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January 30, 2024

To: 2023 Safety Culture Assessments (SCAs) (#2023-SCAs)

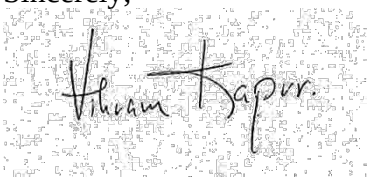
Subject: Pacific Gas and Electric Company's 2023 Management Self-Assessment Supporting Documentation: Part One of Two

Dear Safety Culture Assessment Stakeholders:

Attached please find the supporting documentation submitted by Pacific Gas and Electric Company (PG&E) as part of its 2023 management self-assessment, a component of its 2023 Safety Culture Assessment. PG&E submitted this documentation in multiple formats. Energy Safety has combined all documentation into PDF format. Below is an index pertaining to the attached documentation.

The documentation is divided into two PDFs. This is the first of two parts.

Sincerely,



Vick Kapur
Senior Director, Safety Process and Culture

Index

PG&E submitted the following supporting documentation with its management self-assessment with a summary plan for 2024, safety culture objectives, lessons learned, and progress on 2022 recommendations on July 7, 2023. The index below provides documentation file names and length in pages.

Part One

Documentation Supporting Management Self-Assessment Questions:

Management Self-Assessment Question 1.1.1:

- 1.1.1_True_North_Startegy.png (1 page)

Management Self-Assessment Question 1.2.1:

- SAFE-01_PGE+Safety+Excellence.pdf (3 pages)
- SAFE-5000M_PG&E+Safety+Excellence+Management+System+Manual.pdf (17 pages)
- Supervisor_Central.pdf (1 page)

Management Self-Assessment Question 1.3.1:

- 6.27.23 L1 MOR Materials (May Performance).pdf (120 pages)

Management Self-Assessment Question 2.1.2:

- SAFE-5000M_PG&E+Safety+Excellence+Management+System+Manual.pdf (17 pages)

Management Self-Assessment Question 2.1.3:

- 06.06.2023 WRCC WOR Boards.pdf (116 pages)
- 06.13.2023 WRCC WOR Boards.pdf (110 pages)
- 06.20.2023 WRCC WOR Boards.pdf (79 pages)
- 06.27.2023 WRCC WOR Boards.pdf (64 pages)

Management Self-Assessment Question 2.2.1:

- 06.13.2023 WRCC WOR Boards.pdf (110 pages)
- WMP_8.3.6.pdf (8 pages)

Management Self-Assessment Question 2.2.2:

- SAFE-5000M_PG&E+Safety+Excellence+Management+System+Manual.pdf (17 pages)

Management Self-Assessment Question 2.2.3:

- Currents_2022.07.15.pdf (4 pages)
- Currents_2022.09.30.pdf (5 pages)

- Currents_2023.03.27.pdf (5 pages)
- Currents_2023.06.22.pdf (5 pages)

Management Self-Assessment Question 3.2.1:

- 5MM-Fire Ignition Reporting Host Form v3.docx (5 pages)
- 5MM-July 2023 FAS Enhancements v3.docx (3 pages)
- Asset View – Install and Setup Job Aid v1.docx (2 pages)
- FINAL_RoadShow_Ignitions_FW_MPR_Slide_Deck.pptx (32 pages)
- Fire-Ignition Reporting Form Job Aid -iPad v1.docx (7 pages)
- Fire-Ignition Reporting Form Job Aid -iPhone v1.docx (7 pages)
- MPR_Quick_Guide.pdf (2 pages)

Management Self-Assessment Question 3.3.1:

- OH Vehicle Contact Ignitions_June 2023 (32 pages)

Documentation Supporting Management

Self-Assessment Questions

OUR 10-YEAR TRUE NORTH STRATEGY

PURPOSE: WHY WE EXIST

Delivering for our hometowns

Serving our planet

Leading with love

STANDS: WHAT WE WILL DELIVER

PEOPLE

Everyone and everything is always safe

Catastrophic wildfires shall stop

It is enjoyable to work with and for PG&E

PLANET

A healthy environment and carbon-neutral energy system shall be the reality for all Californians

PROSPERITY

Our work shall create prosperity for all customers and investors

WHERE WE ARE HEADED

CUSTOMERS

Rebuild trust with our customers and our local communities by delivering **affordable energy** & **excellent customer experiences** every day

ENERGY SYSTEM

Architect an electric system that is:
- **Resilient** to climate change
- **Decarbonized** 24 x 7 x 365
- **Optimized** to local and system needs

Unleash the **full potential of electric vehicles**

Electric

Continue to **invest in a safe and reliable gas system**

Boldly shape the future through:
- **Targeted electrification**
- **Greening** the gas supply
- **Shaping** California's policy

Gas

HOW WE WILL DO IT

FOUNDATIONAL CAPABILITIES

- Public & workforce safety and risk mitigation
- Diversity, equity, inclusion & belonging
- PG&E Performance Playbook
- Co-worker development and well-being
- Simple, affordable financial model
- Efficient end-to-end work management system
- Regional service model
- IT platforms and data management capabilities
- Stakeholder, policy, and regulatory advocacy

VIRTUES: WHO WE ARE

Trustworthy, Empathetic, Curious, Tenacious, Nimble, Owners

PG&E Safety Excellence Policy

Policy Statement:

At Pacific Gas & Electric Company (PG&E), our stands are that everyone and everything is always safe and that catastrophic wildfires shall stop. Leadership is committed to protecting the health and safety of our coworkers, contractors, and hometowns and fostering a proactive and engaging organizational culture and safety mindset.

We will achieve industry-leading safety performance through the disciplined application of the PG&E Safety Excellence Management System (PSEMS). PSEMS is the systematic management of our processes, assets, and occupational health & safety to prevent injury and illness including effectively and safely controlling and governing our assets and managing the integrity of operating systems and processes. PSEMS drives continuous improvement in 4 areas: Asset Management, Occupational Health & Safety, Process Safety, and Organizational Culture & Safety Mindset.

At PG&E we:

- Are committed to achieving zero public and workforce (includes coworkers and contractors) safety incidents, an injury-free workplace, and the participation and engagement of the workforce.
- Will eliminate hazards and reduce risks to create healthy and safe conditions for our workforce, customers, and our hometowns that we are privileged to serve.
- Manage our assets, mitigate associated risks, and improve system performance throughout lifecycles to protect our customers, workforce, and environment.
- Generate and deliver safe, reliable, affordable, and clean energy to our customers and our hometowns.
- Comply with legal, regulatory, internal, and applicable process, asset, and health and safety requirements.
- Challenge ourselves to continuously improve and implement best practices.

This policy directs PG&E to develop a safety excellence management system and to continually review and improve the system to assure that it is suitable, adequate, and effective.

Target Audience:

This Policy applies to all parts of PG&E. The Policy will be implemented and sustained across PG&E through PSEMS.

Accountability:

The **Chief Executive Officer** will:

- Ensure an environment is created where people are encouraged to raise concerns and where leaders are expected to respond to them.
- Ensure the adoption of PSEMS across PG&E.
- Own the Leadership and Engagement Element of PSEMS.

The **Chief Safety Officer / Executive Vice President** will:

- Own PSEMS policy changes, provide advice and counsel on matters related to PSEMS, and develop PSEMS performance expectations including recommendations for certifications.
- Oversee the development of strategies, management systems, standards, processes, procedures, programs, and guidelines to ensure effective implementation of this policy.
- Coordinate internal and external activities regarding PSEMS occupational health and safety, asset, and process safety, including representing PG&E on PSEMS policy and strategy matters externally.
- Chair the annual enterprise review of PSEMS to ensure its continuing suitability, adequacy, and effectiveness.

Lines of Business (LOB) Leadership has the primary responsibility for implementing, engaging, and leading teams to understand this policy within their functions and authority limits, including implementing and maturing management systems, and maintaining current and obtaining any new agreed-upon certifications. LOB management will communicate this policy to their respective workforce and will align on new and existing policies, standards, processes, procedures, and guidelines consistent with expectations and requirements of PSEMS.

Coworkers and contractors are responsible for behavior consistent with company policies, standards, processes, procedures, practices, and applicable regulatory obligations to their assigned duties and responsibilities.

Approval:

Key Contact:	[redacted], Director
Reviewed by:	Patti Poppe, CEO, PG&E Corporation Julius Cox, EVP, People, Shared Svs, & Supply Chain Chris Foster, EVP & Chief Financial Officer Jason Glickman, EVP, Energy, Planning & Strategy Carla Peterman, EVP, Corporate Affairs Marlene Santos, EVP & Chief Customer Officer John Simon, EVP, General Counsel & Chief Ethics Officer Sumeet Singh, EVP & Chief Safety & Risk Officer Ajay Waghray, SVP & Chief Information Officer Adam Wright, EVP, Operations & Chief Operations Officer [redacted], Senior Counsel, Law Gas & Electric Operations
Sponsoring Officer:	Sumeet Singh, EVP and Chief Safety & Risk Officer
Final Review by Compliance & Ethics:	Alex Vallejo, VP, Compliance & Ethics and Deputy General Counsel
Approved by:	Patti Poppe, CEO, PG&E Corporation Sumeet Singh, EVP and Chief Safety & Risk Officer
Effective Date:	

Revision Notes:

Where	What Changed
All	Complete review and update (Rev. 0)
All	Revised to reflect new scope of PSEMS versus HSMS (Rev. 1), including title change.

Pacific Gas and Electric Company's

Safety Excellence Management System Manual

April 2023

Message from Leadership

We are committed to protecting the health and safety of our workforce and the hometowns that we are privileged to serve. To do this, we must foster a proactive and engaging safety culture. This commitment is clearly memorialized in our Safety Excellence Policy. We expect that every task be completed without injury or incident as we deliver safe, reliable, affordable and clean energy to our customers and hometowns. Our safety stand, "everyone and everything is always safe", means that nothing is more valuable than human life. To make this stand a reality, we must put safety at the heart of all our decisions and actions and have the courage to stop work if it's unsafe and only start work when it is safe. Our safety culture must encourage us to show empathy to each other and our customers. It must be modeled by our leaders and embraced by each of us.

The PG&E Safety Excellence Management System (PSEMS) is how we systematically manage risks to our processes, assets and occupational health and safety to prevent injury and illness, safely operate our assets and manage the integrity of our operating system. It supports an injury-free workplace and enables our functional areas to continually improve safety and reliability in alignment with our focus on Organizational Culture and Safety Mindset. Driven by leadership, PSEMS reflects our unwavering commitment to safety and establishes a standard for attaining world-class safety performance. It also requires us to deliver sustained value to our customers and hometowns, which will help us rebuild trust.

We all have a role in understanding and mitigating risks and assuring safeguards are in place and effective. I encourage you to read and understand PSEMS and to implement it with the ownership, tenacity and curiosity I know we all share.

Patti Poppe
Chief Executive Officer

How to Use This Manual

This manual provides an overview of PSEMS, our approach to achieving world-class safety performance and the framework for continuous improvement. Read on to learn about your role in supporting PSEMS and creating a safe and reliable organization.

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Our Safety Stands

At PG&E, our safety stands are that everyone and everything is always safe and that catastrophic wildfires shall stop. We are committed to protecting the health and safety of our workforce and hometowns by fostering a proactive and engaging organizational culture and safety mindset. At PG&E, we:

- Are committed to achieving zero public and workforce (includes coworkers and contractors) safety incidents, an injury-free workplace and the participation and engagement of the workforce.
- Create healthy and safe conditions for our workforce, customers and our hometowns that we are privileged to serve.
- Manage our assets, mitigate associated risks and improve system performance throughout lifecycles to protect our customers, workforce and environment.
- Generate and deliver safe, reliable, affordable and clean energy to our customers and our hometowns.
- Comply with legal, regulatory, internal and other health and safety requirements.
- Challenge ourselves to continuously improve and implement best practices.

PG&E's Keys to Life

We follow these 10 principles for every aspect of our work, in the field or office.

1 Conduct pre-job safety briefings prior to performing work activities.

2 Follow safe driving principles and equipment operating procedures.

3 Use personal protective equipment (PPE) for the task being performed.

4 Follow electrical safety testing and grounding rules.

5 Follow clearance and energy lockout/tagout rules.

6 Follow confined space rules.

7 Follow suspended load rules.

8 Follow safety at heights rules.

9 Follow excavation procedures.

10 Follow hazardous environment procedures.

Introducing PSEMS

PSEMS is the systematic management of our processes, assets and occupational health and safety to prevent injury and illness. The PSEMS framework is the Safety Excellence Policy (SAFE-01) and 13 elements that establish governance and operational requirements for how we operate our business to generate and deliver safe, reliable, affordable and clean energy for our customer and hometowns. We will achieve industry-leading safety performance through the disciplined application of PSEMS.

The following 13 PSEMS elements encompass our requirements around safety that all workers shall follow to keep us safe:

1 Leadership Commitment and Engagement

2 Communications and Stakeholder Engagement

3 Risk Management

4 Strategy, Objectives and Planning

5 Operational Control

6 Training and Competence

7 Emergency Preparedness and Response

8 Incident Reporting, Investigation and Corrective Action

9 Contracted Services and Purchased Goods

10 Management of Change

11 Information, Documentation and Records Management

12 Performance Evaluation and Improvement

13 Assurance

Management System Cycle

PSEMS follows the Plan-Do-Check-Act cycle to drive continual improvement across the Enterprise.

PSEMS establishes the systematic annual approach for ensuring continuous improvement:

Review Results

Periodic reviews are conducted to evaluate PSEMS performance, consider how well PSEMS is delivering the desired outcomes and verify progress.

- Reviews include Enterprise PSEMS objectives and benchmarking data.
- Output to objectives setting is focused on risks and critical internal and external business drivers.
- Evaluate maturity assessment results against strategic plans.

Establish Objectives

With workforce participation, establish, validate and/or update PSEMS objectives, metrics and targets.

- Integrate PSEMS objectives into the organization's business planning.
- Cascade PSEMS objectives, metrics and targets to all levels of the organization.

Conduct Assessment

Evaluate performance against PSEMS objectives:

- Identify gaps in leadership and culture.
- Identify gaps in the execution of processes that establish or govern PSEMS expectations.
- Validate, remove or close gaps from the prior year's assessment.
- Consider future risks, changes in business conditions and changes to business plans.
- Prioritize assessed gaps based on risk, business plan priorities and efficiency opportunities.

Prioritize and Plan

Develop gap closure plans with milestones and completion dates; evaluate and prioritize plans based on the risk profile, and consider competency, learning, human performance and technology in order to improve effectiveness.

- Identify and allocate resources to successfully execute PSEMS requirements and plans.
- Incorporate PSEMS plans into business plans and communicate them to the organization.
- Validate or update the PSEMS assurance plan priorities.

Execute and Monitor

Execute PSEMS plans to close gaps, along with other business plan activities; monitor to verify progress and effectiveness of PSEMS plans and adjust as necessary.

- Conduct periodic reviews of PSEMS performance.
- Identify and manage new corrective actions to improve controls as appropriate.
- Execute the PSEMS assurance plan priorities.

PSEMS 13 ELEMENTS

Leadership Commitment and Engagement

Leaders establish expectations and objectives, personally direct the process for continuous improvement, visibly demonstrate involvement and commitment and engage our workforce to build a strong safety culture.

Leadership Commitment

Executives and Senior Leaders communicate safety vision and establish industry-leading objectives, metrics and targets by:

- Communicating the safety vision and establishing clear, world-class safety objectives.
- Encouraging and participating in internal and external benchmarking.
- Establishing methods to hold PG&E accountable to performance objectives and expectations.
- Ensuring that appropriate resources are available and aligned.

Executives and Senior Leaders accept and promote that safety culture constantly changes and requires continuous effort to establish and sustain strength by:

- Establishing a high level of trust in the organization.
- Establishing human error-tolerant systems and capacity in work processes for safe failure.
- Ensuring that differing professional opinions are encouraged, discussed and resolved in a timely manner.
- Informing the workforce of steps taken in response to their concerns.
- Ensuring that safety culture discussions within the organization and with outside groups, including regulatory agencies and customers, are routine, open and comfortable.
- Ensuring the participation and consultation of coworkers in all aspects of PSEMS and the development and execution of communication content and plans.

Executives and Senior Leaders personally direct the process for continuous improvement and integrate PSEMS into business plans by:

- Challenging others in the area of safety culture.
- Avoiding complacency and continuously challenging existing conditions and activities in order to identify discrepancies and opportunities for improvement.
- Ensuring standards, procedures and tools align with PSEMS requirements.
- Identifying high-impact, risk-ranked items for business planning and act on opportunities to integrate PSEMS requirements into the business.
- Directing and monitoring PSEMS implementation and effectiveness reviews through focus on trends rather than absolute or specific values.

Leaders visibly demonstrate their involvement and commitment to improve safety performance by:

- Frequently conducting operational visits and engaging with coworkers.
- Encouraging a "Speak-Up" culture and questioning attitude.
- Identifying workplace risks, including unsafe conditions or situations.
- Engaging workforce on safety expectations and requirements.
- Participating in PSEMS activities, including site visits, audits, incident investigation and corrective/preventive action development.

Leaders demonstrate that safety is a personal core value and personally model behaviors to build a strong safety culture by:

- Avoiding complacency and continuously challenging existing conditions and activities to identify discrepancies that may result in error, inappropriate or noncompliant action.
- Reinforcing that every job can be completed without injury or illness.
- "Walking the talk" and addressing safety issues.
- Eliminating barriers to performance improvement and excellence in safety culture.
- Recognizing positive and leading safety behaviors.
- Holding themselves and others accountable for safety performance.

Workforce Engagement

Workers embody PG&E's safety culture and deliver results. Individuals are expected to:

- Know and exercise their obligation to start work only when safe and stop work when it is or may be unsafe.
- Know and follow PG&E's Keys to Life (KTLs).
- Avoid complacency and continuously challenge existing conditions and activities to identify discrepancies. Be outspoken advocates for safe failure.
- Be watchful for assumptions, anomalies, values, conditions, changes or activities that can have an undesirable or unintended effect on safety.
- Understand that every job and task can be completed without injury or illness and that capacity for failure resulting in no injury is mandatory.
- Participate actively in safety committees and training programs.
- Immediately report unsafe conditions, hazards, risks and barriers to safety performance to leaders.
- Identify opportunities for improvement.
- Work together to remove barriers to the desired safety culture and improve safety performance.
- Hold themselves and others, including executives and all levels of management, accountable for safety performance.

Communications and Stakeholder Engagement

Relationships with internal and external stakeholders are established and maintained through continuous and deliberate formal/informal communications and other activities. The needs and expectations of stakeholders, including linkage to legal requirements, are understood through ongoing and deliberate communications and engagement.

Programs are in place to establish and maintain positive relationships with stakeholders to ensure:

- Internal, external and functional area stakeholders are identified.
- Active engagement and dialogue with communities and community leaders to maintain public confidence in PG&E's commitment to safe and healthy operations.
- Communication of the management system policy and requirements, risk identification and management, safety performance and objectives, including:
  - The role each stakeholder group has in the performance of the management system and achieving its objectives.
  - Stop work authority and obligation.
  - The maturity of PSEMS and ongoing continual improvement efforts and outcomes.
- Coworkers are made aware of hazards present in the work performed, incidents that occur and the outcomes of investigations and their obligation to remove themselves from situations that present an imminent and/or serious danger.
- Coworkers understand their obligation and responsibility to start work only when safe and the obligation and authority to stop work at any point when work is not or may not be safe.
- Communication plans and ongoing communications with workforce, regulatory agencies, community groups and local businesses are established and documented.
- Stakeholder engagement plans are implemented that include mechanisms to monitor stakeholder audiences, systematic tracking of engagements and issues and effectiveness evaluation of communication and outreach efforts.
- Communication plans exist for emergency and crisis events.
- Information relevant to stakeholders from activities governed by other PSEMS elements is monitored, documented and communicated.
- Effective management of social, political and reputational risks to the company and that business impacts of those risks are addressed. A stakeholder engagement plan is in place to manage these requirements.

Risk Management

Risks are identified and evaluated using a defined process that includes associated hazards and consequences and the safeguards to prevent or mitigate the identified risks. A risk profile to prioritize risk reduction and assurance programs is maintained that considers the expectations of stakeholders. Lifecycle risks are evaluated and risk reduction is achieved.

A process for PG&E risk management is established and maintained that includes:

- A formal standardized process for identifying risks and assessing the consequences and likelihood of those risks being realized.
- Identification and implementation of risk control measures that manages identified risks to an acceptable level using the hierarchy of controls.
- Definition and communication of risk acceptance criteria.
- Risk tolerance decisions by levels of management appropriate to the nature and magnitude of the risk.
- Input to the safety assurance process from review of risk assessment results.
- A hazard inventory and risk profile using a Hazard and Risk Register (HRR) to prioritize risk reduction programs and manage assessed risk to acceptable levels.

RISK ASSESSMENTS ARE CONDUCTED FOR:

- All assets
- Ongoing operations
- Hazardous materials and activities
- New projects
- Products and services
- Changes defined by the management of change (MOC) process

RISK ASSESSMENTS CONSIDER RISKS TO:

- Health and safety of workforce, customers and the public
- Process Safety
- Asset integrity
- Environment
- Business continuity
- Security
- Company reputation

Additional requirements:

- Risk assessments are carried out by competent personnel with appropriate independence.
- Completed risk assessments are reviewed, approved and accepted by specific levels of management appropriate to the magnitude of the risk and decisions are documented.
- All stakeholders are kept informed about the risk assessment process and results.
- Risk assessments are updated as changes occur and reviewed and updated at a defined appropriate frequency.
- A follow-up process is in place to ensure that risk management decisions and associated mitigations are implemented and effective.
- High and critical risks and their controls are reviewed for effectiveness and updated, at least annually, with top management.

Strategy, Objectives and Planning

Planning includes consideration of the financial, human and technology resources needed to realize the intent of the Safety Excellence Policy and objectives of PSEMS. It also considers relevant internal and external factors that affect PG&E's ability to achieve the desired outcomes established by PSEMS. The needs and expectations of all stakeholders are actioned and resources needed for effective implementation of PSEMS are provided.

A process for PG&E strategy, objectives and planning is established and maintained, including:

- Identification and management of interactions between existing and future PG&E management systems and their elements, including the processes established to implement, maintain and continually improve PSEMS.
- Documented scope of the management system in as much detail as is required to capture the particulars of each functional area (or other method of organization).
  - Interactions and responsibilities between functional areas are identified.
- A process to continually scan internally and externally for issues and stakeholder needs and expectations that may affect PSEMS performance.
  - Scanning results are communicated to the organization and integrated into business planning, operations and PSEMS.
- A documented Strategic Asset Management Plan (SAMP) to deliver asset management objectives across the asset life cycle is established, implemented, maintained and continuously improved.
- Safety and asset management objectives are established, maintained, reviewed and updated at specified intervals, or as required, and communicated to stakeholders.
- Processes, methods and decision criteria used to prioritize work and allocate resources that are established, documented and communicated.
  - The prioritization of work and allocation of resources considers multiple factors including safety, risk, cost/benefit analyses, feasibility and resource availability.
- Appropriate resources are provided to meet the planned objectives of PSEMS.
- Prioritized risk reduction objectives using input from the Hazard and Risk Register (HRR).
- Construction, inspection and testing processes for systems are established and documented and are consistent with the specified requirements, regulations and applicable standards.
  - Maintenance activities are effectively managed and controlled.
- Facilities, equipment and tools are designed, constructed, inspected, tested and maintained per appropriate standards, processes and procedures including environmental and human factor considerations.

Operational Control

Hazards and risks are identified and associated work and work-related activities and processes are planned, controlled, resourced, supported and adapted to the worker. Processes, procedures, programs and tools are continually evaluated for improvement to reduce reliance on safeguards that require human intervention or action.

Planning, execution and control of work in a safe manner is the product of understanding workplace hazards, providing proper equipment and tools, assigning competent qualified personnel, following approved work procedures with embedded hazard controls, employing proper pre-work activities and exercising Stop Work authority when required.

- Processes are in place and promoted to assess the potential hazards to workers, assets and the community.
  - Programs are in place to assist workers in identifying the hazards associated with work activities and the appropriate mitigations.
  - Procedures and controls are developed and established to mitigate identified hazards using the hierarchy of controls and energy wheel, among others.
  - Coworkers are directly involved in the development of actions to eliminate hazards and reduce risk and establish controls.
- Equipment is operated safely within its design envelope and limitations.
  - Safety critical equipment is identified, tested, approved and maintained.
  - Procedures are in place to ensure tools and equipment are maintained, calibrated (as appropriate) and verified as safe for the task before use.
- Management communicates and reinforces clear operational principles, including:
  - Coworkers understand their roles and responsibilities to maintain operations within established parameters.
  - Coworkers understand and follow approved operating procedures.
  - Work is planned and executed so that capacity for failure to a safe condition without injury is established.
  - Key operating parameters necessary to ensure safety, environmental protection and compliance are established and regularly monitored.
  - Start-up, operating, emergency, maintenance and shutdown procedures are in place, regularly reviewed, updated and made available to appropriate personnel.
  - Appropriate tools are used to guide critical operations such as start-up, shutdown and emergency conditions.
  - Protocols exist to ensure effective shift turnovers.

Policies, standards and procedures are developed and maintained to address the requirements and regulations applicable to PG&E's operations. Personnel follow and management enforces applicable policies, standards and procedures.

- Operating procedures are established and implemented to address safe work practices that assure the safe conduct of operating, maintenance, emergency response activities and control of materials.
  - Processes exist to ensure procedures remain current by monitoring and evaluating changes to regulations, industry practices and PG&E requirements.
  - Programs exist to review, update and maintain procedures and other documents necessary for safe and compliant operation.
  - Personnel have access to procedures and other documents needed to perform their roles.
  - A written process exists for prior approval of deviations from operational procedures.
  - Procedures are in place to perform and document start-up readiness reviews and start-up communications with affected groups.

Training and Competence

Safe and reliable operations are contingent upon competent qualified personnel and contractors that carry out their work properly and possess an awareness of their contribution to the success and effectiveness of PSEMS. Training provides the knowledge, skills and abilities for personnel to perform their jobs proficiently.

This element ensures that people are selected and placed into roles consistent with their abilities and job requirements, people are trained to achieve and maintain competency, collective competency is maintained over time and human performance principles are applied to enable proficient work performance.

PG&E's program for training and competency ensures:

- ✓ Competence and fitness for work requirements are defined for all roles in the organization.
- ✓ Awareness and competency requirements for all workers.
  - At a minimum, hazard identification and risk management competencies relevant to the role are established, including the hierarchy of controls and energy wheel.
- ✓ Necessary levels of experience, knowledge and competency are considered when recruiting, during personnel changes and task assignments.
- ✓ Coworkers are involved in the determination of competence, training development and delivery and training evaluation.
- ✓ Initial, ongoing and refresher training of personnel and contractors that have accountabilities, responsibilities and authorities in executing the requirements of the PSEMS includes:
  - Applicable updates to elements of PSEMS that affect their job requirements.
  - Newly emerging or changing risks or problems in execution of the PSEMS that create opportunities to improve processes and procedures.
  - Consequences of failure to follow processes and procedures.

Assessments of training effectiveness are conducted periodically to ensure desired competency and behavioral outcomes are achieved.

Emergency Preparedness and Response (EP&R)

Emergency management plans and response capabilities exist to protect people, respond to emergencies and communicate with stakeholders. EP&R plans identify procedures, processes, equipment, training and personnel necessary for effective response to foreseeable emergency scenarios, non-routine tasks and other crises.

A process for PG&E emergency response, as documented in the Company Emergency Response Plan (CERP), is established, tested and maintained that incorporates the following:

- ✓ Credible emergency scenarios are identified across the Enterprise.
- ✓ Emergency management plans are risk based and address relevant emergency scenarios.
- ✓ Organizational structure, including roles and responsibilities, are defined and communicated.
- ✓ Periodic drills and exercises are conducted.
- ✓ Lessons learned from previous incidents and exercises are incorporated into plans.
- ✓ Equipment, facilities and trained personnel needed for emergency response are defined and readily available.

Incident Reporting, Investigation and Corrective Action

Incidents and near-hits are identified, reported, recorded, effectively investigated and communicated. Learning from incidents occurs and drives corrective actions, mitigation and prevention of recurrence and ensures continuous improvement.

The process for incident reporting, investigations and corrective action is established to ensure:

- Roles and responsibilities are defined for incidents and near-hit reporting and investigations, including the participation of non-managerial workers.
- Stakeholders are engaged in incident investigation and analysis and provide advice on incidents as necessary.
- Appropriate cause analysis including root cause and extent of condition is performed based on risk.
- Procedures are followed for completion and closure of actions taken to resolve deficiencies.
- Lessons learned and trends are identified and shared across the Enterprise.

A corrective action program is established for the management of corrective, preventive and improvement actions, including:

- Incident investigations
- Measurement and monitoring
- Assessments
- Inspections
- Hazard identification and risk management
- Improvement plans and suggestions
- Audits
- Observations

An effectiveness review process is established to drive continuous improvement and risk reduction.

Contracted Services and Purchased Goods

Contracted service providers' performance is improved through mandatory conformance to PG&E and regulatory safety requirements when providing services for PG&E on or off company property.

Contracted service providers conducting work for or on behalf of the Company (materials, equipment, services and labor) impact our processes, assets, public and workforce safety. Work performed must comply with contract requirements and align with company policies and business objectives. Procurement processes are established to ensure products and services meet PG&E requirements.

A process for PG&E contractor management is established and maintained, including:

- Contracted service providers undergo a qualification and selection process that assesses a contractor's capabilities to perform the work per PG&E safety requirements.
- Contracted service providers are required to provide personnel who are screened, trained, qualified and competent to perform the duties assigned.
- Management provides oversight including visible field leadership, enforcement of standards and verification of safeguards.
- PG&E and contracted service providers actively manage their relationships and interface.
- Contracted service providers are accountable to monitor, assess, improve and report their performance on an ongoing basis.
- PG&E monitors contracted service provider performance, conducts observations and provides feedback on the adequacy of contracted service providers' monitoring and assessment activities.
- PG&E actively monitors contracted service provider compliance to PSEMS when contracted service providers are conducting work for PG&E.
- PG&E assists contracted service providers in their efforts to implement safety management systems in their companies.

Procurement processes for materials, equipment, supplies and other items specify safety and quality requirements.

Management of Change

Changes to systems, process or people could introduce risk and have unintended consequences. Management of change (MOC) is a process that systematically identifies, evaluates and manages changes to facilities, equipment, operations, procedures and the organization by ensuring that unacceptable risks are not introduced into the business.

Types of MOC

- Permanent
- Temporary
- Emergency
- Organizational

The MOC process consists of the following phases:

- INITIATION
- RISK ASSESSMENT
- STAKEHOLDER REVIEW AND APPROVAL
- TRAINING AND NOTIFICATION
- IMPLEMENTATION
- CLOSEOUT AND DOCUMENTATION
- EFFECTIVENESS REVIEW

Information, Documentation and Records Management

Information Management

The organization must ensure consistency and traceability in documents, procedures, records and technical and other relevant non-financial data required to meet legal, regulatory, internal and stakeholder requirements and company objectives. Information should be current, accessible, traceable and clear and comply with retention and security requirements.

Information requirements that affect PG&E's ability to achieve the desired outcomes established by PSEMS are determined by, and must consider:

- Significance of identified risks in the determination of the requirements.
- Roles and responsibilities.
- The size of PG&E, its processes and activities as they relate to assets, procedures, products and services.
- The exchange of information with stakeholders, including service providers.
- The impact of quality, availability and management of information on decision making.
- The control and accessibility of data, information and records.

Data, information and records including documents, drawings, procedures, asset management plans and other data and information are current, accessible, traceable, clear and in as simple a form as achievable.

Processes are in place to specify, implement and maintain data, information and records management, including attribute and quality requirements, enabling technologies and collection, analysis and evaluation requirements. A process is in place for the design, implementation and maintenance of a system (or systems) for managing data, information and records.

The requirements for aligning financial and non-financial terminology are established, consistent and traceable between financial and technical data and other relevant non-financial data.

Documentation Management

A documented process for the development, identification, distribution and control of documents is established and maintained to assure:

- Examination, revision and version control of documents.
- Identification and description of documents.
- Documents are legible and identifiable.
- Review and approval of documents for adequacy before issue.
- Changes are clearly identified and the status of any revision is documented.
- Controlled identification and distribution of documents of external origin.
- Effective distribution of documents.
- Where necessary, the timely removal of obsolete documents from all points of issue and use.

Records Management

Documented processes for the systematic control of records and their related data, including active and inactive assets, is in place. The processes define controls for identification, storage, protection, retrieval, retention, preservation and disposition.

The confidentiality and security of data, information and records are maintained per PG&E standards and procedures and applicable data privacy protection laws and regulations.

Performance Evaluation and Improvement

Evaluation of PSEMS performance is a systematic, planned approach used to drive continuous progress toward world-class safety excellence performance. It is an iterative approach to effectively integrate safety objectives, plans, requirements and activities into daily operations through the lean operating model. Performance evaluation includes review of leading and lagging performance indicators and use of the Plan-Do-Check-Act (PDCA) cycle to drive improvement across the Enterprise.

Performance improvement is achieved through periodic review and evaluation of safety excellence plans, activities and performance and the actions taken to address identified gaps. The following actions are taken:

- Establish, validate, update objectives, metrics and targets through application of the lean operating model.
- Conduct an annual assessment to evaluate the performance and effectiveness of PSEMS.
- Establish and maintain a process to identify and manage performance trends.
- Develop plans with milestones and completion dates.
- Execute plans to close gaps and monitor progress and effectiveness of plans.

Management review is conducted to evaluate PSEMS effectiveness at planned intervals and to ensure its continuing suitability, adequacy and effectiveness.

The review will consider:

- Results and insights from previous performance improvement cycles, audits, assessments and management reviews.
- Changes in business conditions and plans.
- Results of internal and external scanning for factors that affect PG&E's ability to achieve desired PSEMS outcomes.
- Performance against the expectations of the PG&E Safety Excellence Policy.

Assurance

PSEMS assurance establishes the necessary controls to achieve and improve safety excellence. This assures compliance with legal, regulatory and PG&E requirements to minimize risk to the Enterprise.

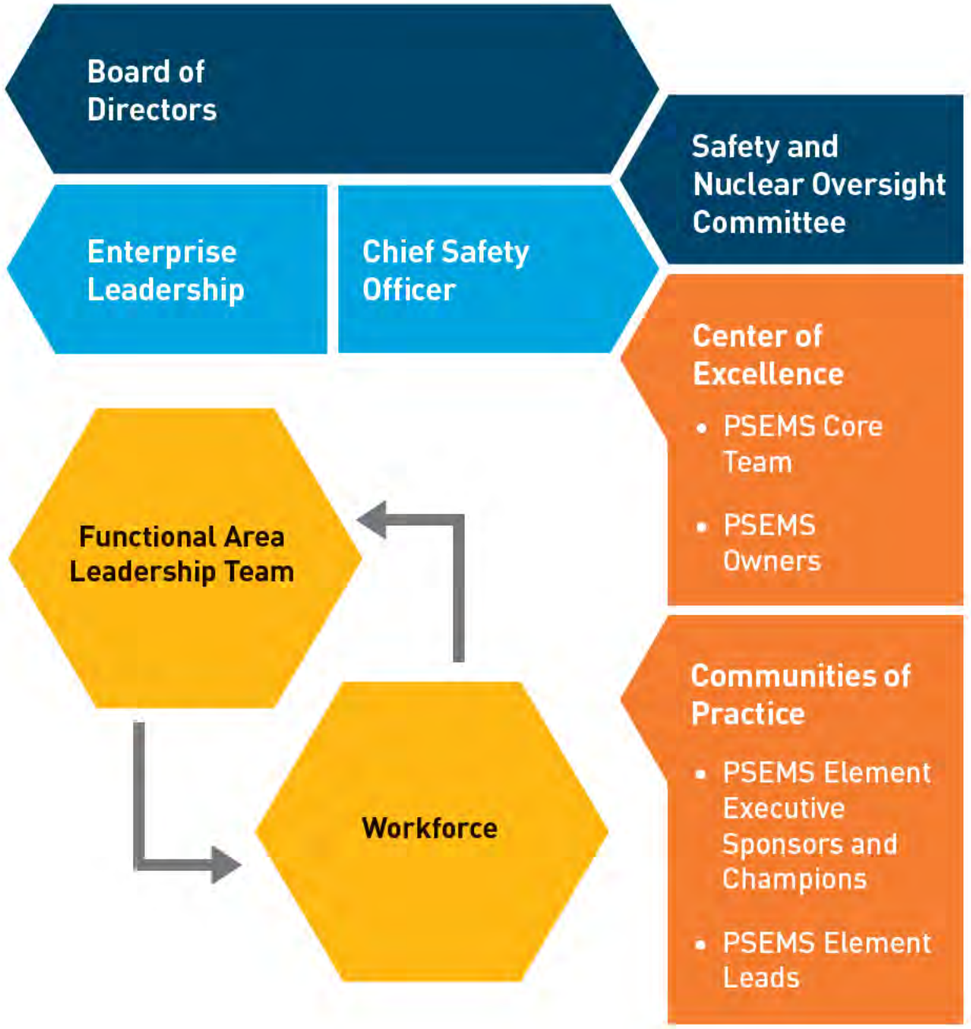
Assurance registers are documented and implemented to identify the safety excellence requirements applicable to each functional area (FA). The FA ensures the registers are associated to the corresponding requirements, controls and verifications that manage or sustain compliance, including the:

- Extent to which regulatory, company and other requirements are fulfilled.
- Activities and operations related to identified hazards, risks and opportunities.
- Methods, frequency and timing of audits and evaluations to assure compliance with requirements.
- Measurement, analysis and monitoring of compliance to evaluate performance.
- Reporting and documentation of findings and instances of potential noncompliance resulting from audits, including resolutions.

Audits and assessments, internal and external, are conducted regularly to assess compliance with PSEMS, verify that controls and verifications are designed and functioning, verify that assurance registers are developed and maintained and evaluate safety excellence performance.

Governance

Achieving world-class performance requires an effective and integrated governance structure that creates and sustains a positive, proactive safety culture. The PG&E governance structure supports PSEMS by providing appropriate oversight, leadership and technical knowledge. It identifies key roles and responsibilities at each level to support the functional areas in implementing and executing PSEMS.



Role		Description	Key Responsibilities
PG&E Board of Directors		Monitors and oversees stewardship of Company	• Oversees business strategy and performance • Ensures effectiveness of compliance programs and controls
Safety and Nuclear Oversight Committee		Monitors and oversees Company's safe operations	• Monitors Enterprise safety risks, assessment processes, mitigations and performance • Promote a strong safety culture through programs and policies
Enterprise Leadership		Responsible for strategy and safety culture	• Endorses goals, programs and policies • Sets health and safety objectives and monitors performance • Allocates resources
Chief Safety Officer		Directs development and implementation of PSEMS	• Advises on health and safety and recommends policy changes • Directs development of health and safety performance expectations • Represents PG&E externally on health and safety
Center of Excellence (COE)		Provides governance and fosters PSEMS implementation	• Implements PSEMS across the Enterprise • Integrates safety and gap closure plans into business plans; helps monitor and follow up • Establishes PSEMS standards, procedures and governance, including performance objectives, metrics and targets
COE Members	PSEMS Core Team	Maintains PSEMS to achieve world-class performance and actively participates in COE	• Supports standardization and integration in functional areas/ divisions • Fosters safety culture that enables PG&E's safety stand
	PSEMS Owners	Owns implementation of PSEMS in assigned functional area/division and actively participates in COE	• Establishes PSEMS standards, procedures and governance within assigned functional area/division • Ensures gaps are closed in assigned functional area/division • Implements PSEMS continual improvement plans
Communities of Practice (COP)		Supports implementation of assigned PSEMS Elements	• Evaluates and executes PSEMS processes and standards • Ensures gaps are closed out consistently • Disseminates best management system practices
COP Members	PSEMS Element Executive Sponsors and Champions	Coaches leaders in the implementation of PSEMS and actively participates in COP	• Approves and communicates Element requirements • Manages potential barriers to gap closure • Drives implementation of and continuous performance improvement in Elements
	PSEMS Element Leads	Serves as expert on assigned Element in assigned functional area/ division and actively participates in COP	• Understands the requirements of PSEMS and assigned Element as applied in area of functional expertise • Establishes and maintains interactions between Elements • Provides technical support for programs and improvements related to PSEMS
Functional Area Leadership Team*		Establishes and communicates a clear vision for PSEMS success	• Integrates PSEMS into operations • Provides resources to enable PSEMS, resolves obstacles and monitors performance • Establishes the Management System Cycle
Workforce		Coworkers and contractors who take personal responsibility to work safely	• Follows safe work practices and procedures, works in a controlled manner and maintains situational awareness • Identifies, communicates and mitigates hazards • Stops work when unsure and speaks up about abnormal conditions

*Functional Area Leadership Team includes all leaders from crew leads and supervisors on up

Audits

Audits play an integral role in PSEMS implementation and compliance assurance while bringing additional value to the organization. They provide an independent assessment of the effectiveness of controls and identify enhancement opportunities, and the audit process yields key insights and learning opportunities for engaged stakeholders.

Audit results update the Board of Directors and executive leadership on PSEMS implementation and effectiveness and identify resource needs across the Enterprise.

Independent Third-Party Certification and Assessment

Following international best practice, PSEMS is designed in alignment with the International Standard Organization 45001 and 55001 and American Petroleum Institute Recommended Practice 1173 standards. Conformance of PSEMS to these standards will be maintained and periodically validated by an independent third party. Existing independent third-party certification to any of the foundational standards within functional areas will be maintained and other certifications may be pursued. Certification, where achieved and maintained, demonstrates that elements are designed and implemented to improve safety performance, reduce risks and create better and safer working conditions.

Corporate Safety Audits

Corporate safety audits will be conducted across the functional areas to assess whether controls are established and in conformance with applicable safety requirements, leading to risk reduction to the acceptable and practical level for the Enterprise. Safety audits are conducted through the coordination and oversight of the Enterprise Health and Safety–Safety Assurance Group in partnership with functional areas. Findings identified by subject-matter resource audit team members are corrected using action plans and are monitored for closure.

California Public Utilities Commission (CPUC) Safety Culture Assessments

Leadership is committed to protecting the health and safety of our workforce and hometowns and fostering a proactive and engaging organizational culture and safety mindset. Internal assessments combined with external CPUC assessments of culture will be conducted.

PSEMS Self-Assessment

Annually, PSEMS is assessed by functional areas and divisions to determine if it is adequately supporting the organization in meeting its safety objectives. The design and implementation are analyzed for effectiveness. Performance is analyzed and compared to industry-leading results.

Pacific Gas and Electric Company

Supervisor Central

Your one-stop-shop for tools and resources

Training, Development and Engagement

Core Learning (Training Recommendations for Supervisors 0-3 years)

Beyond Core Learning (Recommended for all Supervisors)

Click the above **Core Learning** or **Beyond Core Learning** learning path tiles for the courses offered through LinkedIn Learning and MyLearning to improve supervisor skills.

Expand Your Knowledge

- Gas Knowledge Portal
- Electric Knowledge Portal

Professional Development

- Employee Development
- Career Development
- Tuition Refund
- LED
- Leader's Role in Career Development
- Leadership Development
- Gas Operator Qualification (GQ)
- Supervisor Onboarding Program Manual
- LinkedIn

Supervisor Central Engagement Forums

*New Updates

- First Line Network
- Supervisors Forum
- Lunch & Learn
- Office Hours
- Supervisor Central News
- TNS Role of the Supervisor Milestones

Lean Management and Resources

- Clear Sky Playbook
- 4 Basic Plays
- Problem Solving Intake Form
- E&G Performance & Process Improvement
- Lean Thinking
- Hoshin Planning
- A3 Problem Solving
- Standard Work
- Implementing Lean

Leading People

HR Home Page

Leader Resources

The Human Resources People Leaders' site has numerous links to help Supervisors succeed. Take time to explore and get familiar with the site. A few popular links are listed below:

Purpose, Virtues, and Stands

- PVS
- NEO

HR Support and Related Tasks

- People Solutions (Assist)
- My Staff Reports
- How to Fill a Non-Union Job
- Enterprise Onboarding
- Performance Management
- Supporting Separation Process

Labor Relations

- Labor Relations site
- Managing Union-Represented Employees
- Safety & PD

Remote Working

- Microsoft Teams Site
- Get Started with Teams
- Remote Work Best Practices
- Working Safely from Home Handbook

Safety and Support

Safety and Risk

Support Services

The Safety & Risk site contains information related to:

1. Public, employee, and contractor health & safety
2. Speak up and the 24/7 safety emergency hotline
3. DOT & Regulatory Compliance

All coworkers in Gas and Electric Operations are required to conduct a 360-walk around and complete the 360 App prior to moving a vehicle.

Safety

- PSEMS
- Gas Safety Excellence
- Keys to Life
- Grassroots Safety
- EHS Dashboard
- Safety Communications & Weekly Snapshot
- Injury Management
- SIF Dashboard
- ECAP
- Boat Fitting Schedule
- Safety Inspections
- SAFE
- 24/7 NCL
- Checklist for Injury Management
- Drivers Scorecard
- 360 Walk Around
- eDVIR Detail Report
- DVIR Toolkit

Essential Skills and Support

- Future of Work
- GO Leader Quick Reference
- Hometown Team Contact List
- Acronyms
- Transportation Services
- Time & Expense Reporting
- Time Reporting
- Concur
- ERESS

L1 MOR Agenda – June 27, 2023

Date / Time	June 27; 3:00 – 4:15	**Chair**	Patti Poppe
Location	OGO: Central Command Center	**Facilitator**	[redacted]

Agenda Items	Presenter	Duration	Time
Safety & Agenda Review	[redacted]	2	3:00
Dashboard & STIP Review – May Performance	[redacted]	5	3:02
Exception Based Report Outs:		60	3:07
• CSS (Red)	Marlene S. / [redacted]	~ 5 mins per KPI	
• Electric 911 Emergency Response (Red)	Sumeet S. /Janisse Q.		
• SAIDI (Red)	Sumeet S. / Joe B. / Janisse Q.		
• CEMI (Red)	Jason G. / Joe B.		
• PSPS Notification Accuracy (Amber)	Marlene S. / [redacted]		
• Gas Emergency Response (Amber)	Sumeet S. / [redacted]		
• Corrective Maintenance in HFRA (Amber)	Sumeet S. /		
• PMVI Rate (Amber)	Sumeet S. / Matt H.		
• Non Fatal SIF (Amber)	Sumeet S. / Matt H.		
Action Item Review	All		4:13
Meeting End			4:15

MOR Reporting Standard

On **exception only** basis review:

- TIP – Address any back spikes
- KPI performance trends – Is performance overall trending in the right direction
- Pareto Charts – Identify what's driving the gap
- Problem Solving – Share progress in problem solving process and key containments and countermeasures
- Catch Back Plan – Highlight when/if gap will be closed, key actions being taken, and any key dependencies
- Identify any support needed

L1 MOR Action Items

Action	Owner	Due Date	Status
Provide Patti date of when Grounding Manaul will be completed	Janisse Q	06/09/2023	Complete
Share materials from Lean Maturity Assessment Presentations	[redacted]	06/09/2023	Complete

L1 KPI Review Scorecard

Selected Report Month & Year
May 2023

	Month to Date		Year to Date		End of Year	
	MTD Actual	MTD Target	YTD Actual	YTD Target	EOY Forecast	EOY Target
Safety						
✗ L Non-Fatal SIF Rate						S. Singh
● L Wildfire Risk Reduction in HFTD						S. Singh
L Public SIF Incidents						S. Singh
● L Reportable Fire Ignitions						S. Singh
▲ L Gas Emergency Response						S. Singh
✗ H Elec 911 Emergency Response						S. Singh
▲ L PMVI Rate						S. Singh
● H DCPP Reliability & Safety Indicator						S. Singh
● L Total Gas Dig-Ins Rate						S. Singh
● L DART						S. Singh
● H SDOC						S. Singh
Quality						
✗ H Customer Satisfaction (CSS)						M. Santos
Lean Maturity						M. Santos
● H Quality Pass Rate (QPR)						S. Singh
✗ L SAIDI						S. Singh
✗ H CEMI 5/10						J. Glickman
Delivery						
✗ H Commitment Delivery Index						J. Simon
● H Critical Data Asset Management						A. Waghray
▲ H Corrective Maintenance in HFRA						S. Singh
● H High Consequence Area Threat Miles Assessed						S. Singh
▲ H PSPS Notification Accuracy*						M. Santos
● H System Hardening Effectiveness						S. Singh
● H Corporate Security						A. Waghray
● H Cyber Security						A. Waghray
Cost						
Lean Waste Elimination						M. Santos
▲ H Non-GAAP EPS						C. Burke
✗ H Operating Cash Flow						C. Burke
● H TSR						C. Burke
▲ H Greater Affordability						C. Burke
Morale						
○ H Joy at Work Index						J. Cox

*PSPS Notification Accuracy YTD represents LTIP 2021-2023 PTD

Updated on:
6/22/2023

Overall RAG by Month

S	Category	KPI Name	January 2023	February 2023	March 2023	April 2023	May 2023
1	Safety	DART	[redacted]				
		DCPP Reliability & Safety Indicator					
		Elec 911 Emergency Response					
		Gas Emergency Response					
		Non-Fatal SIF Rate					
		PMVI Rate					
		Public SIF Incidents					
		Reportable Fire Ignitions					
		SDOC					
		Total Gas Dig-Ins Rate					
		Wildfire Risk Reduction in HFTD					
2	Quality	CEMI 5/10					
		Customer Satisfaction (CSS)					
		Lean Maturity					
		Quality Pass Rate (QPR)					
		SAIDI					
3	Delivery	Commitment Delivery Index					
		Corporate Security					
		Corrective Maintenance in HFRA					
		Critical Data Asset Management					
		Cyber Security					
		High Consequence Area Threat Miles Assessed					
		PSPS Notification Accuracy					
		System Hardening Effectiveness					
4	Cost	Greater Affordability					
		Lean Waste Elimination					
		Non-GAAP EPS					
		O&M Per customer					
		Operating Cash Flow					
		TSR					
5	Morale	Joy at Work Index					

EOY and YTD on track
YTD Actuals is off track and EOY forecast is on track
EOY Forecast is off track

L1 KPI Review Regional Scorecard

Selected Report Month & Year

May 2023

			Enterprise			North Coast			North Valley & Sierra			Bay Area			South Bay & Central Coast			Central Valley		
			YTD Actual	YTD Target	EOY Target	YTD Actual	YTD Target	EOY Target	YTD Actual	YTD Target	EOY Target	YTD Actual	YTD Target	EOY Target	YTD Actual	YTD Target	EOY Target	YTD Actual	YTD Target	EOY Target
Safety																				
L	Non-Fatal SIF Rate	S. Singh																		
L	Non-Fatal SIF	S. Singh																		
L	Wildfire Risk Reduction in HFTD	S. Singh																		
L	Public SIF Incidents	S. Singh																		
L	Reportable Fire Ignitions	S. Singh																		
L	Gas Emergency Response	S. Singh																		
H	Elec 911 Emergency Response	S. Singh																		
L	PMVI Rate	S. Singh																		
L	Total Gas Dig-Ins Rate	S. Singh																		
L	DART	S. Singh																		
Quality																				
H	Customer Satisfaction (CSS)	M. Santos																		
L	SAIDI	S. Singh																		
L	CEMI 5	J. Glickman																		
L	CEMI 10	J. Glickman																		
Delivery																				
H	Corrective Maintenance in HFRA	S. Singh																		
H	System Hardening Effectiveness (Mileage)	S. Singh																		
Morale																				
H	Joy at Work Index	J. Cox																		

Updated on:
6/21/2023

Appendix

STIP and LTIP Scorecards

Date - Month: May 2023 | LTIP 21-23: May 2023 | LTIP 22-24 and LTIP 23-25: May 2023

Short-Term Incentive Plan (STIP) Scorecard

	2022 Actual	YTD Actual	YTD Target	EOY Forecast	EOY Target	EOY Score
Safety						
Wildfire Risk Reduction	[redacted]					
CPUC Reportable Fire Ignitions in HFRA						
Quality Pass Rate						
Non Fatal SIF Rate						
Prevent Incidents / Operate Safely Index						
Total Gas Dig-In Rate						
Preventable Motor Vehicle Incidents Rate						
DCPP Reliability and Safety Indicator						
Safe Dam Operating Capacity						
Customer						
CEMI-5 / CEMI-10 Index						
Respond to Emergencies Index						
Gas Emergency Response						
Electric 911 Emergency Response						
Finance						
Operating Cash Flow						
Non GAAP Core Earnings per Share						

Long-Term Incentive Plan (LTIP) Scorecard

2021-2023

	Period-to-Date	End-of-Period
Customer Experience	[redacted]	
Public Safety		
Financial Stability		
Score		

2022-2024

	Period-to-Date	End-of-Period
Customer Experience	[redacted]	
Public Safety		
Financial Stability		
Score		

2023-2025

	Period-to-Date	End-of-Period
Customer Experience	[redacted]	
Public Safety		
Financial Stability		
Score		

Updated on:
6/22/2023

Date - Month

May 2023

2023 STIP Scorecard

	YTD Actual	YTD Threshold	YTD Target	YTD Maximum	YTD Score	EOY Forecast	EOY Threshold	EOY Target	EOY Max	EOY Score	Weight
Safety											
Wildfire Risk Reduction											
CPUC Reportable Fire Ignitions in HFRA											
Quality Pass Rate											
Non-Fatal SIF Rate											
Prevent Incidents / Operate Safely Index											
Total Gas Dig-In Rate											
Preventable Motor Vehicle Incidents Rate											
DCPP Reliability and Safety Indicator											
Safe Dam Operating Capacity											
Customer											
CEMI 5 / CEMI 10 Index											
Respond to Emergencies Index											
Gas Emergency Response											
Electric 911 Emergency Response											
Finance											
Operating Cash Flow											
Non-GAAP Core Earnings per Share											

Metric Name	Explanation/Management Actions
Non-Fatal SIF Rate	No new SIFA non-fatal events from May; remain at 2 YTD.
PMVI Rate	PMVI rate improving, catchback plans in place.
CEMI 5/10	Refer to catch-back plan
Elec 911 Emergency Response	Refer to catch-back plan
Gas Emergency Response	Strong May performance is the first step toward bringing metric back to green; Bay Area region registered 3,501 Emergency Calls in May with 0 responses greater than 60 minutes, a tremendous achievement.

Updated on:
6/22/2023

2021-2023 LTIP Scorecard

Date - Month

May 2023

2021-2023 LTIP Scorecard	PTD Actual	PTD Threshold	PTD Target	PTD Maximum	PTD Score	EOP Forecast	EOP Threshold	EOP Target	EOP Maximum	EOP Score	Weight
Customer Experience											
Customer Satisfaction Score	[redacted]										
PSPS Notification Accuracy											
Public Safety											
System Hardening Effectiveness											
Condition 1 - 80% must be highest risk miles											
Condition 2 - 10% must be UG/line removal											
Enhanced Vegetation Management Effectiveness											
Condition 1 - 80% must be highest risk miles											
Financial Stability											
Greater Affordability for Customers ($M)											
Relative Total Shareholder Return (percentile)											

Metric Name	Explanation/Management Actions
Greater Affordability	MTD/PTD variances mainly due to unfavorable variances in GRC base revenue, GRC BA expense and capitalized A&G - labor
Customer Satisfaction (CSS)	0
PSPS Notification Accuracy	0

Updated on:
6/21/2023

2022-2024 LTIP Scorecard

LTIP.Date - Month

May 2023

2022-2024 LTIP Scorecard	PTD Actual	PTD Threshold	PTD Target	PTD Maximum	PTD Score	EOP Forecast	EOP Threshold	EOP Target	EOP Maximum	EOP Score	Weight
Customer Experience											
Customer Satisfaction Score	[redacted]										
SAIDI											
Public Safety											
System Hardening Effectiveness											
Condition 1 - 80% must be highest risk miles											
Enhanced Vegetation Management Effectiveness											
Financial Stability											
Greater Affordability for Customers ($M)											
Relative Total Shareholder Return (percentile)											

Metric Name	Explanation/Management Actions
Customer Satisfaction (CSS)	0
Greater Affordability	MTD/PTD variances mainly due to unfavorable variances in GRC base revenue, GRC BA expense and capitalized A&G - labor
SAIDI	Refer to catch-back plan

Updated on:
6/21/2023

2023-2025 LTIP Scorecard

LTIP.Date - Month

May 2023

2023-2025 LTIP Scorecard	PTD Actual	PTD Threshold	PTD Target	PTD Maximum	PTD Score	EOP Forecast	EOP Threshold	EOP Target	EOP Maximum	EOP Score	Weight
Customer Experience											
SAIDI											
Public Safety											
System Hardening Effectiveness											
Electric Corrective Maintenance in HFRA											
Financial Stability											
Relative Total Shareholder Return (percentile)											

Metric Name	Explanation/Management Actions
Elec Corrective Maintenance in HFRA (Tags)	
SAIDI	

Updated on:
6/21/2023

Customer Satisfaction Score (CSS)

Customer Satisfaction (CSS)

Updated on:
6/21/2023

Selected Report Month & Year

May 2023

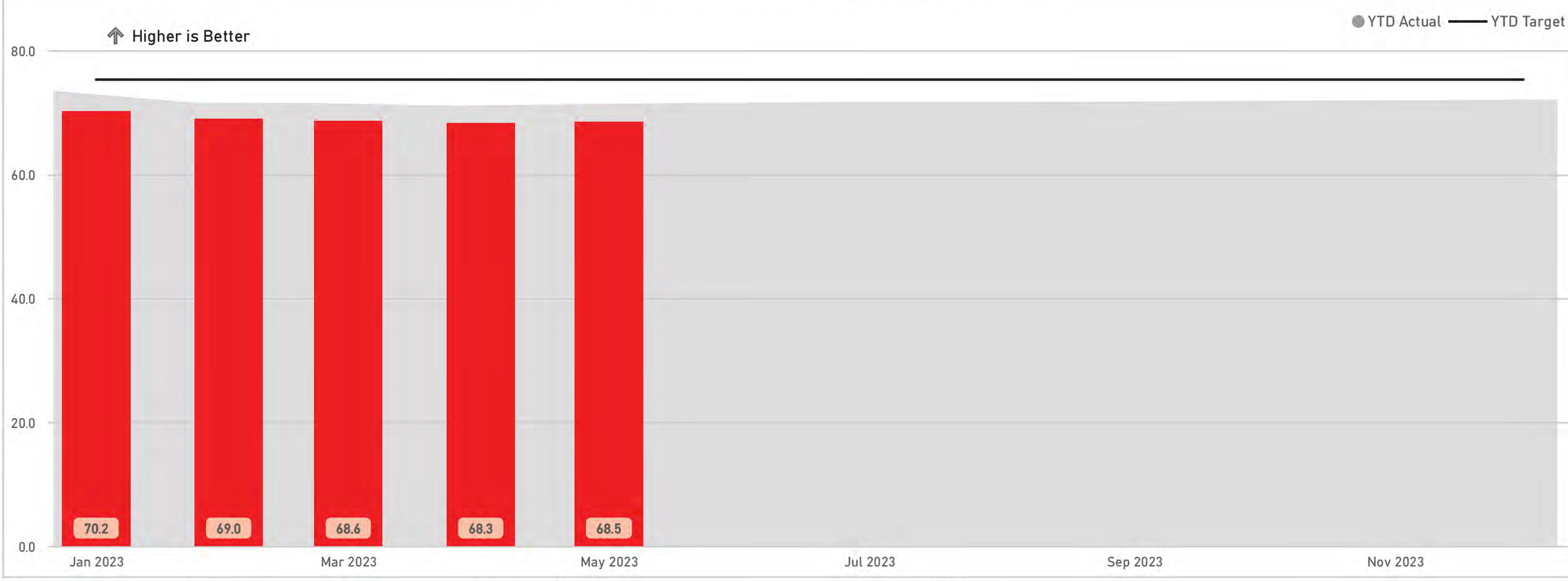
Customer Satisfaction (CSS)

MTD	YTD	EOY
68.7	68.5	70.7
Target: 75.3	Target: 75.3	Target: 75.3

Metric Definition

Customer satisfaction as measured by an ongoing survey conducted by a third party retained by PG&E. The score is based on customer responses to a single overall question: "How would you rate the products and/or services offered by PG&E?"

Customer Satisfaction (CSS) YTD Performance



Executive Owner

Marlene Santos

Functional Area Owner

(Blank)

KPI Reporter

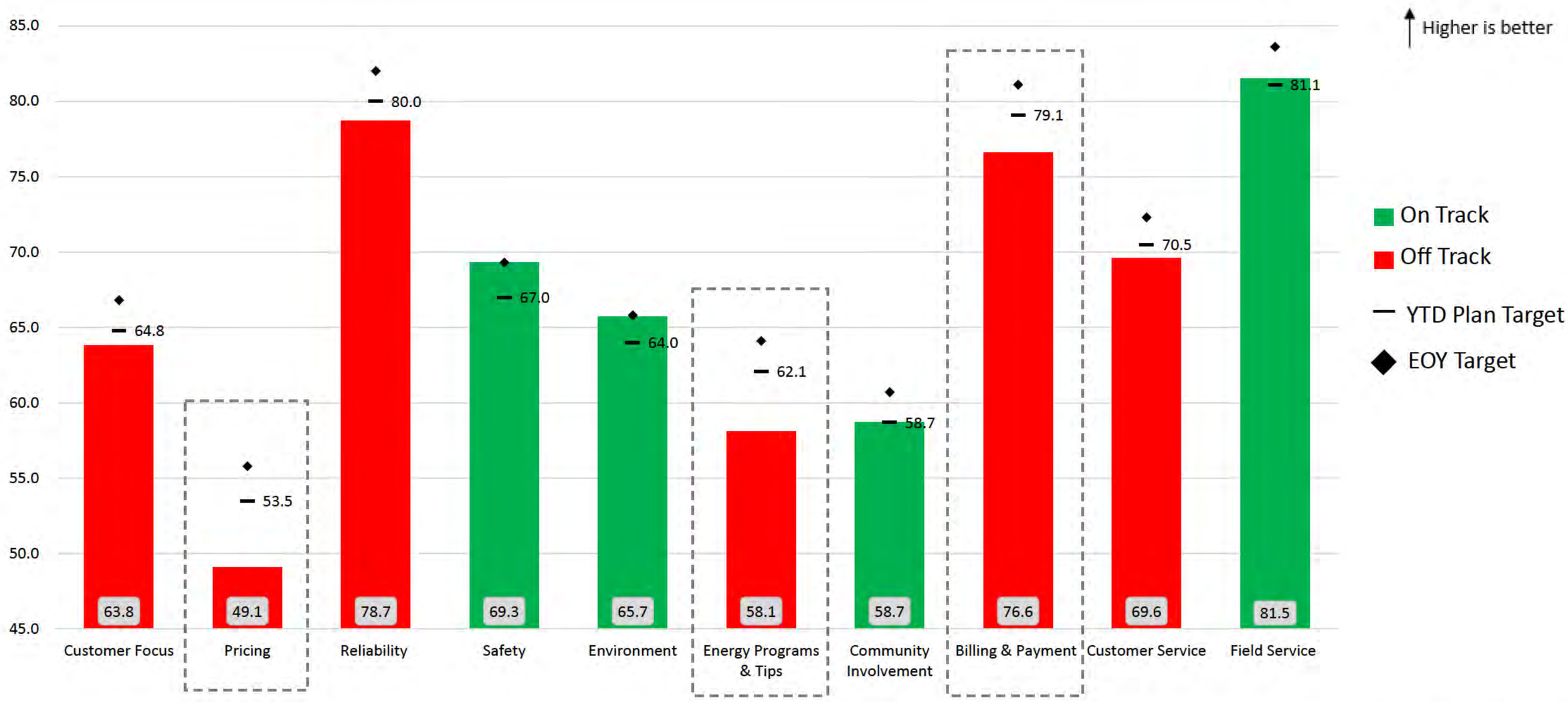
[redacted]

Lean Coach

[redacted]

CSS by Driver

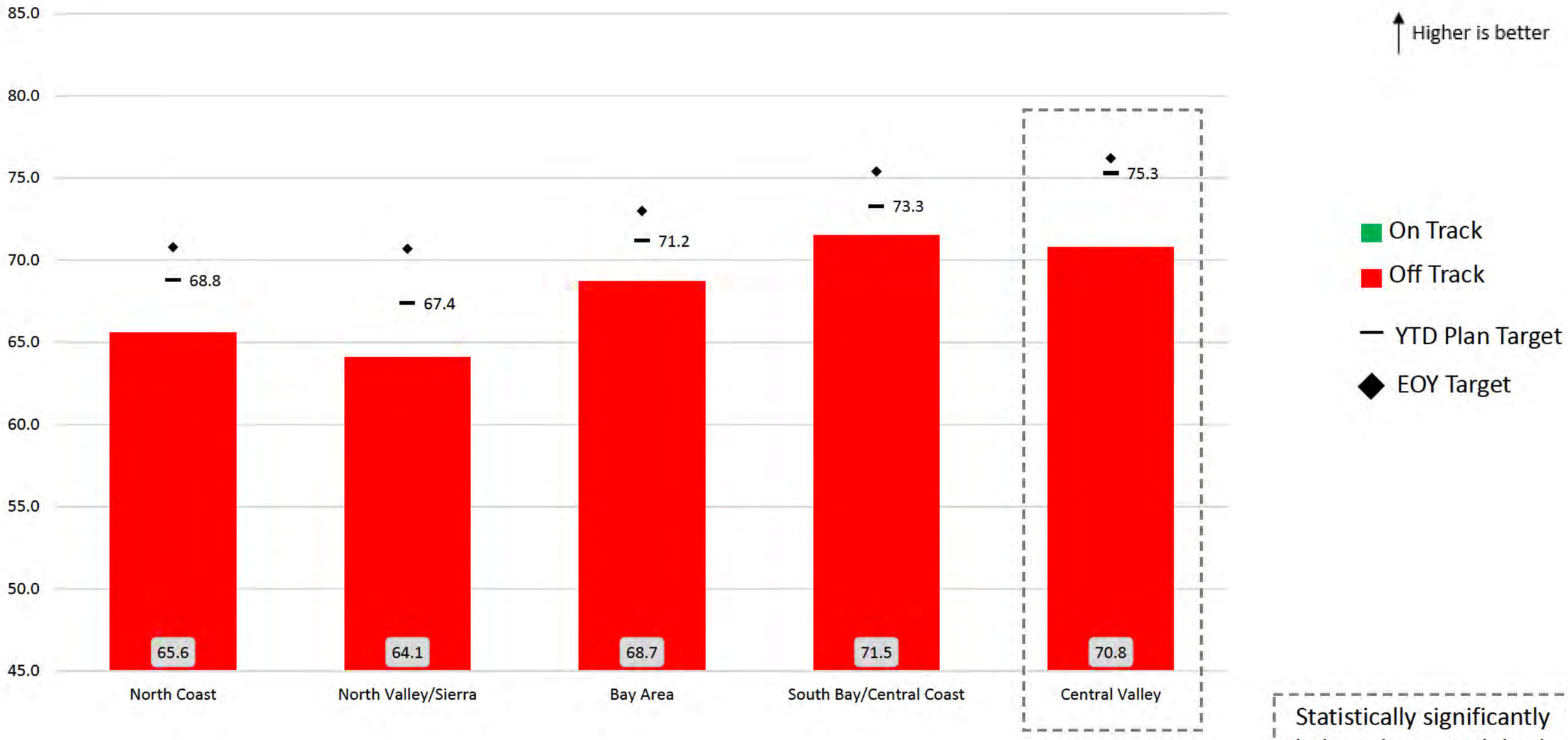
YTD through May



Statistically significantly below plan = catch back plan & problem solving

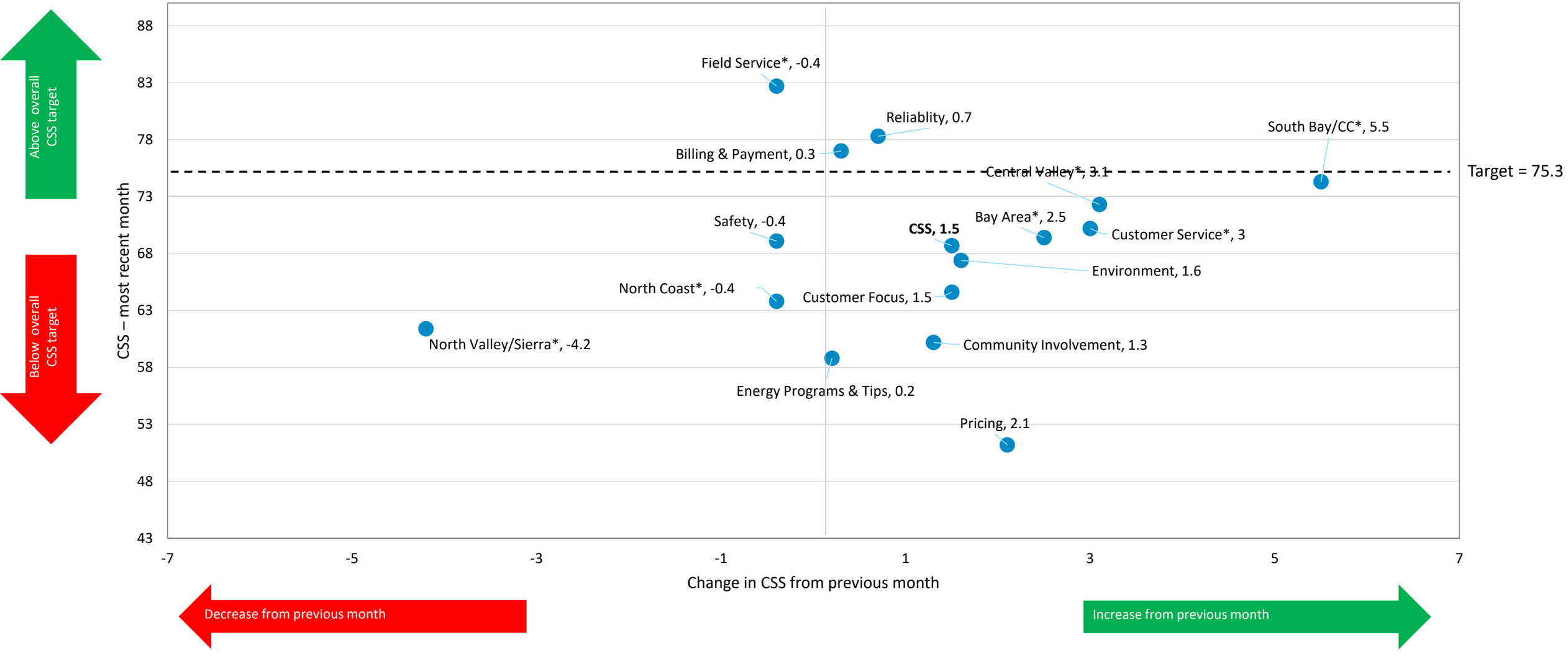
CSS by Region

YTD through May



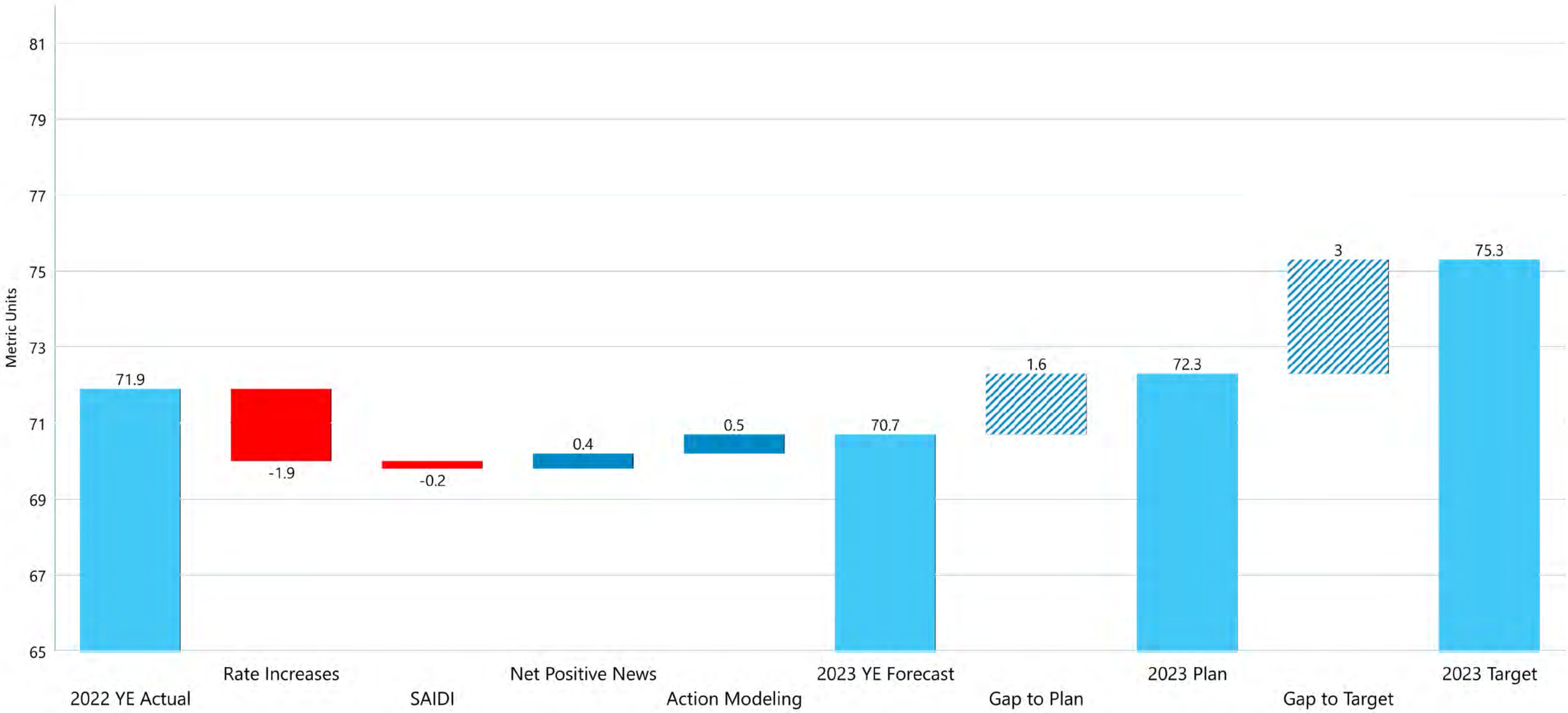
CSS Changes from April to May

2023



Statistically significant change at a 95% confidence level

CSS Year-End Forecast



Line Item No.	ACTION (Top 1-3 2023 Actions per CSS Driver)	OWNER	START DATE	END DATE	% DONE	STATUS	Expected Impact (units)	Expected Impact (date)	Comment
1	**Customer Focus**				48%				
1.1	Brand Positioning Platform		1/1/23	12/31/23	40%		TBD	12/31	Impact is based on modeling for a half year campaign. Currently in testing and analysis phase.
1.2	Brand Advertising		1/1/23	12/31/23	28%		0.500	12/31	Affordability campaign in market Developing new brand campaign to launch in Q4
1.3	Customer Transactional Surveying platform and metric		11/1/22	12/31/23	75%		0.021	12/31	All surveys in first wave launched. Actions to be derived from reporting and analysis throughout the remainder of 2023.
2	**Pricing of Services**				60%				
2.1	Winter Seasonal Campaign to Help Customers Manage Bills		1/1/23	3/31/23	100%	✓	0.050	3/31	Email and Digital
2.2	Summer Seasonal Campaign to Help Customers Manage Bills		6/1/23	8/31/23	20%		0.050	8/31	Email and Digital
2.3	Quarterly LIHEAP acquisition campaign		1/15/23	12/31/23	60%		0.015	12/31	Increase use of LIHEAP and REACH funding through email, newsletter, and integrated messaging
2.4	Increase use of budget billing		1/1/23	10/1/23	58%		0.009	10/1	Evaluate program design, new message testing, quarterly acquisition emails
2.5	Leverage Practical Problem Solving Framework to Identfify Highest Impact Interventions		3/31/23	8/1/23	52%		TBD	TBD	Currently in Step 3b of PPS (Point of Occurrence) Held two workshops with 20 participants to generate 60 new action ideas. Effort/benefit analysis in progress.
3	**Reliability of Services**				58%				
3.1	Planned Outages: - IT solution to automate customer communication based on AFW submitted & scheduled - Improved start time accuracy - Improved outage cancellation communication		3/1/22	10/1/23	67%		0.232	3/30	
3.2	L1 Unplanned Outages		10/17/22	12/1/23	57%		0.000	1/13	Project will not directly yield CSS lift but is the foundation to enable additional improvements that will.
3.3	L2+ Unplanned Outages - Roles/Responsibilities/Training		6/1/22	6/30/23	51%		0.051	6/30	
4	**Safety**				70%				
4.1	Gas Safety ROW Mailer	K. Armato	4/1/23	9/1/23	50%		0.024	9/1	Gas safety mailing to all businesses and residents within 2000ft of ROW
4.2	National Safe Digging Month Geofencing Campaign	K. Armato	3/1/23	5/1/23	100%	✓	0.008	5/1	
4.3	Targeted Dig-in Prevention Social Media Campaign	K. Armato	4/15/23	8/1/23	60%		0.095	8/1	Paid advertising on Facebook/Instagram targeting cities and audiences. Targets TBD based on dig-in data
5	**Concern for the Environment**				38%				
5.1	Complete Climate Goals Customer Message Testing		3/1/23	4/30/23	100%	✓	N/A	N/A	Ensure messaging resonates with customers
5.2	Integrate Climate Goals Messages into Media & Customer Comms		1/1/23	12/31/23	15%		TBD	12/31	Ongoing integration into related media relations; tie proof points to customer communications
5.3	Announce PG&E's Environmental Stewardship Goals		7/17/23	8/31/23	0%		TBD	8/31	Amplify announcement through PG&E & stakeholder channels

Line Item No.	ACTION (Top 1-3 2023 Actions per CSS Driver)	OWNER	START DATE	END DATE	% DONE	STATUS	Expected Impact (units)	Expected Impact (date)	Comment
6	**Energy Savings Programs & Tips**				70%				
6.1	RES: Power Saver Rewards		1/15/23	12/31/23	71%		0.126	12/31	Analysis of 2023 program completed - program participants rated CSS ~10 points higher
6.2	Energy Action Guide (2023) Marketing and Development Activities		1/2/23	12/31/23	40%		0.068	12/31	
6.3	RES: Expand weekly Home Energy Report product		3/6/23	3/31/23	100%	✓	0.052	5/1	
6.4	Contact Center talking points for ESP&T programs (See catch back plan)		2/13/23	4/21/23	100%	✓	TBD	4/21	
6.5	Analysis and targeted actions for lowest scoring custtomer segments (see catch back plan)		3/31/23	6/1/23	100%	✓	0.200	6/1	
6.6	Res Summer & Winter Video HER (Home Energy Report)		6/1/23	12/31/23	50%		0.020	12/31	Video HER to ~1M customers
7	**Community Involvement**				64%				
7.1	Signature Volunteer Event Planning and Execution (Q1-Q4 Events)		1/1/23	12/31/23	50%		TBD	3/23-12/23	Fully scheduled with RVP involvement
7.2	External Comms: Emergency Preparedness and Safety story highlighting a recipient of California Fire Foundation		3/31/23	12/31/23	60%		TBD	1/23-12/23	Grant recipient profile, RVPS included where schedule allows (ALL 5 REGIONS), Com Rel in negotiations with CFF on 2023 program ton include this element
7.3	External Comms: Economic & Community Vitality California Restaurant Foundation program		1/1/23	3/31/23	100%	✓	TBD	1/23-12/23	Ongoing release of small business-centered videos promoting assistance program, RVPS included where schedule allows (ALL 5 REGIONS)
7.4	Regional Charitable Contributions Program Execution		1/20/23	9/30/23	45%		TBD	4/23-12/23	Budget approval 2/15, winter storm relief coordination, open program 4/23
8	**Billing & Payment Options**				100%				
8.1	Rule 17.1 Bill Review / Portal implementation		1/1/22	3/31/23	100%	✓	0.005	4/3	Expected to avoid ~2500 new DB's per month
8.2	MDMS / CC&B enhancements to reduce incoming Delayed Bills		1/3/23	4/26/23	100%	✓	0.003	5/1	Expected to avoid ~2450 new DB's per month
8.3	Use of additional staffing to deive down DB backlog		1/3/23	6/30/23	80%		-0.003		Additional staffing will enable resolution of more DB's
8.4	Catchback - Actions for Call Center volume and handle times for solar & billing calls. Review communications and journey for		5/19/23	8/1/23	15%				Working with CXI to review communications and process to suggest improvements for customer satisfaction and reduced calls
9	**Customer Service**				67%		0.003		
9.1	Monthly IVR Release(s)		12/1/22	12/31/23	45%		0.003	2/1	
9.2	IVR Doctor recommendation		12/5/22	2/28/23	100%	✓	N/A	N/A	
9.3	PGE.COM website redesign project		7/1/22	12/31/23	55%		N/A	N/A	Impact will be in 2024
10	**Field Service**				100%				
10.1	Improve RTLC process communication		11/1/22	3/30/23	100%	✓	TBD	3/30	Revise SRF and Hazard notices to better inform required corrective actions
10.2	Make check box in FAS for "Call Ahead Attempted" a required field		11/1/22	3/30/23	100%	✓	TBD	3/30	Ensure GSRs follow procedure to call ahead

Line Item No.	ACTION (Top 1-3 2023 Actions per CSS Driver)	OWNER	START DATE	END DATE	% DONE	STATUS	Expected Impact (units)	Expected Impact (date)	Comment
12	**SMB**				50%				
12.1	AG Optimal Rate Campaign- Continue outreach and campaign to our small AG customers to educate on optimal rate options, TOU management, reliability and energy savings measures	[redacted]	10/1/22	3/1/23	100%		0.37	3/1	
12.2	Launch Small Business Programs- SB Equity Program, EV Pilot, SB Pilot to provide no cost compressive energy solutions to our small business customers		3/1/23	12/31/23	50%		0.210	12/31	
12.3	SMB Optimal Rate Campaign- Educate and enroll customers in the most optimal rate plan		9/1/23	10/31/23	0%		0.370	10/31	
13	**Solar**				72%				
13.1	Transition complex ABS-billed NEM to Mass Market NEM Bill Presentment through BCS and communicate change to customers once complete		5/15/22	10/1/23	67%		0.010	10/01/23	BCS go live has been pushed back to October 2023, which impacts the changes to the bill presentment.
13.2	Promote the Revamped Solar Calculator with Net Billing Tariff (NBT) -- Digital Campaign		5/1/23	12/31/23	50%		0.020	12/31	To support future Solar CSS, we are planning to augment our outreach tactics to include Digital Media.
13.3	Investigate updating the monthly Kubra emails for NEM/NEM2 customers to showcase annual True-Up and provide relevant information (e.g., Welcome Kits)		2/1/23	6/1/23	100%		TBD	n/a	Changes to the existing templates are possible, but have some limitations. Still investigating costs for development (both PG&E and Kubra) and potential implementation timeline.

Links to Supporting Materials

(Required for CSS drivers that are statistically significantly below plan)

Pricing:

Status and Trend charts

Analysis slides

TIP and Catch back Plan

Practical Problem Solving

Billing & Payment:

Status and Trend charts

Analysis slides

TIP and Catch back Plan

Problem Solving Form

Energy Savings Programs & Tips:

Status and Trend charts

Analysis slides

TIP and Catch back Plan

Problem Solving Form

Central Valley:

Status and Trend charts

TIP and Catch back Plan

Problem Solving Form

Electric 911 Emergency Response

Elec 911 Emergency Response

Updated on:
6/21/2023

Selected Report Month & Year

May 2023

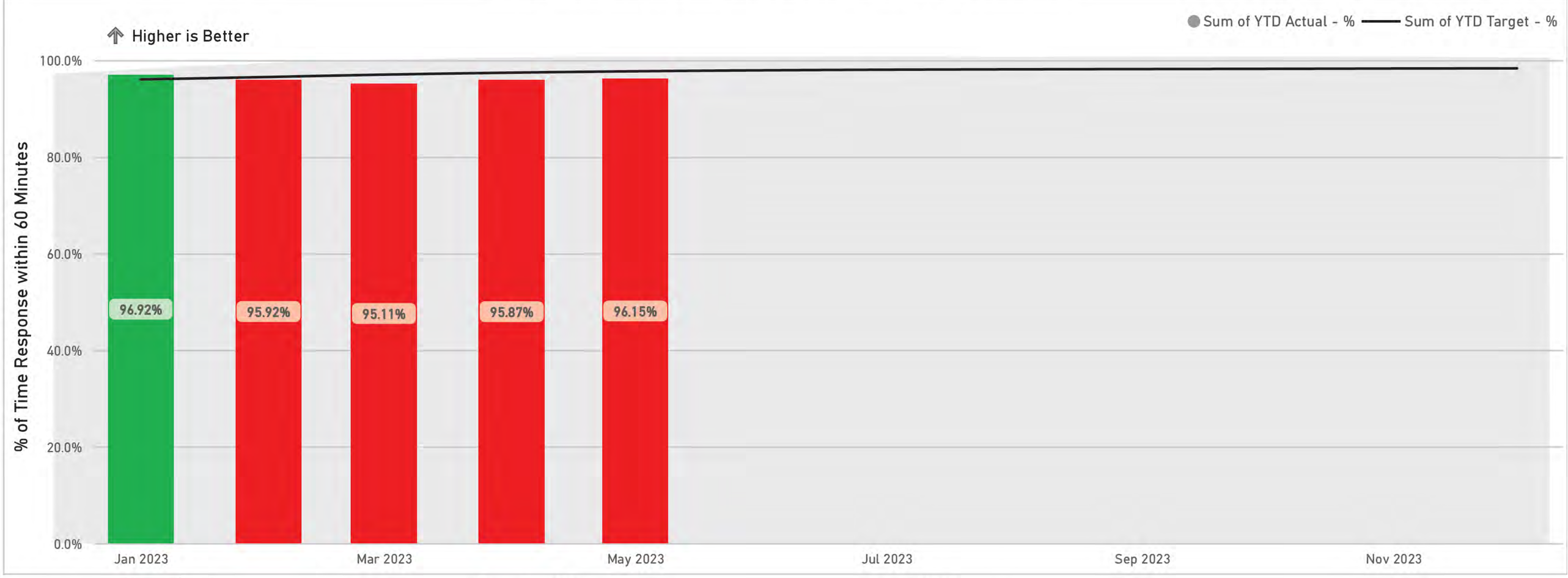
Elec 911 Emergency Response

MTD	YTD	EOY
98.73%	96.15%	96.50%
Target: 98.74%	Target: 97.69%	Target: 98.30%

Metric Definition

Measures the percentage of time that PG&E personnel respond (are on site) within 60 minutes after receiving a 911 call, with onsite defined as arriving at the premises where the 911 agency personnel are waiting

Elec 911 Emergency Response YTD Performance



Executive Owner
Sumeet Singh

Functional Area Owner
Janisse Quinones

KPI Reporter
[redacted]

Lean Coach
[redacted]

Catch Back Plan - Electric 911 Emergency Response

Updated 2023-06-21 09:14: AM

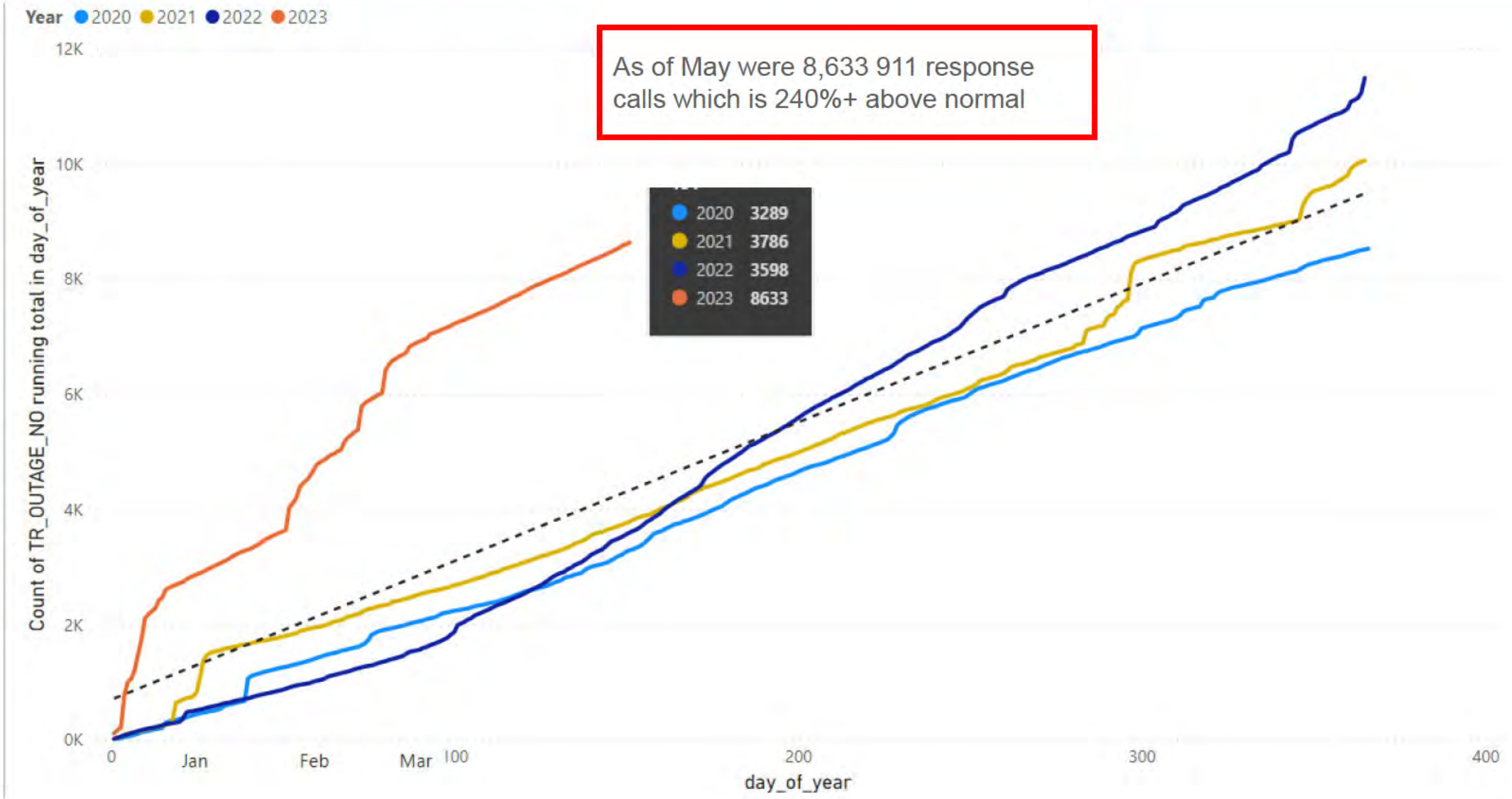
Ref No	Date Raised	Enterprise or Region	Problem/Cause	Point of Cause	Containment/Immediate Actions	Target Date	Owner	Status	Root Cause	Countermeasure	Target Date	Owner	Status	Expected Impact (Units)	Expected Impact (Date)
1	2023-01-01	Enterprise	911 Standby Resources not always staffed in locations when required at volume (large events)	911 Standby SOPP Model needs updating	Leverage recent storm data to update the 911 Standby SOPP Model	2023-06-30	[redacted]	●	Better alignment of weather forecast with 911 Standby Resource needs will enable more timely responses	Continue to refresh and train the 911 Standby SOPP Model with every major storm event to maximize PG&E's effectiveness with its resources	2023-12-31	Duffy	●	0.2%	2023-10-01

Legend: ● On Track; ▲ At Risk,with Plan; ✖ Off Track, without a Plan; ✓ Action Completed; ● N/A

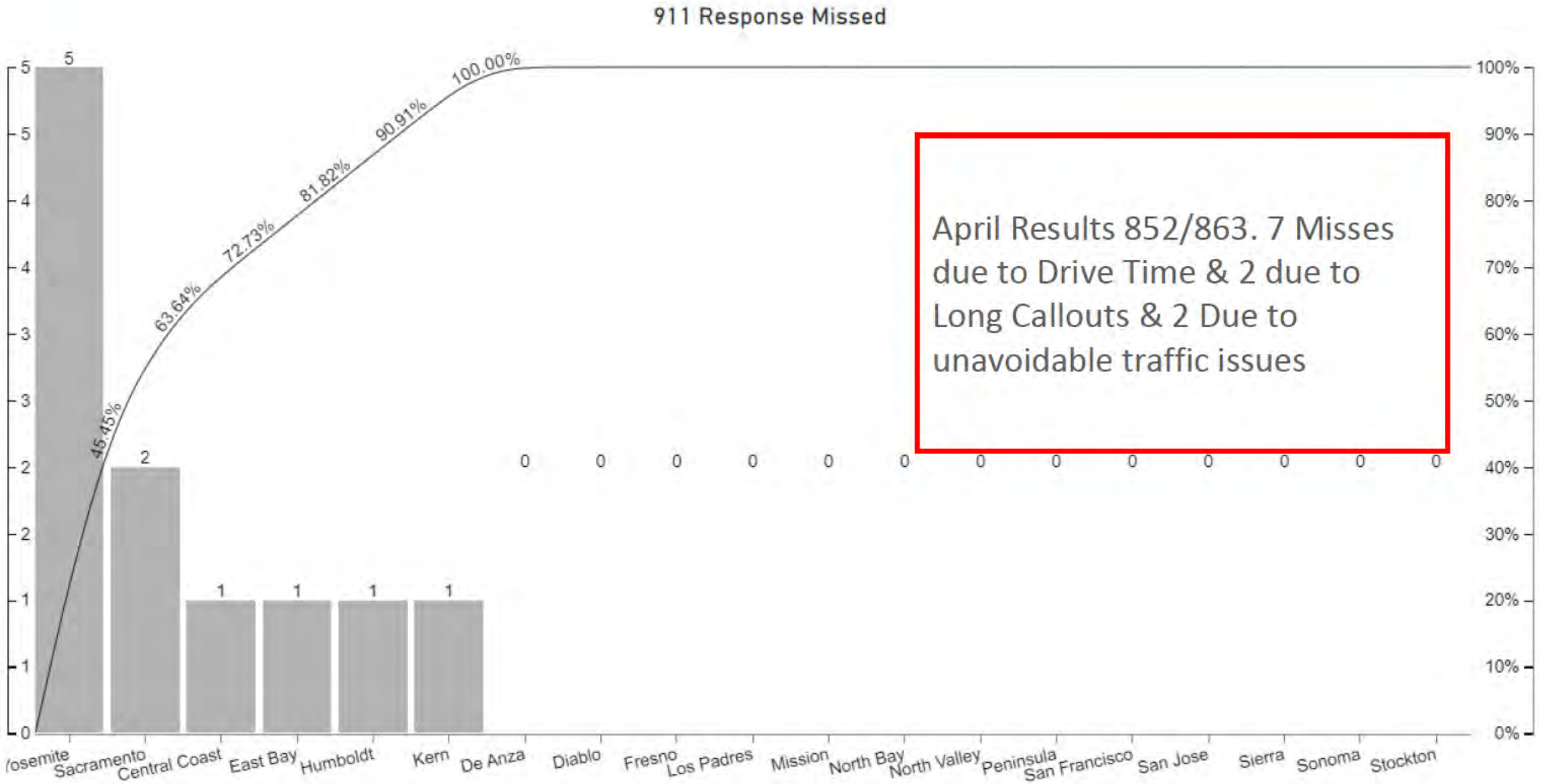
[redacted]

EO Emergency Response

January 2023 – May 2023



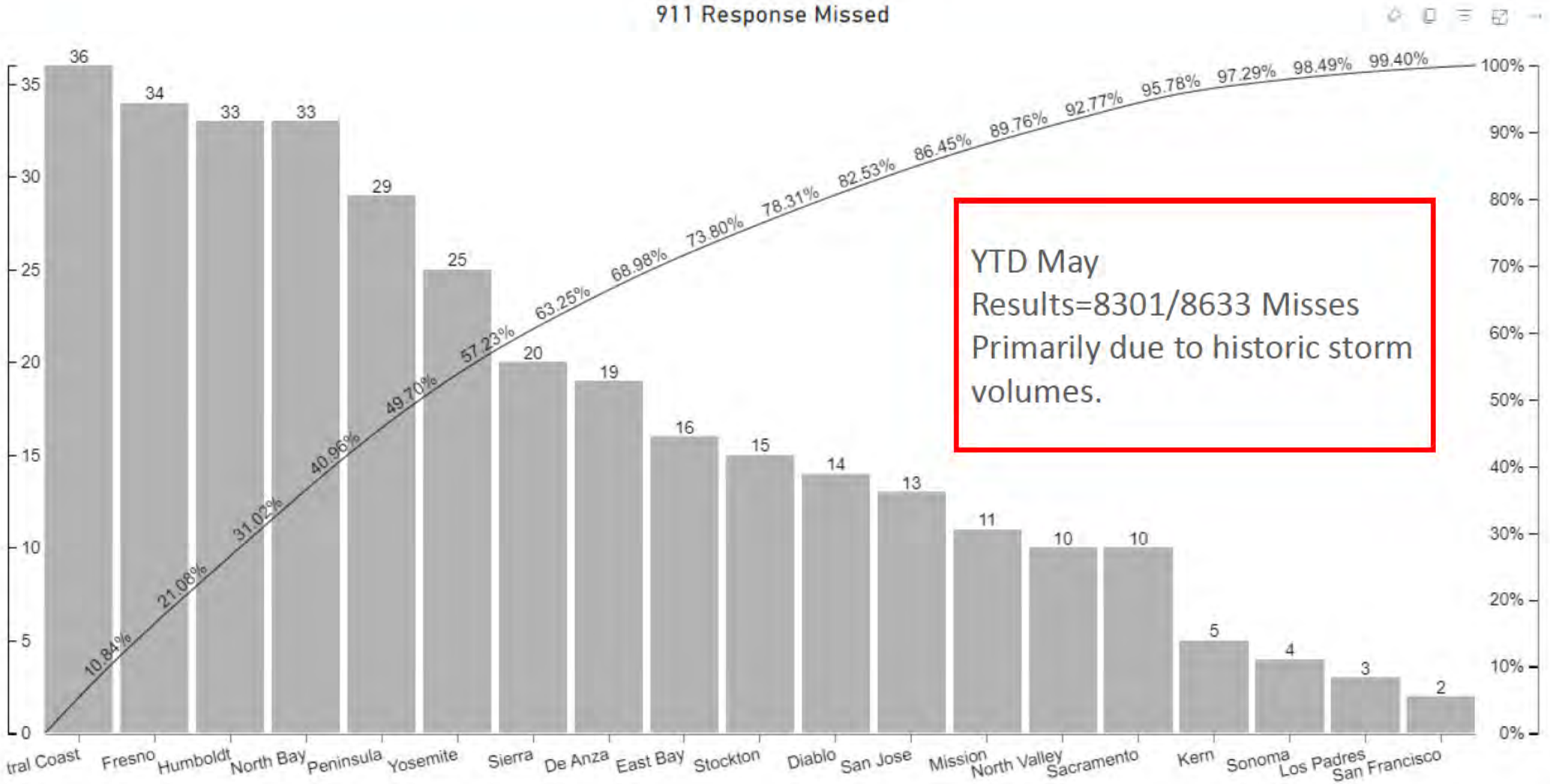
EO Emergency Response
May 2023



Updated on 4/11/2023

EO Emergency Response

January 2023 – May 2023



YTD May
Results=8301/8633 Misses
Primarily due to historic storm volumes.

Simple Problem Solving Form

for problems that are low-complexity, low-risk, and primarily within a team's span of control

Version 09_23_22

For problems that are complex or higher risk or overlap with other departments or Lines of Business, submit your problem at this Problem Solving Intake Form link. A Lean Coach will be assigned to support your team for such complex/higher-risk problems.

Lead's name: [redacted] **Team members**: New Dispatch Director
Department / Functional Area: Ele Ops Start Date: _____
Problem affects (circle or bold): Safety Quality Cost Delivery People Other

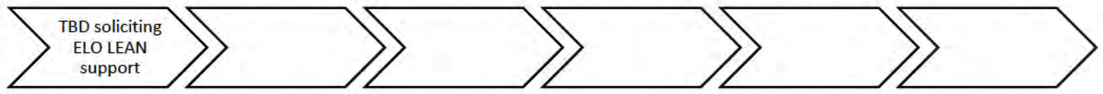
Step 0: General description of the problem / pain points (optional):
The primary problem is that during major storm events, it is very, very difficult to predict where EO Emergency Responses will be required and at what volume.

That is far and away the top driver of misses for this metric.

Step 1: Problem and Goal Statement:
Reach 98.3% for Ele Emergency Response in 2023

Step 2: Point of Occurrence POO *(where the problem is first occurring, not where first detected)*

Draw a line in the process flow where the POO and Containment (aka Band-Aid) is implemented



Step 3: Assess the process

Area	Criteria	Yes / No/ NA/ Comments
Correct Process / People	Is there a documented, standardized process to follow?	Yes
	Was the process followed?	Yes
	Is the process documented clearly and sufficiently?	Yes
	Are the coworkers qualified/trained on the standard?	Yes
Correct Tools	Are the correct tools/equipment available?	Yes
	Are the tools being used correctly for the task?	Yes
	Are coworkers trained and qualified to use the tool?	Yes
Correct Materials	Were the correct materials available for the task?	N/A
	Was the work completed as designed?	N/A
	Was the material of sufficient quantity / quality?	N/A
Correct Design	Was the correct design / instruction available?	N/A
	Was the job completed as designed?	N/A
	Was the work confirmed as complying with the design?	N/A

Every "No" is an opportunity for Simple Problem Solving

Step 4: Containment (Band-Aid) and Countermeasures (complete solutions) Action Plan

Action Item	Assigned to	Due Date	Status	Comments
911 Standby Resources not always staffed in locations when required at volume (large events)	[redacted]	6/30/2023	On Track	
911 Standby SOPP Model needs updating	[redacted]	12/31/2023	On Track	

Step 5: Standardize and Share Action Plan

Action Item (Updated process maps/ procedures etc.)	Assigned to	Due Date	Status	Comments
Soliciting ELO support for guidance				

Has the job instruction been updated? Yes No N/A
Has the product quality standard been updated? Yes No N/A
Has the job instruction training been updated? Yes No N/A
Have the preventative maintenance or process control plans been updated? Yes No N/A
Have prints, check sheets or other forms been updated? Yes No N/A
Have the changes been communicated to all stakeholders (including external teams) Yes No N/A

Number of days without repeat of the problem:

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20

Problem resolved satisfactorily? Yes, issue closed on _____ No, assigned to _____

If you were unable to solve this problem, submit a request through this Problem Solving (PS) Intake form. Lean Office will reach out to you on the next steps.

[redacted]

Questions? Email us at LeanTeam@pge.com

SAIDI

SAIDI

Updated on:
6/21/2023
Selected Report Month & Year

May 2023

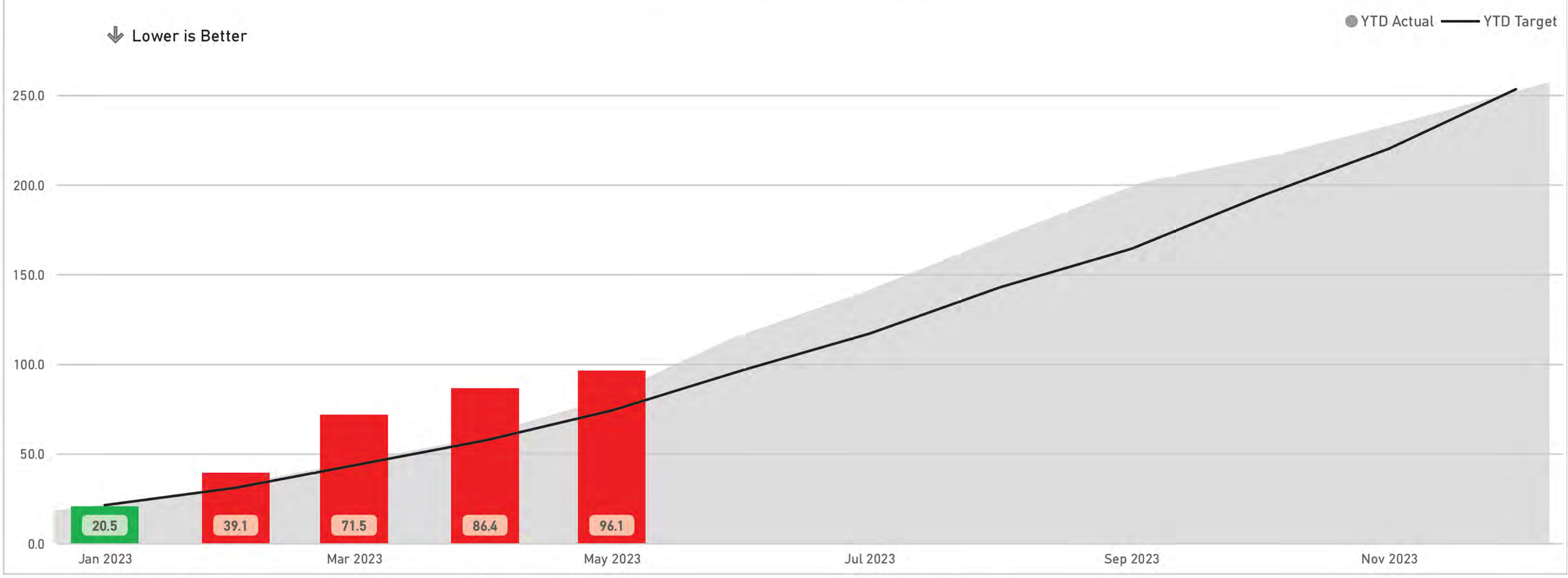
SAIDI

MTD	YTD	EOY
14.5	96.1	275.3
Target: 16.7	Target: 74.0	Target: 253.2

Metric Definition

System Average Interruption Duration Index (SAIDI) is an overall measure of system reliability that measures the number of minutes associated with both unplanned and planned sustained outages (including transformer-only outages) that the average customer experiences in a year. This metric measures all T&D outages with the exceptions noted below.

SAIDI YTD Performance



Executive Owner
Sumeet Singh

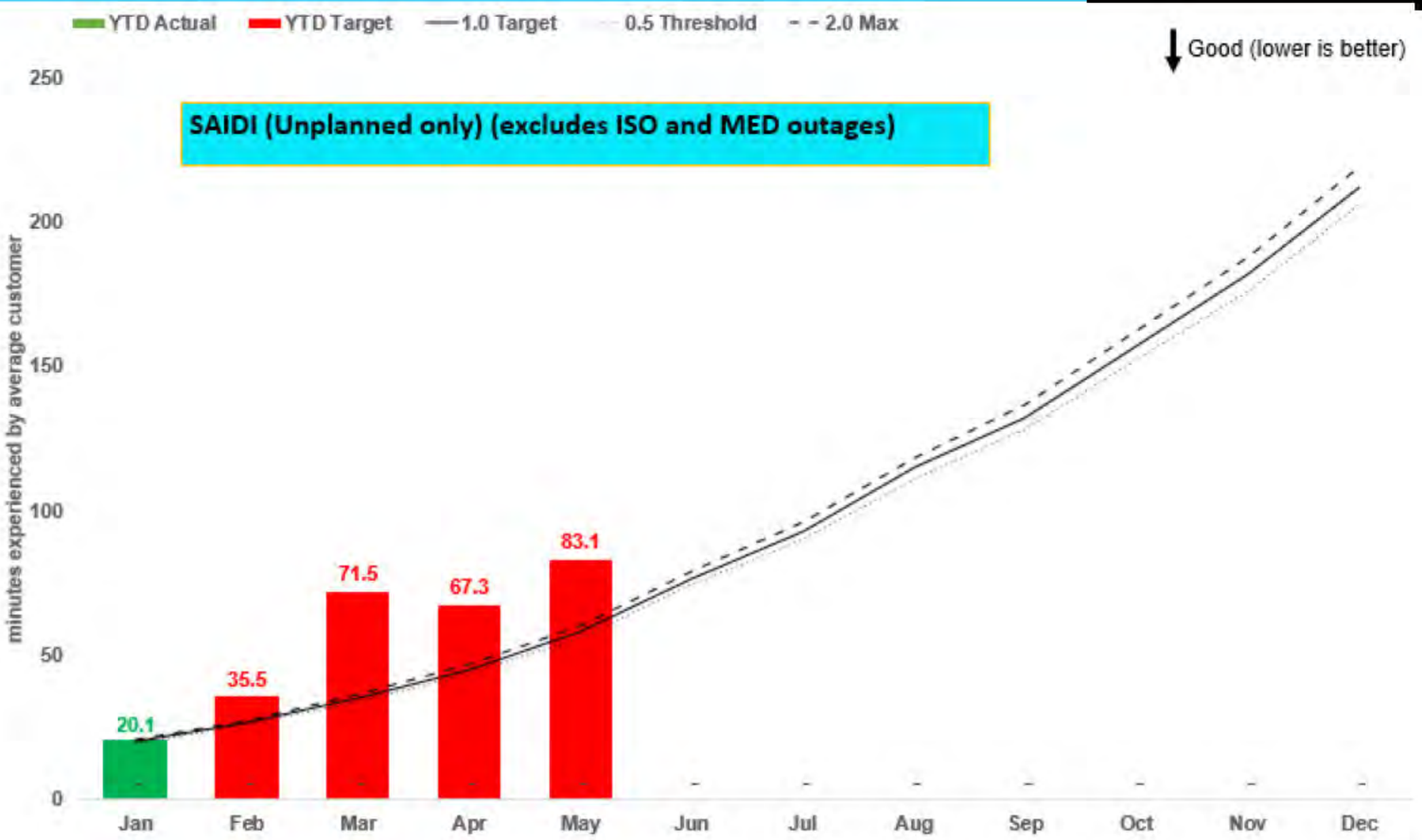
Functional Area Owner
Janisse Quinones

KPI Reporter
[redacted]

Lean Coach
[redacted]

SAIDI (Unplanned only)Performance

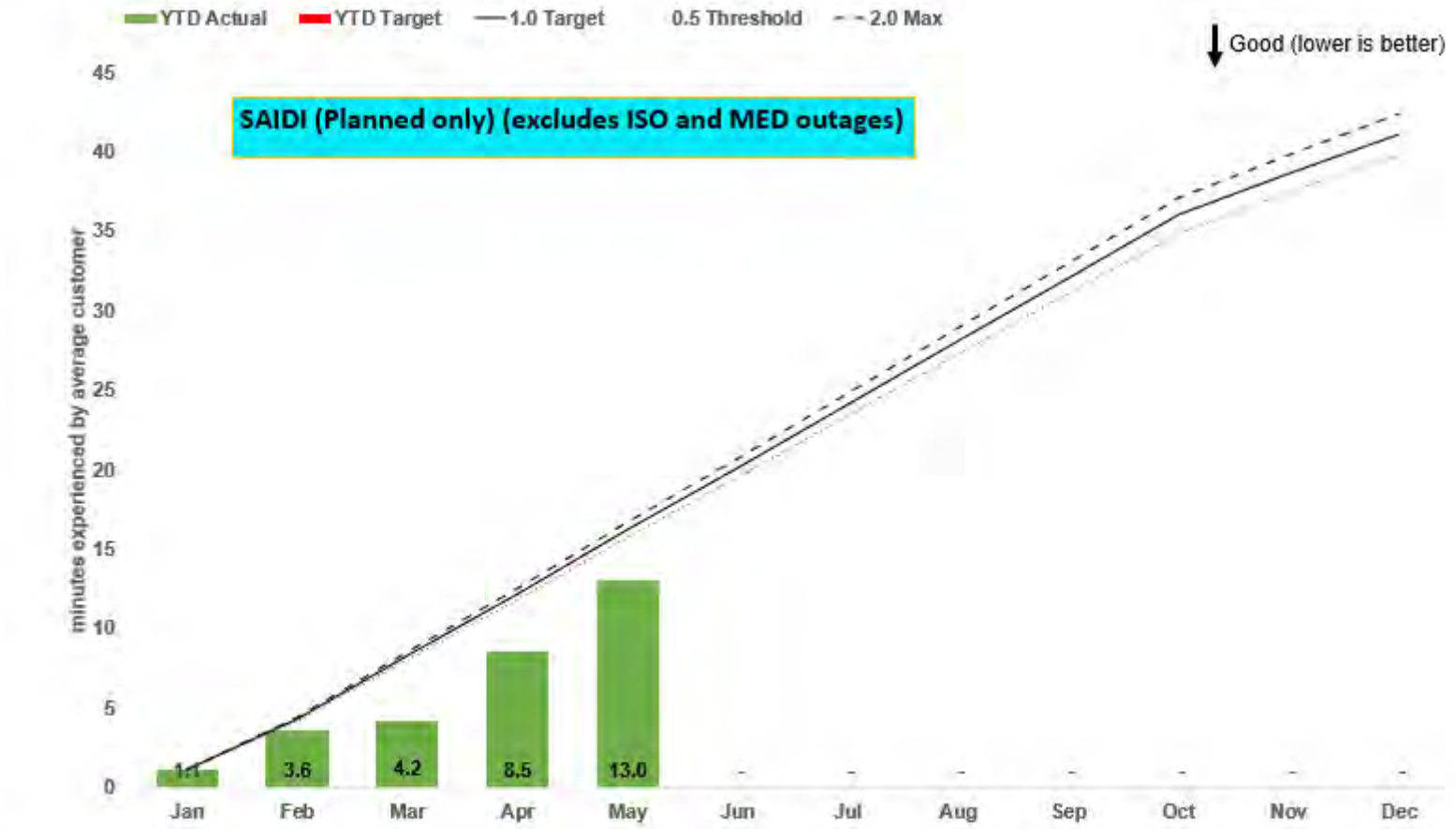
YTD May 2023 (Excluding ISO and MED)



T&D SAIDI (UNPLANNED)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2023 YTD Actual	20.1	35.5	71.5	67.3	83.1							
2.0 Max	20.7	27.4	36.2	46.6	59.6	78.9	95.8	118.4	136.5	162.1	187.4	218.9
1.0 Target	20.1	26.6	35.1	45.1	57.8	76.4	92.8	114.7	132.2	157.0	181.5	212.1
0.5 Threshold	19.5	25.8	34.0	43.8	56.0	74.2	90.1	111.3	128.3	152.3	176.1	205.7

SAIDI (Planned only) Performance

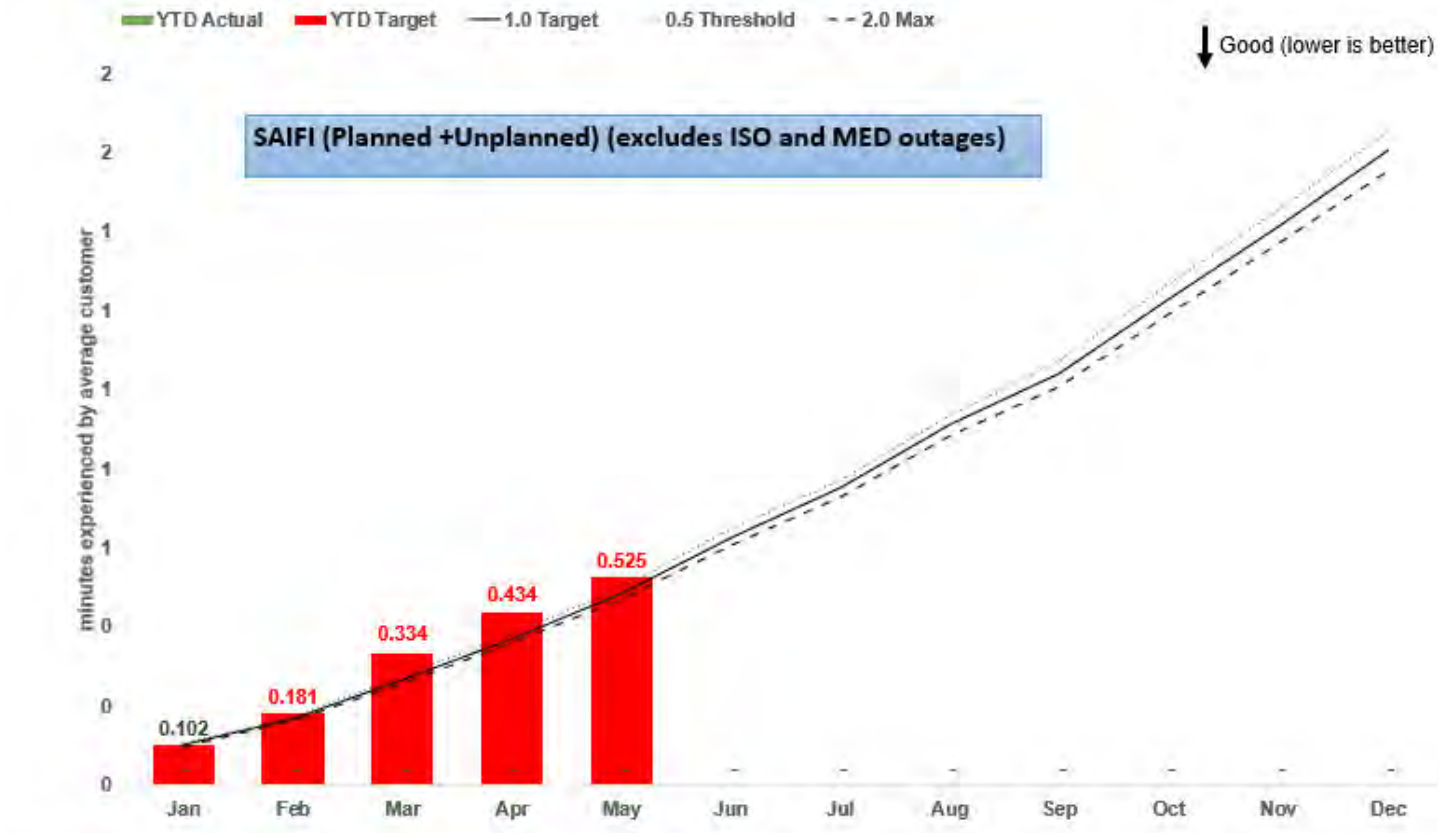
[redacted] YTD May 2023 (Excluding ISO and MED)



T&D SAIDI (PLANNED)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2023 YTD Actual	1.1	3.6	4.2	8.5	13.0							
2.0 Max	1.2	4.4	8.6	12.6	16.7	20.7	24.9	29.0	33.0	37.1	39.8	42.4
1.0 Target	1.1	4.3	8.3	12.2	16.2	20.1	24.1	28.1	32.0	36.0	38.6	41.1
0.5 Threshold	1.1	4.2	8.1	11.8	15.7	19.5	23.4	27.2	31.0	34.9	37.4	39.8

SAIFI (Planned + Unplanned) Performance

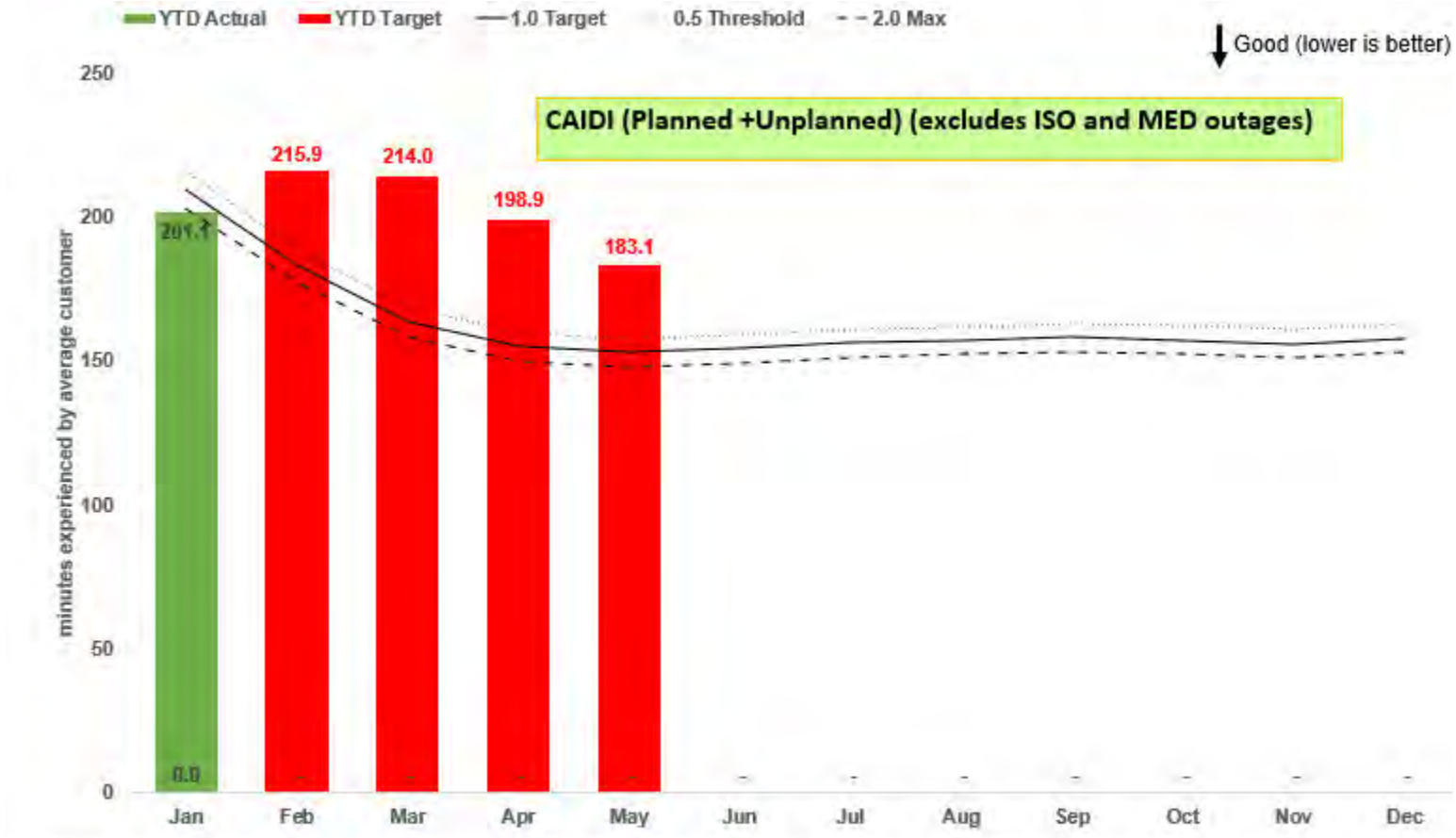
YTD May 2023 (Excluding ISO and MED)



T&D SAIFI (PLANNED + UNPLAI	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2023 YTD Actual	0.102	0.181	0.334	0.434	0.525							
2.0 Max	0.098	0.164	0.257	0.359	0.469	0.608	0.727	0.882	1.008	1.191	1.369	1.554
1.0 Target	0.101	0.169	0.265	0.371	0.484	0.627	0.750	0.910	1.040	1.229	1.413	1.604
0.5 Threshold	0.104	0.174	0.274	0.382	0.499	0.646	0.773	0.938	1.072	1.267	1.456	1.653

CAIDI (Planned + Unplanned) Performance

YTD May 2023 (Excluding ISO and MED)

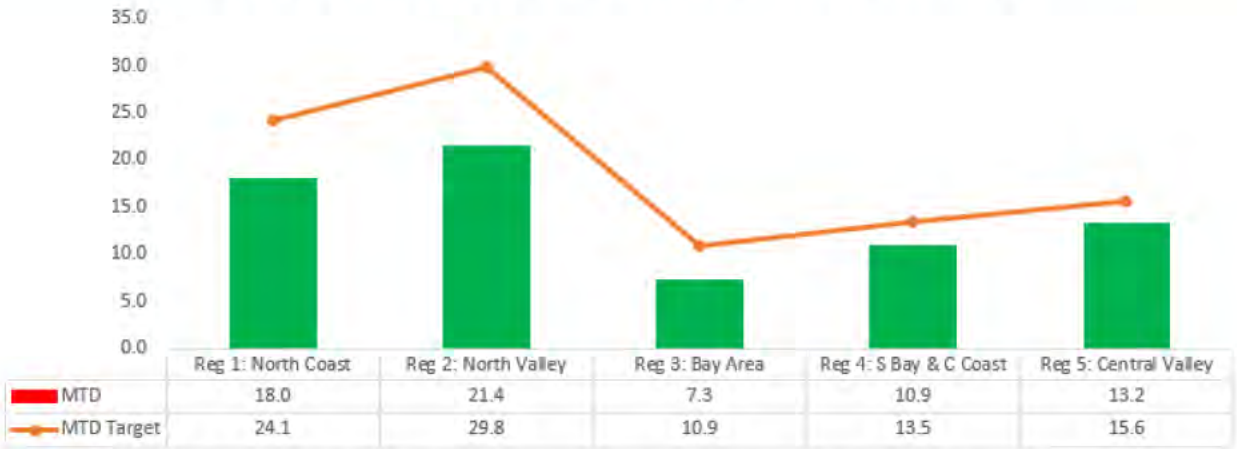


T&D CAIDI (PLANNED + UNPLA	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2023 YTD Actual	201.1	215.9	214.0	198.9	183.1							
2.0 Max	202.8	177.1	158.3	149.8	148.0	149.1	151.1	152.0	152.9	152.1	150.9	152.9
1.0 Target	209.3	182.8	163.4	154.6	152.8	153.9	155.9	156.9	157.9	157.0	155.8	157.8
0.5 Threshold	215.7	188.5	168.5	159.4	157.5	158.7	160.7	161.7	162.7	161.9	160.6	162.7

May'23 – Regional SAIDI

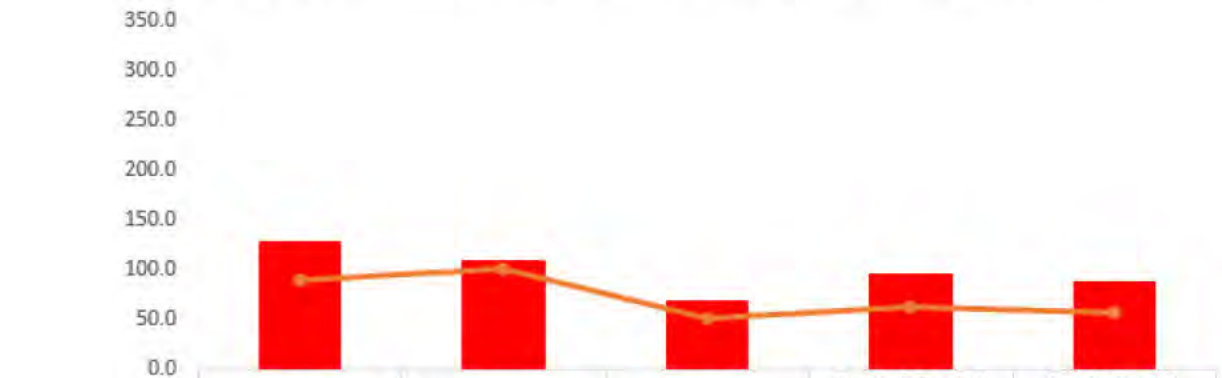
MTD vs Target and YTD vs Target

May 2023 MTD SAIDI(Planned+Unplanned)



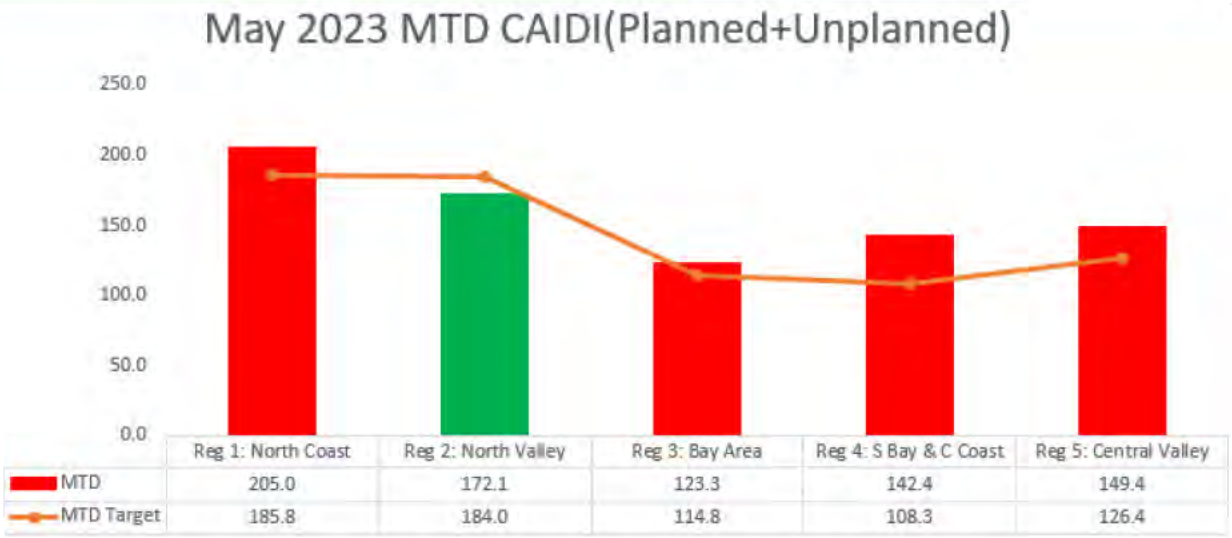
	Reg 1: North Coast	Reg 2: North Valley	Reg 3: Bay Area	Reg 4: S Bay & C Coast	Reg 5: Central Valley
MTD	18.0	21.4	7.3	10.9	13.2
MTD Target	24.1	29.8	10.9	13.5	15.6

May 2023 YTD SAIDI(Planned+Unplanned)

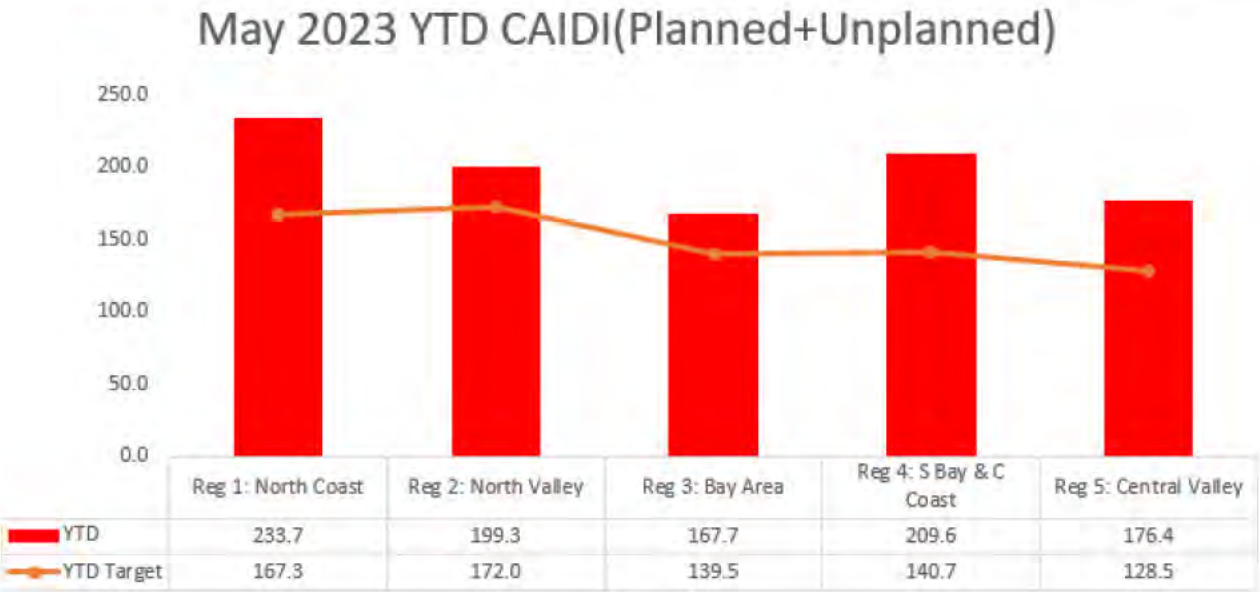


	Reg 1: North Coast	Reg 2: North Valley	Reg 3: Bay Area	Reg 4: S Bay & C Coast	Reg 5: Central Valley
YTD	128.3	109.7	69.3	96.8	88.4
YTD Target	91.1	101.1	52.4	63.3	58.4

May'23 – Regional CAIDI
MTD vs Target and YTD vs Target



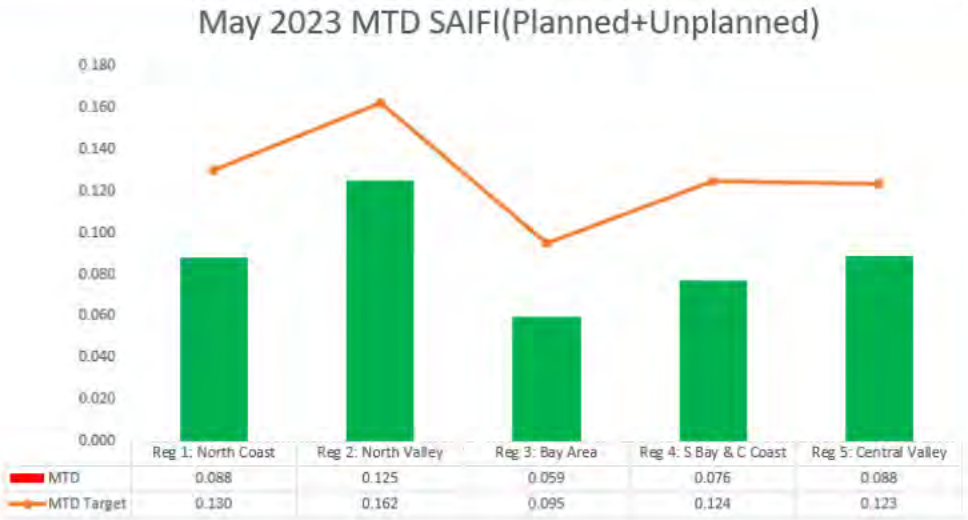
	Reg 1: North Coast	Reg 2: North Valley	Reg 3: Bay Area	Reg 4: S Bay & C Coast	Reg 5: Central Valley
MTD	205.0	172.1	123.3	142.4	149.4
MTD Target	185.8	184.0	114.8	108.3	126.4

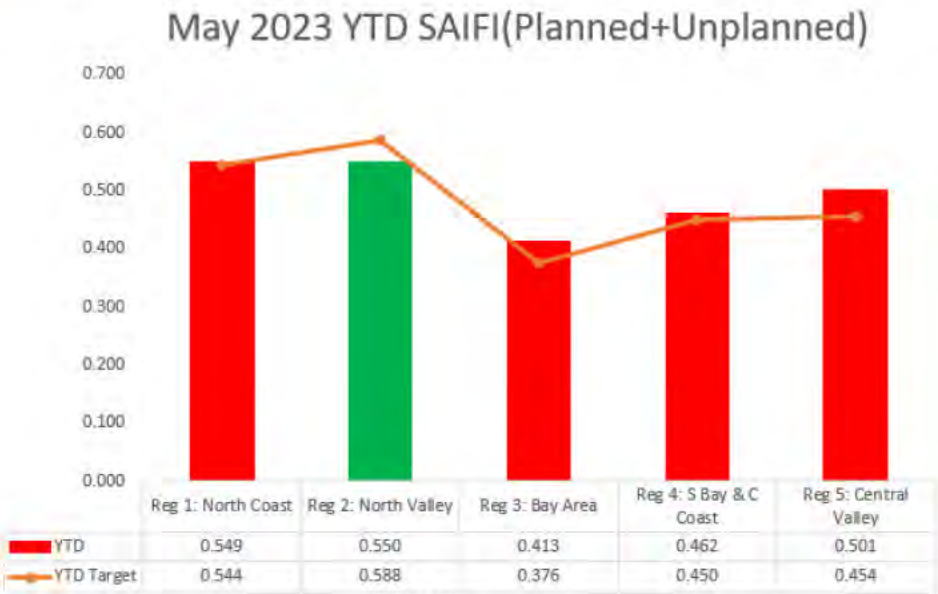


	Reg 1: North Coast	Reg 2: North Valley	Reg 3: Bay Area	Reg 4: S Bay & C Coast	Reg 5: Central Valley
YTD	233.7	199.3	167.7	209.6	176.4
YTD Target	167.3	172.0	139.5	140.7	128.5

Prepared by [redacted] on 6/12/2023

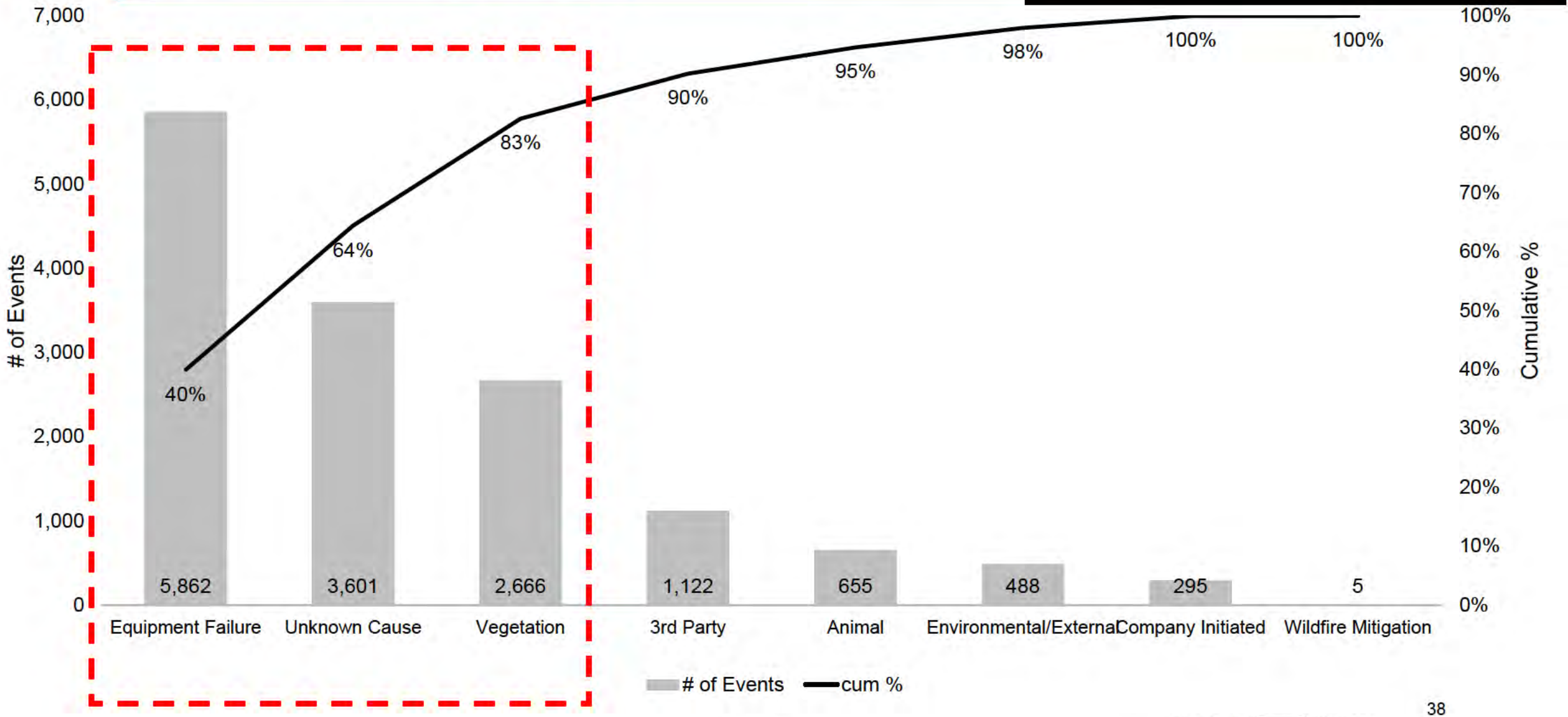
May'23 – Regional SAIFI
MTD vs Target and YTD vs Target





Outages by Cause

2023 YTD through May 31



Updated by [redacted] 6/20/23

May'23 – TIP SHEET

[redacted]

SAIDI Index
Owner Sign Off:

Line Ite... No.	ACTION	OWNER	START DATE	END DATE	% DONE	STATUS	Expected Effect (Min)	Comment (optional)
3	**(Operations Team) Enhanced Power Safety Settings (EPSS)**	[redacted]						
3.1	Collaborate with EP&S team to determine how EDO can align with EPSS improvements to reduce customer impacts.		1/19/22	7/31/23	10%	On Plan		
3.2	Determine top five EPSS areas of impact and assess for asset upgrade opportunities, understand plans for future reliability projects.		2/1/23	7/31/23	1%	On Plan		
3.3	Work with Regional VPs to determine future communication plans for heavily impacted circuits.		5/1/23	11/30/23	20%	On Plan		
3.4	Flag work on heavily impacted circuits to identify potential tags to complete while de-energized.		5/1/23	6/30/23	1%	On Plan		
3.5	Improve Response Time through additional Troublemen positions and schedule review		1/17/23	6/30/23	1%	On Plan	-0.3	
3.6								
3.7								
4	**(Operations Team) Work Bundling & Clearance Coordination (From Workplan and Finance Team's TIP)**	[redacted]						
4.1	Finalize C&RM Org Design		TBD					
4.2	Develop Implementation Plan to roll out work bundling pilot to remainder of the system		TBD					
4.3	Develop draft Roles & Responsibilities and Process Documentation to support pilot rollout to system		TBD					
4.4	Develop plan for expanding North Coast pilot to incorporate upstream stakeholders (Estimating, Environmental, Inspection)		TBD					
4.5	Phase II of North Coast Pilot		TBD				-0.1	
4.6	Phase I of System Roll-out for Work Bundling Process		TBD				-0.1	
7								
7.1	Construct 2 49X Projects for Q2	[redacted]	4/1/23	6/30/23	5%	Behind Plan - No recovery plan	-0.03	Projects were reprioritized for 2023 and because of storm, projects for CEMI were not able to be completed and are projected to have no plans to get back on track.
7.2	Construct 43 49X Projects for Q3		7/1/23	9/30/23		Not Yet Started	-0.43	Same as above
7.3	Construct 44 49X Projects for Q4		10/1/23	12/31/23		Not Yet Started	-0.23	Same as above
7.4	Construct 7 COE Work for Q2		4/1/23	6/30/23	6%	Behind Plan - No recovery plan	-0.16	Same as above
7.5	Construct 105 COE Work for Q3		7/1/23	9/30/23		Not Yet Started	-1.04	Same as above
7.6	Construct 7 COE Work for Q4		10/1/23	12/31/23		Not Yet Started	-0.02	Same as above
7.7	Construct 9 49T/49H Projects for Q2		4/1/23	6/30/23	9%	Behind Plan - No recovery plan	-0.19	Same as above
7.8	Construct 100 49T/49H Projects for Q3		7/1/23	9/30/23		Not Yet Started	-1.14	Same as above
7.9	Construct 40 49T/49H Projects for Q4		10/1/23	12/31/23		Not Yet Started	-0.19	Same as above

Updated by [redacted] 6/21/23

SAIDI Catchback Plan

Good (lower is better)

Metric : SAIDI

Owner : Janisse Quinones

Catch Back Plan

Ref No.	Date Raised	Enterprise or Region-specific	Problem / Cause	Point of Cause	Containment Section: Ideally actions completed in 24-48 hours				Countermeasure Section: Ideally plan built & documented within 1 week						
					Containment / Immediate Actions	Target Date	Owner	Status	Root Cause	Countermeasure	Target Date	Owner	Status	Expected Impact (Units)	Expected Impact (Date)
1	02/09/2023	Enterprise	Storm related outages in Q1	Weather	Push estimating and construction resources to complete 49X, 49H, 49T and COE/Tag work projects. These projects will improve CEMI.	03/31/2023	[redacted]	✔							
2	04/10/2023	Enterprise	Construction was not able to construct projects due to storms	Weather	Re-rank projects with highest CEMI/SAIDI benefits to help outlook for 2023.	04/14/2023		✔	Need projects with highest benefits to be constructed first in order to get realized benefits early and ensure completion	Continue to re-rank and hand projects in tranches to Execution team. Will need to confirm the projects are on a dashboard for continuous updates/monitoring.	04/28/2023	[redacted]	✔		
3	05/01/2023	Enterprise	SAIDI forecast is off-track if weather is similar to or worse than 2022. Reliability budget is also getting cut due to priorities and will make it difficult to meet SAIDI target with projects in the work plan alone.	Weather and Budget	To improve SAIDI, a CAIDI plan is being developed by operations team to improve reliability in Circuit Breaker and Recloser zones.	06/30/2023		●							
4															

Updated by [redacted] 6/20/23

Simple Problem Solving Form

for problems that are low-complexity, low-risk, and primarily within a team's span of control

Version 09_23_22

For problems that are complex or higher risk or overlap with other departments or Lines of Business, submit your problem at this Problem Solving Intake Form link. A Lean Coach will be assigned to support your team for such complex/higher-risk problems.

Lead's name: [redacted] **Team members:** _____

Department / Line of Business: Electric Reliability **Start Date:** 5/2/23

Problem affects (circle or bold): Safety **Quality** Cost Delivery People Other

Step 0: General description of the problem / pain points (optional):
Continuous severe weather in Q1 was the Major contributor to the degradation of the SAIDI Metric.

Step 1: Problem and Goal Statement:
In Q1 this year, the entire State of CA experienced severe winter storm weather with 71 weather days of the 90 days in Q1. As a result, the System SAIDI(Planned + unplanned) YTD has seen increased restoration time and the metric performance has exceeded the YTD [1.0] Target by 22.1 customer SAIDI Minutes. The Metric is recoverable if we continue to construct the projects identified to mitigate the excess SAIDI minutes, manage the response and restoration time of both planned and unplanned work, bundling some planned work to the best of our abilities, and lastly relying on better weather when compared to 2022.

Step 2: Point of Occurrence POO *(where the problem is first occurring, not where first detected)*

Draw a line in the process flow where the POO and Containment (aka Band-Aid) is implemented

Step 3: Assess the process

Area	Criteria	Yes / No/ NA/ Comments
Correct Process / People	Is there a documented, standardized process to follow?	Yes
	Was the process for ORT followed?	Yes
	Is the process documented clearly and sufficiently?	Yes
	Are the coworkers qualified/trained on the standard?	Yes
Correct Tools	Are the correct tools/equipment available?	Yes
	Are the tools being used correctly for the task?	Yes
	Are coworkers trained and qualified to use the tool?	Yes
Completion Timeline	Were the job completed on time?	No – the anticipated date changed due to reprioritization
	Was the job reprioritized?	Yes
		Yes
Correct Design	Was the correct design / instruction available?	Yes
	Was the job completed as designed?	No – Jobs for reliability need to be completed
	Was the work confirmed as complying with the design?	Yes

Every "No" is an opportunity for Simple Problem Solving

[redacted]

Step 4: Containment (Band-Aid) and Countermeasures (complete solutions) Action Plan

Action Item	Assigned to	Due Date	Status	Impact	Comments
Execution team to complete all reliability projects outlined – 49X, 49T, 49H, COE, Bird Tag and more	Operations, Construction & Maintenance	12/31/23	Change	None	Work plan has changed due to reprioritization. See below.
Re-evaluate Veg management in areas where improvement can be made	Veg Management	4/30/23	Complete	None	Veg Management Director already has work plan to address and patrol poor circuits
CAIDI Plan – Improve overall restoration time to outages	[redacted]	6/30/23	In Progress	-2 Min	
Evaluate customers where reliability impacts are highest every month and address in ORT process. Work with M&C and other teams to complete short-term work.	ORT Team	6/30/23	In Progress	-2 Min	Short term and long term solutions are developed.
Work plan to be reprioritized to optimize the largest benefit to help meet the EOY targets	[redacted]	7/31/23	Complete	See below	
Complete the Re-prioritized work plan.	Operations, Construction &	12/31/23	In Progress	-3 min	

Step 5: Standardize and Share Action Plan

Action Item (Updated process maps/ procedures etc.)	Assigned to	Due Date	Status	Comments
Standardized process for break-in work for circuits with high impacted reliability	Veg Management	5/30/23	Cancel	No longer needed.
Asset Failure Analysis team needs to pro-actively look at assets that are likely to fail and replace accordingly or assess issues with constructions that have allowed for prolonged issues to occur	Asset Failure Analysis	4/30/23	N/A	Difficult to bring in additional funding/resources for this work type at this moment due to reprioritization.
Create and construct emergent Reliability work based on reliability impacts seen throughout the year.	[redacted]	7/30/23	In Progress	

Has the job instruction been updated? Yes **No** N/A
Has the product quality standard been updated? Yes **No** N/A
Has the job instruction training been updated? Yes **No** N/A
Have the preventative maintenance or process control plans been updated? Yes **No** N/A
Have prints, check sheets or other forms been updated? Yes **No** N/A
Have the changes been communicated to all stakeholders (including external teams) Yes **No** N/A

Number of days without repeat of the problem:

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20

Problem resolved satisfactorily? Yes, issue closed on _____ No, assigned to _____

CEMI 5/10

Updated on:
6/21/2023

CEMI 5/10

Selected Report Month & Year

May 2023

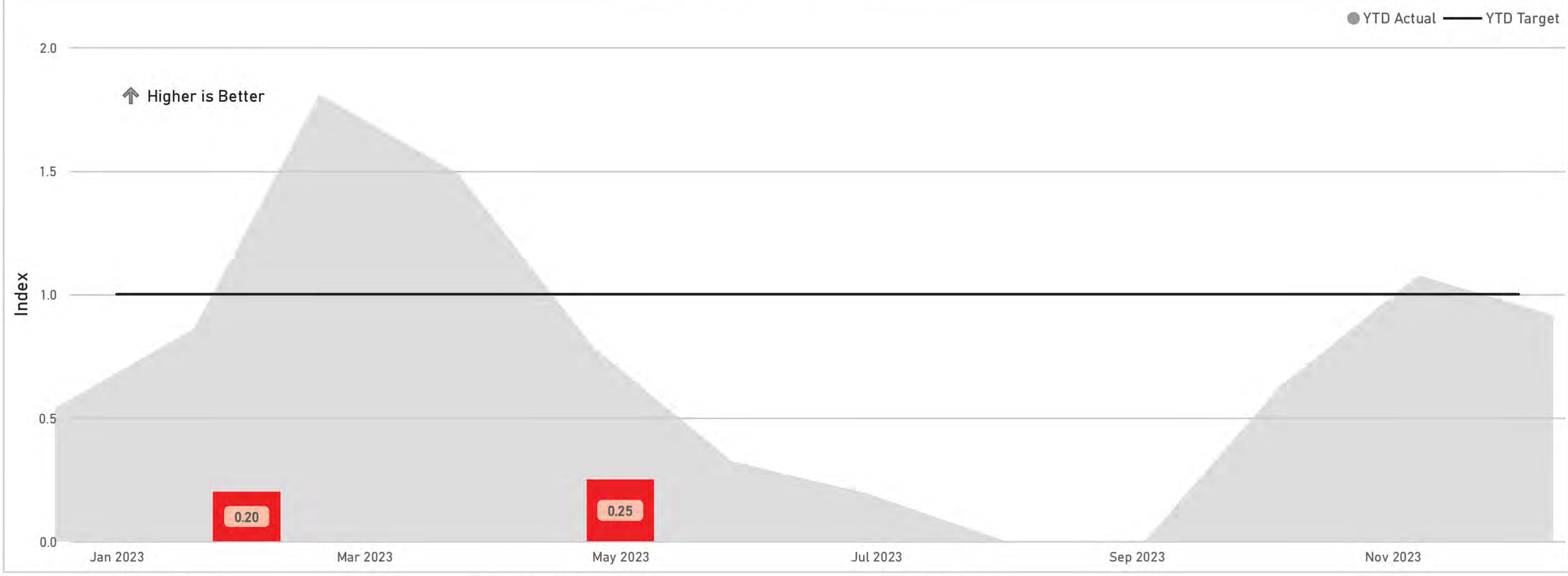
CEMI 5/10

YTD	EOY
0.25	0.50
Target: 1.00	Target: 1.00

Metric Definition

CEMI-5 is the total number of customers experiencing 5 or more sustained interruptions (planned/unplanned) and CEMI-10 is the total number of customers experiencing 10 or more sustained interruptions (planned/unplanned); both metrics are reported as a YTD measure for a rolling 12-month period. Metric calculated as a composite index with total CEMI-5 and CEMI-10 scores each contributing 50%.

CEMI 5/10 Rolling 12 Months



Executive Owner
Jason Glickman

Functional Area Owner
Joe Bentley

KPI Reporter
[redacted]

Lean Coach
[redacted]

Purpose: Delivering for our hometowns

CEMI (Unplanned and Planned) Rolling 12 Month, # Customers

		CEMI-5		CEMI-10	
		HFTD	Non-HFTD	HFTD	Non-HFTD
06/01/22 - 05/31/23	Actual Performance	386,185	74,183	73,941	2,682
06/01/22 - 05/31/23	Target [1.0]	378,181	64,560	66,623	1,745

COMPOSITE STIP SCORE IS [redacted]

YTD CEMI Count Status
(not rolling 12)

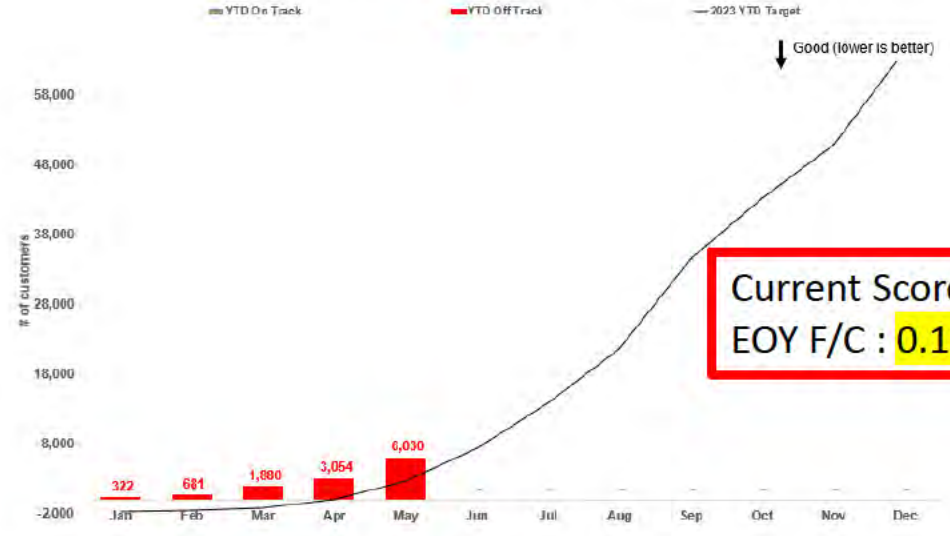
HFTD circuits

CEMI-5

Current Score : 0.0
EOY F/C : 0.175

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2023 YTD Perf	230	1,857	9,461	16,793	29,256							
2023 YTD Target	0	0	0	630	20,196	51,546	103,542	178,327	259,357	302,049	348,875	378,117
2022 YTD Perf	2,488	2,864	6,094	12,251	31,826	63,185	115,190	189,984	271,024	313,725	360,559	389,811
2023 YTD Perf (%↑)		707.4%	409.5%	77.5%	74.2%							

Non-HFTD circuits



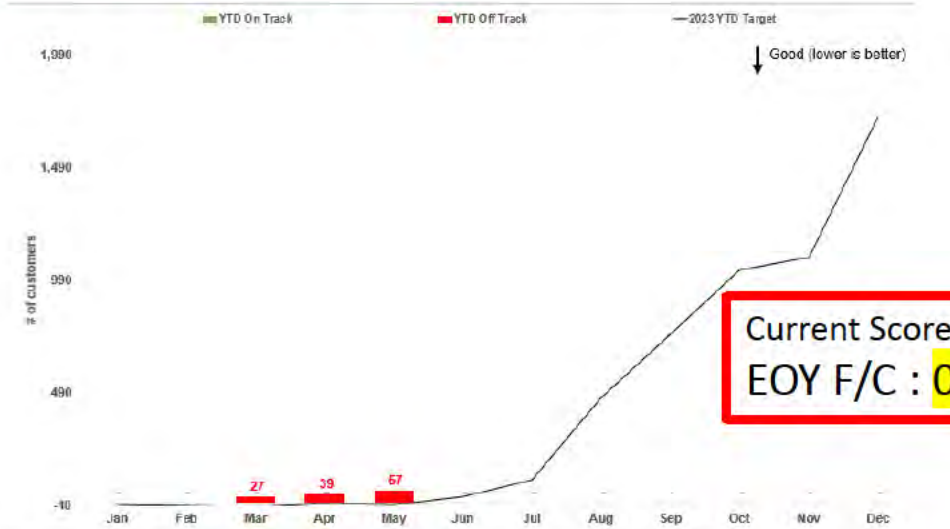
Current Score : 0.0
EOY F/C : 0.125

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2023 YTD Perf	322	681	1,880	3,054	6,030							
2023 YTD Target	(1,815)	(1,591)	(1,257)	20	2,717	7,321	13,868	21,552	34,537	43,254	50,865	64,460
2022 YTD Perf	22	260	608	1,900	4,611	9,229	15,791	23,489	36,488	45,219	52,845	66,454
YTD Perf (%↑)		111.5%	176.1%	62.5%	97.4%							

CEMI-10

Current Score : 0.0
EOY F/C : 0.125

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2023 YTD Perf	0	0	36	309	544							
2023 YTD Target	(1,813)	(1,808)	(1,805)	(345)	175	2,704	6,013	18,882	34,416	46,199	56,695	66,469
2022 YTD Perf	0	27	52	1,534	2,077	4,628	7,959	20,850	36,406	48,211	58,729	68,525
2023 YTD Perf (%↑)				757.3%	76.3%							

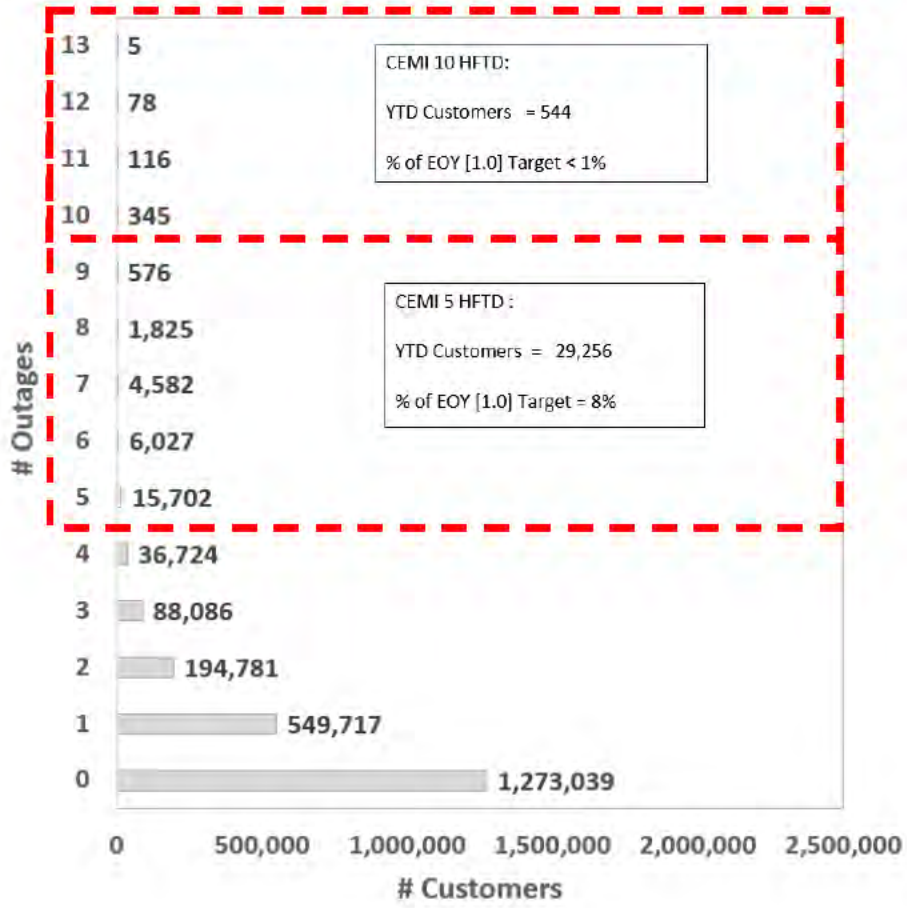


Current Score : 0
EOY F/C : 0.075

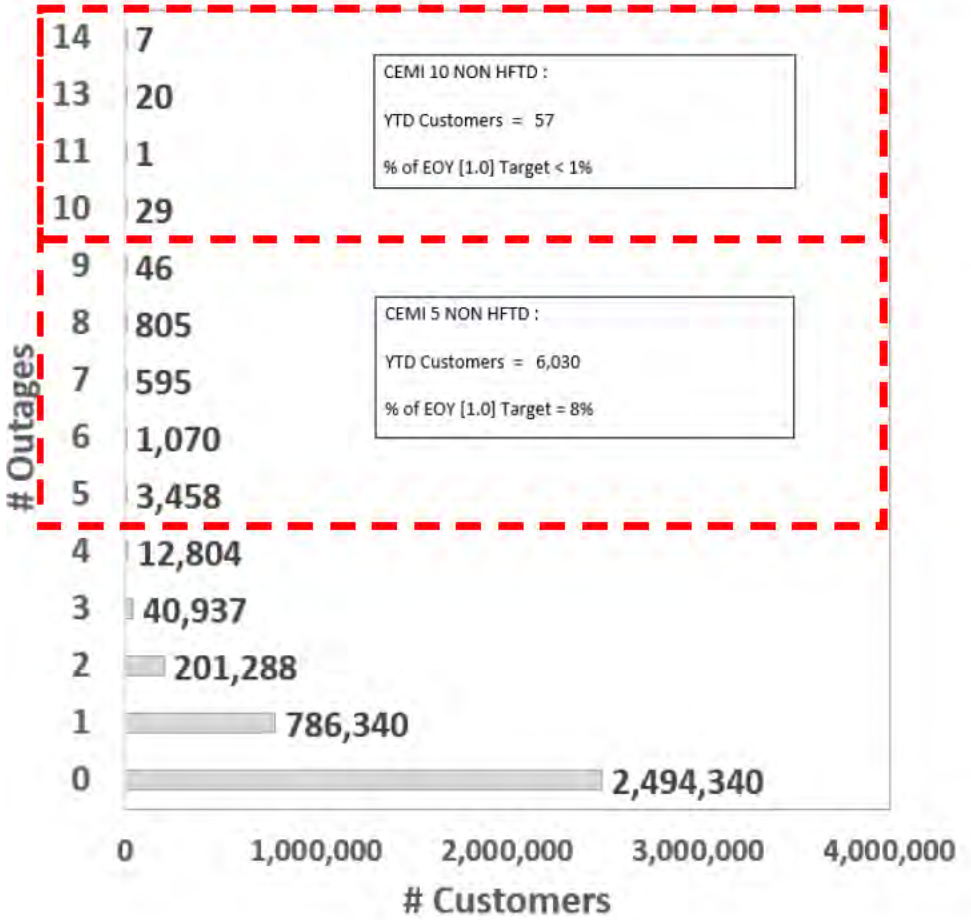
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2023 YTD Perf	0	0	27	39	57							
2023 YTD Target	(8)	(12)	(18)	(2)	(5)	30	101	469	751	1,034	1,094	1,717
2022 YTD Perf	0	0	0	19	20	59	134	506	793	1,080	1,143	1,770
YTD Perf (%↑)				44.4%	46.2%							

CEMI – YTD May 2023 (Excl MED & ISO outages) – FYI only since this is not the definition of the CEMI metric & Targets are not available.

HFTD Circuits

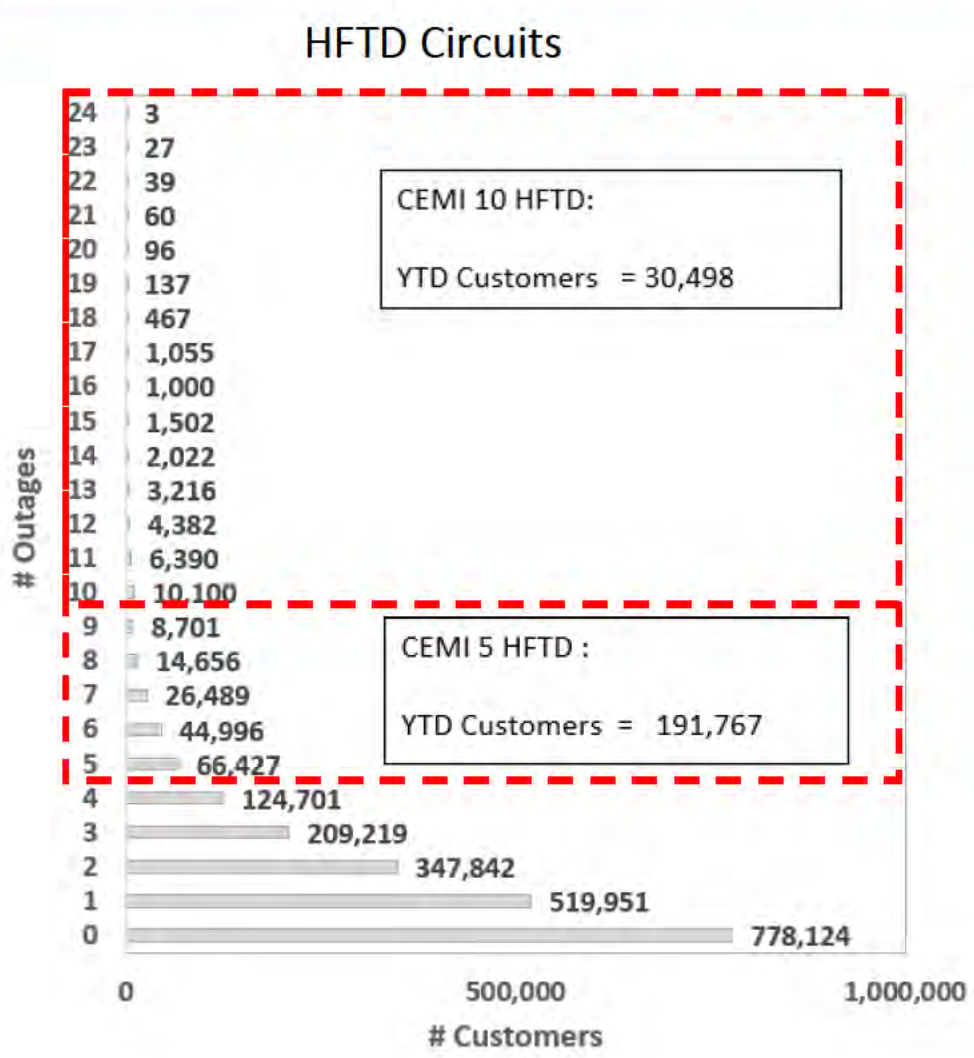


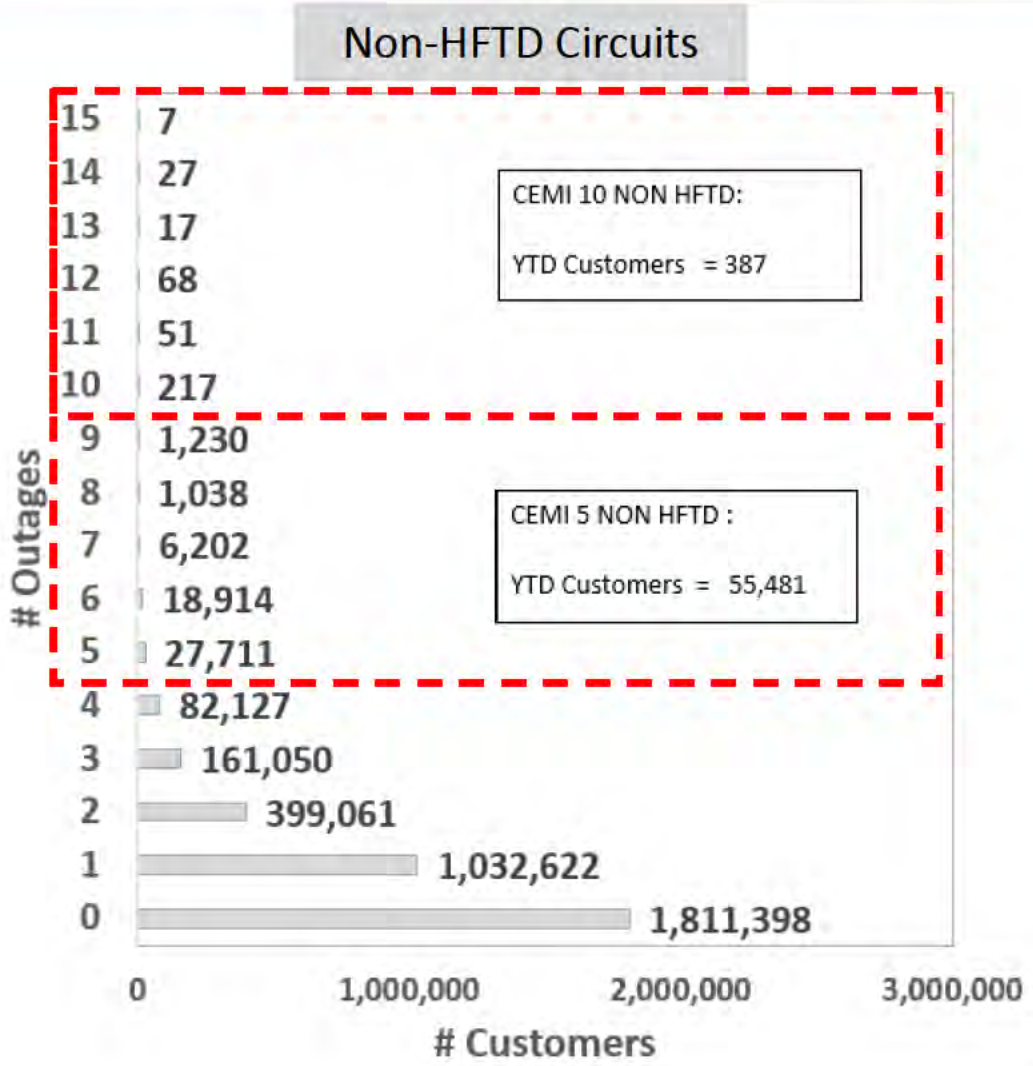
Non-HFTD Circuits



Updated by [redacted] on: 6/12/2023

CEMI – YTD May 2023 (no exclusions) – FYI only since this is [redacted] not the definition of the CEMI metric & Targets are not available.

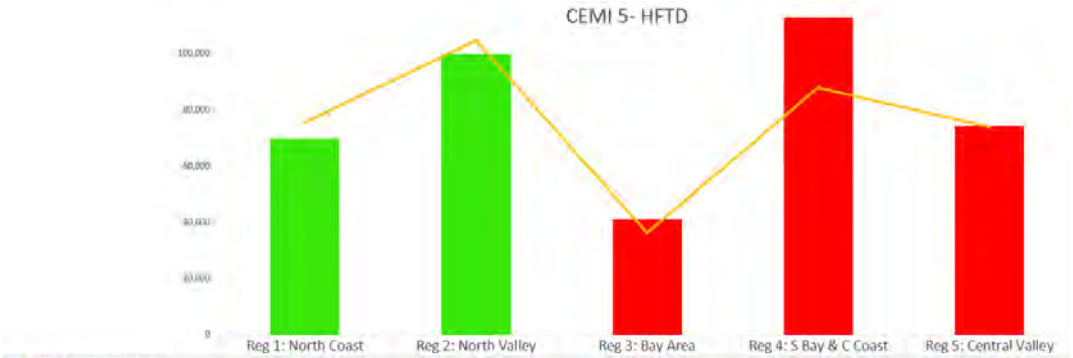




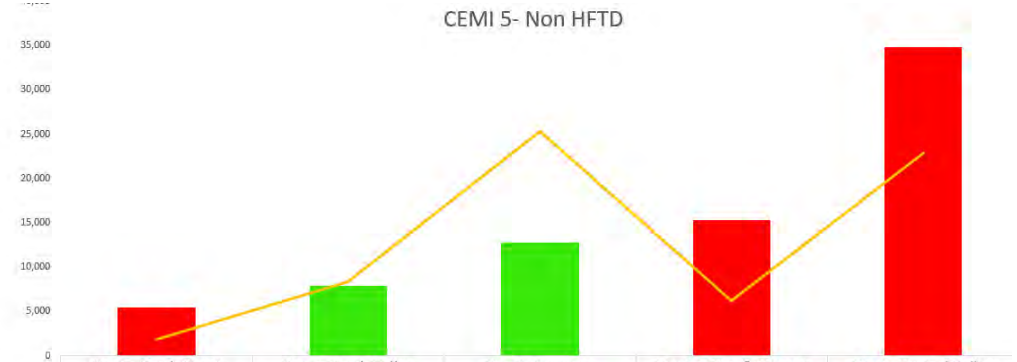
Updated by [redacted] on: 6/12/2023

[redacted] Internal

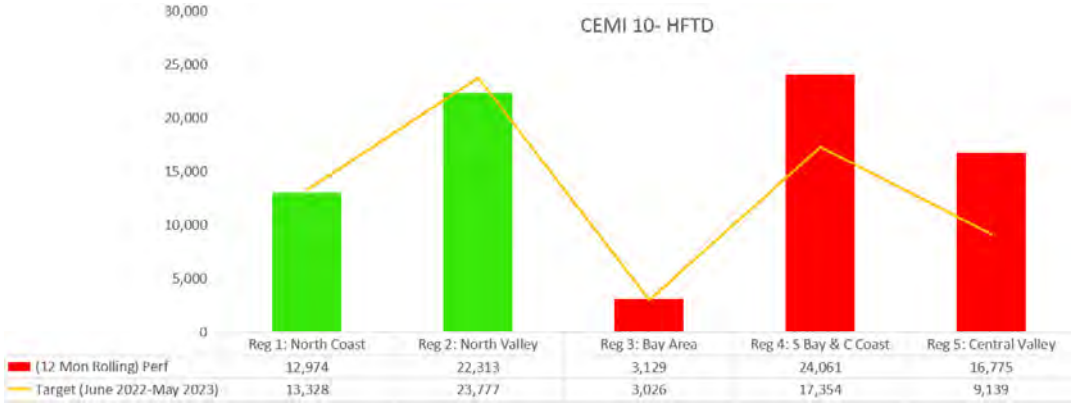
CEMI – May 2023 Regional Performance vs Target – Rolling 12 Months (June 2022 to May 2023) – per definition of the metric



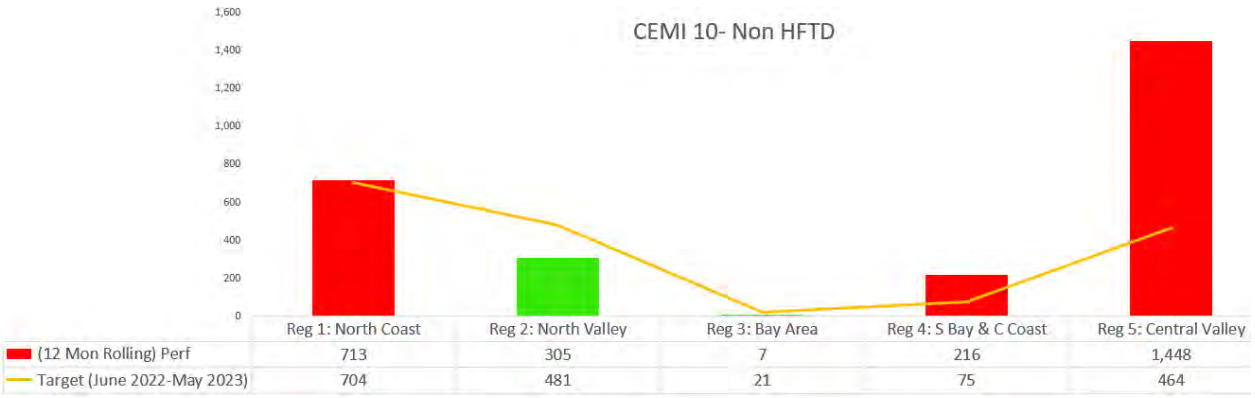
	Reg 1: North Coast	Reg 2: North Valley	Reg 3: Bay Area	Reg 4: S Bay & C Coast	Reg 5: Central Valley
(12 Mon Rolling) Perf	69,594	99,652	41,039	112,894	74,283
Target (June 2022-May 2023)	75,739	104,690	36,170	87,822	73,760



	Reg 1: North Coast	Reg 2: North Valley	Reg 3: Bay Area	Reg 4: S Bay & C Coast	Reg 5: Central Valley
(12 Mon Rolling) Perf	5,419	7,800	12,697	15,272	34,771
Target (June 2022-May 2023)	1,829	8,318	25,308	6,201	22,905



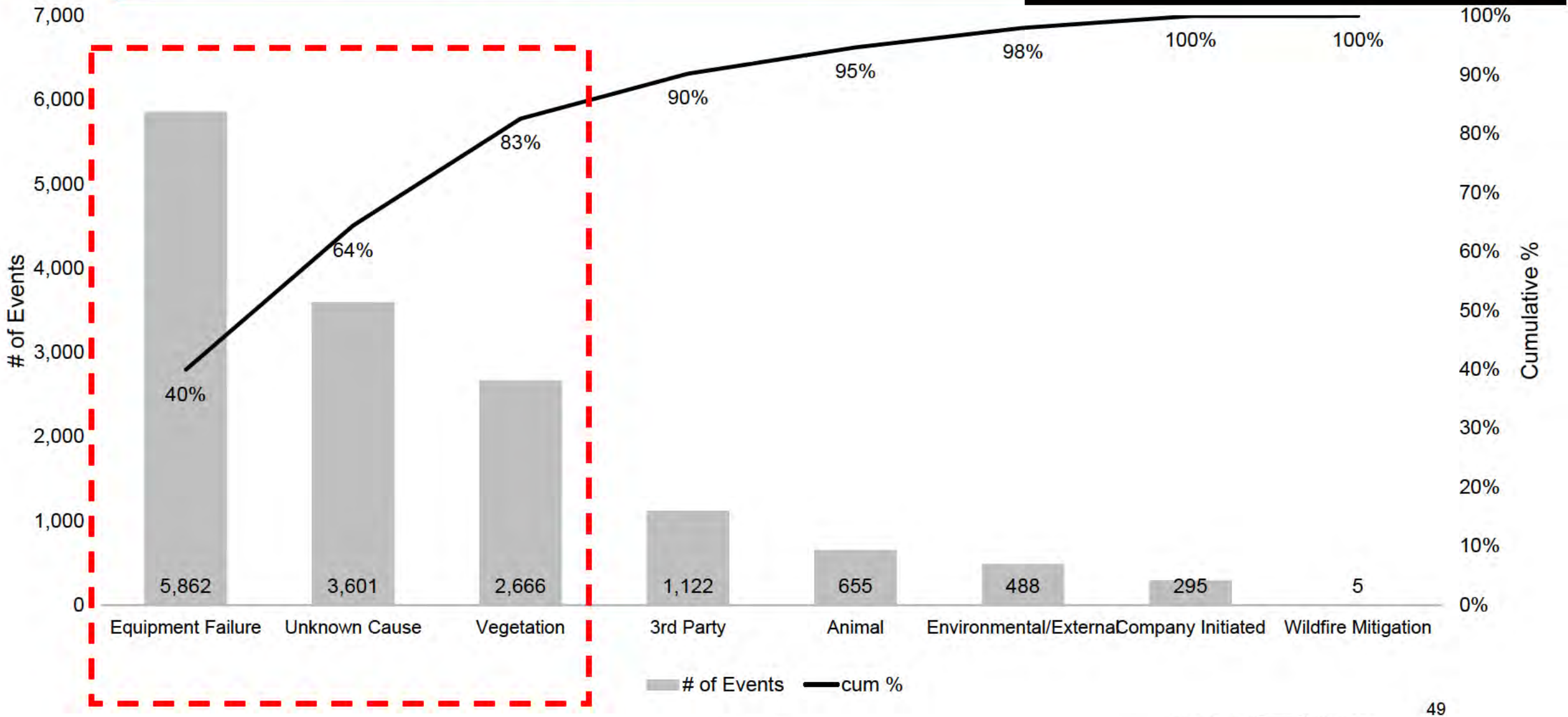
	Reg 1: North Coast	Reg 2: North Valley	Reg 3: Bay Area	Reg 4: S Bay & C Coast	Reg 5: Central Valley
(12 Mon Rolling) Perf	12,974	22,313	3,129	24,061	16,775
Target (June 2022-May 2023)	13,328	23,777	3,026	17,354	9,139



	Reg 1: North Coast	Reg 2: North Valley	Reg 3: Bay Area	Reg 4: S Bay & C Coast	Reg 5: Central Valley
(12 Mon Rolling) Perf	713	305	7	216	1,448
Target (June 2022-May 2023)	704	481	21	75	464

Outages by Cause

2023 YTD through May 31



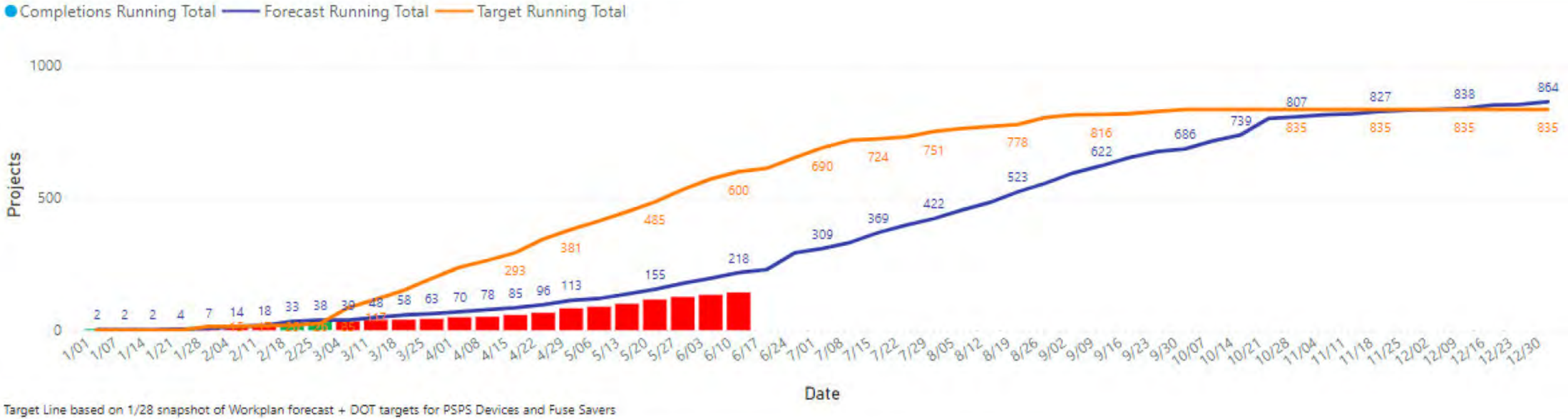
Updated by [redacted] 6/20/23

2023 Work Plan (CEMI)

Data as of 6/10/2023

Unit Act / YTD Target
66%
143 / 218

Work Completion Progression



Target Line based on 1/28 snapshot of Workplan forecast + DOT targets for PSPS Devices and Fuse Savers

Work Readiness Progression - YTD (Initiation through Construction)

Resource	2023 Target	Initiation	Estimating	Dependency	Complete	Ready Scheduled < 8 Weeks	Ready Scheduled > 8 Weeks	Ready Not Scheduled
Contract	265	Complete 265 / 265	Complete 265 / 265	93% 169 / 182	56% 28 / 50	106	8	27
GC & Div	570	Complete 570 / 570	Complete 570 / 570	114% 445 / 391	68% 115 / 168	143	98	89

- Progress towards readiness targets of all 2023 jobs in the Workplan. Target of 100% for **Initiation** by 4/1, **Estimating** by 5/31, **Dependency** by Week 8/31.
- RAG Statuses: **Green** >= 98%, **Amber** 97% - 95%, **Red** <95%

CEMI – TIP Sheet

[redacted]

CEMI Index
Owner Sign Off:

Line Item No.	ACTION	OWNER	START DATE	END DATE	% DONE	STATUS	Expected Effect (CEMI 5 / CEMI 10 Benefits)	EOY CEMI 5 / CEMI 10 STIP Score Impact	Comment (optional)
3	**(Operations Team) Enhanced Power Safety Settings (EPSS)**	[redacted]							
3.1	Collaborate with EP&S team to determine how EDO can align with EPSS improvements to reduce customer impacts.		1/19/22	7/31/23	10%	On Plan			
3.2	Determine top five EPSS areas of impact and assess for asset upgrade opportunities, understand plans for future reliability projects.		2/1/23	7/31/23	1%	On Plan			
3.3	Work with Regional VPs to determine future communication plans for heavily impacted circuits.		5/1/23	11/30/23	20%	On Plan			
3.4	Flag work on heavily impacted circuits to identify potential tags to complete while de-energized.		5/1/23	6/30/23	1%	On Plan			
3.5	Improve Response Time through additional Troublemen positions and schedule review		1/17/23	6/30/23	1%	On Plan			
3.6									
3.7									
4	**(Operations Team) Work Bundling & Clearance Coordination (From Workplan and Finance Team's TIP)**	[redacted]							
4.1	Finalize C&RM Org Design		TBD						
4.2	Develop Implementation Plan to roll out work bundling pilot to remainder of the system		TBD						
4.3	Develop draft Roles & Responsibilities and Process Documentation to support pilot rollout to system		TBD						
4.4	Develop plan for expanding North Coast pilot to incorporate upstream stakeholders (Estimating, Environmental, Inspection)		TBD						
4.5	Phase II of North Coast Pilot		TBD						
4.6	Phase I of System Roll-out for Work Bundling Process		TBD				-2000 / - 0	0.13	
7	**Project Completion of CEMI Projects**								
7.1	Construct 2 49X Projects for Q2	[redacted]	4/1/23	6/30/23	5%	Behind Plan - No recovery plan	-513 / 0	0	Projects reprioritized to EOY will result in zero benefit and zero STIP score impact. If completed in Q4, CEMI benefits will be seen in 2024.
7.2	Construct 43 49X Projects for Q3		7/1/23	9/30/23		Not Yet Started	-4899 / -545	0.3	Same as above
7.3	Construct 44 49X Projects for Q4		10/1/23	12/31/23		Not Yet Started	-831 / -52	0	Same as above
7.4	Construct 7 COE Work for Q2		4/1/23	6/30/23	6%	Behind Plan - No recovery plan	-1753 / -116	0.13	Same as above
7.5	Construct 105 COE Work for Q3		7/1/23	9/30/23		Not Yet Started	-8242 / -514	0.44	Same as above
7.6	Construct 7 COE Work for Q4		10/1/23	12/31/23		Not Yet Started	-227 / -0	0	Same as above
7.7	Construct 9 49T/49H Projects for Q2		4/1/23	6/30/23	9%	Behind Plan - No recovery plan	-1971 / -251	0.13	Same as above
7.8	Construct 100 49T/49H Projects for Q3		7/1/23	9/30/23		Not Yet Started	-4812 / -675	0.3	Same as above
7.9	Construct 40 49T/49H Projects for Q4		10/1/23	12/31/23		Not Yet Started	-912 / -223	0	Same as above
7.10									
7.11							Sum of Impact		
7.12							-24,160 / -2,376		

CEMI Catchback Plan

Good (lower is better)

Metric : CEMI Owner : Joe Bentley

Status Legend
On-track (1)
At risk, with plan (2)
Off-track, without plan (3)
Action completed (4)

Catch Back Plan

Ref No:	Date Raised	Enterprise or Region-specific	Problem / Cause	Point of Cause	Containment Section: Ideally actions completed in 24-48 hours				Countermeasure Section: Ideally plan built & documented within 1 week						
					Containment / Immediate Actions	Target Date	Owner	Status	Root Cause	Countermeasure	Target Date	Owner	Status	Expected Impact (Units)	Expected Impact (Date)
1	02/09/2023	Enterprise	Storm related outages in Q1	Weather	Push estimating and construction resources to complete 49X, 49H, 49T and COE/Tag work projects. These projects will improve CEMI.	03/31/2023	[redacted]	✔							
2	04/10/2023	Enterprise	Construction was not able to construct projects due to storms	Weather	Re-rank projects with highest CEMI/SAIDI benefits to help outlook for 2023.	04/14/2023		✔	Need projects with highest benefits to be constructed first in order to get realized benefits early and ensure completion	Continue to re-rank and hand projects in tranches to Execution team. Will need to confirm the projects are on a dashboard for continuous updates/monitoring.	04/28/2023	[redacted]	✔		
3															
4															

Updated by [redacted] 6/20/23

Simple Problem Solving Form

for problems that are low-complexity, low-risk, and primarily within a team's span of control

Version 09_23_22

For problems that are complex or higher risk or overlap with other departments or Lines of Business, submit your problem at this Problem Solving Intake Form link. A Lean Coach will be assigned to support your team for such complex/higher-risk problems.

Lead's name: [redacted] **Team members:**

Department / Line of Business: Electric Reliability **Start Date:** 5/2/23

Problem affects (circle or bold): Safety **Quality** Cost Delivery People Other

Step 0: General description of the problem / pain points (optional):
Continuous severe weather in Q1 was the Major contributor to the degradation of the SAIDI Metric.

Step 1: Problem and Goal Statement:
In Q1 this year, the entire State of CA experienced severe winter storm weather with 71 weather days of the 90 days in Q1. As a result, the CEMI -5 12 month rolling metric performance has exceeded the [1.0] Target by 17,627 customer count, and the CEMI-10 12 month rolling metric performance has exceeded the [1.0] Target by 8,254 customer count as of May'23. The continuous severe weather in Q1 caused multiple unplanned outages to the same customers. The Metric is recoverable if we continue to construct the projects identified that help recede the progression of the frequency of both planned and unplanned outages.

Step 2: Point of Occurrence POO *(where the problem is first occurring, not where first detected)*

Draw a line in the process flow where the POO and Containment (aka Band-Aid) is implemented

Step 3: Assess the process

Area	Criteria	Yes / No/ NA/ Comments
Correct Process / People	Is there a documented, standardized process to follow?	Yes
	Was the process for ORT followed?	Yes
	Is the process documented clearly and sufficiently?	Yes
	Are the coworkers qualified/trained on the standard?	Yes
Correct Tools	Are the correct tools/equipment available?	Yes
	Are the tools being used correctly for the task?	Yes
	Are coworkers trained and qualified to use the tool?	Yes
Completion Timeline	Were the job completed on time?	No – the anticipated date changed due to reprioritization
	Was the job reprioritized?	Yes
		Yes
Correct Design	Was the correct design / instruction available?	Yes
	Was the job completed as designed?	No – Jobs for reliability need to be completed
	Was the work confirmed as complying with the design?	Yes

Every "No" is an opportunity for Simple Problem Solving

[redacted]

Step 4: Containment (Band-Aid) and Countermeasures (complete solutions) Action Plan

Action Item	Assigned to	Due Date	Status	Impact	Comments
Execution team to complete all reliability projects outlined – 49X, 49T, 49H, COE, Bird Tag and more	Operations, Construction & Maintenance	12/31/23	Change	None	Work plan has changed due to reprioritization. See below.
Re-evaluate Veg management in areas where improvement can be made	Veg Management	4/30/23	Complete	None	Veg Management Director already has work plan to address and patrol poor circuits
Evaluate customers where reliability impacts are highest every month and address in ORT process. Work with M&C and other teams to complete short-term work.	ORT Team	6/30/23	In Progress	-2000 CEMI-5 / -100 CEMI-10	Short term and long term solutions are developed.
Work plan to be reprioritized to optimize the largest benefit to help meet the EOY targets	[redacted]	7/31/23	Complete	See below	
Complete the Re-prioritized work plan.	Operations, Construction & Maintenance	12/31/23	In Progress	-20,700 CEMI-5 / -2,300 CEMI-10	

Step 5: Standardize and Share Action Plan

Action Item (Updated process maps/ procedures etc.)	Assigned to	Due Date	Status	Comments
Standardized process for break-in work for circuits with high impacted reliability	Veg Management	5/30/23	Cancel	No longer needed.
Asset Failure Analysis team needs to pro-actively look at assets that are likely to fail and replace accordingly or assess issues with constructions that have allowed for prolonged issues to occur	Asset Failure Analysis	4/30/23	N/A	Difficult to bring in additional funding/resources for this work type at this moment due to company priority.
Create and construct emergent Reliability work based on reliability impacts seen throughout the year.	[redacted]	7/30/23	In Progress	

Has the job instruction been updated? Yes **No** N/A
Has the product quality standard been updated? Yes **No** N/A
Has the job instruction training been updated? Yes **No** N/A
Have the preventative maintenance or process control plans been updated? Yes **No** N/A
Have prints, check sheets or other forms been updated? Yes **No** N/A
Have the changes been communicated to all stakeholders (including external teams) Yes **No** N/A

Number of days without repeat of the problem:

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20

Problem resolved satisfactorily? Yes, issue closed on _____ No, assigned to _____

Questions? Email us at LeanTeam@pge.com

PSPS Notification Accuracy

PSPS Notification Accuracy

LTIP 2021-2023

Updated on:
6/22/2023

Selected Report Month & Year

May 2023

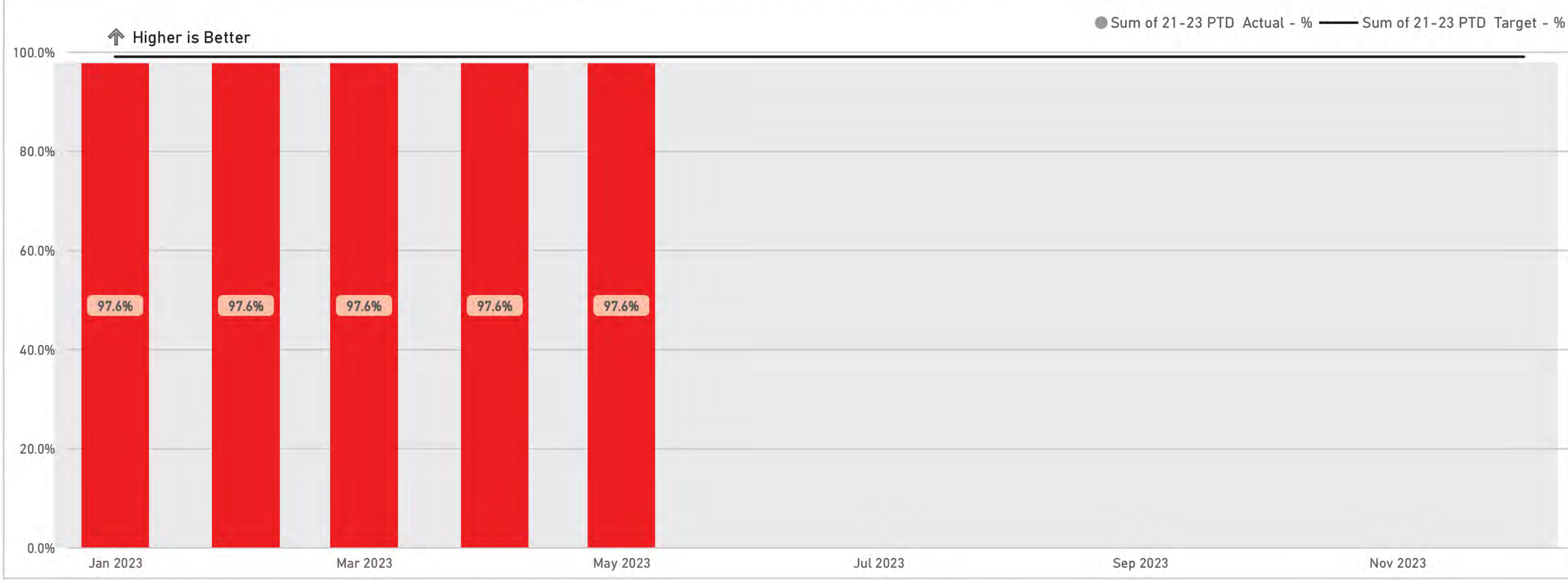
PSPS Notification Accuracy

PTD	EOY
97.6%	99.0%
Target: 99.0%	Target: 99.0%

Metric Definition

The percentage of PG&E customers affected by PSPS (de-energized) who receive notifications in advance of a PSPS outage. Excludes impacted customers that (1) did not have contact information, or (2) received a cancellation notice as their last notification prior to shutoff.

PSPS Notification Accuracy PTD Performance



Executive Owner

Marlene Santos

Functional Area Owner

(Blank)

KPI Reporter

[redacted]

Lean Coach

2021 – 2023 LTIP PSPS Notification Accuracy

LTIP Targets

Targets	Period Cumulative 0.5 Threshold	Period Cumulative 1.0 Threshold	Period Cumulative 2.0 Threshold
	98.0%	99.0%	99.9%

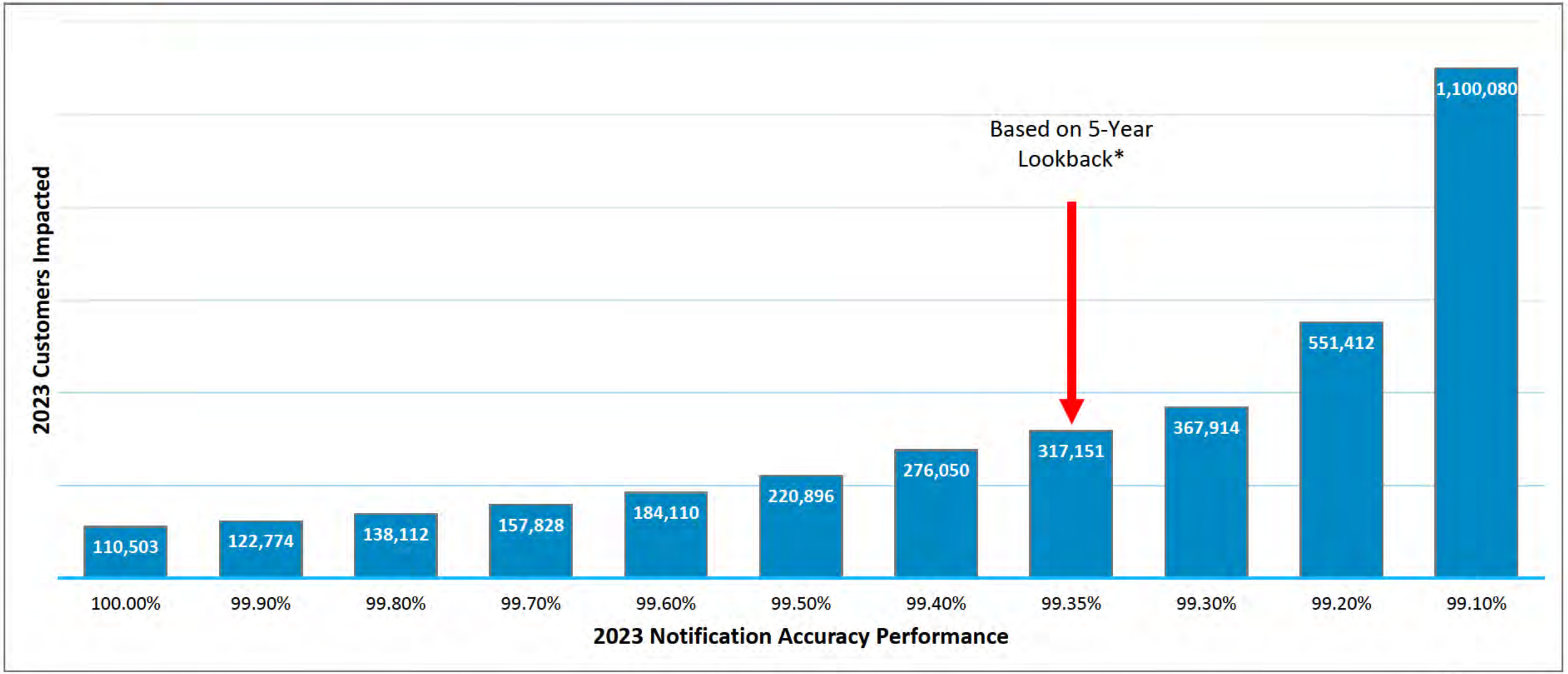
2021-2022 PSPS Notification Accuracy Performance

Year	Customers Impacted	Customers Notified	Notification Accuracy
2021	80,102	78,195	97.619%
2022	0	0	0.000%

2023 scenarios to obtain 99% LTIP Performance for 2021-2023 period on the following slides

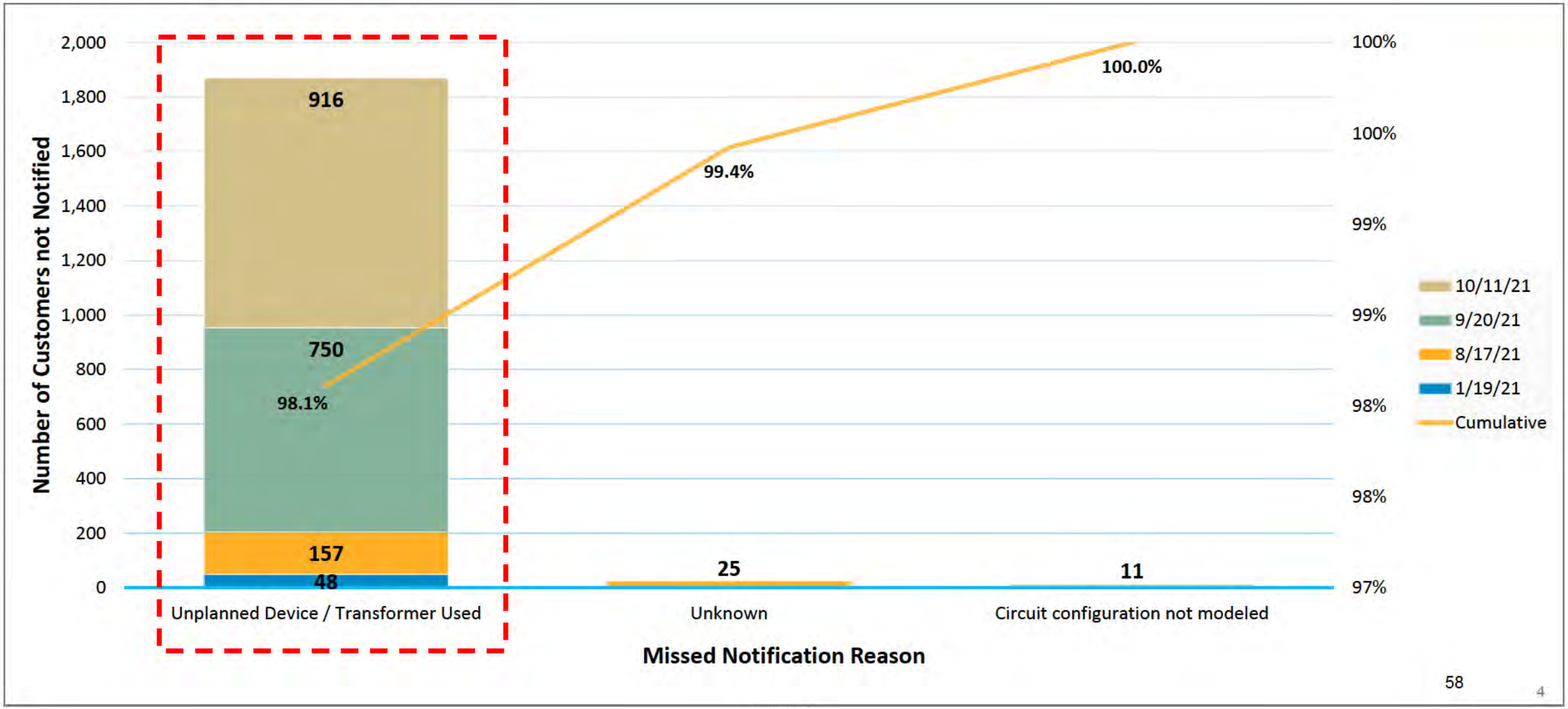
2023 PSPS Notification Accuracy Scenarios

[redacted] To obtain 99% LTIP Performance for 2021-2023 period



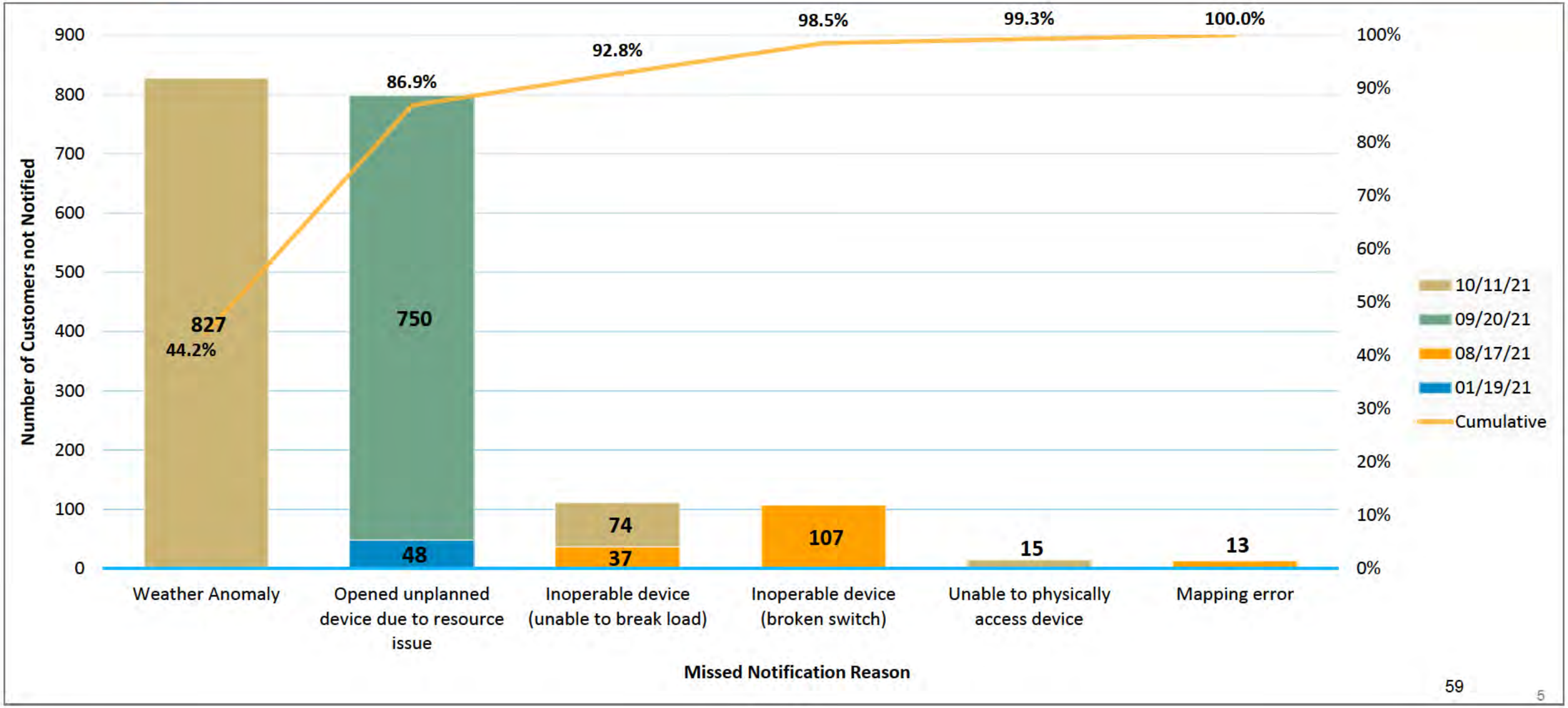
Reasons customers did not receive accurate notifications

2021 - Present



Unplanned Device/Transformer Used

2021 - Present



Notification Accuracy Improvements

Improvement	Issues Addressed
Established process to ensure field resources are located at switching device two hours prior to de-energization time	• Opened unplanned device due to resource issue • Unable to physically access device
Pre-checking device needed for de-energization in advance of “warning” to ensure access and operability	• Inoperable device (broken switch) • Unable to physically access device
Abnormal circuit configuration and device review confirmed prior to event w/ EDEC to ensure PSPS Viewer updated to capture correct customers	• Inoperable device (broken switch) • Inoperable device (unable to break load) • Circuit configuration not modeled
Outage Journey and GIS teams working on mis-assigned customers to investigate mis-assignments in HFRA, 5k SPIDs likely impacted by PSPS targeted for 2023, remainder of 34k in 2024	• Mapping Error
Net-new customer process provides an opportunity to notify customers who are added to scope at de-energization due to inoperable or inaccessible device	• Opened unplanned device due to resource issue • Weather Anomaly • Inoperable device (broken switch)
Comprehensive training and drills throughout 2023 to ensure readiness for all levels of EOC teams responsible for delivering accurate information for notifications	• Opened unplanned device due to resource issue • Weather Anomaly • Inoperable device (broken switch) • Inoperable device (unable to break load) • Unable to physically access device • Mapping Error

Gas Emergency Response

Updated on:
6/21/2023

Gas Emergency Response

Selected Report Month & Year

May 2023

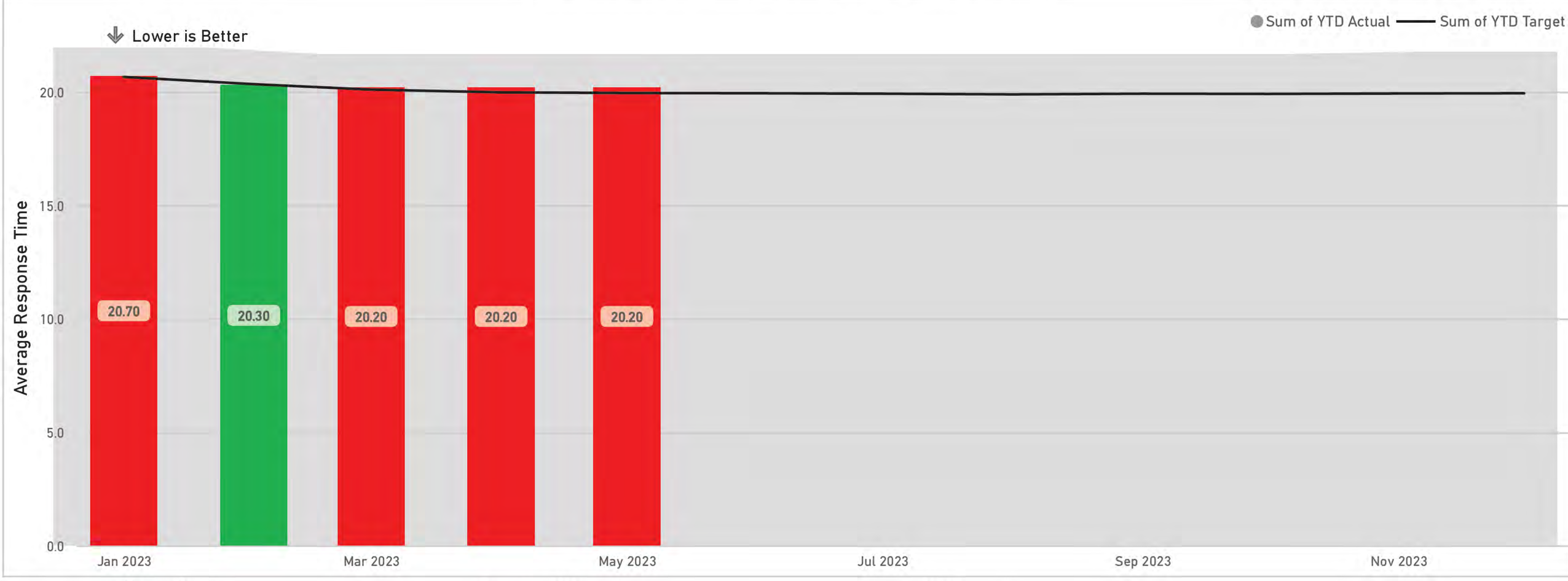
Gas Emergency Response

MTD	YTD	EOY
19.80	20.20	19.90
Target: 19.81	Target: 19.95	Target: 19.90

Metric Definition

The average response time for immediate response (IR) orders. The response time by PG&E is measured from the time PG&E is notified to the time a Gas Service Representative (GSR) or a qualified first responder arrives onsite to the emergency location. PG&E notification time is defined as when a gas emergency order is created and timestamped.

Gas Emergency Response YTD Performance



Executive Owner
Sumeet Singh

Functional Area Owner
Joe Forline

KPI Reporter
[redacted]

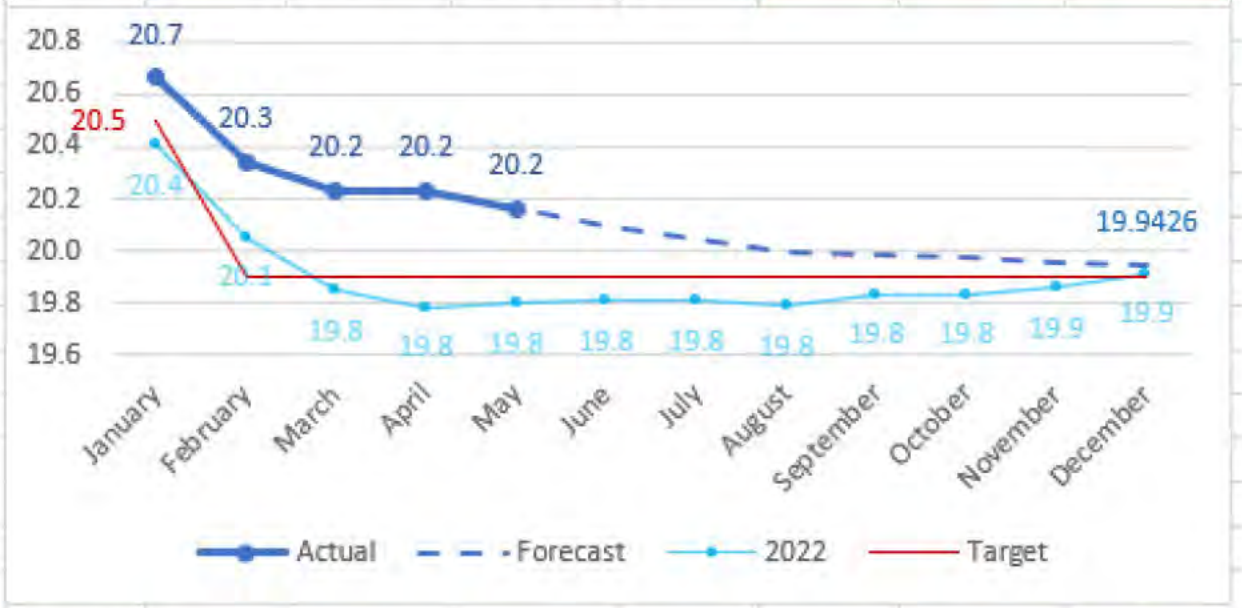
Lean Coach
[redacted]

L1 KPI Gas Emergency Response – YTD by Region (update)

		2023 YTD				
Region	IR Division	% in 60	Made in 60	Total IR's	Avg Resp	Target *
Bay Area	Diablo	99.830%	3525	3531	20.6	
	East Bay	99.802%	5554	5565	20.4	
	Mission	99.647%	3101	3112	18.4	
	Peninsula	99.911%	3383	3386	21.4	
	San Francisco	99.892%	4613	4618	21.5	
Bay Area		**99.822%**	**20176**	**20212**	**20.5**	**20.2**
Central Valley	Fresno	99.842%	3157	3162	19.5	
	Kern	98.566%	2131	2162	17.8	
	Stockton	99.770%	2607	2613	20.2	
	Yosemite	99.627%	2941	2952	19.3	
Central Valley		**99.513%**	**10836**	**10889**	**19.3**	**19.0**
North Coast	Humboldt	99.100%	771	778	22.3	
	North Bay	99.165%	1781	1796	21.8	
	Sonoma	99.680%	1559	1564	21.7	
North Coast		**99.348%**	**4111**	**4138**	**21.8**	**21.4**
North Valley and Sierra	North Valley	98.023%	1190	1214	22.7	
	Sacramento	99.869%	7617	7627	20.6	
	Sierra	99.372%	2058	2071	19.8	
North Valley and Sierra		**99.569%**	**10865**	**10912**	**20.7**	**20.5**
South Bay and Central Coast	Central Coast	99.531%	2336	2347	18.4	
	De Anza	99.930%	1434	1435	17.1	
	San Jose	99.966%	2914	2915	19.4	
South Bay and Central Coast		**99.806%**	**6684**	**6697**	**18.6**	**18.4**
Grand Total		**99.667%**	**52672**	**52848**	**20.2**	**19.6**
						***May Target**

Gas Emergency Response; Glide Path to 19.9

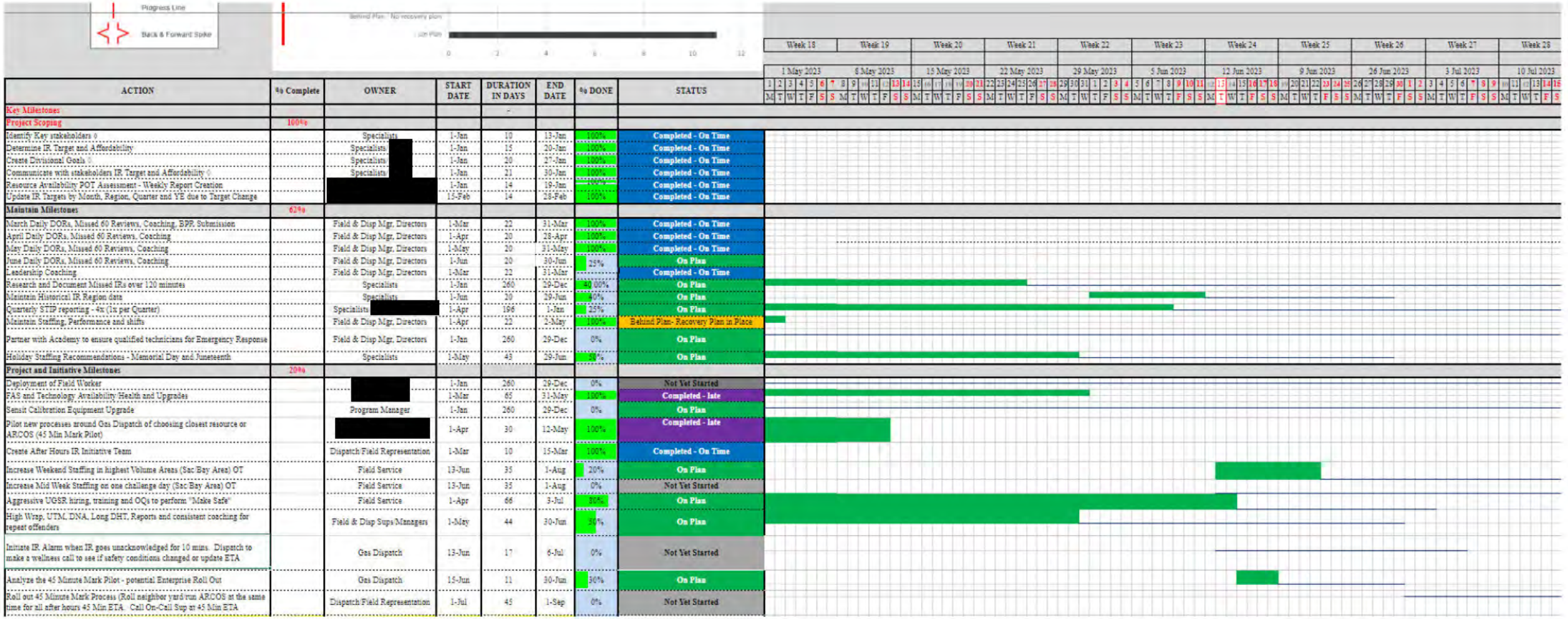
Response Time End of Year Forecast	19.9



Monthly Forecast	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Forecast Volume	8,398	8,306	8,649	8,756	8,710	12,705	13,921
Forecast Response	19.7	19.7	19.6	19.9	19.9	19.8	19.8
5-Year Average	20.5	20.6	20.6	20.8	20.6	20.8	20.6
5-Year Best	19.9	19.8	19.6	20.2	19.9	20.0	20.4

Gas Emergency Response – TIP Sheet

[redacted]



ACTION	% Complete	OWNER	START DATE	DURATION IN DAYS	END DATE	% DONE	STATUS
Key Milestones				-			
Project Scoping	100%						
Identify Key stakeholders ◊		Specialists	1-Jan	10	13-Jun	100%	Completed - On Time
Determine IR Target and Affordability		Specialists [redacted]	1-Jan	15	20-Jan	100%	Completed - On Time
Create Divisional Goals ◊		Specialists	1-Jan	20	27-Jan	100%	Completed - On Time
Communicate with stakeholders IR Target and Affordability ◊		Specialists	1-Jan	21	30-Jan	100%	Completed - On Time
Resource Availability POT Assessment - Weekly Report Creation		[redacted]	1-Jan	14	19-Jan	100%	Completed - On Time
Update IR Targets by Month, Region, Quarter and YE due to Target Change			15-Feb	14	28-Feb	100%	Completed - On Time
Maintain Milestones	62%						
March Daily DORs, Missed 60 Reviews, Coaching, BPP, Submission		Field & Disp Mgr, Directors	1-Mar	22	31-Mar	100%	Completed - On Time
April Daily DORs, Missed 60 Reviews, Coaching		Field & Disp Mgr, Directors	1-Apr	20	28-Apr	100%	Completed - On Time
May Daily DORs, Missed 60 Reviews, Coaching		Field & Disp Mgr, Directors	1-May	20	31-May	100%	Completed - On Time
June Daily DORs, Missed 60 Reviews, Coaching		Field & Disp Mgr, Directors	1-Jun	20	30-Jun	75%	On Plan
Leadership Coaching		Field & Disp Mgr, Directors	1-Mar	22	31-Mar		Completed - On Time
Research and Document Missed IRs over 120 minutes		Specialists	1-Jan	260	29-Dec	40.00%	On Plan
Maintain Historical IR Region data		Specialists	1-Jun	30	29-Jun	40%	On Plan
Quarterly STIP reporting - 4x (1x per Quarter)		Specialists [redacted]	1-Apr	196	1-Jan	25%	On Plan
Maintain Staffing, Performance and shifts		Field & Disp Mgr, Directors	1-Apr	22	2-May	100%	Behind Plan- Recovery Plan in Place
Partner with Academy to ensure qualified technicians for Emergency Response		Field & Disp Mgr, Directors	1-Jan	260	29-Dec	0%	On Plan
Holiday Staffing Recommendations - Memorial Day and Juneteenth		Specialists	1-May	43	29-Jun	80%	On Plan
Project and Initiative Milestones	20%						
Deployment of Field Worker		[redacted]	1-Jan	260	29-Dec	0%	Not Yet Started
FAS and Technology Availability Health and Upgrades			1-Mar	65	31-May	100%	Completed - late
Sensit Calibration Equipment Upgrade		Program Manager	1-Jan	260	29-Dec	0%	On Plan
Pilot new processes around Gas Dispatch of choosing closest resource or ARCOS (45 Min Mark Pilot)		[redacted]	1-Apr	30	12-May	100%	Completed - late
Create After Hours IR Initiative Team		Dispatch/Field Representation	1-Mar	10	15-Mar	100%	Completed - On Time
Increase Weekend Staffing in highest Volume Areas (Sac/Bay Area) OT		Field Service	13-Jun	35	1-Aug	20%	On Plan
Increase Mid Week Staffing on one challenge day (Sac/Bay Area) OT		Field Service	13-Jun	35	1-Aug	0%	Not Yet Started
Aggressive UGSR hiring, training and OQs to perform "Make Safe"		Field Service	1-Apr	66	3-Jul	95%	On Plan
High Wrap, UTM, DNA, Long DHT, Reports and consistent coaching for repeat offenders		Field & Disp Sups/Managers	1-May	44	30-Jun	30%	On Plan
Initiate IR Alarm when IR goes unacknowledged for 10 mins. Dispatch to make a wellness call to see if safety conditions changed or update ETA		Gas Dispatch	13-Jun	17	6-Jul	0%	Not Yet Started
Analyze the 45 Minute Mark Pilot - potential Enterprise Roll Out		Gas Dispatch	15-Jun	11	30-Jun	30%	On Plan
Roll out 45 Minute Mark Process (Roll neighbor yard/run ARCOS at the same time for all after hours 45 Min ETA. Call On-Call Sup at 45 Min ETA		Dispatch/Field Representation	1-Jul	45	1-Sep	0%	Not Yet Started

Gas Emergency Response – Catch Back Plan

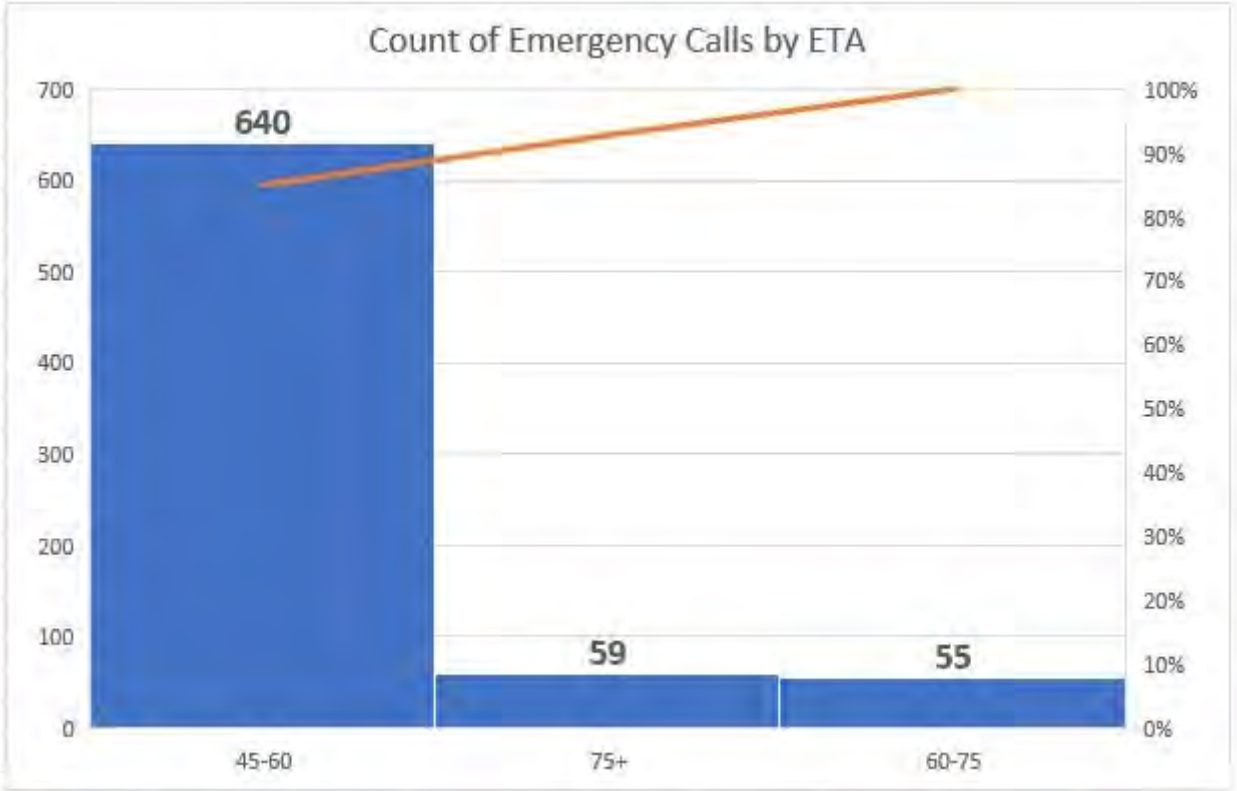
Initiative / Metric: Gas Emergency Response Owner : [redacted]

Status Legend
- On-track (1)
- At risk, with plan (2)
- Off-track, without plan (3)
- Action completed (4)

Catch Back Plan

Ref No:	Date Raised	Problem / Cause	Point of Cause	Containment / Immediate Actions	Target Date	Owner	Status	Root Cause	Countermeasure	Target Date	Owner	Status
1	5/1/2023	High Wrap, UTM, DNA, Long Dispatch Handle Time	Response Time exceeds target	Create a report showing employees with repeated high wraps, UTM/DNAs for a consistent approach for coaching opportunities. Gas Dispatch coaching based on Dispatch IR Report for high DHTs.	6/30/2023	[redacted]	●	Drive behaviors and best practice by coaching	Drive behaviors and best practice by coaching	6/30/2023	[redacted]	●
2	5/5/2023	Increased Average Response Time	UGSR Resource time in training	Many new hires currently going through the condensed Mod 1/Mod 2 and will be ready to respond to IR the first week of June.	5/31/2023		✓	Resources	Mod 1 and Mod 2 adjusted to reduce the time taken to get a new hire eligible for Make Safe. Additional resources may support an 0.1 improvement	6/30/2023		●
3	6/7/2023	Unacknowledged IR by Tech	Timeliness of "enroute" and safety concern for GSR that has not acknowledged an IR	Initiate an IR alarm when the IR goes unacknowledged for 10 minutes. Dispatch would initiate a wellness call to GSR to see if the safety conditions changed or original ETA needs to be updated.	6/30/2023		●	IR Response	Update the Dispatch alert to 10 minutes and create a 5MM to roll out.	6/30/2023		●
4	5/15/2023	High IR Time	Due to high RDOs, vacation season, not enough qualified resources to respond	Staffing appropriately on weekends, specifically Friday and Sundays	6/30/2023		△	Resouces, Travel, Location, Dispatch	Ensure that we staff weekends appropriately and add additional shifts as needed to meet our customer emergency needs. Additional resources may support an 0.1 improvement	6/30/2023		△
5	6/1/2023	High IR Response Time	Response Time exceeds target	Continue Weekly IR OR meetings for Field Service and Gas Dispatch to review performance, challenges, successes, lessons learned to find and share success stories and identify challenges.	6/30/2023		●	Response Time Exceeds Target	Drive behaviors and best practice by sharing. Additional push may support an 0.1 improvement	6/30/2023'		●
6	6/13/2023	High IR Response Time	Higher after hours response	Review January through current volume of IRs exceeding 45 and 60 minutes to determine the effectiveness of the process.	6/30/2023		●	High after hours response prompted Pilot of ERT (estimated response time) of 45 minutes will roll neighbor tech resource and utilize ARCOS for quickest job time. Pilot has rolled out to Bay and Sac and has been going for ~8 weeks.	Expect to roll out as a process change to all Divisions once all analytics are complete.	9/1/2023	Gas Dispatch/Field Service	●

Gas Emergency Response – Catch Back (ETA Pilot)



Gas Emergency Response – SPS Form

Simple Problem Solving Form *for problems that*

For problems that are complex or higher risk or overlap with other departments or Lines of Business, submit your problem at

Lead's name: [redacted] **Team members:** [redacted]
Department / Functional Area: **Start Date:** 4/1/23
Problem effects (circle or bold): Safety Quality Cost **Delivery** People Other

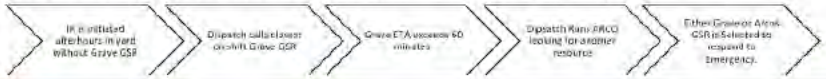
Step 0: General description of the problem / pain points (optional):

The Issue is we have an increase in Emergency response time during the Afterhours shifts. The delay occurs when ARCOS and ARCOS annual list is run prior to routing grave shift Employee. Another pain point is when the Grave GSR must leave an emergency and their ETA exceeds 60 minutes.

Step 1: Problem and Goal Statement:
Our goal is to reduce the number of after hours long duration IRs for the remainder of 2023.

Step 2: Point of Occurrence POO *(where the problem is first occurring, not where first detected)*

Draw a line in the process flow where the POO and Containment (aka Band-Aid) is implemented



Step 3: Assess the process

Area	Criteria	Yes / No/ N/A/ Comments
Correct Process / People	Is there a documented, standardized process to follow?	No- Containment is the document to follow.
	Was the process followed?	No
	Is the process documented clearly and sufficiently?	Yes
	Are the coworkers qualified/trained on the standard?	Yes
Correct Tools	Are the correct tools/equipment available?	Yes
	Are the tools being used correctly for the task?	Yes
	Are coworkers trained and qualified to use the tool?	Yes
Correct Materials	Were the correct materials available for the task?	Yes
	Was the work completed as designed?	Yes
	Was the material of sufficient quantity / quality?	Yes
Correct Design	Was the correct design / instruction available?	NA
	Was the job completed as designed?	NA
	Was the work confirmed as complying with the design?	NA

Every "No" is an opportunity for Simple Problem Solving

Step 4: Containment (Band-Aid) and Countermeasures (complete solutions) Action Plan

Action Item	Assigned to	Due Date	Status	Comments
Pilot initiative in Gas Dispatch - Bay Region to roll neighboring yard and run ARCOS if ART is 45 min or longer current 60 min process). Pre-Meeting 4/10/2023	[redacted]	4/7/2023	On Target	
Expand Pilot to Sacramento for Phase 2		5/31/23	In Process	
Analyze performance Apr/May in Bay and Saf		6/30/2023	Not Started Yet	Compare higher response IRs prior vs after pilot began

Step 5: Standardize and Share Action Plan

Action Item (Updated process maps/ procedures etc.)	Assigned to	Due Date	Status	Comments
FS Socialize with GSRs on After Hours Shifts	Field Service	4/7/2023	Complete	
Gas Dispatch socialize with all Dispatchers on After Hours Shifts	Gas Dispatch	4/7/2023	Complete	
Document Process Change in Dispatch Procedure	Gas Dispatch	6/30/2023	Not Yet Started	When analysis is complete and pilot is rolled out to all, complete documentation

Has the job instruction been updated? Yes No N/A
Has the product quality standard been updated? Yes No N/A
Has the job instruction training been updated? Yes No N/A
Have the preventative maintenance or process control plans been updated? Yes No N/A
Have prints, check sheets or other forms been updated? Yes No N/A
Have the changes been communicated to all stakeholders (including external teams) Yes No N/A

Number of days without repeat of the problem:

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20

Problem resolved satisfactorily? Yes, issue closed on _____ No, assigned to _____

Gas Emergency Response – Monthly (update)

[redacted] May 2023 Results

Metric Performance

May 2023			YTD 2023		
Avg Response Time	Made in 60	Total IRs	Avg Response Time	Made in 60	Total IRs
19.8	99.74%	8,911	20.2	99.67%	52,848

MAT	MAT Description	Cost ($0.000) Forecast	Cost ($0.000) DET	Cost ($0.000) Var	Units Forecast	Units DET	Units Var
Customer Demand							
DDA	Field Services: Other						
DDD	Pilot Relight						
DDE	Appliance Adjs						
DDF	Gas Fumigation Activity						
DDK	Gas Start						
DDL	Gas Stop						
Sub-Total							
Gas Leaks & Emergencies							
DDG	GL&E - Base						
DDG	GL&E - IR Standby						
Sub-Total							
Compliance							
FIS	Leak Survey Meter Repair						
HYI	G Meter Atmospheric Corrosion						
Sub-Total							
TOTAL BASE EXPENSE							

In Q1, we updated our DDG (IR Standby) hours to 9,677 above DET). This was an increase of [redacted]. This included [redacted] for the hours associated and [redacted] overheads. In 2022 we actualized 111,752 hours for Standby, we are currently planning 117,886 hours. We have already overrun original DET hours by 2,961 and have 6,716 hours over DET planned through the end of the year to support 19.9 ART.

Original DDG Budget Target was [redacted] (to meet 20.5 ART), we are now forecast at [redacted] to meet 19.9 ART.

Electric Corrective Maintenance in HFRA

Elec Corrective Maintenance in HFRA (Tags)

Selected Report Month & Year

May 2023

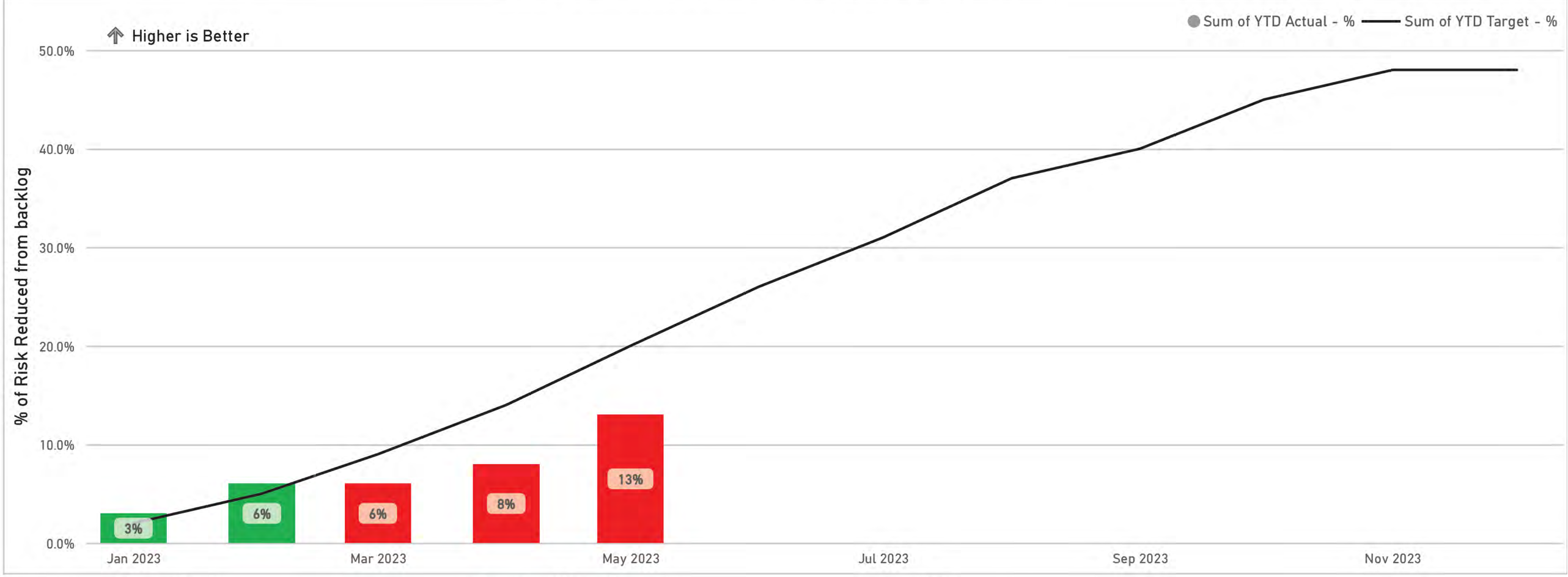
Elec Corrective Maintenance in HFRA (Tags)

MTD	YTD	EOY
4%	13%	48%
Target: 6%	Target: 20%	Target: 48%

Metric Definition

This metric is to measure the percentage of risk reduced from the backlog of HFTD/HFRA ignition tags (Pole & non-Pole).
As 99 percent of the wildfire risk occurs in HFTD and HFRA areas, this metric is focused on reducing the backlog of tags within these areas, specifically tags that create wildfire risks. All outstanding tags have been group...

Elec Corrective Maintenance YTD Performance



Executive Owner

Sumeet Singh

Functional Area Owner

Janisse Quinones

KPI Reporter

[redacted]

Lean Coach

[redacted]

Catch Back Plan - Electric Corrective Maintenance in HFRA

Updated 2023-06-21 09:14: AM

Ref No	Date Raised	Enterprise or Region	Problem/Cause	Point of Cause	Containment/Immediate Actions	Target Date	Owner	Status	Root Cause	Countermeasure	Target Date	Owner	Status	Expected Impact (Units)	Expected Impact (Date)
1	2023-04-07	Enterprise	Less v3 wildfire risk points completed in 2023 then planned.	Storm response has utilized most of the resources that were planned to execute this work and completed lower risk ready units earlier in the work plan.	Reschedule work planned in first two months of year to Q2 & Q3	2023-07-31	[redacted]	●	Not enough resources to complete EC notifications, New Business and storm work	Reschedule work planned in first two months of year to Q2 & Q3: Have enough tags scheduled by 7/31/23 to be at 63 risk points YTD by 9/31/23	2023-07-31	[redacted]	●	n/a	2023-09-30

Legend: ● On Track; ▲ At Risk,with Plan; ✖ Off Track, without a Plan; ✓ Action Completed; ● N/A

[redacted]

Lead's name: [redacted] **Team members:** [redacted]
Department / Functional Area: Asset Management **Start Date**: 03/07/2023 (identification date)
Problem affects (circle or bold): Safety Quality Cost Delivery People Other

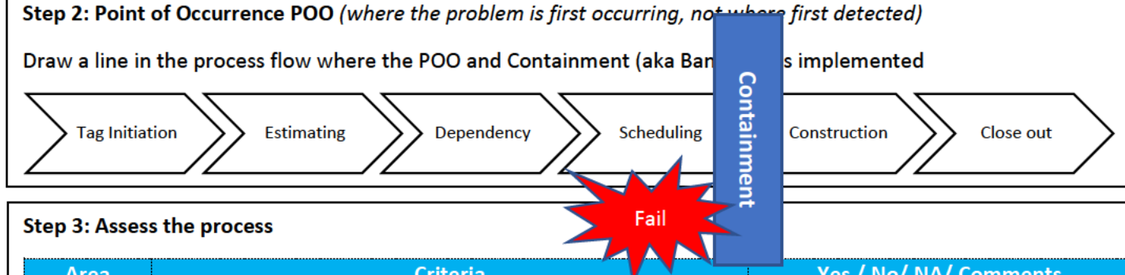
Step 0: General description of the problem / pain points (optional):

Step 1: Problem and Goal Statement:
At the beginning of March, fewer v3 wildfire risk points were completed than planned due to the storm response and new business utilizing most of the resources.

Goal Statement:
"Ignition Risk Backlog: Starting with 151.1 risk units as of January 1, 2023, we will reduce wildfire risk associated with backlog ignition-risk tags in HFTD/HFRA by 72.5 risk units (48 percent) by the end of 2023, barring external factors.."

Step 2: Point of Occurrence POO *(where the problem is first occurring, not where first detected)*

Draw a line in the process flow where the POO and Containment (aka Ban[illegible]s implemented



Step 3: Assess the process

Area	Criteria	Yes / No/ NA/ Comments
Correct Process / People	Is there a documented, standardized process to follow?	Yes
	Was the process followed?	No
	Is the process documented clearly and sufficiently?	Yes
	Are the coworkers qualified/trained on the standard?	Yes
Correct Tools	Are the correct tools/equipment available?	NA
	Are the tools being used correctly for the task?	NA
	Are coworkers trained and qualified to use the tool?	NA
Correct Materials	Were the correct materials available for the task?	NA
	Was the work completed as designed?	NA
	Was the material of sufficient quantity / quality?	NA
Correct Design	Was the correct design / instruction available?	NA
	Was the job completed as designed?	NA
	Was the work confirmed as complying with the design?	NA

Every "No" is an opportunity for Simple Problem Solving

Step 4: Containment (Band-Aid) and Countermeasures (complete solutions) Action Plan

Action Item	Assigned to	Due Date	Status	Comments
Reschedule work planned in first two months of the year to Q2 and Q3	[redacted]	5/31/23	Complete	
Set up WOR for accountability	[redacted]		On-going	

Step 5: Standardize and Share Action Plan

Action Item (Updated process maps/ procedures etc.)	Assigned to	Due Date	Status	Comments
Rebaseline the target	[redacted]	6/12/23	Complete	Will be back on track on 10/1/23

Has the job instruction been updated? Yes No N/A
Has the product quality standard been updated? Yes No N/A
Has the job instruction training been updated? Yes No N/A
Have the preventative maintenance or process control plans been updated? Yes No N/A
Have prints, check sheets or other forms been updated? Yes No N/A
Have the changes been communicated to all stakeholders (including external teams) Yes No N/A

Number of days without repeat of the problem:

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20

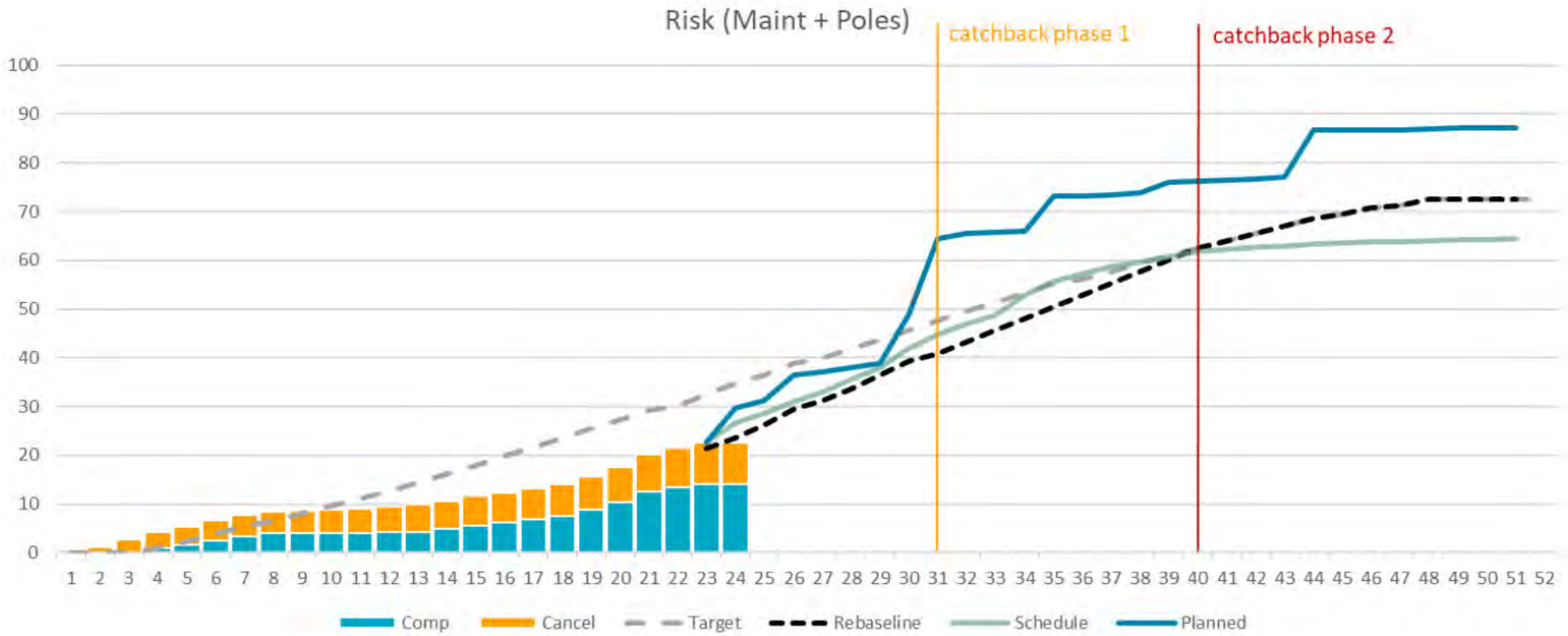
Problem resolved satisfactorily? Yes, issue closed on _____ No, assigned to _____

If you were unable to solve this problem, submit a request through this Problem Solving (PS) Intake form. Lean Office will reach out to you on the next steps.

2023 Distribution Maintenance – 48% risk reduction

June 12, 2023

- 31k+ ready units
- Catchback plan updated to get back on track by end of September
- 2023 Work plan after reprioritization has ~80 v3 WF risk points in 2023 work plan plus 7.5 cancelled units
- Work Plan originally designed with 6 week buffer at end of year



PMVI

PMVI Rate

Updated on:
6/21/2023

Selected Report Month & Year

May 2023

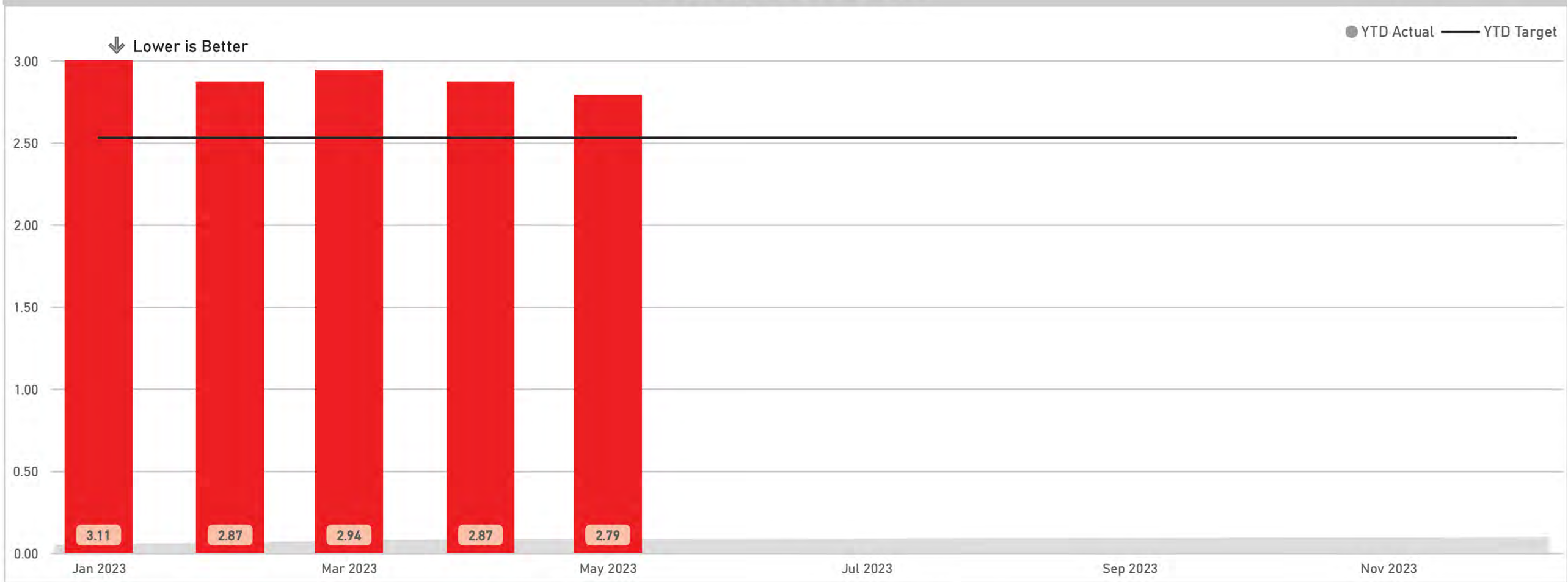
PMVI Rate

MTD	YTD	EOY
2.50	2.79	2.53
Target: 2.53	Target: 2.53	Target: 2.53

Metric Definition

A Preventable Motor Vehicle Incident (PMVI) is any incident where the PG&E driver could have but failed to take reasonable steps to prevent the incident. Includes company, rental and personal vehicles driven for company business. Count of all PMVIs*1M/Total Company Miles Driven

PMVI YTD Performance



Executive Owner
Sumeet Singh

Functional Area Owner
Matt Hayes

KPI Reporter
[redacted]

Lean Coach
[redacted]

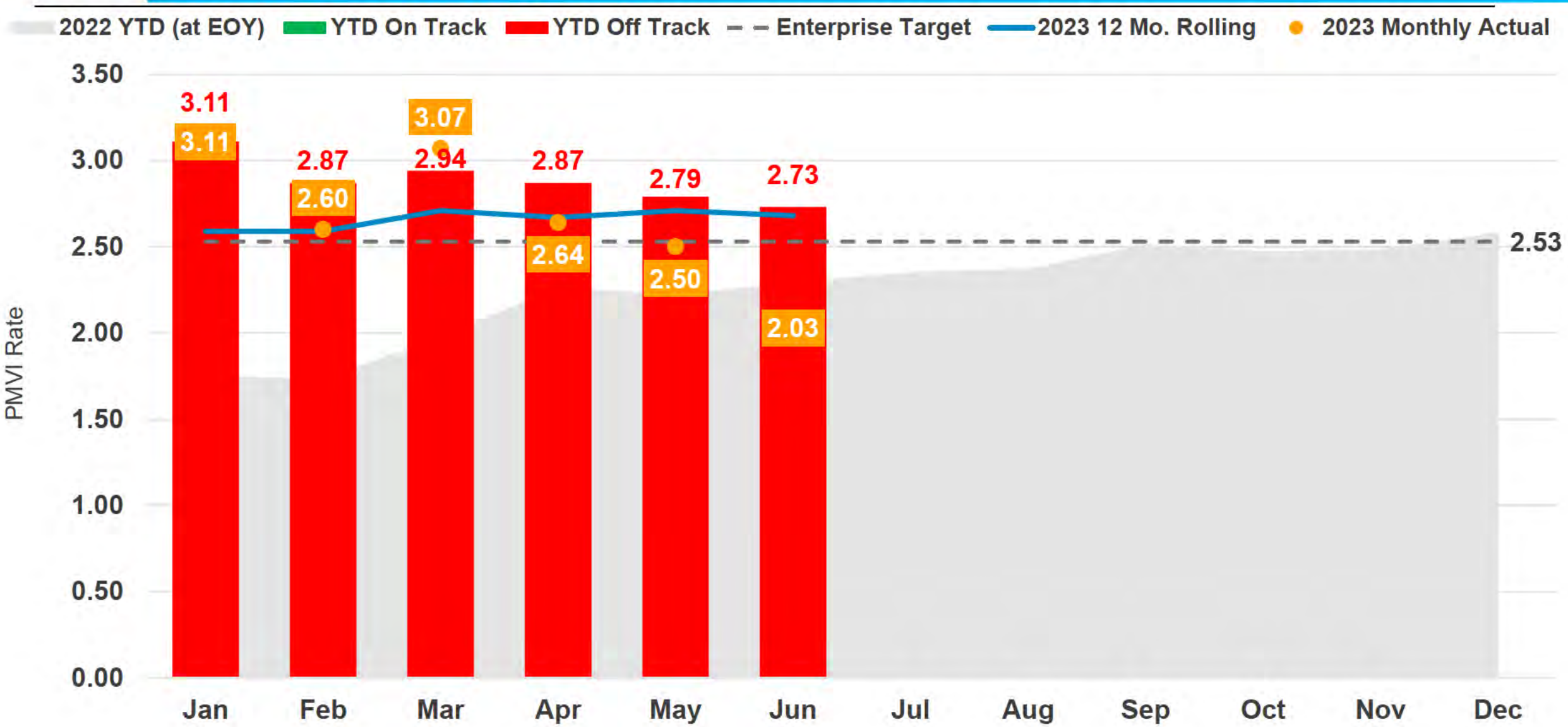
Status Legend
: On-track (1)
: At risk, with plan (2)
: Off-track, without plan (3)
: Action completed (4)

Catch Back Plan

				Containment Section: Ideally actions completed in 24-48 hours				Countermeasure Section: Ideally plan built & documented within 1 week					
KPI	Ref. Num	Date Raised	Enterprise or Region-specific	Containment / Immediate Actions	Target Date	Owner	Status	Countermeasure	Target Date	Owner	Status	Expected Impact (Units)	Expected Impact (Da
PMVI	2.3	1/25/2023	Enterprise (sourcing)	Escalated to Director of Sourcing and Director of Risk Management on 1/25/23, Directors to identify where process is stuck and who owns next steps	1/31/2023	[redacted]	✓						
PMVI	3.4	2/6/2023	Enterprise	Mtg Rescheduled to 2/10	2/10/2023		✓	Mtg held 2/10 to align on logic prioritizing attendees based upon greatest risk reduction, list of CW to be generated for $2M spend	2/22/2023	[redacted]	✓	N/A	N/A
PMVI	2.6	2/16/2023	Enterprise	Escalated to Senior Director of Transportation Services to engage Labor	2/17/2023		✓	Align with Labor on installation strategy	3/3/2023		✓	N/A	N/A
PMVI	2.8	2/15/2023	Enterprise	Escalated to Sr. Director, Business Finance (and team) to move process forward	4/7/2023; budget transfers are executed once per month		✓						
PMVI	5.3	2/24/2023	Enterprise	COO and CSO meet with IBEW Business Manager, funding will be pursued if an LOA is reached with the IBEW	3/31/2024		✓	Meeting held on 3/17 with IBEW. CSO and Motor vehicle safety, IBEW to discuss internally, follow up meeting scheduled for 4/6					
PMVI	5.4	2/24/2023	Enterprise	COO and CSO met with IBEW Business Manager	3/31/2024		⚠	Meeting held on 3/17 with IBEW. CSO and Motor vehicle safety, IBEW to discuss internally, follow up meeting scheduled for 4/6					
PMVI	5.5	2/24/2023	Enterprise	COO and CSO met with IBEW Business Manager	3/31/2024		⚠	Meeting held on 3/17 with IBEW. CSO and Motor vehicle safety, IBEW to discuss internally, follow up meeting scheduled for 4/6					
PMVI	3.6	3/15/2023	Enterprise	Meeting rescheduled to 3/22 pending storm response	3/17/2023		✓	moving forward with EO plan only until able to address concerns with GO plan; meeting scheduled 4/14 with GO	4/14/2023	[redacted]	✓	N/A	N/A
PMVI	5.2	3/27/2023	Enterprise	COO and CSO met with IBEW Business Manager	6/31/2023		⚠	Meeting held on 3/17 with IBEW. CSO and Motor vehicle safety, IBEW to discuss internally, follow up meeting scheduled for 4/6					
PMVI	5.6	2/24/2023	Enterprise	COO and CSO met with IBEW Business Manager	9/30/2024		⚠	Meeting held on 3/17 with IBEW. CSO and Motor vehicle safety, IBEW to discuss internally, follow up meeting scheduled for 4/6					
PMVI	2.12	3/22/2023	Enterprise	Will schedule users for time slots if not signed up by end of 4/12	4/12/2023		✓	Assign dedicated resource from EO to manage schedule and pre populate schedule allowing local work teams to plan around camera install work	4/12/2023				
PMVI	3.7	5/15/2023	Enterprise	Data provided to Electric Safety team to determine if adjustments to target audience will be proposed.	5/18/2023		✓	Staggered communications or FA-specific communications. Minimal overall impact as non-EO students continue to receive	6/22/2023	[redacted]	✓		

PMVI Trends – by Incident Date

Jan 2022 – Jun 2023 YTD



Updated on 6/15/2023

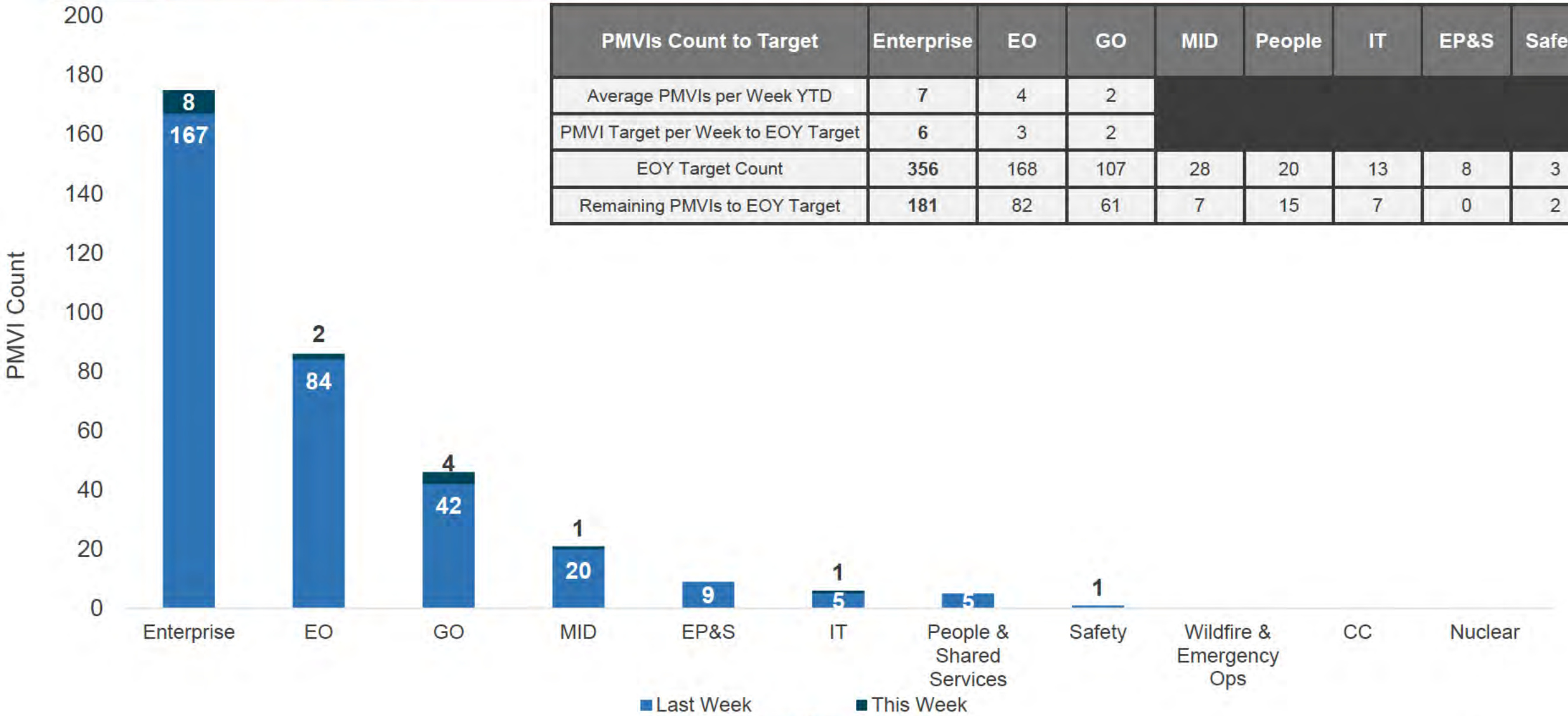
Internal

78

Good (lower is better)

PMVI by Functional Area (by Count)
Jun 2023 YTD

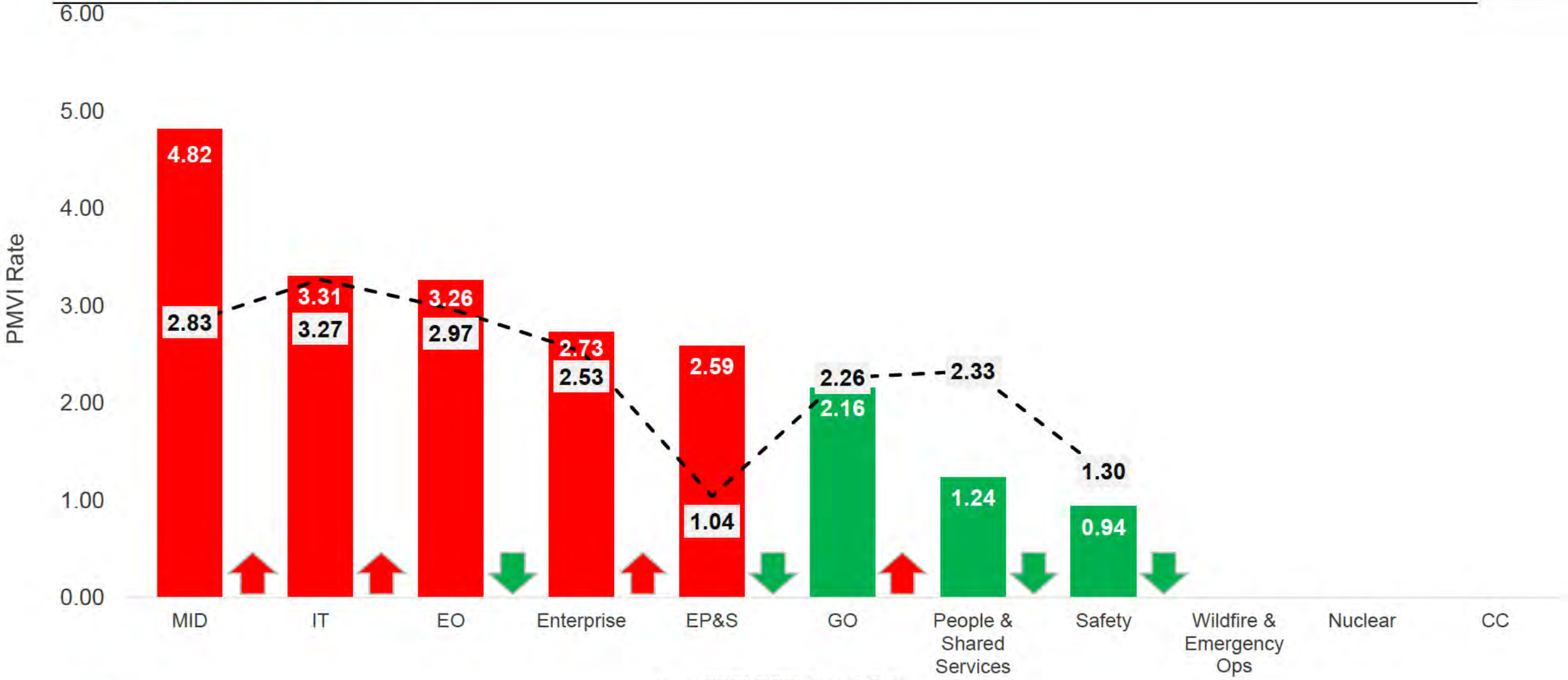
PMVIs Count to Target	Enterprise	EO	GO	MID	People	IT	EP&S	Safety
Average PMVIs per Week YTD	7	4	2					
PMVI Target per Week to EOY Target	6	3	2					
EOY Target Count	356	168	107	28	20	13	8	3
Remaining PMVIs to EOY Target	181	82	61	7	15	7	0	2



Data by classification date

*1 PMVI in Other category not shown

PMVI by Functional Area (by Rate)
Jun 2023 YTD



Data by classification date

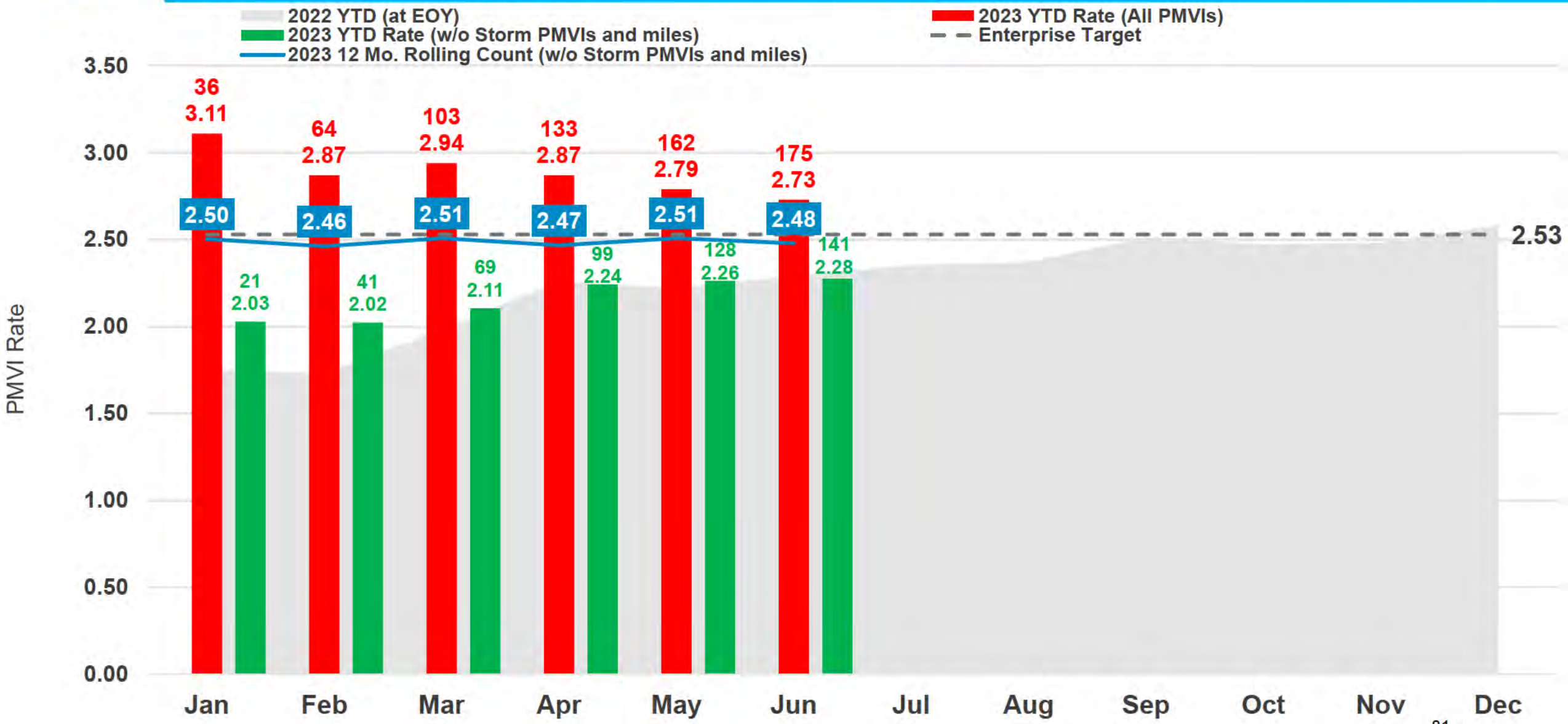
Updated on 6/15/2023

*1 PMVI in Other category not shown

Internal

PMVI Trends – by Incident Date – w/o Storm Related Incidents

Jan 2022 – Jun 2023 YTD



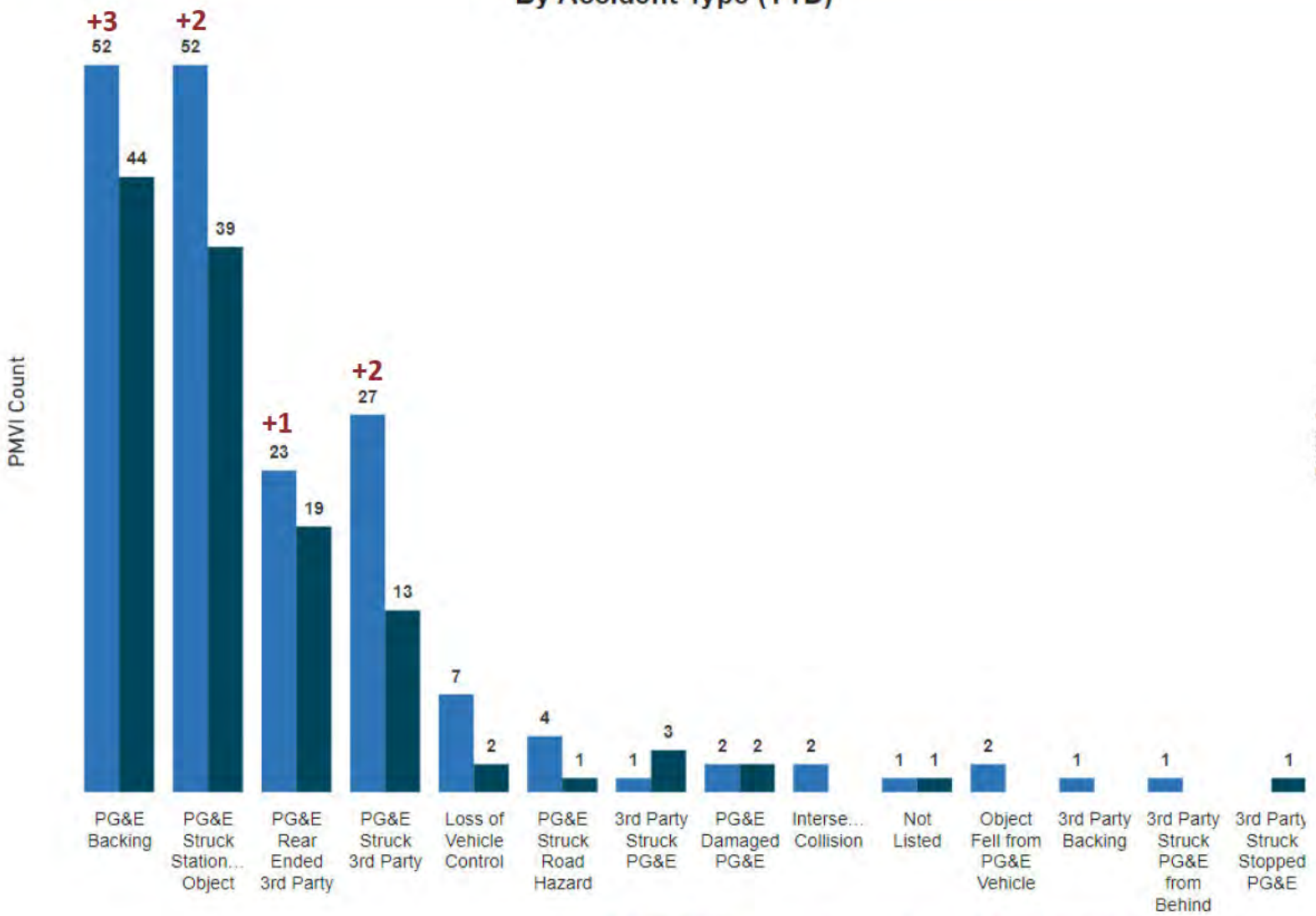
*Updated to remove 2.2 million storm miles from Jan-Mar 2023

Updated on 6/15/2023

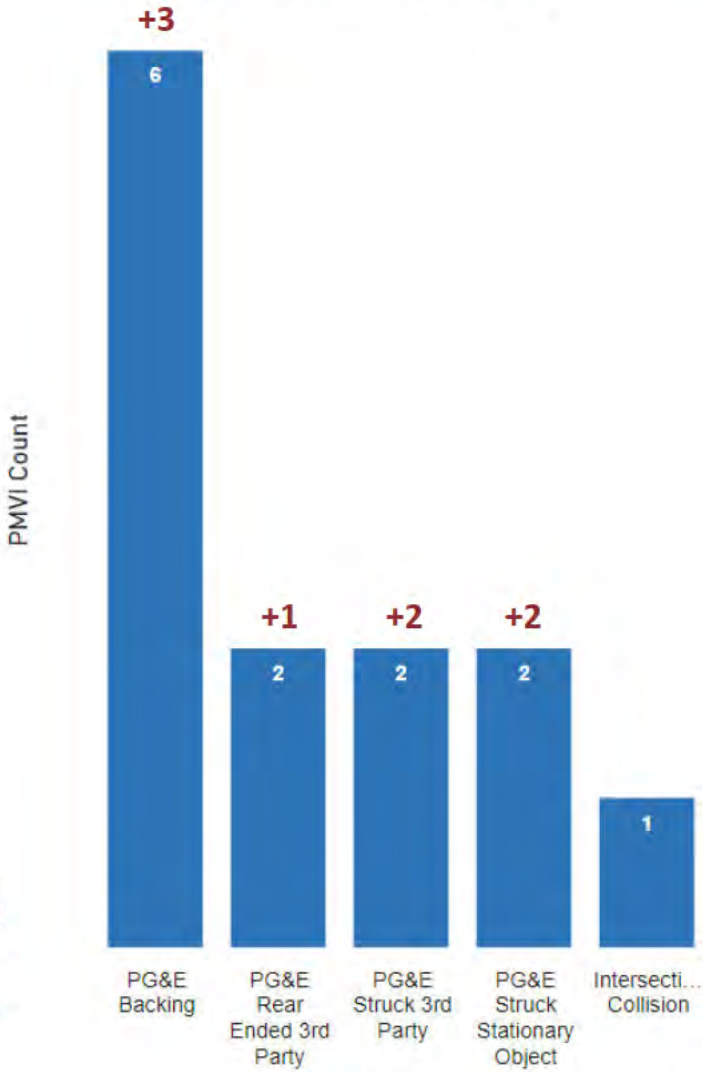
Internal

Good (lower is better)

By Accident Type (YTD)



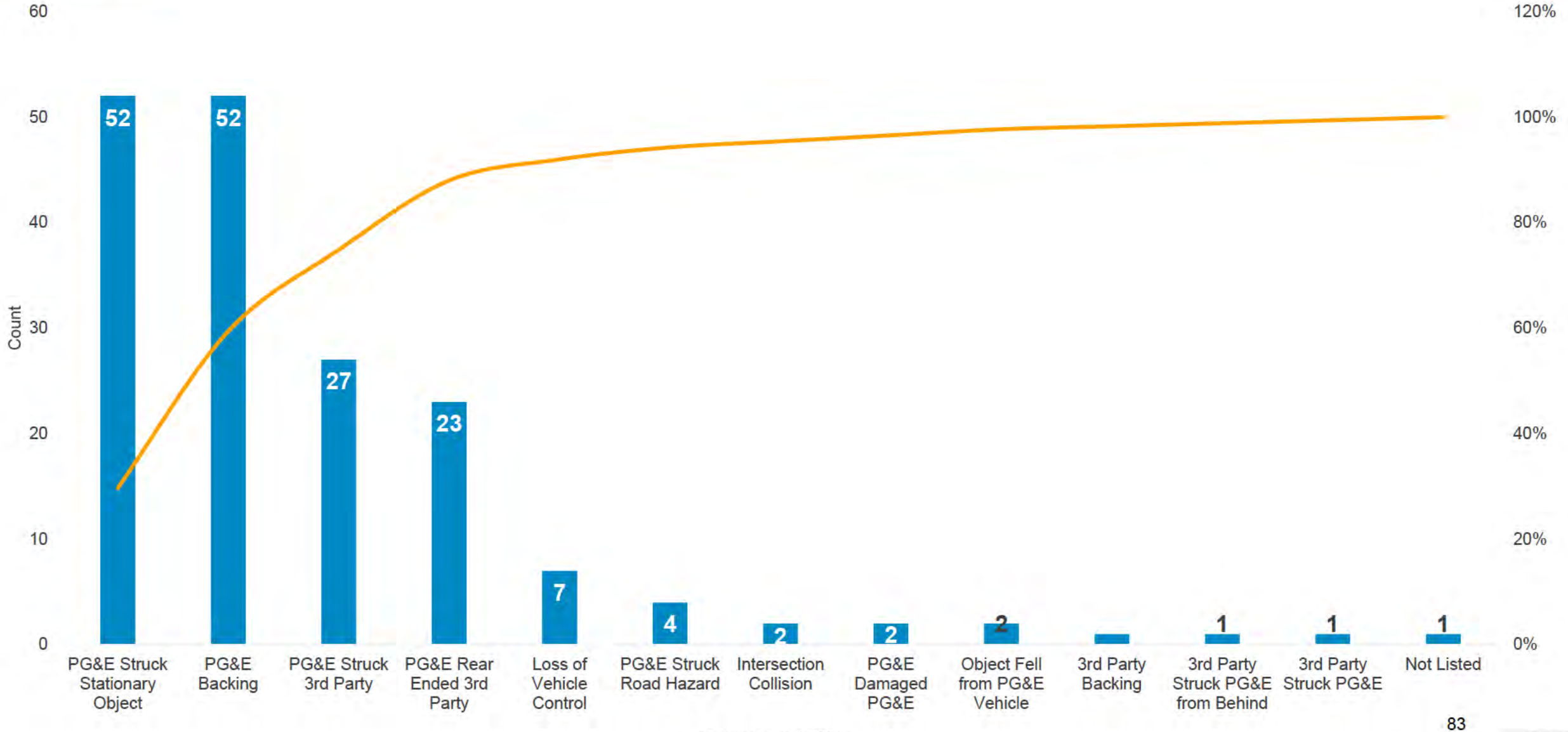
By Accident Type (MTD)



New this week (YTD 2023)

Updated on 6/15/2023

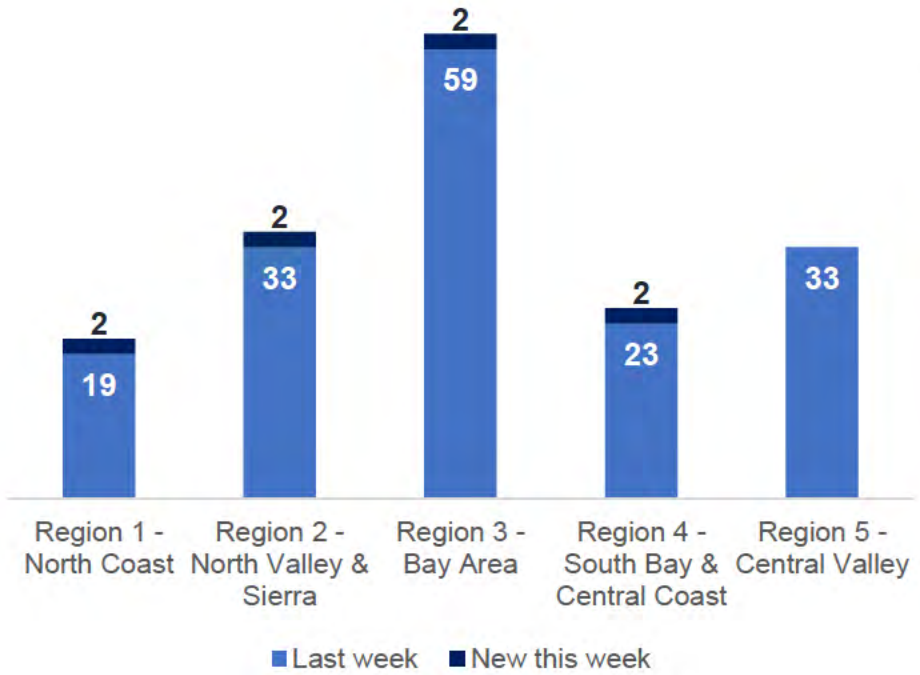
82

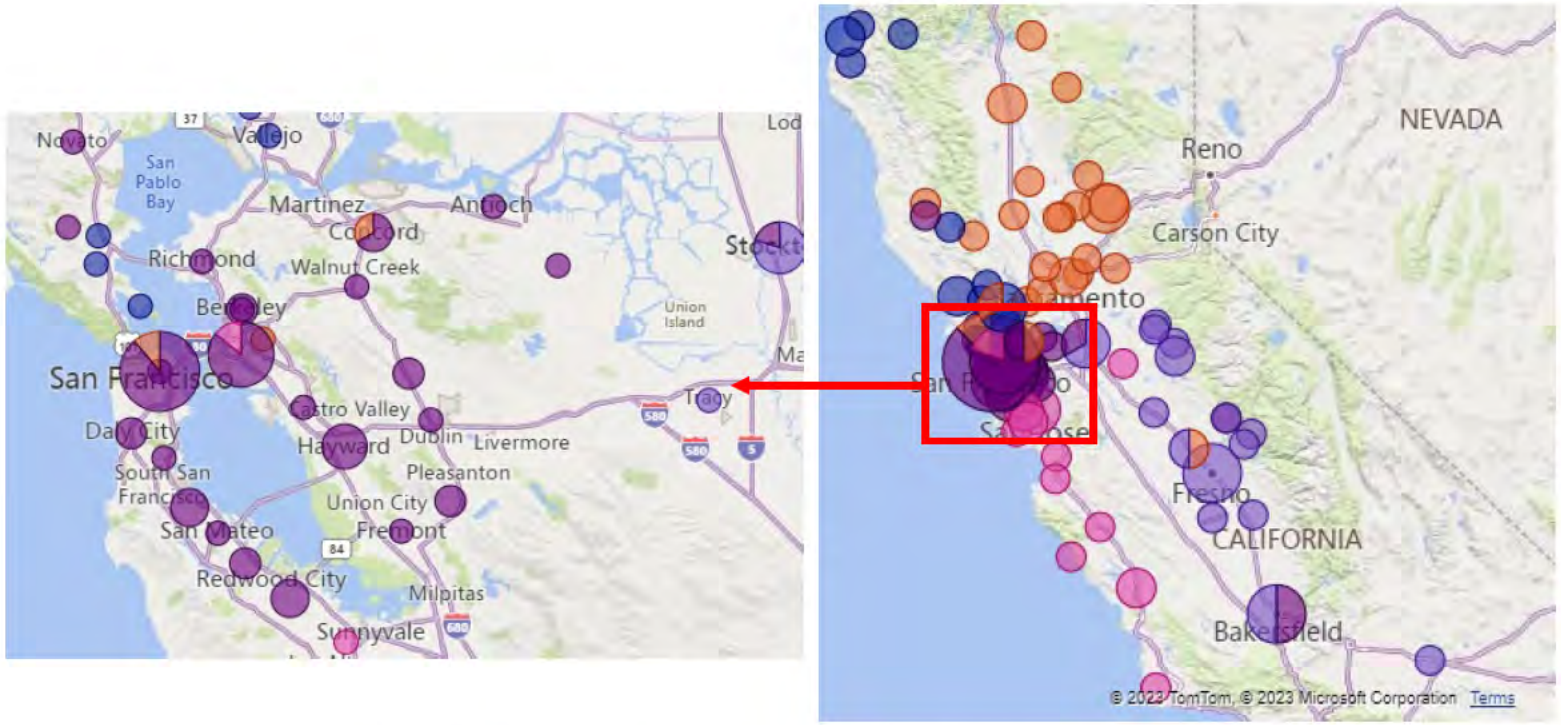


83

Updated on 6/15/2023

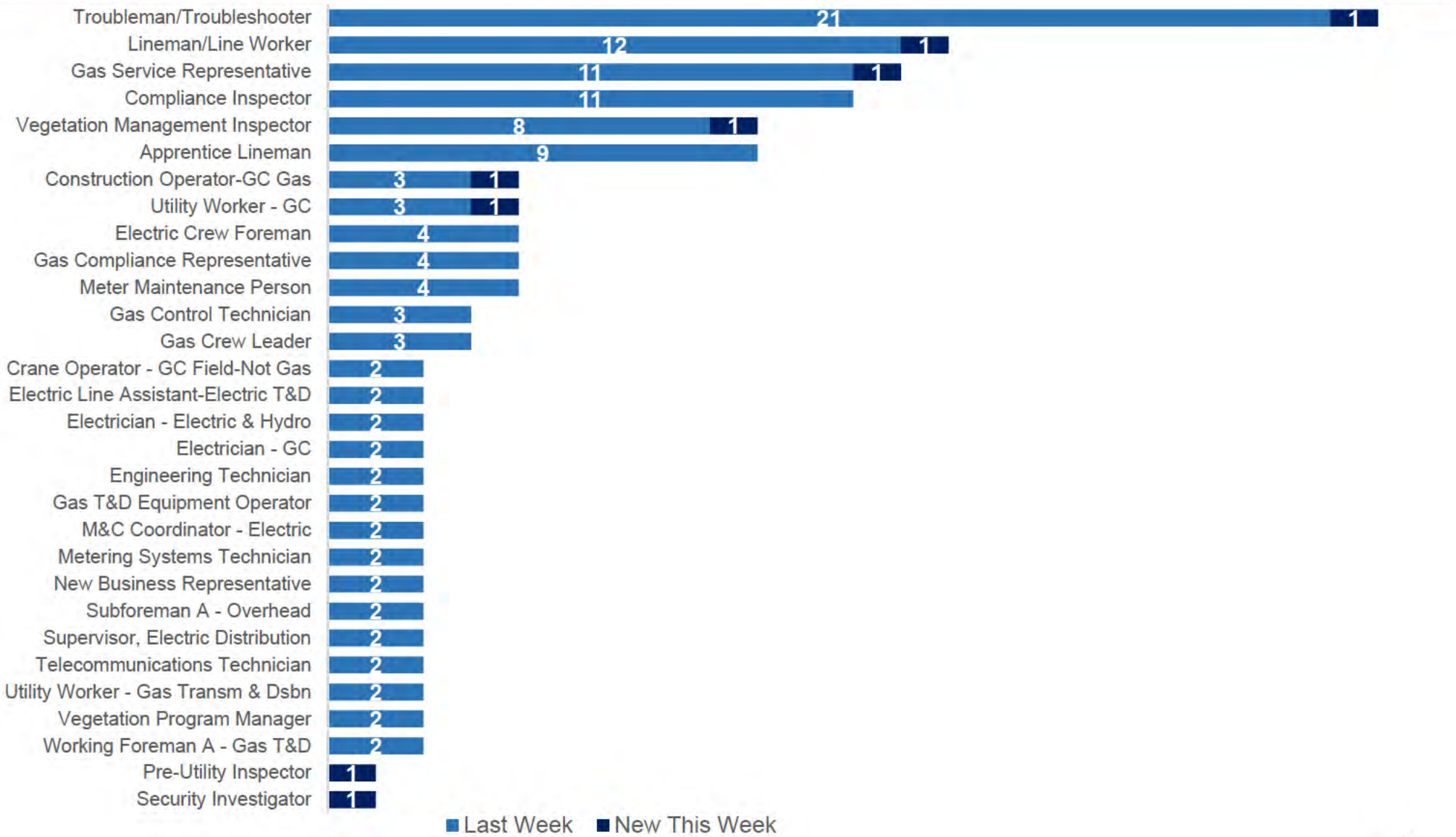
Internal





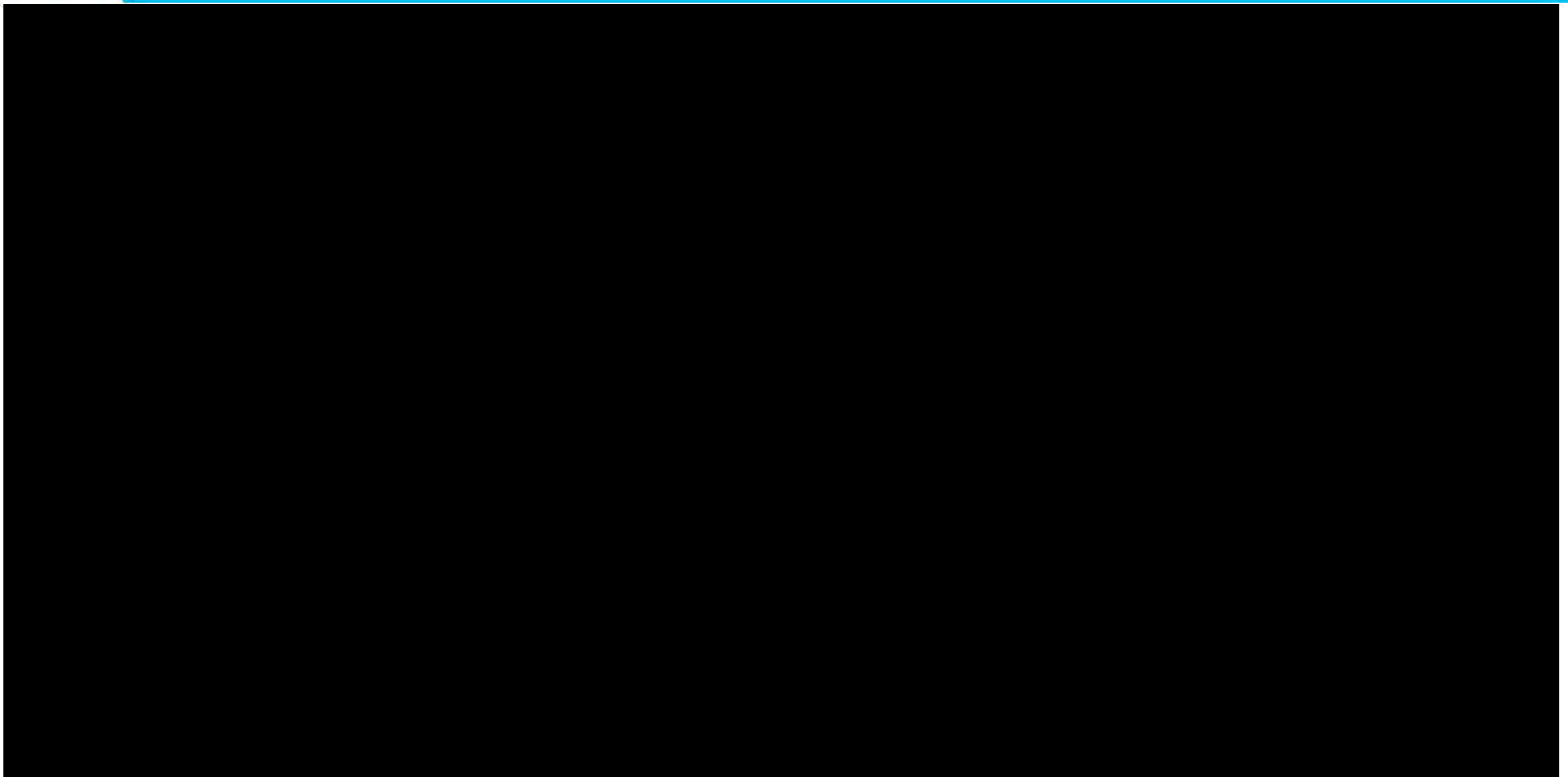
Located by Incident City, Colored by Employee Work City

Region 1 Region 2 Region 3 Region 4 Region 5

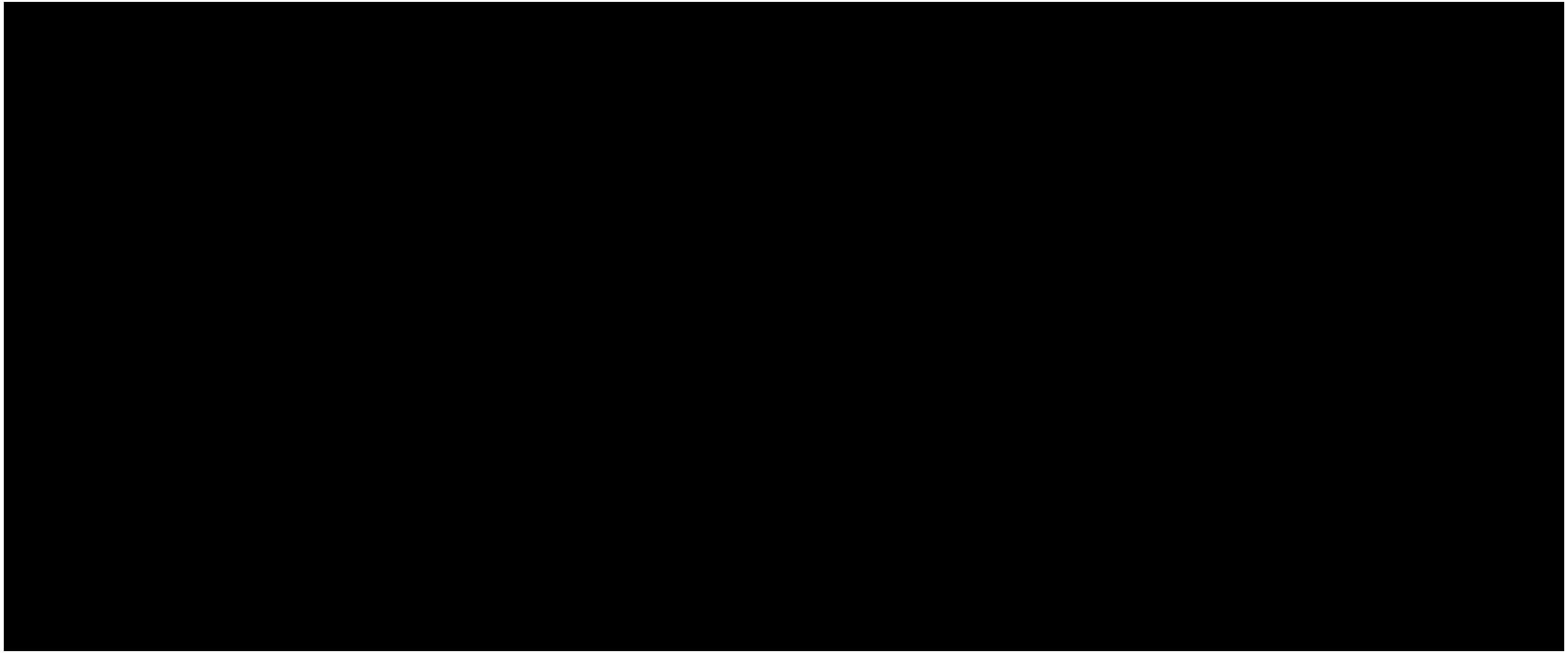


Updated on 6/15/2023

Internal



Public SIF
2021 vs 2022 vs 2023 YTD



Non-Fatal SIF

Non-Fatal SIF Rate

Updated on:
6/21/2023

Selected Report Month & Year

May 2023

Non-Fatal SIF Rate

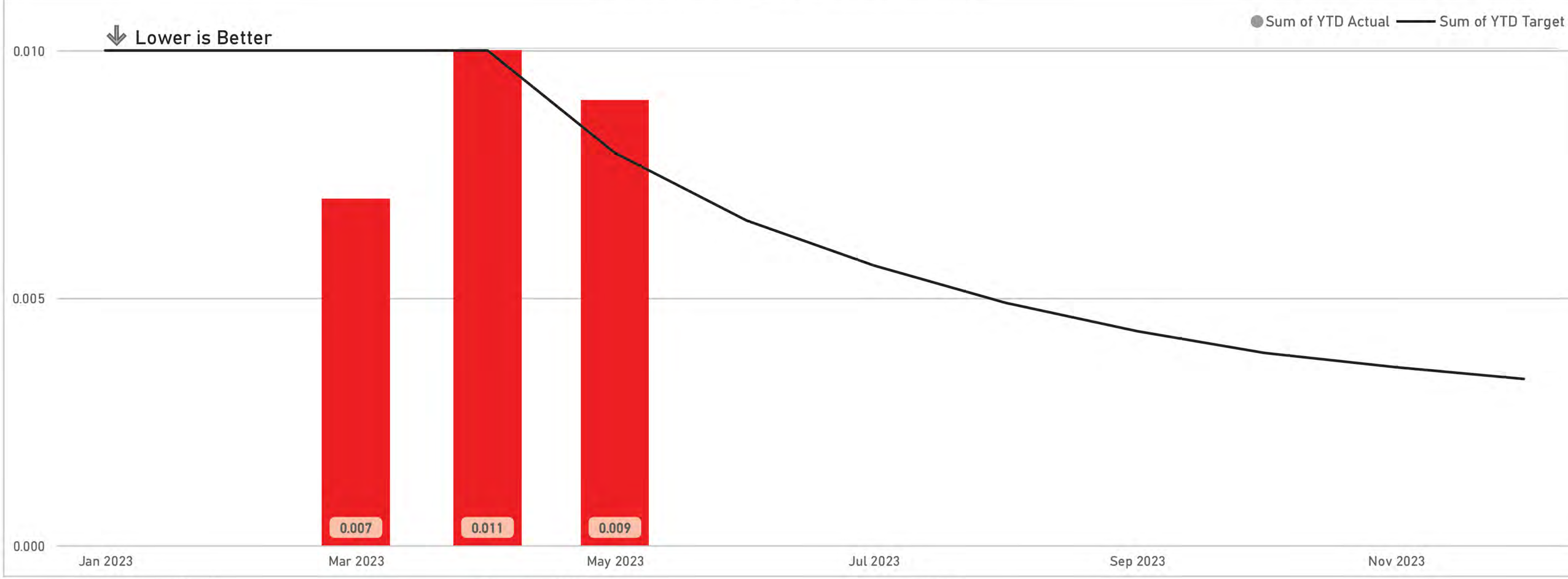
Cumulative Results Only

YTD	EOY
0.009	0.003
Target: 0.008	Target: 0.003

Metric Definition

A work-related high-energy incident from work at/ for PG&E that results in any of the following to employees, contractors, or directly supervised contractors: A life-threatening injury or illness that required immediate life-preserving action that if not applied immediately would likely have resulted in the death of that person. A life-altering injury or illness that resulted in a permanent and significant loss of a major body part or organ function. Metric will include MVIs and Contractors performing work for PG&E. Count will include # of individuals with SIF level injuries. Metric will be reported as a rate calculated as Count *200K/Hours Worked

Non Fatal SIF YTD Performance



Executive Owner
Sumeet Singh

Functional Area Owner
Matt Hayes

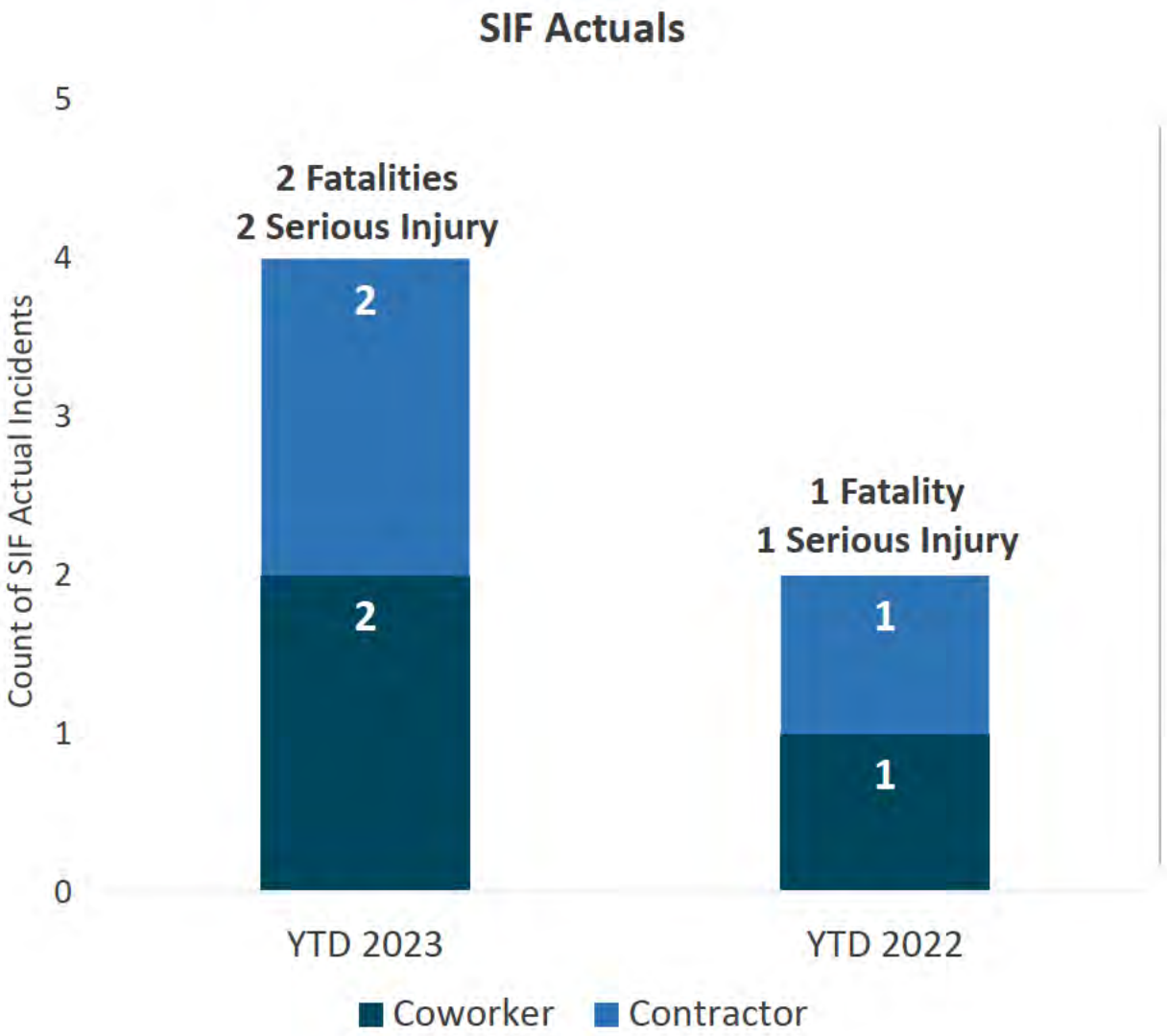
KPI Reporter
[redacted]

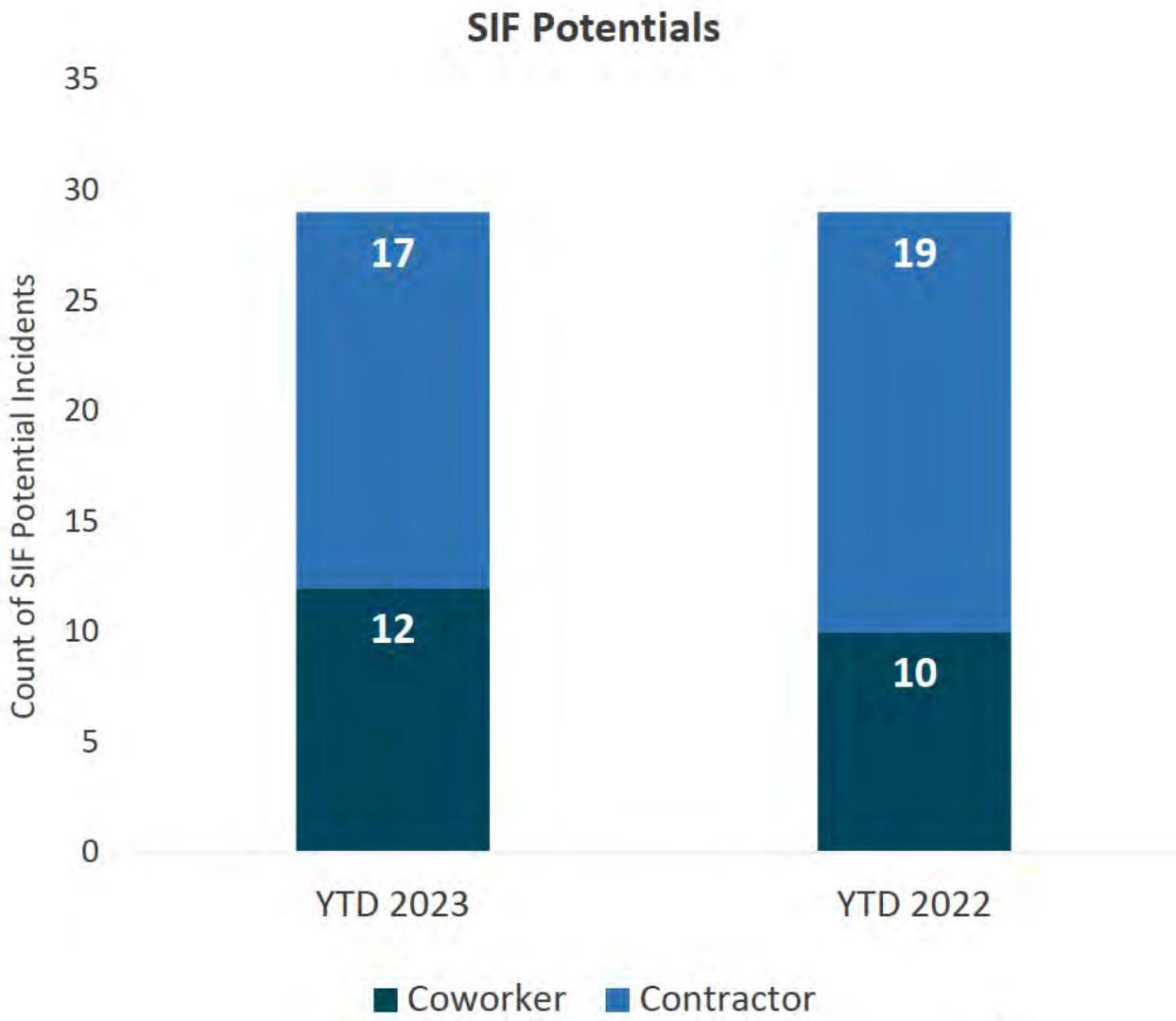
Lean Coach
[redacted]

SIF Catch back Plan

Catch Back Plan														
				Containment Section: Ideally actions completed in 24-48 hours				Countermeasure Section: Ideally plan built & documented within 1 week						
KPI	Ref. Num	Date Raised	Enterprise or Region-specifi	Containment / Immediate Actions	Target Date	Owner	Status	Countermeasure	Target Date	Owner	Status	Expected Impact (Units)	Expected Impact (Da
SIF	4.8	2/21/2023	Enterprise	Additional sessions needed; next session planned for 3/23 pending storm response	3/24/2023	[redacted]	✔						
SIF	4.3	2/24/2023	Enterprise	Additional sessions needed; last session planned for 3/10	3/10/2023		✔						
SIF	5.3	2/27/2023	Enterprise	Review and incorporate recommended actions for 2 failure modes (risk score great than 26) into SIF TIP	6/2/2023		✔						
SIF	1.2	3/6/2023	Enterprise	Conclude stakeholder review by 3/10	3/10/2023		✔						
SIF	5.4	3/16/2023	Enterprise	Discuss and include additional controls or mitigations in Employee Safety Incident risk bow tie	6/30/2023		✔						
SIF	1.3	3/13/2023	Enterprise	Complete stakeholder review by 3/10; incorporation of feedback by 3/16	3/16/2023		✔						
SIF	1.4	3/20/2023	Enterprise	[redacted] and [redacted] to meet on 3/22, continue training/comms discussion for new standard	3/31/2023		✔						
SIF	2.2, 4.1, 5.1	3/27/2023	Enterprise	Reconnect on initial data request and obtain second run of data that meets the need	3/31/2023 (action completed on schedule)		✔						
SIF	1.6	4/3/2023	Enterprise	EDRS approvals complete, awaiting publication in GDL	4/7/2023		✔						
SIF	14.6.3	4/17/2023	Enterprise	Will develop a contest framework/plan for Matt's review/approval.	4/28/2023		✔						
SIF	14.6.2	4/19/2023	Enterprise	Will follow-up on receiving responses for benchmarking purposes.	5/31/2023		✔						
SIF	8.4.8	4/24/2023	Enterprise	Push out start date of CSQAR to support ongoing SIF investigation	4/27/2023		✔	Adjust scheduled start date of CSQAR & ensure resources remain available if further adjustments need to be made	6/30/2023	[redacted]	●	N/A	N/A
SIF	15.3	4/28/2023	Enterprise	Delay in creating communications	4/30/2023		✔	Awaiting Matt's review and approval of communications	5/5/2023		●	N/A	N/A
SIF	2.12	5/1/2023	Enterprise	Previously communicated by Corporate real estate dept	6/23/2023		▲	Previously communicated by Corporate real estate dept, document submitted pending publication	7/15/2023		●		
SIF	2.3	6/1/2023	Enterprise	Await additional responses in NETS forum, follow up for status update as needed	6/23/2023		▲	AGA responses complete. Contact NETS to obtain more responses. Utilize raw data from EEI.	6/30/2023		●		
SIF	4.2	6/1/2023	Enterprise	Await survey results from CEATI, follow up for status update as needed	7/7/2023		▲						
SIF	5.2	6/1/2023	Enterprise	Await survey results from AGA, follow up for status update as needed	7/7/2023		▲						

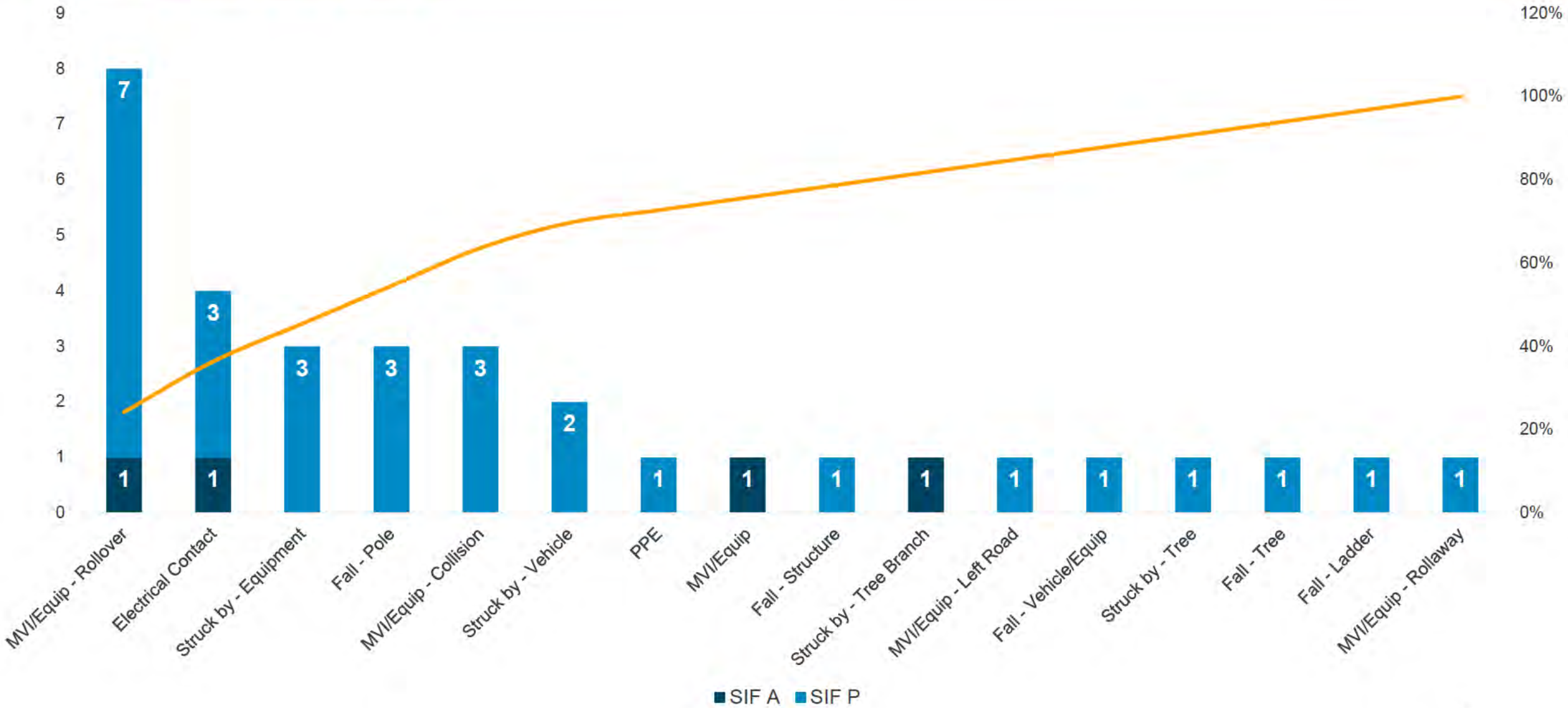
SIF Incidents (Actual & Potential)
Jun 2023 YTD





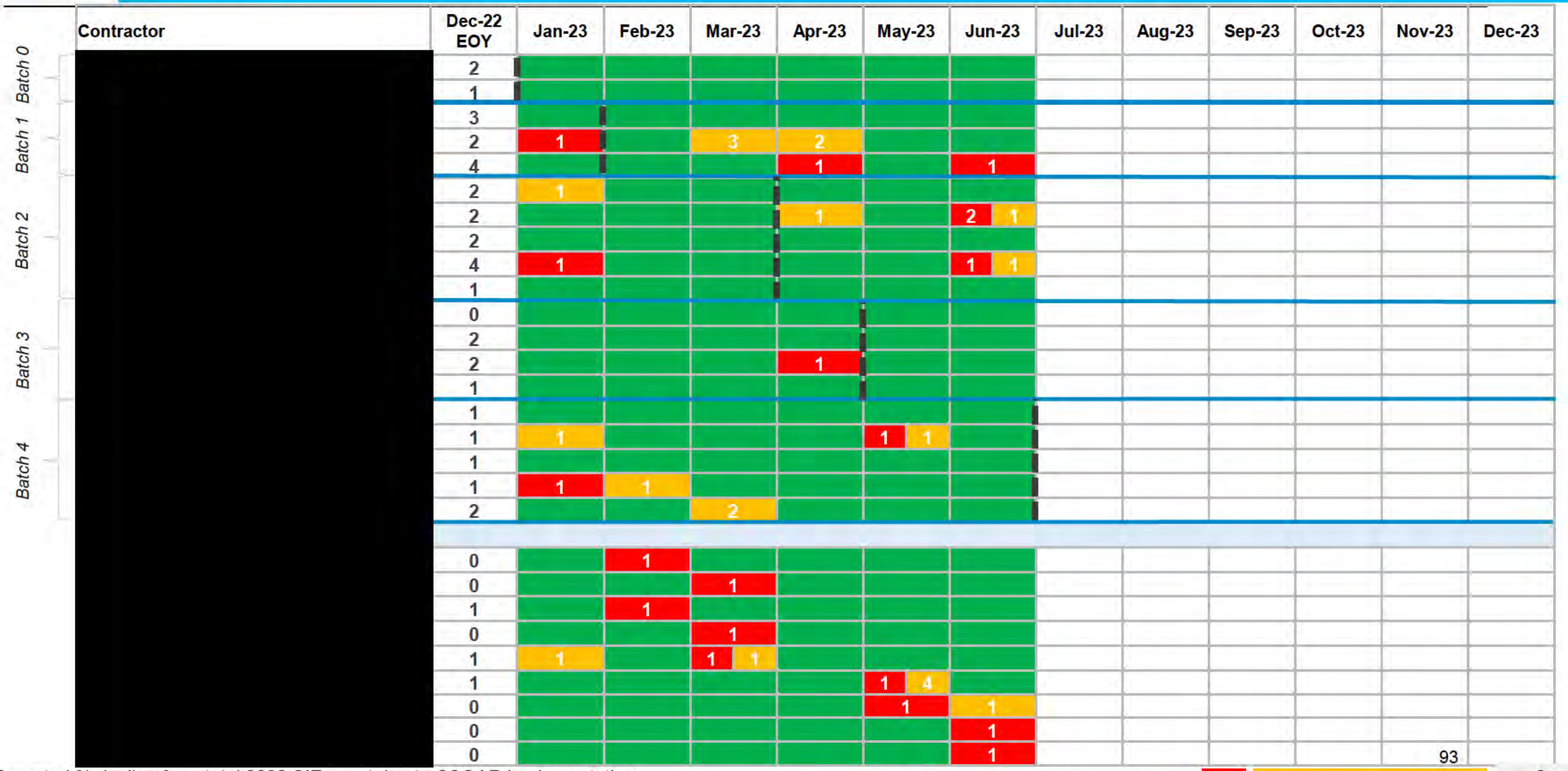
SIF Incidents (Actual & Potential) by Type

June 2023 YTD



SIF A/P and High/Life Threat Observations by Contractor w/CSQAR

Jun 2023 YTD



[1] Expected % decline from total 2022 SIF count due to CSQAR implementation

[2] 1 SIF- PAR prime/Outback sub

SIF A/P Performance- Coworker by KTL

Jun 2023 YTD

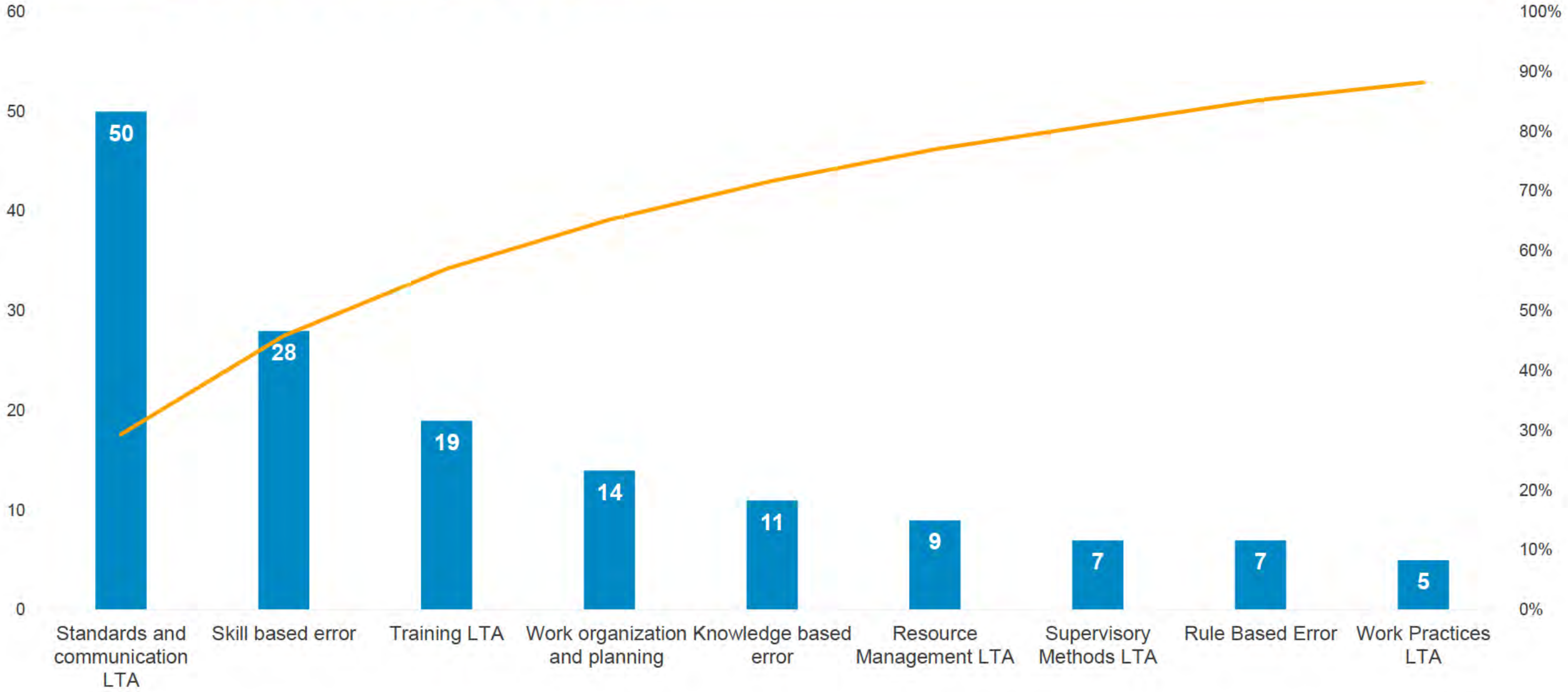
KTL- 2023 Plan	22-Dec EOY	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23
KTL #1: Pre-Job Safety Briefing	1					1							
KTL #2: Safe Driving	4	1		1	3		1						
KTL #3: PPE	0												
KTL #4: Electrical Safety	4		1		1	1							
KTL #10: Hazardous Environment	6	1											
Not in 2023 Plan													
KTL #8: Safety at Heights	2	1			2	1							

Rollout date

**One SIF Incident can have multiple KTLs*

SIF Incidents (Actual & Potential) by Top Causes

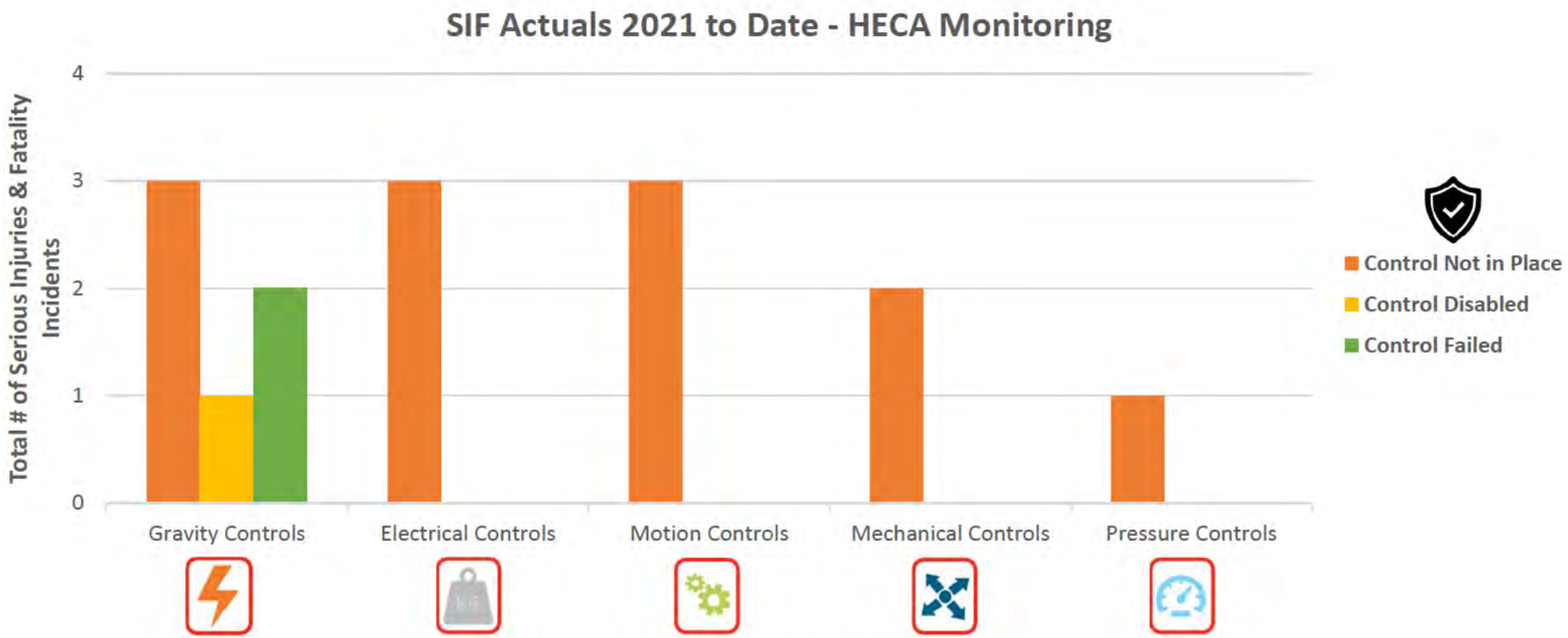
Jan 2022 – May 2023 YTD



**LTA = Less than adequate*

Pareto chart doesn't include "Other" causes which is 12% of the total population

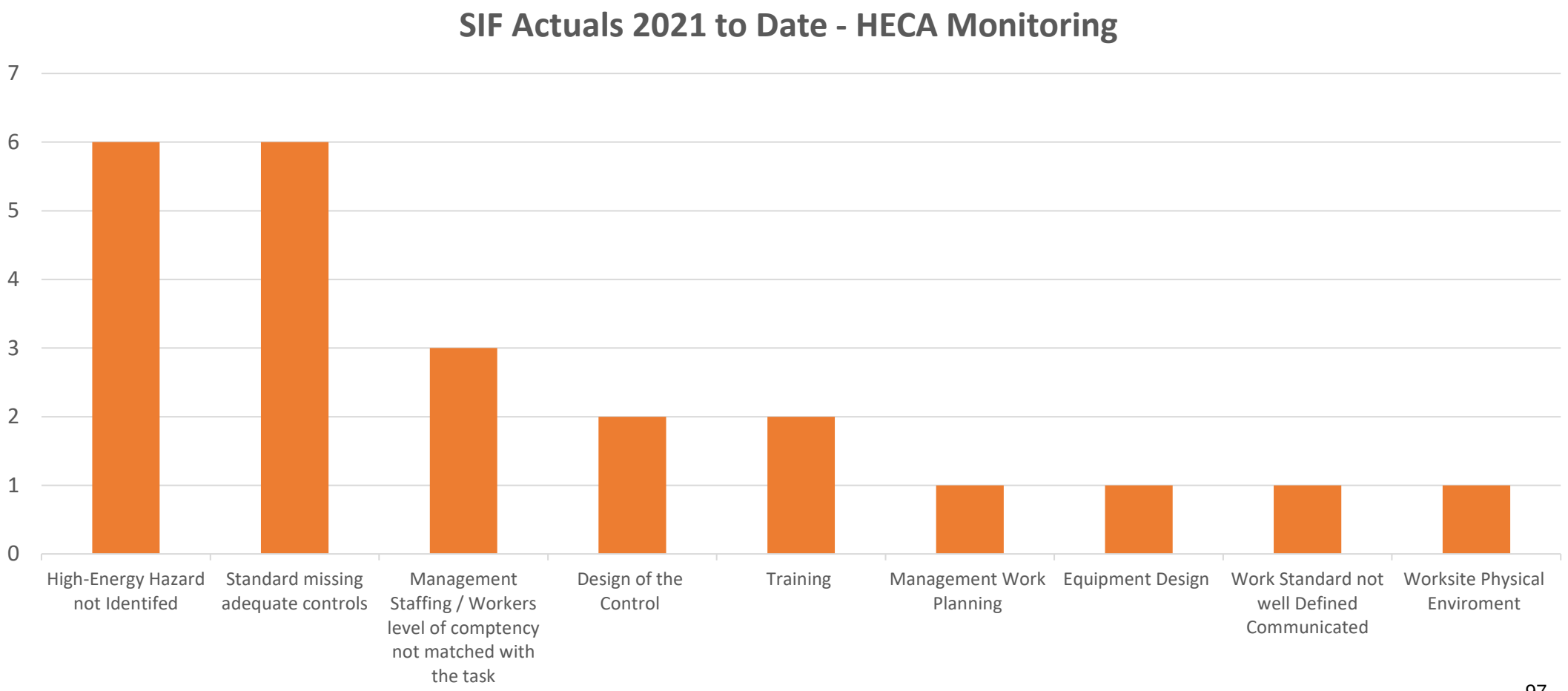
High Energy Controls Assessment (HECA) Learnings



Source of Lethal High Energy & Why the Essential Controls did not Build Capacity

HECA Learnings

What Caused Controls to be Disabled, Fail, Not be In Place?



Note: Most of these SIF incidents have more than one failure identified

Appendix

Off-Track KPIs Excluded from Performance Discussion

Commitment Delivery Index (CDI)

Updated on:
6/21/2023

Selected Report Month & Year

May 2023

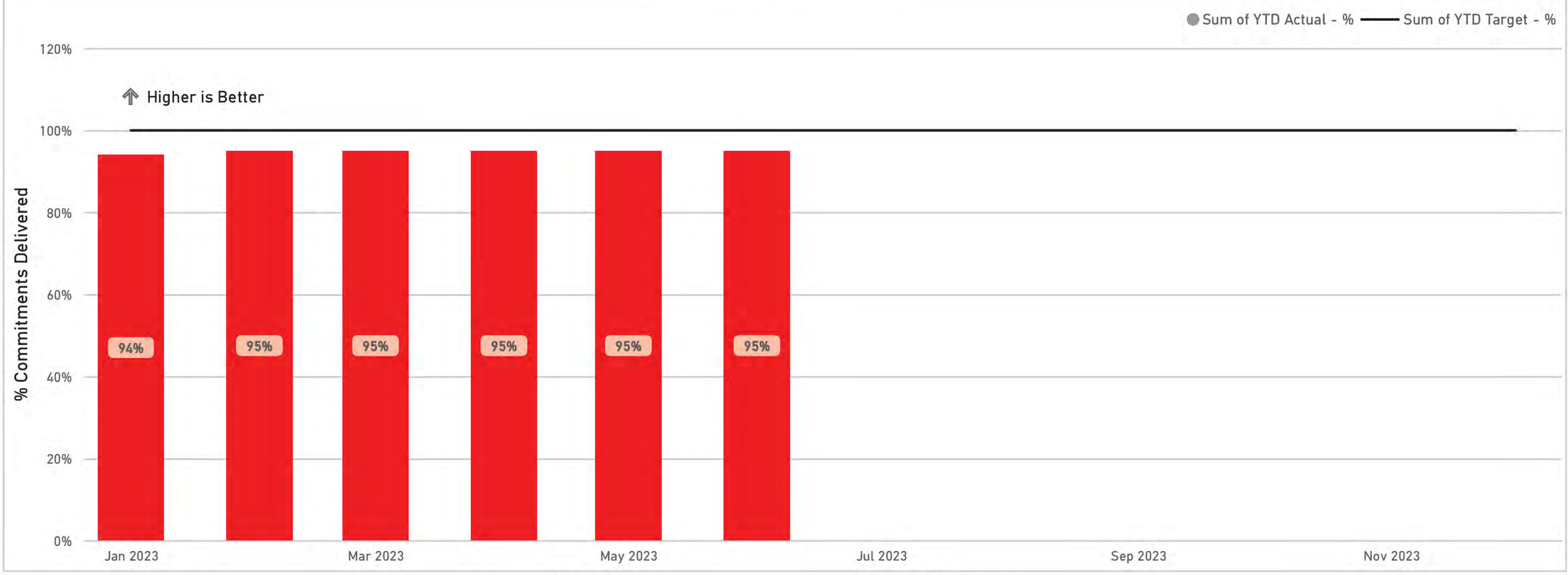
Commitment Delivery Index (CDI)

MTD	YTD
94%	95%
Target: 100%	Target: 100%

Metric Definition

Number of base plans on track or recoverable as a ratio to total commitments across all programs included in the Commitments Information Center

CDI YTD Performance



Executive Owner
John Simon

Functional Area Owner
[redacted]

KPI Reporter
[redacted]

Lean Coach
[redacted]

Wildfire Risk Reduction in HFTD

Updated on:
6/21/2023

Selected Report Month & Year

May 2023

Wildfire Risk Reduction in HFTD

MTD	YTD	EOY
0.00	0.00	0.00
Target: 1.00	Target: 1.00	Target: 1.00

Metric Definition

The metric measures the count of Fire Ignitions that result in fires equal to or greater than 5,000 acres in PG&E's High Fire Risk Area (HFRA)* and reportable to the CPUC per Decision 14-02-015. A reportable fire incident per Decision 14-02-015 is a fire event that meets the following criteria: 1) ignition is associated with PG&E powerlines (both transmission and distribution),...

Wildfire Risk Reduction YTD Performance

Executive Owner
Sumeet Singh

Functional Area Owner
Russ Prentice

KPI Reporter
[redacted]

Lean Coach

Updated on:
6/21/2023

Non-GAAP EPS

Selected Report Month & Year

May 2023

Non-GAAP EPS

MTD | YTD | EOY

[redacted]

Metric Definition

Financial performance from ongoing core operations, in dollars per share. The measurement is Non-GAAP core earnings. Non-GAAP core earnings excludes expenses that Management does not consider representative of ongoing earnings and affects comparability of financial results between periods.

Non-GAAP EPS YTD Performance

[redacted]

Jan 2023 | Mar 2023 | May 2023 | Jul 2023 | Sep 2023 | Nov 2023

Executive Owner

Carolyn Burke

Functional Area Owner

[redacted]

KPI Reporter

[redacted]

Lean Coach

Operating Cash Flow

Updated on:
6/21/2023

Selected Report Month & Year

May 2023

Operating Cash Flow

MTD | YTD | EOY

[redacted]

Metric Definition

OCF is used to measure how much cash the company has from normal operations. This KPI will align with the consolidated GAAP financial statements. It's calculated by starting with Billed Revenue (cash income) and subtracting cash spend on operating activities (e.g. Cost of Energy, Functional Area Earnings Impacting Expense, and Functional Are Non-Earnings ...

Operating Cash Flow YTD Performance

[redacted]

Jan 2023 | Mar 2023 | May 2023 | Jul 2023 | Sep 2023 | Nov 2023

Executive Owner

Carolyn Burke

Functional Area Owner

[redacted]

KPI Reporter

[redacted]

Lean Coach

Greater Affordability

Updated on:
6/21/2023

Selected Report Month & Year

May 2023

Greater Affordability

MTD | YTD | EOY

[redacted]

Metric Definition

% Rate of return to a shareholder relative to PG&E comparators

Greater Affordability YTD Performance

[redacted]

Jan 2023 | Mar 2023 | May 2023 | Jul 2023 | Sep 2023 | Nov 2023

Executive Owner

Carolyn Burke

Functional Area Owner

[redacted]

KPI Reporter

[redacted]

Lean Coach

Updated on:
6/21/2023

Public SIF Incidents

Selected Report Month & Year

May 2023

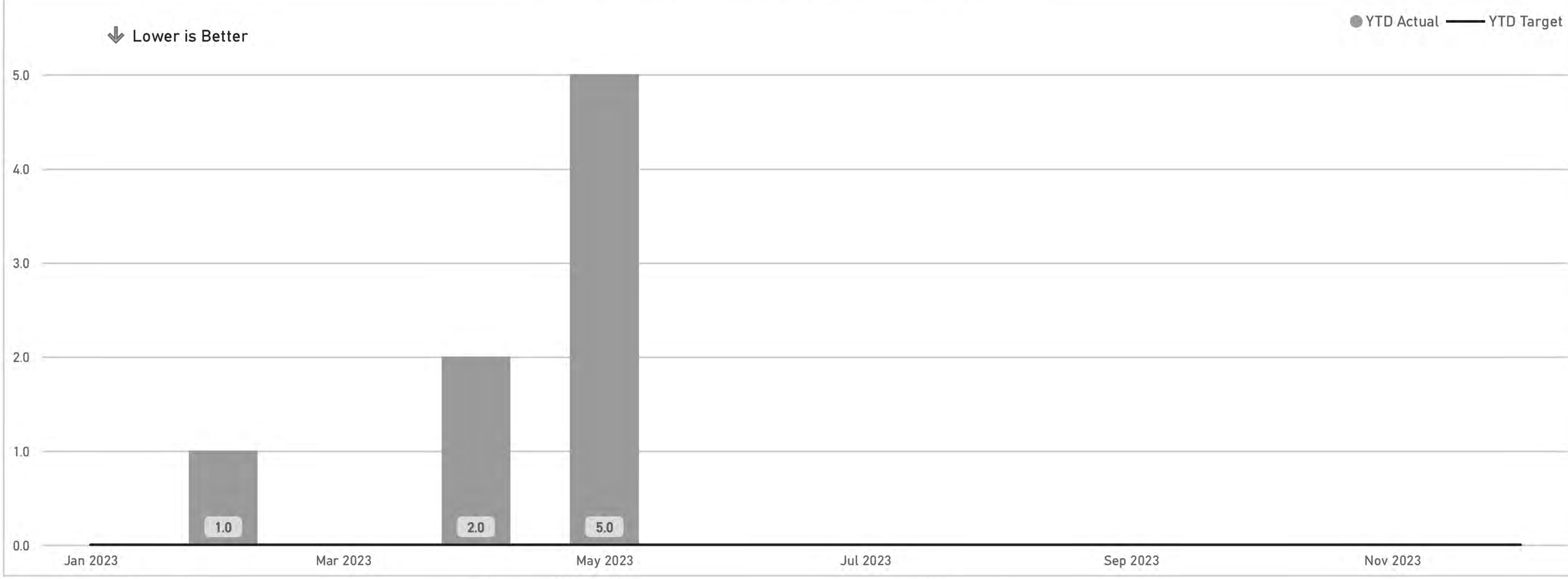
Public SIF Incidents

Cumulative Results Only	YTD	EOY
	5 Target: 0	5 Target: 0

Metric Definition

Includes both:
Public Serious Injuries and Fatalities (SIFs) (not related to PG&E asset failure or equipment malfunction).
Public Serious Injuries and Fatalities (SIFs) reported to the CPUC as Safety and Operational metrics (SOMs - related to asset failure, equipment malfunction or non-compliance with a Commission Standard).
NOTE: A serious injury is defined as one requiring in-patient hospitalization (for other than observation)

Public SIF Incidents Flow YTD Performance



Executive Owner
Sumeet Singh

Functional Area Owner
Russ Prentice

KPI Reporter
[redacted]

Lean Coach

CPUC Reportable Fire Ignitions in HFRA

Updated on:
6/21/2023

Selected Report Month & Year

May 2023

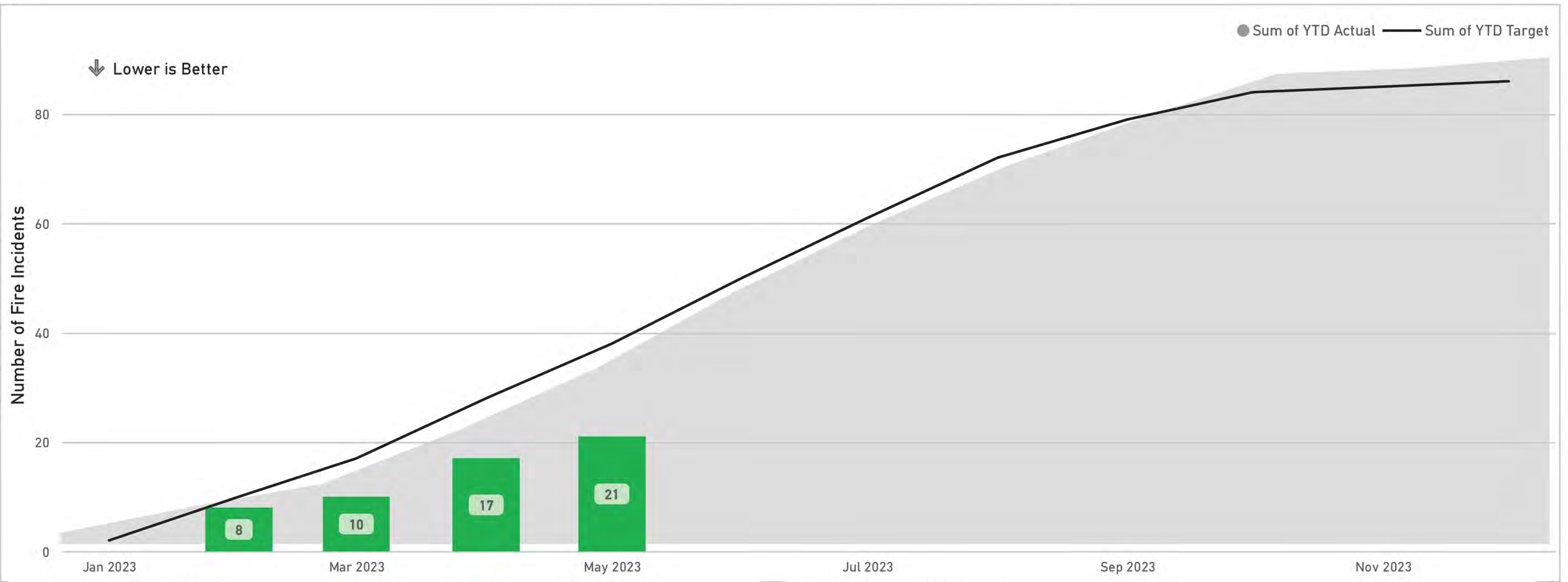
CPUC Reportable Fire Ignitions in HFRA

MTD	YTD	EOY
4	21	86
Target: 10	Target: 38	Target: 86

Metric Definition

Fire incidents that meet the following criteria: Occur within a PG&E's High Fire Risk Area (HFRA)* Reportable to the CPUC per Decision 14-02-015. A reportable fire incident includes all the following: 1) Ignition is associated with PG&E overhead distribution circuits, 2) something other than PG&E facilities burned, ...

CPUC Reportable Fire Ignitions YTD Performance



Executive Owner
Sumeet Singh

Functional Area Owner
Russ Prentice

KPI Reporter
[redacted]

Lean Coach

DCPP Reliability & Safety Indicator

Updated on:
6/21/2023

Selected Report Month & Year

May 2023

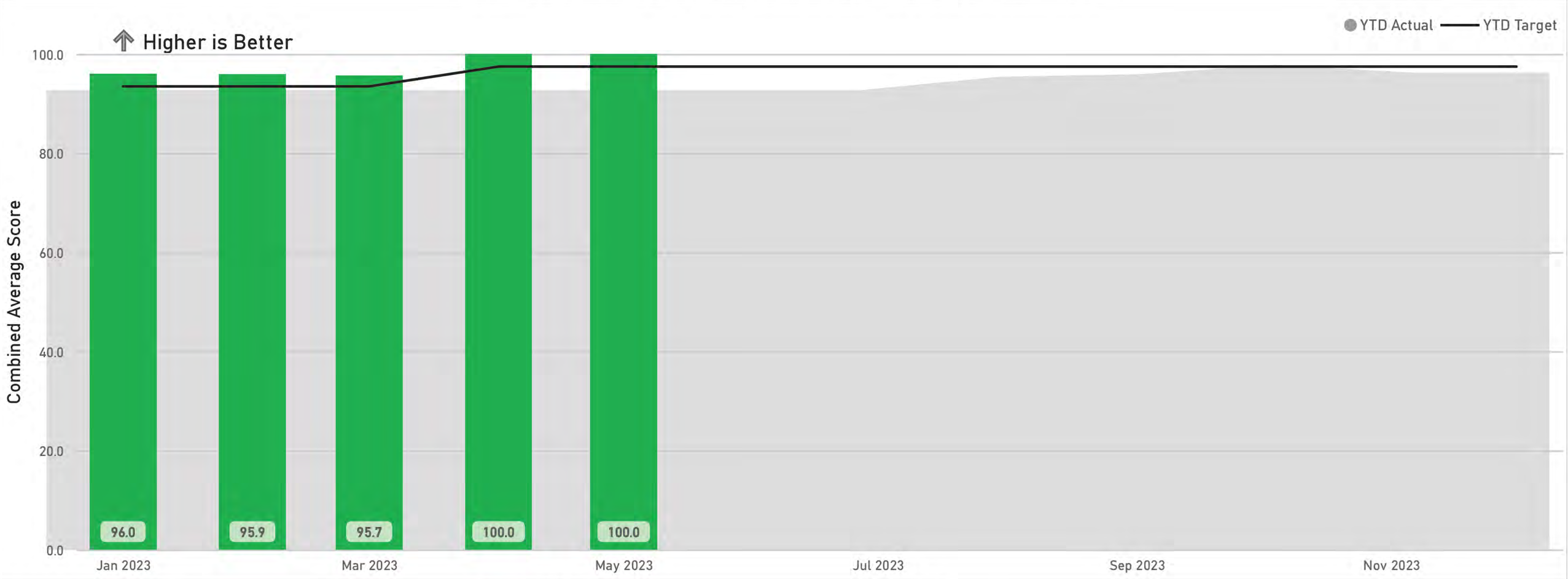
DCPP Reliability & Safety Indicator

MTD	YTD	EOY
100.0	100.0	97.5
Target: 97.5	Target: 97.5	Target: 97.5

Metric Definition

The year-end combined (average) score for Unit 1 and Unit 2, representing a composite of 10 performance indicators for nuclear power generation developed by the nuclear industry and applied to all U.S. nuclear power plants. Indicator performance periods range from 18 to 36 months (rolling). Maximum number of points is 100.

DCPP Reliability & Safety Indicator YTD Performance



Executive Owner

Sumeet Singh

Functional Area Owner

Paula Gerfen

KPI Reporter

[redacted]

Lean Coach

Updated on:
6/21/2023

DART

Selected Report Month & Year

May 2023

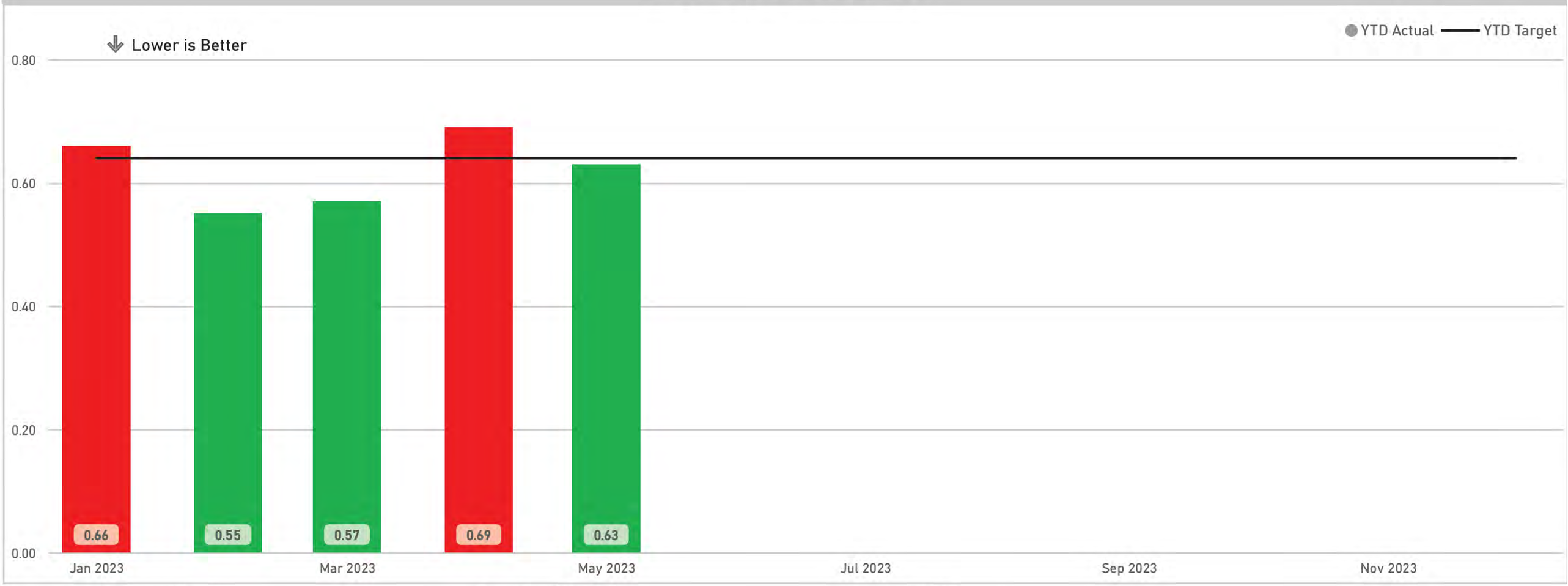
DART

MTD	YTD	EOY
0.39	0.63	0.64
Target: 0.64	Target: 0.64	Target: 0.64

Metric Definition

Days Away, Restrictions & Transfers (DART) Count is the number of OSHA Recordable cases in the current year incurred for employees and staff augmentation resources that meet OSHA's recordkeeping requirements (excluding fatalities) and that have resulted in at least one lost workday or one day of job restriction or ...

DART YTD Performance



Executive Owner

Sumeet Singh

Functional Area Owner

Matt Hayes

KPI Reporter

[redacted]

Lean Coach

Updated on:
6/21/2023

Total Gas Dig-Ins Rate

Selected Report Month & Year

May 2023

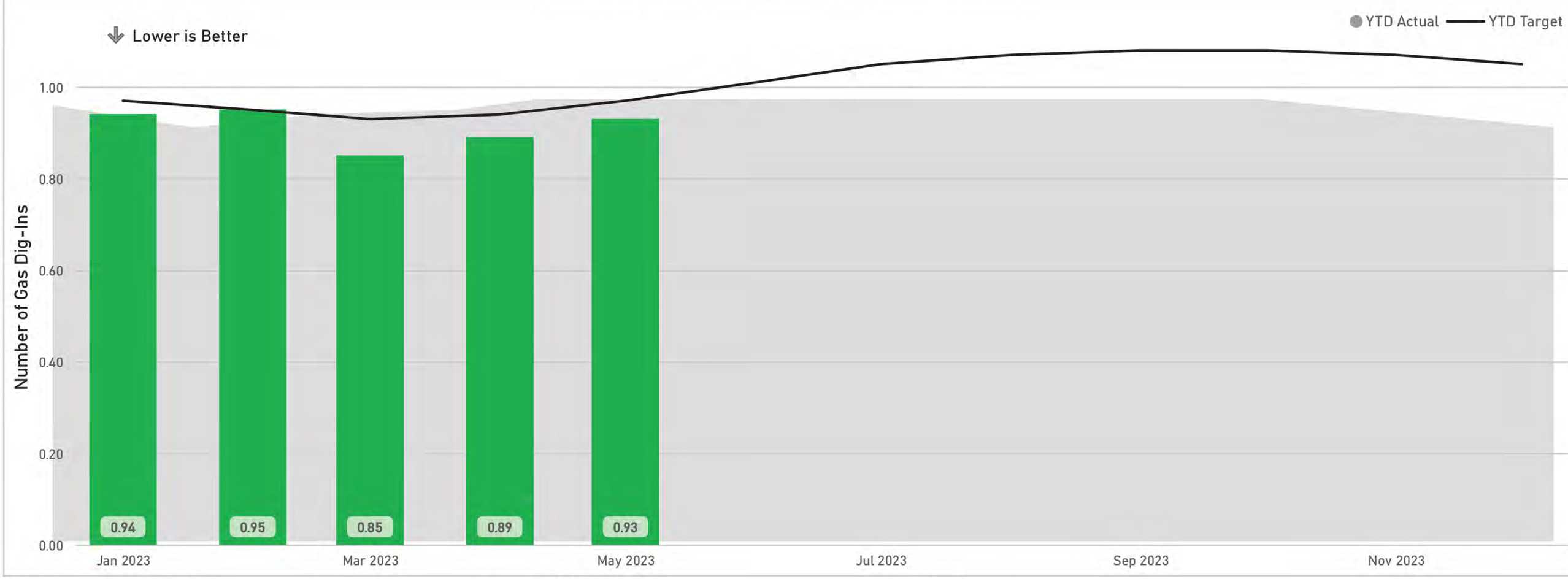
Total Gas Dig-Ins Rate

MTD	YTD	EOY
1.10	0.93	1.05
Target: 1.07	Target: 0.97	Target: 1.05

Metric Definition

This metric tracks the number of gas dig-ins per 1,000 Underground Service Alert (USA) tickets received. The dig-in component tracks all gas dig-ins to PG&E gas subsurface installations. A dig-in refers to damage which occurs during excavation activities (impact or exposure) and results in a repair or replacement of an underground gas facility.

Total Gas Dig-Ins Rate YTD Performance



Executive Owner
Sumeet Singh

Functional Area Owner
Joe Forline

KPI Reporter
[redacted]

Lean Coach

Updated on:
6/21/2023

SDOC

Selected Report Month & Year

May 2023

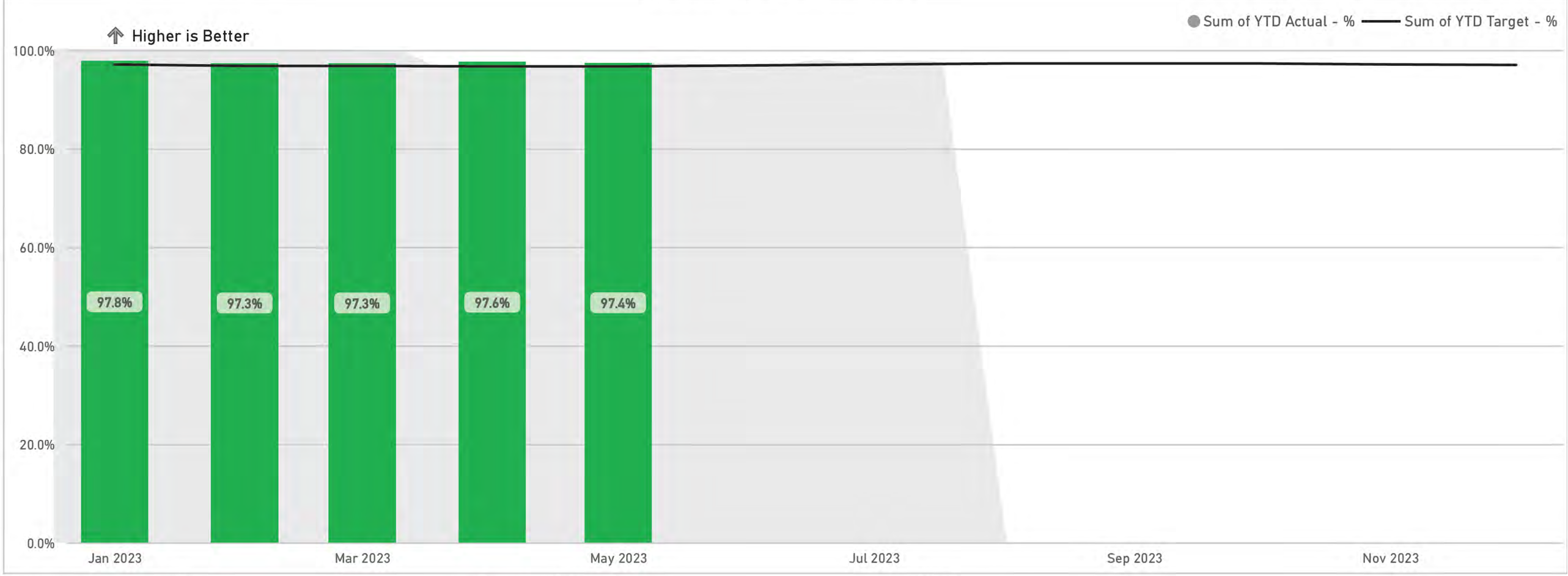
SDOC

MTD	YTD	EOY
96.9%	97.4%	97.2%
Target: 96.6%	Target: 96.7%	Target: 97.0%

Metric Definition

Measure of operating capability of mechanical equipment used as main control to reduce the enterprise risk of a Large Uncontrolled Water Release (LUWR).

SDOC YTD Performance



Executive Owner

Sumeet Singh

Functional Area Owner

Janisse Quinones

KPI Reporter

[redacted]

Lean Coach

Lean Maturity

Selected Report Month & Year

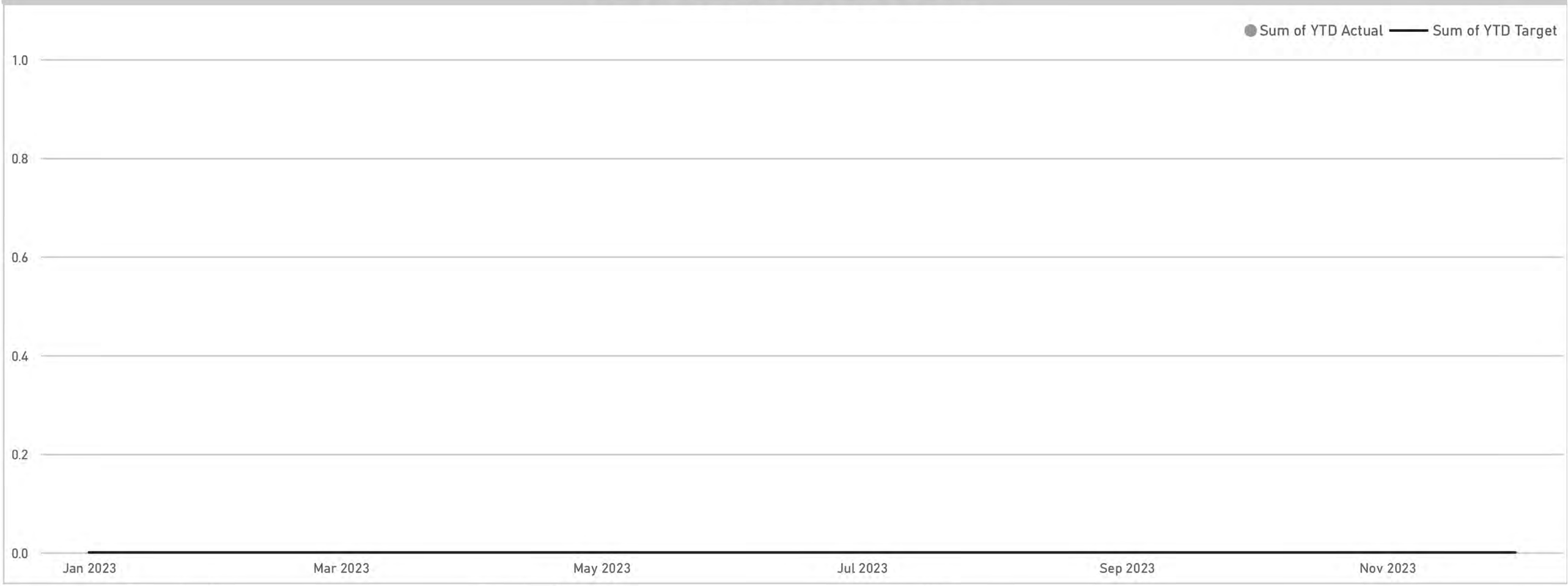
May 2023

Lean Maturity

Metric Definition

1 Target set to 80% to ensure execution portfolio focus on high priority projects

Lean Maturity YTD Performance



Executive Owner

Marlene Santos

Functional Area Owner

[redacted]

KPI Reporter

[redacted]

Lean Coach

Quality Pass Rate (QPR)

Updated on:
6/21/2023

Selected Report Month & Year

May 2023

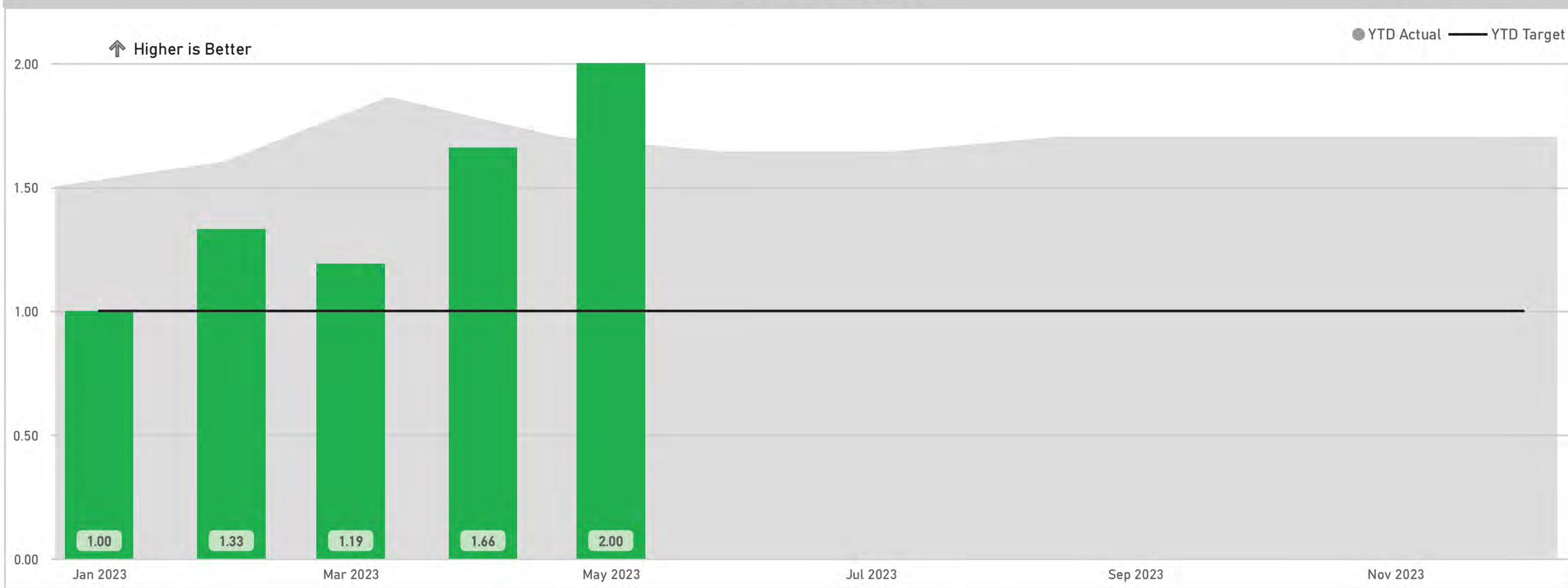
Quality Pass Rate (QPR)

MTD	YTD	EOY
2.00	2.00	2.00
Target: 1.00	Target: 1.00	Target: 1.00

Metric Definition

2 Basis of the top 20% correlates to ~70% of the risk on the risk buydown curve

QPR YTD Performance



Executive Owner	Functional Area Owner	KPI Reporter	Lean Coach
Sumeet Singh	Peter Kenny	[redacted]	

Critical Data Asset Management

Updated on:
6/21/2023

Selected Report Month & Year

May 2023

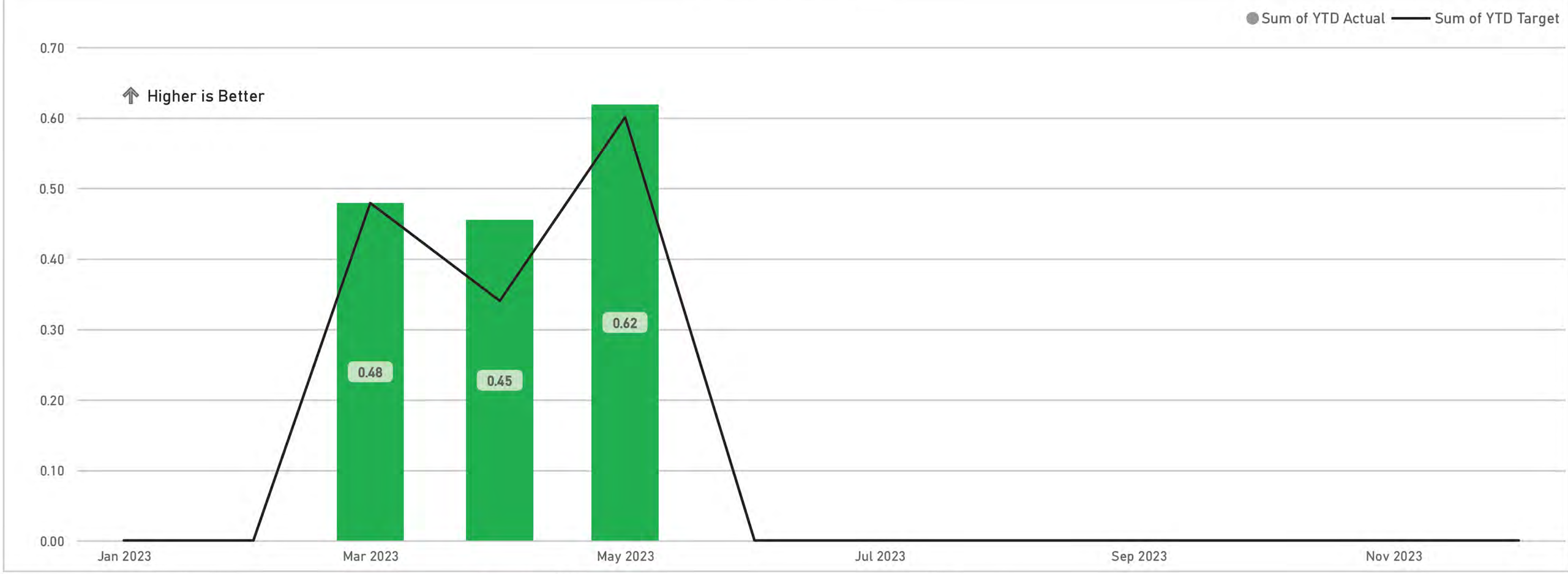
Critical Data Asset Management

MTD	YTD	EOY
0.62	0.62	1.00
Target: 0.60	Target: 0.60	Target: 1.00

Metric Definition

Index measuring data management capabilities and data quality for datasets defined as critical by Electric and Gas

YTD Performance



Executive Owner
Ajay Waghray

Functional Area Owner
David Leach

KPI Reporter
[redacted]

Lean Coach

GO. Trans. High Consequence Area Miles Assessed

Updated on:
6/21/2023

Selected Report Month & Year

May 2023

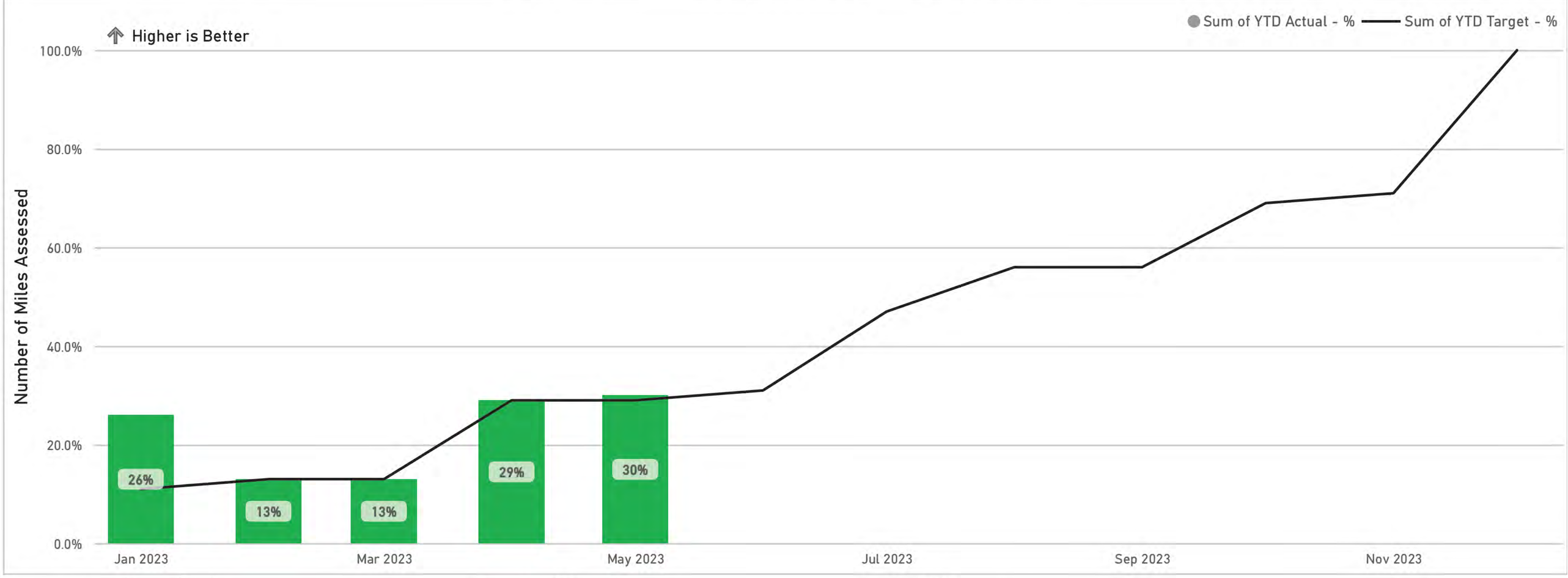
GO. Trans. High Consequence Area Miles Assessed

MTD	YTD	EOY
0%	30%	100%
Target: 0%	Target: 29%	Target: 100%

Metric Definition

This metric tracks the compliance related integrity assessments for threats to the gas transmission assets. As required by 49 CFR 192, Subpart O, integrity assessments of gas transmission high consequence areas (HCA) are required every 7 years. These assessments are performed utilizing methods such as In-line Inspection, Direct Assessment or Strength Test. Target ...

GO. Trans HCA Miles Assessed YTD Performance



Executive Owner
Sumeet Singh

Functional Area Owner
Joe Forline

KPI Reporter
[redacted]

Lean Coach

Updated on:
6/21/2023

System Hardening Effectiveness

Selected Report Month & Year

May 2023

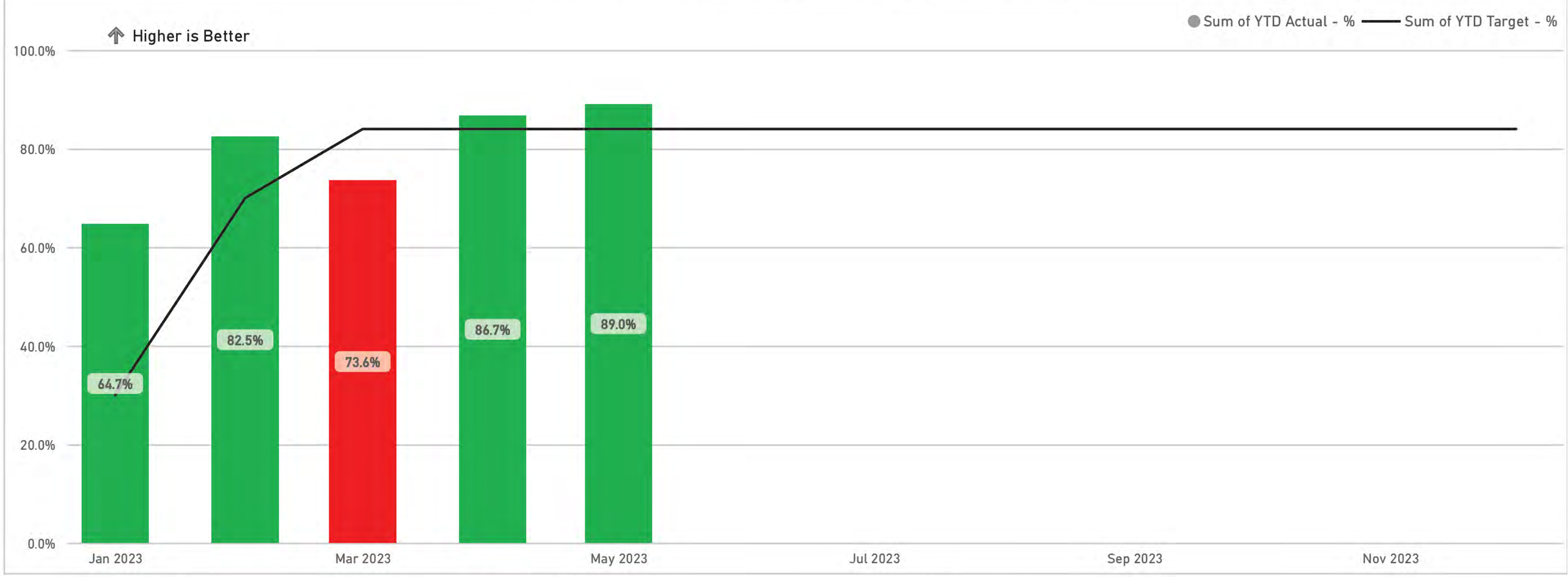
System Hardening Effectiveness

YTD	EOY
89.0%	93.2%
Target: 84.0%	Target: 84.0%

Metric Definition

Percentage of circuit miles completed under System Hardening (SH) program within high-fire risk areas (HRA) to reduce wildfire risk through either (1) undergrounding, (2) rebuild of overhead circuitry to current hardening design standards or (3) removal of overhead circuitry (line removal), including enablement for remote grid. This work...

System Hardening Effectiveness YTD Performance



Executive Owner

Sumeet Singh

Functional Area Owner

Peter Kenny

KPI Reporter

[redacted]

Lean Coach

Corporate Security

Updated on:
6/21/2023

Selected Report Month & Year

May 2023

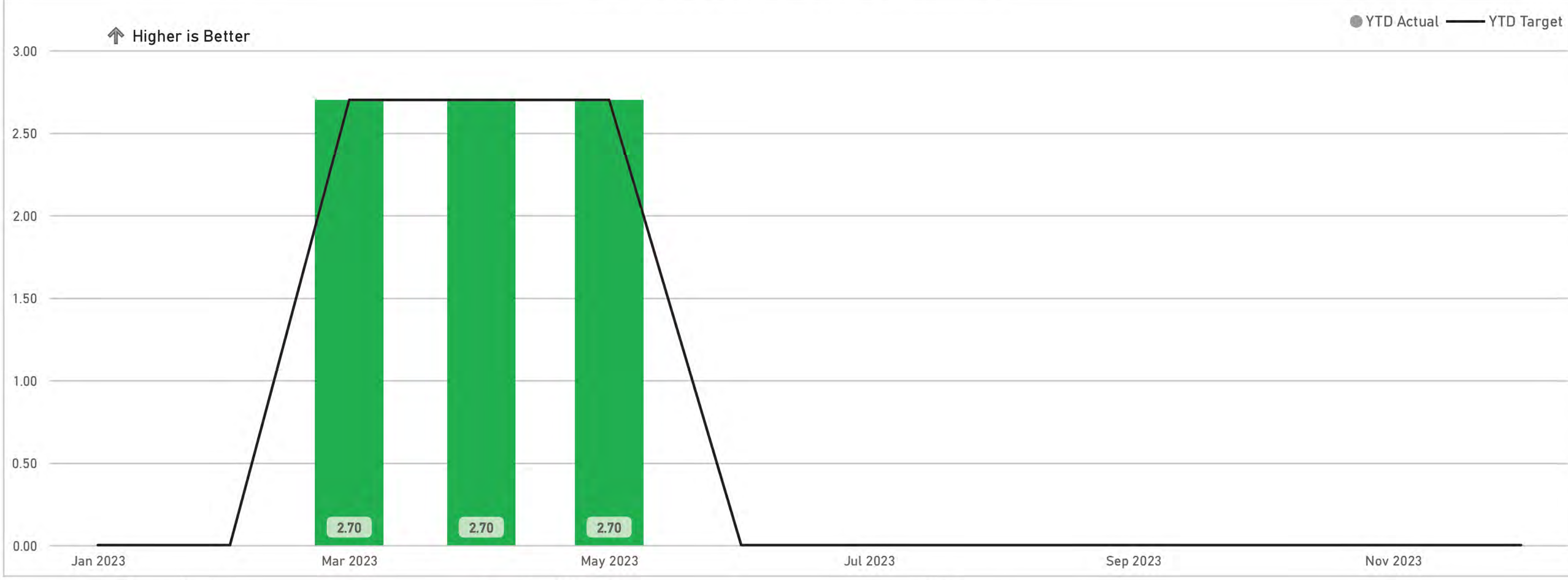
Corporate Security

MTD	YTD	EOY
2.70	2.70	3.00
Target: 2.70	Target: 2.70	Target: 3.00

Metric Definition

Corporate Security Index is to measure the capabilities in order to keep our people safe, and our assets and facilities are protected from threats and attacks.

Corporate Security YTD Performance



Executive Owner

Ajay Waghray

Functional Area Owner

David Leach

KPI Reporter

[redacted]

Lean Coach

Cybersecurity

Updated on:
6/21/2023

Selected Report Month & Year

May 2023

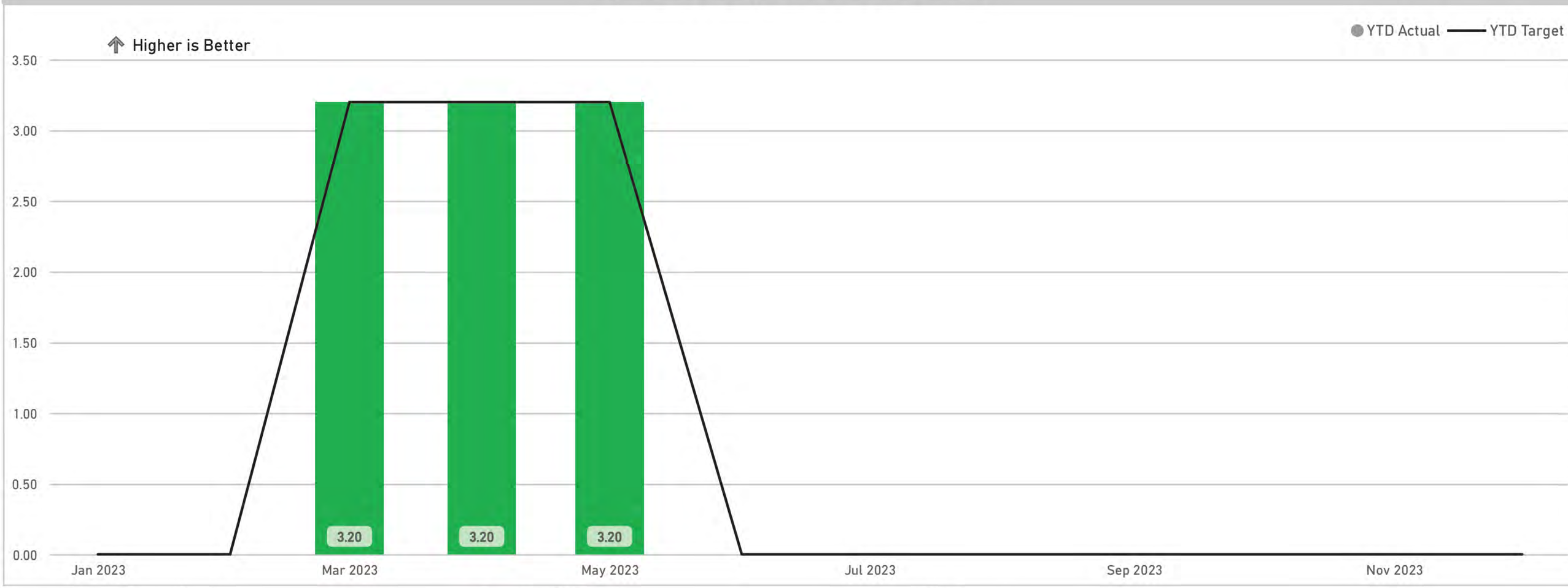
Cybersecurity

MTD	YTD	EOY
3.20	3.20	3.30
Target: 3.20	Target: 3.20	Target: 3.30

Metric Definition

The Cybersecurity Index measures the effectiveness of our ability to protect PG&E and its employees and assets against constantly evolving cyber threats through proactive identification and management of risk and reactive detection and containment of incidents. The index is a composite score of the 5 National Institut...

Cybersecurity YTD Performance



Executive Owner

Ajay Waghray

Functional Area Owner

David Leach

KPI Reporter

[redacted]

Lean Coach

Updated on:
6/21/2023

Lean Waste Elimination

Selected Report Month & Year

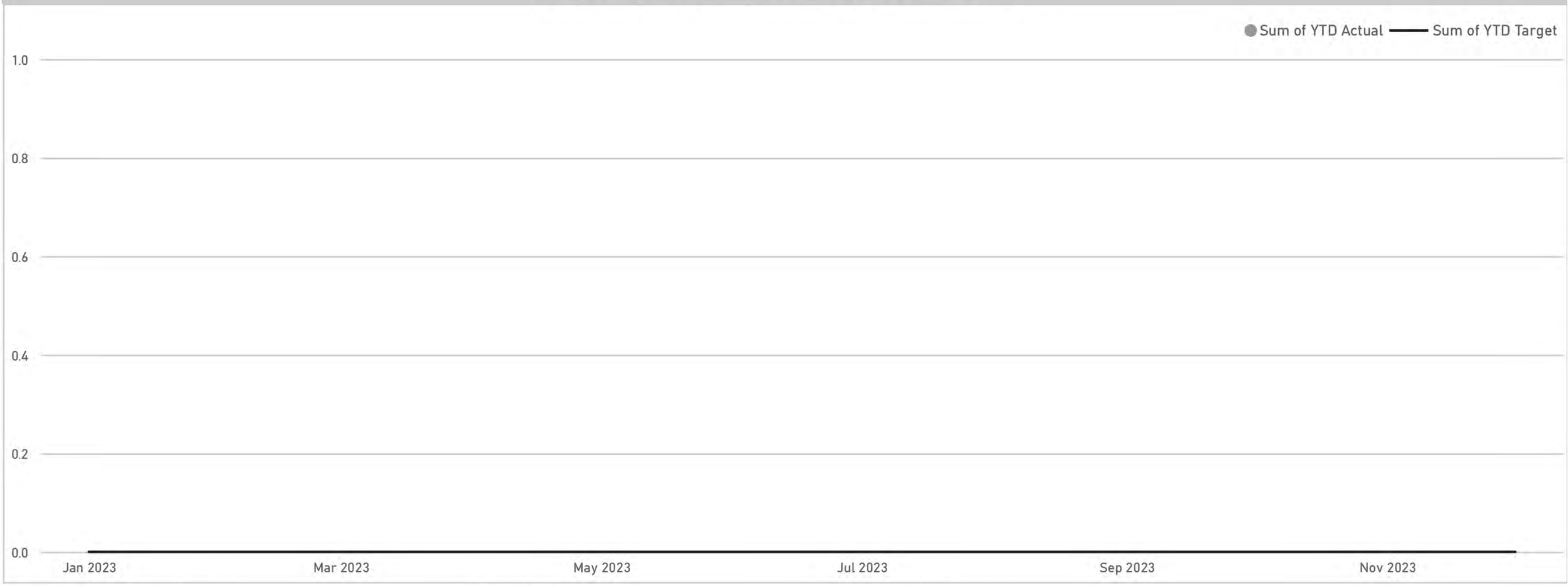
May 2023

Lean Waste Elimination

Metric Definition

Initial waste elimination target is based on 2% O&M reduction. Enterprise and Functional Area targets established through BPD process (effeciency targets) in Dec; presented in Jan

Lean Waste Elimination YTD Performance



Executive Owner

Marlene Santos

Functional Area Owner

[redacted]

KPI Reporter

[redacted]

Lean Coach

O&M Per customer

Updated on:
6/21/2023

Selected Report Month & Year

May 2023

O&M Per customer

Metric Definition

Still being defined. Current definition aligns to O&M from FERC Forms 1 & 2 and customer count from FERC Forms 1 & 2

O&M Per Customer YTD Performance

Executive Owner

Carolyn Burke

Functional Area Owner

[redacted]

KPI Reporter

[redacted]

Lean Coach

Updated on:
6/21/2023

TSR

Selected Report Month & Year

May 2023

TSR

[redacted]

MTD | YTD | EOY

[redacted]

Metric Definition

The internal rate of return to a shareholder during the performance period, including price gains and dividends, relative to the TSR of comparator group companies. TSR = EPS growth + P/E multiple expansion + dividend yield

TSR YTD Performance

[redacted]

Executive Owner

Carolyn Burke

Functional Area Owner

Jonathan Arnold

KPI Reporter

[redacted]

Lean Coach

Joy at Work Index

Updated on:
6/21/2023

Selected Report Month & Year

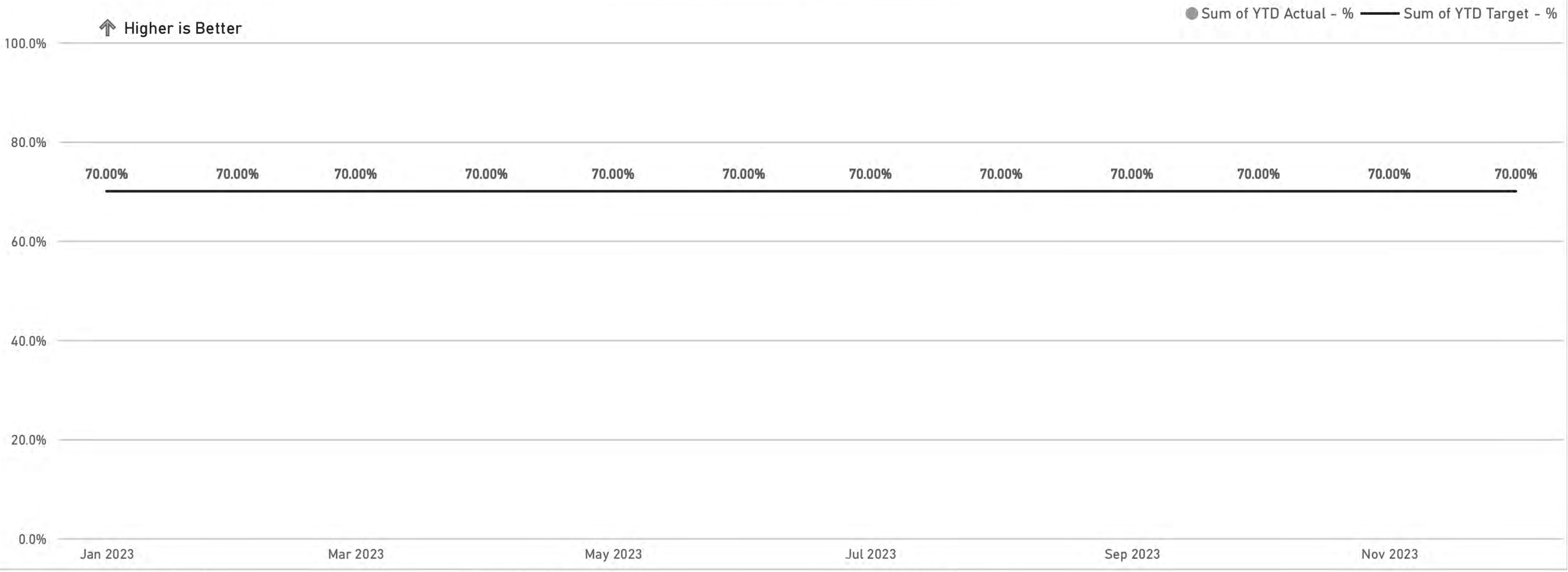
May 2023

Joy at Work Index

Metric Definition

Average % of coworkers responding favorably to feeling Joy, Known, Loved, and Proud working for PG&E

Joy At Work YTD Performance



Executive Owner

Julius Cox

Functional Area Owner

Debbie Powell

KPI Reporter

[redacted]

Lean Coach

Pacific Gas and Electric Company's

Safety Excellence Management System Manual

April 2023

Message from Leadership

We are committed to protecting the health and safety of our workforce and the hometowns that we are privileged to serve. To do this, we must foster a proactive and engaging safety culture. This commitment is clearly memorialized in our Safety Excellence Policy. We expect that every task be completed without injury or incident as we deliver safe, reliable, affordable and clean energy to our customers and hometowns. Our safety stand, "everyone and everything is always safe", means that nothing is more valuable than human life. To make this stand a reality, we must put safety at the heart of all our decisions and actions and have the courage to stop work if it's unsafe and only start work when it is safe. Our safety culture must encourage us to show empathy to each other and our customers. It must be modeled by our leaders and embraced by each of us.

The PG&E Safety Excellence Management System (PSEMS) is how we systematically manage risks to our processes, assets and occupational health and safety to prevent injury and illness, safely operate our assets and manage the integrity of our operating system. It supports an injury-free workplace and enables our functional areas to continually improve safety and reliability in alignment with our focus on Organizational Culture and Safety Mindset. Driven by leadership, PSEMS reflects our unwavering commitment to safety and establishes a standard for attaining world-class safety performance. It also requires us to deliver sustained value to our customers and hometowns, which will help us rebuild trust.

We all have a role in understanding and mitigating risks and assuring safeguards are in place and effective. I encourage you to read and understand PSEMS and to implement it with the ownership, tenacity and curiosity I know we all share.

Patti Poppe
Chief Executive Officer

How to Use This Manual

This manual provides an overview of PSEMS, our approach to achieving world-class safety performance and the framework for continuous improvement. Read on to learn about your role in supporting PSEMS and creating a safe and reliable organization.

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Our Safety Stands

At PG&E, our safety stands are that everyone and everything is always safe and that catastrophic wildfires shall stop. We are committed to protecting the health and safety of our workforce and hometowns by fostering a proactive and engaging organizational culture and safety mindset. At PG&E, we:

- Are committed to achieving zero public and workforce (includes coworkers and contractors) safety incidents, an injury-free workplace and the participation and engagement of the workforce.
- Create healthy and safe conditions for our workforce, customers and our hometowns that we are privileged to serve.
- Manage our assets, mitigate associated risks and improve system performance throughout lifecycles to protect our customers, workforce and environment.
- Generate and deliver safe, reliable, affordable and clean energy to our customers and our hometowns.
- Comply with legal, regulatory, internal and other health and safety requirements.
- Challenge ourselves to continuously improve and implement best practices.

PG&E's Keys to Life

We follow these 10 principles for every aspect of our work, in the field or office.

1 Conduct pre-job safety briefings prior to performing work activities.

2 Follow safe driving principles and equipment operating procedures.

3 Use personal protective equipment (PPE) for the task being performed.

4 Follow electrical safety testing and grounding rules.

5 Follow clearance and energy lockout/tagout rules.

6 Follow confined space rules.

7 Follow suspended load rules.

8 Follow safety at heights rules.

9 Follow excavation procedures.

10 Follow hazardous environment procedures.

Introducing PSEMS

PSEMS is the systematic management of our processes, assets and occupational health and safety to prevent injury and illness. The PSEMS framework is the Safety Excellence Policy (SAFE-01) and 13 elements that establish governance and operational requirements for how we operate our business to generate and deliver safe, reliable, affordable and clean energy for our customer and hometowns. We will achieve industry-leading safety performance through the disciplined application of PSEMS.

The following 13 PSEMS elements encompass our requirements around safety that all workers shall follow to keep us safe:

1 Leadership Commitment and Engagement

2 Communications and Stakeholder Engagement

3 Risk Management

4 Strategy, Objectives and Planning

5 Operational Control

6 Training and Competence

7 Emergency Preparedness and Response

8 Incident Reporting, Investigation and Corrective Action

9 Contracted Services and Purchased Goods

10 Management of Change

11 Information, Documentation and Records Management

12 Performance Evaluation and Improvement

13 Assurance

Management System Cycle

PSEMS follows the Plan-Do-Check-Act cycle to drive continual improvement across the Enterprise.

PSEMS establishes the systematic annual approach for ensuring continuous improvement:

Review Results

Periodic reviews are conducted to evaluate PSEMS performance, consider how well PSEMS is delivering the desired outcomes and verify progress.

- Reviews include Enterprise PSEMS objectives and benchmarking data.
- Output to objectives setting is focused on risks and critical internal and external business drivers.
- Evaluate maturity assessment results against strategic plans.

Establish Objectives

With workforce participation, establish, validate and/or update PSEMS objectives, metrics and targets.

- Integrate PSEMS objectives into the organization's business planning.
- Cascade PSEMS objectives, metrics and targets to all levels of the organization.

Conduct Assessment

Evaluate performance against PSEMS objectives:

- Identify gaps in leadership and culture.
- Identify gaps in the execution of processes that establish or govern PSEMS expectations.
- Validate, remove or close gaps from the prior year's assessment.
- Consider future risks, changes in business conditions and changes to business plans.
- Prioritize assessed gaps based on risk, business plan priorities and efficiency opportunities.

Prioritize and Plan

Develop gap closure plans with milestones and completion dates; evaluate and prioritize plans based on the risk profile, and consider competency, learning, human performance and technology in order to improve effectiveness.

- Identify and allocate resources to successfully execute PSEMS requirements and plans.
- Incorporate PSEMS plans into business plans and communicate them to the organization.
- Validate or update the PSEMS assurance plan priorities.

Execute and Monitor

Execute PSEMS plans to close gaps, along with other business plan activities; monitor to verify progress and effectiveness of PSEMS plans and adjust as necessary.

- Conduct periodic reviews of PSEMS performance.
- Identify and manage new corrective actions to improve controls as appropriate.
- Execute the PSEMS assurance plan priorities.

PSEMS 13 ELEMENTS

Leadership Commitment and Engagement

Leaders establish expectations and objectives, personally direct the process for continuous improvement, visibly demonstrate involvement and commitment and engage our workforce to build a strong safety culture.

Leadership Commitment

Executives and Senior Leaders communicate safety vision and establish industry-leading objectives, metrics and targets by:

- Communicating the safety vision and establishing clear, world-class safety objectives.
- Encouraging and participating in internal and external benchmarking.
- Establishing methods to hold PG&E accountable to performance objectives and expectations.
- Ensuring that appropriate resources are available and aligned.

Executives and Senior Leaders accept and promote that safety culture constantly changes and requires continuous effort to establish and sustain strength by:

- Establishing a high level of trust in the organization.
- Establishing human error-tolerant systems and capacity in work processes for safe failure.
- Ensuring that differing professional opinions are encouraged, discussed and resolved in a timely manner.
- Informing the workforce of steps taken in response to their concerns.
- Ensuring that safety culture discussions within the organization and with outside groups, including regulatory agencies and customers, are routine, open and comfortable.
- Ensuring the participation and consultation of coworkers in all aspects of PSEMS and the development and execution of communication content and plans.

Executives and Senior Leaders personally direct the process for continuous improvement and integrate PSEMS into business plans by:

- Challenging others in the area of safety culture.
- Avoiding complacency and continuously challenging existing conditions and activities in order to identify discrepancies and opportunities for improvement.
- Ensuring standards, procedures and tools align with PSEMS requirements.
- Identifying high-impact, risk-ranked items for business planning and act on opportunities to integrate PSEMS requirements into the business.
- Directing and monitoring PSEMS implementation and effectiveness reviews through focus on trends rather than absolute or specific values.

Leaders visibly demonstrate their involvement and commitment to improve safety performance by:

- Frequently conducting operational visits and engaging with coworkers.
- Encouraging a "Speak-Up" culture and questioning attitude.
- Identifying workplace risks, including unsafe conditions or situations.
- Engaging workforce on safety expectations and requirements.
- Participating in PSEMS activities, including site visits, audits, incident investigation and corrective/preventive action development.

Leaders demonstrate that safety is a personal core value and personally model behaviors to build a strong safety culture by:

- Avoiding complacency and continuously challenging existing conditions and activities to identify discrepancies that may result in error, inappropriate or noncompliant action.
- Reinforcing that every job can be completed without injury or illness.
- "Walking the talk" and addressing safety issues.
- Eliminating barriers to performance improvement and excellence in safety culture.
- Recognizing positive and leading safety behaviors.
- Holding themselves and others accountable for safety performance.

Workforce Engagement

Workers embody PG&E's safety culture and deliver results. Individuals are expected to:

- Know and exercise their obligation to start work only when safe and stop work when it is or may be unsafe.
- Know and follow PG&E's Keys to Life (KTLs).
- Avoid complacency and continuously challenge existing conditions and activities to identify discrepancies. Be outspoken advocates for safe failure.
- Be watchful for assumptions, anomalies, values, conditions, changes or activities that can have an undesirable or unintended effect on safety.
- Understand that every job and task can be completed without injury or illness and that capacity for failure resulting in no injury is mandatory.
- Participate actively in safety committees and training programs.
- Immediately report unsafe conditions, hazards, risks and barriers to safety performance to leaders.
- Identify opportunities for improvement.
- Work together to remove barriers to the desired safety culture and improve safety performance.
- Hold themselves and others, including executives and all levels of management, accountable for safety performance.

Communications and Stakeholder Engagement

Relationships with internal and external stakeholders are established and maintained through continuous and deliberate formal/informal communications and other activities. The needs and expectations of stakeholders, including linkage to legal requirements, are understood through ongoing and deliberate communications and engagement.

Programs are in place to establish and maintain positive relationships with stakeholders to ensure:

- Internal, external and functional area stakeholders are identified.
- Active engagement and dialogue with communities and community leaders to maintain public confidence in PG&E's commitment to safe and healthy operations.
- Communication of the management system policy and requirements, risk identification and management, safety performance and objectives, including:
  - The role each stakeholder group has in the performance of the management system and achieving its objectives.
  - Stop work authority and obligation.
  - The maturity of PSEMS and ongoing continual improvement efforts and outcomes.
- Coworkers are made aware of hazards present in the work performed, incidents that occur and the outcomes of investigations and their obligation to remove themselves from situations that present an imminent and/or serious danger.
- Coworkers understand their obligation and responsibility to start work only when safe and the obligation and authority to stop work at any point when work is not or may not be safe.
- Communication plans and ongoing communications with workforce, regulatory agencies, community groups and local businesses are established and documented.
- Stakeholder engagement plans are implemented that include mechanisms to monitor stakeholder audiences, systematic tracking of engagements and issues and effectiveness evaluation of communication and outreach efforts.
- Communication plans exist for emergency and crisis events.
- Information relevant to stakeholders from activities governed by other PSEMS elements is monitored, documented and communicated.
- Effective management of social, political and reputational risks to the company and that business impacts of those risks are addressed. A stakeholder engagement plan is in place to manage these requirements.

Risk Management

Risks are identified and evaluated using a defined process that includes associated hazards and consequences and the safeguards to prevent or mitigate the identified risks. A risk profile to prioritize risk reduction and assurance programs is maintained that considers the expectations of stakeholders. Lifecycle risks are evaluated and risk reduction is achieved.

A process for PG&E risk management is established and maintained that includes:

- A formal standardized process for identifying risks and assessing the consequences and likelihood of those risks being realized.
- Identification and implementation of risk control measures that manages identified risks to an acceptable level using the hierarchy of controls.
- Definition and communication of risk acceptance criteria.
- Risk tolerance decisions by levels of management appropriate to the nature and magnitude of the risk.
- Input to the safety assurance process from review of risk assessment results.
- A hazard inventory and risk profile using a Hazard and Risk Register (HRR) to prioritize risk reduction programs and manage assessed risk to acceptable levels.

RISK ASSESSMENTS ARE CONDUCTED FOR:

- All assets
- Ongoing operations
- Hazardous materials and activities
- New projects
- Products and services
- Changes defined by the management of change (MOC) process

RISK ASSESSMENTS CONSIDER RISKS TO:

- Health and safety of workforce, customers and the public
- Process Safety
- Asset integrity
- Environment
- Business continuity
- Security
- Company reputation

Additional requirements:

- Risk assessments are carried out by competent personnel with appropriate independence.
- Completed risk assessments are reviewed, approved and accepted by specific levels of management appropriate to the magnitude of the risk and decisions are documented.
- All stakeholders are kept informed about the risk assessment process and results.
- Risk assessments are updated as changes occur and reviewed and updated at a defined appropriate frequency.
- A follow-up process is in place to ensure that risk management decisions and associated mitigations are implemented and effective.
- High and critical risks and their controls are reviewed for effectiveness and updated, at least annually, with top management.

Strategy, Objectives and Planning

Planning includes consideration of the financial, human and technology resources needed to realize the intent of the Safety Excellence Policy and objectives of PSEMS. It also considers relevant internal and external factors that affect PG&E's ability to achieve the desired outcomes established by PSEMS. The needs and expectations of all stakeholders are actioned and resources needed for effective implementation of PSEMS are provided.

A process for PG&E strategy, objectives and planning is established and maintained, including:

- Identification and management of interactions between existing and future PG&E management systems and their elements, including the processes established to implement, maintain and continually improve PSEMS.
- Documented scope of the management system in as much detail as is required to capture the particulars of each functional area (or other method of organization).
  - Interactions and responsibilities between functional areas are identified.
- A process to continually scan internally and externally for issues and stakeholder needs and expectations that may affect PSEMS performance.
  - Scanning results are communicated to the organization and integrated into business planning, operations and PSEMS.
- A documented Strategic Asset Management Plan (SAMP) to deliver asset management objectives across the asset life cycle is established, implemented, maintained and continuously improved.
- Safety and asset management objectives are established, maintained, reviewed and updated at specified intervals, or as required, and communicated to stakeholders.
- Processes, methods and decision criteria used to prioritize work and allocate resources that are established, documented and communicated.
  - The prioritization of work and allocation of resources considers multiple factors including safety, risk, cost/benefit analyses, feasibility and resource availability.
- Appropriate resources are provided to meet the planned objectives of PSEMS.
- Prioritized risk reduction objectives using input from the Hazard and Risk Register (HRR).
- Construction, inspection and testing processes for systems are established and documented and are consistent with the specified requirements, regulations and applicable standards.
  - Maintenance activities are effectively managed and controlled.
- Facilities, equipment and tools are designed, constructed, inspected, tested and maintained per appropriate standards, processes and procedures including environmental and human factor considerations.

Operational Control

Hazards and risks are identified and associated work and work-related activities and processes are planned, controlled, resourced, supported and adapted to the worker. Processes, procedures, programs and tools are continually evaluated for improvement to reduce reliance on safeguards that require human intervention or action.

Planning, execution and control of work in a safe manner is the product of understanding workplace hazards, providing proper equipment and tools, assigning competent qualified personnel, following approved work procedures with embedded hazard controls, employing proper pre-work activities and exercising Stop Work authority when required.

- Processes are in place and promoted to assess the potential hazards to workers, assets and the community.
  - Programs are in place to assist workers in identifying the hazards associated with work activities and the appropriate mitigations.
  - Procedures and controls are developed and established to mitigate identified hazards using the hierarchy of controls and energy wheel, among others.
  - Coworkers are directly involved in the development of actions to eliminate hazards and reduce risk and establish controls.
- Equipment is operated safely within its design envelope and limitations.
  - Safety critical equipment is identified, tested, approved and maintained.
  - Procedures are in place to ensure tools and equipment are maintained, calibrated (as appropriate) and verified as safe for the task before use.
- Management communicates and reinforces clear operational principles, including:
  - Coworkers understand their roles and responsibilities to maintain operations within established parameters.
  - Coworkers understand and follow approved operating procedures.
  - Work is planned and executed so that capacity for failure to a safe condition without injury is established.
  - Key operating parameters necessary to ensure safety, environmental protection and compliance are established and regularly monitored.
  - Start-up, operating, emergency, maintenance and shutdown procedures are in place, regularly reviewed, updated and made available to appropriate personnel.
  - Appropriate tools are used to guide critical operations such as start-up, shutdown and emergency conditions.
  - Protocols exist to ensure effective shift turnovers.

Policies, standards and procedures are developed and maintained to address the requirements and regulations applicable to PG&E's operations. Personnel follow and management enforces applicable policies, standards and procedures.

- Operating procedures are established and implemented to address safe work practices that assure the safe conduct of operating, maintenance, emergency response activities and control of materials.
  - Processes exist to ensure procedures remain current by monitoring and evaluating changes to regulations, industry practices and PG&E requirements.
  - Programs exist to review, update and maintain procedures and other documents necessary for safe and compliant operation.
  - Personnel have access to procedures and other documents needed to perform their roles.
  - A written process exists for prior approval of deviations from operational procedures.
  - Procedures are in place to perform and document start-up readiness reviews and start-up communications with affected groups.

Training and Competence

Safe and reliable operations are contingent upon competent qualified personnel and contractors that carry out their work properly and possess an awareness of their contribution to the success and effectiveness of PSEMS. Training provides the knowledge, skills and abilities for personnel to perform their jobs proficiently.

This element ensures that people are selected and placed into roles consistent with their abilities and job requirements, people are trained to achieve and maintain competency, collective competency is maintained over time and human performance principles are applied to enable proficient work performance.

PG&E's program for training and competency ensures:

- ✓ Competence and fitness for work requirements are defined for all roles in the organization.
- ✓ Awareness and competency requirements for all workers.
  - At a minimum, hazard identification and risk management competencies relevant to the role are established, including the hierarchy of controls and energy wheel.
- ✓ Necessary levels of experience, knowledge and competency are considered when recruiting, during personnel changes and task assignments.
- ✓ Coworkers are involved in the determination of competence, training development and delivery and training evaluation.
- ✓ Initial, ongoing and refresher training of personnel and contractors that have accountabilities, responsibilities and authorities in executing the requirements of the PSEMS includes:
  - Applicable updates to elements of PSEMS that affect their job requirements.
  - Newly emerging or changing risks or problems in execution of the PSEMS that create opportunities to improve processes and procedures.
  - Consequences of failure to follow processes and procedures.

Assessments of training effectiveness are conducted periodically to ensure desired competency and behavioral outcomes are achieved.

Emergency Preparedness and Response (EP&R)

Emergency management plans and response capabilities exist to protect people, respond to emergencies and communicate with stakeholders. EP&R plans identify procedures, processes, equipment, training and personnel necessary for effective response to foreseeable emergency scenarios, non-routine tasks and other crises.

A process for PG&E emergency response, as documented in the Company Emergency Response Plan (CERP), is established, tested and maintained that incorporates the following:

- ✓ Credible emergency scenarios are identified across the Enterprise.
- ✓ Emergency management plans are risk based and address relevant emergency scenarios.
- ✓ Organizational structure, including roles and responsibilities, are defined and communicated.
- ✓ Periodic drills and exercises are conducted.
- ✓ Lessons learned from previous incidents and exercises are incorporated into plans.
- ✓ Equipment, facilities and trained personnel needed for emergency response are defined and readily available.

Incident Reporting, Investigation and Corrective Action

Incidents and near-hits are identified, reported, recorded, effectively investigated and communicated. Learning from incidents occurs and drives corrective actions, mitigation and prevention of recurrence and ensures continuous improvement.

The process for incident reporting, investigations and corrective action is established to ensure:

- Roles and responsibilities are defined for incidents and near-hit reporting and investigations, including the participation of non-managerial workers.
- Stakeholders are engaged in incident investigation and analysis and provide advice on incidents as necessary.
- Appropriate cause analysis including root cause and extent of condition is performed based on risk.
- Procedures are followed for completion and closure of actions taken to resolve deficiencies.
- Lessons learned and trends are identified and shared across the Enterprise.

A corrective action program is established for the management of corrective, preventive and improvement actions, including:

- Incident investigations
- Measurement and monitoring
- Assessments
- Inspections
- Hazard identification and risk management
- Improvement plans and suggestions
- Audits
- Observations

An effectiveness review process is established to drive continuous improvement and risk reduction.

Contracted Services and Purchased Goods

Contracted service providers' performance is improved through mandatory conformance to PG&E and regulatory safety requirements when providing services for PG&E on or off company property.

Contracted service providers conducting work for or on behalf of the Company (materials, equipment, services and labor) impact our processes, assets, public and workforce safety. Work performed must comply with contract requirements and align with company policies and business objectives. Procurement processes are established to ensure products and services meet PG&E requirements.

A process for PG&E contractor management is established and maintained, including:

- Contracted service providers undergo a qualification and selection process that assesses a contractor's capabilities to perform the work per PG&E safety requirements.
- Contracted service providers are required to provide personnel who are screened, trained, qualified and competent to perform the duties assigned.
- Management provides oversight including visible field leadership, enforcement of standards and verification of safeguards.
- PG&E and contracted service providers actively manage their relationships and interface.
- Contracted service providers are accountable to monitor, assess, improve and report their performance on an ongoing basis.
- PG&E monitors contracted service provider performance, conducts observations and provides feedback on the adequacy of contracted service providers' monitoring and assessment activities.
- PG&E actively monitors contracted service provider compliance to PSEMS when contracted service providers are conducting work for PG&E.
- PG&E assists contracted service providers in their efforts to implement safety management systems in their companies.

Procurement processes for materials, equipment, supplies and other items specify safety and quality requirements.

Management of Change

Changes to systems, process or people could introduce risk and have unintended consequences. Management of change (MOC) is a process that systematically identifies, evaluates and manages changes to facilities, equipment, operations, procedures and the organization by ensuring that unacceptable risks are not introduced into the business.

Types of MOC

- Permanent
- Temporary
- Emergency
- Organizational

The MOC process consists of the following phases:

- INITIATION
- RISK ASSESSMENT
- STAKEHOLDER REVIEW AND APPROVAL
- TRAINING AND NOTIFICATION
- IMPLEMENTATION
- CLOSEOUT AND DOCUMENTATION
- EFFECTIVENESS REVIEW

Information, Documentation and Records Management

Information Management

The organization must ensure consistency and traceability in documents, procedures, records and technical and other relevant non-financial data required to meet legal, regulatory, internal and stakeholder requirements and company objectives. Information should be current, accessible, traceable and clear and comply with retention and security requirements.

Information requirements that affect PG&E's ability to achieve the desired outcomes established by PSEMS are determined by, and must consider:

- Significance of identified risks in the determination of the requirements.
- Roles and responsibilities.
- The size of PG&E, its processes and activities as they relate to assets, procedures, products and services.
- The exchange of information with stakeholders, including service providers.
- The impact of quality, availability and management of information on decision making.
- The control and accessibility of data, information and records.

Data, information and records including documents, drawings, procedures, asset management plans and other data and information are current, accessible, traceable, clear and in as simple a form as achievable.

Processes are in place to specify, implement and maintain data, information and records management, including attribute and quality requirements, enabling technologies and collection, analysis and evaluation requirements. A process is in place for the design, implementation and maintenance of a system (or systems) for managing data, information and records.

The requirements for aligning financial and non-financial terminology are established, consistent and traceable between financial and technical data and other relevant non-financial data.

Documentation Management

A documented process for the development, identification, distribution and control of documents is established and maintained to assure:

- Examination, revision and version control of documents.
- Identification and description of documents.
- Documents are legible and identifiable.
- Review and approval of documents for adequacy before issue.
- Changes are clearly identified and the status of any revision is documented.
- Controlled identification and distribution of documents of external origin.
- Effective distribution of documents.
- Where necessary, the timely removal of obsolete documents from all points of issue and use.

Records Management

Documented processes for the systematic control of records and their related data, including active and inactive assets, is in place. The processes define controls for identification, storage, protection, retrieval, retention, preservation and disposition.

The confidentiality and security of data, information and records are maintained per PG&E standards and procedures and applicable data privacy protection laws and regulations.

Performance Evaluation and Improvement

Evaluation of PSEMS performance is a systematic, planned approach used to drive continuous progress toward world-class safety excellence performance. It is an iterative approach to effectively integrate safety objectives, plans, requirements and activities into daily operations through the lean operating model. Performance evaluation includes review of leading and lagging performance indicators and use of the Plan-Do-Check-Act (PDCA) cycle to drive improvement across the Enterprise.

Performance improvement is achieved through periodic review and evaluation of safety excellence plans, activities and performance and the actions taken to address identified gaps. The following actions are taken:

- Establish, validate, update objectives, metrics and targets through application of the lean operating model.
- Conduct an annual assessment to evaluate the performance and effectiveness of PSEMS.
- Establish and maintain a process to identify and manage performance trends.
- Develop plans with milestones and completion dates.
- Execute plans to close gaps and monitor progress and effectiveness of plans.

Management review is conducted to evaluate PSEMS effectiveness at planned intervals and to ensure its continuing suitability, adequacy and effectiveness.

The review will consider:

- Results and insights from previous performance improvement cycles, audits, assessments and management reviews.
- Changes in business conditions and plans.
- Results of internal and external scanning for factors that affect PG&E's ability to achieve desired PSEMS outcomes.
- Performance against the expectations of the PG&E Safety Excellence Policy.

Assurance

PSEMS assurance establishes the necessary controls to achieve and improve safety excellence. This assures compliance with legal, regulatory and PG&E requirements to minimize risk to the Enterprise.

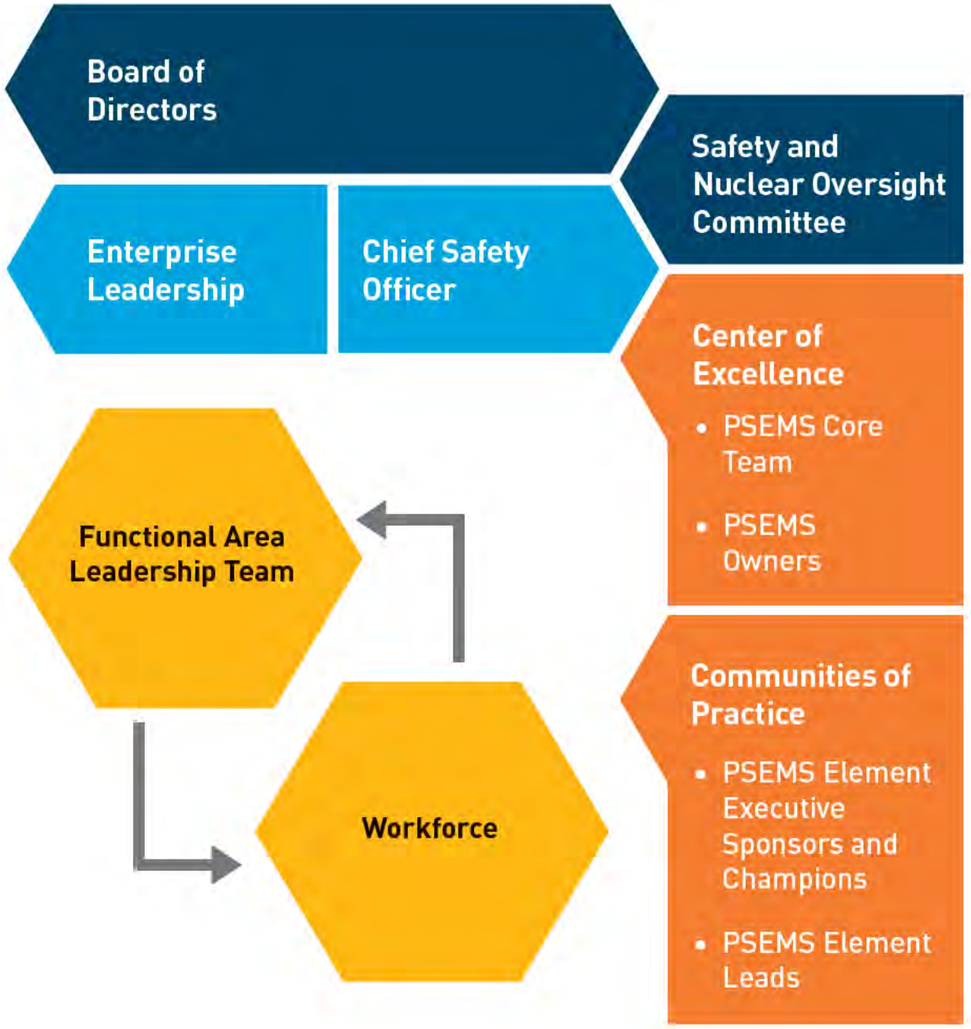
Assurance registers are documented and implemented to identify the safety excellence requirements applicable to each functional area (FA). The FA ensures the registers are associated to the corresponding requirements, controls and verifications that manage or sustain compliance, including the:

- Extent to which regulatory, company and other requirements are fulfilled.
- Activities and operations related to identified hazards, risks and opportunities.
- Methods, frequency and timing of audits and evaluations to assure compliance with requirements.
- Measurement, analysis and monitoring of compliance to evaluate performance.
- Reporting and documentation of findings and instances of potential noncompliance resulting from audits, including resolutions.

Audits and assessments, internal and external, are conducted regularly to assess compliance with PSEMS, verify that controls and verifications are designed and functioning, verify that assurance registers are developed and maintained and evaluate safety excellence performance.

Governance

Achieving world-class performance requires an effective and integrated governance structure that creates and sustains a positive, proactive safety culture. The PG&E governance structure supports PSEMS by providing appropriate oversight, leadership and technical knowledge. It identifies key roles and responsibilities at each level to support the functional areas in implementing and executing PSEMS.



Role		Description	Key Responsibilities
PG&E Board of Directors		Monitors and oversees stewardship of Company	• Oversees business strategy and performance • Ensures effectiveness of compliance programs and controls
Safety and Nuclear Oversight Committee		Monitors and oversees Company's safe operations	• Monitors Enterprise safety risks, assessment processes, mitigations and performance • Promote a strong safety culture through programs and policies
Enterprise Leadership		Responsible for strategy and safety culture	• Endorses goals, programs and policies • Sets health and safety objectives and monitors performance • Allocates resources
Chief Safety Officer		Directs development and implementation of PSEMS	• Advises on health and safety and recommends policy changes • Directs development of health and safety performance expectations • Represents PG&E externally on health and safety
Center of Excellence (COE)		Provides governance and fosters PSEMS implementation	• Implements PSEMS across the Enterprise • Integrates safety and gap closure plans into business plans; helps monitor and follow up • Establishes PSEMS standards, procedures and governance, including performance objectives, metrics and targets
COE Members	PSEMS Core Team	Maintains PSEMS to achieve world-class performance and actively participates in COE	• Supports standardization and integration in functional areas/ divisions • Fosters safety culture that enables PG&E's safety stand
	PSEMS Owners	Owns implementation of PSEMS in assigned functional area/division and actively participates in COE	• Establishes PSEMS standards, procedures and governance within assigned functional area/division • Ensures gaps are closed in assigned functional area/division • Implements PSEMS continual improvement plans
Communities of Practice (COP)		Supports implementation of assigned PSEMS Elements	• Evaluates and executes PSEMS processes and standards • Ensures gaps are closed out consistently • Disseminates best management system practices
COP Members	PSEMS Element Executive Sponsors and Champions	Coaches leaders in the implementation of PSEMS and actively participates in COP	• Approves and communicates Element requirements • Manages potential barriers to gap closure • Drives implementation of and continuous performance improvement in Elements
	PSEMS Element Leads	Serves as expert on assigned Element in assigned functional area/ division and actively participates in COP	• Understands the requirements of PSEMS and assigned Element as applied in area of functional expertise • Establishes and maintains interactions between Elements • Provides technical support for programs and improvements related to PSEMS
Functional Area Leadership Team*		Establishes and communicates a clear vision for PSEMS success	• Integrates PSEMS into operations • Provides resources to enable PSEMS, resolves obstacles and monitors performance • Establishes the Management System Cycle
Workforce		Coworkers and contractors who take personal responsibility to work safely	• Follows safe work practices and procedures, works in a controlled manner and maintains situational awareness • Identifies, communicates and mitigates hazards • Stops work when unsure and speaks up about abnormal conditions

*Functional Area Leadership Team includes all leaders from crew leads and supervisors on up

Audits

Audits play an integral role in PSEMS implementation and compliance assurance while bringing additional value to the organization. They provide an independent assessment of the effectiveness of controls and identify enhancement opportunities, and the audit process yields key insights and learning opportunities for engaged stakeholders.

Audit results update the Board of Directors and executive leadership on PSEMS implementation and effectiveness and identify resource needs across the Enterprise.

Independent Third-Party Certification and Assessment

Following international best practice, PSEMS is designed in alignment with the International Standard Organization 45001 and 55001 and American Petroleum Institute Recommended Practice 1173 standards. Conformance of PSEMS to these standards will be maintained and periodically validated by an independent third party. Existing independent third-party certification to any of the foundational standards within functional areas will be maintained and other certifications may be pursued. Certification, where achieved and maintained, demonstrates that elements are designed and implemented to improve safety performance, reduce risks and create better and safer working conditions.

Corporate Safety Audits

Corporate safety audits will be conducted across the functional areas to assess whether controls are established and in conformance with applicable safety requirements, leading to risk reduction to the acceptable and practical level for the Enterprise. Safety audits are conducted through the coordination and oversight of the Enterprise Health and Safety–Safety Assurance Group in partnership with functional areas. Findings identified by subject-matter resource audit team members are corrected using action plans and are monitored for closure.

California Public Utilities Commission (CPUC) Safety Culture Assessments

Leadership is committed to protecting the health and safety of our workforce and hometowns and fostering a proactive and engaging organizational culture and safety mindset. Internal assessments combined with external CPUC assessments of culture will be conducted.

PSEMS Self-Assessment

Annually, PSEMS is assessed by functional areas and divisions to determine if it is adequately supporting the organization in meeting its safety objectives. The design and implementation are analyzed for effectiveness. Performance is analyzed and compared to industry-leading results.

Pacific Gas and Electric Company

Ignitions

CPUC Reportable Ignitions in HFRA + HFTD

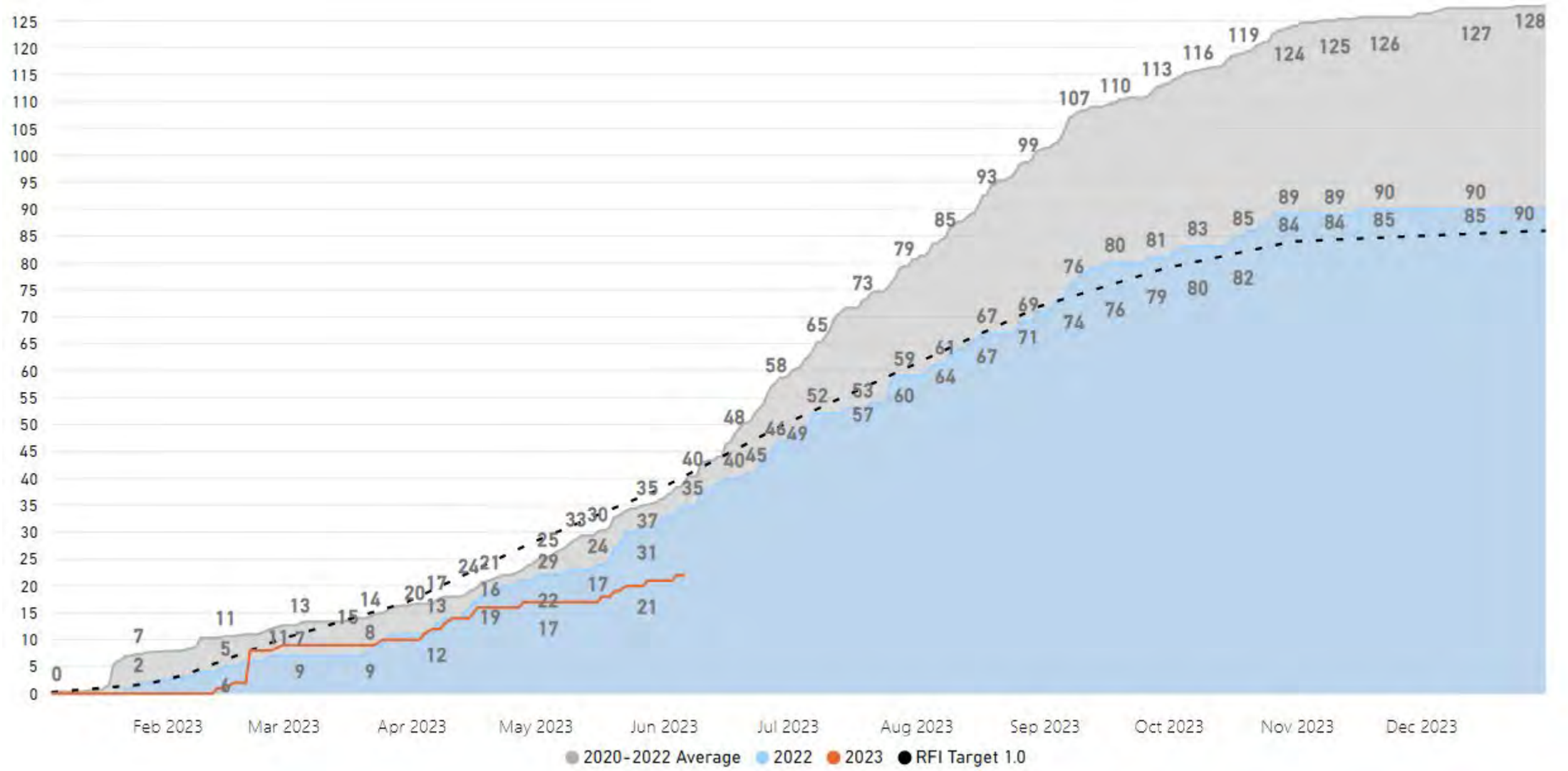
YTD Total *Through 06/30/23*		Month to Date *06/01/23 – 06/30/23*	
22		**1**	
2022	35	3	
3-yr Average	39	4	
2023 Target	86	**June Target**	50

Wildfire Risk Reduction Metric

YTD Total	
0	
2022	0
3-yr Average	0
2023 Target	1

Under Investigation					
Index ID	*Name*	*Date*	*Size (acres)*	*Status*	*Cause*

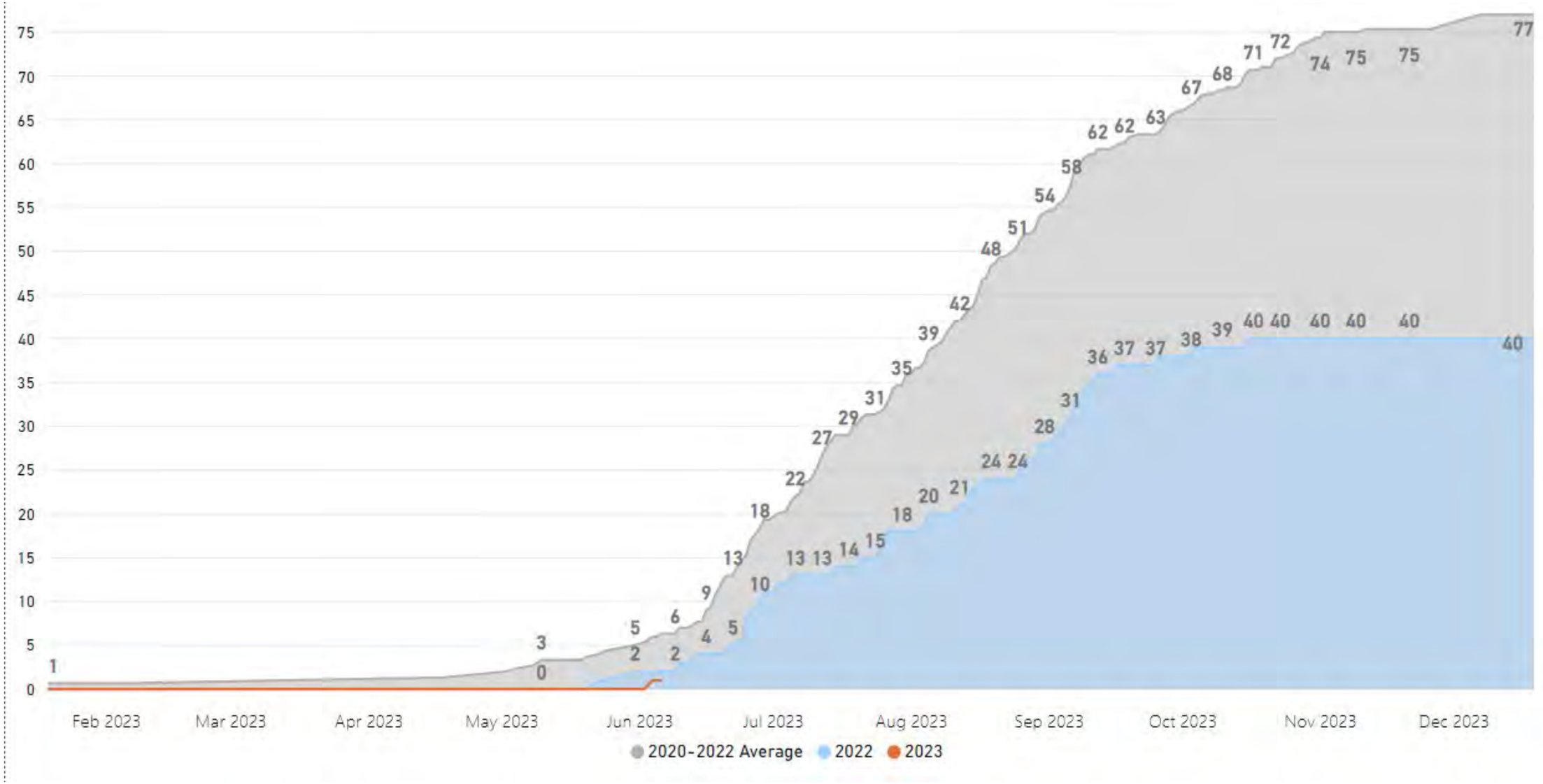
PG&E Reportable Ignitions in HFTD vs Target



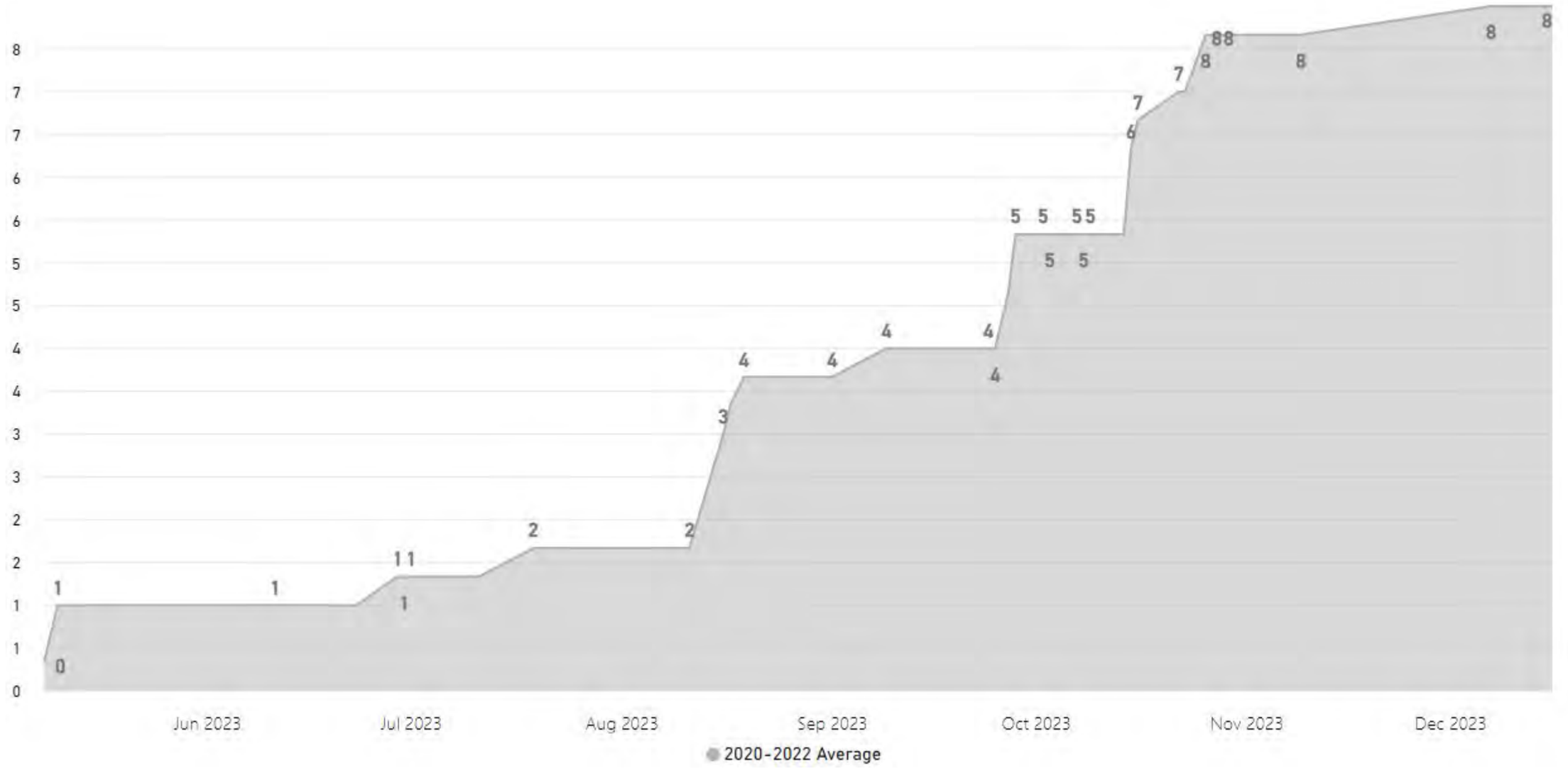
Reportable Fire Ignitions in HFRA by Weather Conditions

Risk Level	RFW	HWW	R3+	<R3
2023 YTD	0	0	1	21
2022 YTD	0	0	2	33
3-YEAR AVG	1	3	3	32
2017 YTD	0	0	0	18

PGE RFIs in HFTD – R3+ Conditions



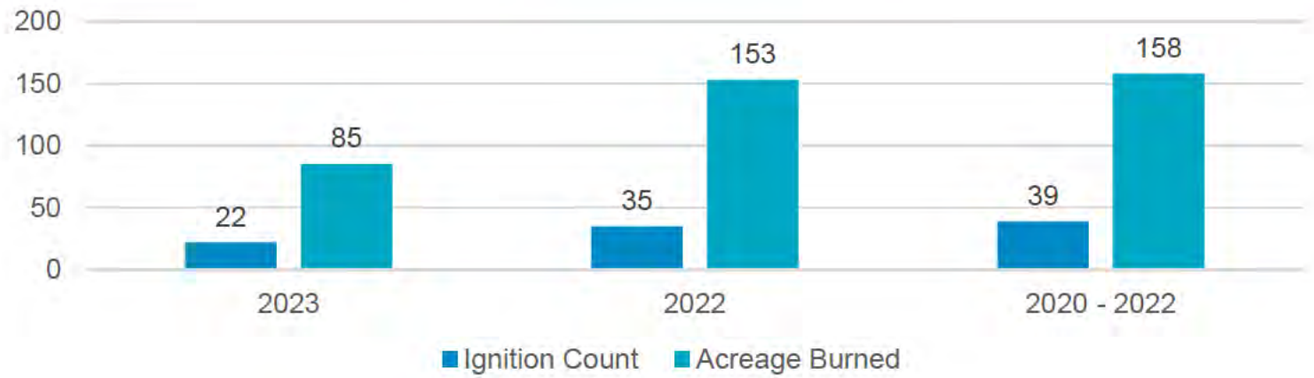
PGE RFIs in HFTD – RFW Conditions



Reportable Fire Ignitions in HFRA by FPI and Asset Type

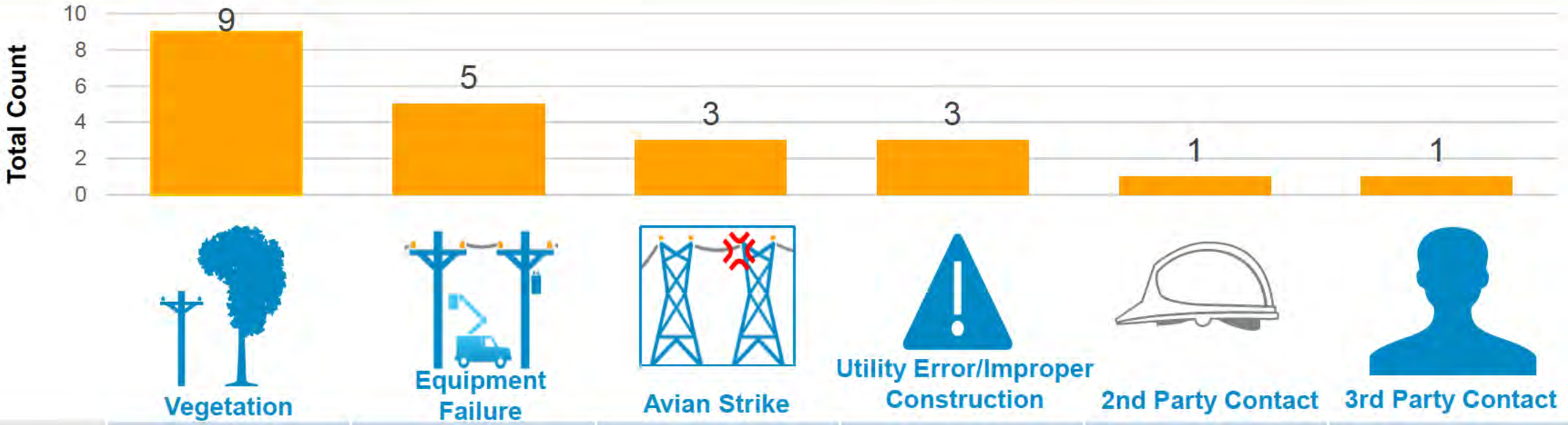
	Transmission	Dist R3+ Primary	Dist R3+ Secondary	Dist R3+ Service	Dist <R3
2023 YTD	2	0	0	0	20
2022 YTD	1	2	0	0	32
3-YEAR AVG	2	6	1	0	30

Reportable Fire Ignitions in HFTD and HFRA – Count and Acreage Burned



	2023 YTD	2022 YTD	2020 - 2022
IGNITION COUNT	22	35	39
ACREAGE BURNED	85	153	158

Reportable Fire Ignitions in HFTD and HFRA by Cause



	Vegetation	Equipment Failure	Avian Strike	Utility Error/Improper Construction	2nd Party Contact	3rd Party Contact
LAST WEEK	0	0	0	0	0	1
2023 YTD	9	5	3	3	1	1

Index 20230468N “Range Fire”

Date & Time of ignition: June 4, 2023 @approximately 16:40 hours.

Location: Salinas, CA

Circuit: Soledad #1&2 115kV

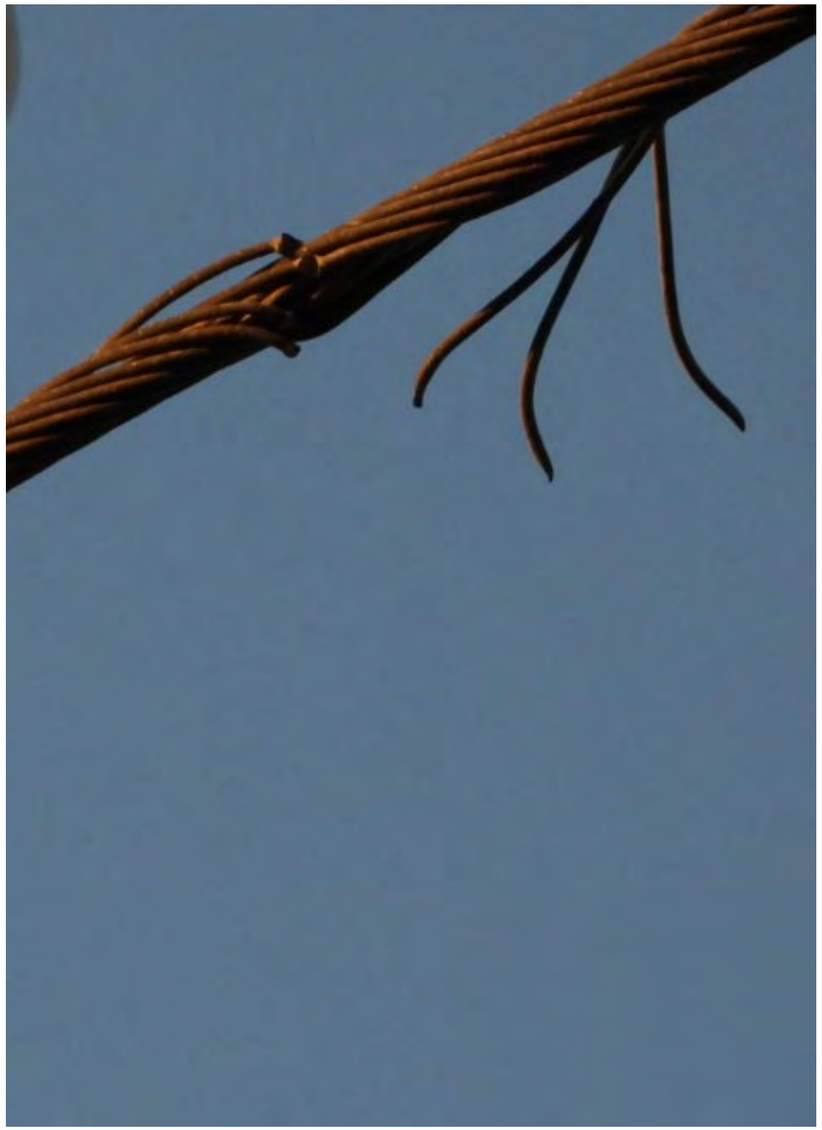
Division: Central Coast

HFTD: Tier 2

Failure Driver: 3rd Party Contact

Failure Sub-Driver: Gunshot

Fire Size: 79 Acres



EPSS

2023 EPSS Program Pillars

1. Further Reduce Wildfire Risk

Implement mitigations for ignition / fault types not yet fully mitigated (e.g. DCD for high impedance faults)

2. Improve Reliability & Customer Experience

Leverage a risk-informed and data-driven approach to our reliability mitigations, customer outreach, and customer support programs

3. Reduce the Human Struggle

Continuously improve the supporting processes, technology, and communications utilized in the EPSS program

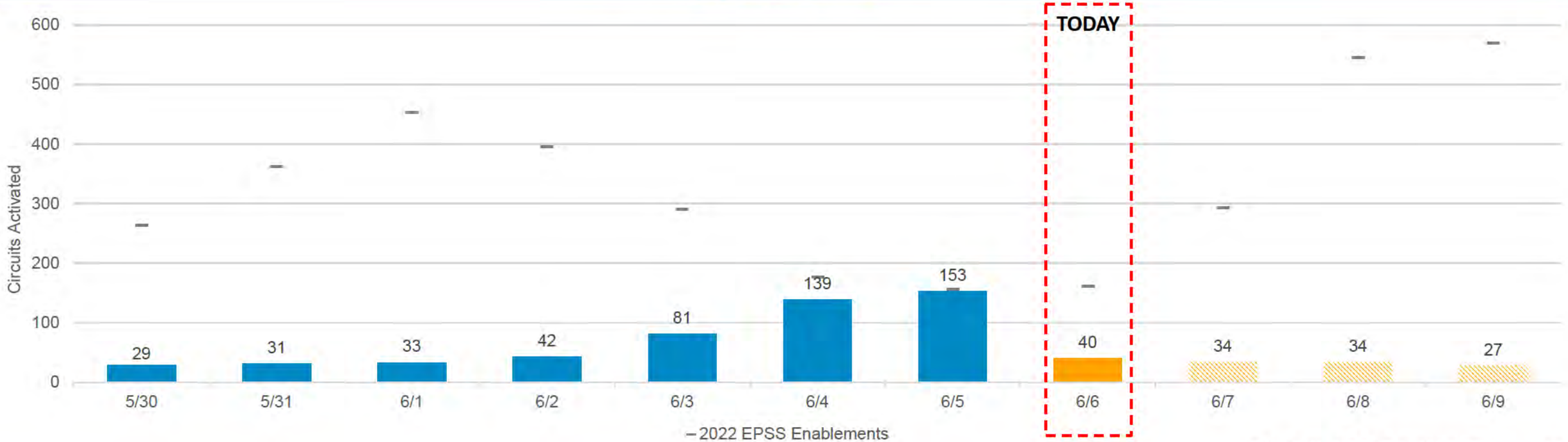
EPSS Enablement 1-Week Back / Forecast

1. Status

	2023			2022	
	Last Week	MTD	YTD	MTD	YTD
Circuits Enabled	174	174	199	489	592
Customers Protected	202,350	202,350	229,167	661,242	809,563
Miles Enabled	10,903	10,903	12,488	24,499	27,517

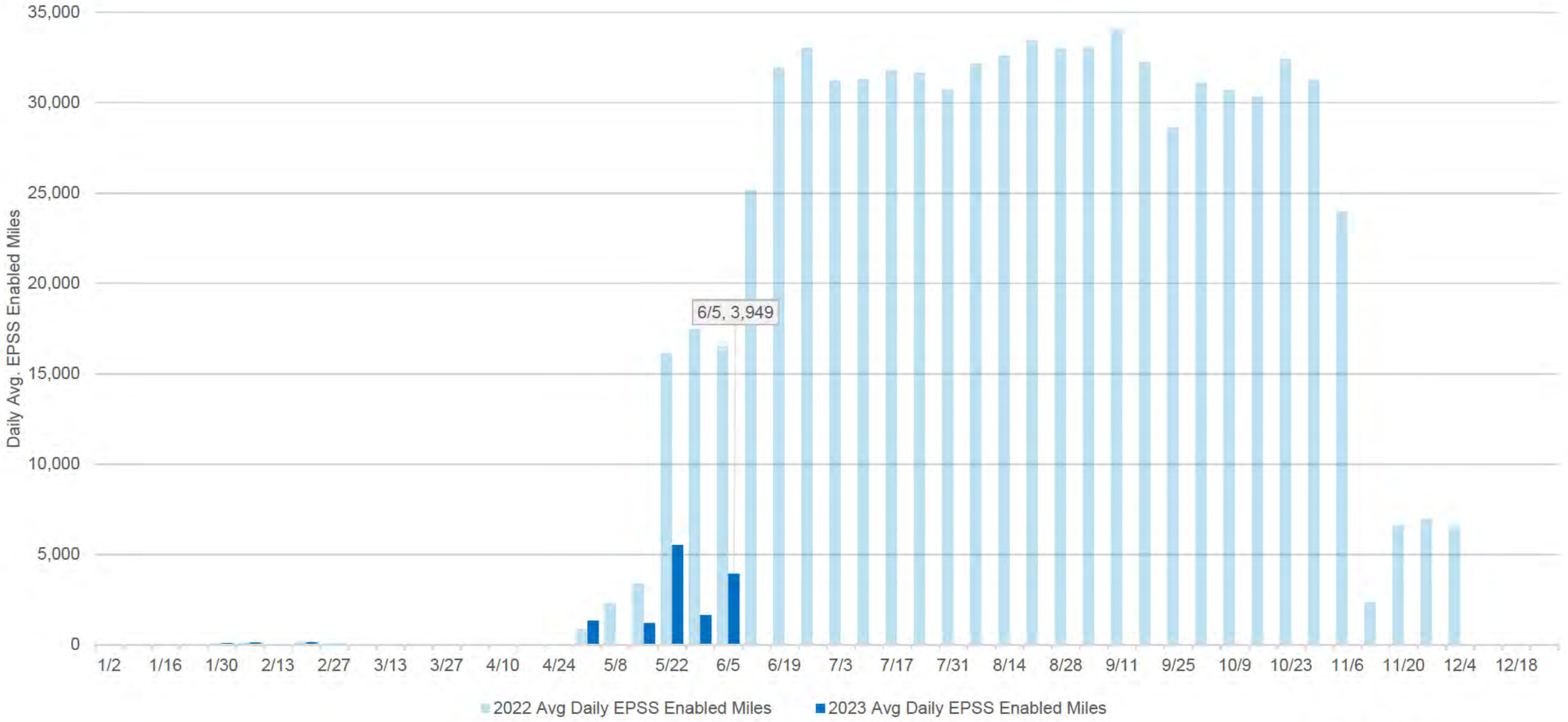
3. Trend: EPSS Enablement – Circuit Counts

One week back / forecast



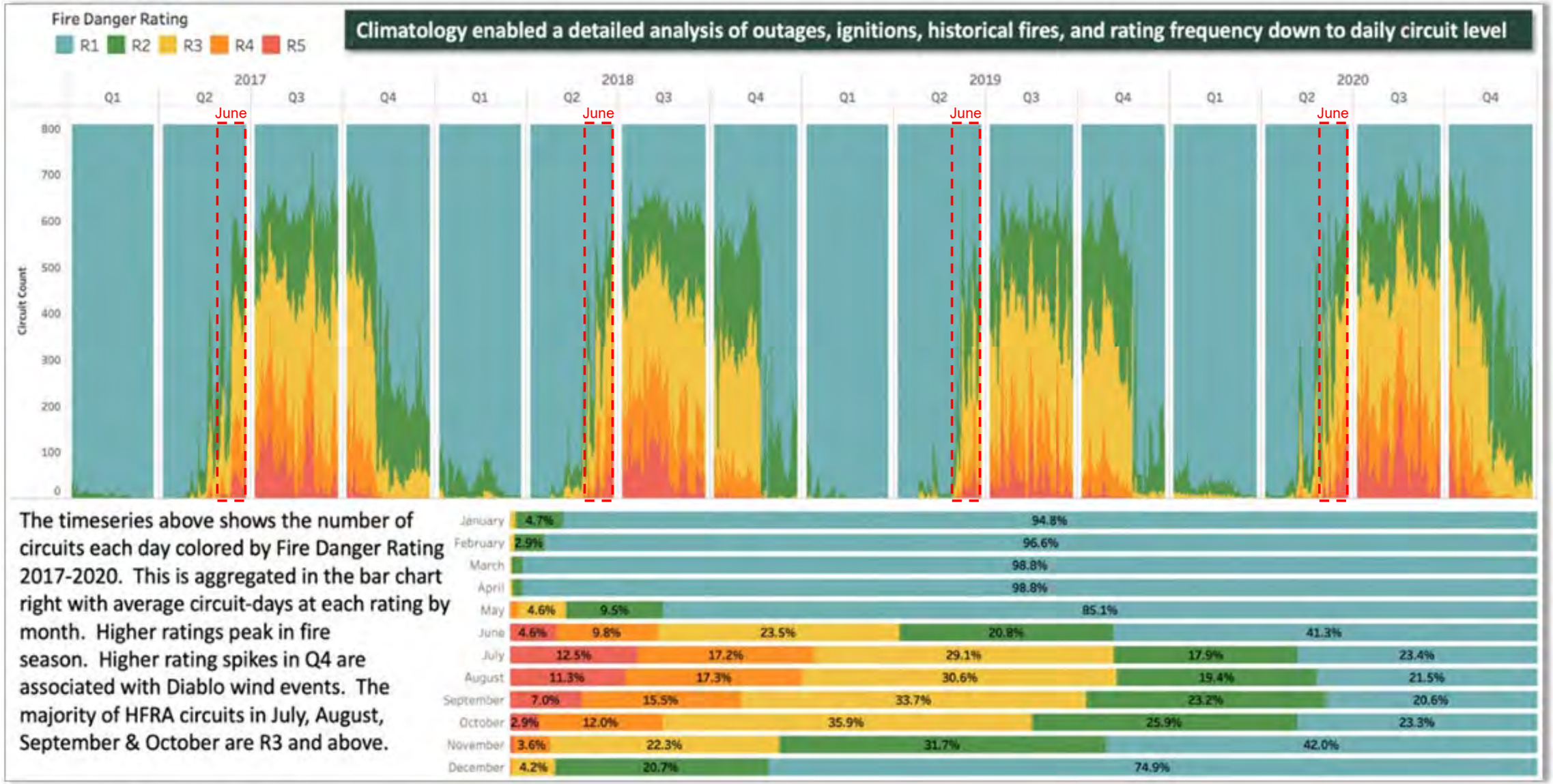
Data through 6/5/23 as of 6/6/23

Daily Average Miles EPSS Enabled by Week



Data through 6/5/23 as of 6/6/23

Historic Fire Danger Rating

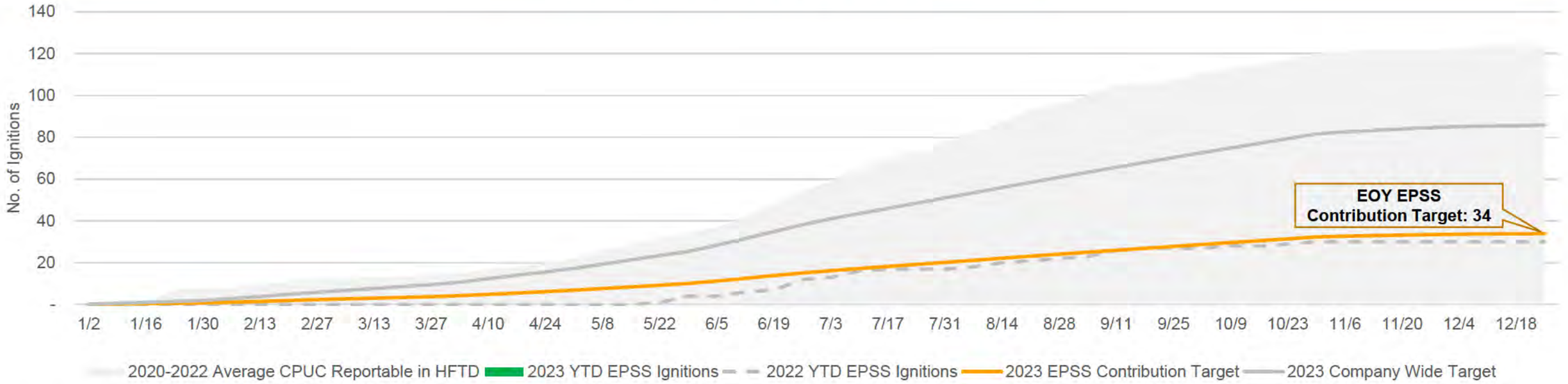


HFRA & HFTD RFIs in EPSS Enabled Zones

1. Status

	2023 EPSS			2022 EPSS in HFTD		2020 – 2022 Avg CPUC RFI in HFTD	
	Last Week[1]	MTD	YTD	MTD	YTD	MTD	YTD
HFRA & HFTD Reportable Fire Ignitions[1]	0	0	0	0	4	3	37
Target[2]	1	1	11	1	6	-	-

3. Trend: HFRA & HFTD RFIs in EPSS Enabled Zones



[1] PRELIMINARY – Incidents under investigation and ignition confirmation is not yet determined

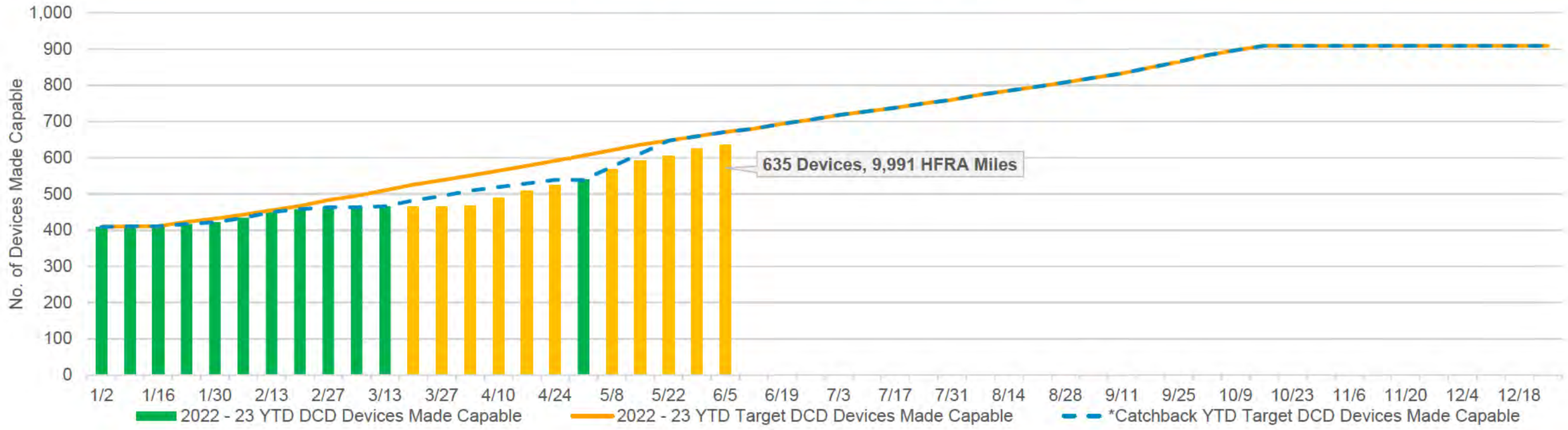
[2] Target based on EPSS contribution to 2023 CPUC Reportable Fire Ignitions on Primary Distribution and Transmission Conductor in HFRA & HFTD company target

Data through 6/5/23 as of 6/6/23

Down Conductor Detection Capability

1. Status				
	Last Week	MTD	YTD	2022 EOY Total
DCD Devices Made Capable	11	11	226	409
Target DCD Devices Made Capable	12	12	262	-
Catchback Target DCD Devices Made Capable	12	12	262	-
HFRA Miles	479	479	6,551	3,440

3. Trend: Down Conductor Detection Enablement



Data through 6/5/23 as of 6/6/23

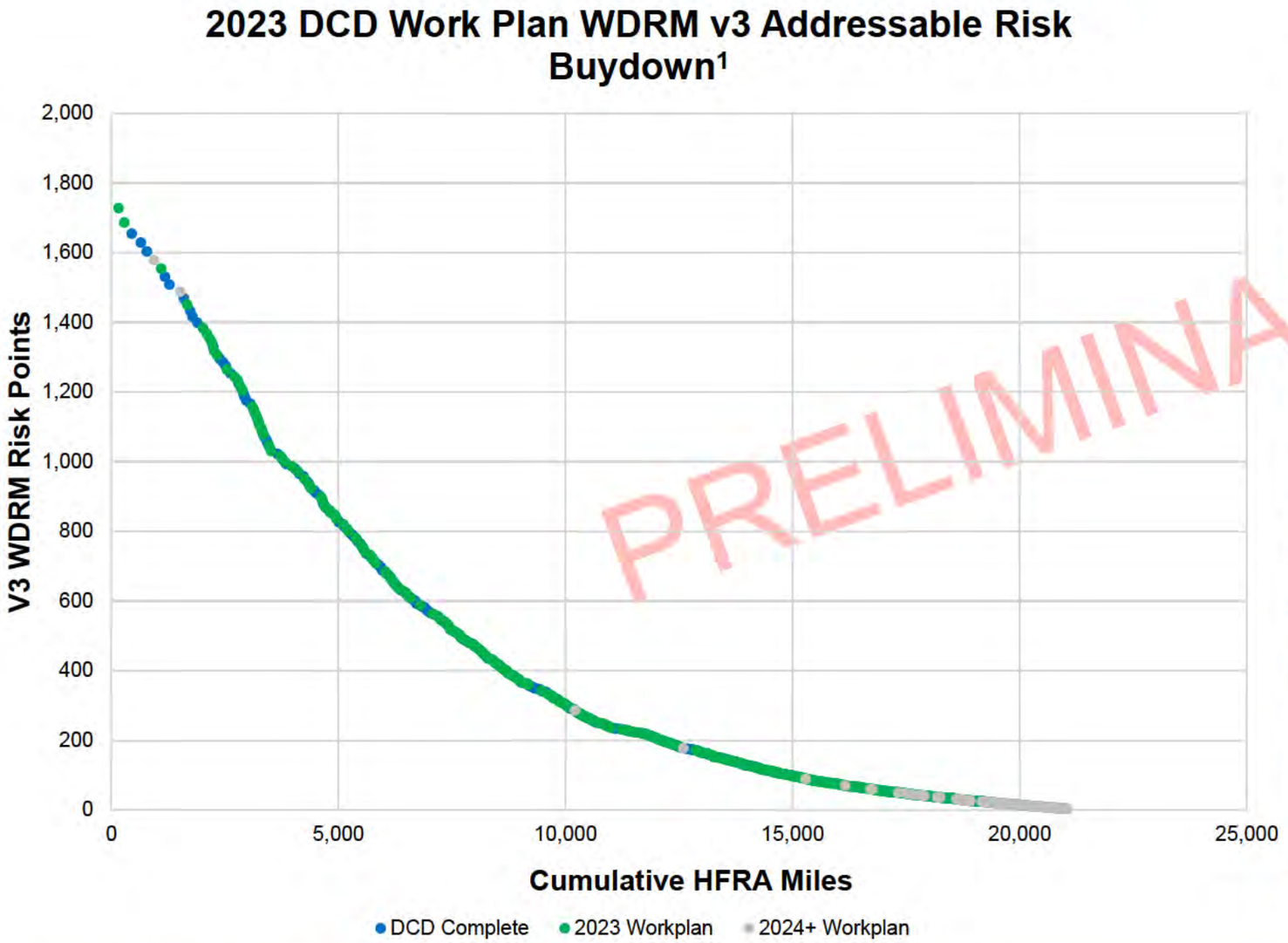
Down Conductor Detection Capability

Containment & Countermeasure									
Date	**Problem**	**Point of Cause**	**Containment Action**	**Status**	**Root**	**Countermeasure Action**	**Target**	**Owner**	**Status**
5/1/2023	DCD install schedule delayed in April due to Advanced Distribution Management System (ADMS) screen build delays, telecom issues and construction schedule constraint	ADMS delays in building screens necessary for DCD testing, coupled with telecom communication issues, resulted in delays in Los Padres installs, while ADMS and construction schedule constraint are impacting Sierra install schedules	Expediting DCD install schedule in non-ADMS cutover divisions (Humboldt) and installing DCD on existing/new Beckwith controllers to supplement work delays in ADMS LP/SI divisions	At Risk	DCD install cannot be completed while Telecom/SCADA communication issues remain unresolved. Due to Q1 storm impacts, construction resources and schedule availability are more limited	ADMS/Telecom teams prioritizing issues resolution in LP. Expediting Humboldt and installing DCD on existing/new Beckwith controllers to get back on plan	7/1/23	[redacted]	On Track

Action Items					
No.	**Action**	**Description**	**Date**	**Owner**	**Status**
1	**DCD Workplan Alignment with Stepdown Transformer**	▪ Refresh System Hardening Wildfire Risk allocation for known population of DCD eligible devices to include multi-device allocation for circuits with stepdown transformers ▪ Evaluate additional eligible DCD devices against refined risk allocation for incorporation into 2023 workplan	5/15/2023	[redacted]	Complete
2	**DCD Device Stepdown Transformer Review**	▪ Conduct Engineering review of DCD eligible devices capable of visibility bypass of stepdown transformers	~~6/1/2023~~ 6/9/2023	[redacted]	On Track
3	**DCD Eligible Viper Scope Evaluation**	▪ Evaluate additional eligible Viper DCD devices against refined HFRA mileage and risk allocation for incorporation into 2023 workplan	5/26/2023	[redacted]	Complete

Data through 6/5/23 as of 6/6/23

Down Conductor Detection Capability

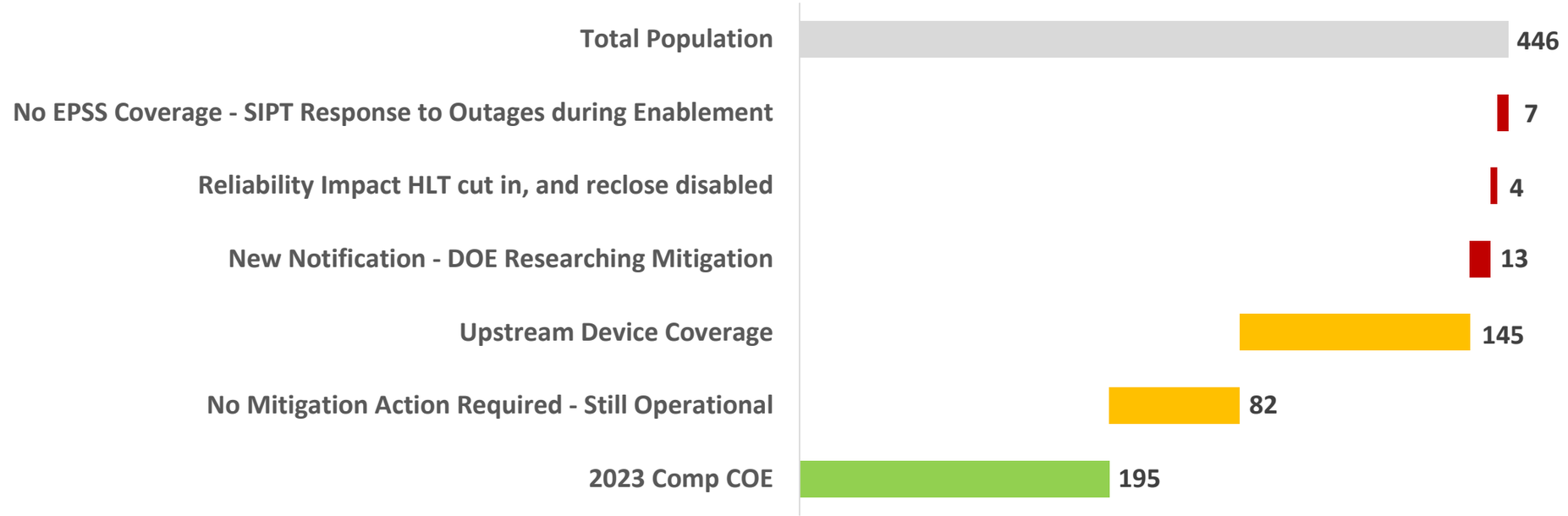


Scope Type	Devices	V3 WDRM Risk Points	Total Indirect HFRA Mileage
2022 Complete	408	242	3,440
2023 Complete	226	580	6,551
WMP Device	217	546	6,251
Additional Scope	9	34	300
2023 Retrofits	402	582	7,172
WMP Device	314	451	5,759
Additional Scope	88	131	1,413
2023 Eligible Viper	90	169	1,790
WMP Device	18	43	504
Additional Scope	72	126	1,286
2023 Form6 CBs	34	80	545
2024+ Workplan	2,279	65	1,866
CBs and 4-Wire	-	314	3,882
Grand Total[1]	**3,439**	**2,033**	**25,246**

[1]Pending completion of eligible viper scope evaluation

Data through 6/5/23 as of 6/6/23

2023 EPSS Critical Operating Equipment



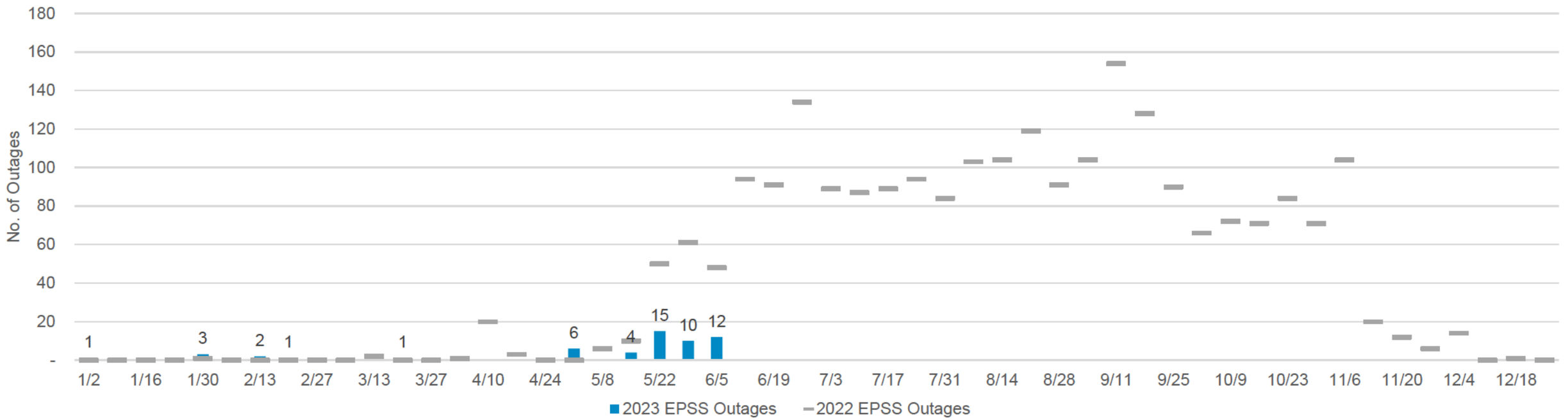
COE Tag ID	PM	Date Added	Device #	Circuit	Device	Division	HFRA Miles	Outages	Upstream Device	Status
125049462	35412792	12/20/2022	2400	BELL 1107	Viper	SI	25	3	CB	COMPLETE 6/5/2023
125509585	35426892	3/1/2023	274	GEYSERVILLE 1102	Rxe	SO	5.5	11	220154	Ready – re-Scheduled 6/7/2023 from 6/6 from 6/2
125615068	35438773	3/10/2023	625902	LOS COCHES 1101	Nova	CC	2.3		CB	Ready - Unscheduled
123442770	35344602	3/7/2023	3012>491190	DOLAN ROAD 1101	-	CC	0.1	1	CB	Ready – Unscheduled Prior Schedule 5/22/2023 from 5/19 rom 5/22 from 5/19 from 5/22 from 4/17
123221745	35354315	6/1/2022	XR462	MC KEE 1107	Wve	SJ	0.0	3	CB	Ready – Unscheduled - Prior Scheduled 8/16/2023
125258739	35419925	12/31/2022	672110	DOLAN ROAD 1101	Viper	CC	0.0	1	CB	Ready – Unscheduled - Prior Scheduled 5/8/2023
125780522	35436529	4/3/2023	4724	HUMBOLDT BAY 1102	Nova	HB	0.0	-	CB	Ready – Scheduled 10/16/2023, division plans to move up in schedule to September and gain release to work from 7/10/2023 – Osprey Nest
126205139	35449696	5/22/2023	12705	SERRAMONTE 1104	Rve	PN	0.0	-	CB	Estimating – 6/17/2023 EOD – Moved from exp to cap

Data through 6/5/23 as of 6/6/23

Outages on EPSS Enabled Zones

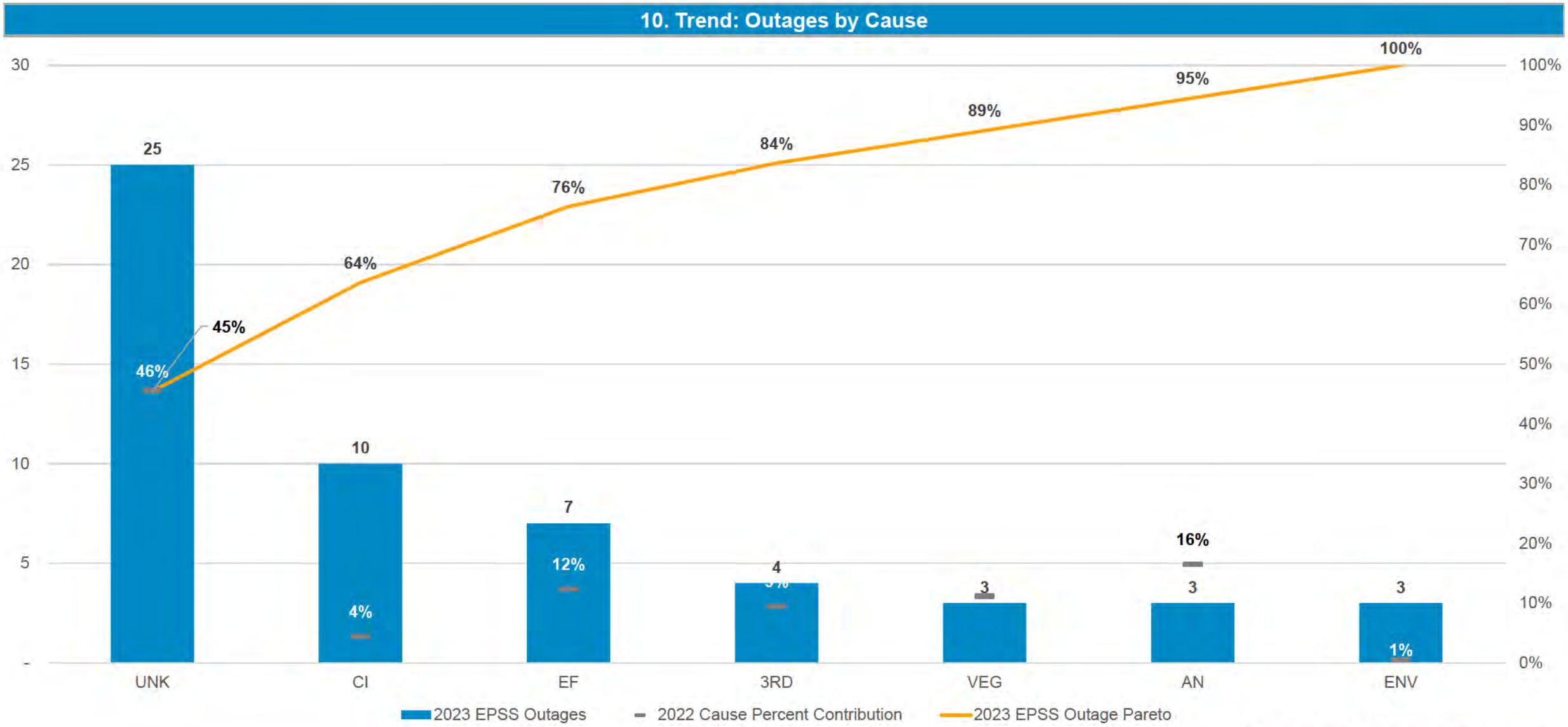
1. Status					
	2023			*2022*	
	Last Week	**MTD**	**YTD**	**MTD**	**YTD**
Outages in Enabled Zones	12	12	55	44	202
Average CESO	601	601	1,026	900	741

3. Trend: Outages on EPSS Enabled Zones



Data through 6/5/23 as of 6/6/23

Outages on EPSS Enabled Zones by Cause

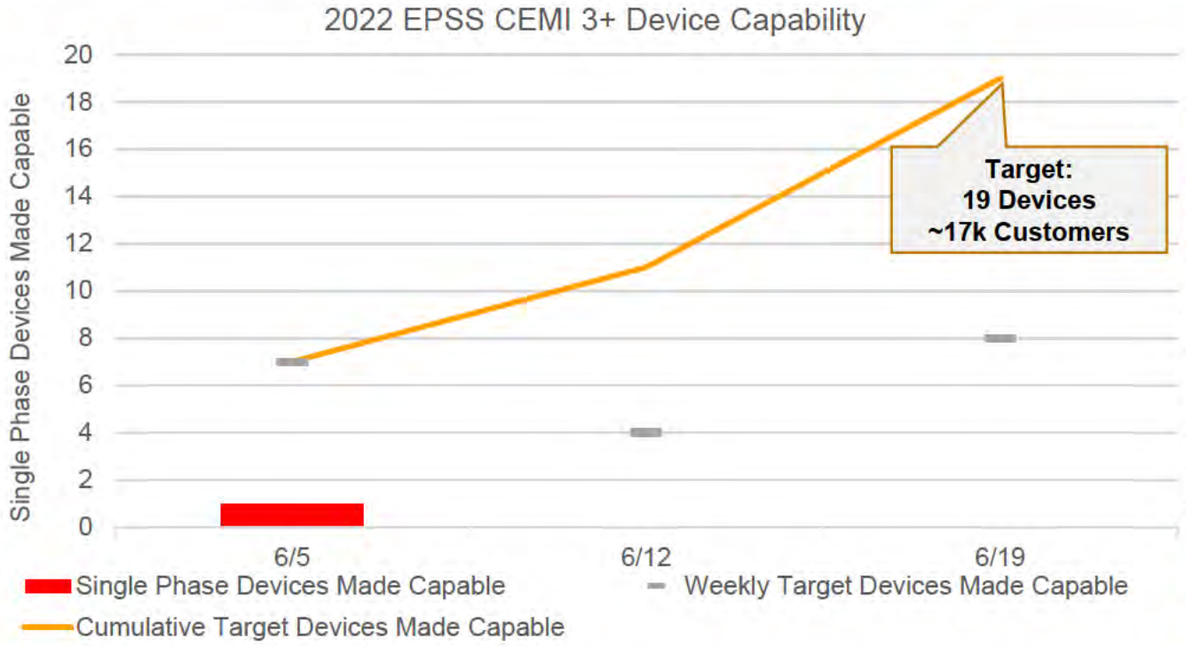


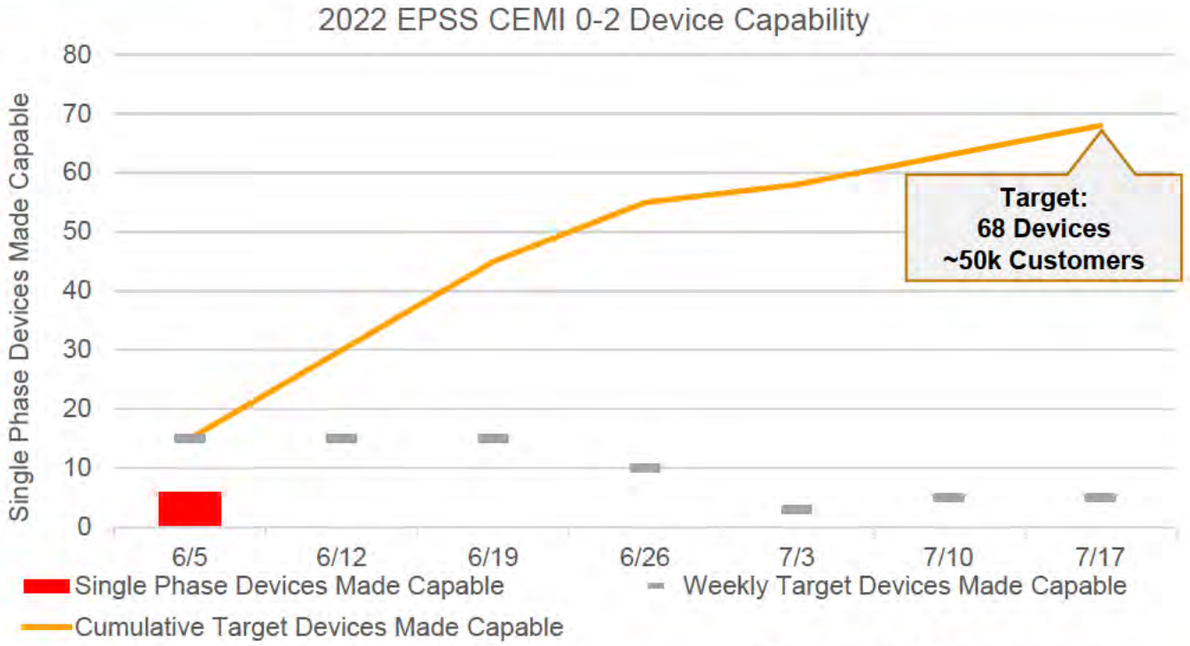
Data through 6/5/23 as of 6/6/23

EPSS Single Phase Device Capability

1. Status			
	Last Week	**MTD**	**YTD**
Total Devices	7	7	7
Total Target	22	22	22

3. Trend: Single Phase Device Capability



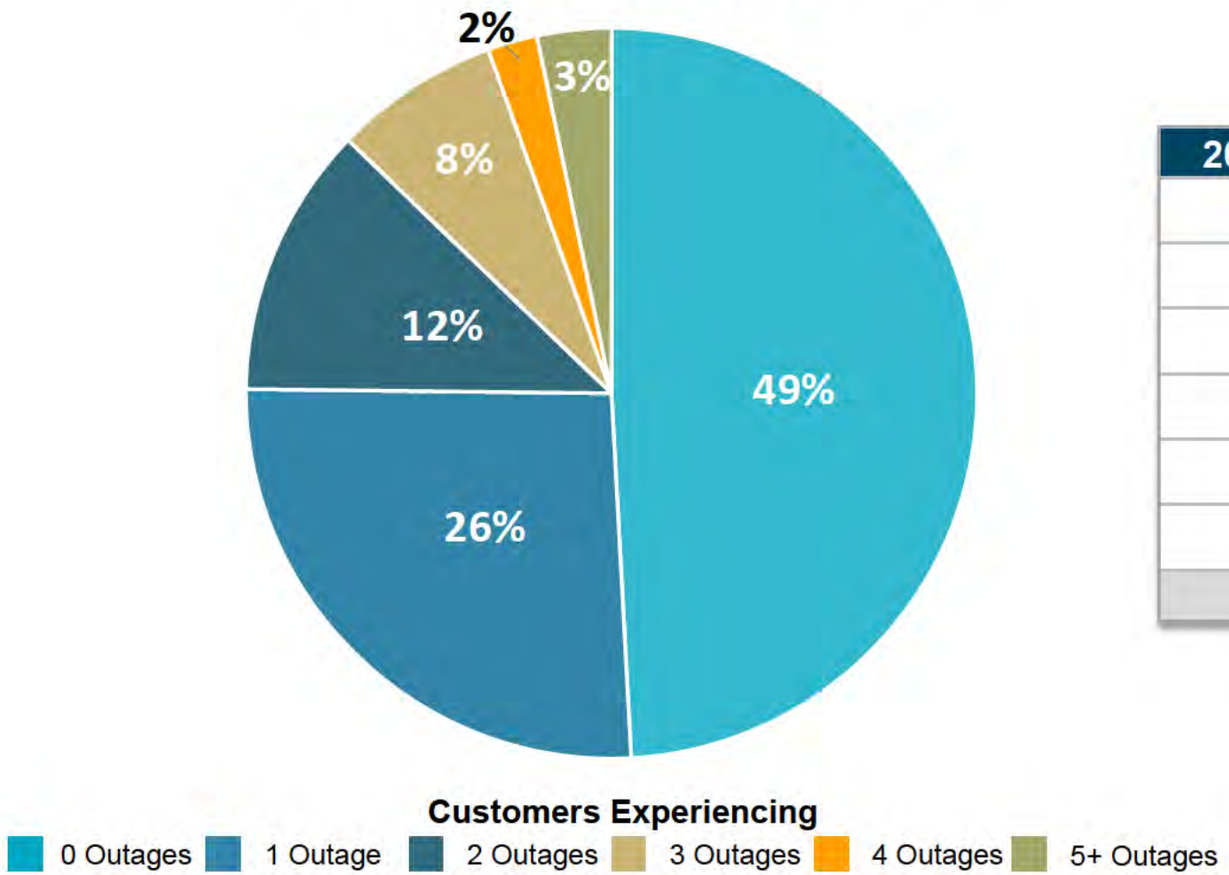


Data through 6/5/23 as of 6/6/23

EPSS Single Phase Device Capability

By making eligible single phase devices EPSS capable, over 67k customers will be descoped from the program or rescoped to EPSS buffer, further minimizing customer reliability impacts.

Service Points by 2022 EPSS CEMI



2022 EPSS CEMI	Service Points	% of Total
0	33,199	49%
1	17,594	26%
2	8,117	12%
3	4,951	7%
4	1,488	2%
5+	2,212	3%
Total	**67,561**	**-**

Data through 6/5/23 as of 6/6/23

EPSS Single Phase Device Capability

Action Items					
No.	**Action**	**Description**	**Date**	**Owner**	**Status**
1	**2023 Eligible EPSS Device Scope**	▪ Identify single phase EPSS eligible devices to be made capable to further reduce customer reliability impact	5/1/2023	[redacted]	Complete
2	**2023 EPSS Single Phase Device Capability – 2022 EPSS CEMI 3+ Devices**	▪ Execute single phase EPSS device capability workplan for devices impacting customers with a 2022 EPSS CEMI 3+	6/15/2023		At Risk
2	**2023 EPSS Single Phase Device Capability – Remaining Devices**	▪ Execute single phase EPSS device capability workplan for remaining devices	7/15/2023		At Risk

Data through 6/5/23 as of 6/6/23

Phases of 2023 EPSS Customer Outreach

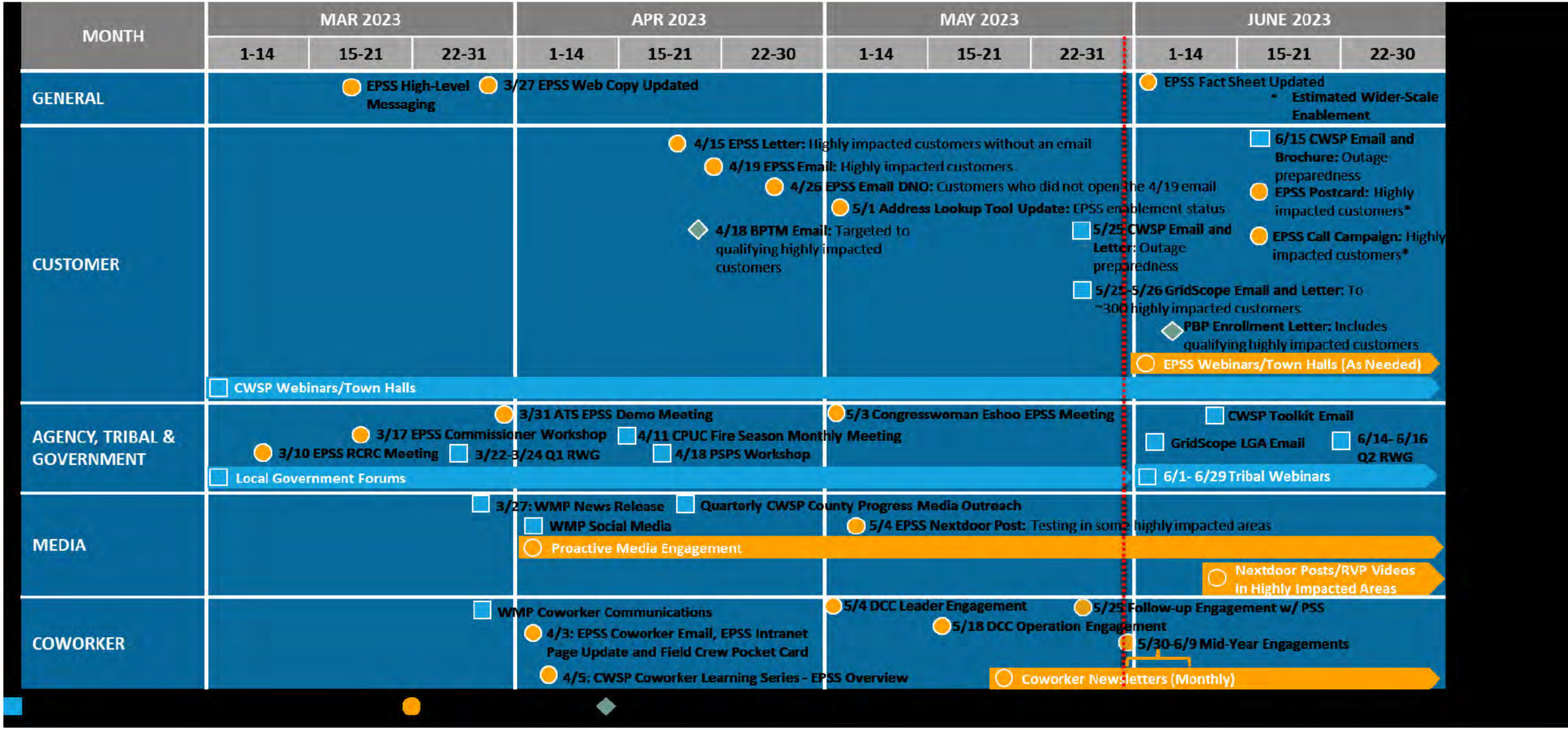
		Progress
Phase 1 – Preseason Education	• Continue to incorporate EPSS into **broader CWSP safety outage messaging** • Leverage **customer insights** from EPSS awareness testing to inform strategies • **Differentiate between customer experiences** in 2021/22	
Phase 2 – CEMI Initial Comms	• Multiple **escalation paths** – EPSS CEMI 5, outages in 30 days, etc. • Be **quicker to acknowledge** outages and show that **PG&E is taking action** • Leverage IVR, SMS, and email to **reach more customers**	
Phase 3 – CEMI Findings from MORE	• **Customer testing and interviews** for MORE process occurring in Q1 • Share **community-specific findings** and actions to improve reliability, leveraging all direct comms methods and social media • **Coordination with Regional teams** on holistic view of outage experience	
Phase 4 – Escalations	• **Ongoing communication** and support after the MORE process – direct to customer comms, community webinars, in-person town halls • Additional focus on **2022 CEMI-8+ customers –** targeted communications about actions to improve reliability, customer resiliency opportunities	

Data through 6/5/23 as of 6/6/23

Outreach Objectives

- **Reach all customers** who may be impacted in 2023 before large-scale enablement occurs.
- **Provide additional information** to customers who were highly impacted in 2022.
- **Roll out communications strategically** to reach customers, agency partners, media and coworkers.
- **Ensure outreach is comprehensive** but not duplicative across the EPSS and CWSP workstreams.

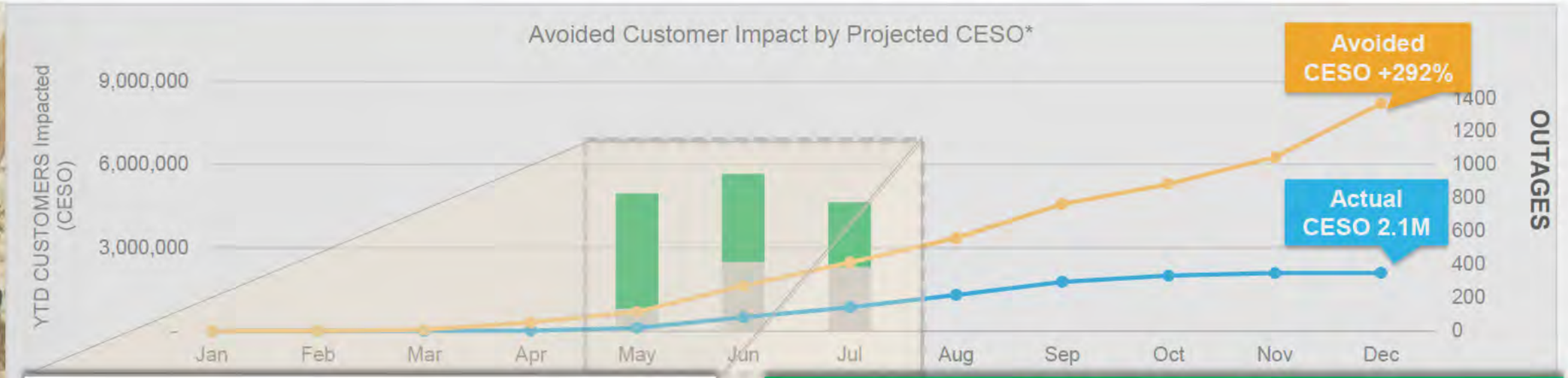
EPSS Pre-Season Engagement Timeline

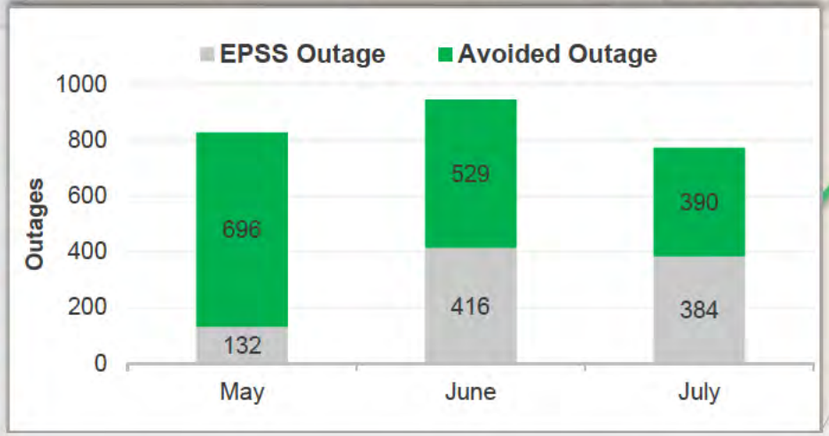


Data through 6/5/23 as of 6/6/23

Avoided EPSS Outages

As a result of improved operational capability to enable and disable EPSS over 1,600 fuse, switch, or other lower-level outages were not line recloser or circuit breaker outages between May and July 2022.





Avoided Outages by Cause

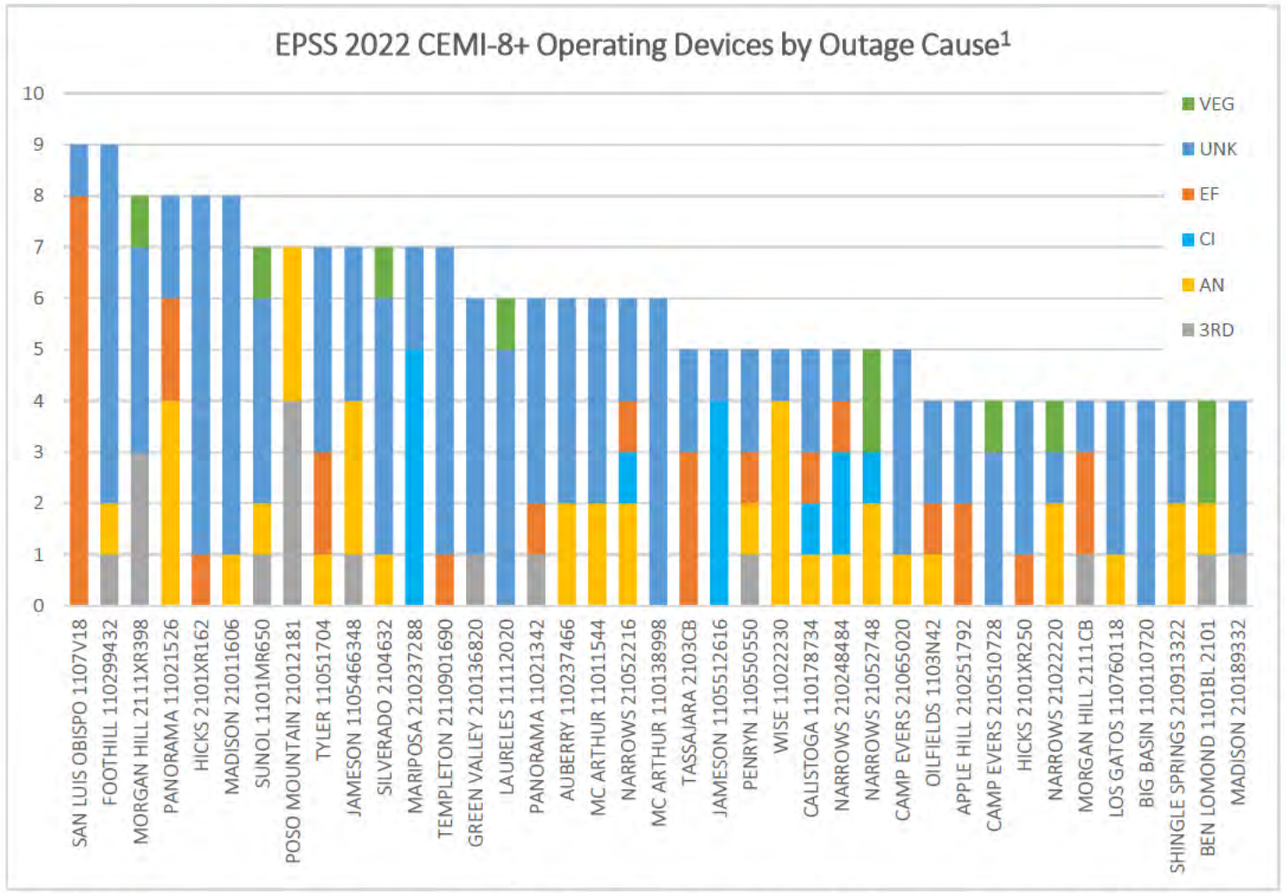
	May	June	July
ENV	4	6	1
CI	12	7	13
3RD	49	46	32
VEG	84	58	32
AN	69	66	53
EF	107	89	61
UNK	371	257	198

'Avoided Outages' aggregates increased customer impact based on presumed upstream EPSS device operation for unplanned outages on downstream fuses, trip savers, and reclosers when EPSS was not enabled.

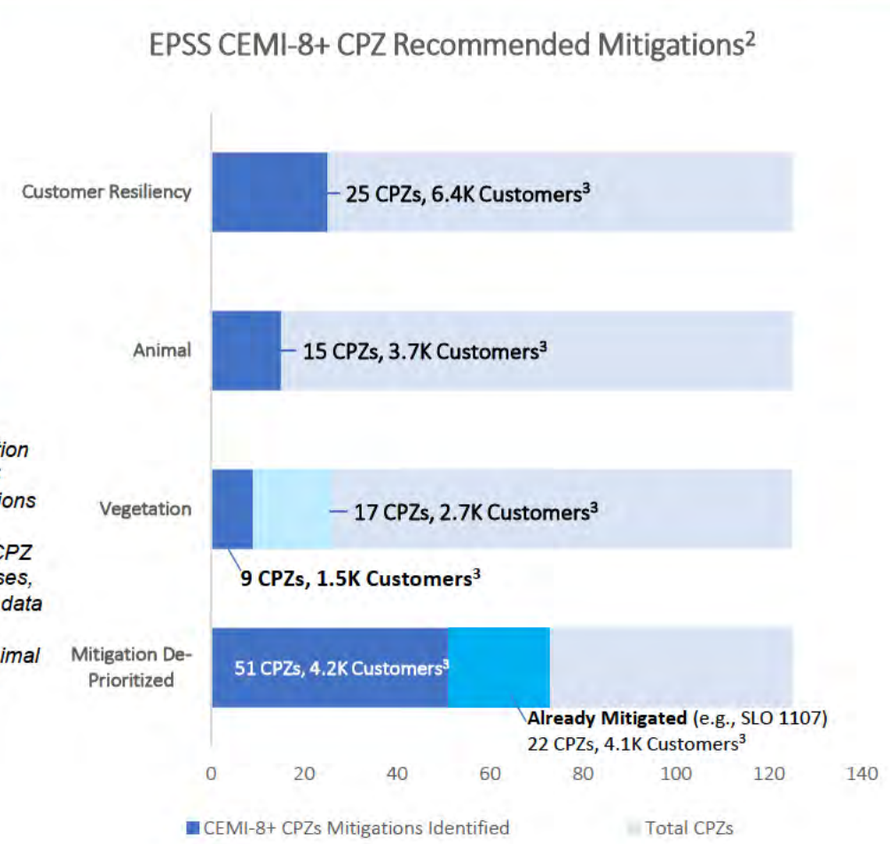
Data through 6/5/23 as of 6/6/23

EPSS CEMI-8+ Operating Device Outages by Cause

Informed by each CPZ's outage counts and causes, recommended mitigations for each CPZ have been selected for preliminary budgeting and planning purposes, with additional localized scoping pending.



Preliminary mitigation selection by EPSS PMO Field Operations and Engineering branch based on CPZ outage count, causes, location, and local data as well as 2023 Vegetation and Animal Retrofit programs.



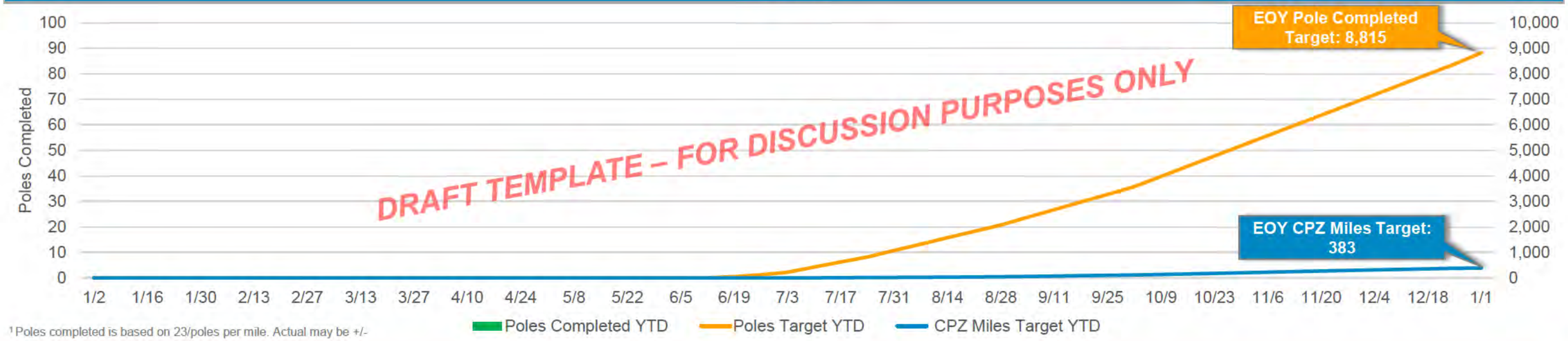
1.Chart depicts CPZs experiencing more than four total EPSS outages. Full list of CPZs reviewed and resulting mitigations included in appendix.
2.Data as of January 31, 2022. CPZs may be included in more than one mitigation category.
3.SPIDs experiencing eight or more EPSS outages in 2022 currently located on CPZ in mitigation bucket as of January, 31 2023.

Proactive Animal Mitigation

1. Status

	Last Week	MTD	YTD
Poles Completed[1]	-	-	-
Target	-	-	8,815
Direct CPZ Miles	-	-	-
Target Miles	-	-	383

3. Trend



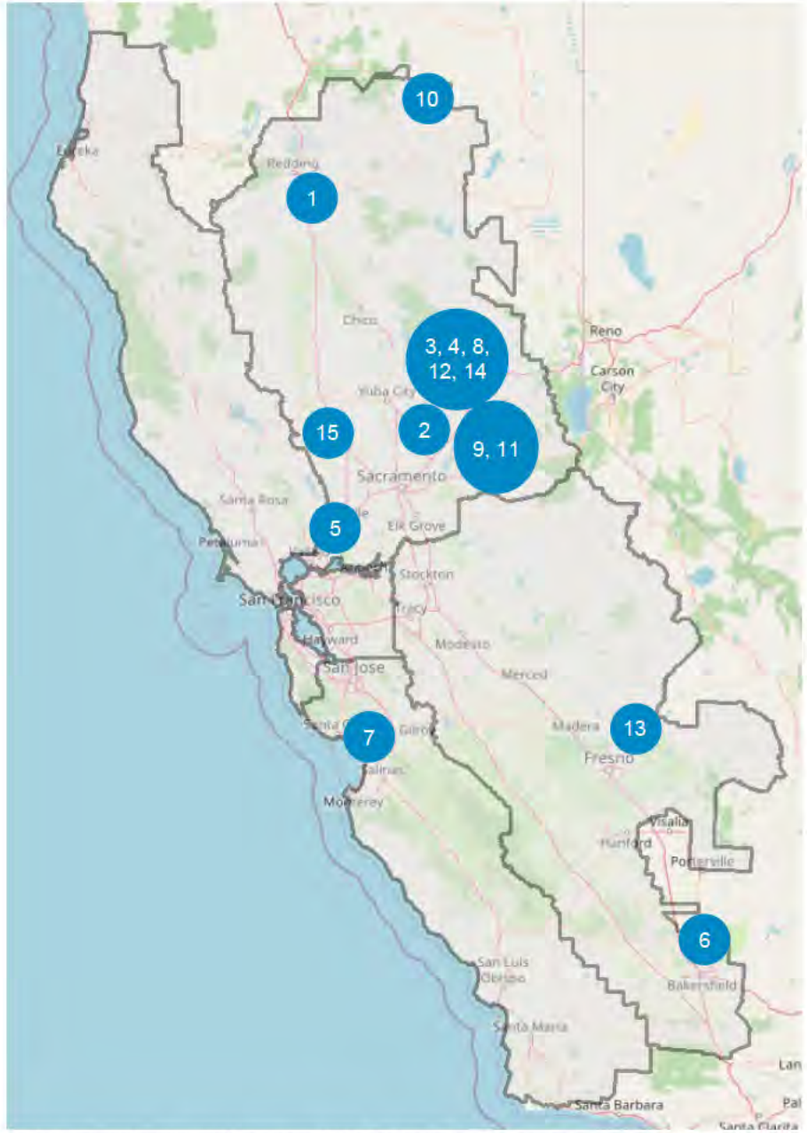
[1] Poles completed is based on 23/poles per mile. Actual may be +/-

Action Items

No.	Action	Description	Date	Owner	Status
1	**2023 Proactive Animal Mitigation Workplan Updates**	▪ Align on bird and critter mitigation workplan and resource prioritization with remaining 2023 field work ▪ Coordinate update of existing animal mitigation standards to include additional animal guard work and equipment proximity field review and execution	~~5/1/2023~~ 6/15/2023	[redacted]	Off Track

Data through 6/5/23 as of 6/6/23

Proactive Animal Mitigation



Total CPZs	Miles Mitigated	EPSS CEMI 8+ Customers Impacted[1]
15	383	~3,700

ID	CPZ	Animal Mitigations Needed?	CPZ Miles	Estimated Total Poles[2]	AN Outages	UNK Outages	Total Outages
1	PANORAMA 11021526	Yes	18	417	4	2	8
2	WISE 11022230	Yes	25	576	4	1	5
3	NARROWS 21052426	Yes	36	829	3	0	3
4	BRUNSWICK 111063100	Yes	4	96	3	0	3
5	JAMESON 1105466348	Yes	15	353	3	3	7
6	POSO MOUNTAIN 21012181	Yes	24	545	3	0	7
7	GREEN VALLEY 210112106	Yes	16	362	2	0	2
8	NARROWS 21052748	Yes	20	459	2	0	5
9	SHINGLE SPRINGS 210913322	Yes	41	942	2	2	4
10	MC ARTHUR 11011544	Yes	28	645	2	4	6
11	SHINGLE SPRINGS 21099372	Yes	19	445	2	1	3
12	NARROWS 21022220	Yes	28	653	2	1	4
13	AUBERRY 110237466	Yes	32	729	2	4	6
14	NARROWS 21052216	Yes	58	1,338	2	2	6
15	MADISON 21011606	Yes	19	426	1	7	8
			383	**8,815**	**37**	**27**	**77**

1.SPIDs experiencing eight or more EPSS outages in 2022 currently located on CPZs in proactive animal plan as of January 31, 2023. Is not reflective of all SPIDs that may be addressed.
2.Estimated Total Poles per SME input estimate of 23 poles per CPZ miles. Some poles may include animal mitigation, to be confirmed in the field.

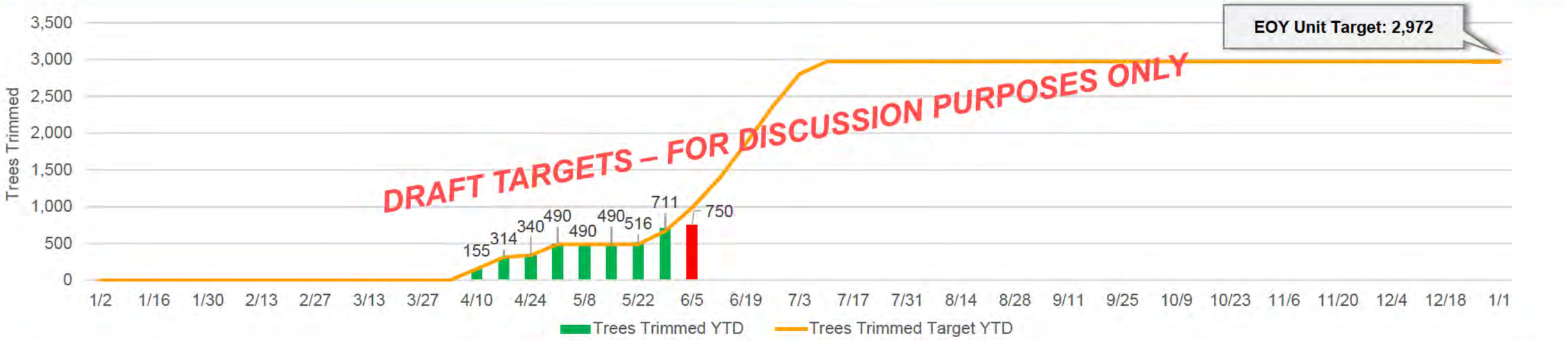
Data through 6/5/23 as of 6/6/23

VMOM – Proactive Mitigation 2022 (Tranche 1)

1. Status

	Last Week	MTD	YTD
Trees Trimmed	39	25	750
Target	375	225	985

3. Trend



Action Items

No.	Action	Description	Date	Owner	Status
1	**2023 VMOM Reporting Alignment**	▪ Align on 2023 reporting cadence and technology support for Vegetation Management for Operational Mitigation workplan	6/1/2023	[redacted]	At-Risk

Data through 6/5/23 as of 6/6/23

VMOM – Extent of Condition 2022 (Tranche 1)

1. Status

	Last Week	MTD	YTD
Trees Trimmed	84	51	305
Target	92	54	346

3. Trend

Action Items

No.	Action	Description	Date	Owner	Status
1	**2023 VMOM Reporting Alignment**	▪ Align on 2023 reporting cadence and technology support for Vegetation Management for Operational Mitigation workplan ▪ Assess ramp up of resources to complete 2022 carry-over tree trimming by the end of June	6/1/2023	[redacted]	At-Risk

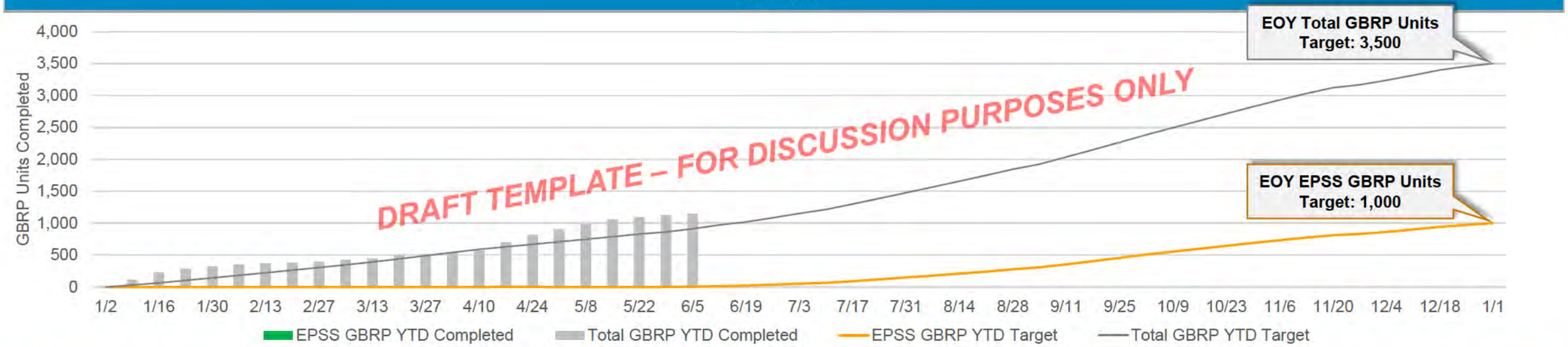
Data through 6/5/23 as of 6/6/23

Customer Resiliency – Generator & Battery Rebate Program (GBRP)

1. Status

	Last Week	MTD	YTD
EPSS GBRP	-	-	-
Target EPSS GBRP	4	4	4
Total GBRP	25	25	1,151
Target Total GBRP	38	30	907

3. Trend



Action Items

No.	Action	Description	Date	Owner	Status
1	**Customer Resiliency - GBRP Expansion Workplan Finalization and Execution**	▪ Update 2023 workplan per finalized scope	5/31/2023	[redacted]	Complete

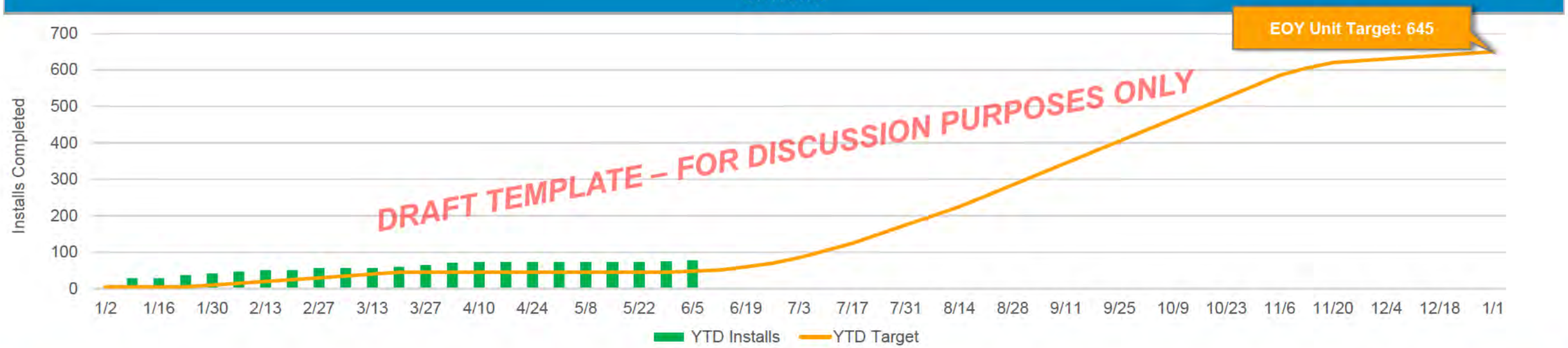
Data through 6/5/23 as of 6/6/23

Fixed Power Solutions – Residential Storage Initiative (RSI)

1. Status

	Last Week	MTD	YTD
Installs Completed	3	0	78
Target	3	3	48

3. Trend



Action Items

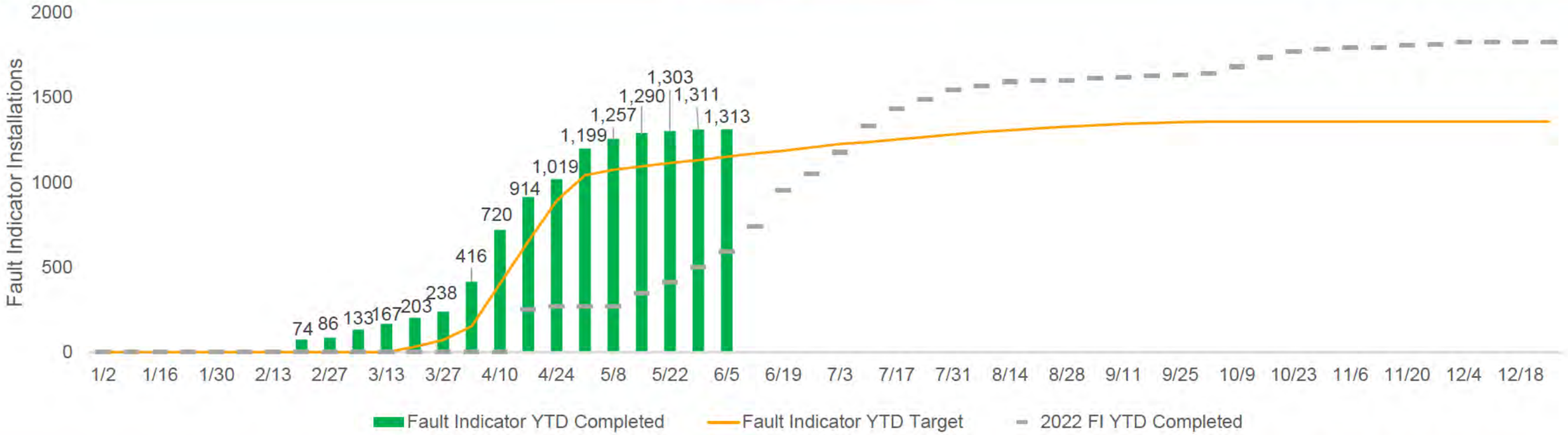
No.	Action	Description	Date	Owner	Status
1	**Customer Resiliency - RSI Workplan Finalization and Execution**	▪ Finalize Phase 2 contracts currently in Sourcing and authorize work execution for Fixed Power Solutions / RSI effort ▪ Update 2023 workplan per finalized scope	5/31/2023	[redacted]	Complete

Data through 6/5/23 as of 6/6/23

Fault Indicators

1. Status					
	2023			2022	
	Last Week	MTD	YTD	MTD	YTD
Fault Indicators Installed	2	2	1,313	92	591
Target	20	8	1,151	60	240

3. Trend: Fault Indicators



Data through 6/5/23 as of 6/6/23

Completed & Planned Engagement

Date	Meeting	LOB / Target Audience	Purpose
1/19/2023	2022 Regional Year in Review	Central Valley Field Ops	Provide each region with an overview of the 2022 EPSS program and regional performance relative to EPSS metrics and discuss program plan and goals for 2023.
1/23/2023		Bay Area Field Ops	
1/24/2023		North Coast Field Ops	
1/25/2023		Central Coast Field Ops	
1/26/2023		North Valley/Sierra Field Ops	
2/14/2023	EPSS Engagement w/ PSS	Public Safety Specialist Supervisors	Engage with PSS Supervisor team to discuss 2023 EPSS program goals and solicit feedback on opportunities for continued improvement.
Ongoing	EPSS Tmen / DLT Workshops	DLTs, Tmen	Socialize 2023 EPSS program goals and solicit feedback on 2022 program performance and opportunities for continued improvement.
5/4/2023	DCC Leader Engagement	DCC Leadership	Engage with DCC Leadership to align on 2023 program goals and enhancements.
5/18/2023	DCC Operator Engagement	North, South, and Central DCC	Socialize 2023 EPSS program goals and solicit feedback on 2022 program performance and opportunities for continued improvement.
5/25/2023	Follow-up Engagement w/ PSS	Public Safety Specialist Supervisors	Follow-up engagement with PSS Supervisor team to discuss mid-year program updates and eventual shift to peak season posture.
5/30/2023	Mid-Year EPSS Engagement	North Valley/Sierra Field Ops	Provide each region with a mid-year update of the program and progress against program goals and improvements for 2023.
5/30/2023		Central Coast Field Ops	
6/9/2023		North Coast Field Ops	
6/1/2023		Bay Area Field Ops	
6/9/2023		Central Valley Field Ops	

Data through 6/5/23 as of 6/6/23

EPSS Regional Year in Review Actions

No.	Action	Date	Owner	Status
1	Resume EPSS Outage Review DORs in partnership with Reliability Engineering team and explore integrating into existing Regional or Reliability Engineering DORs.	~~3/1/2023~~ ~~5/1/2023~~ *When applicable*	Regional Leadership w/ support from EPSS PMO	**On Track**
2	Refine and assess test-in & tail board bulletin process based around in-field conditions and improve real-time communications between field operations and meteorology.	6/30/2023	[redacted]	**On Track**
3	Target earlier distribution of AM EPSS Enablement Summary emails; begin distributing at 0500.	1/26/2023	EPSS PMO	**Complete**
4	Initiate proactive communication channels with customers to provide pre-season messaging and develop comms plan for outage communication and outage mitigation progress updates.	5/5/2023	[redacted]	**Complete**
5	Enhance ETOR procedure to improve accuracy and reliability for customers and begin tracking Level 1, blue-sky metrics for EPSS outages.	*TBD*	Outage Journey Team	**On Track**
6	Work with regional field operations teams to determine, and enhance where needed, resource availability for response and restoration of EPSS outages within our targets.	5/15/2023	Division Field Operations	**At Risk** *Due to Q1 storms*
7	Socialize the 2023 sectionalizing plan with field operations teams for appropriate planning and EPSS scope awareness.	4/15/2023	EPSS PMO	**Complete**

Data through 6/5/23 as of 6/6/23

WMP Delivery

2023-2025 WMP Commitments

Timeline Category	Not Started	On Track	At Risk	Off Track	Complete	Total
2023 Commitments	0	27	7	0	2	36
3 Year Objectives	2	13	0	0	0	15
10 Year Objectives	11	0	0	0	0	**11**
Total	13	40	7	0	2	**62***

*62 Commitments = 31 Targets + 31 Objectives

10 Year Objectives

Not Started	On Track	At Risk	Off Track	Complete	Total
11	0	0	0	0	11

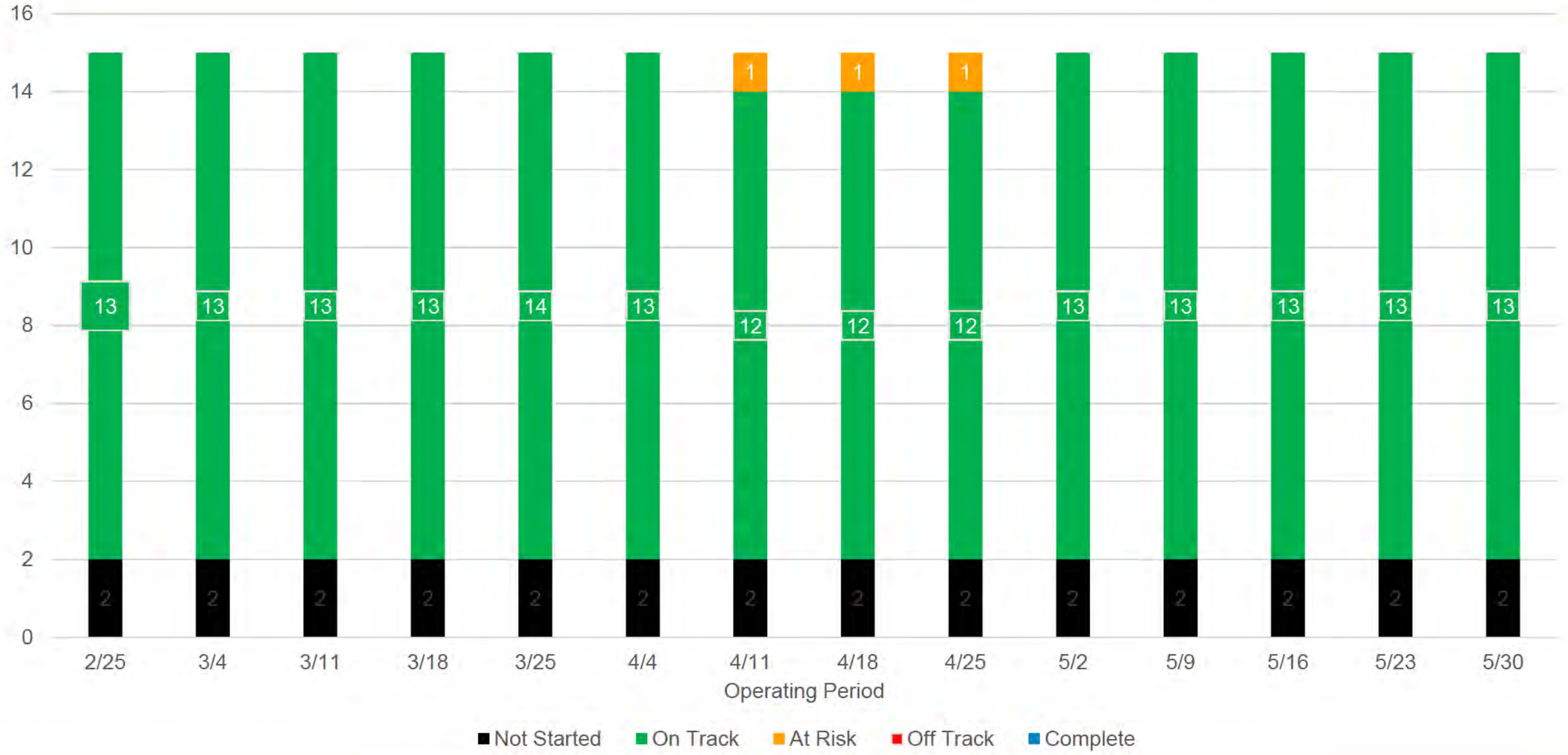
10 Year Objectives

ID	*2023 WMP Target Name*	Chief Sponsor (Execution)	WMP Start Date	Last Compliance Date
CO-03	Community Engagement - Meetings in 2026 -2032	[redacted]	1/1/2026	12/31/2032
EP-03	Maintain all hazards planning and preparedness program in 2026 - 2033	Angie Gibson	1/1/2026	12/31/2032
EP-05	Expand all hazards planning to include additional threats and scenarios in 2026 - 2033	Angie Gibson	1/1/2026	12/31/2032
GM-05	HFTD/HFRA Open Tag Reduction - Backlog Elimination - 7 Year Plan	Jeff Deal	1/1/2026	12/31/2029
PS-03	Evaluate enhancements for the PSPS Transmission guidance	Rod Robinson	1/1/2026	12/31/2032
PS-04	Evaluate incorporation of approved IPW enhancements into the PSPS Distribution guidance	Rod Robinson	1/1/2026	12/31/2032
PS-05	Battery Solutions	[redacted]	6/1/2023	12/31/2032
SA-06	Evaluate FPI and IPW Modeling enhancements in 2026 - 2033	[redacted]	1/1/2026	12/31/2032
VM-10	Inspections in HFTD and HFRA	Peter Kenny	TBD	12/31/2032
VM-11	Enhance and refine Focus Tree Inspection program	Peter Kenny	1/1/2026	12/31/2032
VM-12	Evaluate emerging technologies	Peter Kenny	TBD	12/31/2032

3 Year Objectives

Not Started	On Track	At Risk	Off Track	Complete	Total
2	13	0	0	0	15

3 Year Objectives Delivery Trend



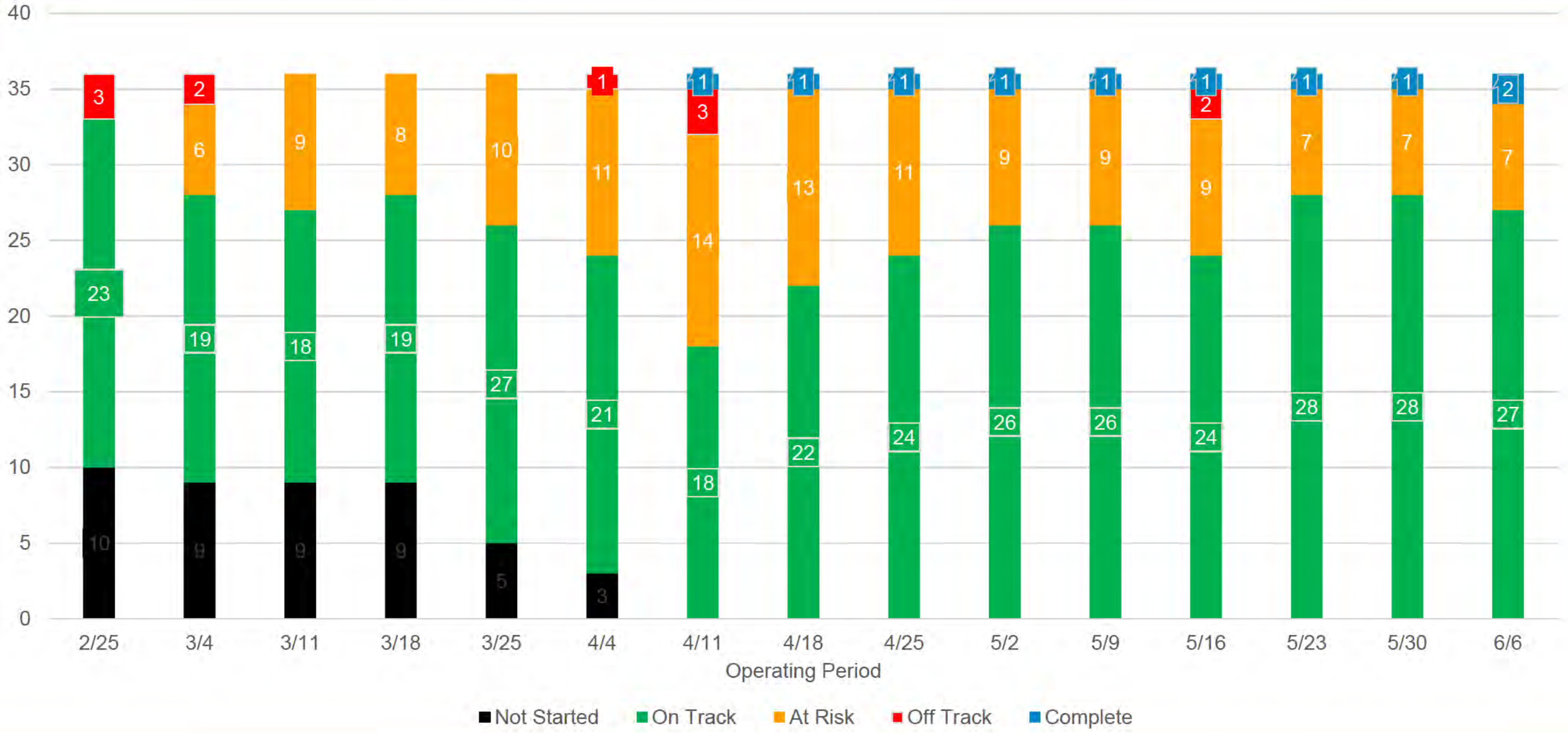
3 Year Objectives

2023 WMP Targets				Q1			Q2			Q3			Q4		
ID	*2023 WMP Target Name*	Chief Sponsor (Execution)	Last Compliance Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
AI-01	Retainment of Inspectors and Internal Workforce Development	Jason Regan	12/31/2025												
AI-11	Filling Asset Inventory Data Gaps	Martin Wyspianski	12/31/2025												
CO-01	Community Engagement - Meetings	[redacted]	9/30/2025												
EP-01	Complete PSPS and Wildfire Tabletop and Functional Exercises	Angie Gibson	11/30/2023												
EP-02	Maintain all hazards planning and preparedness program in 2023 - 2025	Angie Gibson	12/31/2025												
EP-04	Expand all hazards planning to include additional threats and scenarios in 2023 - 2025	Angie Gibson	12/31/2025												
GH-02	Evaluate Covered Conductor Effectiveness	Martin Wyspianski	3/29/2024 (2023 data)												
GM-01	Asset Inspections - Quality Assurance	[redacted]	12/31/2025												
GM-04	HFTD/HFRA Open Tag Reduction - Backlog Elimination - 3 Year Plan	Jeff Deal	12/31/2025												
GM-07	Updates on EPSS Reliability Study	Dave Canny	2/15/2024 (For 2023 data)												
PS-01	Evaluate enhancements for the PSPS Transmission guidance	Rod Robinson	12/31/2025												
PS-02	Evaluate incorporation of approved IPW enhancements into the PSPS Distribution guidance	Rod Robinson	12/31/2025												
SA-05	Evaluate FPI and IPW Modeling enhancements in 2023 - 2025	[redacted]	12/31/2025												
VM-03	Focused Tree Inspection Program	Peter Kenny	12/31/2025												
VM-09	Constraint Resolution Procedural Guideline	Peter Kenny	12/31/2025												

2023 Commitments – Execution

On Track	At Risk	Off Track	Complete	Total
27	7	0	2	36

2023 WMP Commitment Delivery Trend



2023 WMP Commitment At Risk/Off Track

No	ID	WMP Target Name	Chief Sponsor (Execution)	Catch Back Plan	Meeting Catch Back	Catch Back Plan Quarterly Due Date		WMP Target Due Date	Week(s) on list
1	GH-01	System Hardening - Distribution	Jamie Martin	Yes		6/30/2023	No	12/31/2023	4
2	GH-04	10K Undergrounding	Jamie Martin	Yes		6/30/2023	No	12/31/2023	14
3	GH-07	Distribution Protective Devices	[redacted]	Yes		8/12/2023	No	12/31/2023	10
4	GM-03	HFTD/HFRA Open Tag Reduction – Distribution Backlog	Jeff Deal	Yes		7/31/2023	No	12/31/2023	14
5	GM-06	EPSS - Down Conductor Detection (DCD)	Dave Canny	Yes		7/1/2023	No	12/31/2023	16
6	PS-07	PSPS Custom Impact Reduction	[redacted]	Yes		6/30/2023	No	12/31/2023	2
7	VM-04	Tree removal	Peter Kenny	Yes		6/30/2023	No	12/31/2023	5

Q2 Target Status

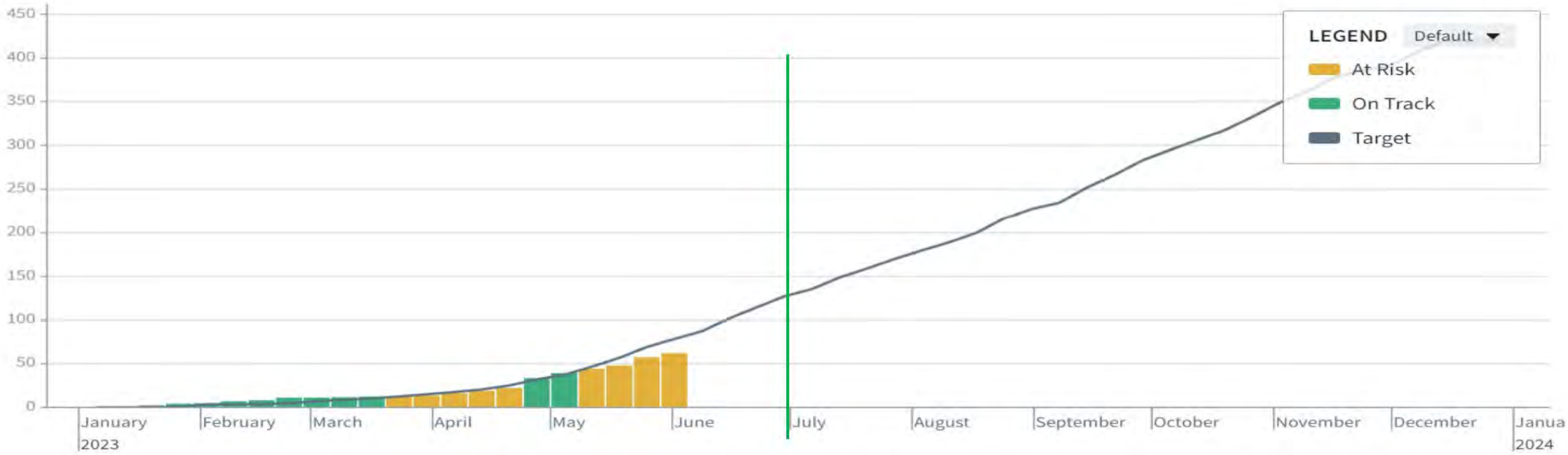
2023 Quarterly Targets										Q2
#	ID	2023 WMP Target Name	Owner	Q2 Internal Due Date	Q2 Compliance Date	Target / Target-Quarterly / Objective	YTD Actuals	Q2 Target	Q2 % Complete	WRCC Status
4	AI-06	Perform transmission infrared inspections	Jason Regan	6/15/2023	6/30/2023	Target (Quarterly)	2,677	1,500	178.47%	
5	AI-07	Detailed Ground Inspections - Distribution	Jason Regan	6/15/2023	6/30/2023	Target (Quarterly)	33,543	30,000	111.81%	
6	AI-08	Supplemental Inspections - Substation Distribution	Jason Regan	6/15/2023	6/30/2023	Target (Quarterly)	49	60	81.67%	
7	AI-09	Supplemental Inspections - Substation Transmission	Jason Regan	6/15/2023	6/30/2023	Target (Quarterly)	34	34	100.00%	
8	AI-10	Supplemental Inspections - Hydroelectric Substations and Powerhouses	Jason Regan	6/15/2023	6/30/2023	Target (Quarterly)	36	41	87.80%	
9	CO-02	Community Engagement - Surveys	[redacted]	6/15/2023	6/30/2023	Target (Quarterly)	1	1	100.00%	
10	VM-01	LiDAR Routine Inspections - Transmission	Peter Kenny	6/15/2023	6/30/2023	Target (Quarterly)	17,808.39	17,500	101.76%	
11	VM-02	Pole Clearing Program	Peter Kenny	6/15/2023	6/30/2023	Target (Quarterly)	80,077	80,000	100.10%	
12	VM-05	Defensible Space Inspections - Distribution Substation	Martin Wyspianski	6/15/2023	6/30/2023	Target (Quarterly)	129	131	98.47%	
13	VM-06	Defensible Space Inspections - Transmission Substation	Martin Wyspianski	6/15/2023	6/30/2023	Target (Quarterly)	54	55	98.18%	
14	VM-07	Defensible Space Inspections - Hydroelectric Substations and Powerhouses	Andrew Williams/Air	6/15/2023	6/30/2023	Target (Quarterly)	58	61	95.08%	

2023 WMP Commitment Status

2023 WMP Targets								Q1			Q2			Q3			Q4		
ID	2023 WMP Target Name	Chief Sponsor (Execution)	Q2 Compliance Date	Q3 Compliance Date	Internal Due Date	Last Compliance Date	Target / Target-Quarterly / Objective	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
AI-01	Retainment of Inspectors and Internal Workforce Development	Jason Regan	N/A	N/A	11/30/2023	12/31/2025	Objective (3 Year)												
AI-02	Detailed Inspection Transmission – Ground	Jason Regan	6/30/2023	N/A	6/30/2023	7/31/2023	Target (Quarterly)												
AI-03	Develop Distribution Aerial Inspections program	Jason Regan	N/A	N/A	10/31/2023	12/31/2023	Objective												
AI-04	Detailed Inspection Transmission – Aerial	Jason Regan	6/30/2023	N/A	6/30/2023	7/31/2023	Target (Quarterly)												
AI-05	Detailed Inspection Transmission – Climbing	Jason Regan	6/30/2023	N/A	6/30/2023	7/31/2023	Target (Quarterly)												
AI-06	Perform transmission infrared inspections	Jason Regan	6/30/2023	9/30/2023	11/30/2023	12/31/2023	Target (Quarterly)												
AI-07	Detailed Ground Inspections - Distribution	Jason Regan	6/30/2023	9/30/2023	11/30/2023	12/31/2023	Target (Quarterly)												
AI-08	Supplemental Inspections - Substation Distribution	Jason Regan	6/30/2023	N/A	6/30/2023	7/31/2023	Target (Quarterly)												
AI-09	Supplemental Inspections - Substation Transmission	Jason Regan	6/30/2023	N/A	6/30/2023	7/31/2023	Target (Quarterly)												
AI-10	Supplemental Inspections - Hydroelectric Substations and Powerhouses	Jason Regan	6/30/2023	N/A	6/30/2023	7/31/2023	Target (Quarterly)												
AI-11	Filling Asset Inventory Data Gaps	Martin Wyspianski	N/A	N/A	12/1/2025	12/31/2025	Objective (3 Year)												
CO-01	Community Engagement - Meetings	[redacted]	N/A	N/A	9/30/2023	9/30/2025	Objective (3 Year)												
CO-02	Community Engagement - Surveys		6/30/2023	9/30/2023	10/31/2023	12/31/2023	Target (quarterly)												
CO-03	Community Engagement - Meetings in 2026 -2032		N/A	N/A		12/31/2032	Objective (10 Year)												
EP-01	Complete PSPS and Wildfire Tabletop and Functional Exercises	Angie Gibson	N/A	N/A	11/10/2023	11/30/2023	Objective (3 Year)												
EP-02	Maintain all hazards planning and preparedness program in 2023 - 2025	Angie Gibson	N/A	N/A	12/1/2023	12/31/2025	Objective (3 Year)												
EP-03	Maintain all hazards planning and preparedness program in 2026 - 2033	Angie Gibson	N/A	N/A		12/31/2032	Objective (10 Year)												
EP-04	Expand all hazards planning to include additional threats and scenarios in 2023 - 2025	Angie Gibson	N/A	N/A	12/1/2023	12/31/2025	Objective (3 Year)												
EP-05	Expand all hazards planning to include additional threats and scenarios in 2026 - 2033	Angie Gibson	N/A	N/A		12/31/2032	Objective (10 Year)												
EP-06	Review, and revise the CERP and 2 Wildfire Related Annexes on a yearly basis	Angie Gibson	N/A	N/A	12/1/2023	12/31/2023	Target												
GH-01	System Hardening - Distribution	Jamie Martin	N/A	N/A	12/31/2023	12/31/2023	Target												
GH-02	Evaluate Covered Conductor Effectiveness	Martin Wyspianski	N/A	N/A	3/29/2024	3/29/2024 (2023 data)	Objective (3 Year)												
GH-03	Evaluate and Implement Covered Conductor Effectiveness Impact on Inspections and Maintenance Standards	Martin Wyspianski	N/A	N/A	12/1/2023	12/31/2023	Objective												
GH-04	10K Undergrounding	Jamie Martin	N/A	N/A	12/31/2023	12/31/2023	Target												
GH-05	System Hardening - Transmission	Ahmad Ababneh	N/A	N/A	11/30/2023	12/31/2023	Target												
GH-06	System Hardening - Transmission Shunt Splices	Ahmad Ababneh	N/A	N/A	10/31/2023	12/31/2023	Target												
GH-07	Distribution Protective Devices	[redacted]	N/A	N/A	8/31/2023	12/31/2023	Target												
GH-08	Surge Arrestor - Removals		N/A	N/A	10/31/2023	12/31/2023	Target												
GH-09	Distribution Line Motor Switch Operator (MSO) - Replacements		N/A	N/A	11/30/2023	12/31/2023	Target												
GH-10	Non-Exempt Expulsion Fuse - Removal		N/A	N/A	12/31/2023	12/31/2023	Target												
GM-01	Asset Inspections – Quality Assurance		N/A	N/A	12/1/2023	12/31/2025	Objective (3 Year)												
GM-02	HFTD/HFRA Open Tag Reduction - Transmission	Ahmad Ababneh	N/A	N/A	12/31/2023	12/31/2023	Target												
GM-03	HFTD/HFRA Open Tag Reduction – Distribution Backlog	Jeff Deal	N/A	N/A	12/31/2023	12/31/2023	Target												
GM-04	HFTD/HFRA Open Tag Reduction - Backlog Elimination - 3 Year Plan	Jeff Deal	N/A	N/A	12/31/2025	12/31/2025	Objective (3 Year)												
GM-05	HFTD/HFRA Open Tag Reduction - Backlog Elimination - 7 Year Plan	Jeff Deal	N/A	N/A		12/31/2029	Objective (10 Year)												
GM-06	EPSS - Down Conductor Detection (DCD)	Dave Canny	N/A	N/A	11/30/2023	12/31/2023	Target												
GM-07	Updates on EPSS Reliability Study	Dave Canny	N/A	N/A	2/15/2024	2/15/2024 (For 2023 data)	Objective (3 Year)												
PS-01	Evaluate enhancements for the PSPS Transmission guidance	Rod Robinson	N/A	N/A	9/1/2023	12/31/2025	Objective (3 Year)												
PS-02	Evaluate incorporation of approved IPW enhancements into the PSPS Distribution guidance	Rod Robinson	N/A	N/A	9/1/2023	12/31/2025	Objective (3 Year)												
PS-03	Evaluate enhancements for the PSPS Transmission guidance	Rod Robinson	N/A	N/A		12/31/2032	Objective (10 Year)												
PS-04	Evaluate incorporation of approved IPW enhancements into the PSPS Distribution guidance	Rod Robinson	N/A	N/A		12/31/2032	Objective (10 Year)												
PS-05	Battery Solutions	[redacted]	N/A	N/A		12/31/2032	Objective (10 Year)												
PS-06	Provide 12,000 new or replacement portable batteries to PG&E customers at risk of PSPS or EPSS		N/A	N/A	12/6/2023	12/31/2023	Target												
PS-07	PSPS Customer Impact Reduction		N/A	N/A	12/15/2023	12/31/2023	Target												
SA-01	AI in Wildfire Cameras	Angie Gibson	N/A	N/A	6/15/2023	6/30/2023	Objective												
SA-02	Line Sensor - Installations	Rod Robinson	N/A	N/A	10/31/2023	12/31/2023	Target												
SA-03	EFD and DFA Reporting	Rod Robinson	N/A	N/A	11/15/2023	12/31/2023	Objective												
SA-04	FPI and IPW Modeling - Revision Evaluation		N/A	N/A	12/1/2023	12/31/2023	Objective												
SA-05	Evaluate FPI and IPW Modeling enhancements in 2023 - 2025	[redacted]	N/A	N/A	12/1/2023	12/31/2025	Objective (3 Year)												
SA-06	Evaluate FPI and IPW Modeling enhancements in 2026 - 2033		N/A	N/A		12/31/2032	Objective (10 Year)												
VM-01	LiDAR Routine Inspections - Transmission	Peter Kenny	6/30/2023	9/30/2023	6/15/2023	12/31/2023	Target (Quarterly)												
VM-02	Pole Clearing Program	Peter Kenny	6/30/2023	9/30/2023	9/30/2023	9/30/2023	Target (Quarterly)												
VM-03	Focused Tree Inspection Program	Peter Kenny	N/A	N/A	12/1/2023	12/31/2025	Objective (3 Year)												
VM-04	Tree removal	Peter Kenny	N/A	N/A	12/1/2023	12/31/2023	Target												
VM-05	Defensible Space Inspections - Distribution Substation	Andrew Williams [redacted]	6/30/2023	N/A	9/15/2023	9/30/2023	Target (Quarterly)												
VM-06	Defensible Space Inspections - Transmission Substation	Andrew Williams [redacted]	6/30/2023	9/30/2023	6/15/2023	7/31/2023	Target (Quarterly)												
VM-07	Defensible Space Inspections - Hydroelectric Substations and Powerhouses	Andrew Williams [redacted]	6/30/2023	N/A	6/15/2023	7/31/2023	Target (Quarterly)												
VM-08	Vegetation Management – Quality Verification	[redacted]	N/A	N/A	12/1/2023	12/31/2023	Target												
VM-09	Constraint Resolution Procedural Guideline	Peter Kenny	N/A	N/A	12/1/2023	12/31/2025	Objective (3 Year)												
VM-10	Inspections in HFTD and HFRA	Peter Kenny	N/A	N/A		12/31/2032	Objective (10 Year)												
VM-11	Enhance and refine Focus Tree Inspection program	Peter Kenny	N/A	N/A		12/31/2032	Objective (10 Year)												

GH-01 System Hardening - Distribution

YTD Baseline



Week Ending	1/7	1/14	1/21	1/28	2/4	2/11	2/18	2/25	3/4	3/11	3/18	3/25	4/1	4/8	4/15	4/22	4/29	5/6	5/13	5/20	5/27	6/3	6/10	6/17	6/24	7/1	7/8	7/15	7/22	7/29	8/5	8/12	8/19	8/26	9/2	9/9	9/16	9/23	9/30	10/7	10/14	10/21	10/28	11/4	11/11	11/18	11/25	12/2	12/9	12/16	12/23
OP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
Target YTD				.6	3.5	3.5	3.5	4.7	7.1	8.7	10.3	12.5	15	17.5	20.5	25	32	37.2	46.5	56.6	69	78.2	87	101.8	114.4	127	135.2	148.4	158.7	169.5	179.5	188.8	199.8	216.5	227.7	234.8	252.2	266.6	283	294.9	306.5	317.7	332.8	349.2	362.4	378.3	386	391.1	407	419.8	420
Target Week of				.6	2.9	0	0	1.2	2.4	1.6	1.6	2.2	2.5	2.5	3	4.5	7	5.2	9.3	10.1	12.4	9.2	8.8	14.8	12.6	12.6	8.2	13.2	10.3	10.8	10	9.3	11	16.7	11.2	7.1	17.4	14.4	16.4	11.9	11.6	11.2	15.1	16.4	13.2	15.9	7.7	5.1	15.9	12.8	.2
YTD Actual	-	.8	2.3	4.2	4.6	7	8.3	11.2	11.2	11.62	12.4	12.4	13.6	16.33	19.16	22.24	33.42	39.19	44.15	47.98	57.28	62.15																															

GH-01 System Hardening - Distribution Catch Back Plan

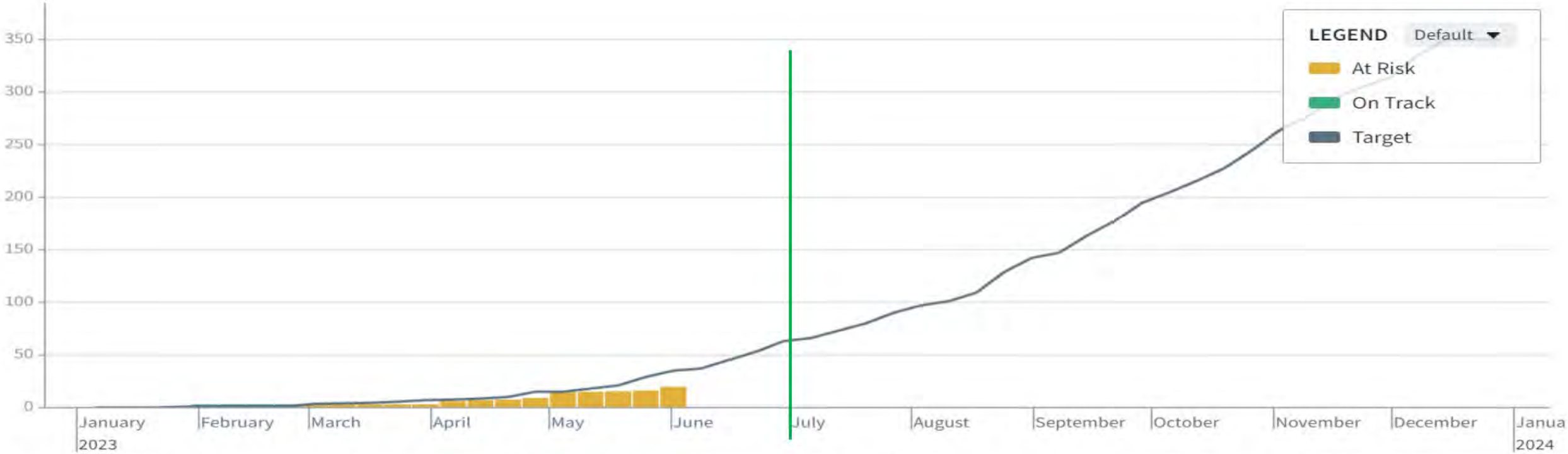
Catch Back Plan Due Date: 6/30/2023 - WMP Target Due Date: 12/31/23
Chief Sponsor: Jamie Martin

YTD Actual	YTD Target	Gap to Target
62.15	78.2	16.05

Program	Date Raised	Problem	Point of Cause	Containment Action	Containment Status	Root Cause	Countermeasure Action	Catch Back	Owner	Countermeasure Status
10K Under-grounding	3/6/23	The program is behind target with 44.2 miles completed YTD against Target of 46.5	The multiple storm/snow events in Jan/Feb and into March have prevented access to underground construction sites where work is otherwise ready to execute.	Project Management team reviewing projects ready for construction to validate that crews are scheduled to complete work as aggressively as possible. [As of 5/12 there are over 170.8 miles in construction and another 73.6 miles ready for construction.] Complete 400 system hardening UG miles out of PEND / permitting, targeting 6/1 [Some of these miles will carry over to 2024.]		2023 Underground work is still largely being executed on a "just in time basis" such that there is little buffer time (or "float") in project schedules to accommodate weather or other unforeseen delays.	Program is accelerating work readiness activities with estimating having recently completed 400 miles of work for 2023 & 2024 that will allow the program to build in some buffer against future delays. Additional focus placed on projects in PEND and with daily reporting to track progress/delays	6/30/23 Number of units to be delivered (as part of the catch back plan): 82.85 miles OH/Rem/UG Number of units delivered by Target Date: 127	[redacted] with Construction and Contract Land, Environ-mental & EPWC partners	

GH-04 10K Undergrounding

YTD Baseline



Week Ending	1/7	1/14	1/21	1/28	2/4	2/11	2/18	2/25	3/4	3/11	3/18	3/25	4/1	4/8	4/15	4/22	4/29	5/6	5/13	5/20	5/27	6/3	6/10	6/17	6/24	7/1	7/8	7/15	7/22	7/29	8/5	8/12	8/19	8/26	9/2	9/9	9/16	9/23	9/30	10/7	10/14	10/21	10/28	11/4	11/11	11/18	11/25	12/2	12/9	12/16	12/23
OP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
Target YTD				.6	1.4	1.4	1.4	1.4	3.5	4	4.5	5.5	7	7.5	8.5	10	15	15	18	21	29	35	37	45	53	63	66	73	80	90	97	101	109	128.5	142	147	163	177	195	205	216	228	245	264	277	294	305	314	335	350	350
Target Week of				.6	.8	0	0	0	2.1	.5	.5	1	1.5	.5	1	1.5	5	0	3	3	8	6	2	8	8	10	3	7	7	10	7	4	8	19.5	13.5	5	16	14	18	10	11	12	17	19	13	17	11	9	21	15	0
YTD Actual	-	-	.2	1.5	2.95	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	6.12	6.93	7.58	9.25	14.54	15.06	15.36	16.12	19.78																															

GH-04 10K Undergrounding Catch Back Plan

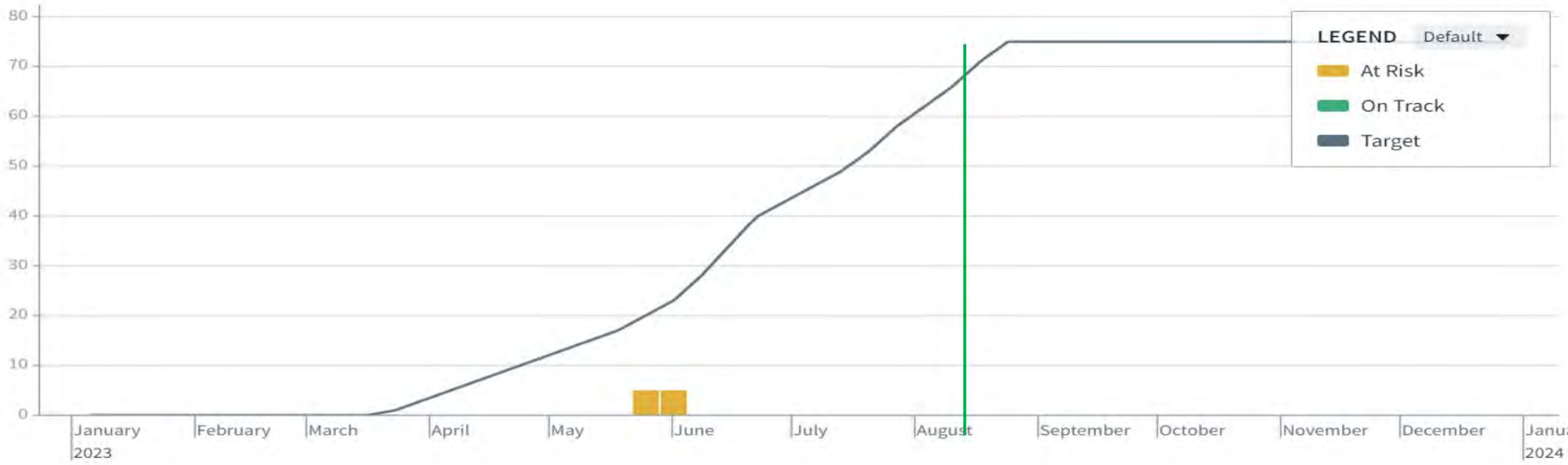
Catch Back Plan Due Date: 6/30/23 (1 change)
WMP Target Due Date: 12/31/23
Chief Sponsor: Jamie Martin

YTD Actual	YTD Target	Gap to Target
19.78	35	15.22

Program	Date Raised	Problem	Point of Cause	Containment Action	Status	Root Cause	Countermeasure Action	Containment Due Date	Catch Back	Owner	Status
10K Under-grounding	3/6/23	Program has fallen behind work delivery goals with 9.2 miles of UG completed & QA reviewed as of 5/1 against a target of 15 miles.	The multiple storm/snow events in Q1 delayed work and prevented access to underground construction sites where work was otherwise ready to execute.	Project Management team reviewing projects ready for construction to validate that crews are scheduled to complete work as aggressively as possible. [As of 5/1 there are 117 miles in construction and another 54 ready for construction.] Interim Target is 160 miles Civil Construction Complete by 6/30		2023 Underground work is still largely being executed on a "just in time basis" such that there is little buffer time (or "float") in project schedules to accommodate weather or other unforeseen delays.	Program is accelerating work readiness activities with estimating having recently completed 400 miles of work for 2023 & 2024 that will allow the program to build in some buffer against future delays.	6/30/2023 Number of units to be delivered: 160 miles civil construction complete Number of units delivered as of 5/1: 22.5	6/30/23 Number of units to be delivered (as part of the catch back plan): 60.9 Number of units delivered by Target Date: 63	[redacted] with Construction and Contract partners	
				Complete 400 system hardening UG miles out of PEND / permitting, targeting 6/1 [Some of these miles will carry over to 2024.]				6/1/2023 Number of units to be delivered: 400 miles out of PEND / permitting (some will support 2024) Number of units delivered as of 5/1: 109		[redacted] with Land, Environmental & EPWC partners	

GH-07 Distribution Protective Devices

YTD Baseline



Week Ending	1/7	1/14	1/21	1/28	2/4	2/11	2/18	2/25	3/4	3/11	3/18	3/25	4/1	4/8	4/15	4/22	4/29	5/6	5/13	5/20	5/27	6/3	6/10	6/17	6/24	7/1	7/8	7/15	7/22	7/29	8/5	8/12	8/19	8/26	9/2	9/9	9/16	9/23	9/30	10/7	10/14	10/21	10/28	11/4	11/11	11/18	11/25	12/2	12/9	12/16	12/23
OP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
Target YTD												1	3	5	7	9	11	13	15	17	20	23	28	34	40	43	46	49	53	58	62	66	71	75																			
Target Week of												1	2	2	2	2	2	2	2	2	3	3	5	6	6	3	3	3	4	5	4	4	5	4																			
YTD Actual	-											0	0	0	0	0	0	0	0	0	5	5																															

GH-07 Distribution Protective Devices Catch Back Plan

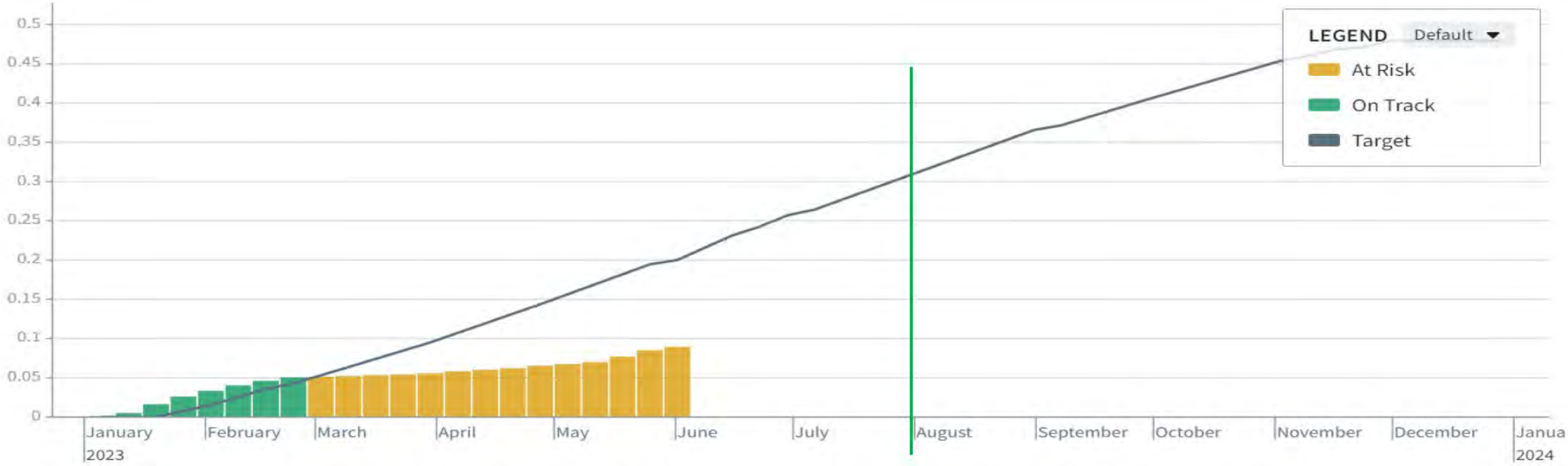
Catch Back Plan Due Date: 8/12/23 (1 change)
WMP Target Due Date: 12/31/22
Chief Sponsor: [redacted]

YTD Actual	YTD Target	Gap to Target
5	23	18

Program	Date Raised	Problem	Point of Cause	Containment Action	Containment Status	Root Cause	Countermeasure Action	Catch Back Due Date	Owner	Countermeasure Status
Dist Protective Device	03/27/2023	Program is behind due to Resource constraint and availability supporting Q1 storm restoration.	Q1 Storm caused scheduled order cancellations and deferrals due to crews supporting storms activities. Some projects are slow getting ready for construction as IT Telecom is prioritizing DCD Program	Re-schedule construction-ready jobs based on crew and DO calendar availability: Get more jobs pre commissioned and ready for construction by partnering with IT and DLT Work with execution to get all ready scheduled (construction resource availability) Partner with the DCC on prioritization to get clearances when needed Resource planning will issue a prioritization plan at the end of May which may impact this containment plan		Not completed due to resource and storm restoration, re-scheduling in progress.	Complete re-scheduling of construction-ready jobs, schedule jobs that are coming out of pre-commissioning and soon to be construction-ready with the coordination of the DO	8/12/2023 Number of units to be delivered (as part of the catch back plan): 66 Number of units delivered by Target Date: 66	[redacted]	

GM-03 HFTD/HFRA Open Tag Reduction – Distribution Backlog

YTD Baseline



Week Ending	1/7	1/14	1/21	1/28	2/4	2/11	2/18	2/25	3/4	3/11	3/18	3/25	4/1	4/8	4/15	4/22	4/29	5/6	5/13	5/20	5/27	6/3	6/10	6/17	6/24	7/1	7/8	7/15	7/22	7/29	8/5	8/12	8/19	8/26	9/2	9/9	9/16	9/23	9/30	10/7	10/14	10/21	10/28	11/4	11/11	11/18	11/25	12/2	12/9	12/16	12/23
OP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
Target YTD				.008	.015	.026	.036	.043	.053	.063	.074	.084	.095	.107	.119	.131	.143	.156	.169	.181	.194	.2	.215	.231	.242	.257	.265	.277	.29	.302	.315	.328	.34	.353	.366	.372	.382	.393	.403	.413	.424	.434	.444	.454	.46	.468	.471	.479	.48		
Target Week of				.008	.008	.01	.01	.007	.01	.011	.011	.011	.011	.012	.012	.012	.012	.013	.013	.013	.013	.006	.016	.016	.011	.016	.007	.013	.013	.013	.013	.013	.013	.013	.013	.006	.011	.011	.011	.01	.01	.01	.01	.01	.006	.009	.002	.009			
YTD Actual	.001	.005	.016	.026	.033	.04	.046	.051	.051	.052	.053	.054	.056	.058	.06	.06	.06	.07	.07	.08	.09	.09																															

GM-03 HFTD/HFRA Open Tag Reduction – Distribution Backlog Catch Back Plan

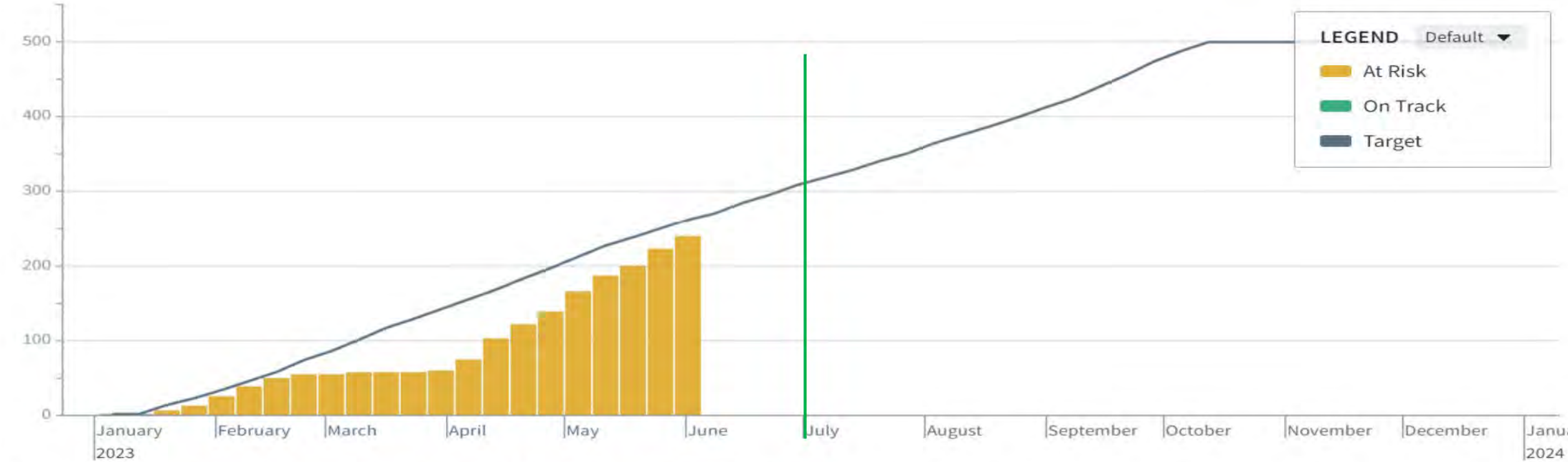
Catch Back Plan Due Date: 7/31/23 - WMP Target Due Date: 12/31/22
Chief Sponsor: Jeff Deal

YTD Actual	YTD Target	Gap to Target
0.09	0.2	0.11

Program	Date Raised	Problem	Point of Cause	Containment Action	Status	Root Cause	Countermeasure Action	Catch Back Due Date	Owner	Status
EC Notifications Risk Reduction	3/7/23	Less v3 wildfire risk points completed in 2023 then planned	Storm response has utilized most of the resources that were planned to execute this work and completed lower risk ready units earlier in the work plan	Reschedule work planned in first two months of year to Q2+		Not enough resources to complete EC notifications and storm work	Reschedule work planned in first two months of year to Q2+	**7/31/23** Number of units to be delivered (as part of the catch back plan): 38.72 Number of units delivered by Target Date: 47.14	[redacted]	

GM-06 EPSS - Down Conductor Detection (DCD)

YTD Baseline



Week Ending	1/7	1/14	1/21	1/28	2/4	2/11	2/18	2/25	3/4	3/11	3/18	3/25	4/1	4/8	4/15	4/22	4/29	5/6	5/13	5/20	5/27	6/3	6/10	6/17	6/24	7/1	7/8	7/15	7/22	7/29	8/5	8/12	8/19	8/26	9/2	9/9	9/16	9/23	9/30	10/7	10/14	10/21	10/28	11/4	11/11	11/18	11/25	12/2	12/9	12/16	12/23
OP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
Target YTD	2	2	14	23	34	46	58	74	86	101	117	129	142	155	168	183	197	212	227	238	250	262	271	285	296	309	319	329	341	351	365	376	387	399	412	424	440	456	474	488	500									0
Target Week of	2.0	0.0	12.0	9.0	11.0	12.0	12.0	16.0	12.0	15.0	16.0	12.0	13.0	13.0	13.0	15.0	14.0	15.0	15.0	11.0	12.0	12.0	9.0	14.0	11.0	13.0	10.0	10.0	12.0	10.0	14.0	11.0	11.0	12.0	13.0	12.0	16.0	16.0	18.0	14.0	12.0								
YTD Actual	2	2	7	13	26	39	50	55	55	58	58	58	60	76	104	122	139	166	187	200	233	240																													

GM-06 EPSS - Down Conductor Detection Catch Back Plan

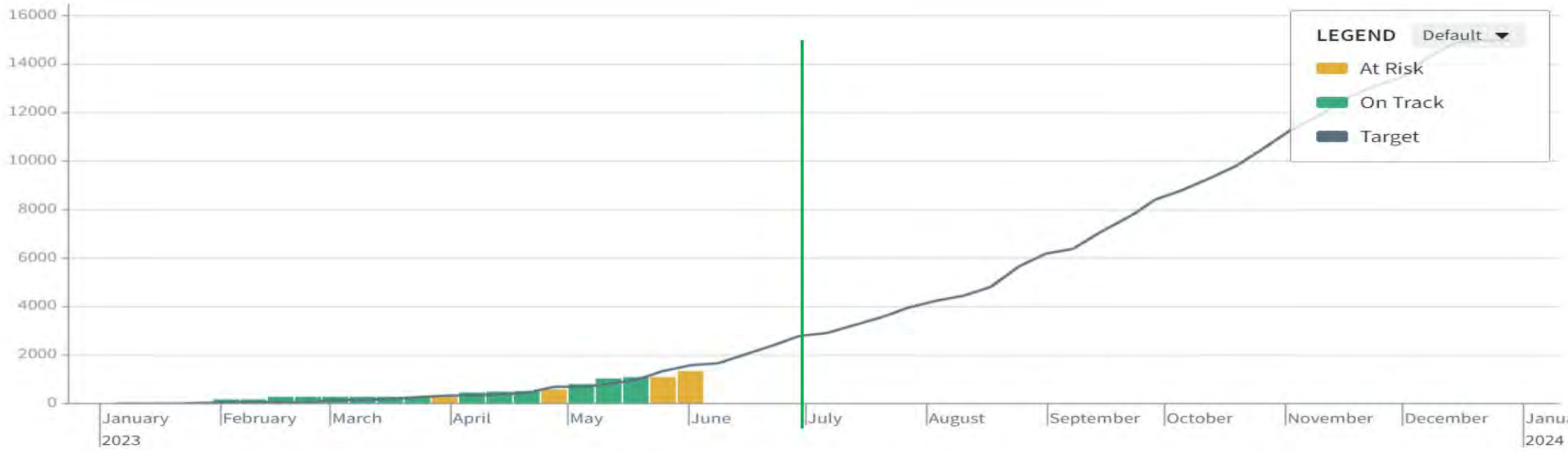
Catch Back Plan Due Date: 7/1/23 (4 changes)
WMP Target Due Date: 11/30/23
Chief Sponsor: Dave Canny

YTD Actual	YTD Target	Gap to Target
240	262	22

Program	Date Raised	Problem	Point of Cause	Containment Action	Status	Root Cause	Countermeasure Action	Target Date	Owner	Status
Down Conductor Detection	2/21/23	DCD install schedule delayed due to ADMS screen build delays, telecom issues and construction schedule constraint.	ADMS delays in building screens necessary for DCD testing, coupled with telecom communication issues, resulted in delays in Los Padres installs, while ADMS and construction schedule constraint are impacting Sierra install schedules.	Expediting DCD install schedule in non-ADMS cutover divisions (Humboldt) and installing DCD on existing/new Beckwith controllers to supplement work delays in ADMS LP/SI divisions.		DCD install cannot be completed while Telecom/SCADA communication issues remain unresolved. Due to Q1 storm impacts, construction resources and schedule availability are more limited.	ADMS/Telecom teams prioritizing issues resolution in LP. Expediting Humboldt and installing DCD on existing/new Beckwith controllers to get back on plan.	7/1/23 Number of units to be delivered (as part of the catch back plan): 254 Number of units delivered by Target Date: 309	[redacted]	

PS-07 PSPS Custom Impact Reduction

YTD Baseline



Week Ending	1/7	1/14	1/21	1/28	2/4	2/11	2/18	2/25	3/4	3/11	3/18	3/25	4/1	4/8	4/15	4/22	4/29	5/6	5/13	5/20	5/27	6/3	6/10	6/17	6/24	7/1	7/8	7/15	7/22	7/29	8/5	8/12	8/19	8/26	9/2	9/9	9/16	9/23	9/30	10/7	10/14	10/21	10/28	11/4	11/11	11/18	11/25	12/2	12/9	12/16	12/23
OP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
Target YTD				24	55.9	55.9	55.9	55.9	139.7	159.7	179.7	265	324.9	344.9	384.8	444.7	689.7	689.7	809.5	974.7	1339	1579	1659	2024	2388	2788	2907	3232	3557	3957	4237	4422	4802	4807	5630	6169	6369	7053	7658	8421	9305	9830	10554	11312	11877	12601	13086	13445	14283	14882	15001
Target Week of				24	31.9				83.8	20	20	85.3	59.9	20	39.9	59.9	245		119.8	165.2	364.8	239.5	79.8	364.8	364.8	392.2	119.8	324.9	324.9	399.9	279.5	205.1	364.8	823.9	539	199.6	684.2	604.3	764	399.2	484.6	524.5	724.1	758.5	564.4	724.1	484.6	359.3	838.4	598.8	118.8
YTD Actual	0	0	8	59.9	172	178	287	287	287	287	287	287	287	462	495	521	587.2	587.2	690	1091	1091	1346																													

PS-07 Customer Impact Reduction Catch Back Plan

Catch Back Plan Due Date: 6/30/23 - WMP Target Due Date: 12/31/23

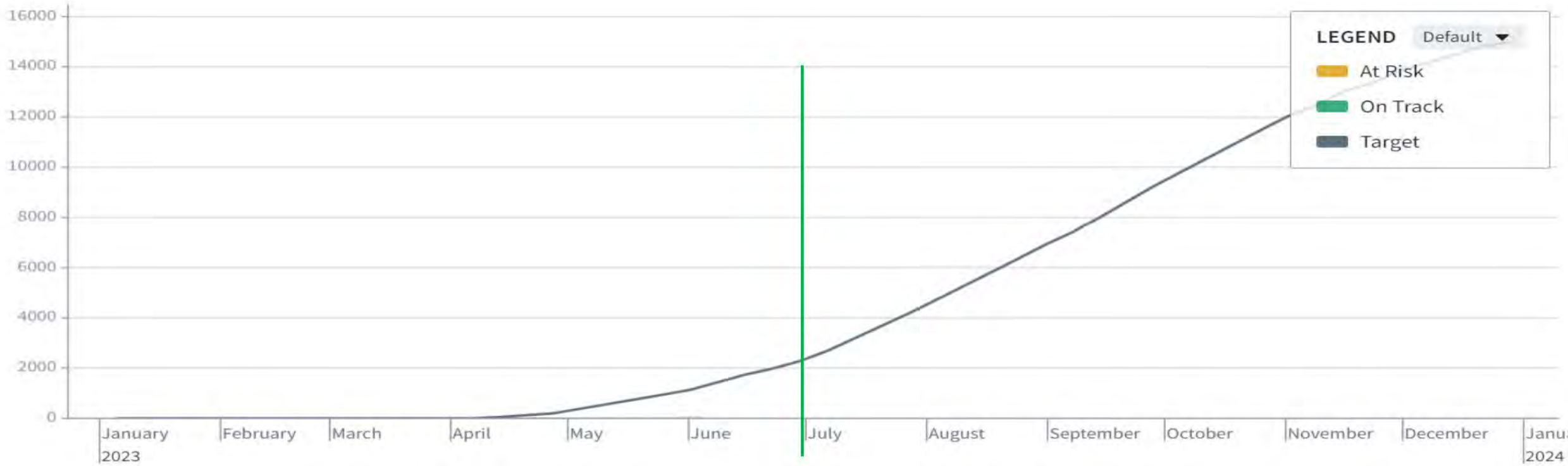
Chief Sponsor: [redacted]

YTD Actual	YTD Target	Gap to Target
1,346	1,579	233

Program	Date Raised	Problem	Point of Cause	Containment Action	Status	Root Cause	Countermeasure Action	Containment Due Date	Catch Back	Owner	Status
PSPS Customer Impact Reduction	5/30/23	Customer impact reduction has fallen behind YTD target of 690 customer reduction with a YTD performance of 587 customer reduction as of 5/1.	The target for PS-07 is tied to the miles of Undergrounding completed and MSO devices installed. The multiple storm/snow events in Q1 delayed work and prevented access to underground construction sites where work was otherwise ready to execute.	Interim Target is 160 miles Civil Construction Complete by 6/30. Complete 400 system hardening UG miles out of PEND / permitting, targeting 6/1 [Some of these miles will carry over to 2024.]		2023 Underground work is still largely being executed on a “just in time basis” such that there is little buffer time (or “float”) in project schedules to accommodate weather or other unforeseen delays.	The Undergrounding Program is accelerating work readiness activities for 2024 and beyond work with estimating having recently completed 400 miles of system hardening work for 2023 & 2024 that will allow the program to build in some buffer against future delays.	6/30/2023 Will follow UG containment plan	6/30/23 Will follow UG catch back plan	[redacted]	

VM-04 Tree Removal

YTD Baseline



Week Ending	1/7	1/14	1/21	1/28	2/4	2/11	2/18	2/25	3/4	3/11	3/18	3/25	4/1	4/8	4/15	4/22	4/29	5/6	5/13	5/20	5/27	6/3	6/10	6/17	6/24	7/1	7/8	7/15	7/22	7/29	8/5	8/12	8/19	8/26	9/2	9/9	9/16	9/23	9/30	10/7	10/14	10/21	10/28	11/4	11/11	11/18	11/25	12/2	12/9	12/16	12/23
OP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
Target YTD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	125	200	385	570	755	940	1,134	1,434	1,734	1,974	2,274	2,674	3,174	3,674	4,174	4,710	5,255	5,800	6,345	6,906	7,406	8,031	8,656	9,281	9,851	10,421	10,991	11,561	12,107	12,531	13,061	13,379	13,866	14,181	14,496	15,000
Target Week of	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	75	75	185	185	185	185	194	300	300	240	300	400	500	500	500	536	545	545	545	561	500	625	625	625	570	570	570	570	546	424	530	318	487	315	315	504
YTD Actual	0	0	0	0	11	24	24	24	24	24	30	30	30	33	33	33	33	33	33	33	33	49																															

VM-04 Tree Removal Inventory Catch Back Plan

Catch Back Plan Due Date: 06/30/23
WMP Target Due Date: 6/30/23
Chief Sponsor: Peter Kenny

YTD Actual	YTD Target	Gap to Target
49	1134	1,085

Program	Date Raised	Problem	Point of Cause	Containment Action	Status	Root Cause	Countermeasure Action	Catch Back Due Date	Owner	Status
VM-04 Tree Removal Inventory	04/18/23	Current technology field guides require update prior to releasing work for crews to account for new programmatic changes	New Program recently added to the Vegetation Portfolio	Develop revised guidance and implement change communication prior to work start		Robust change management plan is needed prior to introduction of new programs	Develop Process for new programs development	06/30/23 Number of units to be delivered (as part of the catch back plan): 1,974 Number of units delivered by Target Date: 1,974	[redacted]	

WMP Data Requests

2023 WMP Discovery Questions

Due Today	Due 1 Business Day	Due 2 Business Days	Due Later	Complete	Total
1	0	7	9	383	400

56 Total Requests | 400 Total Questions | 1065 Sub-Parts

WMP Data Requests

2023 WMP Discovery: By Requestor

REQUESTOR	Data Requests	Questions	Sub-Parts	% of Total Questions	Questions Requiring Extensions
OEIS	9	71	207	18%	10
CPUC - SPD	8	32	40	8%	2
CalPA	19	201	693	50%	20
TURN	13	50	113	13%	7
MGRA	6	41	9	10%	5
GPI	1	5	3	1%	0
TOTAL	56	400	1065	100%	44

WMP Data Requests

2023 WMP Discovery:
Questions & Sub-Parts per Category by Requestor

	Total		OEIS		CPUC - SPD (Safety Policy Division)		CalPA		GPI		MGRA		TURN	
WMP Section	**Questions**	**Sub-Parts**	**Questions**	**Sub-Parts**	**Questions**	**Sub-Parts**	**Questions**	**Sub-Parts**	**Questions**	**Sub-Parts**	**Questions**	**Sub-Parts**	**Questions**	**Sub-Parts**
Grid Design and System Hardening	95	249	7	12	14	24	52	179	0	0	0	0	22	34
Vegetation Management and Inspections	74	236	12	47	0	0	52	183	5	3	0	0	5	3
Risk Methodology and Assessment	43	62	3	8	1	2	7	23	0	0	28	9	4	20
Areas for Continued Improvement	37	118	16	53	5	10	8	21	0	0	0	0	8	34
Grid Operations and Procedures	35	70	1	5	1	0	23	65	0	0	10	0	0	0
Public Safety Power Shutoff	18	51	3	5	1	2	13	40	0	0	0	0	1	4
Wildfire Mitigation Strategy Development	17	58	5	11	0	0	8	42	0	0	0	0	4	5
Grid Design, Operations, and Maintenance	12	30	1	3	1	1	7	22	0	0	0	0	3	4
Emergency Preparedness	11	24	9	18	1	0	1	6	0	0	0	0	0	0
Open Work Orders	8	25	2	9	0	0	6	16	0	0	0	0	0	0
N/A	8	37	2	6	0	0	4	25	0	0	0	0	2	6
Other	42	105	10	30	8	1	20	71	0	0	3	0	1	3
Grand Total	**400**	**1065**	**71**	**207**	**32**	**40**	**201**	**693**	**5**	**3**	**41**	**9**	**50**	**113**

WMP Data Requests

2023 WMP Discovery:
Office of Energy Infrastructure Safety (OEIS)

WMP Category	# of Questions	# of Sub-Parts
Areas for Continued Improvement	**16**	**53**
ACI PG&E-22--08 Better Application of Specific Lessons Learned from Utility-Caused Fires	2	4
ACI PG&E-22--09 Evaluation of Model Reprioritization and Fire Rebuild in High-Risk Areas	1	3
ACI PG&E-22--10 Justification of Weather Station Network Density	1	1
ACI PG&E-22--20 Asset Inspection Drone Program Pilot	1	1
ACI PG&E-22--21 Asset Inspections Quality Assurance and Quality Control ACI PG&E-22--08 Better Application of Specific Lessons Learned from Utility-Caused Fires	2	6
ACI PG&E-22-24 – Progression of Vegetation Management Maturity	1	8
ACI PG&E-22-32 – Updates on EPSS Reliability Study	2	14
ACI PG&E-22-34 – Revise Process of Prioritizing Wildfire Mitigations	2	5
ACI PG&E-22-28 – Progression of Effectiveness of Enhanced Clearances Joint Study	1	0
ACI PG&E-22-31 – PSPS Wind Threshold Change Evaluations	2	3
ACI PG&E-22-33 – Progress on Filling Asset Inventory Data Gaps	1	8

WMP Category (cont.)	# of Questions	# of Sub-Parts
Vegetation Management and Inspections	**12**	**47**
Clearance	1	2
Discontinued Programs	1	2
Focused Tree Inspections	4	17
High-Risk Species	1	3
N/A	2	10
Tree Removal Inventory	1	2
Vegetation Management Inspections	1	3
Wood and Slash Management	1	8
Emergency Preparedness	**9**	**18**
Customer Support in Wildfire and PSPS Emergencies	3	8
N/A	1	2
Objectives	2	4
Overview	1	0
Public Emergency Communication Strategy	1	0
Personnel Training	1	4

WMP Data Requests

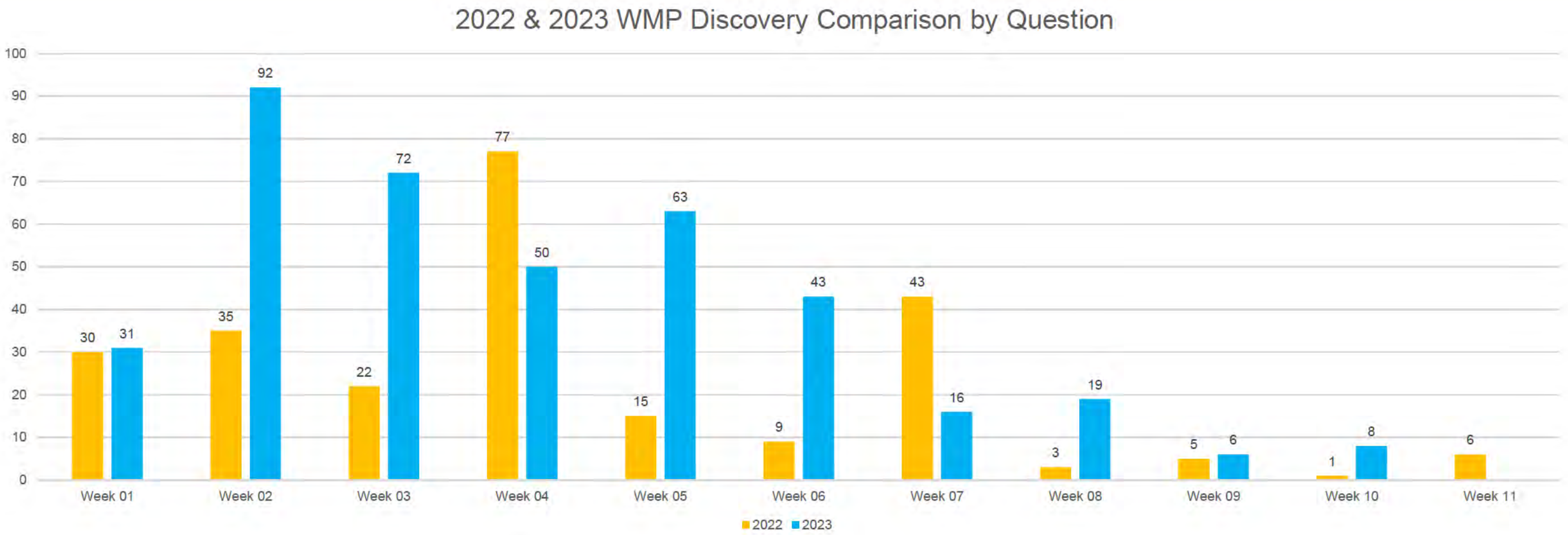
2023 WMP Discovery:
CPUC - SPD (Safety Policy Division)

WMP Category	# of Questions	# of Sub-Parts
Grid Design and System Hardening	**14**	**24**
Covered Conductor Installation – Distribution	2	0
Undergrounding of Electric Lines and/or Equipment – Distribution	4	13
Undergrounding of Electric Lines and/or Equipment – Distribution	8	11
Areas for Continued Improvement	**5**	**10**
ACI PG&E-22-06 – Addressing Increase in Risk Events	3	6
ACI PG&E-22-16 – Progress and Updates on Undergrounding and Risk Prioritization	2	4
Situational Awareness and Forecasting	**4**	**0**
Fire Potential Index	4	0

WMP Open Data Requests

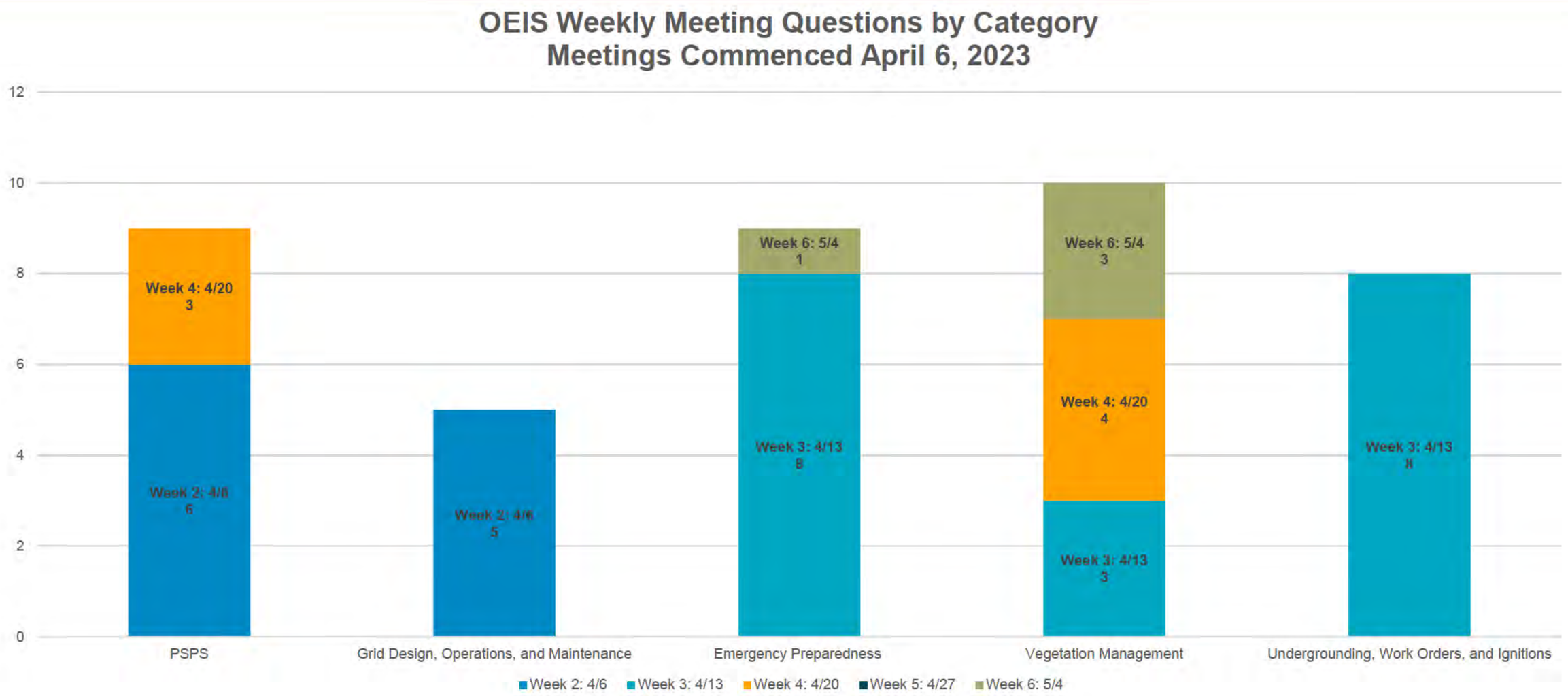
Chief Sponsors	Due Today	Due in 1 Business Day	Due in 2 Business Days	Due Later
[redacted]	0	0	0	2
Jamie Martin	1	0	0	7
[redacted] / Jamie Martin	0	0	1	0
[redacted]	0	0	1	0
Angie Gibson	0	0	1	0
[redacted] / Chris Patterson	0	0	1	0
[redacted]	0	0	3	0
Grand Total	**1**	**0**	**7**	**9**

WMP Data Requests



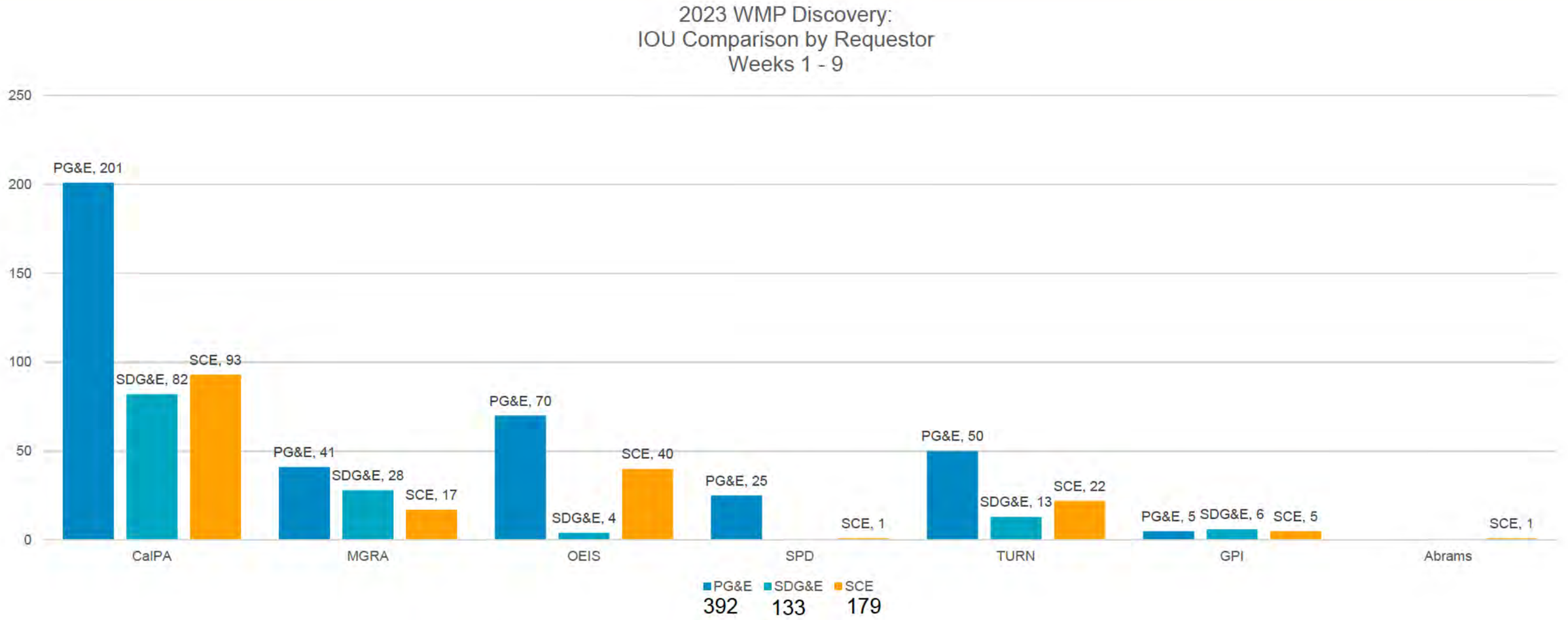
Totals: 2022 – 246 | 2023 – 400
(63% increase)

WMP Data Requests

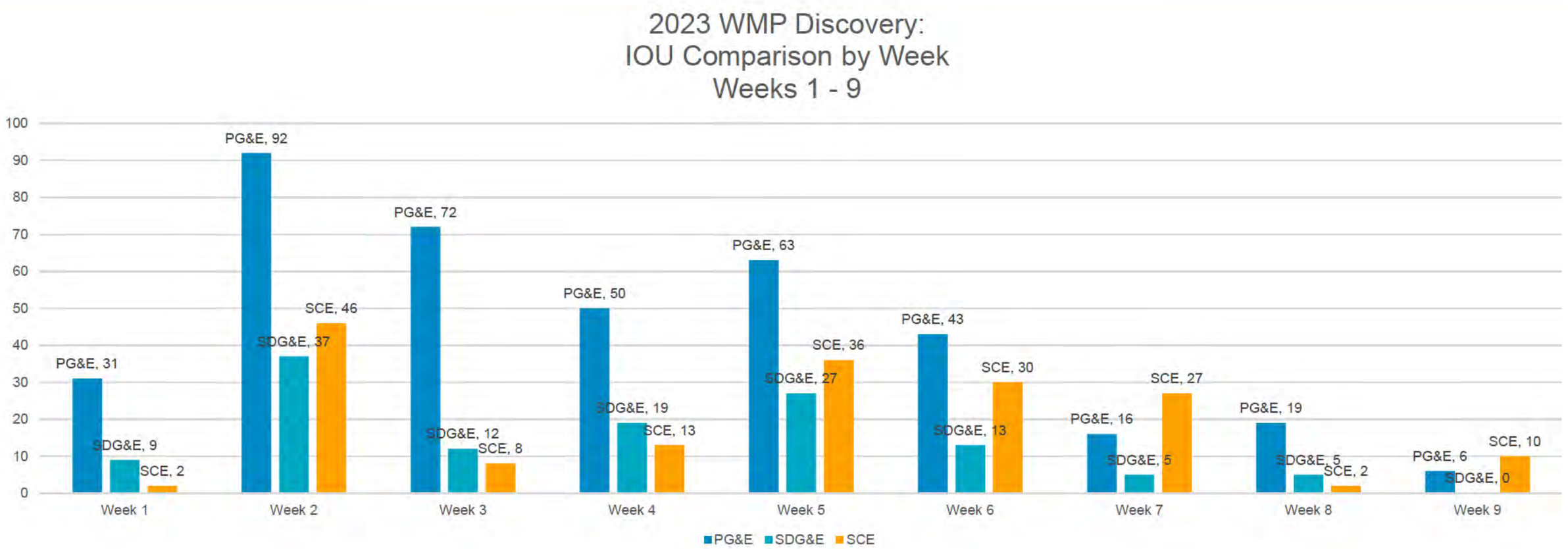


41 Total Questions

WMP Data Requests



WMP Data Requests



386 133 169

WMP Data Requests

2023 WMP Discovery:
IOU Comparison – Top 3 Categories: Weeks 1 - 9

	WMP Category	Questions
PG&E	Grid Design and System Hardening	93
	Vegetation Management and Inspections	74
	Risk Methodology and Assessment	43
SDG&E	Grid Design and System Hardening	81
	Vegetation Management and Inspection	39
	Risk Methodology and Assessment	22
SCE	Vegetation Management and Inspection	35
	Ignition Model	5
	Quality Assurance and Quality Control	3

WMP Data Requests

2023 WMP Discovery: Top 3 Areas of Focus – OEIS
Weeks 1 - 9

PG&E	# of Questions	# of Sub-Parts
Areas for Continued Improvement	**16**	**53**
ACI PG&E-22--08 Better Application of Specific Lessons Learned from Utility-Caused Fires	2	4
ACI PG&E-22--09 Evaluation of Model Reprioritization and Fire Rebuild in High-Risk Areas	1	3
ACI PG&E-22--10 Justification of Weather Station Network Density	1	1
ACI PG&E-22--20 Asset Inspection Drone Program Pilot	1	1
ACI PG&E-22--21 Asset Inspections Quality Assurance and Quality Control ACI PG&E-22--08 Better Application of Specific Lessons Learned from Utility-Caused Fires	2	6
ACI PG&E-22-24 – Progression of Vegetation Management Maturity	1	8
ACI PG&E-22-32 – Updates on EPSS Reliability Study	2	14
ACI PG&E-22-34 – Revise Process of Prioritizing Wildfire Mitigations	2	5
ACI PG&E-22-28 – Progression of Effectiveness of Enhanced Clearances Joint Study	1	0
ACI PG&E-22-31 – PSPS Wind Threshold Change Evaluations	2	3
ACI PG&E-22-33 – Progress on Filling Asset Inventory Data Gaps	1	8
Vegetation Management and Inspections	**12**	**47**
Clearance	1	2
Discontinued Programs	1	2
Focused Tree Inspections	4	17
High-Risk Species	1	3
N/A	2	10
Tree Removal Inventory	1	2
Vegetation Management Inspections	1	3
Wood and Slash Management	1	8
Emergency Preparedness	**9**	**18**
Customer Support in Wildfire and PSPS Emergencies	3	8
N/A	1	2
Objectives	2	4
Overview	1	0
Public Emergency Communication Strategy	1	0
Personnel Training	1	4

SCE	# of Questions
Grid Design and System Hardening	**13**
Asset Inspections (8.1.3)	4
Grid Design and System Hardening (8.1.2)	9
Risk Methodology and Assessment	**10**
Multiple	3
Risk Analysis Framework (6.2)	1
Risk and Risk Component Identification (6.2.1)	1
Risk Overview (6.1.1)	1
Summary of Risk Models (6.1.2)	3
Top Risk-Contributing Circuits/Segments/Spans (6.4.2)	1
Veg Mgmt & Inspection	**7**
Risk and Risk Components Calculation (6.2.2)	1
Vegetation Management and Inspections Overview (8.2.1)	3
Vegetation Management Inspections (8.2.2)	3

SDG&E	# of Questions
Risk Methodology and Assessment	**2**
6.1.2 Summary of Risk Models Page 54	2
Portfolio Level Risk Analysis and Risk Spend Efficiency	**1**
N/A	1
Cost-Benefit Within and Overall Decision-Making Framework	**1**
N/A	1

WMP Data Requests

2023 WMP Discovery: Top 3 Areas of Focus – CPUC - SPD
Weeks 1 - 6

PG&E	# of Questions	# of Sub-Parts
Grid Design and System Hardening	**13**	**19**
Covered Conductor Installation – Distribution	2	0
Undergrounding of Electric Lines and/or Equipment – Distribution	3	8
Undergrounding of Electric Lines and/or Equipment – Distribution	8	11
Situational Awareness and Forecasting	**4**	**0**
Fire Potential Index	4	0
Areas for Continued Improvement	**4**	**10**
ACI PG&E-22-06 – Addressing Increase in Risk Events	2	6
ACI PG&E-22-16 – Progress and Updates on Undergrounding and Risk Prioritization	2	4

SCE	# of Questions
Administrative	**1**
N/A	1

SDG&E	# of Questions

COA

2023-2025 WMP Commitments

Timeline Category	Not Started	Delayed	In Progress	On Track	At Risk	Off Track	Complete	Total
2023 Commitments	29	0	2	3	1	1	0	36
3 Year Objectives	15	0	0	0	0	0	0	15
Total	44	0	2	3	1	1	0	**51**

COA WMP Target Validation 1 of 3

Progress		Status	Catch Back Plan
	YTD	On Track	As of June 6th, 2023, the validation status is “On Track” with **5** commitment(s) validated YTD against a target of **5**. Of the **5** in progress validations, COA has found that **1** is “At Risk” and **1** is “Off Track” and **3** are “On Track”
Completed	5		
Planned	5		

Validated

Number	Section	Target	Command Center Status	COA Status	Comment
AI-06	**8.1.3.1.4**	Perform Transmission Infrared Inspections	On Track	At Risk Catch Back Plan	The unit completion and records of evidence were incomplete and were also found to contain errors. Additionally, COA believes improvement opportunities exist to advance the overall program maturity, key focus areas include job aids, training, and Quality Control that will support TVAC records.
AI-08	**8.1.3.3.1**	Supplemental Inspections - Substation Distribution	On Track	On Track	Date of Inspection on Execution Tracker does not match Inspection date. Pronto forms did not reflect CIRT Review. Anomalies missing LC notification number. Electronic files missing for IR Inspections. Missing F80 Forms.
AI-09	**8.1.3.3.1**	Supplemental Inspections - Substation Transmission	On Track	On Track	Date of Inspection on Execution Tracker does not match Inspection date. Pronto forms did not reflect CIRT Review. Required photos missing . Anomalies missing LC notification number. At risk for execution.
AI-10	**8.1.3.3.1**	Supplemental Inspections - Hydroelectric Substations and Powerhouses	At Risk Catch Back Plan	On Track	Date of Inspection on Execution Tracker does not match Inspection date. Pronto forms did not reflect CIRT Review. Required photos missing Anomalies missing LC notification number. At risk for execution.
VM-01	**8.2.2.1.1**	LiDAR Data Collection - Transmission	Complete	“Off Track”	Execution plan and Approved EDRS plan do not match. Execution plan miles did not match work plan miles. Transmission Circuit voltage not on work plan . Outdated bulletin are not in compliance with GOV-2001P.

COA WMP Target Validation 2 of 3

In-Progress

Number	Section	Target	Command Center Status	COA Status	Comment
GM-02	8.1.7.1	HFTD-HFRA Open Tag Reduction - Transmission	**On Tack**	In-progress	
GM-03	8.1.7.2	HFTD-HFRA Open Tag Reduction – Distribution Backlog	**At Risk**	In-progress	

Upcoming Validations

Number	Section	Target	Command Center Status	COA Status	Comments
AI-02	8.1.3.1.1	Detailed Inspection Transmission – Ground	On Track	Upcoming	
AI-04	8.1.3.1.2	Detailed Inspection Transmission – Aerial	On Track	Upcoming	
AI-05	8.1.3.1.3	Detailed Inspection Transmission – Climbing	On Track	Upcoming	
VM-05	8.2.2.3.1	Defensible Space Inspections - Distribution Substation	On Track	Upcoming	

COA WMP Target Validation 3 of 3

Catch Back Plan Issues Identified, Open and Resolved

Number	Section	Target	Resolved	Open	Total Identified
AI-06	**8.1.3.1.4**	Perform Transmission Infrared Inspections	7	1	**8**
AI-08	**8.1.3.3.1**	Supplemental Inspections - Substation Distribution	4		**4**
AI-09	**8.1.3.3.1**	Supplemental Inspections - Substation Transmission	3		**3**
AI-10	**8.1.3.3.1**	Supplemental Inspections - Hydroelectric Substations and Powerhouses	3		**3**
VM-01	**8.2.2.11**	LiDAR Data Collection – Transmission	1	2	**3**
Total			**18**	**3**	**21**

AI-06 Perform Transmission Infrared Inspection

Program	Date Raised	Problem	Point of Cause	Containment Action	Status	Root Cause	Countermeasure Action	Target Date	Owner	Status
Infrared Inspection	4/4/23	**Target Validation**: Work Plan: Per the Master List there are (3050) T3 and (649) T2 they are due for inspection per the procedure. The workplan includes 543 additional circuit miles that aren't due. If not correctly flagged as required there is potential to meet the WMP commitment and still end up with missed inspections that are due.	The entire circuit is inspected therefore adds additional HFTD miles.	Asset Strategy should flag the ETL's that are due in 2023 in the workplan to ensure that execution clearly understands which units are due and avoids a miss that could lead to a self report.	Complete	Creates additional miles to be inspected.	ETLs required for compliance are indicated in Column P "Reason for Inclusion" in the '2023 IR Scope' tab of the workplan. Specifically, ETLs indicated as "High Consequence Line" or "Guest/Host of scoped line" are still part of the workplan, but not specifically part of the compliance requirement.	04/07/2023	[redacted]	Complete
Infrared Inspection	4/4/23	**Procedural Adherence**: COA found 1,158 of the 1937 circuit miles to be less than 40%. Per procedural guidance TD-1001P-14 provide "considerations" that supported these flights represent peak loading. Execution team shared that they have data to provide related to loading and timing selection.	Did not schedule time to review our 2023 IR Inspection Tracker with our partners.	Provide considerations as described in TD-1001P-14 Infrared Inspection Procedure that supported these lines at peak load.	Complete	Do not have a formal process to share historical loading data or decisions on when to time inspections.	Provide considerations as described in TD-1001P-14 Infrared Inspection Procedure that supported these lines at peak load. Add additional columns to tracker to help outline that we considered loading, timing and other factors prior to inspection.	05/01/2023		Complete

AI-06 Perform Transmission Infrared Inspection

Program	Date Raised	Problem	Point of Cause	Containment Action	Status	Root Cause	Countermeasure Action	Target Date	Owner	Status
Infrared Inspection	4/4/23	**Record of Evidence**: TVAC Records: 2/26 IR Data Sheets uploaded to SAP reflected miles that did not match the miles reported as complete in the execution tracker.	QC Process on documentation.	Review all IR Data Sheets and confirm the correct circuit miles are reflected.	Complete	Lack of QC process.	Ensure procedure/job aid clearly defines process to capture mileage flown and reviewed as part of QC.	05/01/2023	[redacted]	Complete
Infrared Inspection	4/4/23	**Record of Evidence**: 2/26 sampled reported as complete in the execution tracker did not have data sheets uploaded in SAP and in working with the team were found to be marked complete in error.	Process.	Validate all lines currently reported as complete are correct. Consider adding a column to execution tracker to reflect completed for record of evidence review. Only report miles that reflect completed in both columns.	Complete	Do not have clearly defined process map for documentation flow.	Develop Process Map and Job Aid for IRS and clerical function to include validation.	05/01/2023		Complete
Infrared Inspection	4/4/23	**Record of Evidence**: 4 /26 sampled did not have required IR data sheets uploaded in SAP	QC Process on documentation.	Ensure for all miles reported completed in the execution file have IR data sheets uploaded in SAP.	Complete	QC process not clearly outlined and fully implemented.	Develop Process Map and Job Aid for IRS and clerical function to include validation.	05/01/2023		Complete
Infrared Inspection	4/4/23	**Record of Evidence:** **TVAC Records**: Procedural Adherece: Incomplete IR Data Sheet: Disk and Photo number was not found on any of the samples. This is a requirement by TD-1001P-14 Infrared Inspection Procedure Rev 3 (Team reports this task is not performed)	Update by TD-1001P-14 Infrared Inspection Procedure Rev 3 now that we moved to digitally storing data.	Start discussions with Standards to clarify procedure requirements in sections 3.4. and Form 15.	In Process (target date of 6/1/23)	company has moved to from storing data on physical storage devises to housing data on shared servers. Therefore, disk & photo number is now obsolete.	Update TD-1001P-14 Infrared Inspection Procedure Rev 3 Form 15 to reflect current process.	12/31/2023		Complete

AI-06 Perform Transmission Infrared Inspection

Program	Date Raised	Problem	Point of Cause	Containment Action	Status	Root Cause	Countermeasure Action	Target Date	Owner	Status
Infrared Inspection	4/4/23	**Record of Evidence:** GEO Spatial documentation was not Provided for all IR inspections. COA reviewed two that were provided. All Geo Spatial documentation is required per define phase	GEO spatial data isn't easily accessible to those outside of the process	System Inspections to identify the best location/method to provide COA/IA/PMO access to the files.	Complete	System Inspections not fully understanding deliverable requirements therefore not having a good method to house and share data.	System Inspections to identify the best location/method to provide COA/IA/PMO access to the files.	05/01/2023	[redacted]	Complete
Infrared Inspection	4/4/23	**Record of Evidence**: Requirement to provide Weekly Report with anomalies and LC notifications. Report contains 4 anomalies but only 1 has an LC notification number. Appears to be a process delay in reviewing and generating LC's, as anomalies reflect found in February.	Lack of Process	Review 3 anomalies and create notification numbers.	Complete	System inspections reporting on all anomalies found and should only report on anomalies that have been verified with notifications. Lack of formal process around reporting anomalies.	Ensure a process is identified and documented to ensure notifications are created in a timely manner (define and monitor an acceptable timeline).	05/01/2023		Complete

Wildfire OII

Wildfire OII – Execution

On Track	At Risk	Off Track	Complete	Total
14	1	0	5	20

Note: SEI #5 is unlikely to meet the external due date of 7/1/2023

Wildfire OII – Execution

SEI #	Shareholder-Funded System Enhancement Initiatives (SEI)	Status	Chief Sponsor	Compliance Date	Forecast Completion Date	Actual Completion Date
1	Tree Crew Training and Certificate Program	On Track	[redacted]	7/1/2023	7/1/2023	
2	Pre-Inspector Training and Certificate Program	On Track		7/1/2023	7/1/2023	
3	Vegetation Management Oversight Pilot	Complete		7/1/2021	N/A	7/1/2021
4	Development of Recommendations for General Order 165 Revisions	Complete	Martin Wyspianski	7/1/2021	N/A	7/1/2021
5	Accelerating Commercialization of Non-Diesel Temporary Generation	At Risk	[redacted]	7/1/2023	10/1/2023	
6	LiDAR Asset Analysis	Complete		7/1/2021	N/A	7/1/2021
7	Independent Root Cause Analysis	On Track		2/1/2023	7/1/2025	
8	Fuel Reduction Funding	Complete		7/1/2021	N/A	7/1/2021
9	Resilience Centers Grant Program	On Track	Carla Peterman	7/1/2025	7/1/2023	
10	Funding to California Foundation for Independent Living Centers	Complete	[redacted]	7/1/2021	N/A	7/1/2021
11	Officer Safety Town Halls	On Track		7/1/2025	7/1/2025	
12	Semi-Annual Wildfire Mitigation Meetings	On Track	Meredith Allen	7/1/2023	7/1/2023	
13	ISO 55000 Certification	On Track	Martin Wyspianski	9/1/2024	9/1/2024	
14	Independent Wildfire Safety Audits	On Track	[redacted]	7/1/2023	7/1/2024	
15	Verification of Safety-Related Filings	On Track		7/1/2023	7/1/2023	
16	Quarterly Reporting on Electric Maintenance Work	On Track	Martin Wyspianski	7/1/2023	7/1/2023	
17	Local Government Vegetation Management Data Sharing	On Track	[redacted]	7/1/2023	7/1/2023	
18	Local Government System Hardening Data Sharing	On Track	Jamie Martin	7/1/2023	7/1/2023	
19	Documentation of “Near Hit” Potential Fire Incidents	On Track	[redacted]	7/1/2023	7/1/2023	
20	Study of Distribution and Transmission System	On Track	Martin Wyspianski	2/1/2025	12/31/2024	

Wildfire OII - Validation

N/A	On Track	At Risk	Off Track	Complete	Total
5	8	2	0	5	20

Note: SEI #17 and 18 making final supporting documents review and posting missing data, expected to be completed by June 16th.
The 5 SEI listed with “N/A” as they are not due in 2023.

Wildfire OII – Validation (by Internal Audit)

SEI #	Shareholder-Funded System Enhancement Initiatives (SEI)	Status	Chief Sponsor	Completion Date	Compliance Date
1	Tree Crew Training and Certificate Program	On Track	[redacted]		7/1/2023
2	Pre-Inspector Training and Certificate Program	On Track			7/1/2023
3	Vegetation Management Oversight Pilot	Complete		7/1/2021	7/1/2021
4	Development of Recommendations for General Order 165 Revisions	Complete	Martin Wyspianski	7/1/2021	7/1/2021
5	Accelerating Commercialization of Non-Diesel Temporary Generation	On Track	[redacted]		7/1/2023
6	LiDAR Asset Analysis	Complete		7/1/2021	7/1/2021
7	Independent Root Cause Analysis	N/A			2/1/2023
8	Fuel Reduction Funding	Complete		7/1/2021	7/1/2021
9	Resilience Centers Grant Program	N/A	Carla Peterman		7/1/2025
10	Funding to California Foundation for Independent Living Centers	Complete	[redacted]	7/1/2021	7/1/2021
11	Officer Safety Town Halls	N/A			7/1/2025
12	Semi-Annual Wildfire Mitigation Meetings	On Track	Meredith Allen		7/1/2023
13	ISO 55000 Certification	On Track	Martin Wyspianski		9/1/2027
14	Independent Wildfire Safety Audits	N/A	[redacted]		7/1/2024
15	Verification of Safety-Related Filings	On Track			7/1/2023
16	Quarterly Reporting on Electric Maintenance Work	On Track	Martin Wyspianski		7/1/2023
17	Local Government Vegetation Management Data Sharing	At Risk	[redacted]		7/1/2023
18	Local Government System Hardening Data Sharing	At Risk	Jamie Martin		7/1/2023
19	Documentation of “Near Hit” Potential Fire Incidents	On Track	[redacted]		7/1/2023
20	Study of Distribution and Transmission System	N/A	Martin Wyspianski		12/31/2024

Wildfire OII – Overall Spend (as of April EOM 2023)

SEI #	Shareholder-Funded System Enhancement Initiatives (SEI)	Initial Cost Forecast	Inception to Date Spend	Delta
1	Tree Crew Training and Certificate Program	[redacted]		
2	Pre-Inspector Training and Certificate Program			
3	Vegetation Management Oversight Pilot			
4	Development of Recommendations for General Order 165 Revisions			
5	Accelerating Commercialization of Non-Diesel Temporary Generation			
6	LiDAR Asset Analysis			
7	Independent Root Cause Analysis			
8	Fuel Reduction Funding			
9	Resilience Centers Grant Program			
10	Funding to California Foundation for Independent Living Centers			
11	Officer Safety Town Halls			
12	Semi-Annual Wildfire Mitigation Meetings			
13	ISO 55000 Certification			
14	Independent Wildfire Safety Audits			
15	Verification of Safety-Related Filings			
16	Quarterly Reporting on Electric Maintenance Work			
17	Local Government Vegetation Management Data Sharing			
18	Local Government System Hardening Data Sharing			
19	Documentation of “Near Hit” Potential Fire Incidents			
20	Study of Distribution and Transmission System			
	Total (Excluding Corrective Actions)			

Quality

MID - QUALITY ASSURANCE DASHBOARD - QUALITY PASS RATE (QPR)

QUALITY PASS RATE INDEX SCORE

WEEKLY PERFORMANCE

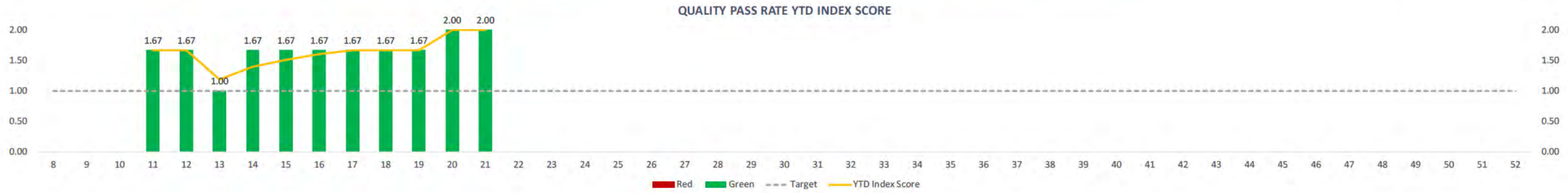
	RAG Status	Index Score
OVERALL QPR INDEX		2.00

YTD PERFORMANCE

	RAG Status	Index Score
OVERALL QPR INDEX		2.00

	RAG Status	Index Score	Pass Rate	Target
VMQA DISTRIBUTION INDEX SCORE		2.00	100.00%	97.26%
SIQA DISTRIBUTION INDEX SCORE		2.00	97.16%	79.77%
SIQA TRANSMISSION INDEX SCORE		2.00	100.00%	97.25%

	RAG Status	Index Score	Pass Rate	Target	Target Range / Threshold
VMQA DISTRIBUTION INDEX SCORE		2.00	99.81%	97.26%	0.5 - 96.30% 1.0 - 97.26% 2.0 - 98.24%
SIQA DISTRIBUTION INDEX SCORE		2.00	95.64%	79.77%	0.5 - 78.00% 1.0 - 79.77% 2.0 - 81.59%
SIQA TRANSMISSION INDEX SCORE		2.00	99.51%	97.25%	0.5 - 96.29% 1.0 - 97.25% 2.0 - 98.23%

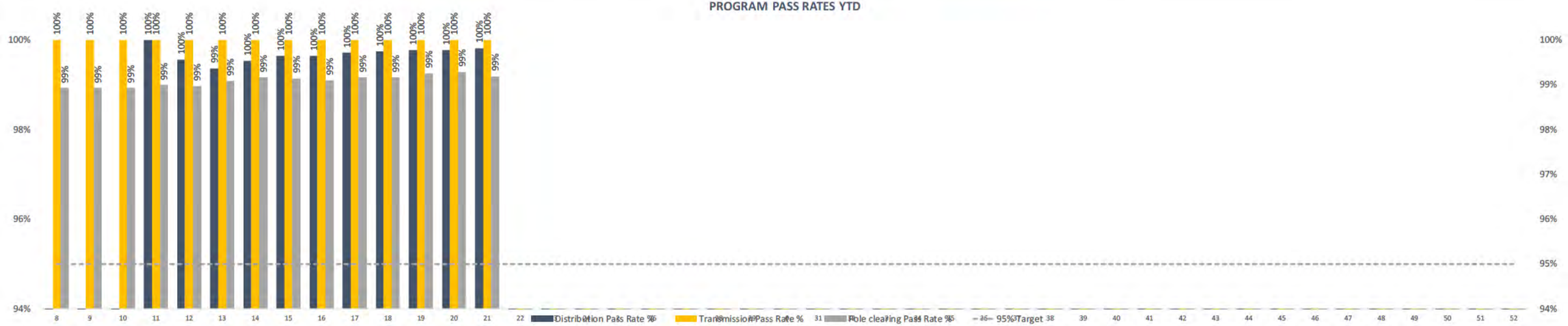


MID - QUALITY ASSURANCE DASHBOARD

ACCEPTABLE QUALITY LEVEL (AQL)

	WEEKLY PERFORMANCE			YTD PERFORMANCE		
	RAG Status	Pass Rate	Target	RAG Status	Pass Rate	Target
VMQA DISTRIBUTION		100.00%	95.00%		99.81%	95.00%
VMQA TRANSMISSION		100.00%	95.00%		100.00%	95.00%
VMQA VEGETATION CONTROL (VC)		96.67%	95.00%		99.19%	95.00%

PROGRAM PASS RATES YTD



MID - QUALITY ASSURANCE DASHBOARD - QUALITY PASS RATE (QPR)

VMQA DISTRIBUTION - HFTD

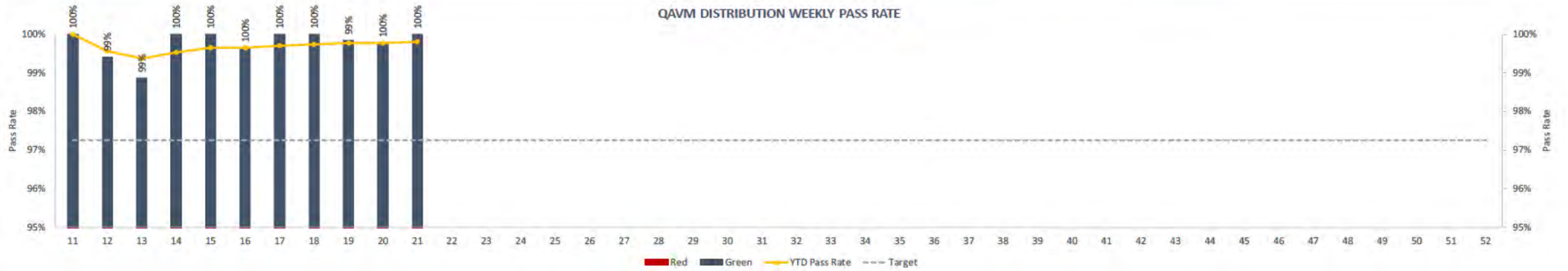
WEEKLY PERFORMANCE

	RAG Status	Index Score	Target	Pass Rate	Total Trees Comp.	Total Trees Passed	Total Trees Failed
1		2.00	97.26%	100.00%	780	780	0

YTD PERFORMANCE

RAG Status	Index Score	Target	Pass Rate	Total Trees Comp.	Total Trees Passed	Total Trees Failed
	2.00	97.26%	99.81%	4297	4289	8

3



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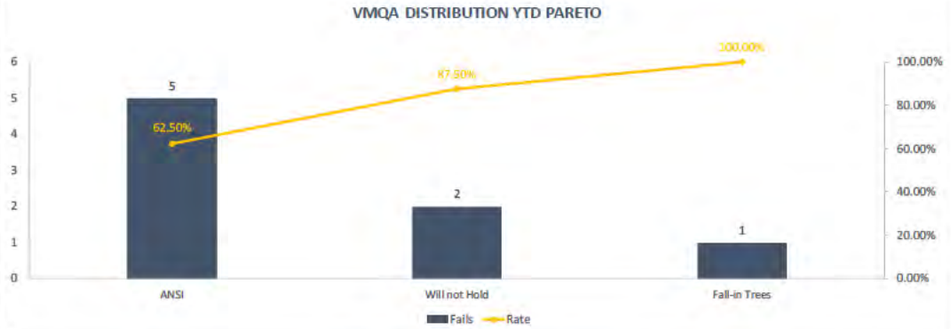
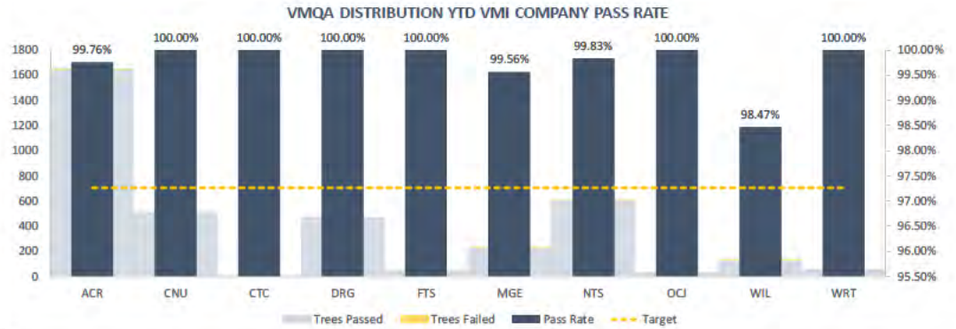
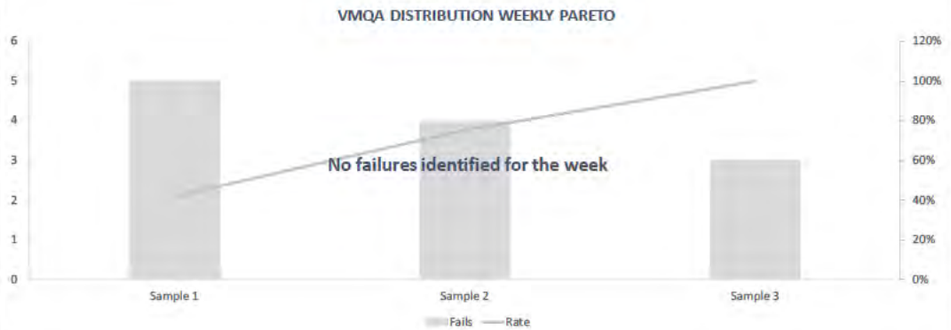
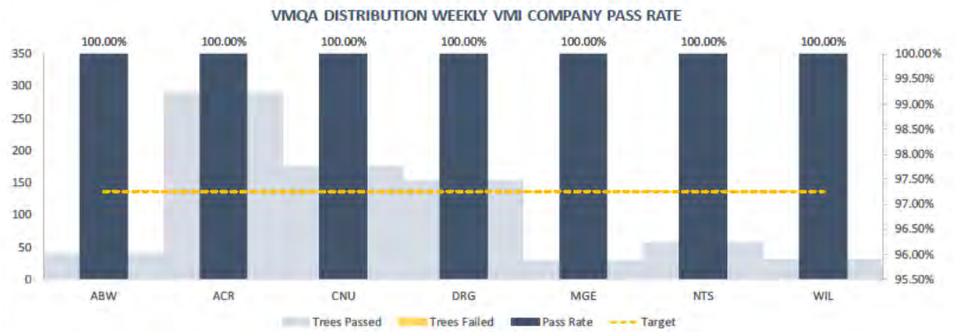








BOARD - QUALITY PASS RATE (QPR)

MISSION - RETD

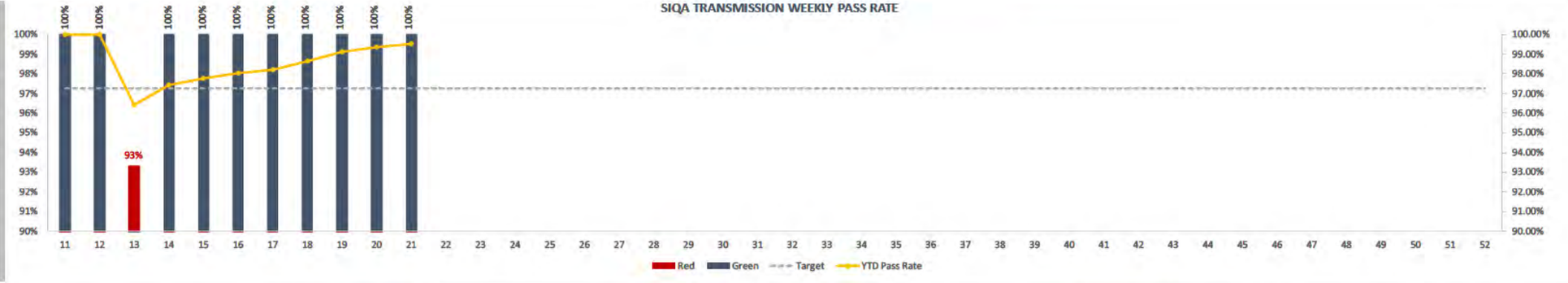
WEEKLY PERFORMANCE

RAG Status	Index Score	Target	Pass Rate	Total Eq. ID Comp.	Total Eq. ID Passed	Total Eq. ID Failed
	#	#	#	#	#	0

YTD PERFORMANCE

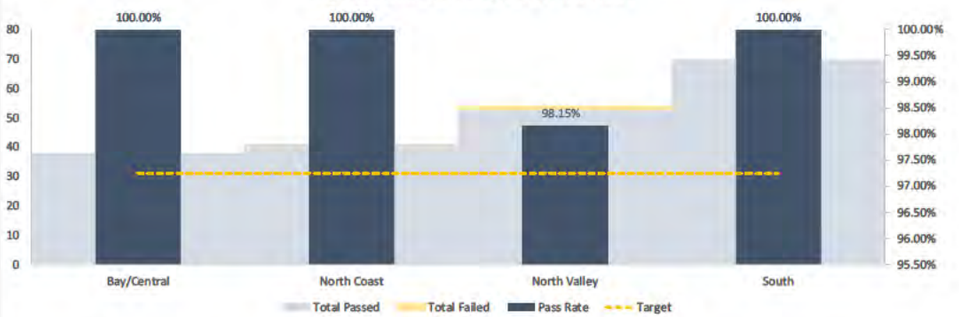
RAG Status	Index Score	Target	Pass Rate	Total Eq. ID Comp.	Total Eq. ID Passed	Total Eq. ID Failed
	#	#	#	#	#	1

SIQA TRANSMISSION WEEKLY PASS RATE



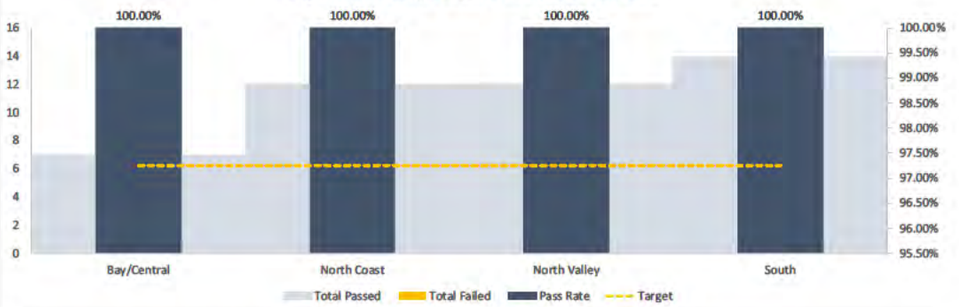
SIQA TRANSMISSION YTD PARETO

SIQA TRANSMISSION YTD REGION PASS RATE



SIQA TRANSMISSION WEEKLY PARETO

SIQA TRANSMISSION WEEKLY REGIONAL PASS RATE



MID - QUALITY ASSURANCE DASHBOARD - QUALITY PASS RATE (QPR)

SIQA DISTRIBUTION - HFTD

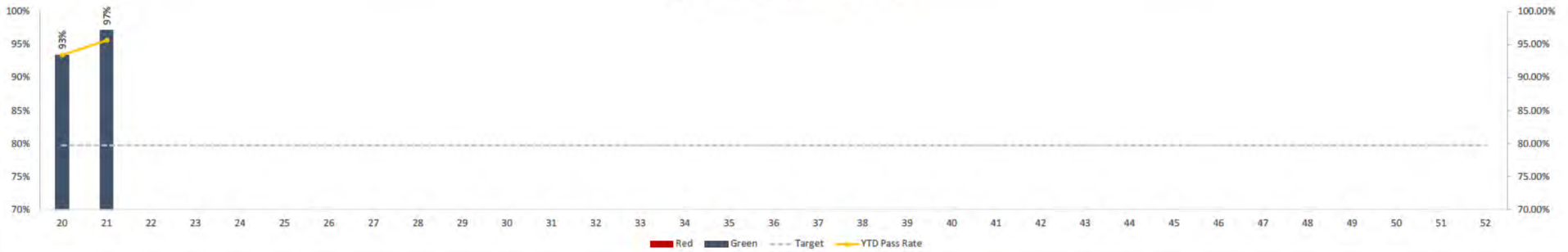
WEEKLY PERFORMANCE

RAG Status	Index Score	Target	Pass Rate	Total Eq. ID Comp.	Total Eq. ID Passed	Total Eq. ID Failed
	2.00	79.77%	97.16%	176	171	5

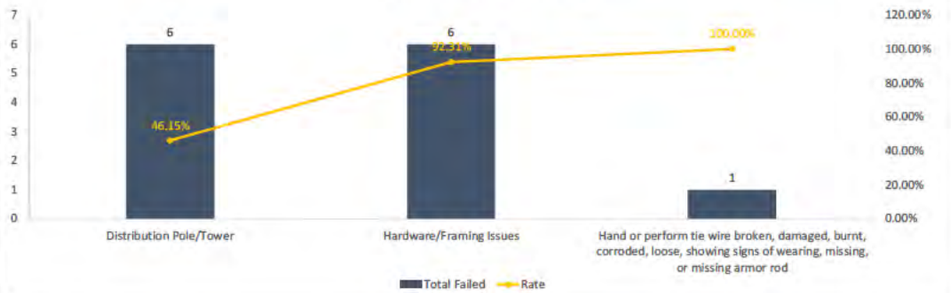
YTD PERFORMANCE

RAG Status	Index Score	Target	Pass Rate	Total Eq. ID Comp.	Total Eq. ID Passed	Total Eq. ID Failed
	2.00	79.77%	95.64%	298	285	13

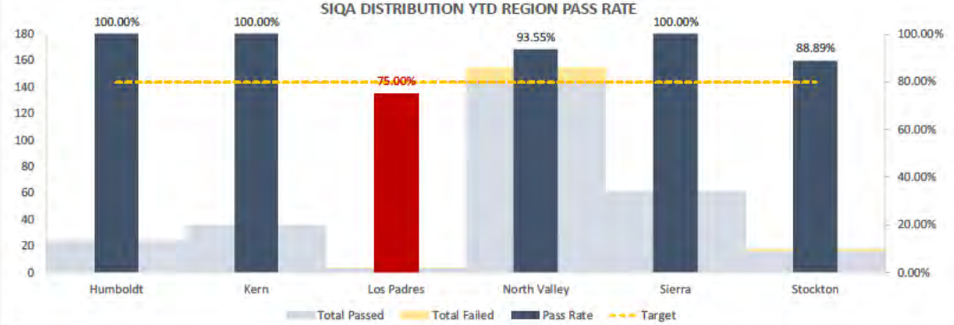
SIQA DISTRIBUTION WEEKLY PASS RATE



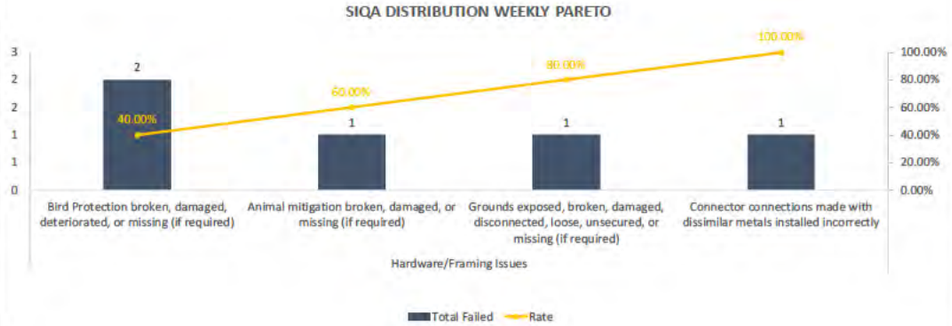
SIQA DISTRIBUTION YTD PARETO



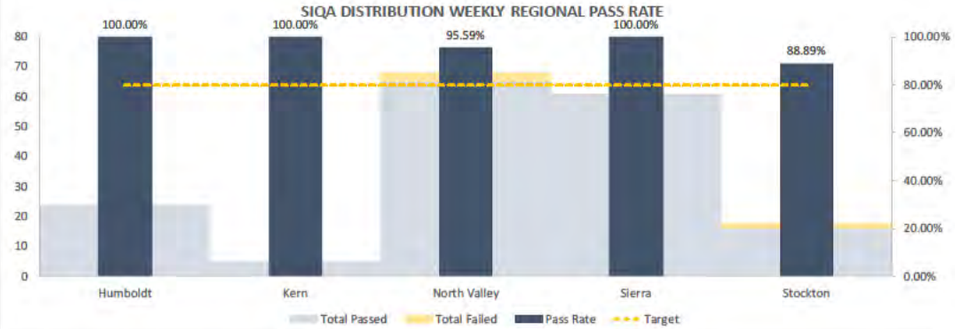
SIQA DISTRIBUTION YTD REGION PASS RATE



SIQA DISTRIBUTION WEEKLY PARETO



SIQA DISTRIBUTION WEEKLY REGIONAL PASS RATE



MID - QUALITY ASSURANCE DASHBOARD - ACCEPTABLE QUALITY LEVEL (AQL)

VMQA TRANSMISSION - HFTD

WEEKLY PERFORMANCE

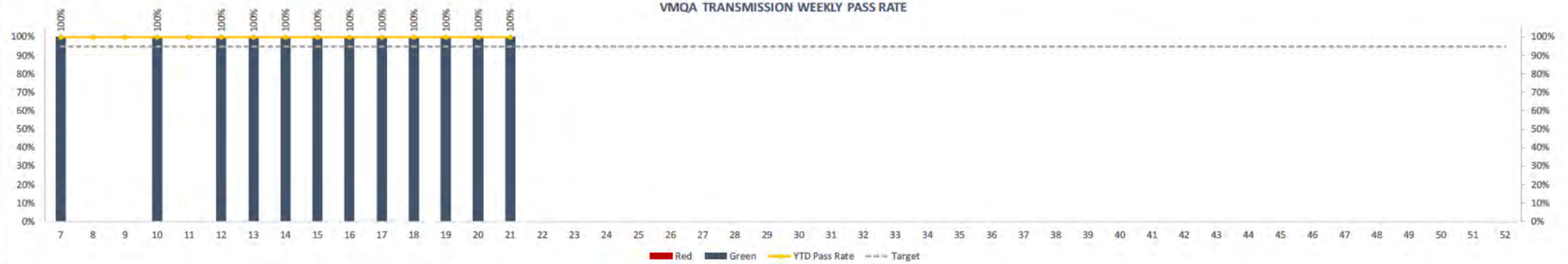
RAG Status	Target	Pass Rate	Total Trees Comp.	Total Trees Passed	Total Trees Failed
	95.00%	100.00%	25	25	0

YTD PERFORMANCE

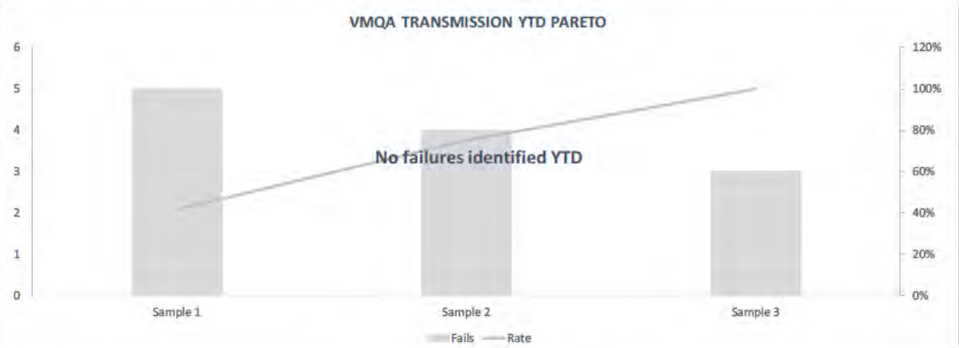
RAG Status	Target	Pass Rate	Total Trees Comp.	Total Trees Passed	Total Trees Failed
	95.00%	100.00%	1527	1527	0

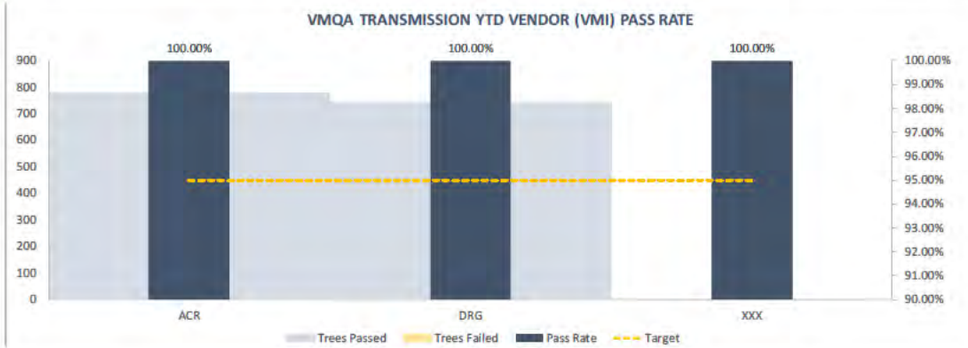
1

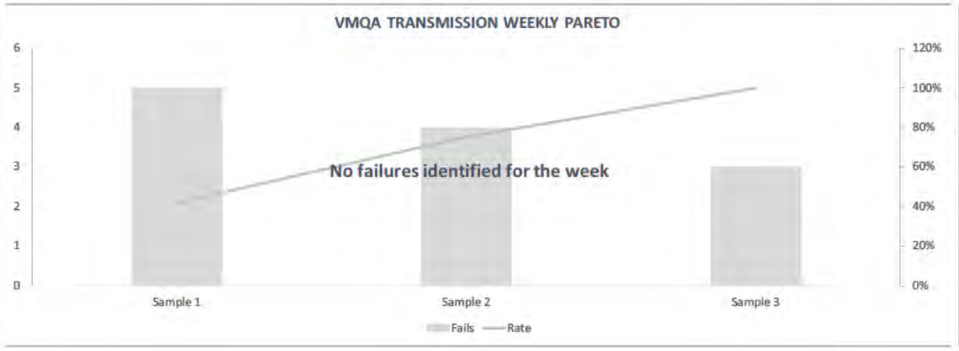
3

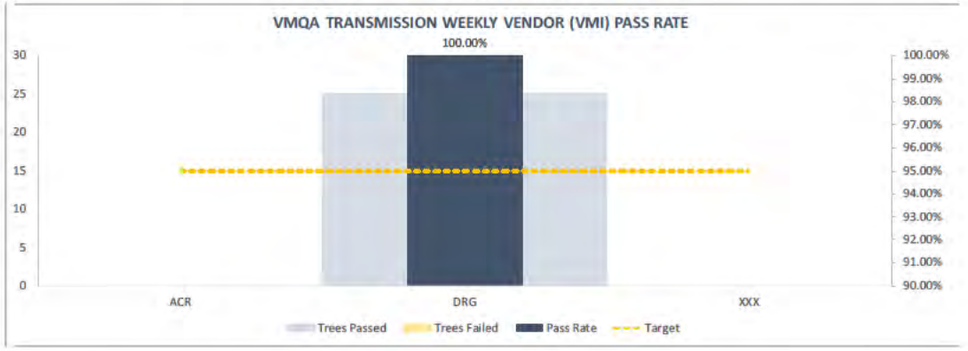


10









MID - QUALITY ASSURANCE DASHBOARD - ACCEPTABLE QUALITY LEVEL (AQL)

VMQA VEGETATION CONTROL (VC) - HFTD

WEEKLY PERFORMANCE

RAG Status	Target	Pass Rate	Total Trees Comp.	Total Trees Passed	Total Trees Failed
	95.00%	96.67%	60	58	2

YTD PERFORMANCE

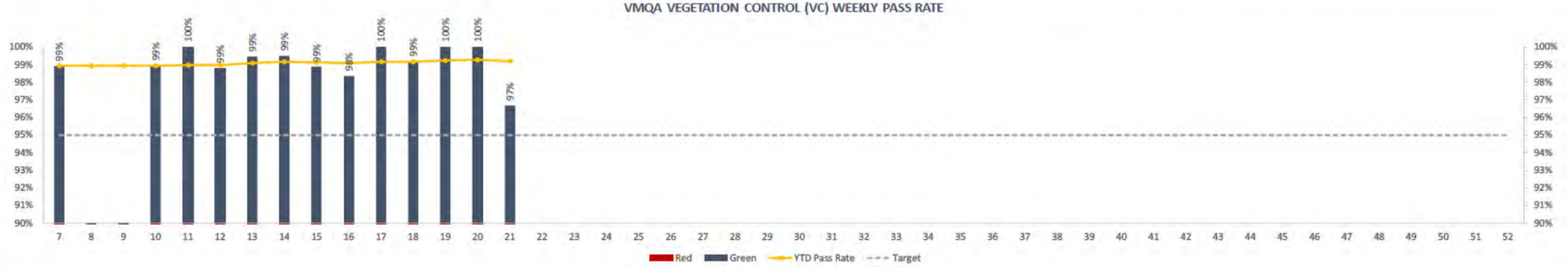
RAG Status	Target	Pass Rate	Total Trees Comp.	Total Trees Passed	Total Trees Failed
	95.00%	99.19%	1598	1585	13

1

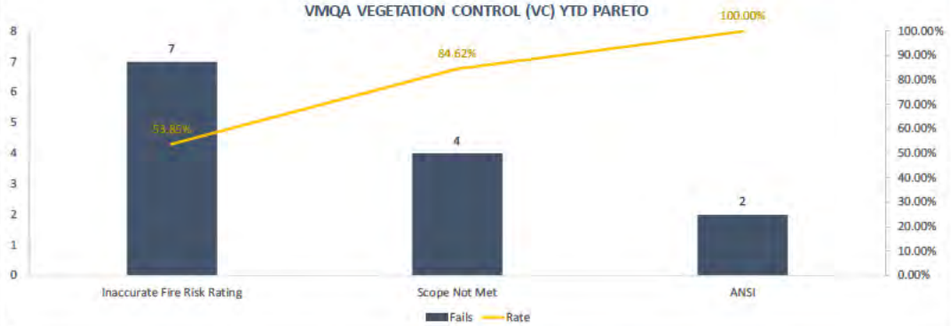
3

10

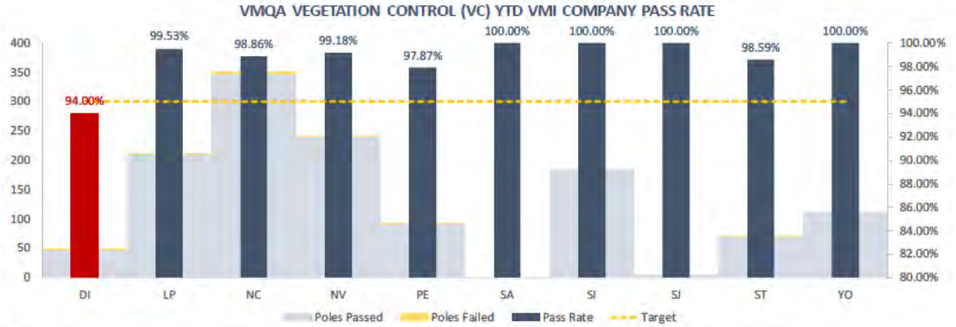
VMQA VEGETATION CONTROL (VC) WEEKLY PASS RATE



VMQA VEGETATION CONTROL (VC) YTD PARETO

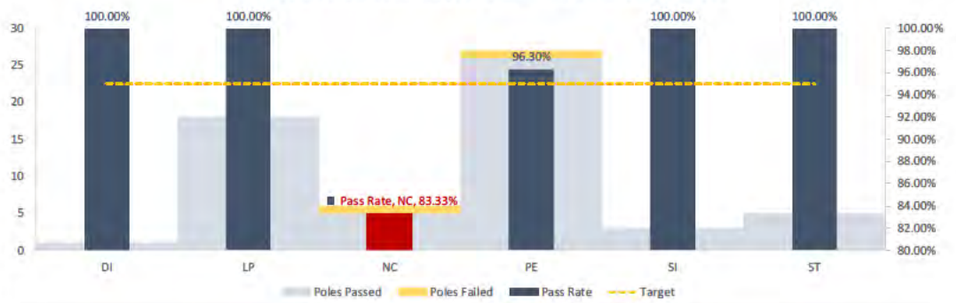


VMQA VEGETATION CONTROL (VC) YTD VMI COMPANY PASS RATE



VMQA VEGETATION CONTROL (VC) WEEKLY PARETO

VMQA VEGETATION CONTROL (VC) WEEKLY VMI COMPANY PASS RATE



WRGSC

FOR INTERNAL USE ONLY

Internal

Wildfire Risk Command Center

WRGSC Agenda for June 8th

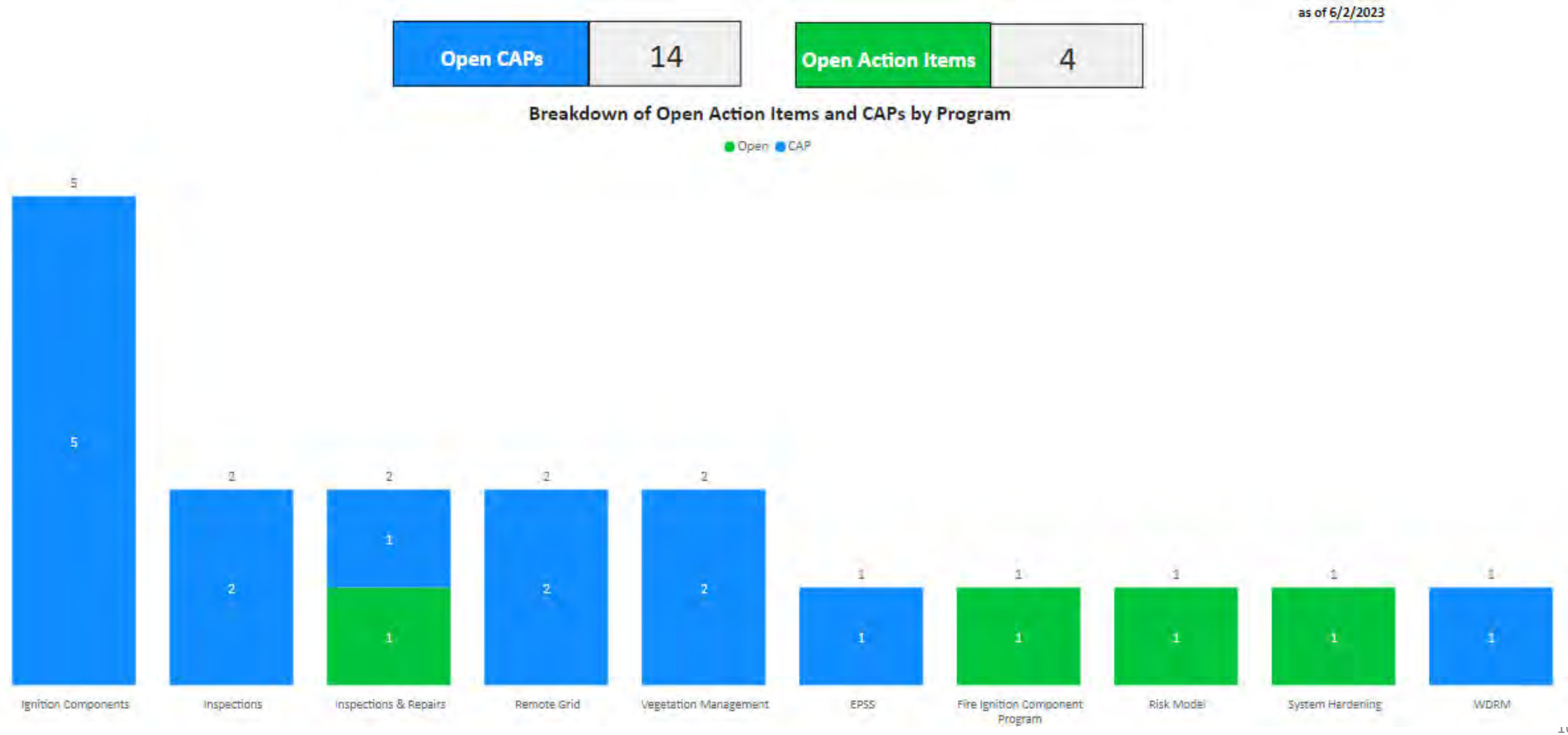
	Topic	Lead	Decision/Inform	Timing
1	Recent Annual Ignition Trends	[redacted]	Inform	30 min

WRGSC Action Items and CAPs

as of 6/2/2023

Open CAPs	14

Open Action Items	4



WRGSC Open Action Items and CAPs

Workstream	Number	Action Item	Description	Deliverable Category	Responsible Party	Target Resolution Date	Status	CAP Number
Fire Ignition Component Program	393	Remediation Plan Presentation	Come back to the WRGSC to present remediation plan related to Wildfire Risk and possible inventory shortage	Closure in WRGSC	[redacted]	3/10/2023	This topic is on the 5/25 WRGSC agenda, for this reason a CAP has not been created	
Inspections & Repairs	414	Impact of 113 high consequence poles inclusion on WMP	Validate how decisions impact WMP commitments and ensure they go through the appropriate approvals.	Email for Closure		8/4/2023		
Risk Model	413	Risk/consequence model decision standard	Develop a standard for when to use the risk model or the consequence model. Note [redacted] as backup CAP 126053327 was written by COA to address the issue	Email for Closure		8/4/2023		
System Hardening	415	UG depth standard	Create a standard for undergrounding depth. Note: [redacted] as backup	Email for Closure				
Inspections & Repairs	188	Post-SH/UG Analysis for Inspections	Evaluate system inspections planning post system hardening and undergrounding work: gather data and determine if inspections planning approach/execution can change	Email for Closure		12/31/2022	Reassigned to [redacted] with the Asset Strategy team	000125893915
Inspections	395	Data Analysis	Analyze data to review ground versus aerial method to create VIN diagram to identify overlap. [redacted] and [redacted] will assist with data analysis. Analysis will be brought back to Wildfire Risk Governance Committee	Email for Closure		6/30/2023	In Progress	000125894180
Inspections	396	Patrol Benchmark	Benchmark patrols with other IOUs	Email for Closure		6/30/2023	In Progress	000125894291
Ignition Components	400	Data reconciliation	Reconcile data collected through inspections to validate the count of locations with non-exempt fuses.	Email for Closure		1/31/2023	In Progress	000125894299
Ignition Components	399	Standard review for emergency or new constructions	Check standards to make sure that non-exempt fuses are not allowed in HFTD and HFRA during emergency or new constructions.	Email for Closure		1/31/2023	In Progress	000125894306

WRGSC Open Action Items and CAPs

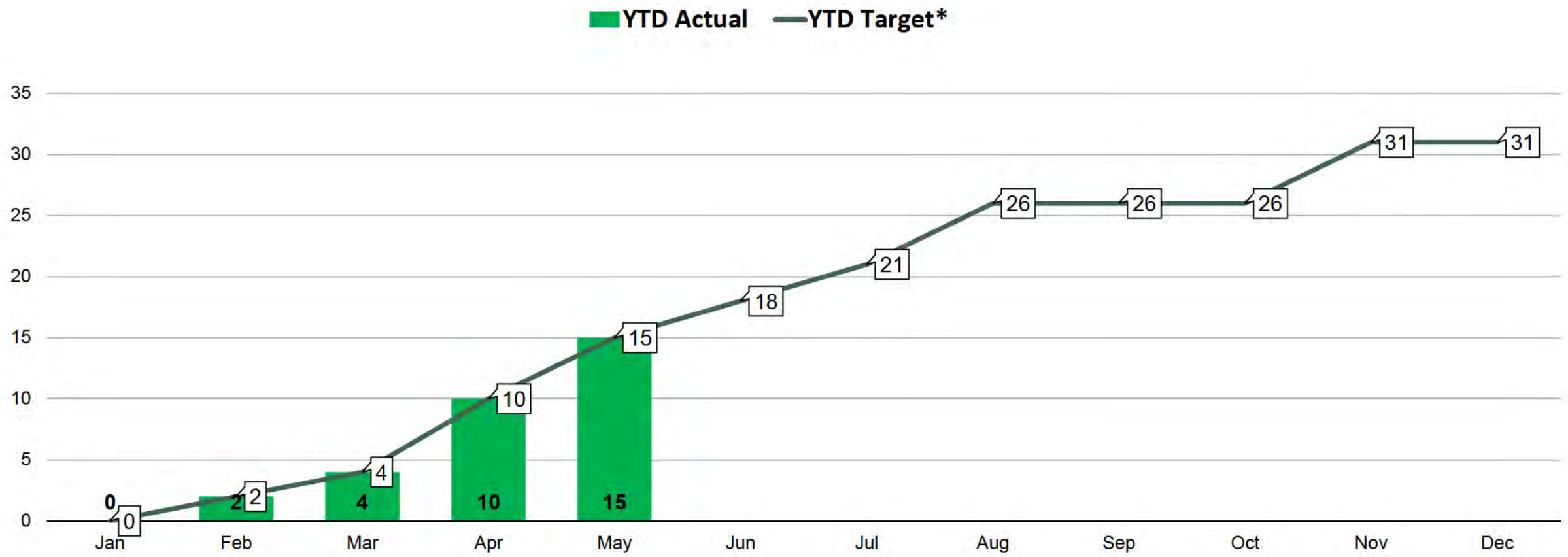
Workstream	Number	Action Item	Description	Deliverable Category	Responsible Party	Target Resolution Date	Status	CAP Number
Ignition Components	401	Standard review	Ensure that the standard requires replacement of any overloaded secondary and service connections when replacing a transformer.	Email for Closure	[redacted]	1/31/2023		000125894550
Ignition Components	402	Comparison against other utilities	Compare with SCE and SDG&E on any programs related to proactive replacement of transformers.	Email for Closure		1/31/2023	Sent email to [redacted] with details of this action item	000125894631
Ignition Components	403	Present analytical model results	Team to come back and present out the results from the analytical model of highest risk transformers that we should target.	Closure in WRGSC		4/28/2023	In Progress	000125894635
Remote Grid	406	Tranche 2 project updates	Provide an update to the committee every other month on Tranche 2 projects.	Email for Closure		7/31/2023	In Progress	000125894871
Remote Grid	407	Tranche 3 project review	Return to the committee to provide where the Remote Grids fall into the risk buydown curve using WDRM V3 and to review Tranche 3 projects including volume, cost and locations.	Closure in WRGSC		10/31/2023	In Progress	000125894987
WDRM	408	Risk Model EPSS Alignment	Align with Manger, Data Science on the EPSS approach that is used to feed the Risk Model	Email for Closure		4/12/2023	In Progress	000125895155
Vegetation Management	409	Tree Work Analysis	Provide table containing miles and historic tree worked performed in the different layer inputs in the Second Patrol Area. Analysis will be provided at end of April.	Closure in WRGSC		4/28/2023		000125895273
Vegetation Management	411	WMP Commitment	Confirm if there's flexibility to modify the commitment to work down 20,000 trees in 2024 as stated in the WMP.	Email for Closure		5/31/2023		000125895461
EPSS	412	Field Review of the EPSS Buffer Areas	Check with PSS team if review of the EPSS Buffer Areas has been conducted. If review has not been conducted, request them to review and validate the buffer areas.	Email for Closure		5/1/2023		000125895512

PSPS

Webinars and Townhalls

Hosting a series of public meetings to further drive PSPS readiness and understanding and answer questions.

WMP Commitment*



YTD Actual	0	2	4	10	15	-	-	-	-	-	-	-
YTD Target	0	2	4	10	15	18	21	26	26	26	31	31

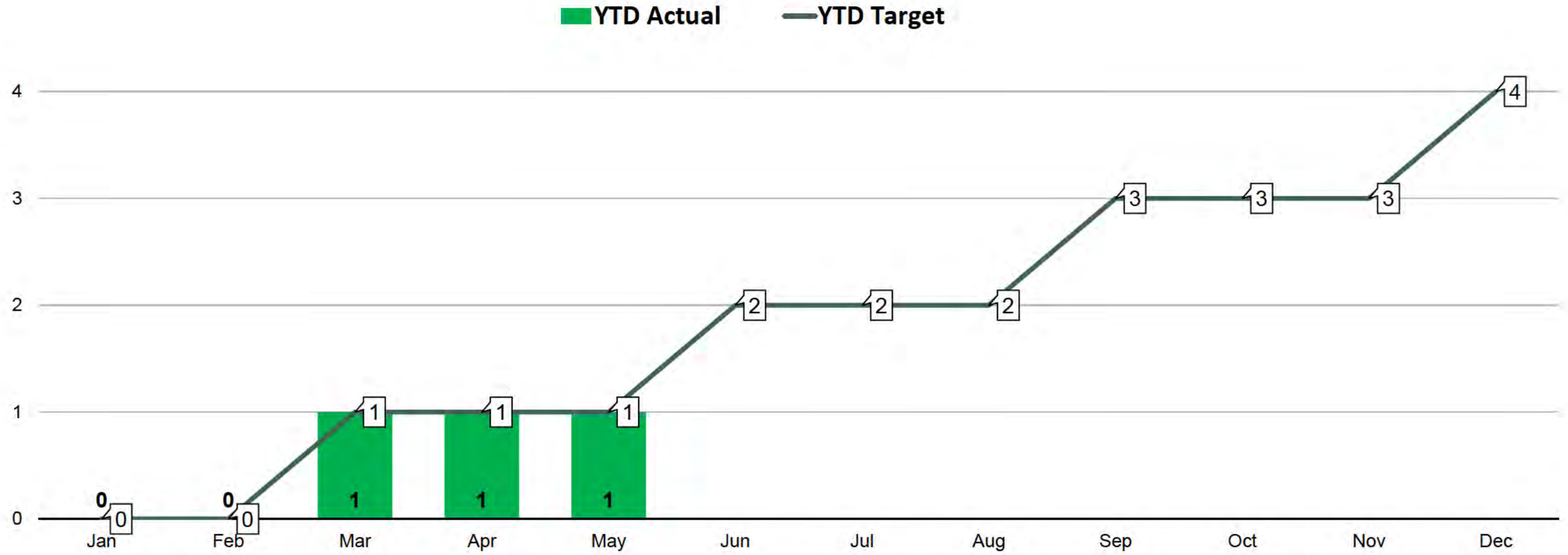
**The WMP commitment of 22 webinars and town halls completed by EOY consists of Safety Town Halls and Regional Webinars*

Updated 5/31/2023

CWSP Advisory Committee

Engaging with Counties, Cities and Tribes to gather feedback on CWSP processes and procedures.

CPUC Requirement*



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
YTD Actual	0	0	1	1	1	-	-	-	-	-	-	-
YTD Target	0	0	1	1	1	2	2	2	3	3	3	4

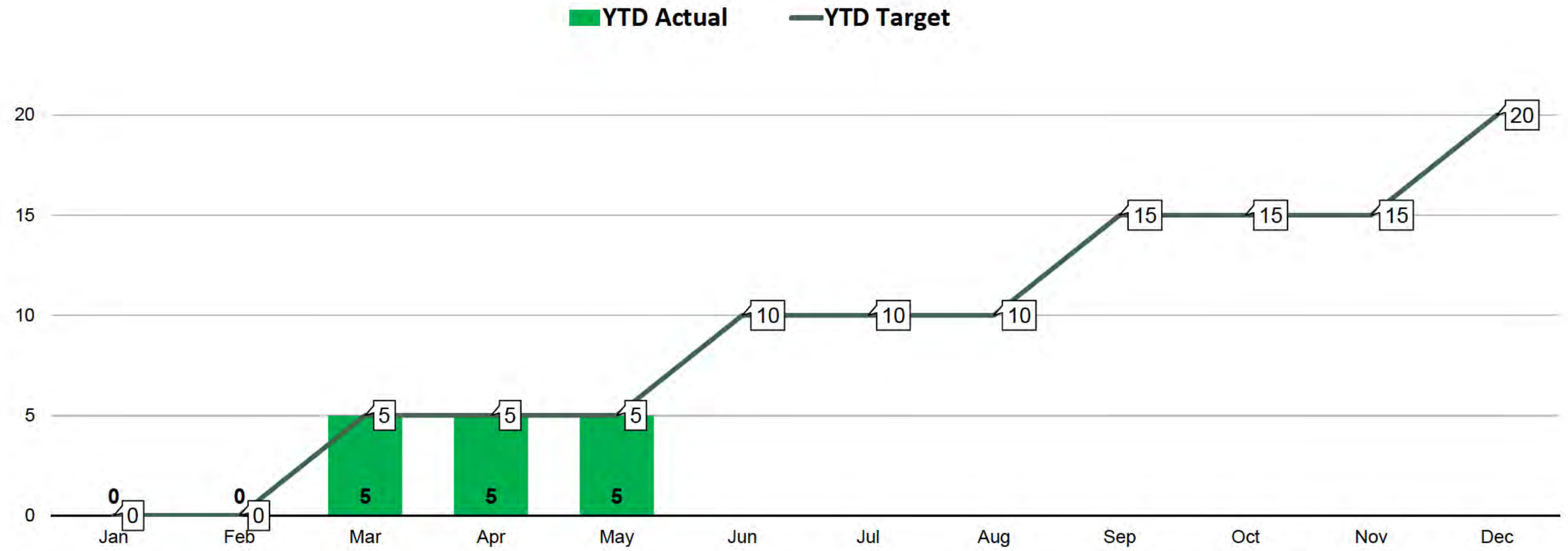
**Indicates initiative was included as part of previous CPUC rulings, but is not a requirement in the 2023 PG&E Wildfire Mitigation Plan*

Updated 5/31/2023

Regional Working Groups

Engaging with Public Safety Partners to share updates, discuss wildfire safety work and collaborate on areas for improvement.

CPUC/WMP Requirement*



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
YTD Actual	0	0	5	5	5	-	-	-	-	-	-	-
YTD Target	0	0	5	5	5	10	10	10	15	15	15	20

*Indicates initiative was included as part of previous CPUC rulings and included in the 2023 PG&E Wildfire Mitigation Plan

Updated 5/31/2023

Customer Contact Info Updates

Year-round customer contact campaigns are critical to ensuring we can provide timely notifications to our customers.

TOTAL CUSTOMERS LIKELY TO BE IMPACTED WITH NO CONTACT INFO

<1% EOY TARGET	<1% YTD TARGET	0.24% YTD ACTUALS

CUSTOMER CONTACT INFO UPDATES	5/25-5/31	2023 YTD
Medical Baseline Customers	**399**	**12,414**
Address-Level Alerts Enrollment	**N/A**	**8,212**

ALL CUSTOMERS LIKELY TO BE IMPACTED	
Residential Customers	**1,132,740**
Residential Customers With No Contact Info	**3,807**
MEDICAL BASELINE CUSTOMERS LIKELY TO BE IMPACTED	
Medical Baseline Customers	**71,980**
Medical Baseline Customers with No Contact Info*	**7**

**These customers will receive a doorbell ring in lieu of phone/email contact*

NEW MEDICAL BASELINE APPLICATIONS

513 ENROLLMENT WEEK OF 5/25-5/31	279,956 TOTAL ENROLLED TO DATE

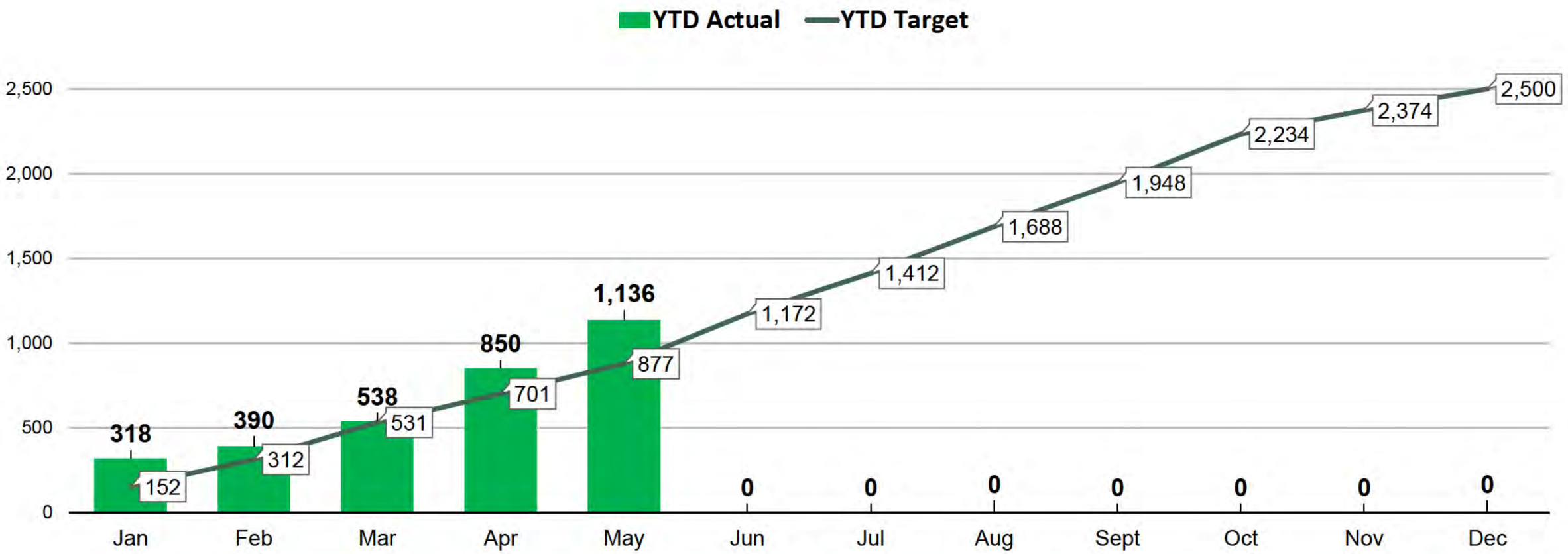
CUSTOMERS WHO SELF IDENTIFY AS VULNERABLE (SIV)

1,291 ENROLLMENT WEEK OF 5/25-5/31	13,993 TOTAL ENROLLED TO DATE

Updated 5/31/2023

Generator & Battery Rebate Program

Providing rebates for backup power generators for customers located in Tier 2/3 HFTD or on an EPSS impacted circuit AND experienced two or more PSPS outages.

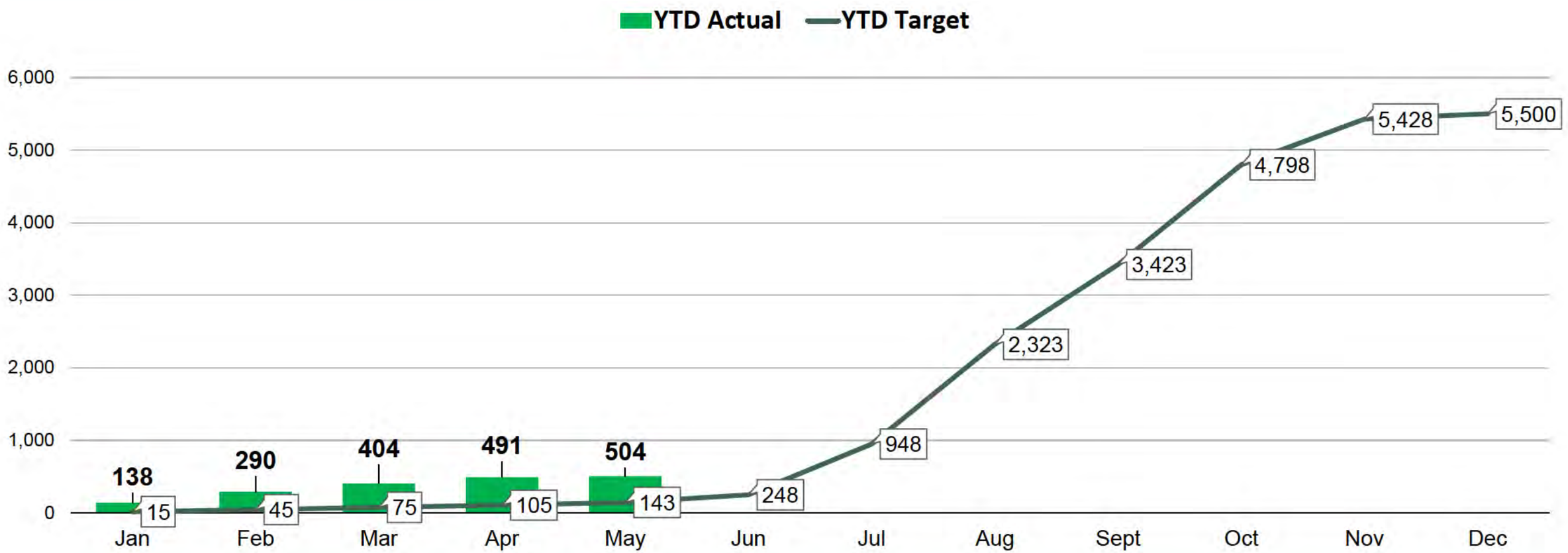


	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
YTD Actual	318	390	538	850	1,136	-	-	-	-	-	-	-
YTD Target	152	312	531	701	877	1,172	1,412	1,688	1,948	2,234	2,374	2,500

Updated 5/31/2023

Portable Batteries – Delivered

Providing portable batteries to the most vulnerable customers through partnership with the California Foundation for Independent Living Centers (CFILC) and PG&E's Portable Battery Program.

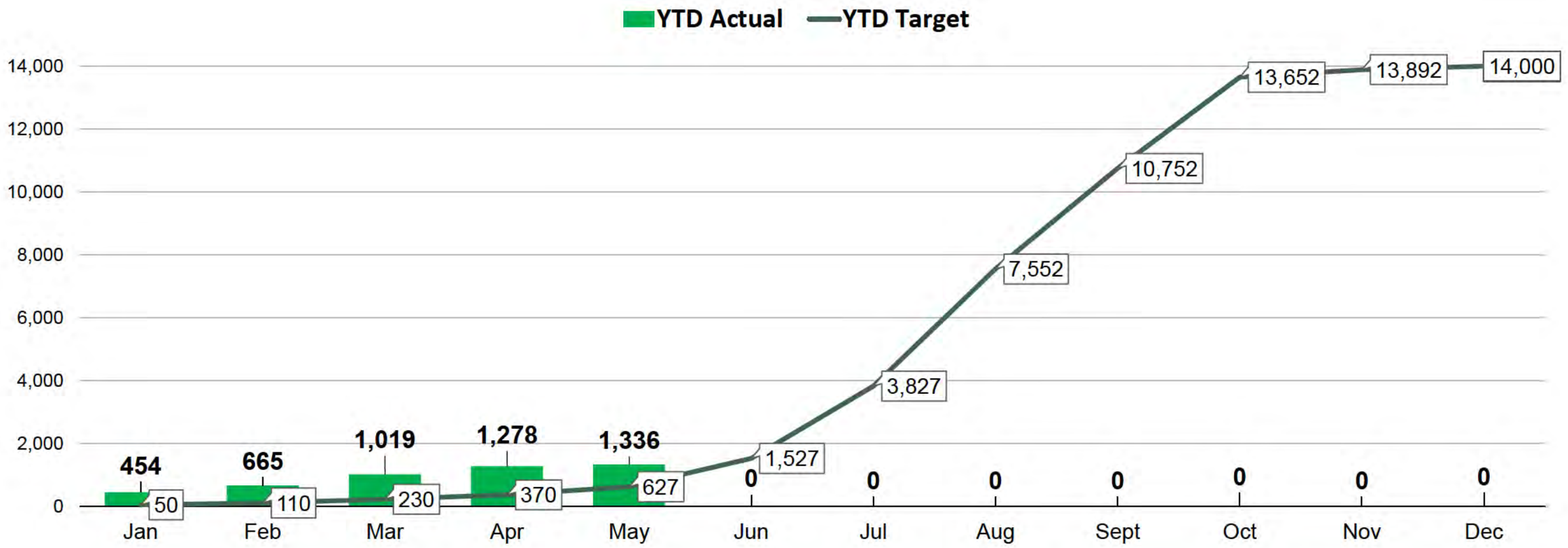


	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
YTD Actual	138	290	404	491	504	-	-	-	-	-	-	-
YTD Target	15	45	75	105	143	248	948	2,323	3,423	4,798	5,428	5,500

Updated 5/31/2023

Portable Batteries – Outreach

PG&E offers portable batteries to our most vulnerable customers through our Portable Battery Program and through a partnership with the California Foundation of Independent Living Centers (CFILC).

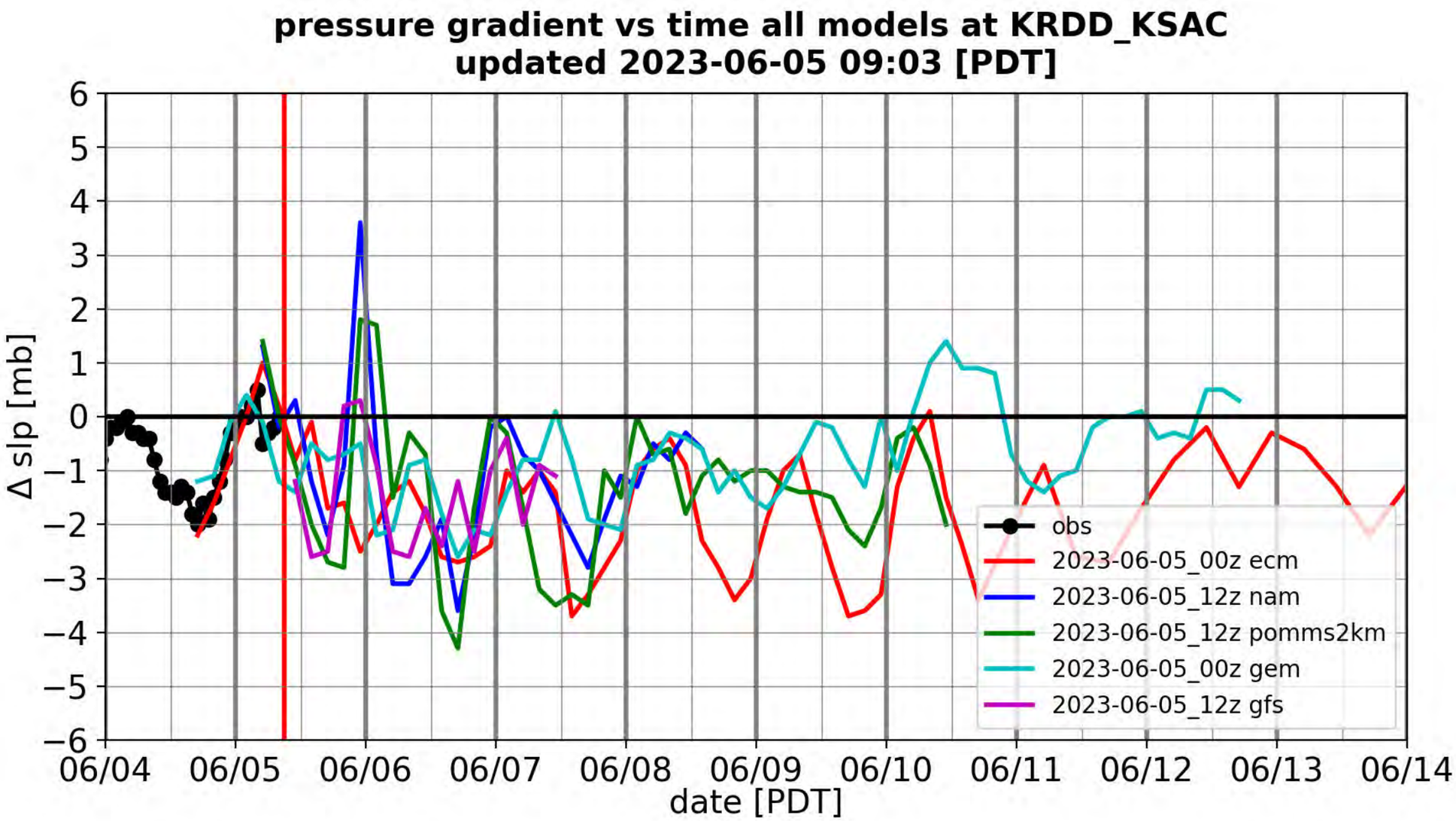


	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
YTD Actual	454	665	1,019	1,278	1,336	-	-	-	-	-	-	-
YTD Target	50	110	230	370	627	1,527	3,827	7,552	10,752	13,652	13,892	14,000

Updated 5/31/2023

Pressure Gradient Differential

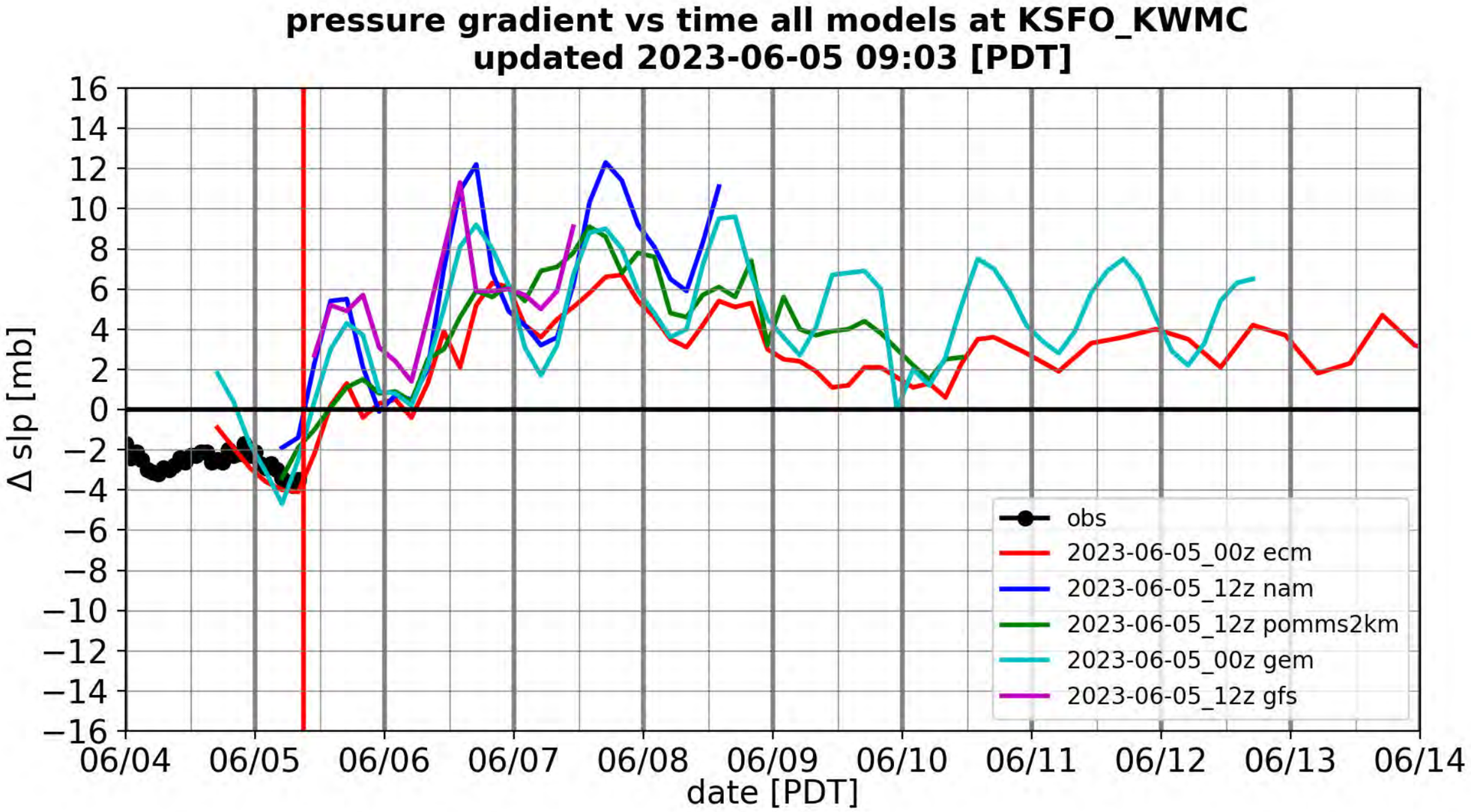
RDD - SAC



Updated 5/31/2023

Pressure Gradient Differential

SFO - WMC



Updated 5/31/2023

Ignitions

CPUC Reportable Ignitions in HFRA + HFTD

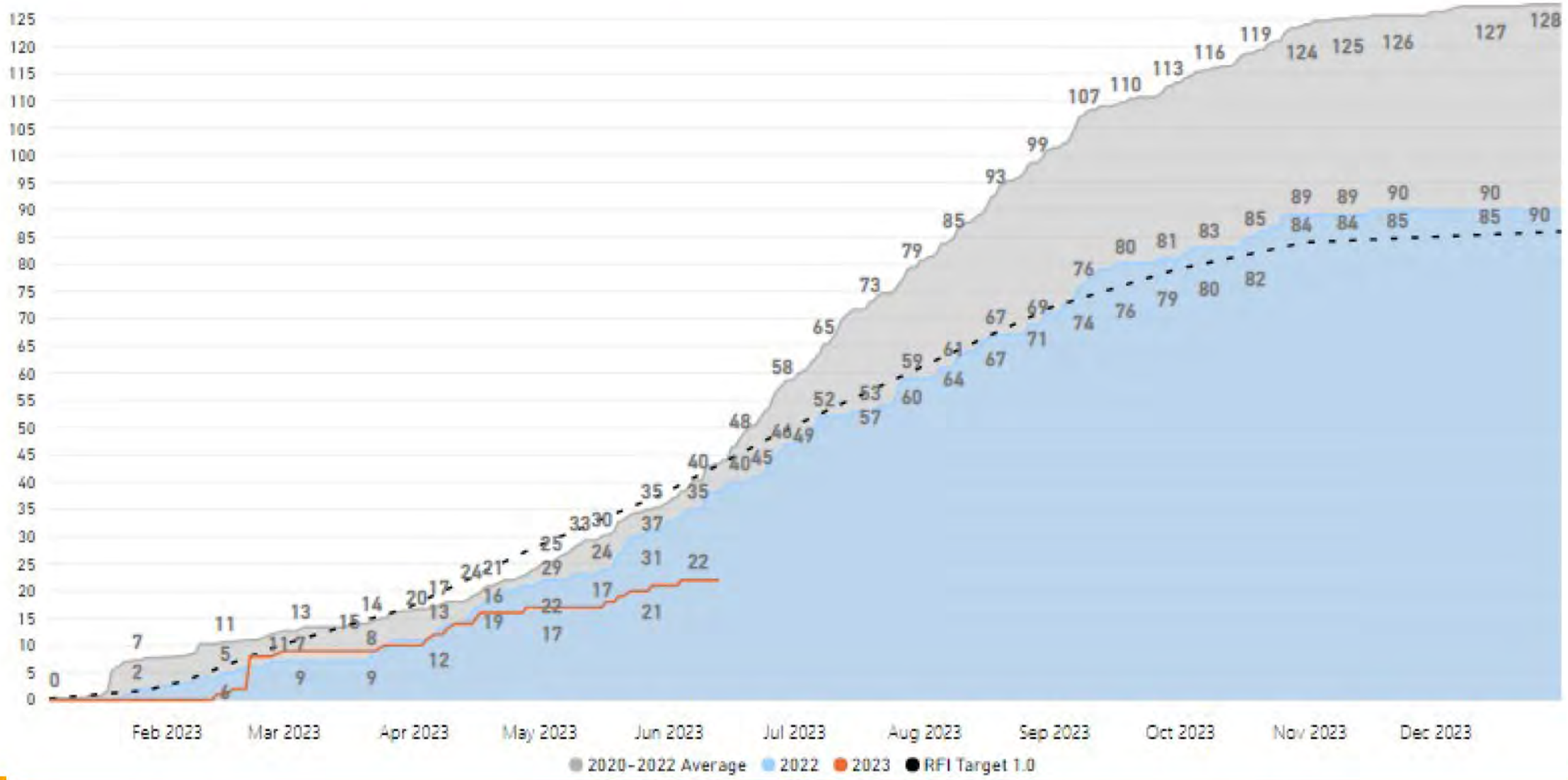
YTD Total *Through 06/30/23*		**Month to Date** *06/01/23 – 06/30/23*	
22		**1**	
2022	38	6	
3-yr Average	44	8	
2023 Target	86	**June Target**	50

Wildfire Risk Reduction Metric

YTD Total	
0	
2022	0
3-yr Average	0
2023 Target	1

Under Investigation					
Index ID	*Name*	*Date*	*Size (acres)*	*Status*	*Cause*

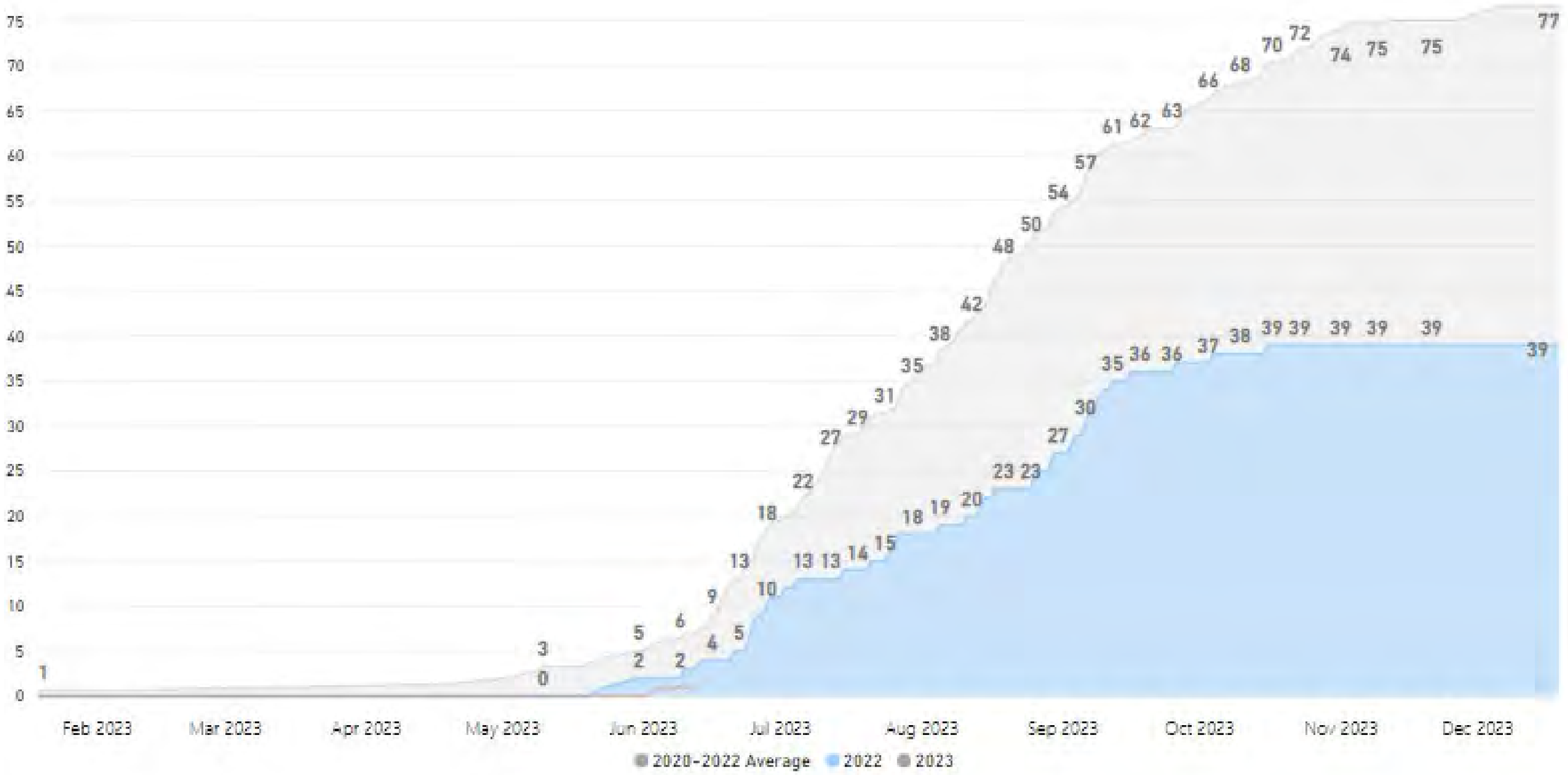
PG&E Reportable Ignitions in HFTD vs Target



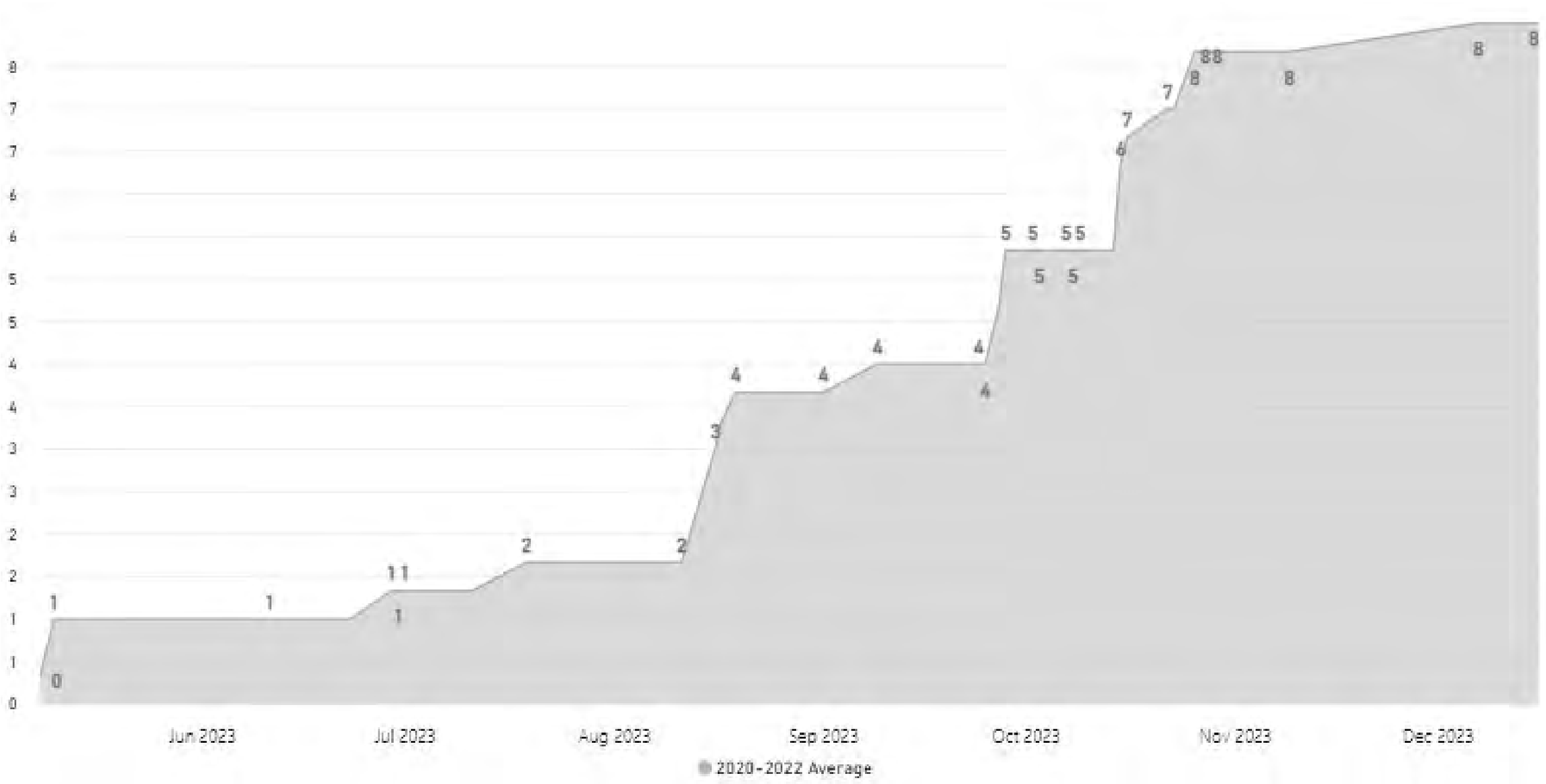
Reportable Fire Ignitions in HFRA by Weather Conditions

Risk Level	RFW	HWW	R3+	<R3
2023 YTD	0	0	1	21
2022 YTD	0	0	3	35
3-YEAR AVG	1	3	3	37
2017 YTD	0	0	0	20

PGE RFIs in HFTD – R3+ Conditions



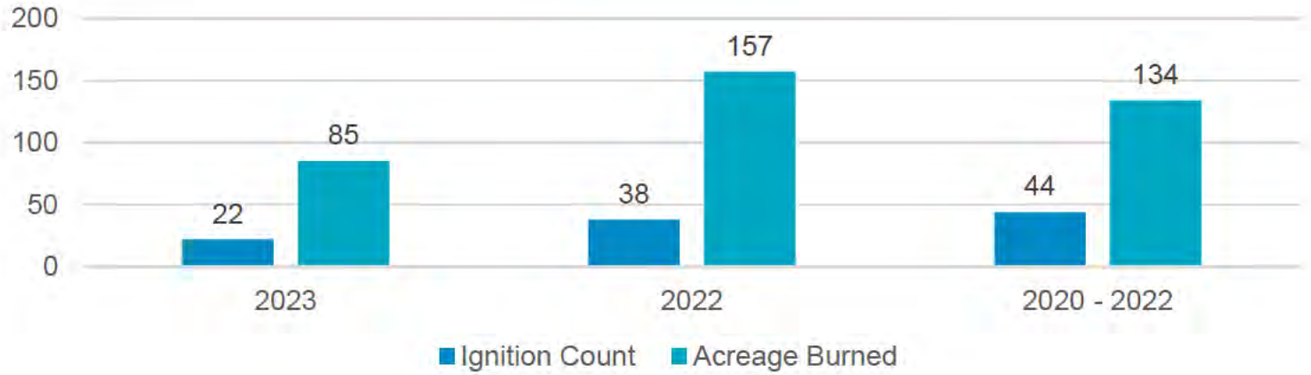
PGE RFIs in HFTD – RFW Conditions



Reportable Fire Ignitions in HFRA by FPI and Asset Type

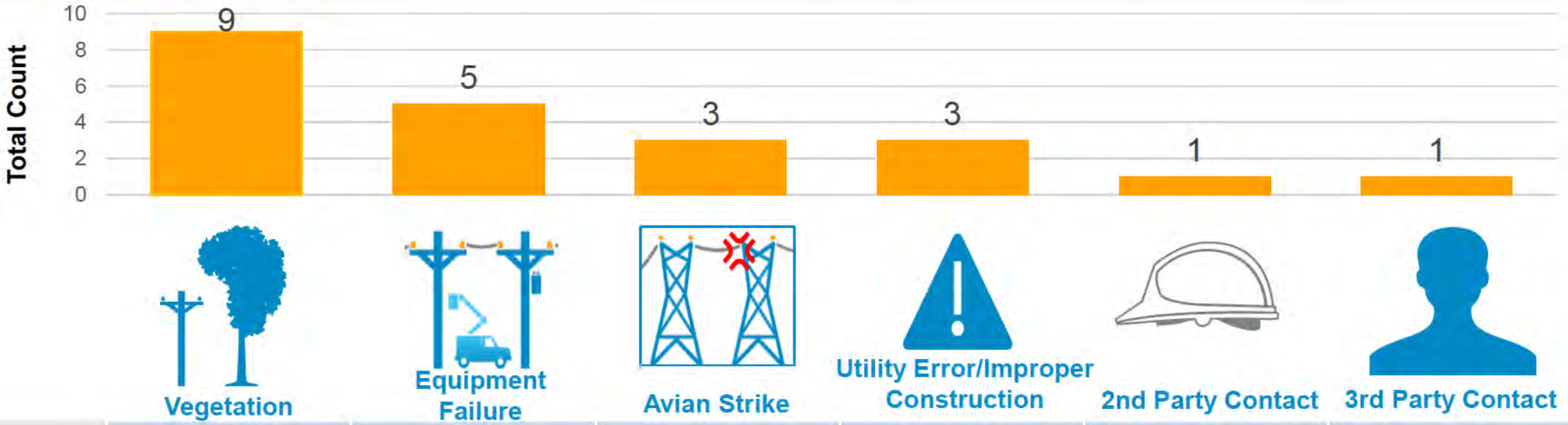
	Transmission	Dist R3+ Primary	Dist R3+ Secondary	Dist R3+ Service	Dist <R3
2023 YTD	2	0	0	0	20
2022 YTD	1	3	0	0	34
3-YEAR AVG	3	6	1	0	34

Reportable Fire Ignitions in HFTD and HFRA – Count and Acreage Burned



	2023 YTD	2022 YTD	2020 - 2022
IGNITION COUNT	22	38	44
ACREAGE BURNED	85	157	134

Reportable Fire Ignitions in HFTD and HFRA by Cause



	Vegetation	Equipment Failure	Avian Strike	Utility Error/Improper Construction	2nd Party Contact	3rd Party Contact
LAST WEEK	0	0	0	0	0	0
2023 YTD	9	5	3	3	1	1

EPSS

2023 EPSS Program Pillars

1. Further Reduce Wildfire Risk

Implement mitigations for ignition / fault types not yet fully mitigated (e.g. DCD for high impedance faults)

2. Improve Reliability & Customer Experience

Leverage a risk-informed and data-driven approach to our reliability mitigations, customer outreach, and customer support programs

3. Reduce the Human Struggle

Continuously improve the supporting processes, technology, and communications utilized in the EPSS program

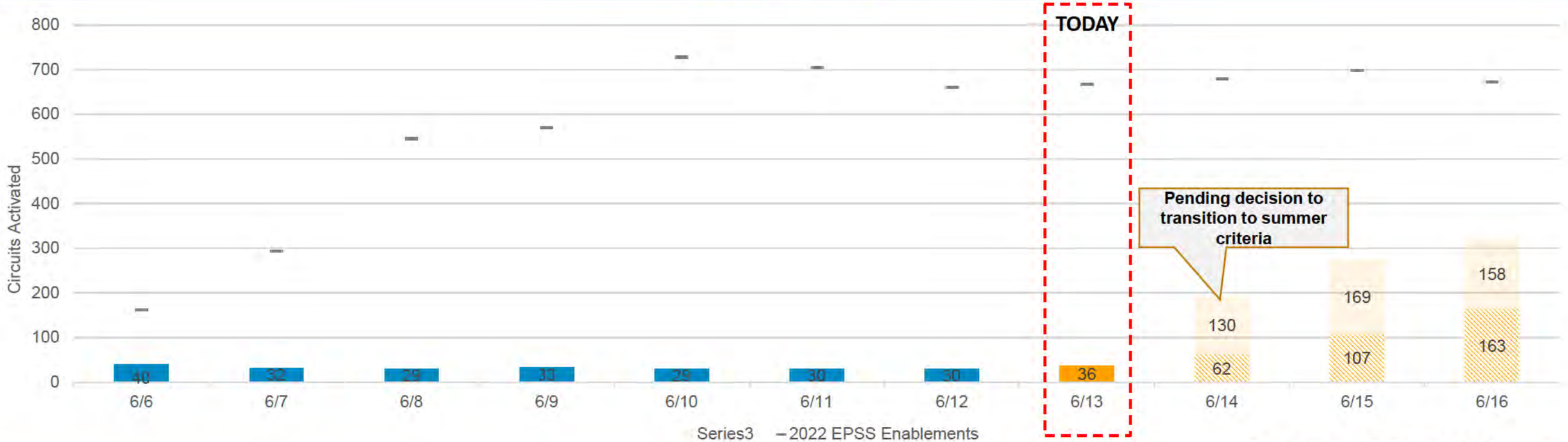
EPSS Enablement 1-Week Back / Forecast

1. Status

	2023			2022	
	Last Week	MTD	YTD	MTD	YTD
Circuits Enabled	44	175	200	773	781
Customers Protected	37,250	202,144	228,667	202,144	228,677
Miles Enabled	2,734	10,913	12,452	10,913	12,452

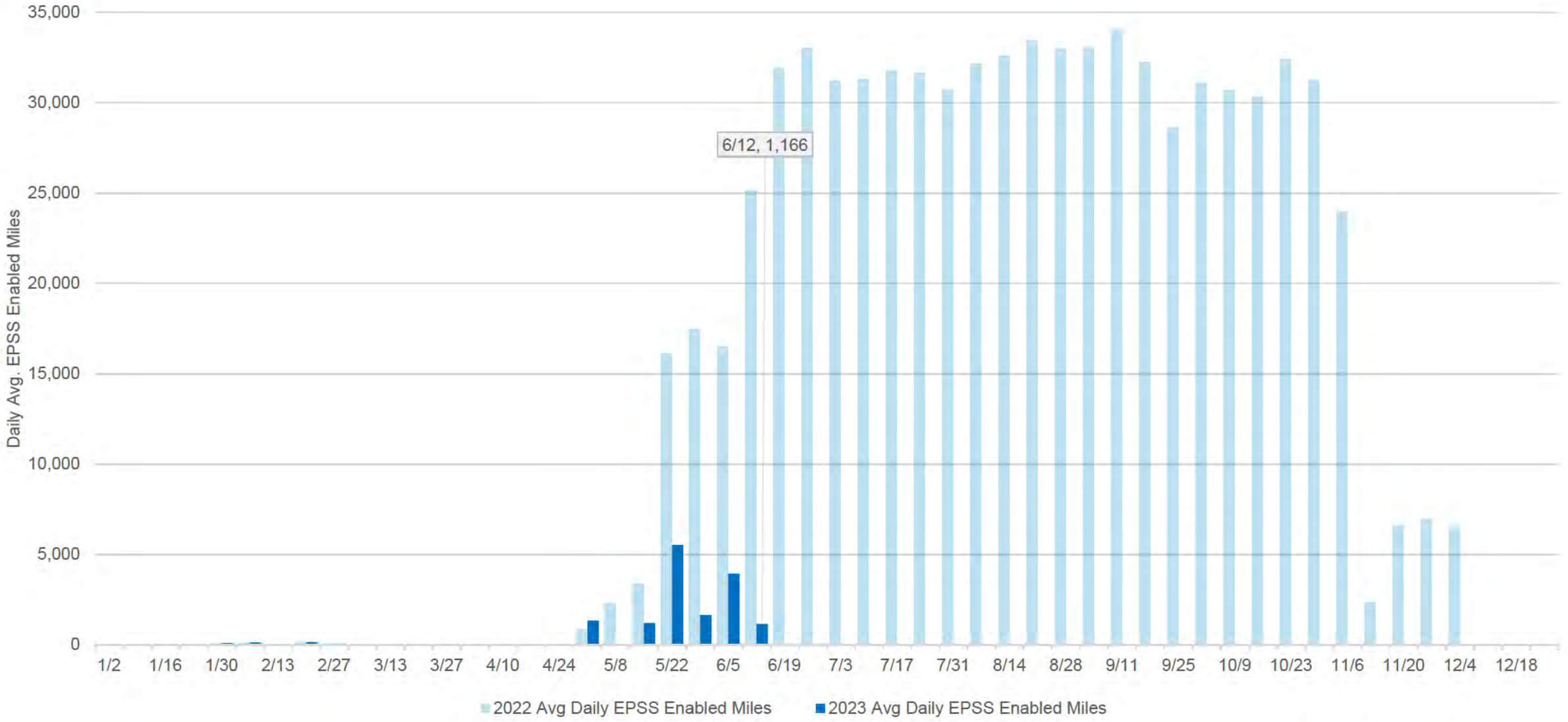
3. Trend: EPSS Enablement – Circuit Counts

One week back / forecast



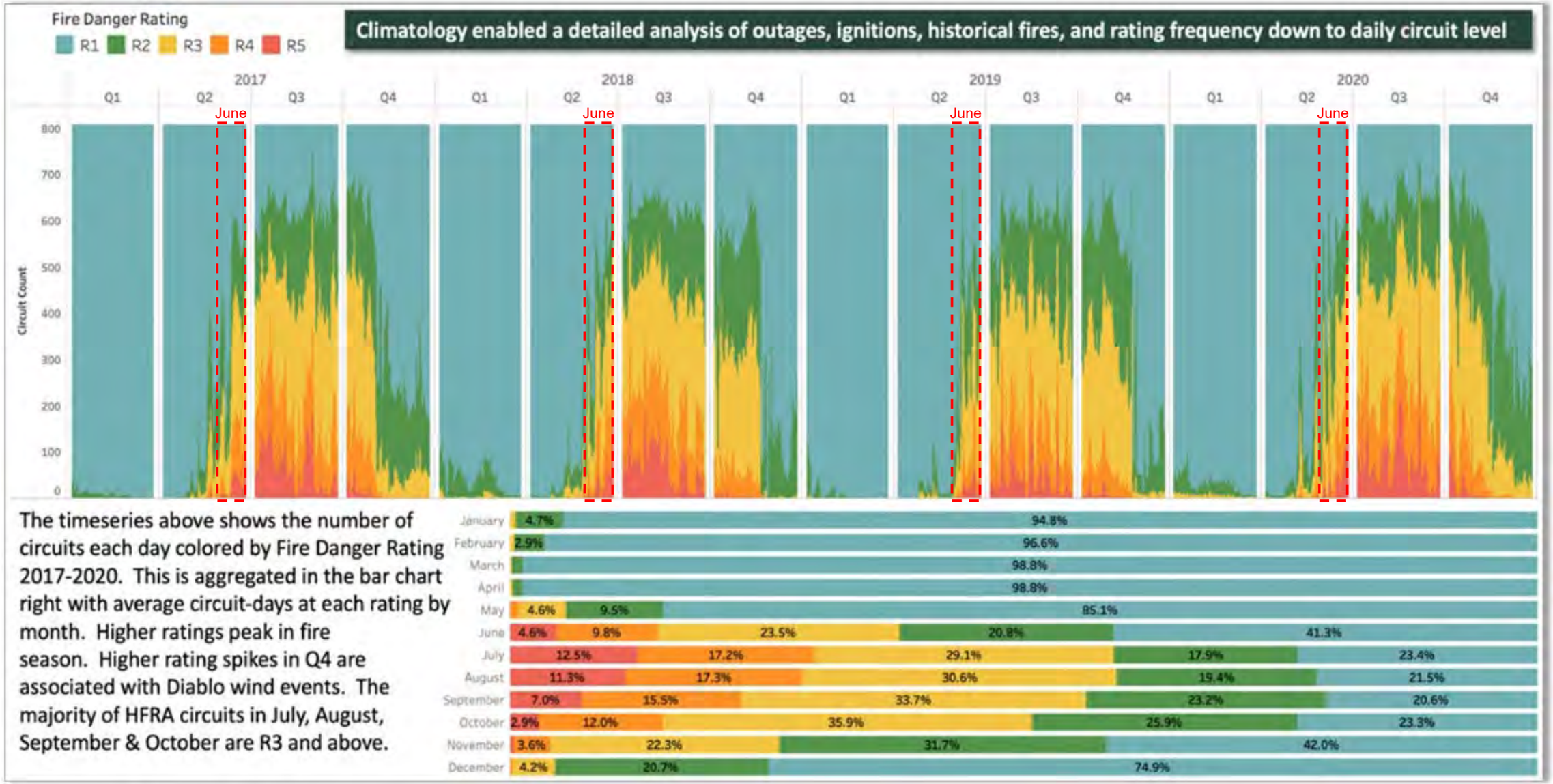
Data through 6/12/23 as of 6/12/23

Daily Average Miles EPSS Enabled by Week



Data through 6/12/23 as of 6/12/23

Historic Fire Danger Rating

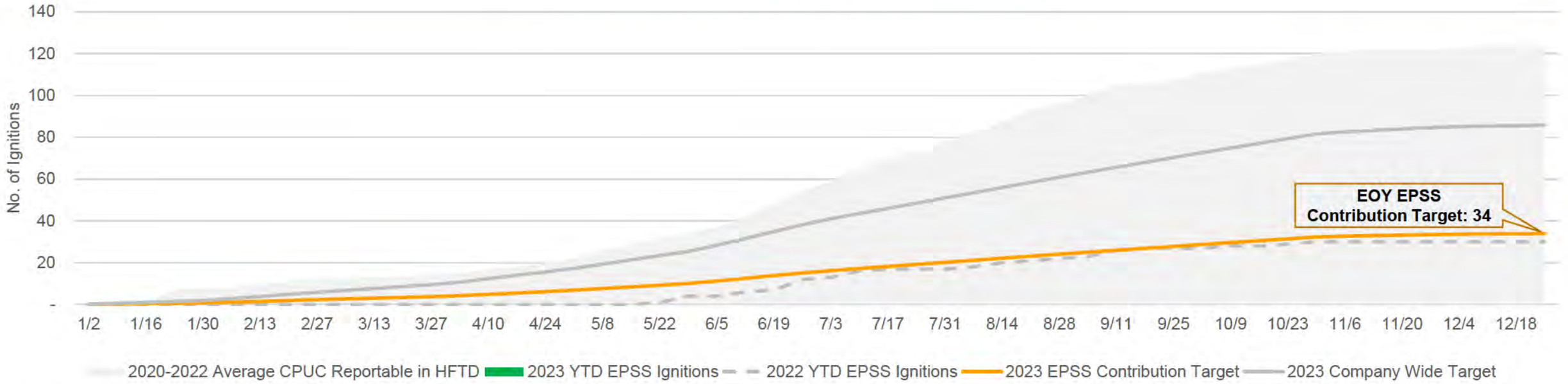


HFRA & HFTD RFIs in EPSS Enabled Zones

1. Status

	2023 EPSS			2022 EPSS in HFTD		2020 – 2022 Avg CPUC RFI in HFTD	
	Last Week[1]	MTD	YTD	MTD	YTD	MTD	YTD
HFRA & HFTD Reportable Fire Ignitions[1]	0	0	0	2	6	8	42
Target[2]	2	3	13	3	8	-	-

3. Trend: HFRA & HFTD RFIs in EPSS Enabled Zones



[1] PRELIMINARY – Incidents under investigation and ignition confirmation is not yet determined

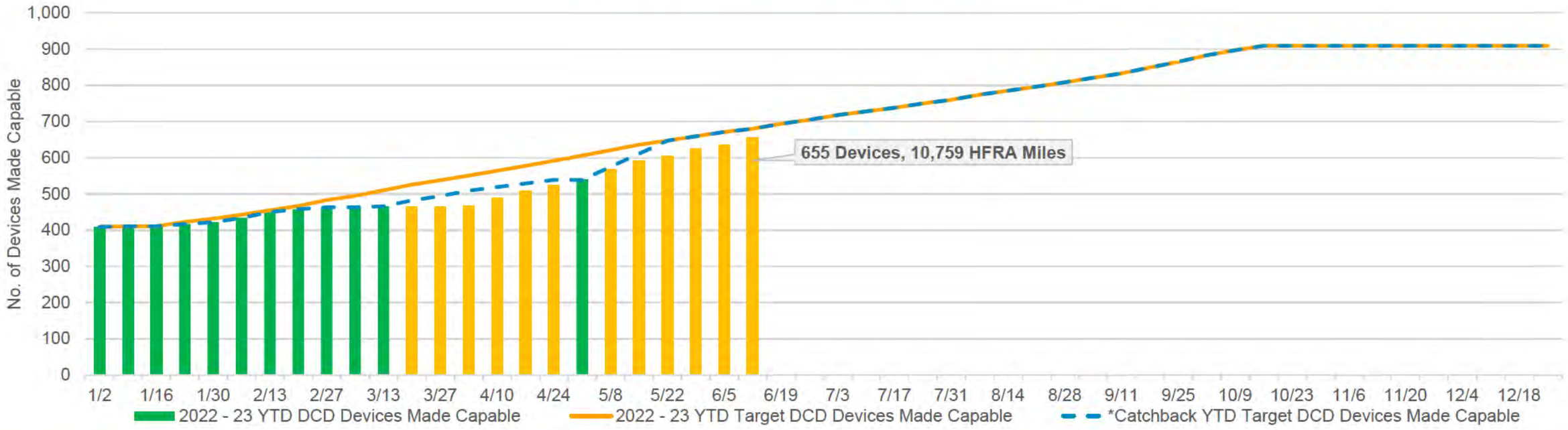
[2] Target based on EPSS contribution to 2023 CPUC Reportable Fire Ignitions on Primary Distribution and Transmission Conductor in HFRA & HFTD company target

Data through 6/11/23 as of 6/12/23

Down Conductor Detection Capability

1. Status				
	Last Week	MTD	YTD	2022 EOY Total
DCD Devices Made Capable	20	31	246	409
Target DCD Devices Made Capable	9	21	271	-
Catchback Target DCD Devices Made Capable	9	21	271	-
HFRA Miles	768	1,247	7,319	3,440

3. Trend: Down Conductor Detection Enablement



Data through 6/11/23 as of 6/12/23

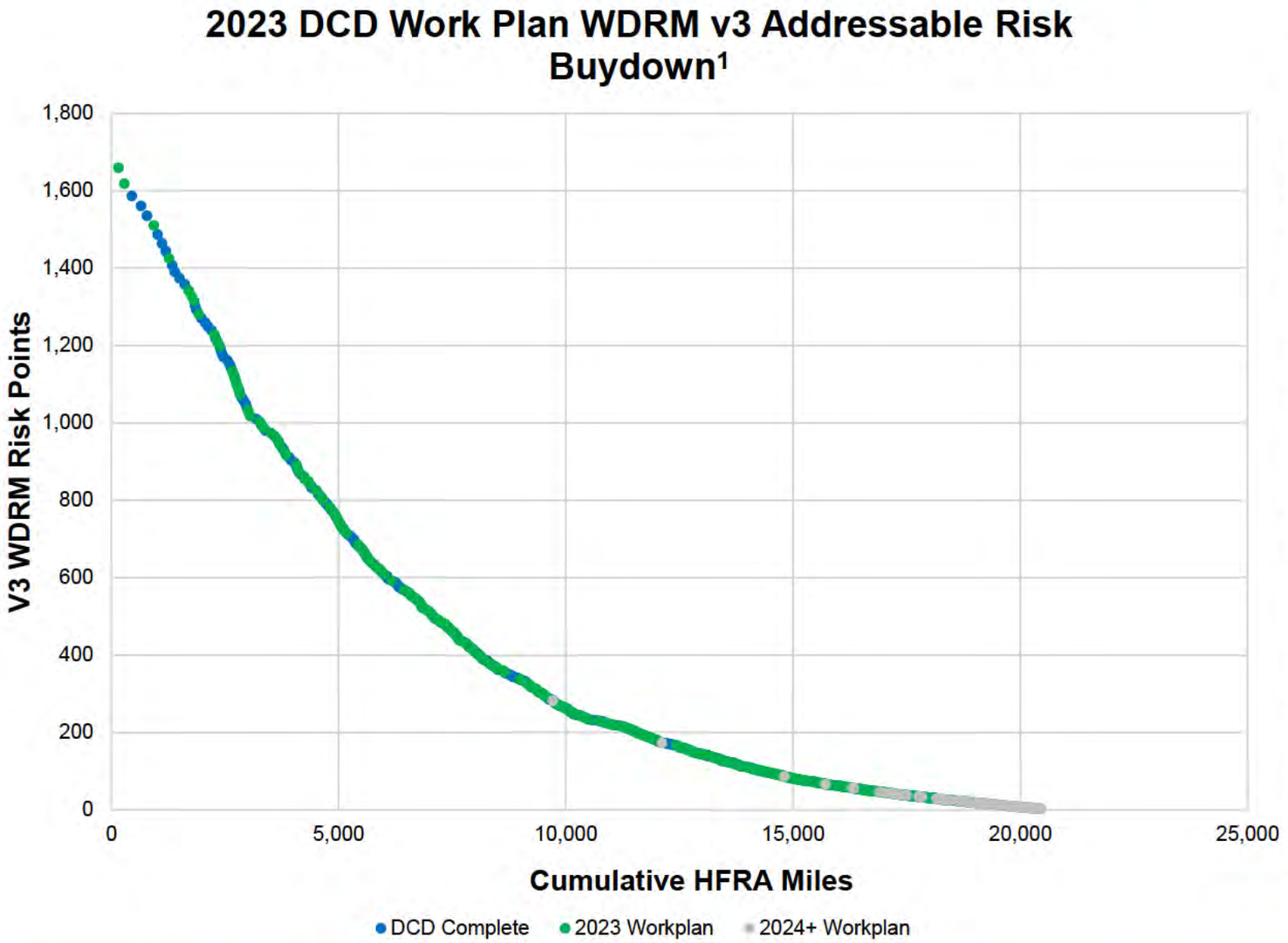
Down Conductor Detection Capability

Containment & Countermeasure									
Date	**Problem**	**Point of Cause**	**Containment Action**	**Status**	**Root**	**Countermeasure Action**	**Target**	**Owner**	**Status**
5/1/2023	DCD install schedule delayed in April due to Advanced Distribution Management System (ADMS) screen build delays, telecom issues and construction schedule constraint	ADMS delays in building screens necessary for DCD testing, coupled with telecom communication issues, resulted in delays in Los Padres installs, while ADMS and construction schedule constraint are impacting Sierra install schedules	Expediting DCD install schedule in non-ADMS cutover divisions (Humboldt) and installing DCD on existing/new Beckwith controllers to supplement work delays in ADMS LP/SI divisions	At Risk	DCD install cannot be completed while Telecom/SCADA communication issues remain unresolved. Due to Q1 storm impacts, construction resources and schedule availability are more limited	ADMS/Telecom teams prioritizing issues resolution in LP. Expediting Humboldt and installing DCD on existing/new Beckwith controllers to get back on plan	7/1/23	[redacted]	On Track

Action Items					
No.	**Action**	**Description**	**Date**	**Owner**	**Status**
1	**DCD Workplan Alignment with Stepdown Transformer**	▪ Refresh System Hardening Wildfire Risk allocation for known population of DCD eligible devices to include multi-device allocation for circuits with stepdown transformers ▪ Evaluate additional eligible DCD devices against refined risk allocation for incorporation into 2023 workplan	5/15/2023	[redacted]	Complete
2	**DCD Device Stepdown Transformer Review**	▪ Conduct Engineering review of DCD eligible devices capable of visibility bypass of stepdown transformers	~~6/1/2023~~ 6/9/2023		Complete
3	**DCD Eligible Viper Scope Evaluation**	▪ Evaluate additional eligible Viper DCD devices against refined HFRA mileage and risk allocation for incorporation into 2023 workplan	5/26/2023		Complete

Data through 6/11/23 as of 6/12/23

Down Conductor Detection Capability



Scope Type	Devices	V3 WDRM Risk Points	Total Indirect HFRA Mileage
2022 Complete	409	242	3,440
2023 Complete	246	638	7,320
WMP Device	231	590	6,814
Additional Scope	15	48	506
2023 Retrofits	298	521	6,181
WMP Device	214	397	4,811
Additional Scope	84	124	1,370
2023 Eligible Viper	81	134	1,557
WMP Device	19	41	500
Additional Scope	62	93	1,057
2023 Form6 CBs	29	80	539
2024+ Workplan	2,277	65	1,861
CBs and 4-Wire	-	433	4,888
Grand Total[1]	**3,340**	**2,113**	**25,786**

[1]Pending completion of eligible viper scope evaluation

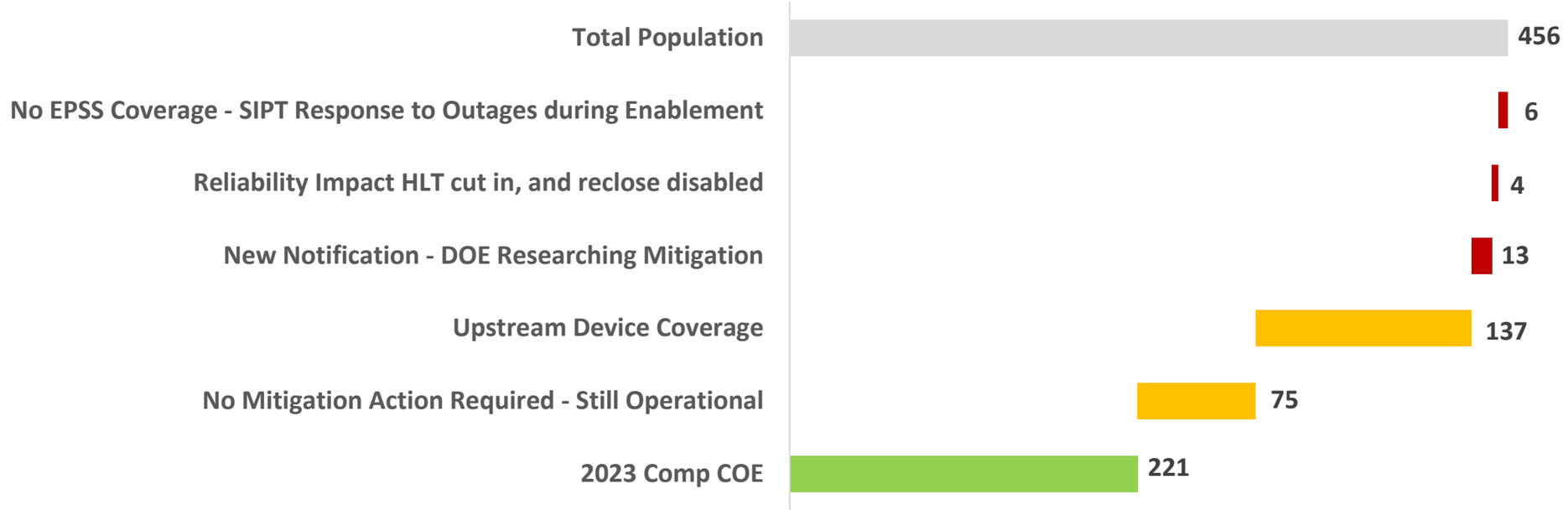
Data through 6/11/23 as of 6/12/23

EPSS on Overwatch CPZs

	CPZs EPSS Protected	EPSS Outages	Avg CESO	Response Time in 60 Minutes	CAIDI	Reportable RFI Ignitions	DCD Eligible
Year-to-Date							
2023 Overwatch CPZs	26	1	325	N/A	31	0	26
2022 Overwatch CPZs	38	0	-	-	-	0	N/A
End-of-Year							
2022 Overwatch CPZs	38	16	787	75%	169	0	N/A

Data through 6/11/23 as of 6/12/23

2023 EPSS Critical Operating Equipment



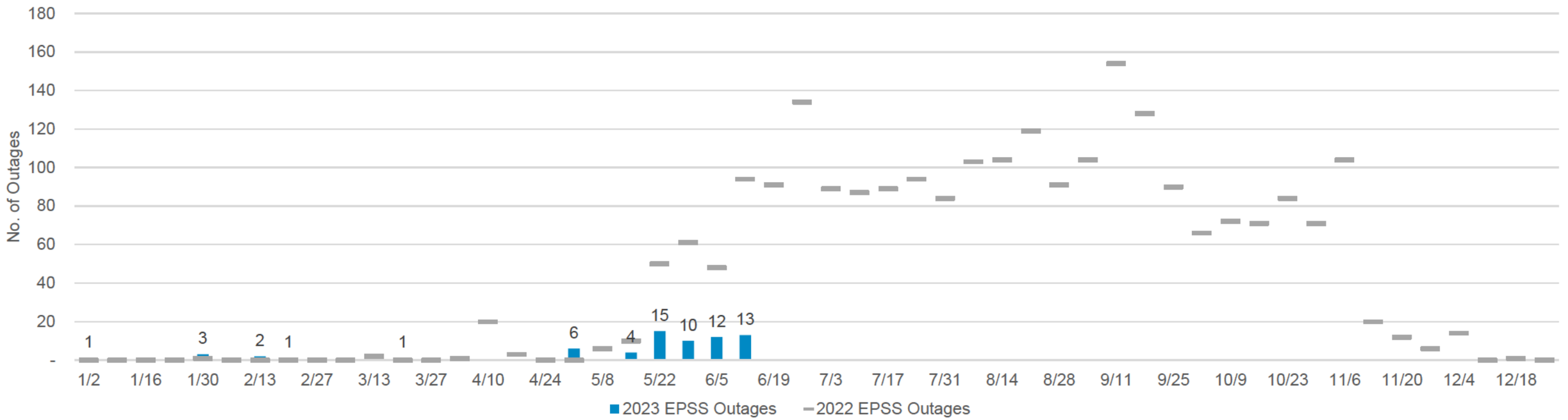
COE Tag ID	PM	Date Added	Device #	Circuit	Device	Division	HFRA Miles	Outages	Upstream Device	Status
125509585	35426892	3/1/2023	274	GEYSERVILLE 1102	Rxe	SO	5.5	11	220154	**COMPLETED 6/6/2023**
125615068	35438773	3/10/2023	625902	LOS COCHES 1101	Nova	CC	2.3		CB	Ready - Unscheduled
123442770	35344602	3/7/2023	3012>491190	DOLAN ROAD 1101	-	CC	0.1	1	CB	Ready – Unscheduled Prior Schedule 5/22/2023 from 5/19 rom 5/22 from 5/19 from 5/22 from 4/17
123221745	35354315	6/1/2022	XR462	MC KEE 1107	Wve	SJ	0.0	3	CB	Ready – Scheduled 7/8/2023 - Prior Scheduled 8/16/2023
125258739	35419925	12/31/2022	672110	DOLAN ROAD 1101	Viper	CC	0.0	1	CB	Ready – Unscheduled - Prior Scheduled 5/8/2023 Shifting to Expense – Water Intrusion Condition
125780522	35436529	4/3/2023	4724	HUMBOLDT BAY 1102	Nova	HB	0.0	-	CB	Ready – Scheduled 10/16/2023, division plans to move up in schedule to September and gain release to work from 7/10/2023 – Osprey Nest
126205139	35449696	5/22/2023	12705	SERRAMONTE 1104	Rve	PN	0.0	-	CB	Estimating – 6/17/2023 EOD – Moved from exp to cap

Data through 6/11/23 as of 6/12/23

Outages on EPSS Enabled Zones

1. Status					
	2023			*2022*	
	Last Week	**MTD**	**YTD**	**MTD**	**YTD**
Outages in Enabled Zones	13	25	70	122	280
Average CESO	526	562	987	870	773

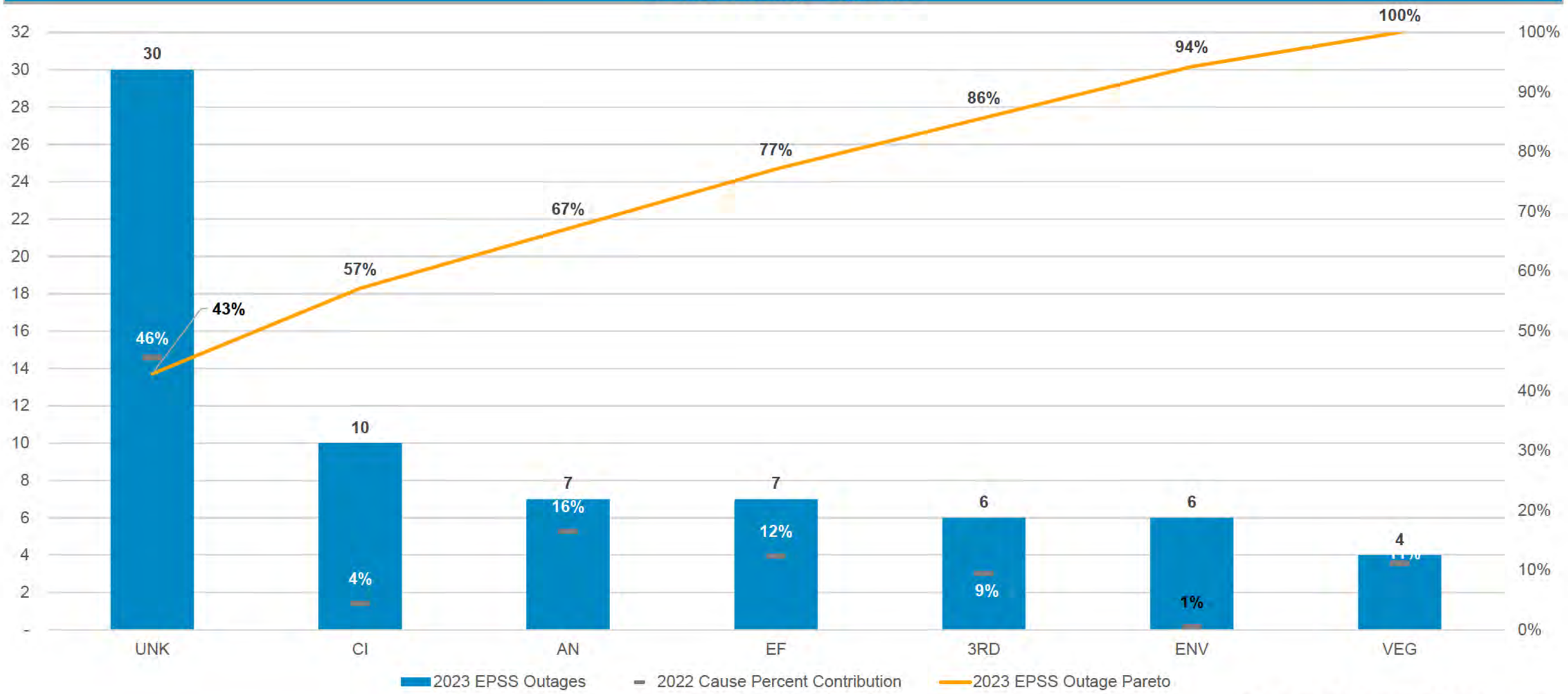
3. Trend: Outages on EPSS Enabled Zones



Data through 6/11/23 as of 6/12/23

Outages on EPSS Enabled Zones by Cause

10. Trend: Outages by Cause



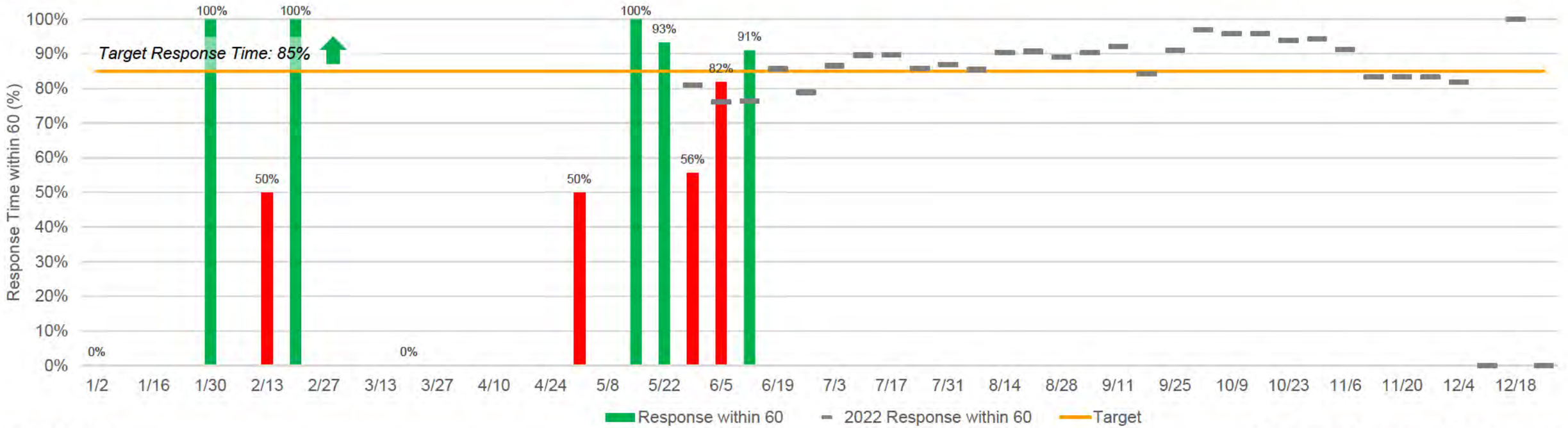
Data through 6/11/23 as of 6/12/23

Outage Response Within 60 Minutes

1. Status

	2023			2022	
	Last Week	MTD	YTD	2022 MTD[1]	2022 YTD[1]
Response within 60 Min	91%	83%	79%	77%	80%
Target	85%	85%	85%	80%	80%
Average Response Time	40	45	46	51	52

3. Trend: Outage Response Within 60 Minutes



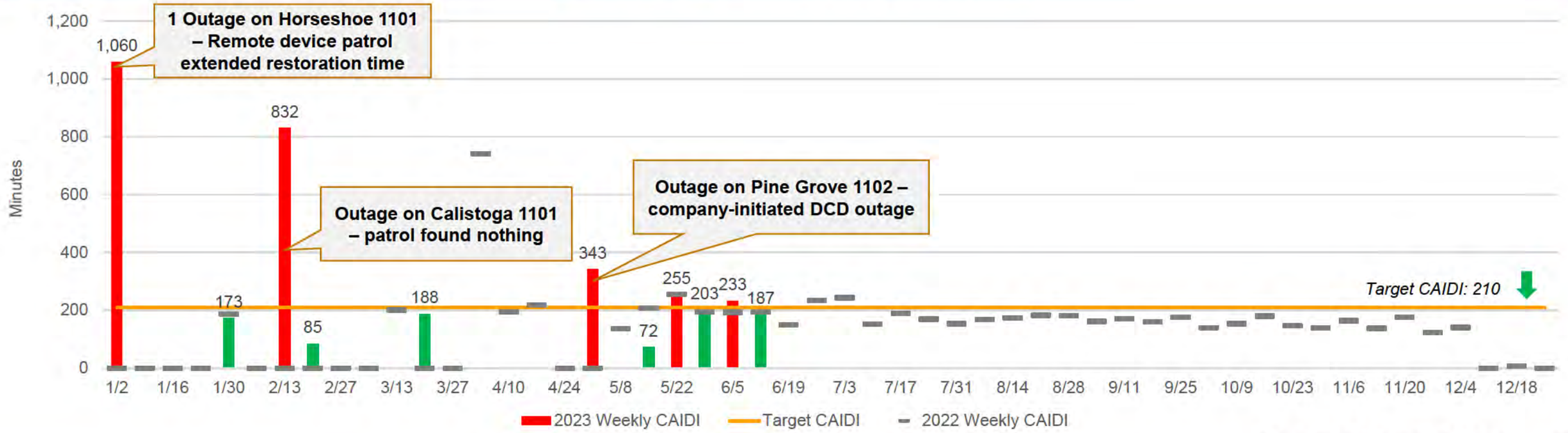
[1] Since 5/24/22

Data through 6/11/23 as of 6/12/23

EPSS CAIDI

1. Status					
	2023			2022	
	Last Week	MTD	YTD	MTD	YTD
CAIDI	187	210	213	191	203
Target	210	210	210	240	240

3. Trend: Outage CAIDI on EPSS Enabled Zones

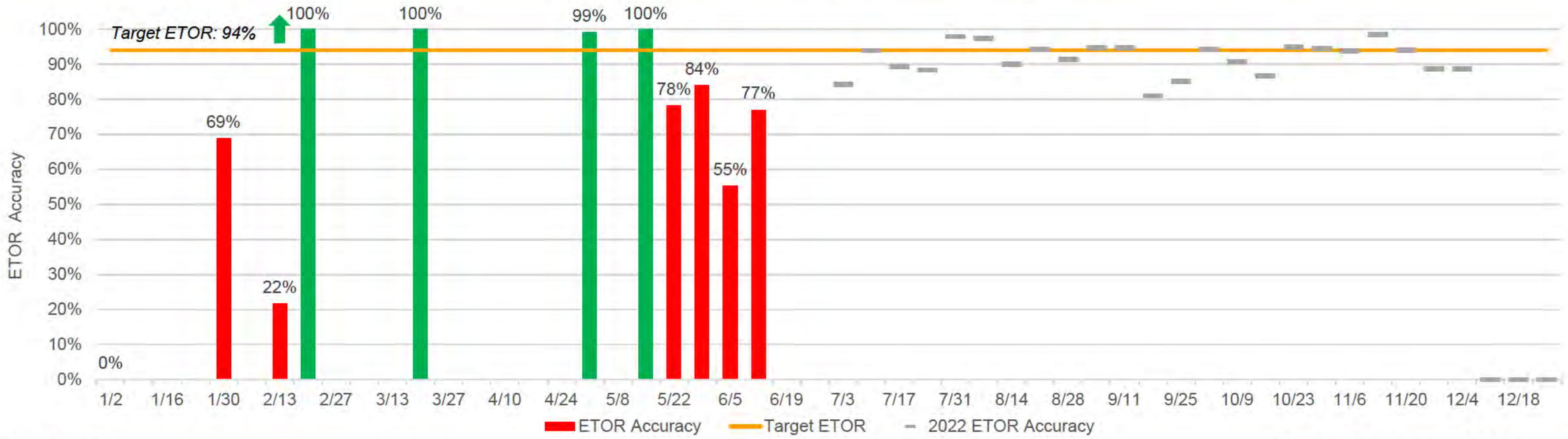


Data through 6/11/23 as of 6/12/23

EPSS ETOR Accuracy

1. Status					
	2023			2022	
	Last Week	MTD	YTD	2022 MTD[1]	2022 YTD[1]
ETOR	77%	61%	84%	N/A	N/A
Target	94%	94%	94%	94%	94%

3. Trend: Outage ETOR on EPSS Enabled Zones



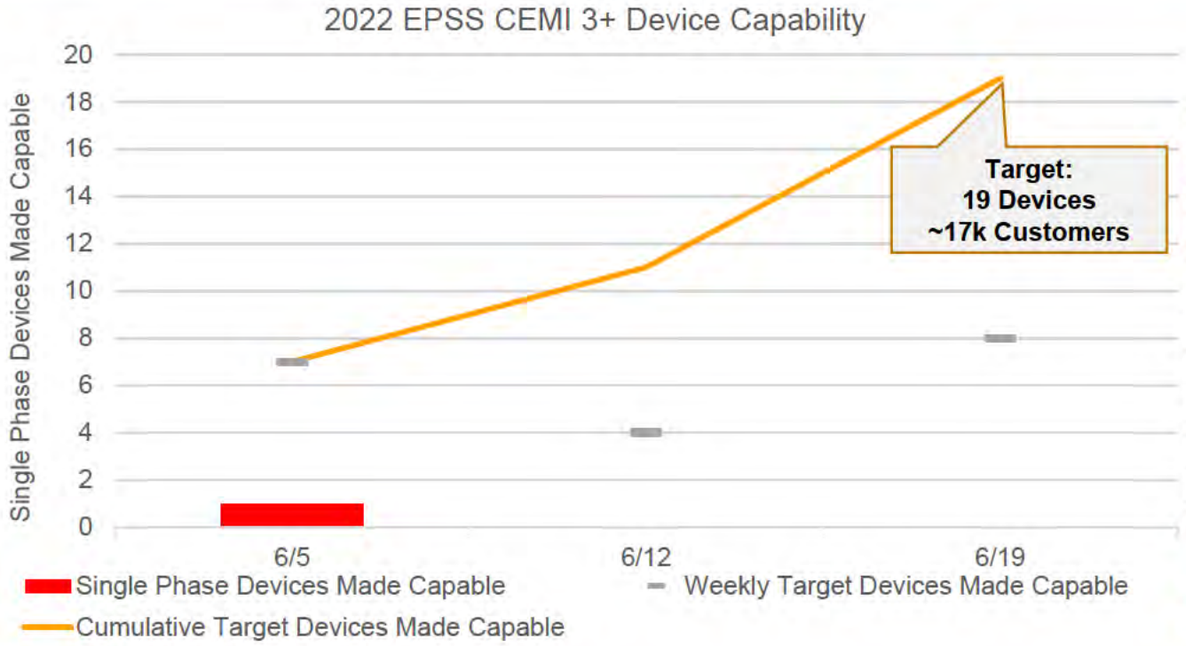
[1] Since 7/1/22

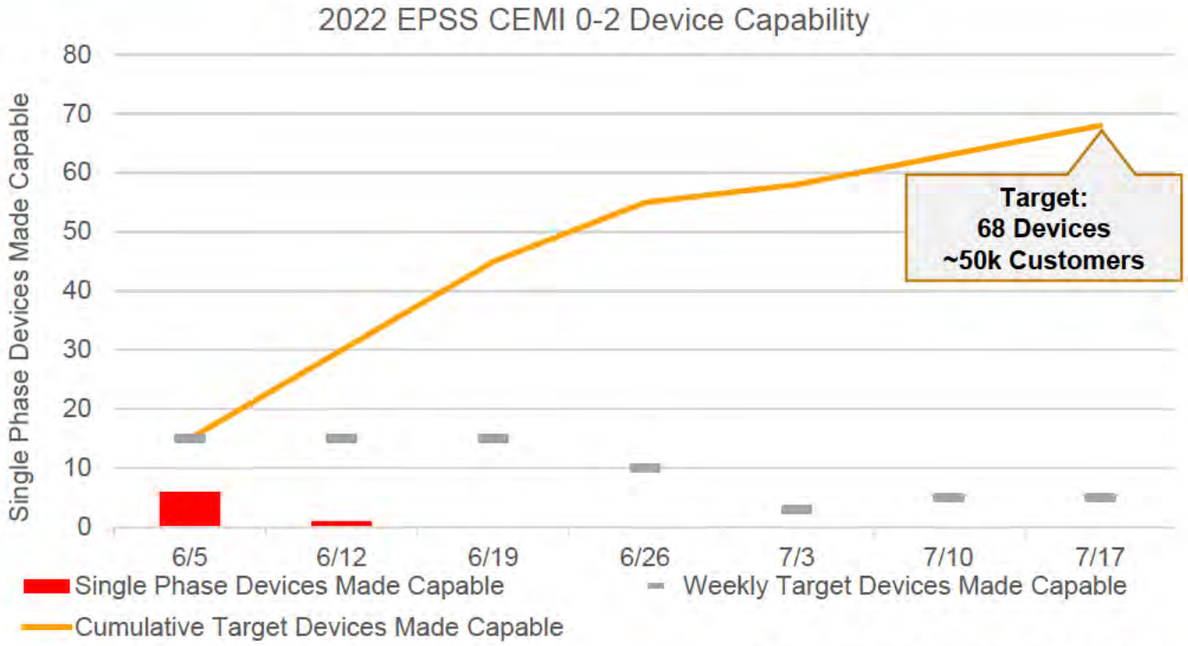
Data through 6/11/23 as of 6/12/23

EPSS Single Phase Device Capability

1. Status			
	Last Week	**MTD**	**YTD**
Total Devices	1	8	8
Total Target	19	41	41

3. Trend: Single Phase Device Capability



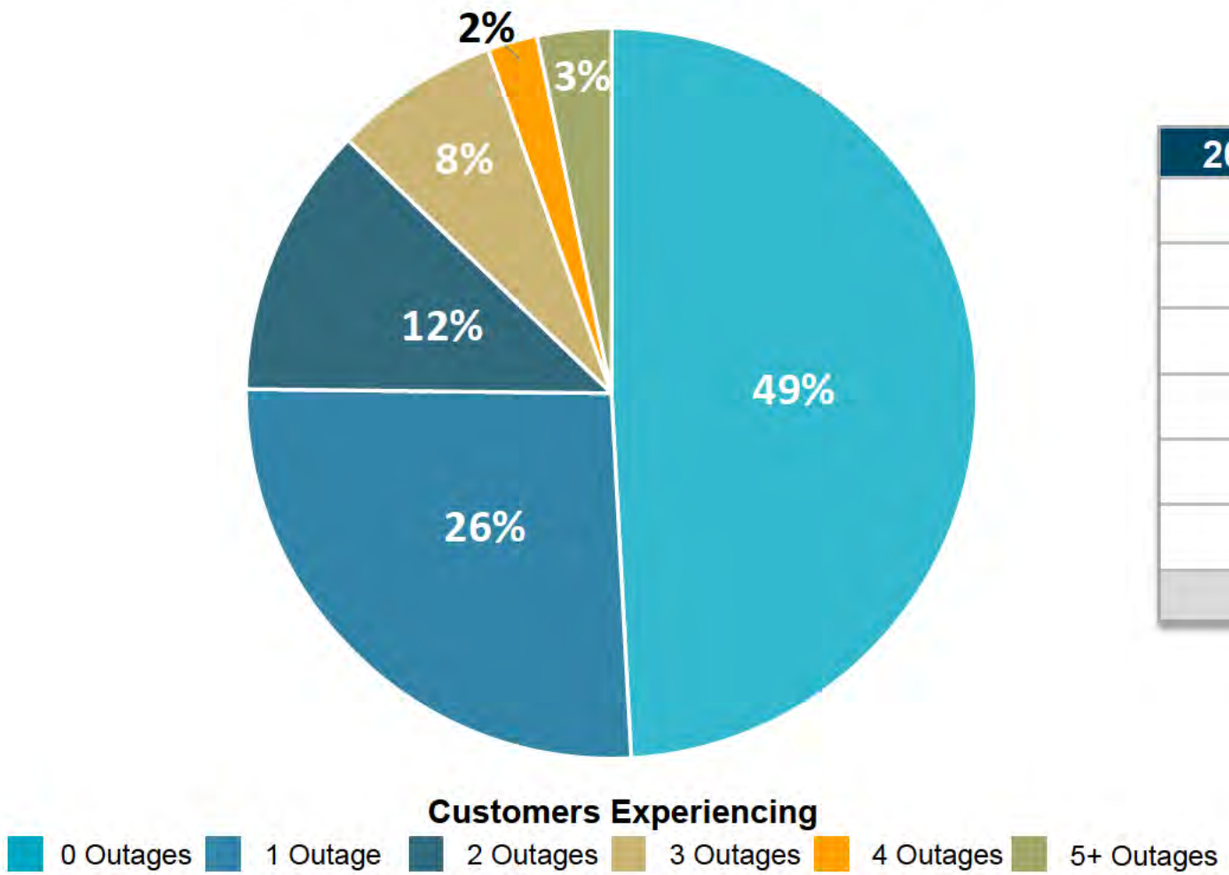


Data through 6/11/23 as of 6/12/23

EPSS Single Phase Device Capability

By making eligible single phase devices EPSS capable, over 67k customers will be descoped from the program or rescoped to EPSS buffer, further minimizing customer reliability impacts.

Service Points by 2022 EPSS CEMI



2022 EPSS CEMI	Service Points	% of Total
0	33,199	49%
1	17,594	26%
2	8,117	12%
3	4,951	7%
4	1,488	2%
5+	2,212	3%
Total	**67,561**	**-**

Data through 6/11/23 as of 6/12/23

EPSS Single Phase Device Capability

Action Items					
No.	**Action**	**Description**	**Date**	**Owner**	**Status**
1	**2023 Eligible EPSS Device Scope**	▪ Identify single phase EPSS eligible devices to be made capable to further reduce customer reliability impact	5/1/2023	[redacted]	Complete
2	**2023 EPSS Single Phase Device Capability – 2022 EPSS CEMI 3+ Devices**	▪ Execute single phase EPSS device capability workplan for devices impacting customers with a 2022 EPSS CEMI 3+	6/15/2023		At Risk
2	**2023 EPSS Single Phase Device Capability – Remaining Devices**	▪ Execute single phase EPSS device capability workplan for remaining devices	7/15/2023		At Risk

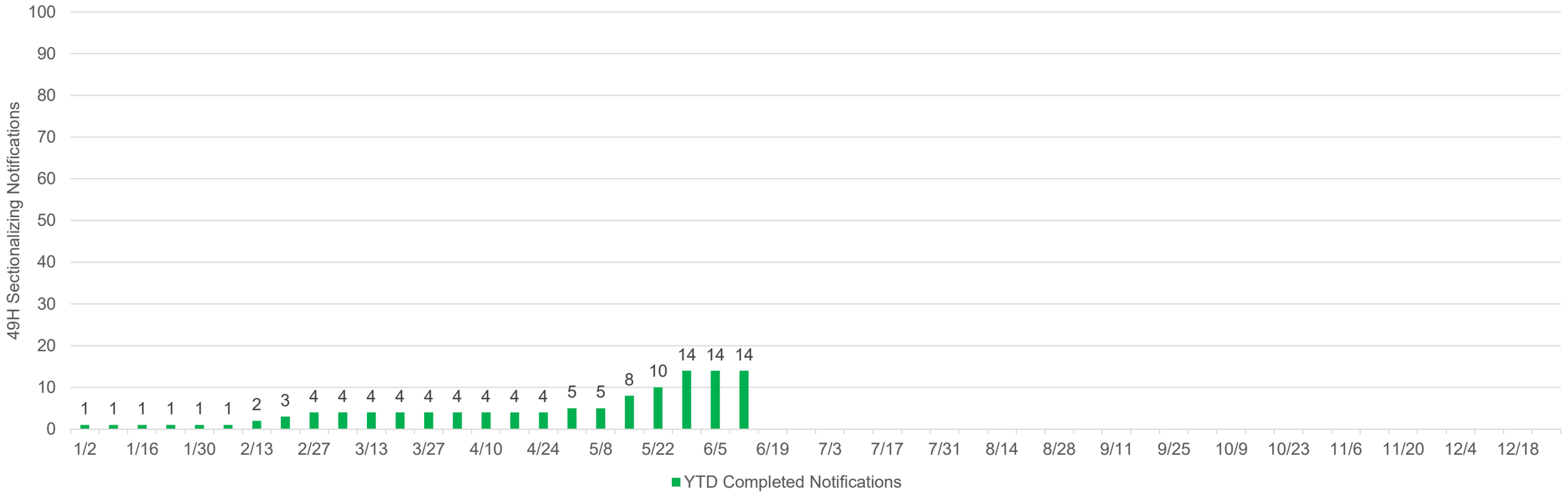
Data through 6/11/23 as of 6/12/23

49H Sectionalizing Impacting EPSS

1. Status

	Last Week	MTD	YTD
Complete	0	0	14
Target	-	-	107

3. Trend

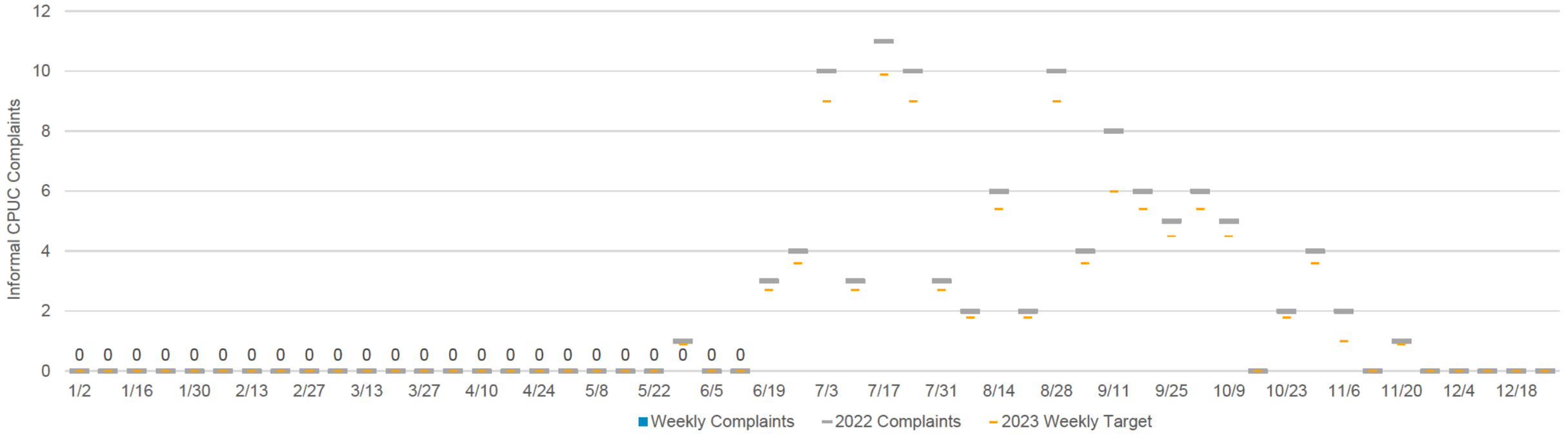


Data through 6/2/23 as of 6/7/23

EPSS Related Informal CPUC Complaints

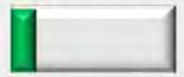
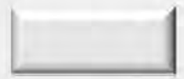
1. Status					
	2023			*2022*	
	Last Week	**MTD**	**YTD**	**2022 MTD**	**2022 YTD**
Informal CPUC Customer Complaints	0	0	0	0	1
Target	0	0	1	-	-

3. Trend: EPSS Related Informal CPUC Complaints



Data through 6/11/23 as of 6/12/23

Phases of 2023 EPSS Customer Outreach

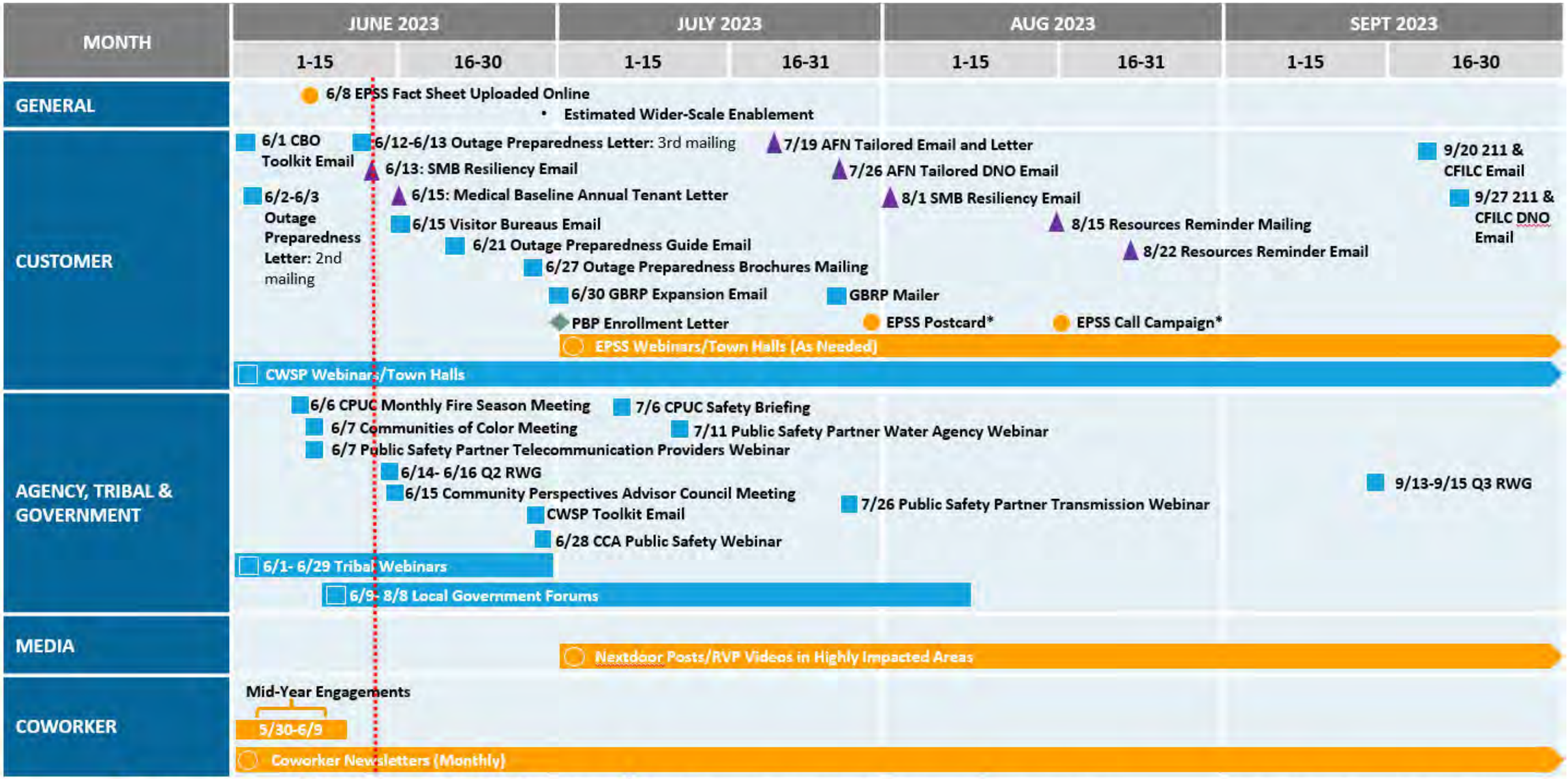
		Progress
Phase 1 – Preseason Education	• Continue to incorporate EPSS into **broader CWSP safety outage messaging** • Leverage **customer insights** from EPSS awareness testing to inform strategies • **Differentiate between customer experiences** in 2021/22	
Phase 2 – CEMI Initial Comms	• Multiple **escalation paths** – EPSS CEMI 5, outages in 30 days, etc. • Be **quicker to acknowledge** outages and show that **PG&E is taking action** • Leverage IVR, SMS, and email to **reach more customers**	
Phase 3 – CEMI Findings from MORE	• **Customer testing and interviews** for MORE process occurring in Q1 • Share **community-specific findings** and actions to improve reliability, leveraging all direct comms methods and social media • **Coordination with Regional teams** on holistic view of outage experience	
Phase 4 – Escalations	• **Ongoing communication** and support after the MORE process – direct to customer comms, community webinars, in-person town halls • Additional focus on **2022 CEMI-8+ customers –** targeted communications about actions to improve reliability, customer resiliency opportunities	

Data through 6/11/23 as of 6/12/23

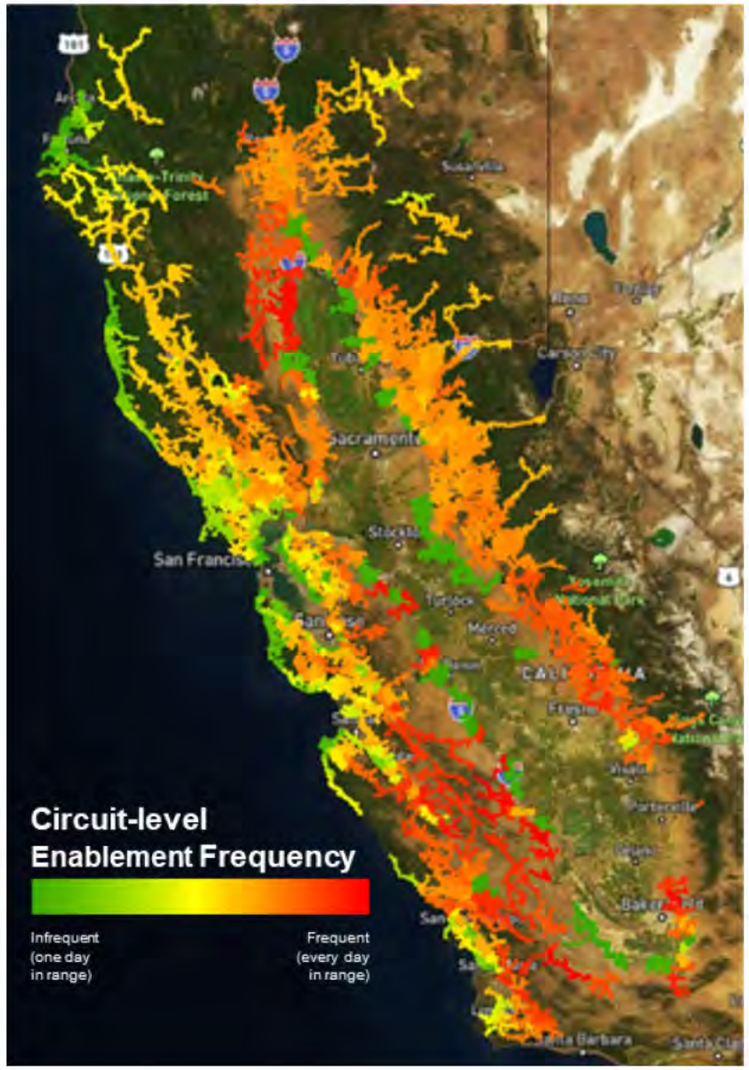
Outreach Objectives

- **Reach all customers** who may be impacted in 2023 before large-scale enablement occurs.
- **Provide additional information** to customers who were highly impacted in 2022.
- **Roll out communications strategically** to reach customers, agency partners, media and coworkers.
- **Ensure outreach is comprehensive** but not duplicative across the EPSS and CWSP workstreams.

EPSS Engagement Timeline

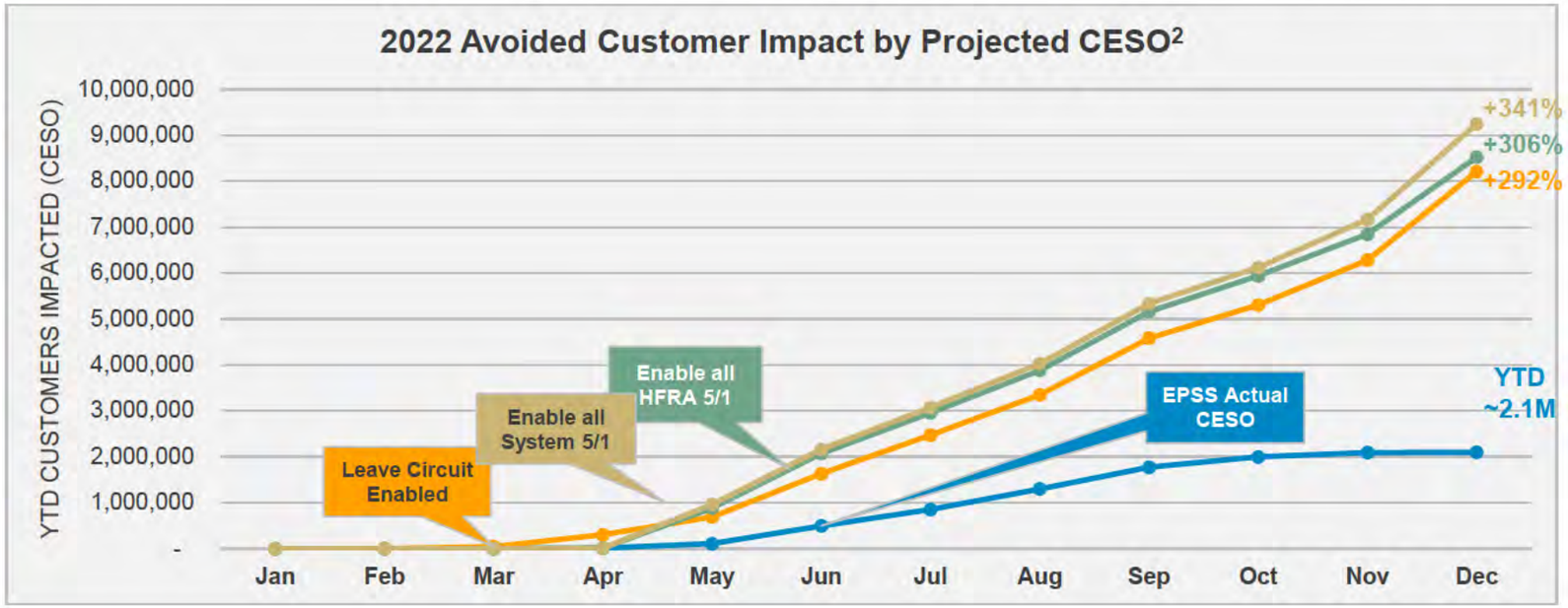


Customer Impact of Improved Operational Capabilities



Our operational capability to enable EPSS during periods of elevated wildfire risk, and return our circuits to normal when it is safe to do so has helped to reduce the scope of outages in 2022:

EPSS ENABLEMENT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
CIRCUITS ENABLED[1]	3	31	65	242	562	833	718	757	772	733	583	88
MILES ENABLED[1]	256	1,674	3,307	15,038	31,138	39,033	37,159	37,965	38,218	38,095	33,903	7,776
EPSS OUTAGES	1	-	3	23	138	416	392	458	488	321	140	8

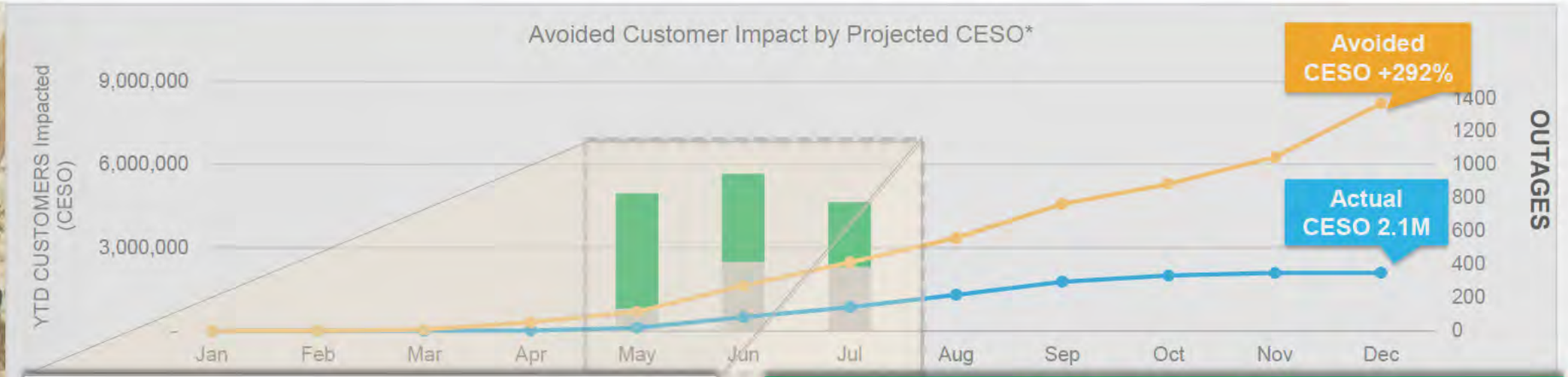


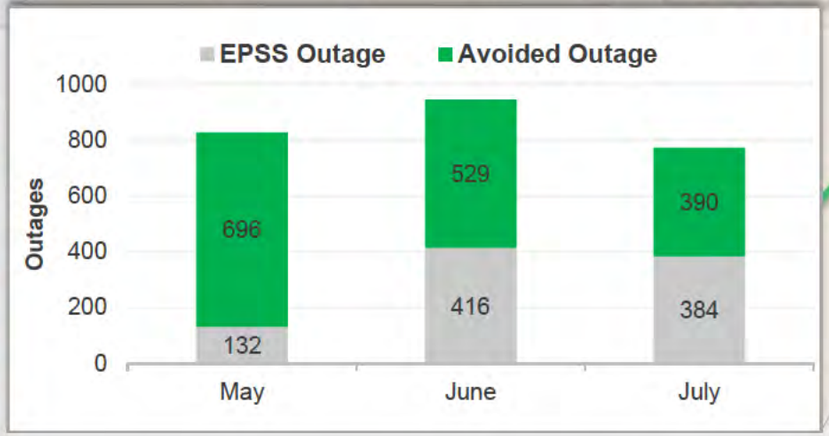
[1] Circuits and Miles enabled is the number of unique circuits and associated miles enabled each month.

Data through 6/11/23 as of 6/12/23

Avoided EPSS Outages

As a result of improved operational capability to enable and disable EPSS over 1,600 fuse, switch, or other lower-level outages were not line recloser or circuit breaker outages between May and July 2022.





Avoided Outages by Cause

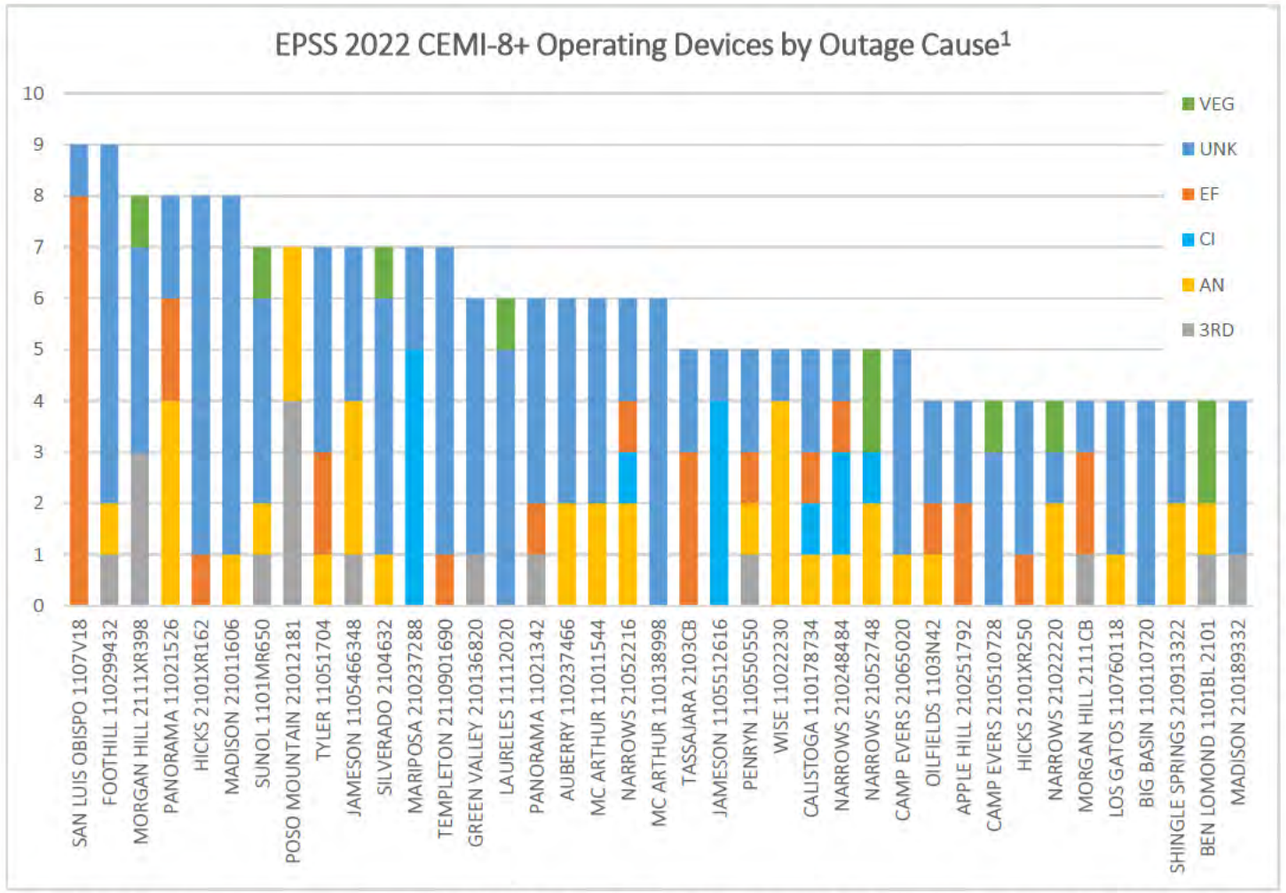
	May	June	July
ENV	4	6	1
CI	12	7	13
3RD	49	46	32
VEG	84	58	32
AN	69	66	53
EF	107	89	61
UNK	371	257	198

'Avoided Outages' aggregates increased customer impact based on presumed upstream EPSS device operation for unplanned outages on downstream fuses, trip savers, and reclosers when EPSS was not enabled.

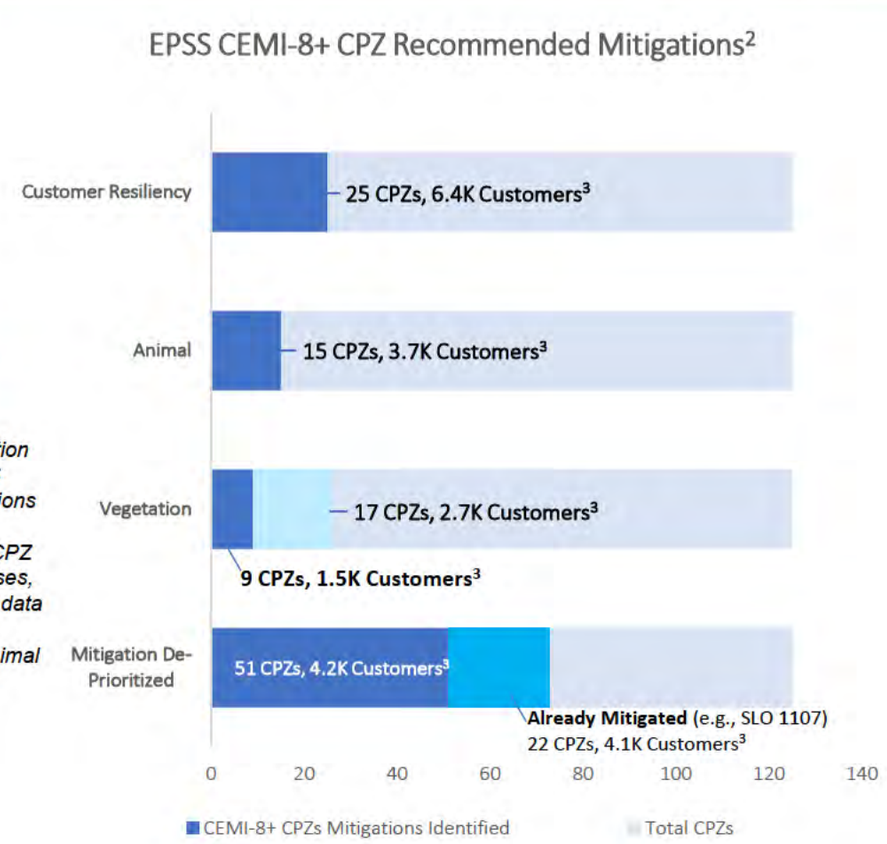
Data through 6/11/23 as of 6/12/23

EPSS CEMI-8+ Operating Device Outages by Cause

Informed by each CPZ's outage counts and causes, recommended mitigations for each CPZ have been selected for preliminary budgeting and planning purposes, with additional localized scoping pending.



Preliminary mitigation selection by EPSS PMO Field Operations and Engineering branch based on CPZ outage count, causes, location, and local data as well as 2023 Vegetation and Animal Retrofit programs.



1.Chart depicts CPZs experiencing more than four total EPSS outages. Full list of CPZs reviewed and resulting mitigations included in appendix.
2.Data as of January 31, 2022. CPZs may be included in more than one mitigation category.
3.SPIDs experiencing eight or more EPSS outages in 2022 currently located on CPZ in mitigation bucket as of January, 31 2023.

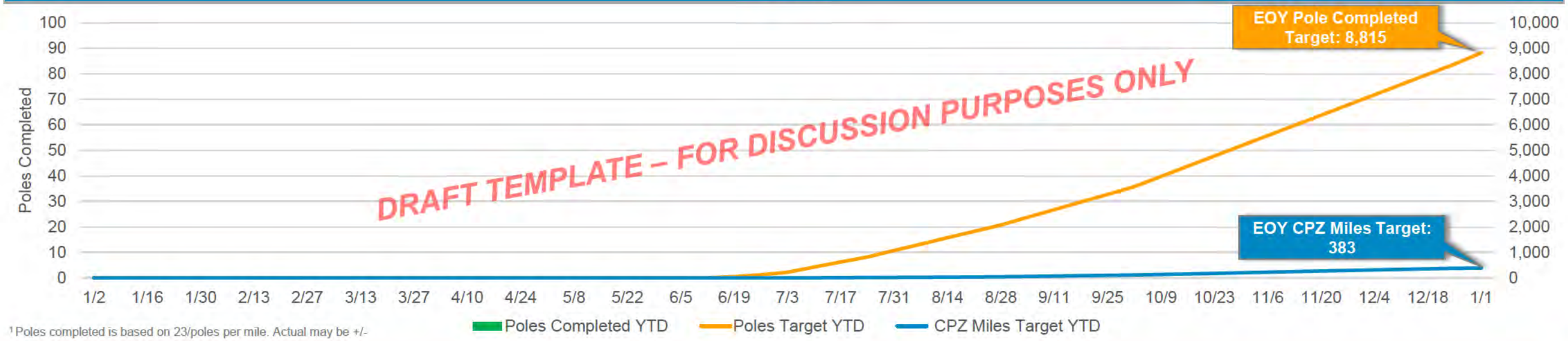
Data through 6/11/23 as of 6/12/23

Proactive Animal Mitigation

1. Status

	Last Week	MTD	YTD
Poles Completed[1]	-	-	-
Target	-	-	8,815
Direct CPZ Miles	-	-	-
Target Miles	-	-	383

3. Trend



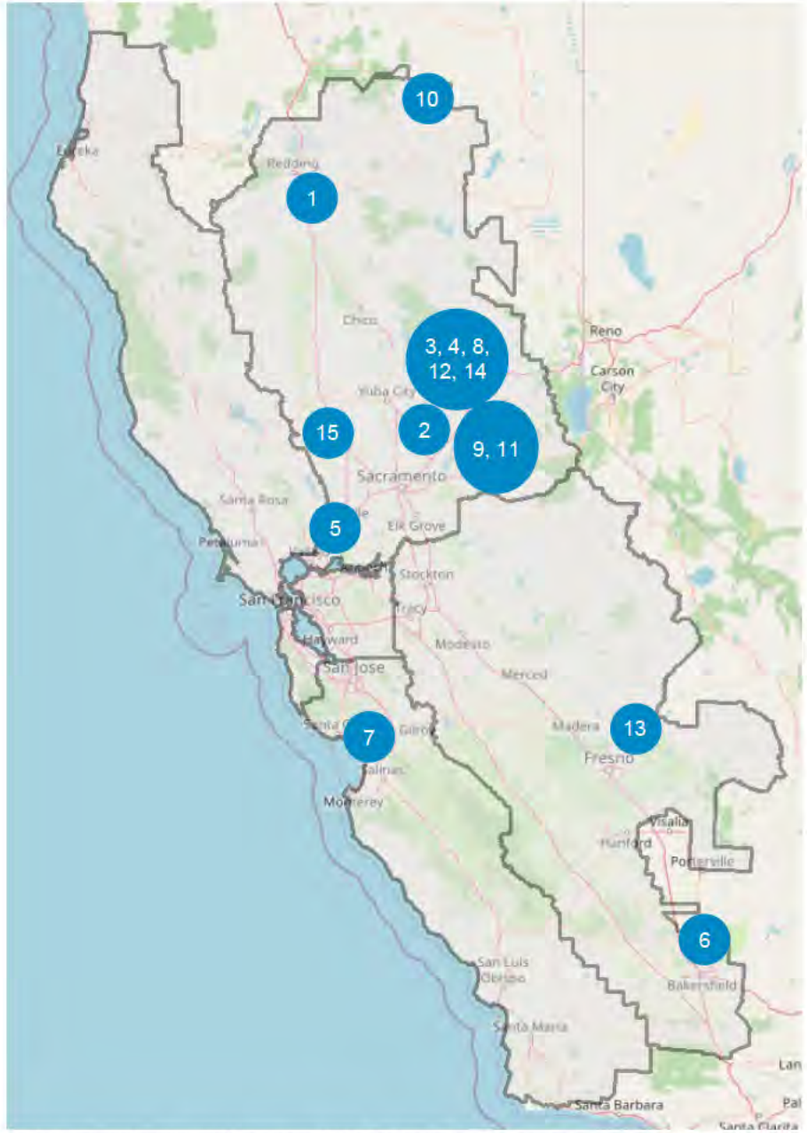
[1] Poles completed is based on 23/poles per mile. Actual may be +/-

Action Items

No.	Action	Description	Date	Owner	Status
1	**2023 Proactive Animal Mitigation Workplan Updates**	▪ Align on bird and critter mitigation workplan and resource prioritization with remaining 2023 field work ▪ Coordinate update of existing animal mitigation standards to include additional animal guard work and equipment proximity field review and execution	~~5/1/2023~~ 6/15/2023	[redacted]	Off Track

Data through 6/11/23 as of 6/12/23

Proactive Animal Mitigation



Total CPZs	Miles Mitigated	EPSS CEMI 8+ Customers Impacted[1]
15	383	~3,700

ID	CPZ	Animal Mitigations Needed?	CPZ Miles	Estimated Total Poles[2]	AN Outages	UNK Outages	Total Outages
1	PANORAMA 11021526	Yes	18	417	4	2	8
2	WISE 11022230	Yes	25	576	4	1	5
3	NARROWS 21052426	Yes	36	829	3	0	3
4	BRUNSWICK 111063100	Yes	4	96	3	0	3
5	JAMESON 1105466348	Yes	15	353	3	3	7
6	POSO MOUNTAIN 21012181	Yes	24	545	3	0	7
7	GREEN VALLEY 210112106	Yes	16	362	2	0	2
8	NARROWS 21052748	Yes	20	459	2	0	5
9	SHINGLE SPRINGS 210913322	Yes	41	942	2	2	4
10	MC ARTHUR 11011544	Yes	28	645	2	4	6
11	SHINGLE SPRINGS 21099372	Yes	19	445	2	1	3
12	NARROWS 21022220	Yes	28	653	2	1	4
13	AUBERRY 110237466	Yes	32	729	2	4	6
14	NARROWS 21052216	Yes	58	1,338	2	2	6
15	MADISON 21011606	Yes	19	426	1	7	8
			383	**8,815**	**37**	**27**	**77**

1.SPIDs experiencing eight or more EPSS outages in 2022 currently located on CPZs in proactive animal plan as of January 31, 2023. Is not reflective of all SPIDs that may be addressed.
2.Estimated Total Poles per SME input estimate of 23 poles per CPZ miles. Some poles may include animal mitigation, to be confirmed in the field.

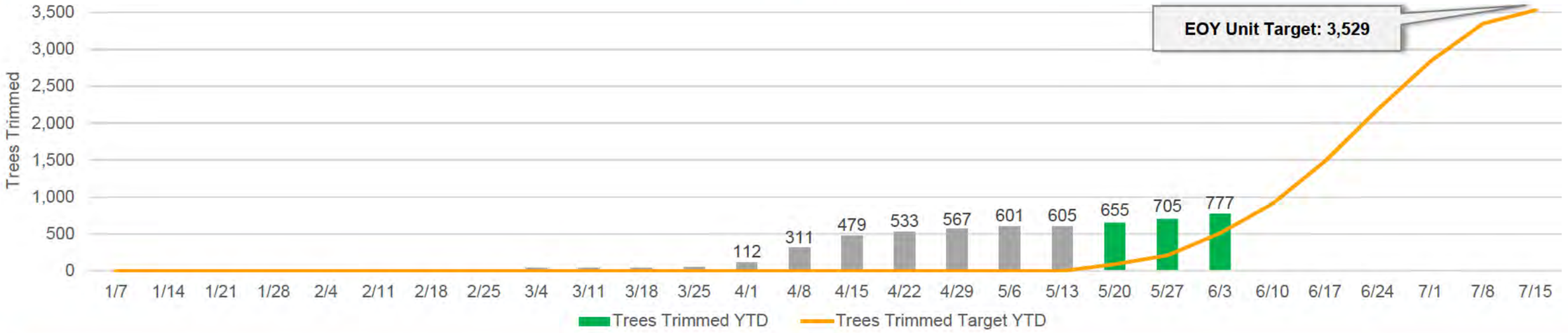
Data through 6/11/23
as of 6/12/23

VMOM – 2022 Carryover (Proactive + Reactive)

1. Status

	Last Week	MTD	YTD
Trees Trimmed[1]	74	54	777
Target[2]	300	-	511

3. Trend



Action Items

No.	Action	Description	Date	Owner	Status
1	**2023 VMOM Reporting Alignment**	▪ Align on 2023 reporting cadence and technology support for Vegetation Management for Operational Mitigation workplan	6/1/2023	[redacted]	Complete

1. Tree trimming data is reported on a weekly basis on Wednesday from the Vegetation Management team
2. As of June 3, 896 trees are constrained; these trees are tracked separately and will be added to the scope as the constraints are cleared

Data through 6/2/23 as of 6/7/23

VMOM – 2023 Extent of Condition

1. Status

	Last Week	MTD	YTD
Trees Trimmed	0	0	0
Target	0	0	0
EPSS Extent of Condition Projects	1	1	3
Past Due Extent of Condition Investigation	0	0	0

3. Trend

Action Items

No.	Action	Description	Date	Owner	Status
1	**2023 VMOM Reporting Alignment**	▪ Align on 2023 reporting cadence and technology support for Vegetation Management for Operational Mitigation workplan ▪ Assess ramp up of resources to complete first extent of conditions by June 16, 2023	6/1/2023	[redacted]	**Complete**

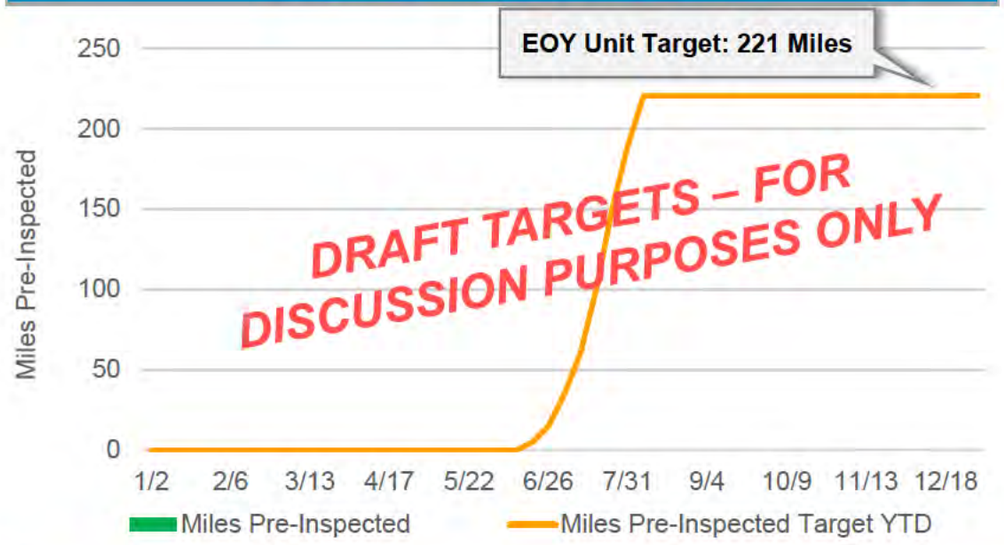
Data through 6/11/23 as of 6/12/23

VMOM – 2023 Proactive Tree Trimming

1. Status

	Last Week	MTD	YTD
Miles Pre-Inspected	0	0	0
Miles Target	0	0	0
Trees Trimmed	0	0	0
Trees Trimmed Target	0	0	0

3. Trend – Miles Pre-Inspected



3. Trend – Trees Trimmed

Action Items

No.	Action	Description	Date	Owner	Status
1	2023 VMOM Reporting Alignment	▪ Align on 2023 reporting cadence and technology support for Vegetation Management for Operational Mitigation workplan	6/1/2023	[redacted]	Complete

Tree trimming for 2023 Proactive Tree Trimming is scheduled to begin the week of June 26

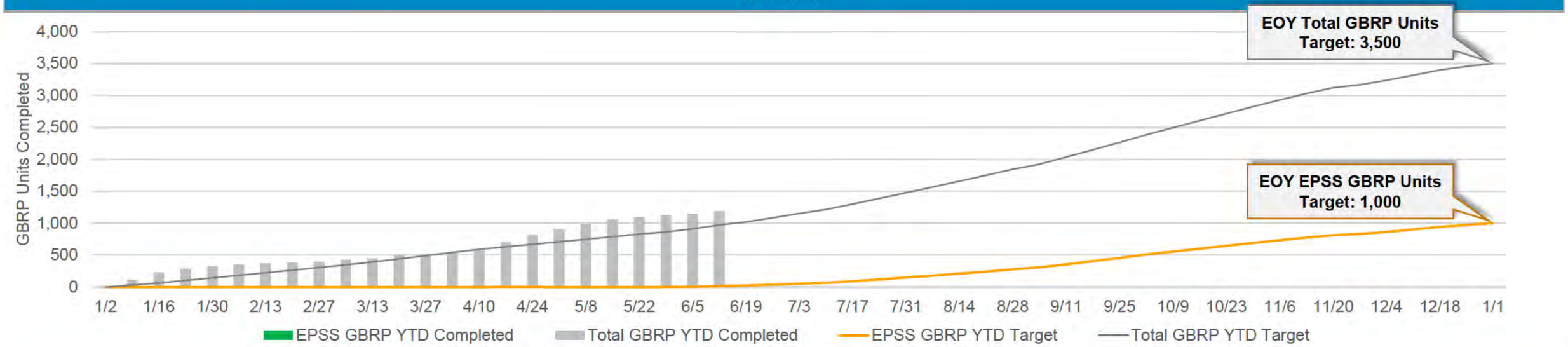
Data through 6/11/23 as of 6/12/23

Customer Resiliency – Generator & Battery Rebate Program (GBRP)

1. Status

	Last Week	MTD	YTD
EPSS GBRP	12	12	12
Target EPSS GBRP	10	14	14
Total GBRP	39	64	1,190
Target Total GBRP	52	82	959

3. Trend



Action Items

No.	Action	Description	Date	Owner	Status
1	**Customer Resiliency - GBRP Expansion Workplan Finalization and Execution**	▪ Update 2023 workplan per finalized scope	5/31/2023	[redacted]	**Complete**

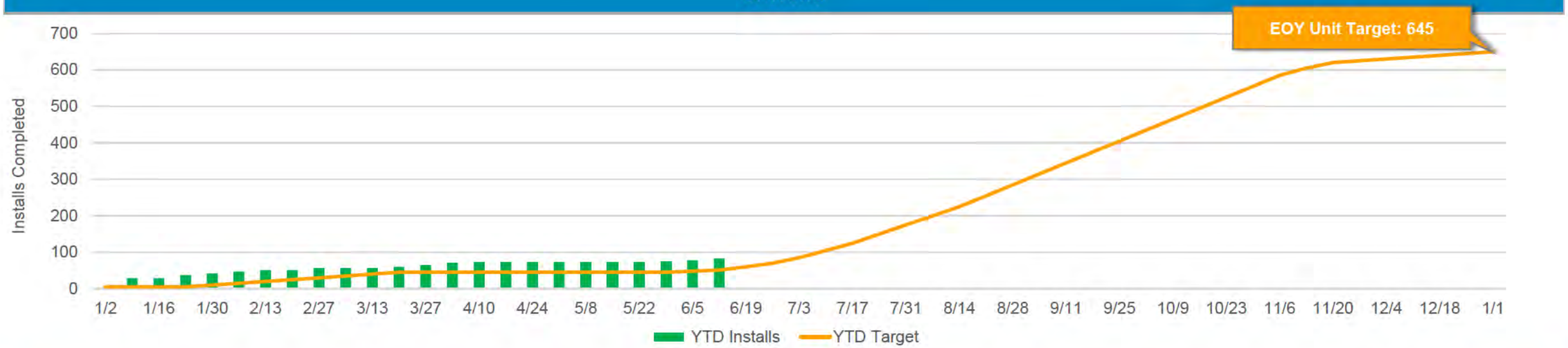
Data through 6/11/23 as of 6/12/23

Fixed Power Solutions – Residential Storage Initiative (RSI)

1. Status

	Last Week	MTD	YTD
Installs Completed	5	5	83
Target	3	6	51

3. Trend



Action Items

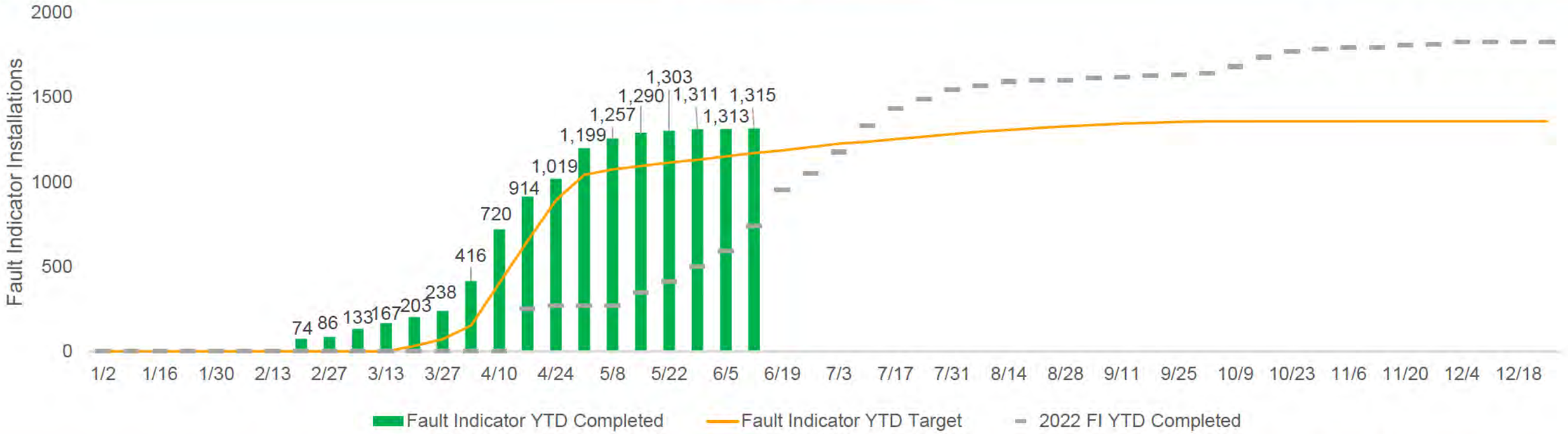
No.	Action	Description	Date	Owner	Status
1	**Customer Resiliency - RSI Workplan Finalization and Execution**	▪ Finalize Phase 2 contracts currently in Sourcing and authorize work execution for Fixed Power Solutions / RSI effort ▪ Update 2023 workplan per finalized scope	5/31/2023	[redacted]	Complete

Data through 6/11/23 as of 6/12/23

Fault Indicators

1. Status					
	2023			2022	
	Last Week	MTD	YTD	MTD	YTD
Fault Indicators Installed	2	4	1,315	148	739
Target	20	28	1,171	130	310

3. Trend: Fault Indicators



Data through 6/11/23 as of 6/12/23

Completed & Planned Engagement

Date	Meeting	LOB / Target Audience	Purpose
1/19/2023	2022 Regional Year in Review	Central Valley Field Ops	Provide each region with an overview of the 2022 EPSS program and regional performance relative to EPSS metrics and discuss program plan and goals for 2023.
1/23/2023		Bay Area Field Ops	
1/24/2023		North Coast Field Ops	
1/25/2023		Central Coast Field Ops	
1/26/2023		North Valley/Sierra Field Ops	
2/14/2023	EPSS Engagement w/ PSS	Public Safety Specialist Supervisors	Engage with PSS Supervisor team to discuss 2023 EPSS program goals and solicit feedback on opportunities for continued improvement.
Ongoing	EPSS Tmen / DLT Workshops	DLTs, Tmen	Socialize 2023 EPSS program goals and solicit feedback on 2022 program performance and opportunities for continued improvement.
5/4/2023	DCC Leader Engagement	DCC Leadership	Engage with DCC Leadership to align on 2023 program goals and enhancements.
5/18/2023	DCC Operator Engagement	North, South, and Central DCC	Socialize 2023 EPSS program goals and solicit feedback on 2022 program performance and opportunities for continued improvement.
5/25/2023	Follow-up Engagement w/ PSS	Public Safety Specialist Supervisors	Follow-up engagement with PSS Supervisor team to discuss mid-year program updates and eventual shift to peak season posture.
5/30/2023	Mid-Year EPSS Engagement	North Valley/Sierra Field Ops	Provide each region with a mid-year update of the program and progress against program goals and improvements for 2023.
5/30/2023		Central Coast Field Ops	
6/9/2023		North Coast Field Ops	
6/1/2023		Bay Area Field Ops	
6/9/2023		Central Valley Field Ops	

Data through 6/11/23 as of 6/12/23

EPSS Regional Year in Review Actions

No.	Action	Date	Owner	Status
1	Resume EPSS Outage Review DORs in partnership with Reliability Engineering team and explore integrating into existing Regional or Reliability Engineering DORs.	~~3/1/2023~~ ~~5/1/2023~~ *When applicable*	Regional Leadership w/ support from EPSS PMO	**On Track**
2	Refine and assess test-in & tail board bulletin process based around in-field conditions and improve real-time communications between field operations and meteorology.	6/30/2023	[redacted]	**On Track**
3	Target earlier distribution of AM EPSS Enablement Summary emails; begin distributing at 0500.	1/26/2023	EPSS PMO	**Complete**
4	Initiate proactive communication channels with customers to provide pre-season messaging and develop comms plan for outage communication and outage mitigation progress updates.	5/5/2023	[redacted]	**Complete**
5	Enhance ETOR procedure to improve accuracy and reliability for customers and begin tracking Level 1, blue-sky metrics for EPSS outages.	*TBD*	Outage Journey Team	**On Track**
6	Work with regional field operations teams to determine, and enhance where needed, resource availability for response and restoration of EPSS outages within our targets.	5/15/2023	Division Field Operations	**At Risk** *Due to Q1 storms*
7	Socialize the 2023 sectionalizing plan with field operations teams for appropriate planning and EPSS scope awareness.	4/15/2023	EPSS PMO	**Complete**

Data through 6/11/23 as of 6/12/23

Field Engagement Feedback

To date in 2023, we have engaged key lines of business to inform our partners on the EPSS program and solicit their feedback. We plan to continue these engagements throughout the course of the year.

Topic	Key Takeaways
Distribution Control Center Consistency	• EPSS Ops team to identify ways to support patrol strategy consistency between field crews and DCCs.
Patrol Strategies for Specific Scenarios	• Discussions around varied understanding of patrol strategies for specific scenarios reinforced our need to be engaging in-person.
Policy on Testing During Inclement Weather	• Teams voiced a desire to have a better policy on testing during inclement weather; we recognize this as a paint point and have begun discussions with key stakeholders to create and implement a solution.
Down Conductor Detection	• EPSS Ops Team to share locations and strategy for Downed Conductor Detection (DCD) devices and provide additional detail around the purpose and standards for DCD devices.
Engagement with EPSS Operations Team	• Leaders in multiple divisions requested the EPSS Ops team meet with the Field Operations teams.
Tags Canceled by CIRT Team	• The EPSS Ops Team is engaging with CIRT to ensure correct priority for EPSS related repair work and with our Restoration teams to document EPSS related issues in the tags for better tracking and support.

WMP Delivery

2023-2025 WMP Commitments

Timeline Category	Not Started	On Track	At Risk	Off Track	Complete	Total
2023 Commitments	0	26	7	0	3	36
3 Year Objectives	2	13	0	0	0	15
10 Year Objectives	11	0	0	0	0	**11**
Total	13	39	7	0	3	**62***

*62 Commitments = 31 Targets + 31 Objectives

10 Year Objectives

Not Started	On Track	At Risk	Off Track	Complete	Total
11	0	0	0	0	11

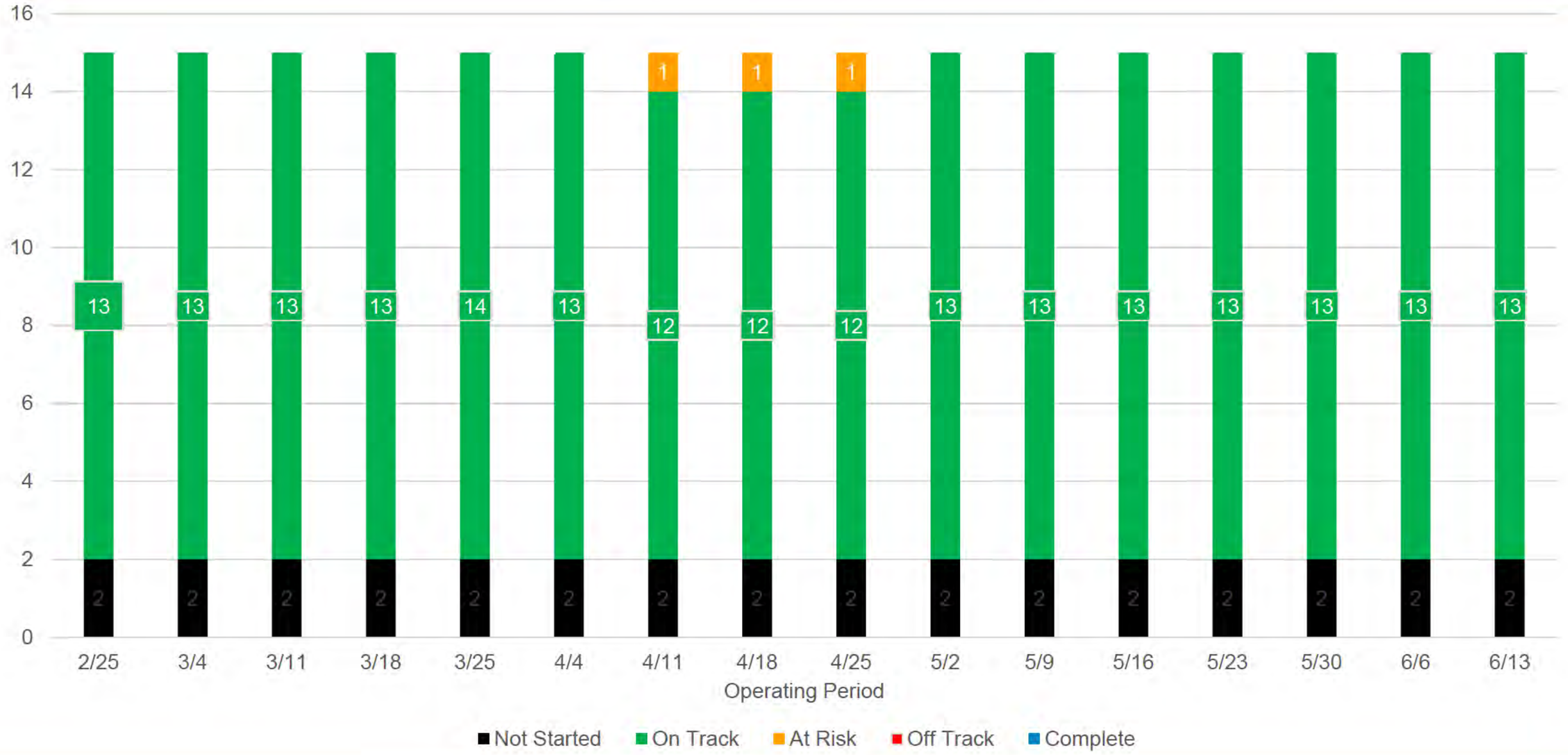
10 Year Objectives

ID	*2023 WMP Target Name*	Chief Sponsor (Execution)	WMP Start Date	Last Compliance Date
CO-03	Community Engagement - Meetings in 2026 -2032	[redacted]	1/1/2026	12/31/2032
EP-03	Maintain all hazards planning and preparedness program in 2026 - 2033	Angie Gibson	1/1/2026	12/31/2032
EP-05	Expand all hazards planning to include additional threats and scenarios in 2026 - 2033	Angie Gibson	1/1/2026	12/31/2032
GM-05	HFTD/HFRA Open Tag Reduction - Backlog Elimination - 7 Year Plan	Jeff Deal	1/1/2026	12/31/2029
PS-03	Evaluate enhancements for the PSPS Transmission guidance	Rod Robinson	1/1/2026	12/31/2032
PS-04	Evaluate incorporation of approved IPW enhancements into the PSPS Distribution guidance	Rod Robinson	1/1/2026	12/31/2032
PS-05	Battery Solutions	[redacted]	6/1/2023	12/31/2032
SA-06	Evaluate FPI and IPW Modeling enhancements in 2026 - 2033		1/1/2026	12/31/2032
VM-10	Inspections in HFTD and HFRA	Peter Kenny	TBD	12/31/2032
VM-11	Enhance and refine Focus Tree Inspection program	Peter Kenny	1/1/2026	12/31/2032
VM-12	Evaluate emerging technologies	Peter Kenny	TBD	12/31/2032

3 Year Objectives

Not Started	On Track	At Risk	Off Track	Complete	Total
2	13	0	0	0	15

3 Year Objectives Delivery Trend



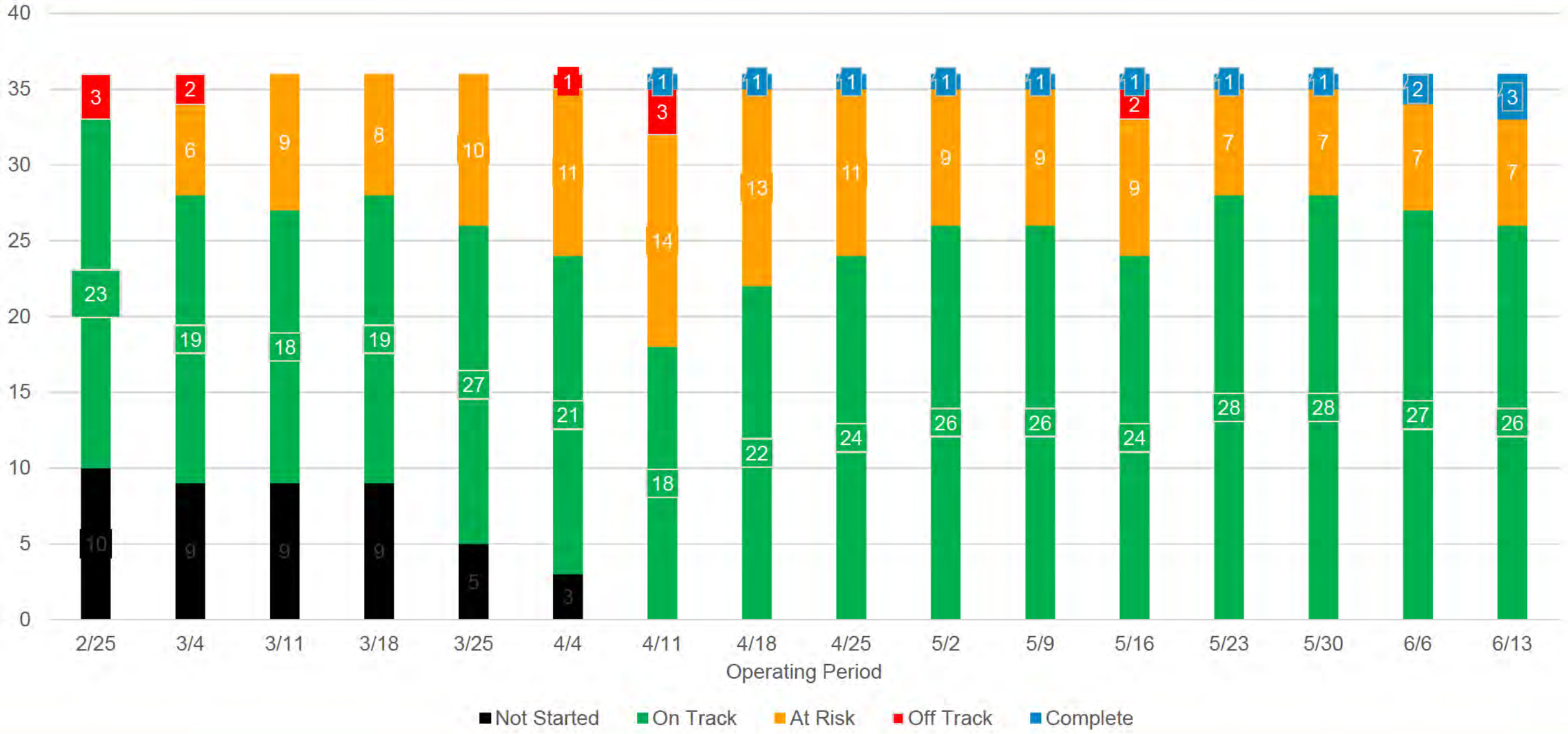
3 Year Objectives

2023 WMP Targets				Q1			Q2			Q3			Q4		
ID	*2023 WMP Target Name*	Chief Sponsor (Execution)	Last Compliance Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
AI-01	Retainment of Inspectors and Internal Workforce Development	Jason Regan	12/31/2025												
AI-11	Filling Asset Inventory Data Gaps	Martin Wyspianski	12/31/2025												
CO-01	Community Engagement - Meetings	[redacted]	9/30/2025												
EP-01	Complete PSPS and Wildfire Tabletop and Functional Exercises	Angie Gibson	11/30/2023												
EP-02	Maintain all hazards planning and preparedness program in 2023 - 2025	Angie Gibson	12/31/2025												
EP-04	Expand all hazards planning to include additional threats and scenarios in 2023 - 2025	Angie Gibson	12/31/2025												
GH-02	Evaluate Covered Conductor Effectiveness	Martin Wyspianski	3/29/2024 (2023 data)												
GM-01	Asset Inspections - Quality Assurance	[redacted]	12/31/2025												
GM-04	HFTD/HFRA Open Tag Reduction - Backlog Elimination - 3 Year Plan	Jeff Deal	12/31/2025												
GM-07	Updates on EPSS Reliability Study	Dave Canny	2/15/2024 (For 2023 data)												
PS-01	Evaluate enhancements for the PSPS Transmission guidance	Rod Robinson	12/31/2025												
PS-02	Evaluate incorporation of approved IPW enhancements into the PSPS Distribution guidance	Rod Robinson	12/31/2025												
SA-05	Evaluate FPI and IPW Modeling enhancements in 2023 - 2025	[redacted]	12/31/2025												
VM-03	Focused Tree Inspection Program	Peter Kenny	12/31/2025												
VM-09	Constraint Resolution Procedural Guideline	Peter Kenny	12/31/2025												

2023 Commitments – Execution

On Track	At Risk	Off Track	Complete	Total
26	7	0	3	36

2023 WMP Commitment Delivery Trend



2023 WMP Commitment At Risk

No	ID	WMP Target Name	Chief Sponsor (Execution)	Catch Back Plan	Meeting Catch Back	Catch Back Plan Due Date	Quarterly	WMP Target Due Date	Week(s) on list
1	GH-01	System Hardening - Distribution	Jamie Martin	Yes		6/30/2023	No	12/31/2023	5
2	GH-04	10K Undergrounding	Jamie Martin	Yes		6/30/2023	No	12/31/2023	15
3	GH-07	Distribution Protective Devices	[redacted]	Yes		8/12/2023	No	12/31/2023	11
4	GM-03	HFTD/HFRA Open Tag Reduction – Distribution Backlog	Jeff Deal	Yes		7/31/2023	No	12/31/2023	15
5	GM-06	EPSS - Down Conductor Detection (DCD)	Dave Canny	Yes		7/1/2023	No	12/31/2023	17
6	PS-07	PSPS Custom Impact Reduction	[redacted]	Yes		6/30/2023	No	12/31/2023	3
7	VM-04	Tree removal	Peter Kenny	Yes		6/30/2023	No	12/31/2023	6

Q2 Target Status

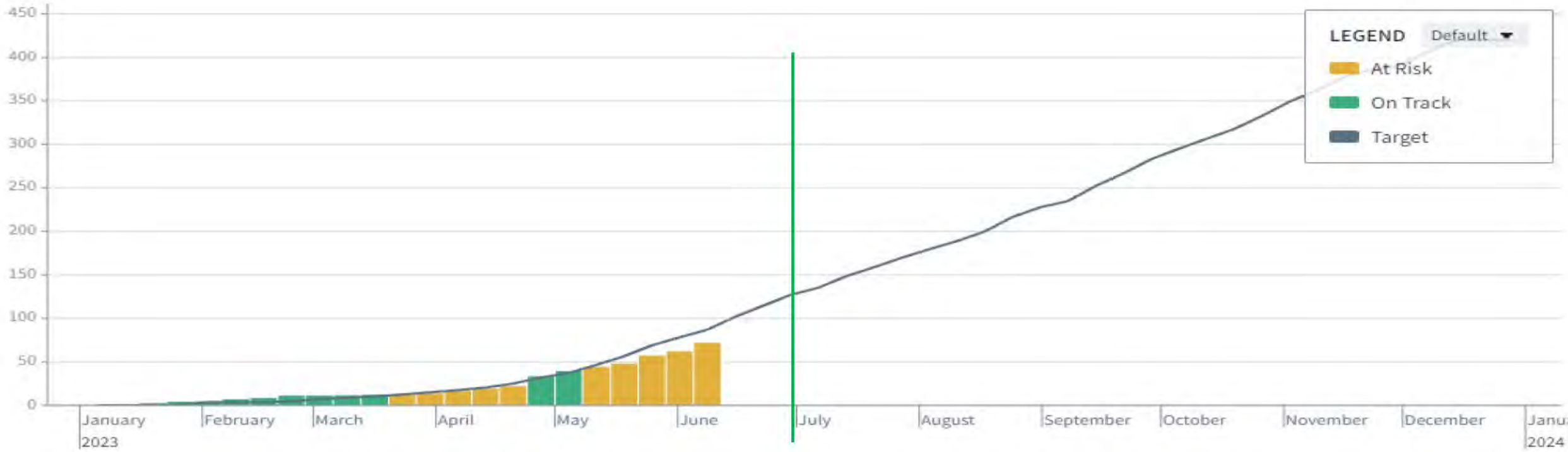
2023 Quarterly Targets										Q2
#	ID	2023 WMP Target Name	Owner	Q2 Internal Due Date	Q2 Compliance Date	Target / Target-Quarterly / Objective	YTD Actuals	Q2 Target	Q2 % Complete	WRCC Status
1	AI-02	Detailed Inspection Transmission – Ground	Jason Regan	6/15/2023	6/30/2023	Target (Quarterly)	22,708	18,000	126.16%	
2	AI-04	Detailed Inspection Transmission – Aerial	Jason Regan	6/15/2023	6/30/2023	Target (Quarterly)	20,586	17,000	121.09%	
3	AI-05	Detailed Inspection Transmission – Climbing	Jason Regan	6/15/2023	6/30/2023	Target (Quarterly)	1,616	1,200	134.67%	
4	AI-06	Perform transmission infrared inspections	Jason Regan	6/15/2023	6/30/2023	Target (Quarterly)	2,676	1,500	178.40%	
5	AI-07	Detailed Ground Inspections - Distribution	Jason Regan	6/15/2023	6/30/2023	Target (Quarterly)	43,270	30,000	144.23%	
6	AI-08	Supplemental Inspections - Substation Distribution	Jason Regan	6/15/2023	6/30/2023	Target (Quarterly)	50	46	108.70%	
7	AI-09	Supplemental Inspections - Substation Transmission	Jason Regan	6/15/2023	6/30/2023	Target (Quarterly)	34	31	109.68%	
8	AI-10	Supplemental Inspections - Hydroelectric Substations and Powerhouses	Jason Regan	6/15/2023	6/30/2023	Target (Quarterly)	38	41	92.68%	
9	CO-02	Community Engagement - Surveys	[redacted]	6/15/2023	6/30/2023	Target (Quarterly)	1	1	100.00%	
10	VM-01	LiDAR Routine Inspections - Transmission	Peter Kenny	6/15/2023	6/30/2023	Target (Quarterly)	17,808.39	17,500	101.76%	
11	VM-02	Pole Clearing Program	Peter Kenny	6/15/2023	6/30/2023	Target (Quarterly)	80,088	57,750	138.68%	
12	VM-05	Defensible Space Inspections - Distribution Substation	Martin Wyspianski	6/15/2023	6/30/2023	Target (Quarterly)	130	130	100.00%	
13	VM-06	Defensible Space Inspections - Transmission Substation	Martin Wyspianski	6/15/2023	6/30/2023	Target (Quarterly)	55	55	100.00%	
14	VM-07	Defensible Space Inspections - Hydroelectric Substations and Powerhouses	Andrew Williams	6/15/2023	6/30/2023	Target (Quarterly)	61	61	100.00%	

2023 WMP Commitment Status

		2023 WMP Targets					Q1			Q2			Q3			Q4		
ID	*2023 WMP Target Name*	Chief Sponsor (Execution)	Q2 Compliance Date	Q3 Compliance Date	Internal Due Date	Last Compliance Date	Target / Target-Quarterly / Objective	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
AI-01	Retainment of Inspectors and Internal Workforce Development	Jason Regan	N/A	N/A	11/30/2023	12/31/2025	Objective (3 Year)												
AI-02	Detailed Inspection Transmission – Ground	Jason Regan	6/30/2023	N/A	6/30/2023	7/31/2023	Target (Quarterly)												
AI-03	Develop Distribution Aerial Inspections program	Jason Regan	N/A	N/A	10/31/2023	12/31/2023	Objective												
AI-04	Detailed Inspection Transmission – Aerial	Jason Regan	6/30/2023	N/A	6/30/2023	7/31/2023	Target (Quarterly)												
AI-05	Detailed Inspection Transmission – Climbing	Jason Regan	6/30/2023	N/A	6/30/2023	7/31/2023	Target (Quarterly)												
AI-06	Perform transmission infrared inspections	Jason Regan	6/30/2023	9/30/2023	11/30/2023	12/31/2023	Target (Quarterly)												
AI-07	Detailed Ground Inspections - Distribution	Jason Regan	6/30/2023	9/30/2023	11/30/2023	12/31/2023	Target (Quarterly)												
AI-08	Supplemental Inspections - Substation Distribution	Jason Regan	6/30/2023	N/A	6/30/2023	7/31/2023	Target (Quarterly)												
AI-09	Supplemental Inspections - Substation Transmission	Jason Regan	6/30/2023	N/A	6/30/2023	7/31/2023	Target (Quarterly)												
AI-10	Supplemental Inspections - Hydroelectric Substations and Powerhouses	Jason Regan	6/30/2023	N/A	6/30/2023	7/31/2023	Target (Quarterly)												
AI-11	Filling Asset Inventory Data Gaps	[redacted]nski	N/A	N/A	12/1/2025	12/31/2025	Objective (3 Year)												
CO-01	Community Engagement - Meetings	[redacted]	N/A	N/A	9/30/2023	9/30/2025	Objective (3 Year)												
CO-02	Community Engagement - Surveys	[redacted]	6/30/2023	9/30/2023	10/31/2023	12/31/2023	Target (quarterly)												
CO-03	Community Engagement - Meetings in 2026 -2032	[redacted]	N/A	N/A		12/31/2032	Objective (10 Year)												
EP-01	Complete PSPS and Wildfire Tabletop and Functional Exercises	Angie Gibson	N/A	N/A	11/10/2023	11/30/2023	Objective (3 Year)												
EP-02	Maintain all hazards planning and preparedness program in 2023 - 2025	Angie Gibson	N/A	N/A	12/1/2023	12/31/2025	Objective (3 Year)												
EP-03	Maintain all hazards planning and preparedness program in 2026 - 2033	Angie Gibson	N/A	N/A		12/31/2032	Objective (10 Year)												
EP-04	Expand all hazards planning to include additional threats and scenarios in 2023 - 2025	Angie Gibson	N/A	N/A	12/1/2023	12/31/2025	Objective (3 Year)												
EP-05	Expand all hazards planning to include additional threats and scenarios in 2026 - 2033	Angie Gibson	N/A	N/A		12/31/2032	Objective (10 Year)												
EP-06	Review, and revise the CERP and 2 Wildfire Related Annexes on a yearly basis	Angie Gibson	N/A	N/A	12/1/2023	12/31/2023	Target												
GH-01	System Hardening - Distribution	Jamie Martin	N/A	N/A	12/31/2023	12/31/2023	Target												
GH-02	Evaluate Covered Conductor Effectiveness	Martin Wyspianski	N/A	N/A	3/29/2024	3/29/2024 (2023 data)	Objective (3 Year)												
GH-03	Evaluate and Implement Covered Conductor Effectiveness Impact on Inspections and Maintenance Standards	Martin Wyspianski	N/A	N/A	12/1/2023	12/31/2023	Objective												
GH-04	10K Undergrounding	Jamie Martin	N/A	N/A	12/31/2023	12/31/2023	Target												
GH-05	System Hardening - Transmission	Ahmad Ababneh	N/A	N/A	11/30/2023	12/31/2023	Target												
GH-06	System Hardening - Transmission Shunt Splices	Ahmad Ababneh	N/A	N/A	10/31/2023	12/31/2023	Target												
GH-07	Distribution Protective Devices	[redacted]	N/A	N/A	11/30/2023	12/31/2023	Target												
GH-08	Surge Arrestor - Removals	[redacted]	N/A	N/A	10/31/2023	12/31/2023	Target												
GH-09	Distribution Line Motor Switch Operator (MSO) - Replacements	[redacted]	N/A	N/A	11/30/2023	12/31/2023	Target												
GH-10	Non-Exempt Expulsion Fuse - Removal	[redacted]	N/A	N/A	11/30/2023	12/31/2023	Target												
GM-01	Asset Inspections - Quality Assurance	[redacted]	N/A	N/A	12/1/2023	12/31/2025	Objective (3 Year)												
GM-02	HFTD/HFRA Open Tag Reduction - Transmission	Ahmad Ababneh	N/A	N/A	12/31/2023	12/31/2023	Target												
GM-03	HFTD/HFRA Open Tag Reduction – Distribution Backlog	Jeff Deal	N/A	N/A	12/31/2023	12/31/2023	Target												
GM-04	HFTD/HFRA Open Tag Reduction - Backlog Elimination - 3 Year Plan	Jeff Deal	N/A	N/A	12/31/2025	12/31/2025	Objective (3 Year)												
GM-05	HFTD/HFRA Open Tag Reduction - Backlog Elimination - 7 Year Plan	Jeff Deal	N/A	N/A		12/31/2029	Objective (10 Year)												
GM-06	EPSS - Down Conductor Detection (DCD)	Dave Canny	N/A	N/A	11/30/2023	12/31/2023	Target												
GM-07	Updates on EPSS Reliability Study	Dave Canny	N/A	N/A	2/15/2024	2/15/2024 (For 2023 data)	Objective (3 Year)												
PS-01	Evaluate enhancements for the PSPS Transmission guidance	Rod Robinson	N/A	N/A	9/1/2023	12/31/2025	Objective (3 Year)												
PS-02	Evaluate incorporation of approved IPW enhancements into the PSPS Distribution guidance	Rod Robinson	N/A	N/A	9/1/2023	12/31/2025	Objective (3 Year)												
PS-03	Evaluate enhancements for the PSPS Transmission guidance	Rod Robinson	N/A	N/A		12/31/2032	Objective (10 Year)												
PS-04	Evaluate incorporation of approved IPW enhancements into the PSPS Distribution guidance	Rod Robinson	N/A	N/A		12/31/2032	Objective (10 Year)												
PS-05	Battery Solutions	[redacted]	N/A	N/A		12/31/2032	Objective (10 Year)												
PS-06	Provide 12,000 new or replacement portable batteries to PG&E customers at risk of PSPS or EPSS	[redacted]	N/A	N/A	12/6/2023	12/31/2023	Target												
PS-07	PSPS Customer Impact Reduction	[redacted]	N/A	N/A	12/15/2023	12/31/2023	Target												
SA-01	AI in Wildfire Cameras	Angie Gibson	N/A	N/A	6/15/2023	6/30/2023	Objective												
SA-02	Line Sensor - Installations	Rod Robinson	N/A	N/A	10/31/2023	12/31/2023	Target												
SA-03	EFD and DFA Reporting	Rod Robinson	N/A	N/A	11/15/2023	12/31/2023	Objective												
SA-04	FPI and IPW Modeling - Revision Evaluation	[redacted]	N/A	N/A	12/1/2023	12/31/2023	Objective												
SA-05	Evaluate FPI and IPW Modeling enhancements in 2023 - 2025	[redacted]	N/A	N/A	12/1/2023	12/31/2025	Objective (3 Year)												
SA-06	Evaluate FPI and IPW Modeling enhancements in 2026 - 2033	[redacted]	N/A	N/A		12/31/2032	Objective (10 Year)												
VM-01	LiDAR Routine Inspections - Transmission	Peter Kenny	6/30/2023	9/30/2023	6/15/2023	12/31/2023	Target (Quarterly)												
VM-02	Pole Clearing Program	Peter Kenny	6/30/2023	9/30/2023	9/30/2023	9/30/2023	Target (Quarterly)												
VM-03	Focused Tree Inspection Program	Peter Kenny	N/A	N/A	12/1/2023	12/31/2025	Objective (3 Year)												
VM-04	Tree removal	Peter Kenny	N/A	N/A	12/1/2023	12/31/2023	Target												
VM-05	Defensible Space Inspections - Distribution Substation	Andrew Williams/[redacted]	6/30/2023	N/A	9/15/2023	9/30/2023	Target (Quarterly)												
VM-06	Defensible Space Inspections - Transmission Substation	Andrew Williams/[redacted]	6/30/2023	9/30/2023	6/15/2023	7/31/2023	Target (Quarterly)												
VM-07	Defensible Space Inspections - Hydroelectric Substations and Powerhouses	Andrew Williams/[redacted]	6/30/2023	N/A	6/15/2023	7/31/2023	Target (Quarterly)												
VM-08	Vegetation Management – Quality Verification	[redacted]	N/A	N/A	12/1/2023	12/31/2023	Target												
VM-09	Constraint Resolution Procedural Guideline	Peter Kenny	N/A	N/A	12/1/2023	12/31/2025	Objective (3 Year)												
VM-10	Inspections in HFTD and HFRA	Peter Kenny	N/A	N/A		12/31/2032	Objective (10 Year)												
VM-11	Enhance and refine Focus Tree Inspection program	Peter Kenny	N/A	N/A		12/31/2032	Objective (10 Year)												

GH-01 System Hardening - Distribution

YTD Baseline



Week Ending	1/7	1/14	1/21	1/28	2/4	2/11	2/18	2/25	3/4	3/11	3/18	3/25	4/1	4/8	4/15	4/22	4/29	5/6	5/13	5/20	5/27	6/3	6/10	6/17	6/24	7/1	7/8	7/15	7/22	7/29	8/5	8/12	8/19	8/26	9/2	9/9	9/16	9/23	9/30	10/7	10/14	10/21	10/28	11/4	11/11	11/18	11/25	12/2	12/9	12/16	12/23
OP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
Target YTD				.6	3.5	3.5	3.5	4.7	7.1	8.7	10.3	12.5	15	17.5	20.5	25	32	37.2	46.5	56.6	69	78.2	87	101.8	114.4	127	135.2	148.4	158.7	169.5	179.5	188.8	199.8	216.5	227.7	234.8	252.2	266.6	283	294.9	306.5	317.7	332.8	349.2	362.4	378.3	386	391.1	407	419.8	420
Target Week of				.6	2.9	0	0	1.2	2.4	1.6	1.6	2.2	2.5	2.5	3	4.5	7	5.2	9.3	10.1	12.4	9.2	8.8	14.8	12.6	12.6	8.2	13.2	10.3	10.8	10	9.3	11	16.7	11.2	7.1	17.4	14.4	16.4	11.9	11.6	11.2	15.1	16.4	13.2	15.9	7.7	5.1	15.9	12.8	.2
YTD Actual	-	.8	2.3	4.2	4.6	7	8.3	11.2	11.2	11.62	12.4	12.4	13.6	16.33	19.16	22.24	33.42	39.19	44.15	47.98	57.28	62.15	72.04																														

GH-01 System Hardening - Distribution Catch Back Plan

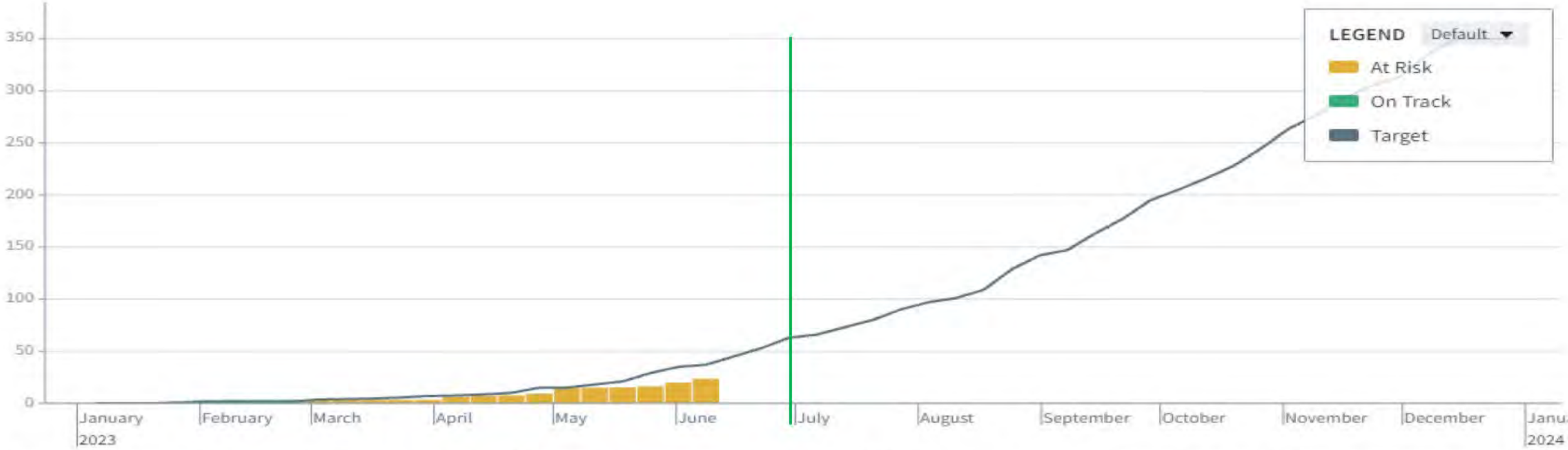
Catch Back Plan Due Date: 6/30/2023 - WMP Target Due Date: 12/31/23
Chief Sponsor: Jamie Martin

YTD Actual	YTD Target	Gap to Target
72.04	87	14.96

Program	Date Raised	Problem	Point of Cause	Containment Action	Containment Status	Root Cause	Countermeasure Action	Catch Back	Owner	Countermeasure Status
10K Under-grounding	3/6/23	The program is behind target with 44.2 miles completed YTD against Target of 46.5	The multiple storm/snow events in Jan/Feb and into March have prevented access to underground construction sites where work is otherwise ready to execute.	Project Management team reviewing projects ready for construction to validate that crews are scheduled to complete work as aggressively as possible. [As of 5/12 there are over 170.8 miles in construction and another 73.6 miles ready for construction.]		2023 Underground work is still largely being executed on a "just in time basis" such that there is little buffer time (or "float") in project schedules to accommodate weather or other unforeseen delays.	Program is accelerating work readiness activities with estimating having recently completed 400 miles of work for 2023 & 2024 that will allow the program to build in some buffer against future delays. Additional focus placed on projects in PEND and with daily reporting to track progress/delays	6/30/23 Number of units to be delivered (as part of the catch back plan): 82.85 miles OH/Rem/UG Number of units delivered by Target Date: 127	[redacted] with Construction and Contract Land, Environ-mental & EPWC partners	
				Complete 400 system hardening UG miles out of PEND / permitting, targeting 6/1 [Some of these miles will carry over to 2024.]					

GH-04 10K Undergrounding

YTD Baseline



Week Ending	1/7	1/14	1/21	1/28	2/4	2/11	2/18	2/25	3/4	3/11	3/18	3/25	4/1	4/8	4/15	4/22	4/29	5/6	5/13	5/20	5/27	6/3	6/10	6/17	6/24	7/1	7/8	7/15	7/22	7/29	8/5	8/12	8/19	8/26	9/2	9/9	9/16	9/23	9/30	10/7	10/14	10/21	10/28	11/4	11/11	11/18	11/25	12/2	12/9	12/16	12/23
OP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
Target YTD				.6	1.4	1.4	1.4	1.4	3.5	4	4.5	5.5	7	7.5	8.5	10	15	15	18	21	29	35	37	45	53	63	66	73	80	90	97	101	109	128.5	142	147	163	177	195	205	216	228	245	264	277	294	305	314	335	350	350
Target Week of				.6	.8	0	0	0	2.1	.5	.5	1	1.5	.5	1	1.5	5	0	3	3	8	6	2	8	8	10	3	7	7	10	7	4	8	19.5	13.5	5	16	14	18	10	11	12	17	19	13	17	11	9	21	15	0
YTD Actual	-	-	.2	1.5	2.95	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	6.12	6.93	7.58	9.25	14.54	15.06	15.36	16.12	19.78	23.76																													

GH-04 10K Undergrounding Catch Back Plan

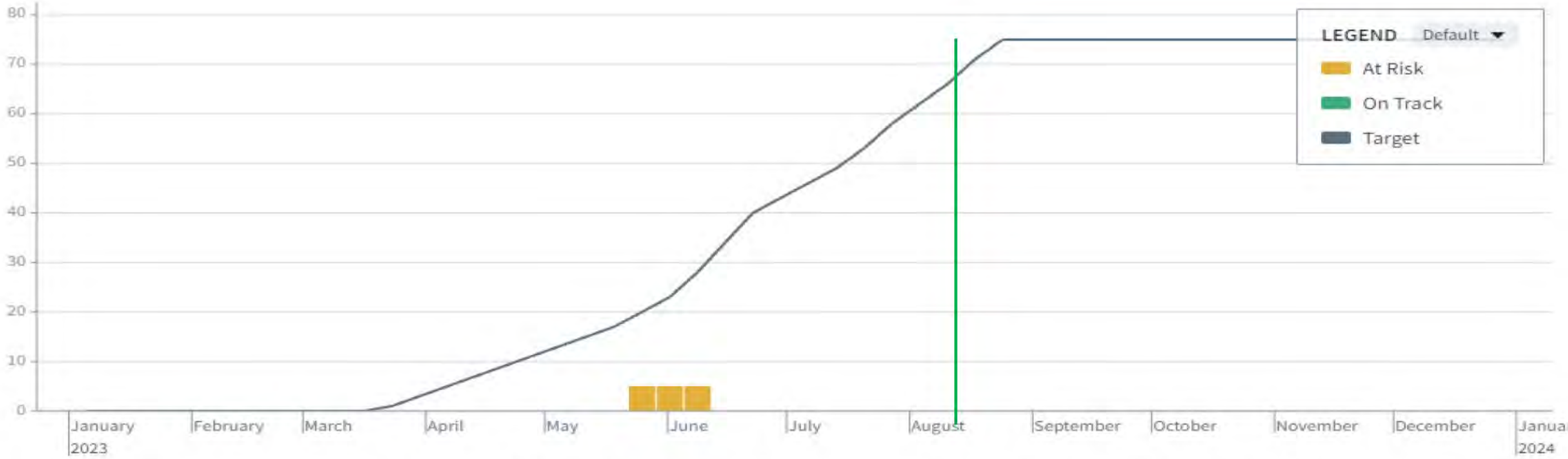
Catch Back Plan Due Date: 6/30/23 (1 change)
WMP Target Due Date: 12/31/23
Chief Sponsor: Jamie Martin

YTD Actual	YTD Target	Gap to Target
23.76	37	13.24

Program	Date Raised	Problem	Point of Cause	Containment Action	Status	Root Cause	Countermeasure Action	Containment Due Date	Catch Back	Owner	Status
10K Under-grounding	3/6/23	Program has fallen behind work delivery goals with 9.2 miles of UG completed & QA reviewed as of 5/1 against a target of 15 miles.	The multiple storm/snow events in Q1 delayed work and prevented access to underground construction sites where work was otherwise ready to execute.	Project Management team reviewing projects ready for construction to validate that crews are scheduled to complete work as aggressively as possible. [As of 5/1 there are 117 miles in construction and another 54 ready for construction.] Interim Target is 160 miles Civil Construction Complete by 6/30		2023 Underground work is still largely being executed on a "just in time basis" such that there is little buffer time (or "float") in project schedules to accommodate weather or other unforeseen delays.	Program is accelerating work readiness activities with estimating having recently completed 400 miles of work for 2023 & 2024 that will allow the program to build in some buffer against future delays.	6/30/2023 Number of units to be delivered: 160 miles civil construction complete Number of units delivered as of 5/1: 22.5	6/30/23 Number of units to be delivered (as part of the catch back plan): 60.9 Number of units delivered by Target Date: 63	[redacted] Construction and Contract partners	
				Complete 400 system hardening UG miles out of PEND / permitting, targeting 6/1 [Some of these miles will carry over to 2024.]				6/1/2023 Number of units to be delivered: 400 miles out of PEND / permitting (some will support 2024) Number of units delivered as of 5/1: 109		[redacted] with Land, Environmental & EPWC partners	

GH-07 Distribution Protective Devices

YTD Baseline



Week Ending	1/7	1/14	1/21	1/28	2/4	2/11	2/18	2/25	3/4	3/11	3/18	3/25	4/1	4/8	4/15	4/22	4/29	5/6	5/13	5/20	5/27	6/3	6/10	6/17	6/24	7/1	7/8	7/15	7/22	7/29	8/5	8/12	8/19	8/26	9/2	9/9	9/16	9/23	9/30	10/7	10/14	10/21	10/28	11/4	11/11	11/18	11/25	12/2	12/9	12/16	12/23
OP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
Target YTD												1	3	5	7	9	11	13	15	17	20	23	28	34	40	43	46	49	53	58	62	66	71	75																			
Target Week of												1	2	2	2	2	2	2	2	2	3	3	5	6	6	3	3	3	4	5	4	4	5	4																			
YTD Actual	-											0	0	0	0	0	0	0	0	0	5	5	5																															

GH-07 Distribution Protective Devices Catch Back Plan

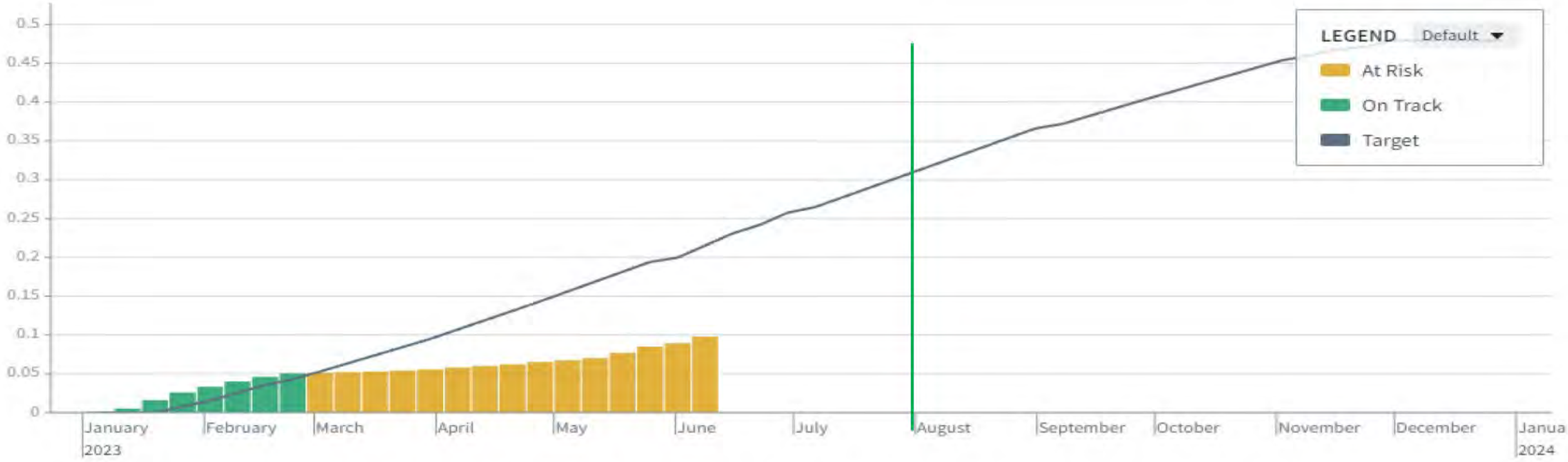
Catch Back Plan Due Date: 8/12/23 (1 change)
WMP Target Due Date: 12/31/22
Chief Sponsor: [redacted]

YTD Actual	YTD Target	Gap to Target
5	28	23

Program	Date Raised	Problem	Point of Cause	Containment Action	Containment Status	Root Cause	Countermeasure Action	Catch Back Due Date	Owner	Countermeasure Status
Dist Protective Device	03/27/2023	Program is behind due to Resource constraint and availability supporting Q1 storm restoration.	Q1 Storm caused scheduled order cancellations and deferrals due to crews supporting storms activities. Some projects are slow getting ready for construction as IT Telecom is prioritizing DCD Program	Re-schedule construction-ready jobs based on crew and DO calendar availability: Get more jobs pre commissioned and ready for construction by partnering with IT and DLT Work with execution to get all ready scheduled (construction resource availability) Partner with the DCC on prioritization to get clearances when needed Resource planning will issue a prioritization plan at the end of May which may impact this containment plan		Not completed due to resource and storm restoration, re-scheduling in progress.	Complete re-scheduling of construction-ready jobs, schedule jobs that are coming out of pre-commissioning and soon to be construction-ready with the coordination of the DO	8/12/2023 Number of units to be delivered (as part of the catch back plan): 66 Number of units delivered by Target Date: 66	[redacted]	

GM-03 HFTD/HFRA Open Tag Reduction – Distribution Backlog

YTD Baseline



Week Ending	1/7	1/14	1/21	1/28	2/4	2/11	2/18	2/25	3/4	3/11	3/18	3/25	4/1	4/8	4/15	4/22	4/29	5/6	5/13	5/20	5/27	6/3	6/10	6/17	6/24	7/1	7/8	7/15	7/22	7/29	8/5	8/12	8/19	8/26	9/2	9/9	9/16	9/23	9/30	10/7	10/14	10/21	10/28	11/4	11/11	11/18	11/25	12/2	12/9	12/16	12/23
OP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
Target YTD				.008	.015	.026	.036	.043	.053	.063	.074	.084	.095	.107	.119	.131	.143	.156	.169	.181	.194	.2	.215	.231	.242	.257	.265	.277	.29	.302	.315	.328	.34	.353	.366	.372	.382	.393	.403	.413	.424	.434	.444	.454	.46	.468	.471	.479	.48		
Target Week of				.008	.008	.01	.01	.007	.01	.011	.011	.011	.011	.012	.012	.012	.012	.013	.013	.013	.013	.006	.016	.016	.011	.016	.007	.013	.013	.013	.013	.013	.013	.013	.013	.006	.011	.011	.011	.01	.01	.01	.01	.01	.006	.009	.002	.009			
YTD Actual	.001	.005	.016	.026	.033	.04	.046	.051	.051	.052	.053	.054	.056	.058	.06	.06	.06	.07	.07	.08	.09	.09	.1																														

GM-03 HFTD/HFRA Open Tag Reduction – Distribution Backlog Catch Back Plan

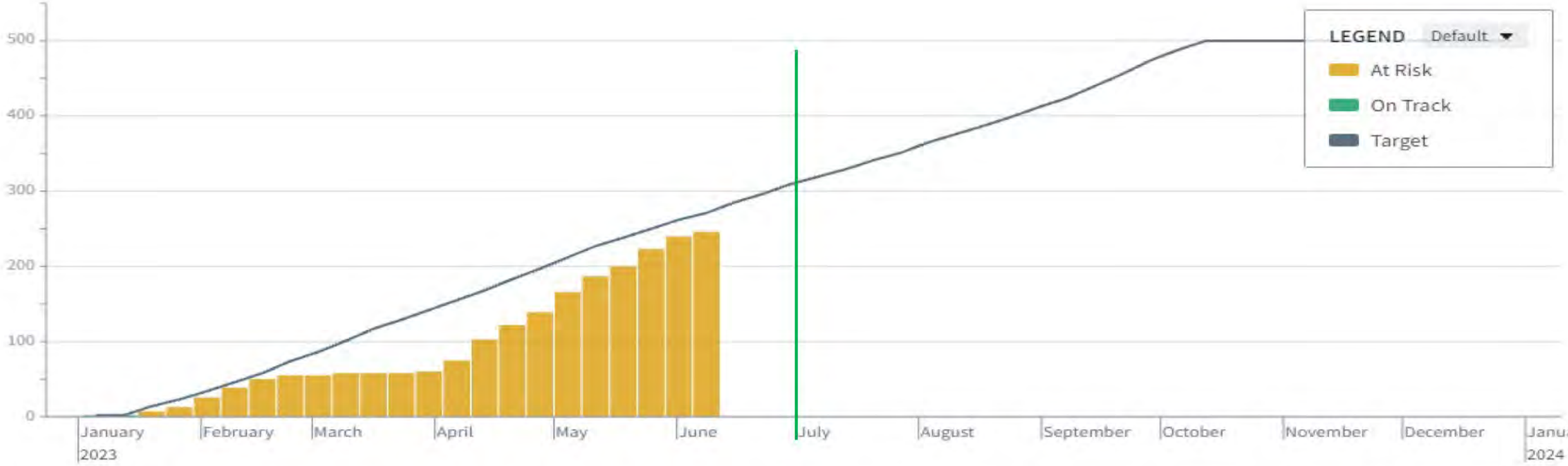
Catch Back Plan Due Date: 7/31/23 - WMP Target Due Date: 12/31/22
Chief Sponsor: Jeff Deal

YTD Actual	YTD Target	Gap to Target
0.1	0.22	0.12

Program	Date Raised	Problem	Point of Cause	Containment Action	Status	Root Cause	Countermeasure Action	Catch Back Due Date	Owner	Status
EC Notifications Risk Reduction	3/7/23	Less v3 wildfire risk points completed in 2023 then planned	Storm response has utilized most of the resources that were planned to execute this work in Q1, and New Business was prioritized in April and May.	Reschedule work planned in first two months of year to Q2+		Not enough resources to complete EC notifications and storm work	Reschedule work planned in first two months of year to Q2+	**7/31/23** Number of units to be delivered (as part of the catch back plan): 38.72 Number of units delivered by Target Date: 47.14	[redacted]	

GM-06 EPSS - Down Conductor Detection (DCD)

YTD Baseline



Week Ending	1/7	1/14	1/21	1/28	2/4	2/11	2/18	2/25	3/4	3/11	3/18	3/25	4/1	4/8	4/15	4/22	4/29	5/6	5/13	5/20	5/27	6/3	6/10	6/17	6/24	7/1	7/8	7/15	7/22	7/29	8/5	8/12	8/19	8/26	9/2	9/9	9/16	9/23	9/30	10/7	10/14	10/21	10/28	11/4	11/11	11/18	11/25	12/2	12/9	12/16	12/23
OP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
Target YTD	2	2	14	23	34	46	58	74	86	101	117	129	142	155	168	183	197	212	227	238	250	262	271	285	296	309	319	329	341	351	365	376	387	399	412	424	440	456	474	488	500									0
Target Week of	2.0	0.0	12.0	9.0	11.0	12.0	12.0	16.0	12.0	15.0	16.0	12.0	13.0	13.0	13.0	15.0	14.0	15.0	15.0	11.0	12.0	12.0	9.0	14.0	11.0	13.0	10.0	10.0	12.0	10.0	14.0	11.0	11.0	12.0	13.0	12.0	16.0	16.0	18.0	14.0	12.0								
YTD Actual	2	2	7	13	26	39	50	55	55	58	58	58	60	76	104	122	139	166	187	200	233	240	246																												

GM-06 EPSS - Down Conductor Detection Catch Back Plan

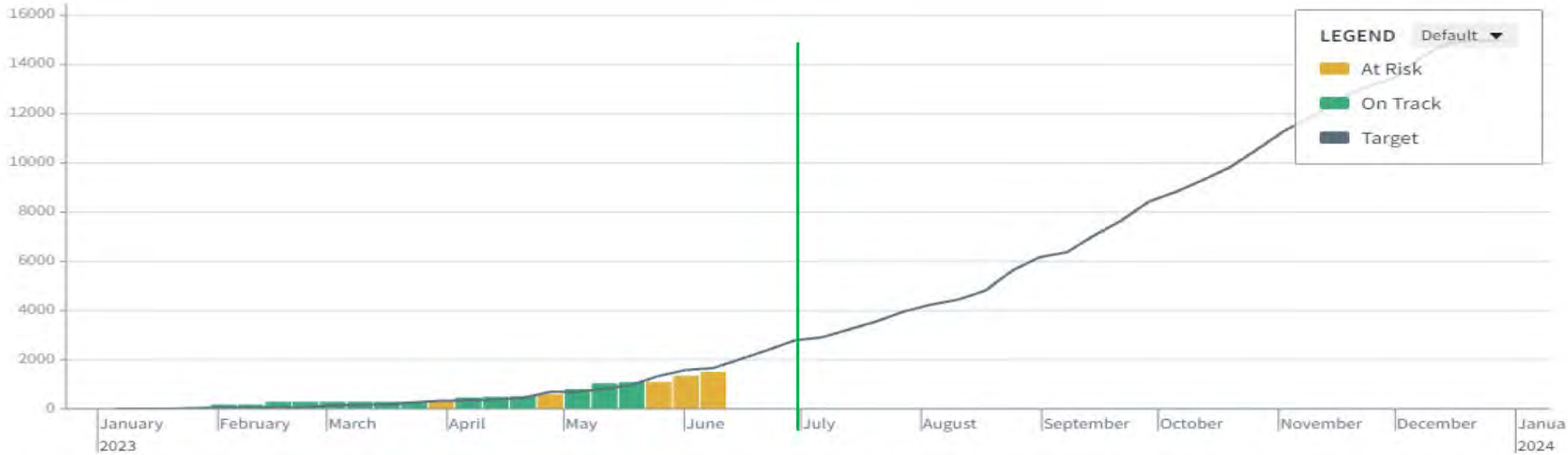
Catch Back Plan Due Date: 7/1/23 (4 changes)
WMP Target Due Date: 11/30/23
Chief Sponsor: Dave Canny

YTD Actual	YTD Target	Gap to Target
246	271	25

Program	Date Raised	Problem	Point of Cause	Containment Action	Status	Root Cause	Countermeasure Action	Target Date	Owner	Status
Down Conductor Detection	2/21/23	DCD install schedule delayed due to ADMS screen build delays, telecom issues and construction schedule constraint.	ADMS delays in building screens necessary for DCD testing, coupled with telecom communication issues, resulted in delays in Los Padres installs, while ADMS and construction schedule constraint are impacting Sierra install schedules.	Expediting DCD install schedule in non-ADMS cutover divisions (Humboldt) and installing DCD on existing/new Beckwith controllers to supplement work delays in ADMS LP/SI divisions.		DCD install cannot be completed while Telecom/SCADA communication issues remain unresolved. Due to Q1 storm impacts, construction resources and schedule availability are more limited.	ADMS/Telecom teams prioritizing issues resolution in LP. Expediting Humboldt and installing DCD on existing/new Beckwith controllers to get back on plan.	7/1/23 Number of units to be delivered (as part of the catch back plan): 254 Number of units delivered by Target Date: 309	[redacted]	

PS-07 PSPS Custom Impact Reduction

YTD Baseline



Week Ending	1/7	1/14	1/21	1/28	2/4	2/11	2/18	2/25	3/4	3/11	3/18	3/25	4/1	4/8	4/15	4/22	4/29	5/6	5/13	5/20	5/27	6/3	6/10	6/17	6/24	7/1	7/8	7/15	7/22	7/29	8/5	8/12	8/19	8/26	9/2	9/9	9/16	9/23	9/30	10/7	10/14	10/21	10/28	11/4	11/11	11/18	11/25	12/2	12/9	12/16	12/23
OP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
Target YTD				24	55.9	55.9	55.9	55.9	139.7	159.7	179.7	265	324.9	344.9	384.8	444.7	689.7	689.7	809.5	974.7	1339	1579	1659	2024	2388	2788	2907	3232	3557	3957	4237	4422	4803	4807	5630	6169	6369	7053	7658	8422	8821	9305	9830	10554	11312	11877	12601	13086	13445	14283	14881	15001
Target Week of				24	31.9				83.8	20	20	85.3	59.9	20	39.9	59.9	245		119.8	165.2	364.8	239.5	79.8	364.8	364.8	392.5	119.8	324.9	324.9	399.9	279.5	205.1	364.8	823.9	539	199.6	684.2	604.3	764	399.2	484.6	524.5	724.1	758.5	564.4	724.1	484.6	359.3	838.4	598.8	118.8
YTD Actual	0	0	8	59.9	172	178	287	287	287	287	287	287	287	462	495	521	587.2	587.2	690	1091	1091	1346	1505																													

PS-07 Customer Impact Reduction Catch Back Plan

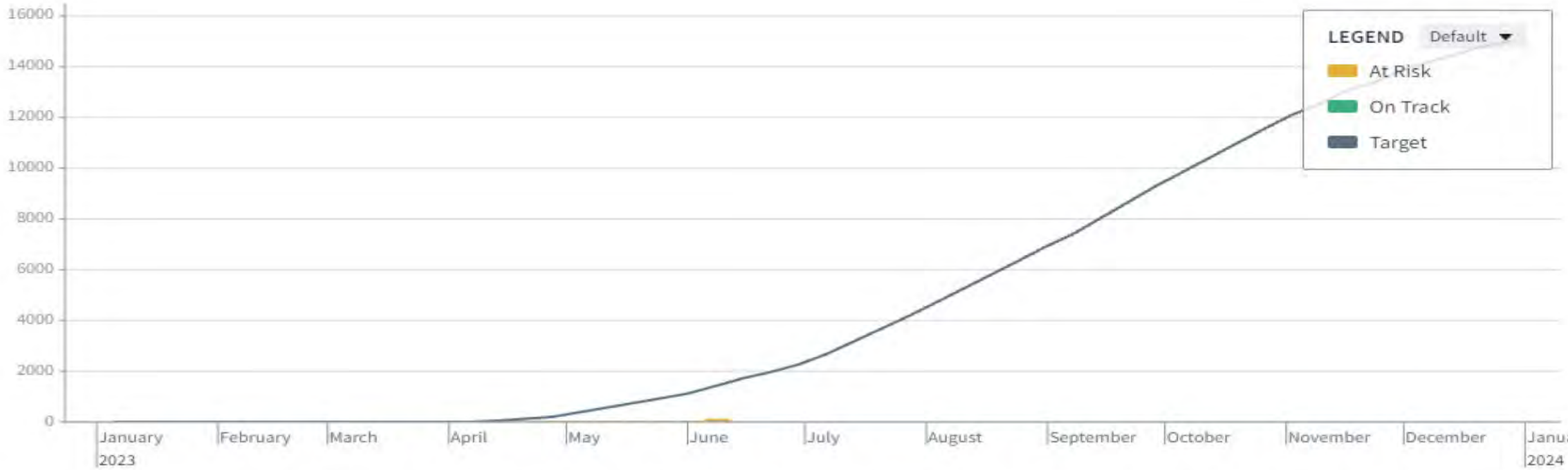
Catch Back Plan Due Date: 6/30/23 - WMP Target Due Date: 12/31/23
Chief Sponsor: [redacted]

YTD Actual	YTD Target	Gap to Target
1,505	1,658.8	153.8

Program	Date Raised	Problem	Point of Cause	Containment Action	Status	Root Cause	Countermeasure Action	Containment Due Date	Catch Back	Owner	Status
PSPS Customer Impact Reduction	5/30/23	Customer impact reduction has fallen behind YTD target of 690 customer reduction with a YTD performance of 587 customer reduction as of 5/1.	The target for PS-07 is tied to the miles of Undergrounding completed and MSO devices installed. The multiple storm/snow events in Q1 delayed work and prevented access to underground construction sites where work was otherwise ready to execute.	Interim Target is 160 miles Civil Construction Complete by 6/30. Complete 400 system hardening UG miles out of PEND / permitting, targeting 6/1 [Some of these miles will carry over to 2024.]		2023 Underground work is still largely being executed on a "just in time basis" such that there is little buffer time (or "float") in project schedules to accommodate weather or other unforeseen delays.	The Undergrounding Program is accelerating work readiness activities for 2024 and beyond work with estimating having recently completed 400 miles of system hardening work for 2023 & 2024 that will allow the program to build in some buffer against future delays.	6/30/2023 Will follow UG containment plan	6/30/23 Will follow UG catch back plan	[redacted]	

VM-04 Tree Removal

YTD Baseline



Week Ending	1/7	1/14	1/21	1/28	2/4	2/11	2/18	2/25	3/4	3/11	3/18	3/25	4/1	4/8	4/15	4/22	4/29	5/6	5/13	5/20	5/27	6/3	6/10	6/17	6/24	7/1	7/8	7/15	7/22	7/29	8/5	8/12	8/19	8/26	9/2	9/9	9/16	9/23	9/30	10/7	10/14	10/21	10/28	11/4	11/11	11/18	11/25	12/2	12/9	12/16	12/23
OP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
Target YTD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	125	200	385	570	755	940	1,134	1,434	1,734	1,974	2,274	2,674	3,174	3,674	4,174	4,710	5,255	5,800	6,345	6,906	7,406	8,031	8,656	9,281	9,851	10,421	10,991	11,561	12,107	12,531	13,061	13,379	13,866	14,181	14,496	15,000
Target Week of	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	75	75	185	185	185	185	194	300	300	240	300	400	500	500	500	536	545	545	545	561	500	625	625	625	570	570	570	570	546	424	530	318	487	315	315	504
YTD Actual	0	0	0	0	11	24	24	24	24	24	30	30	30	33	33	33	33	33	33	33	33	49	125																												

VM-04 Tree Removal Inventory Catch Back Plan

Catch Back Plan Due Date: 06/30/23
WMP Target Due Date: 12/31/23
Chief Sponsor: Peter Kenny

YTD Actual	YTD Target	Gap to Target
125	1,434	1,309

Program	Date Raised	Problem	Point of Cause	Containment Action	Status	Root Cause	Countermeasure Action	Catch Back Due Date	Owner	Status
VM-04 Tree Removal Inventory	04/18/23	Current technology field guides require update prior to releasing work for crews to account for new programmatic changes	New Program recently added to the Vegetation Portfolio	Develop revised guidance and implement change communication prior to work start		Robust change management plan is needed prior to introduction of new programs	Develop Process for new programs development	06/30/23 Number of units to be delivered (as part of the catch back plan): 1,974 Number of units delivered by Target Date: 1,974	[redacted]	

Summary of WMP Intervenor/Reply Comments

- On 5/26, we received 20 sets of comments on our 2023-2025 WMP totaling over 650 pages.
- Intervenor comments focused on:
  - Undergrounding: cost and justification.
  - System Inspections: backlog and QA/QC pass rate.
  - Vegetation Management: EVM tree removal inventory, contractor performance, and wood management.
  - Risk Modeling: risk factors and modeling guidelines.
  - EPSS: notification protocols, impact studies, and customer support.
- With a 5-page limitation for our response, we focused on the issues that were most prevalent in discovery and having a potential for a revision notice. We conducted working sessions with the functional areas to prepare the comments. We also sought feedback from the functional areas on all the issues catalogued to consider addressing any other concerns raised.
- On 6/6, we filed our reply comments with Energy Safety. We will be providing a deeper dive into our responses at the WRGSC next week.

WMP Data Requests

2023 WMP Discovery Questions

Due Today	Due 1 Business Day	Due 2 Business Days	Due Later	Complete	Total
0	0	0	0	400	400

56 Total Requests | 400 Total Questions | 1065 Sub-Parts

WMP Data Requests

2023 WMP Discovery: By Requestor

REQUESTOR	Data Requests	Questions	Sub-Parts	% of Total Questions	Questions Requiring Extensions
OEIS	9	71	207	18%	10
CPUC - SPD	8	32	40	8%	2
CalPA	19	201	693	50%	20
TURN	13	50	113	13%	7
MGRA	6	41	9	10%	5
GPI	1	5	3	1%	0
TOTAL	56	400	1065	100%	44

WMP Data Requests

2023 WMP Discovery:
Questions & Sub-Parts per Category by Requestor

	Total		OEIS		CPUC - SPD (Safety Policy Division)		CalPA		GPI		MGRA		TURN	
WMP Section	**Questions**	**Sub-Parts**	**Questions**	**Sub-Parts**	**Questions**	**Sub-Parts**	**Questions**	**Sub-Parts**	**Questions**	**Sub-Parts**	**Questions**	**Sub-Parts**	**Questions**	**Sub-Parts**
Grid Design and System Hardening	95	249	7	12	14	24	52	179	0	0	0	0	22	34
Vegetation Management and Inspections	74	236	12	47	0	0	52	183	5	3	0	0	5	3
Risk Methodology and Assessment	43	62	3	8	1	2	7	23	0	0	28	9	4	20
Areas for Continued Improvement	37	118	16	53	5	10	8	21	0	0	0	0	8	34
Grid Operations and Procedures	35	70	1	5	1	0	23	65	0	0	10	0	0	0
Public Safety Power Shutoff	18	51	3	5	1	2	13	40	0	0	0	0	1	4
Wildfire Mitigation Strategy Development	17	58	5	11	0	0	8	42	0	0	0	0	4	5
Grid Design, Operations, and Maintenance	12	30	1	3	1	1	7	22	0	0	0	0	3	4
Emergency Preparedness	11	24	9	18	1	0	1	6	0	0	0	0	0	0
Open Work Orders	8	25	2	9	0	0	6	16	0	0	0	0	0	0
N/A	8	37	2	6	0	0	4	25	0	0	0	0	2	6
Other	42	105	10	30	8	1	20	71	0	0	3	0	1	3
Grand Total	**400**	**1065**	**71**	**207**	**32**	**40**	**201**	**693**	**5**	**3**	**41**	**9**	**50**	**113**

WMP Data Requests

2023 WMP Discovery:
Office of Energy Infrastructure Safety (OEIS)

WMP Category	# of Questions	# of Sub-Parts
Areas for Continued Improvement	**16**	**53**
ACI PG&E-22--08 Better Application of Specific Lessons Learned from Utility-Caused Fires	2	4
ACI PG&E-22--09 Evaluation of Model Reprioritization and Fire Rebuild in High-Risk Areas	1	3
ACI PG&E-22--10 Justification of Weather Station Network Density	1	1
ACI PG&E-22--20 Asset Inspection Drone Program Pilot	1	1
ACI PG&E-22--21 Asset Inspections Quality Assurance and Quality Control ACI PG&E-22--08 Better Application of Specific Lessons Learned from Utility-Caused Fires	2	6
ACI PG&E-22-24 – Progression of Vegetation Management Maturity	1	8
ACI PG&E-22-32 – Updates on EPSS Reliability Study	2	14
ACI PG&E-22-34 – Revise Process of Prioritizing Wildfire Mitigations	2	5
ACI PG&E-22-28 – Progression of Effectiveness of Enhanced Clearances Joint Study	1	0
ACI PG&E-22-31 – PSPS Wind Threshold Change Evaluations	2	3
ACI PG&E-22-33 – Progress on Filling Asset Inventory Data Gaps	1	8

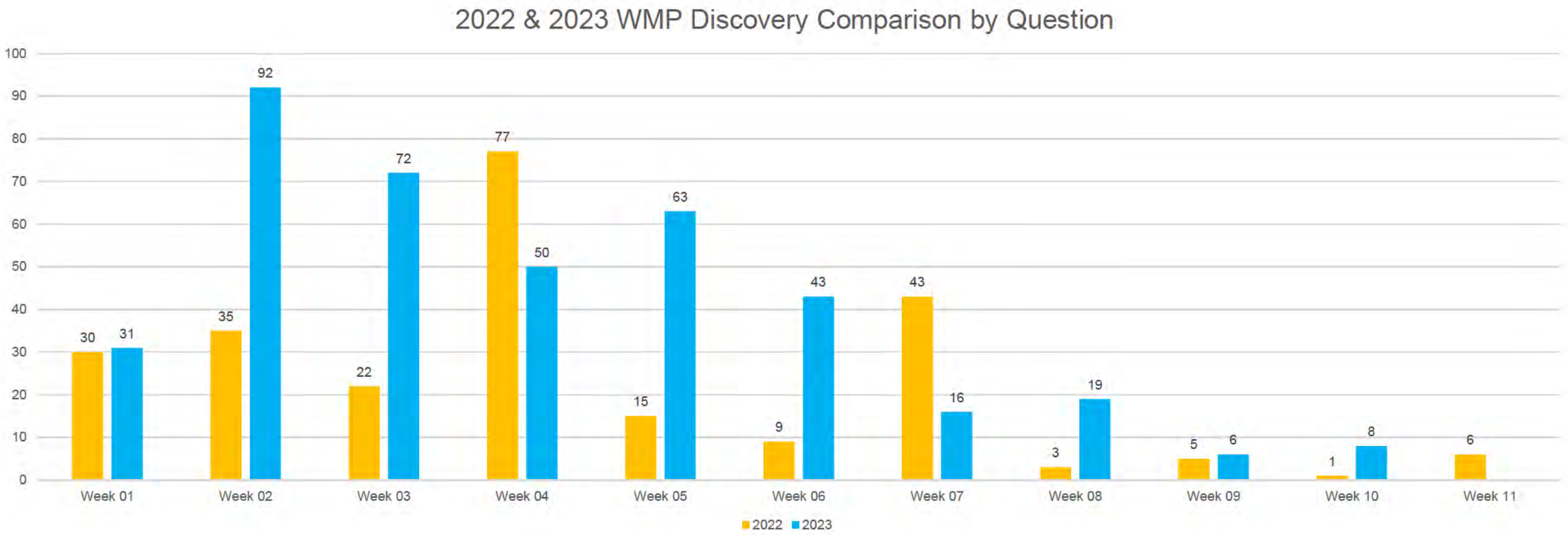
WMP Category (cont.)	# of Questions	# of Sub-Parts
Vegetation Management and Inspections	**12**	**47**
Clearance	1	2
Discontinued Programs	1	2
Focused Tree Inspections	4	17
High-Risk Species	1	3
N/A	2	10
Tree Removal Inventory	1	2
Vegetation Management Inspections	1	3
Wood and Slash Management	1	8
Emergency Preparedness	**9**	**18**
Customer Support in Wildfire and PSPS Emergencies	3	8
N/A	1	2
Objectives	2	4
Overview	1	0
Public Emergency Communication Strategy	1	0
Personnel Training	1	4

WMP Data Requests

2023 WMP Discovery:
CPUC - SPD (Safety Policy Division)

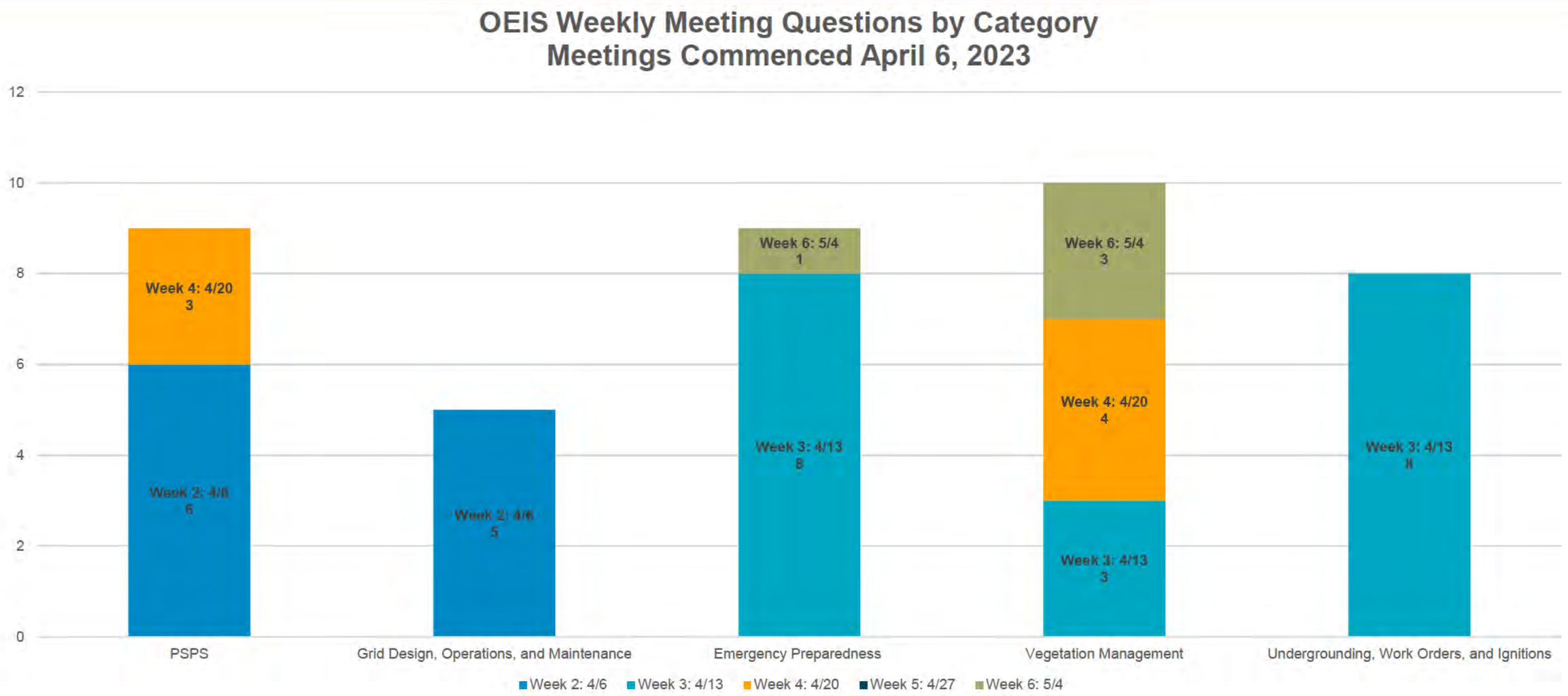
WMP Category	# of Questions	# of Sub-Parts
Grid Design and System Hardening	**14**	**24**
Covered Conductor Installation – Distribution	2	0
Undergrounding of Electric Lines and/or Equipment – Distribution	4	13
Undergrounding of Electric Lines and/or Equipment – Distribution	8	11
Areas for Continued Improvement	**5**	**10**
ACI PG&E-22-06 – Addressing Increase in Risk Events	3	6
ACI PG&E-22-16 – Progress and Updates on Undergrounding and Risk Prioritization	2	4
Situational Awareness and Forecasting	**4**	**0**
Fire Potential Index	4	0

WMP Data Requests



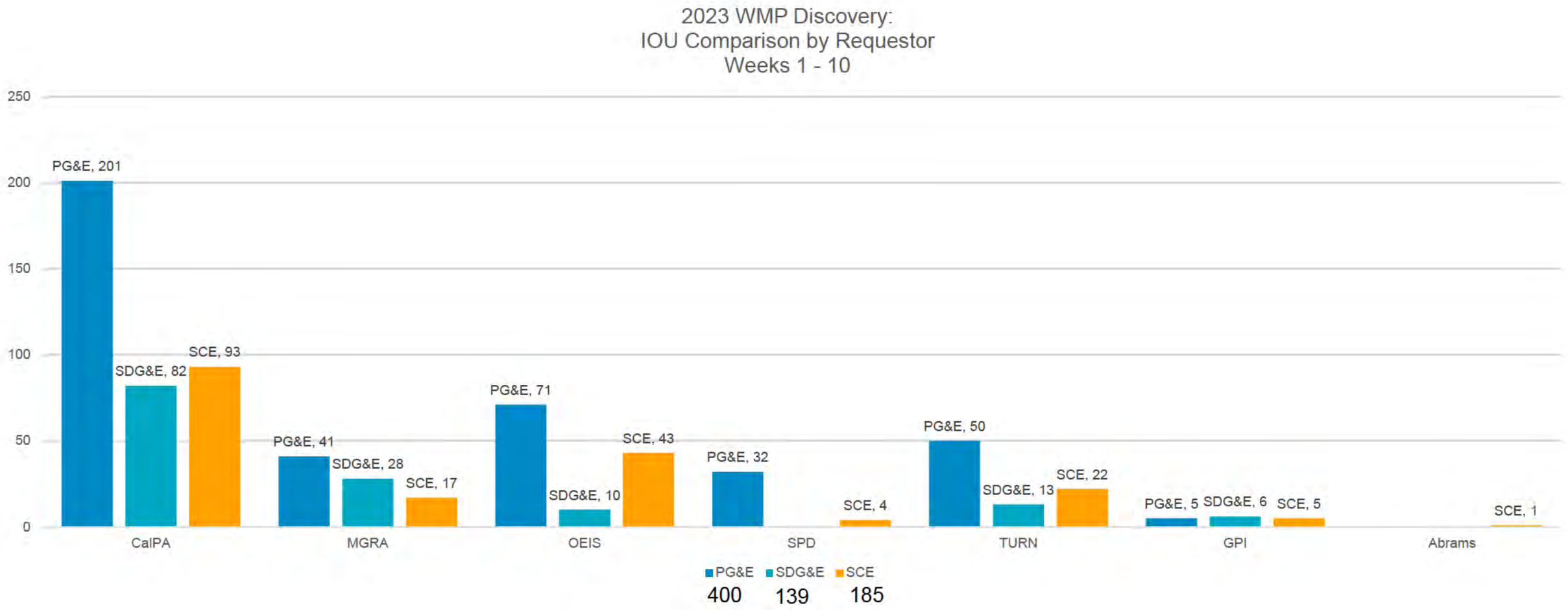
Totals: 2022 – 246 | 2023 – 400
(63% increase)

WMP Data Requests

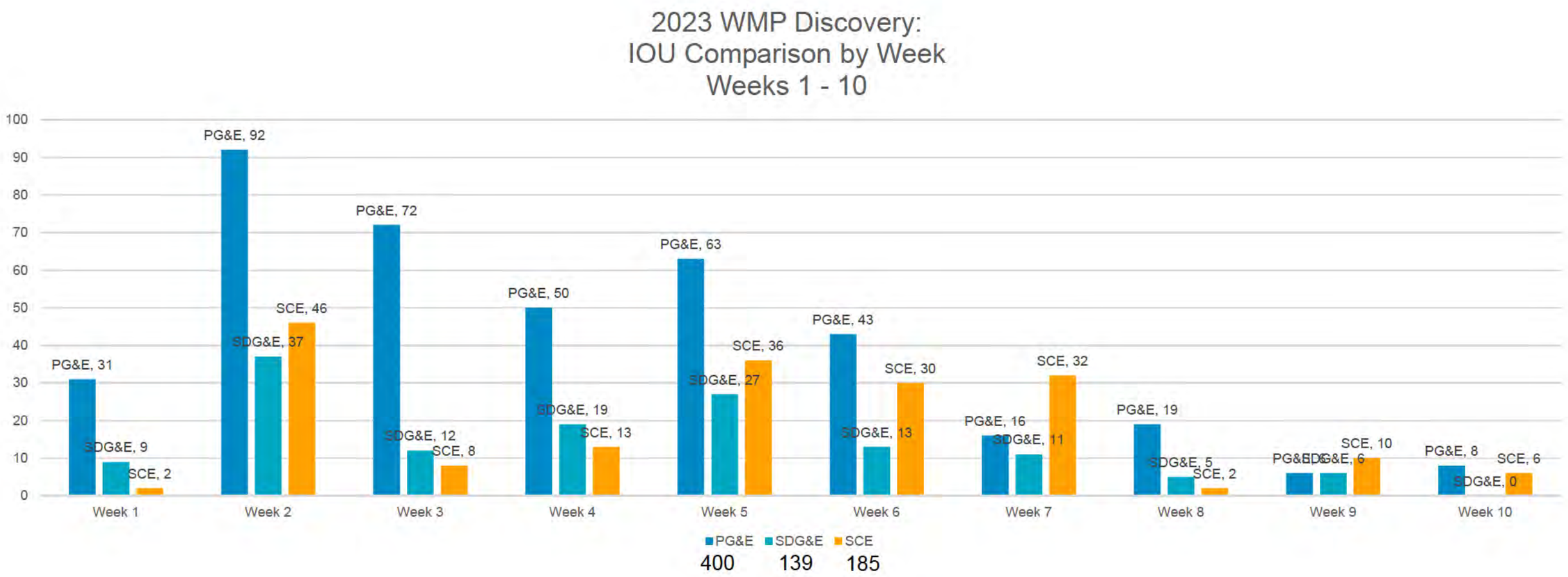


41 Total Questions

WMP Data Requests



WMP Data Requests



WMP Data Requests

2023 WMP Discovery:
IOU Comparison – Top 3 Categories: Weeks 1 - 10

	WMP Category	Questions
PG&E	Grid Design and System Hardening	95
	Vegetation Management and Inspections	74
	Risk Methodology and Assessment	43
SDG&E	Grid Design and System Hardening	81
	Vegetation Management and Inspection	39
	Risk Methodology and Assessment	22
SCE	Vegetation Management and Inspection	35
	Ignition Model	5
	Quality Assurance and Quality Control	3

WMP Data Requests

2023 WMP Discovery: Top 3 Areas of Focus – OEIS
Weeks 1 - 10

PG&E	# of Questions	# of Sub-Parts
Areas for Continued Improvement	**16**	**53**
ACI PG&E-22--08 Better Application of Specific Lessons Learned from Utility-Caused Fires	2	4
ACI PG&E-22--09 Evaluation of Model Reprioritization and Fire Rebuild in High-Risk Areas	1	3
ACI PG&E-22--10 Justification of Weather Station Network Density	1	1
ACI PG&E-22--20 Asset Inspection Drone Program Pilot	1	1
ACI PG&E-22--21 Asset Inspections Quality Assurance and Quality Control ACI PG&E-22--08 Better Application of Specific Lessons Learned from Utility-Caused Fires	2	6
ACI PG&E-22-24 – Progression of Vegetation Management Maturity	1	8
ACI PG&E-22-32 – Updates on EPSS Reliability Study	2	14
ACI PG&E-22-34 – Revise Process of Prioritizing Wildfire Mitigations	2	5
ACI PG&E-22-28 – Progression of Effectiveness of Enhanced Clearances Joint Study	1	0
ACI PG&E-22-31 – PSPS Wind Threshold Change Evaluations	2	3
ACI PG&E-22-33 – Progress on Filling Asset Inventory Data Gaps	1	8
Vegetation Management and Inspections	**12**	**47**
Clearance	1	2
Discontinued Programs	1	2
Focused Tree Inspections	4	17
High-Risk Species	1	3
N/A	2	10
Tree Removal Inventory	1	2
Vegetation Management Inspections	1	3
Wood and Slash Management	1	8
Emergency Preparedness	**9**	**18**
Customer Support in Wildfire and PSPS Emergencies	3	8
N/A	1	2
Objectives	2	4
Overview	1	0
Public Emergency Communication Strategy	1	0
Personnel Training	1	4

SCE	# of Questions
Grid Design and System Hardening	**13**
Asset Inspections (8.1.3)	4
Grid Design and System Hardening (8.1.2)	9
Risk Methodology and Assessment	**10**
Multiple	3
Risk Analysis Framework (6.2)	1
Risk and Risk Component Identification (6.2.1)	1
Risk Overview (6.1.1)	1
Summary of Risk Models (6.1.2)	3
Top Risk-Contributing Circuits/Segments/Spans (6.4.2)	1
Veg Mgmt & Inspection	**7**
Risk and Risk Components Calculation (6.2.2)	1
Vegetation Management and Inspections Overview (8.2.1)	3
Vegetation Management Inspections (8.2.2)	3

SDG&E	# of Questions
Risk Methodology and Assessment	**2**
6.1.2 Summary of Risk Models Page 54	2
Portfolio Level Risk Analysis and Risk Spend Efficiency	**1**
N/A	1
Cost-Benefit Within and Overall Decision-Making Framework	**1**
N/A	1

2023 WMP Discovery: Top 3 Areas of Focus – CPUC - SPD
Weeks 1 - 10

PG&E	# of Questions	# of Sub-Parts
Grid Design and System Hardening	**13**	**19**
Covered Conductor Installation – Distribution	2	0
Undergrounding of Electric Lines and/or Equipment – Distribution	3	8
Undergrounding of Electric Lines and/or Equipment – Distribution	8	11
Situational Awareness and Forecasting	**4**	**0**
Fire Potential Index	4	0
Areas for Continued Improvement	**4**	**10**
ACI PG&E-22-06 – Addressing Increase in Risk Events	2	6
ACI PG&E-22-16 – Progress and Updates on Undergrounding and Risk Prioritization	2	4

SCE	# of Questions
Administrative	**1**
N/A	1

SDG&E	# of Questions

COA

2023-2025 WMP Commitments

Timeline Category	Not Started	Delayed	In Progress	On Track	At Risk	Off Track	Complete	Total
2023 Commitments	25	0	6	3	2	0	0	36
3 Year Objectives	15	0	0	0	0	0	0	15
Total	40	0	6	3	2	0	0	**51**

COA WMP Target Validation 1 of 3

Progress		Status	Catch Back Plan
	YTD	On Track	As of June 6th, 2023, the validation status is “On Track” with **5** commitment(s) validated YTD against a target of **5**. Of the **5** in progress validations, COA has found that **2** are “At Risk” and **0** are “Off Track” and **3** are “On Track”
Completed	5		
Planned	5		

Validated

Number	Section	Target	Command Center Status	COA Status	Comment
AI-06	**8.1.3.1.4**	Perform Transmission Infrared Inspections	On Track	At Risk Catch Back Plan	The unit completion and records of evidence were incomplete and were also found to contain errors. Additionally, COA believes improvement opportunities exist to advance the overall program maturity, key focus areas include job aids, training, and Quality Control that will support TVAC records.
AI-08	**8.1.3.3.1**	Supplemental Inspections - Substation Distribution	On Track	On Track	Date of Inspection on Execution Tracker does not match Inspection date. Pronto forms did not reflect CIRT Review. Anomalies missing LC notification number. Electronic files missing for IR Inspections. Missing F80 Forms.
AI-09	**8.1.3.3.1**	Supplemental Inspections - Substation Transmission	On Track	On Track	Date of Inspection on Execution Tracker does not match Inspection date. Pronto forms did not reflect CIRT Review. Required photos missing . Anomalies missing LC notification number. At risk for execution.
AI-10	**8.1.3.3.1**	Supplemental Inspections - Hydroelectric Substations and Powerhouses	On Track	On Track	Date of Inspection on Execution Tracker does not match Inspection date. Pronto forms did not reflect CIRT Review. Required photos missing Anomalies missing LC notification number. At risk for execution.
VM-01	**8.2.2.1.1**	LiDAR Data Collection - Transmission	Complete	At Risk Catch Back Plan	Execution plan and Approved EDRS plan do not match. Execution plan miles did not match work plan miles. Transmission Circuit voltage not on work plan . Outdated bulletin are not in compliance with GOV-2001P.

COA WMP Target Validation 2 of 3

In-Progress

Number	Section	Target	Command Center Status	COA Status	Comments
AI-02	8.1.3.1.1	Detailed Inspection Transmission – Ground	On Track	In-progress	
AI-04	8.1.3.1.2	Detailed Inspection Transmission – Aerial	On Track	In-progress	
AI-05	8.1.3.1.3	Detailed Inspection Transmission – Climbing	On Track	In-progress	
GM-02	8.1.7.1	HFTD-HFRA Open Tag Reduction - Transmission	On Track	In-progress	
GM-03	8.1.7.2	HFTD-HFRA Open Tag Reduction – Distribution Backlog	At Risk	In-progress	
SA-01	8.3.2.3	AI in Wildfire Cameras	On Track	In-progress	

Upcoming Validations

Number	Section	Target	Command Center Status	COA Status	Comments
SA-01	8.3.2.3	AI in Wildfire Cameras	On Track	Up-coming	
GH-01	8.1.2.1	System Hardening - Distribution	At Risk	Up-coming	
GH-04	8.1.2.2	10K Undergrounding	At Risk	Up-coming	
GH-06	8.1.2.5.1	System Hardening - Transmission Shunt Splices	On Track	Up-coming	

COA WMP Target Validation 3 of 3

Catch Back Plan Issues Identified, Open and Resolved

Number	Section	Target	Resolved	Open	Total Identified
AI-06	**8.1.3.1.4**	Perform Transmission Infrared Inspections	7	1	**8**
AI-08	**8.1.3.3.1**	Supplemental Inspections - Substation Distribution	4		**4**
AI-09	**8.1.3.3.1**	Supplemental Inspections - Substation Transmission	3		**3**
AI-10	**8.1.3.3.1**	Supplemental Inspections - Hydroelectric Substations and Powerhouses	3		**3**
VM-01	**8.2.2.11**	LiDAR Data Collection – Transmission	1	2	**3**
Total			**18**	**3**	**21**

AI-06 Perform Transmission Infrared Inspection

Program	Date Raised	Problem	Point of Cause	Containment Action	Status	Root Cause	Countermeasure Action	Target Date	Owner	Status
Program Name	*Date issue identified*	*Description of the issue; What is the deviation between what should happen vs what actually happened?*	*Where the failure behind the problem occurred?*	*Immediate action to fix Point of Cause*		*Causation behind the Point of Cause*	*Action to fix the root cause; Countermeasure not populated until root cause verified*	*Date for completion of Countermeasure*	*Name*	
Infrared Inspection	4/4/23	**Target Validation**: Work Plan: Per the Master List there are (3050) T3 and (649) T2 they are due for inspection per the procedure. The workplan includes 543 additional circuit miles that aren't due. If not correctly flagged as required there is potential to meet the WMP commitment and still end up with missed inspections that are due.	The entire circuit is inspected therefore adds additional HFTD miles.	Asset Strategy should flag the ETL's that are due in 2023 in the workplan to ensure that execution clearly understands which units are due and avoids a miss that could lead to a self report.	Complete	Creates additional miles to be inspected.	ETLs required for compliance are indicated in Column P "Reason for Inclusion" in the '2023 IR Scope' tab of the workplan. Specifically, ETLs indicated as "High Consequence Line" or "Guest/Host of scoped line" are still part of the workplan, but not specifically part of the compliance requirement.	04/07/2023	[redacted]	Complete
Infrared Inspection	4/4/23	**Procedural Adherence**: COA found 1,158 of the 1937 circuit miles to be less than 40%. Per procedural guidance TD-1001P-14 provide "considerations" that supported these flights represent peak loading. Execution team shared that they have data to provide related to loading and timing selection.	Did not schedule time to review our 2023 IR Inspection Tracker with our partners.	Provide considerations as described in TD-1001P-14 Infrared Inspection Procedure that supported these lines at peak load.	Complete	Do not have a formal process to share historical loading data or decisions on when to time inspections.	Provide considerations as described in TD-1001P-14 Infrared Inspection Procedure that supported these lines at peak load. Add additional columns to tracker to help outline that we considered loading, timing and other factors prior to inspection.	05/01/2023		Complete

AI-06 Perform Transmission Infrared Inspection

Program	Date Raised	Problem	Point of Cause	Containment Action	Status	Root Cause	Countermeasure Action	Target Date	Owner	Status
Program Name	*Date issue identified*	*Description of the issue; What is the deviation between what should happen vs what actually happened?*	*Where the failure behind the problem occurred?*	*Immediate action to fix Point of Cause*		*Causation behind the Point of Cause*	*Action to fix the root cause; Countermeas ure not populated until root cause verified*	*Date for completion of Countermeasure*	*Name*	
Infrared Inspection	4/4/23	**Record of Evidence**: TVAC Records: 2/26 IR Data Sheets uploaded to SAP reflected miles that did not match the miles reported as complete in the execution tracker.	QC Process on documentation.	Review all IR Data Sheets and confirm the correct circuit miles are reflected.	Complete	Lack of QC process.	Ensure procedure/job aid clearly defines process to capture mileage flown and reviewed as part of QC.	05/01/2023	[redacted]	Complete
Infrared Inspection	4/4/23	**Record of Evidence**: 2/26 sampled reported as complete in the execution tracker did not have data sheets uploaded in SAP and in working with the team were found to be marked complete in error.	Process.	Validate all lines currently reported as complete are correct. Consider adding a column to execution tracker to reflect completed for record of evidence review. Only report miles that reflect completed in both columns.	Complet e	Do not have clearly defined process map for documentation flow.	Develop Process Map and Job Aid for IRS and clerical function to include validation.	05/01/2023		Complete
Infrared Inspection	4/4/23	**Record of Evidence**: 4 /26 sampled did not have required IR data sheets uploaded in SAP	QC Process on documentation.	Ensure for all miles reported completed in the execution file have IR data sheets uploaded in SAP.	Complet e	QC process not clearly outlined and fully implemented.	Develop Process Map and Job Aid for IRS and clerical function to include validation.	05/01/2023		Complete
Infrared Inspection	4/4/23	**Record of Evidence: TVAC Records**: Procedural Adherece: Incomplete IR Data Sheet: Disk and Photo number was not found on any of the samples. This is a requirement by TD-1001P-14 Infrared Inspection Procedure Rev 3 (Team reports this task is not performed)	Update by TD-1001P-14 Infrared Inspection Procedure Rev 3 now that we moved to digitally storing data.	Start discussions with Standards to clarify procedure requirements in sections 3.4. and Form 15.	In Process (target date of 6/1/23)	company has moved to from storing data on physical storage devises to housing data on shared servers. Therefore, disk & photo number is now obsolete.	Update TD-1001P-14 Infrared Inspection Procedure Rev 3 Form 15 to reflect current process.	12/31/2023		Complete

AI-06 Perform Transmission Infrared Inspection

Program	Date Raised	Problem	Point of Cause	Containment Action	Status	Root Cause	Countermeasure Action	Target Date	Owner	Status
Program Name	*Date issue identified*	*Description of the issue; What is the deviation between what should happen vs what actually happened?*	*Where the failure behind the problem occurred?*	*Immediate action to fix Point of Cause*		*Causation behind the Point of Cause*	*Action to fix the root cause; Countermeasure not populated until root cause verified*	*Date for completion of Countermeasure*	*Name*	
Infrared Inspection	4/4/23	**Record of Evidence:** GEO Spatial documentation was not Provided for all IR inspections. COA reviewed two that were provided. All Geo Spatial documentation is required per define phase	GEO spatial data isn't easily accessible to those outside of the process	System Inspections to identify the best location/method to provide COA/IA/PMO access to the files.	Complete	System Inspections not fully understanding deliverable requirements therefore not having a good method to house and share data.	System Inspections to identify the best location/method to provide COA/IA/PMO access to the files.	05/01/2023	[redacted]	Complete
Infrared Inspection	4/4/23	**Record of Evidence**: Requirement to provide Weekly Report with anomalies and LC notifications. Report contains 4 anomalies but only 1 has an LC notification number. Appears to be a process delay in reviewing and generating LC's, as anomalies reflect found in February.	Lack of Process	Review 3 anomalies and create notification numbers.	Complete	System inspections reporting on all anomalies found and should only report on anomalies that have been verified with notifications. Lack of formal process around reporting anomalies.	Ensure a process is identified and documented to ensure notifications are created in a timely manner (define and monitor an acceptable timeline).	05/01/2023		Complete

VM-01 LiDAR Data Collection – Transmission

Program	Date Raised	Problem	Point of Cause	Containment Action	Containment Action Date	Status	Root Cause	Countermeasure Action	Target Date	Owner	Status
Program Name	*Date issue identified*	*Description of the issue; What is the deviation between what should happen vs what actually happened?*	*Where the failure behind the problem occurred?*	*Immediate action to fix Point of Cause*	*Immediate action to fix Point of Cause*		*Causation behind the Point of Cause*	*Action to fix the root cause; Countermeasure not populated until root cause verified*	*Date for completion of Countermeasure*	*Name*	
LiDAR Data Collection – Transmission	5/8/23	**Work Plan Validation:** There is not a standard or procedure for LiDAR data collection. • A Bulletin was found TD-7103B-003 dated 10/15/2018 however, states “This is a time-limited document expected to extend into late 2018”. It did not include LiDAR data collection cycles or the work planning process additionally. This Bulletin does not meet the guidance document GOV-2001P that requires incorporation of bulletin in procedure within 1 year (Section 4.1.1.2a)	Utility Procedure TD-7103-10 details standard procedure for LiDAR data collection. It was published 4/6/23 and becomes effective 6/6/23.	Refer to Utility Procedure TD-7103-10	Back dated to 4/6/23		Timing of the publication of Utility Procedure TD-7103-10 lagged reporting window.	Utility Bulletin TD-7103B-03 is obsolete and was replaced by TD-7103-10. Additionally, Utility Procedure TD-7103P-01 will be updated to reference Utility Procedure TD-7103-10 which incorporates the procedures from cancelled Bulletin TD-7103B-003	Utility ProcedureTD-7103B-003 was published on 4/6/23 and becomes effective 6/6/23. Utility Procedure TD-7103P-01 target for approval 6/30/2023.		
LiDAR Data Collection – Transmission	5/8/23	**Work Plan Validation:** Transmission circuit voltage not provided COA was unable to verify	The VM-01 Template does not have a column for circuit voltage.	Update form to VM-01 Template voltage and circuit ETL to avoid confusion in reporting. Column B has been added for circuit voltage. In addition, the ETL circuit IDs have been added in Column C.	Completed 5/15/23		Without column for circuit voltage, requestee was unaware these data were requested. This created confusion with circuits with the same name with different voltages with multiple deliveries.	Include additional Identification descriptors such as circuit ETL in reporting documents.	Completed 5/15/23		

VM-01 LiDAR Data Collection – Transmission

Program	Date Raised	Problem	Point of Cause	Containment Action	Containment Action Date	Status	Root Cause	Countermeasure Action	Target Date	Owner	Status
Program Name	*Date issue identified*	*Description of the issue; What is the deviation between what should happen vs what actually happened?*	*Where the failure behind the problem occurred?*	*Immediate action to fix Point of Cause*	*Immediate action to fix Point of Cause*		*Causation behind the Point of Cause*	*Action to fix the root cause; Countermeasure not populated until root cause verified*	*Date for completion of Countermeasure*	*Name*	
LiDAR Data Collection – Transmission	5/8/23	**Execution:** **Execution Plan not aligned with Work plan:** • COA found 6 circuits that were not included in work plan. Additional scope must be justified and documented and approved in EDRS. • COA found 5 Circuits not found on the Execution Plan that were in the work plan • Execution Plan Miles did not match work plan miles.	• The 6 circuits that 'were not included in work plan' were include in our VM2023 execution plan. **It is unclear why these were not submitted in the work plan**. • Independent QC review and attestation records failed to include 5 circuits listed below, and these omissions propagated in our records. They are now included in **Execution Plan work plan**. • The updated work plan contained 17,784 planned miles and completed a final of 17,817 miles.	Review QC records and attestation process to make sure all circuits are reported correctly for 2023, and records are complete. TVM GIS records are complete and accurate.	Completed 5/15/23		Circuit omissions were caused by human error. Mileage differences are caused by real and regular asset changes that occur in PG&E's transmission system (e.g., reconductoring, tower/pole replacements, etc.)	Create internal review process for audit & approval for Execution Plan work plan circuits & mileages as reported in attestations	Completed 5/15/23		

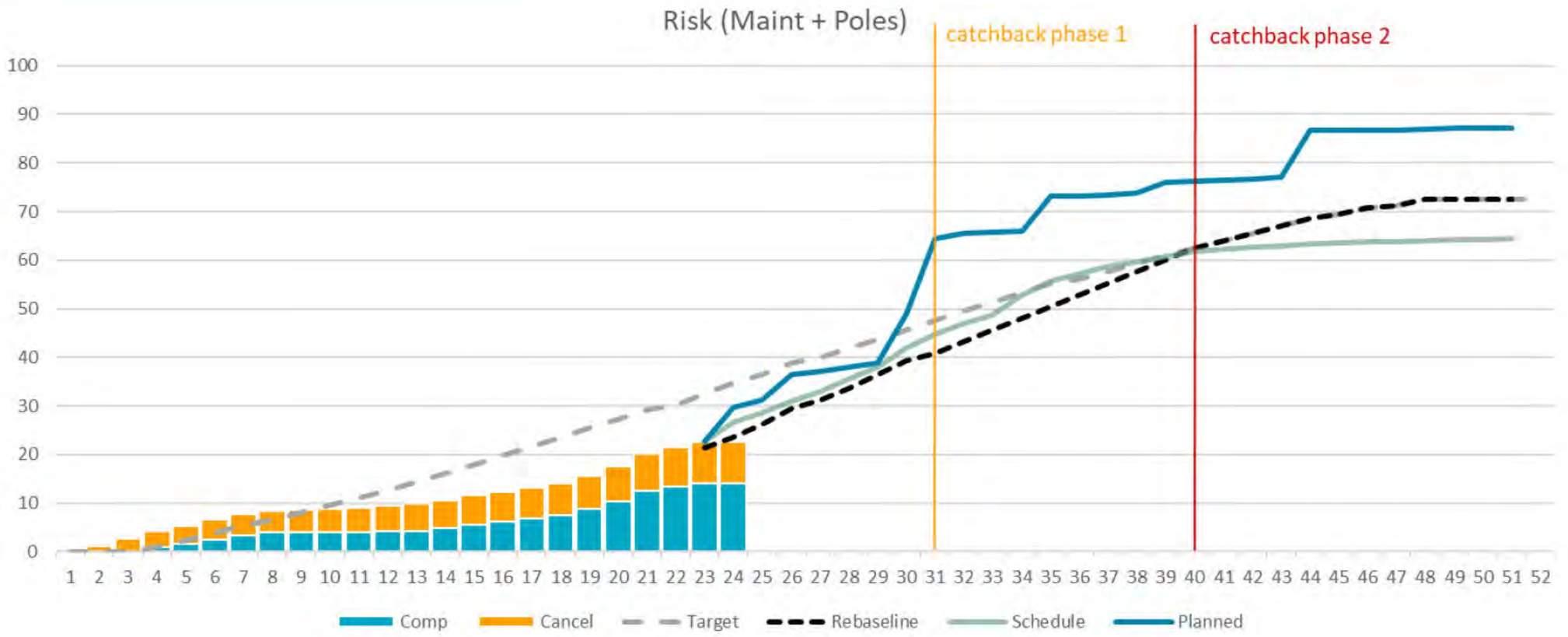
8.2.2.1 VM LiDAR Inspection Transmission (VM-01)							2023 Units (Circuit Mile)							
5 Added Circuit Records the were omitted from Execution work plan	kV	ETL	NERC	Lat	Long	Scheduled Completion date (Per unit completion definition)	Planned Total Units	Final Total Miles	Tier 3 HFTD	Tier 2 HFTD	Zone 1 HFTD	HFRA Non-HFTD	Non-HFTD Tier 2/3 Buffer	Non-HFTD / Non- HFRA
CIC TAP	60	ETL.6971	N			3/3/2023	0.114	0.114						0.114
GRIZZLY TAP (SVP)	115	ETL.1231	N			3/3/2023	0.164	0.164	0.063	0.101		0.000		0.000
LAWRENCE LIVERMORE LAB #2 TAP	115	ETL.3981	N			2/6/2023	6.363	6.363						6.363
PITTSBURG #1 TAP	60	ETL.6551	N			3/3/3023	1.159	1.159						1.159
SAN JOAQUIN COGEN TAP	115	ETL.4012	N			3/3/3023	0.037	0.037						0.037

Tags

2023 Distribution Maintenance – 48% risk reduction

[redacted] June 12, 2023

- 44K+ ready units, 16K+ scheduled
- 2023 Work plan after reprioritization has >80 v3 WF risk points in 2023 work plan plus 7.5 cancelled risk units
- Total 2023 Planned Units = ~55K
- Work Plan designed with ~4 week buffer at end of year



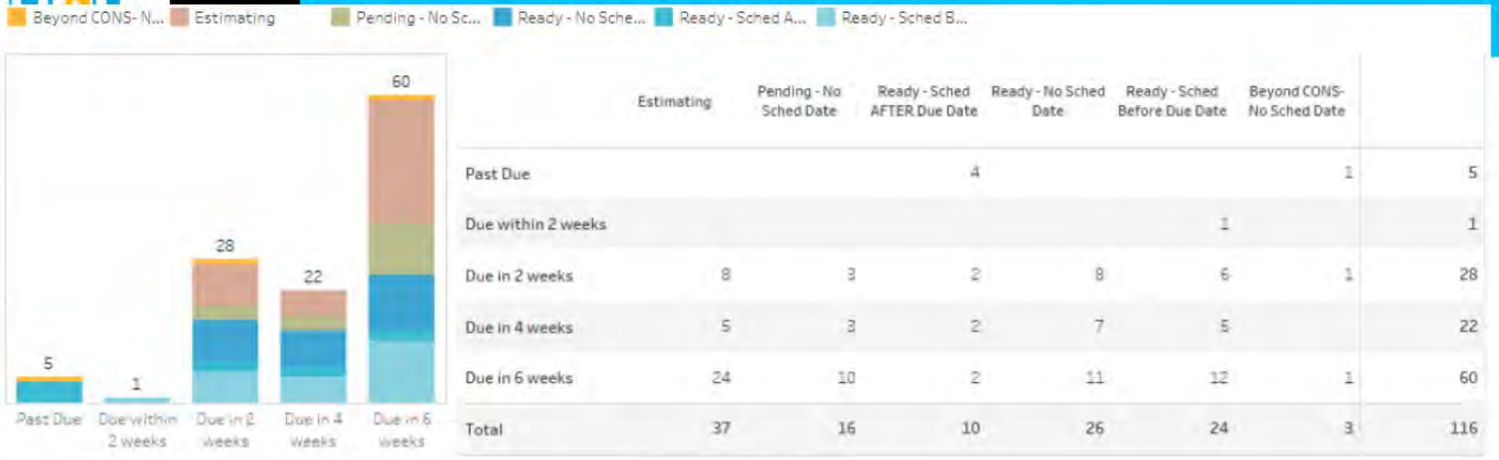
GM.03 – Open EC Notifications Risk Reduction Catch Back Plan

Catch Back Plan Due Date: 10/2/23 - WMP Target Due Date: 12/31/23
Chief Sponsor: Jeff Deal

Program	Date Raised	Problem	Point of Cause	Containment Action	Status	Root Cause	Countermeasure Action	Catch Back Due Date	Owner	Status
Program Name	*Date issue identified*	*Description of the issue; What is the deviation between what should happen vs what actually happened?*	*Where the failure behind the problem occurred?*	*Immediate action to fix Point of Cause*		*Causation behind the Point of Cause*	*Action to fix the root cause; Countermeasure not populated until root cause verified*	*Date for completion of Countermeasure.* ***Number of units delivered by this date (to meet YTD target).***	*Name*	
EC Notifications Risk Reduction	3/7/23	Less v3 wildfire risk points completed in 2023 then planned	Storm response and new business has utilized most of the resources that were planned to execute this work and completed lower risk ready units earlier in the work plan	Reschedule work planned in first two months of year to Q2 & Q3		Not enough resources to complete EC notifications, New Business and storm work	Reschedule work planned in first two months of year to Q2 & Q3	By 5/31/23 have enough tags scheduled to be at 40 risk points YTD by 7/31/232 - complete By 7/31/23 have enough tags scheduled to be at 63 risk points YTD by 9/31/2023 - complete	[redacted]	

January Tier 3 Pole E Steady-State Tags

June 12, 2023



	Estimating	Pending - No Sched Date	Ready - Sched AFTER Due Date	Ready - No Sched Date	Ready - Sched Before Due Date	Beyond CONS- No Sched Date	
Past Due			4			1	5
Due within 2 weeks					1		1
Due in 2 weeks	8	3	2	8	6	1	28
Due in 4 weeks	5	3	2	7	5		22
Due in 6 weeks	24	10	2	11	12	1	60
Total	37	16	10	26	24	3	116

Open By HFTD Tiers

	TIER 3		Total
	B	E	
2023 Jan	7	109	116

Readiness	Contract	Division	Estimating	GC	Veg	Grand Total
Estimating	**25**	**9**	**3**			**37**
Bay Area		2	1			3
Central Valley	1					1
North Coast	3	7	1			11
North Valley & Sierra	20					20
South Bay & Central Coast	1		1			2
Pending - No Sched Date	**10**	**5**		**1**		**16**
Ready - No Sched Date	**20**	**4**			**2**	**26**
Central Valley	6	4				10
North Coast	3				1	4
North Valley & Sierra	7					7
South Bay & Central Coast	4				1	5
Ready - Sched AFTER Due Date	**5**	**4**		**1**		**10**
Bay Area		1				1
Central Valley	1	2		1		4
North Coast	3					3
North Valley & Sierra	1					1
South Bay & Central Coast		1				1
Ready - Sched Before Due Date	**10**	**14**				**24**
Beyond CONS- No Sched Date			**3**			**3**
Grand Total	**70**	**36**	**6**	**2**	**2**	**116**

Action	Action Owner	Target Date	RAG Status
39 Estimating jobs: 3 are duplicates with existing orders, 8 are in the approval phase, 3 are pole calcs tags (GAC tags, no field work needed). Need to expedite the rest of the 25 jobs (Approximately 10 need jobs need permits)	[redacted]	6/12/23	
Joint Pole: Clear current 7 intents with ATT (3 will be complete by 6/19, 3 by 7/5, and 1 by 7/16)		6/12/23	
Of the 39 tags that are still in Estimating: 12 of the 22 tags assigned for Division are RCR'd to contract, correct the resource in WPML		6/13/23	
Environment (1): file exemption before tag due (GC)		7/1/23	
Land (2): file exemptions before tag due (1 Division,1 Contract)		7/1/23	
Contract work that is still in estimating (currently 14 + 12 RCR'd), escalate to leadership		6/12/23	
Contract (25 jobs)/GC (1 job)/Division (8 jobs) scheduling current ready work before due dates, and move the currently scheduled before due dates		6/15/23	

GM.XX – Open EC Notifications SteadyState Catch Back Plan

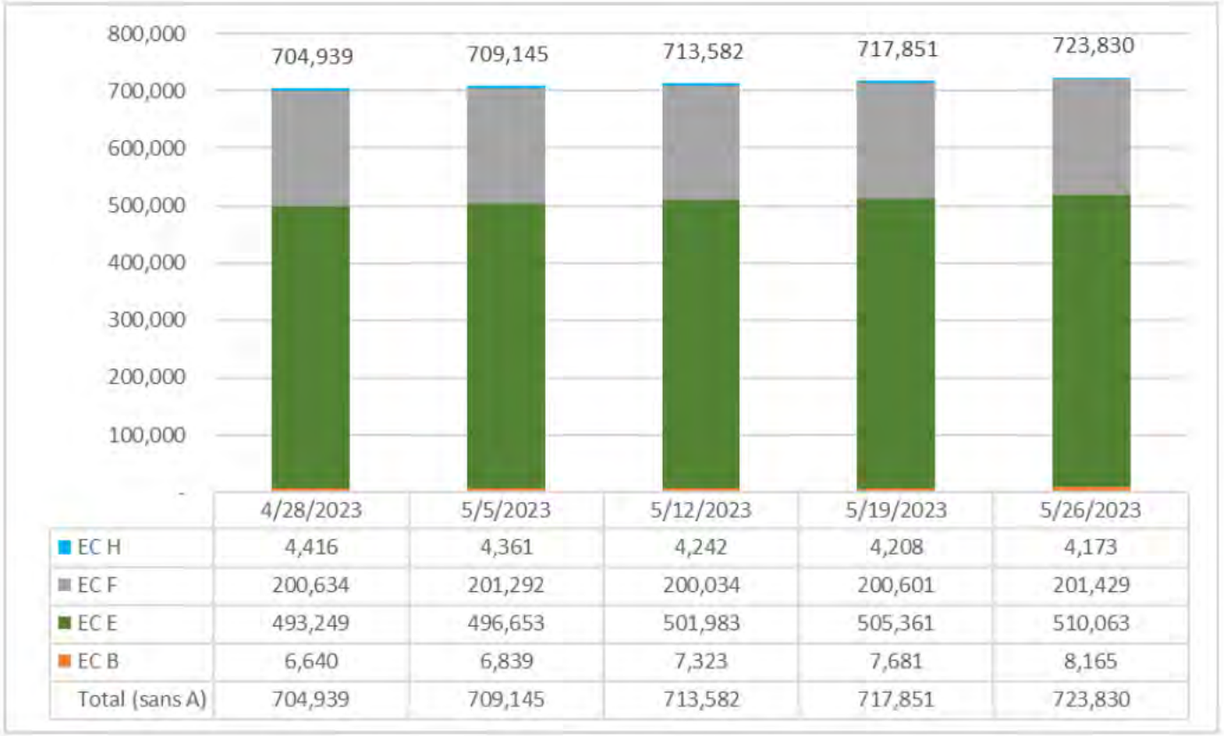
Catch Back Plan Due Date: 7/30/23 - WMP Target Due Date: Ongoing
Chief Sponsor: Jeff Deal

Program	Date Raised	Problem	Point of Cause	Containment Action	Status	Root Cause	Countermeasure Action	Catch Back Due Date	Owner	Status
Program Name	*Date issue identified*	*Description of the issue; What is the deviation between what should happen vs what actually happened?*	*Where the failure behind the problem occurred?*	*Immediate action to fix Point of Cause*		*Causation behind the Point of Cause*	*Action to fix the root cause; Countermeasure not populated until root cause verified*	*Date for completion of Countermeasure.* ***Number of units delivered by this date (to meet YTD target).***	*Name*	
EC Notifications SteadyState completion	5/30/23	Tier 3 pole E tags not uploaded to Work Plan	System failure where all tags were uploaded to work plan except tier 3 pole E tags	Daily meeting with: estimating, permitting, scheduling and divisions. Utilizing exemption process where applicable		System failure where all tags were uploaded to work plan except tier 3 pole E tags	System has been corrected and manual verification has been implemented in the process	Estimating complete 6/12 Permitting complete or exemption filed 6/30 Work assigned and scheduled throughout July	[redacted]	

OPEN Distribution Tag Weekly Summary

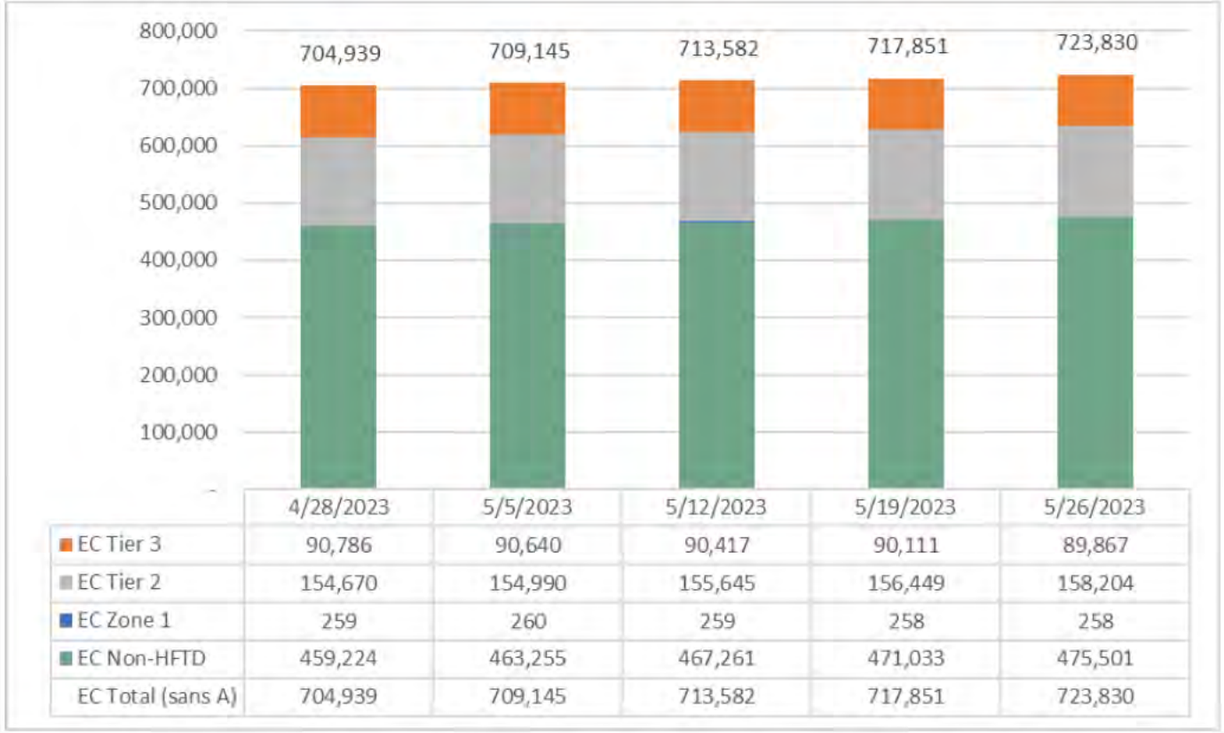
May 26, 2023

Distribution Tags OPEN By Priority



	4/28/2023	5/5/2023	5/12/2023	5/19/2023	5/26/2023
EC H	4,416	4,361	4,242	4,208	4,173
EC F	200,634	201,292	200,034	200,601	201,429
EC E	493,249	496,653	501,983	505,361	510,063
EC B	6,640	6,839	7,323	7,681	8,165
Total (sans A)	704,939	709,145	713,582	717,851	723,830

Distribution Tags OPEN By HFTD



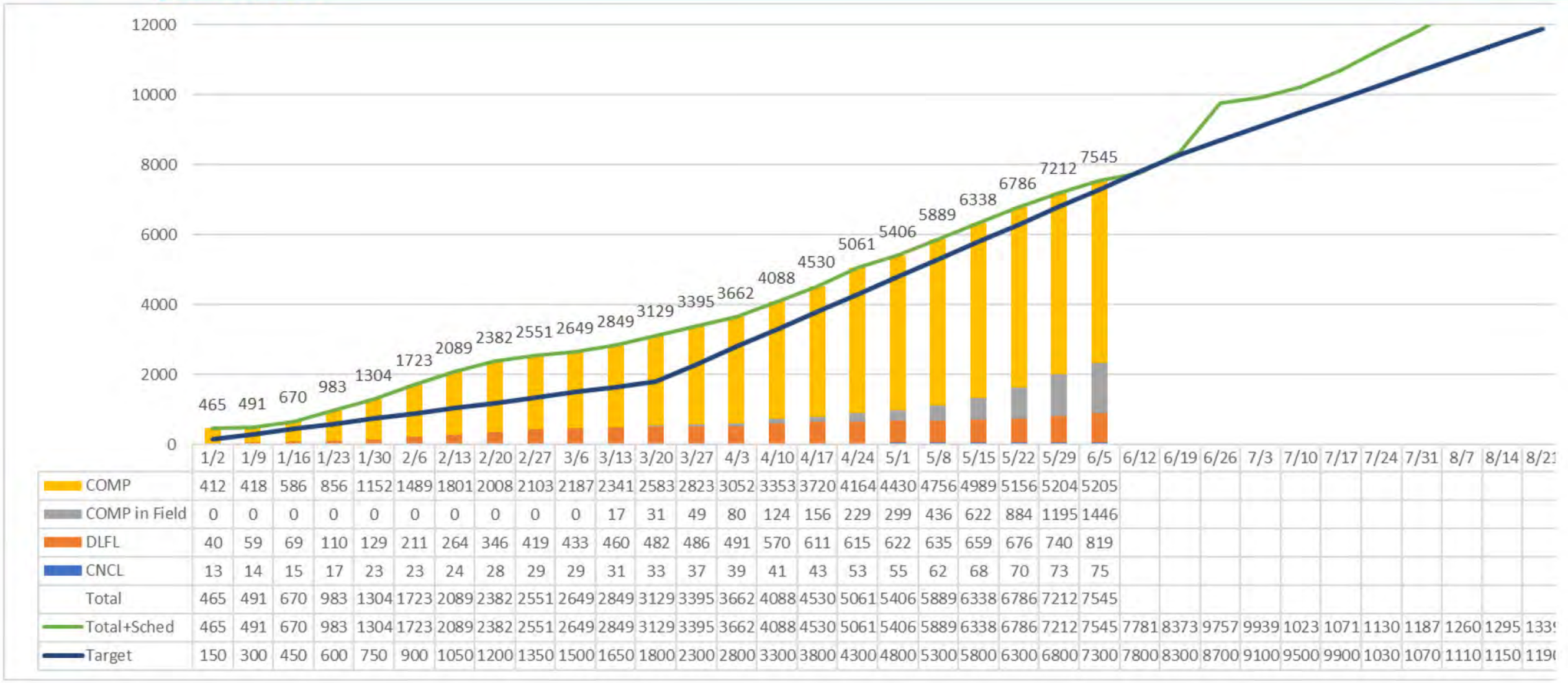
	4/28/2023	5/5/2023	5/12/2023	5/19/2023	5/26/2023
EC Tier 3	90,786	90,640	90,417	90,111	89,867
EC Tier 2	154,670	154,990	155,645	156,449	158,204
EC Zone 1	259	260	259	258	258
EC Non-HFTD	459,224	463,255	467,261	471,033	475,501
EC Total (sans A)	704,939	709,145	713,582	717,851	723,830

*A tags not included in this chart as their times series from OPEN to COMP is generally shorter, see alternate slide for A- Tag OPEN Summary.

Tag snapshot taken each Monday to represent the previous week open tag counts.

2023 Transmission Maintenance

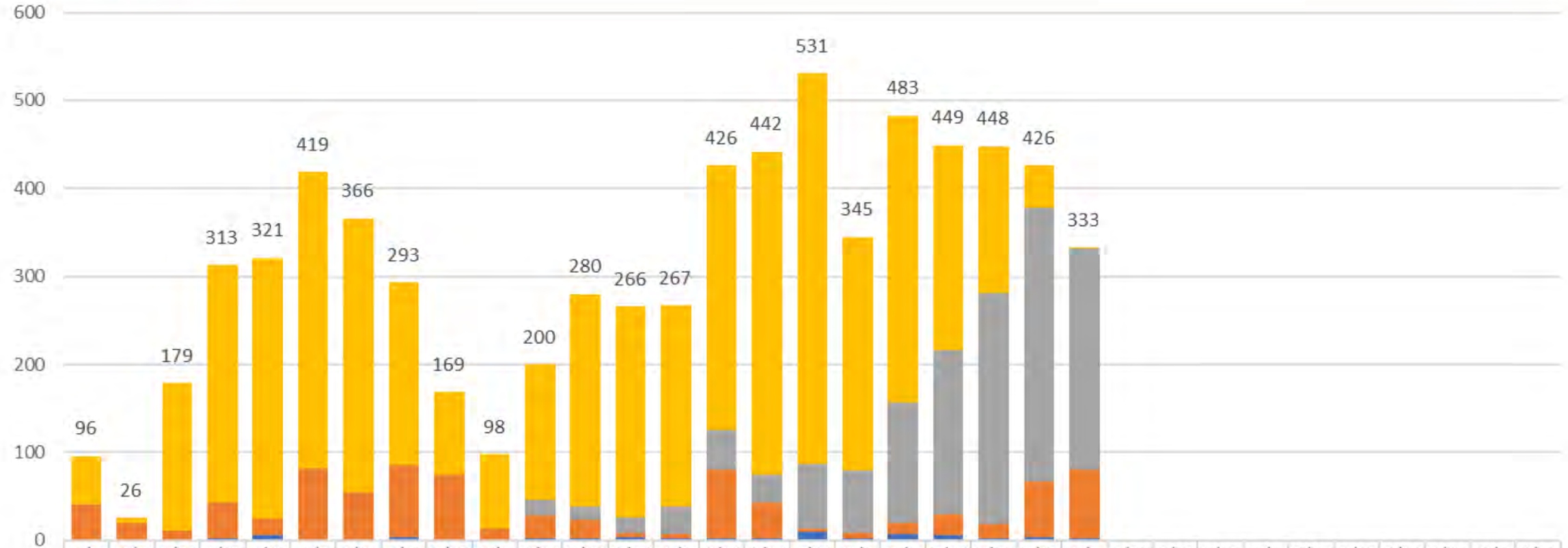
June 9, 2023



	1/2	1/9	1/16	1/23	1/30	2/6	2/13	2/20	2/27	3/6	3/13	3/20	3/27	4/3	4/10	4/17	4/24	5/1	5/8	5/15	5/22	5/29	6/5	6/12	6/19	6/26	7/3	7/10	7/17	7/24	7/31	8/7	8/14	8/21
COMP	412	418	586	856	1152	1489	1801	2008	2103	2187	2341	2583	2823	3052	3353	3720	4164	4430	4756	4989	5156	5204	5205											
COMP in Field	0	0	0	0	0	0	0	0	0	0	17	31	49	80	124	156	229	299	436	622	884	1195	1446											
DLFL	40	59	69	110	129	211	264	346	419	433	460	482	486	491	570	611	615	622	635	659	676	740	819											
CNCL	13	14	15	17	23	23	24	28	29	29	31	33	37	39	41	43	53	55	62	68	70	73	75											
Total	465	491	670	983	1304	1723	2089	2382	2551	2649	2849	3129	3395	3662	4088	4530	5061	5406	5889	6338	6786	7212	7545											
Total+Sched	465	491	670	983	1304	1723	2089	2382	2551	2649	2849	3129	3395	3662	4088	4530	5061	5406	5889	6338	6786	7212	7545	7781	8373	9757	9939	1023	1071	1130	1187	1260	1295	133
Target	150	300	450	600	750	900	1050	1200	1350	1500	1650	1800	2300	2800	3300	3800	4300	4800	5300	5800	6300	6800	7300	7800	8300	8700	9100	9500	9900	1030	1070	1110	1150	119

2023 Transmission Maintenance

June 9, 2023

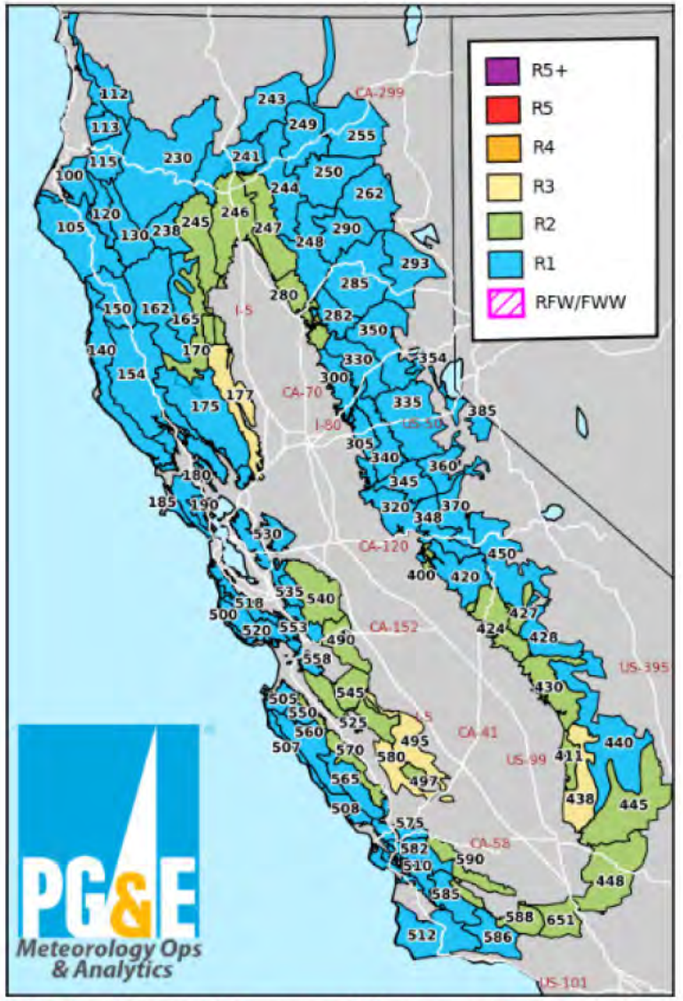


	1/2	1/9	1/16	1/23	1/30	2/6	2/13	2/20	2/27	3/6	3/13	3/20	3/27	4/3	4/10	4/17	4/24	5/1	5/8	5/15	5/22	5/29	6/5	6/12	6/19	6/26	7/3	7/10	7/17	7/24	7/31	8/7	8/14
COMP	55	6	168	270	296	337	312	207	95	84	154	242	240	229	301	367	444	266	326	233	167	48	1										
COMP in Field	0	0	0	0	0	0	0	0	0	0	17	14	18	31	44	32	73	70	137	186	262	311	251										
DLFL	40	19	10	41	19	82	53	82	73	14	27	22	4	5	79	41	4	7	13	24	17	64	79										
CNCL	1	1	1	2	6	0	1	4	1	0	2	2	4	2	2	2	10	2	7	6	2	3	2										
Total	96	26	179	313	321	419	366	293	169	98	200	280	266	267	426	442	531	345	483	449	448	426	333										

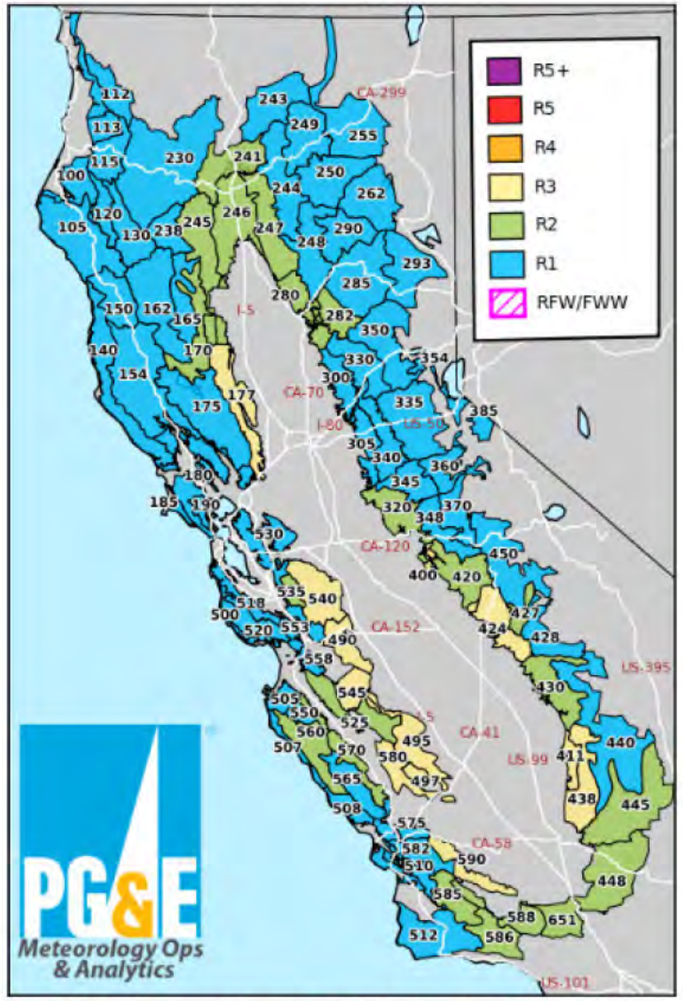
Meteorology

[redacted]

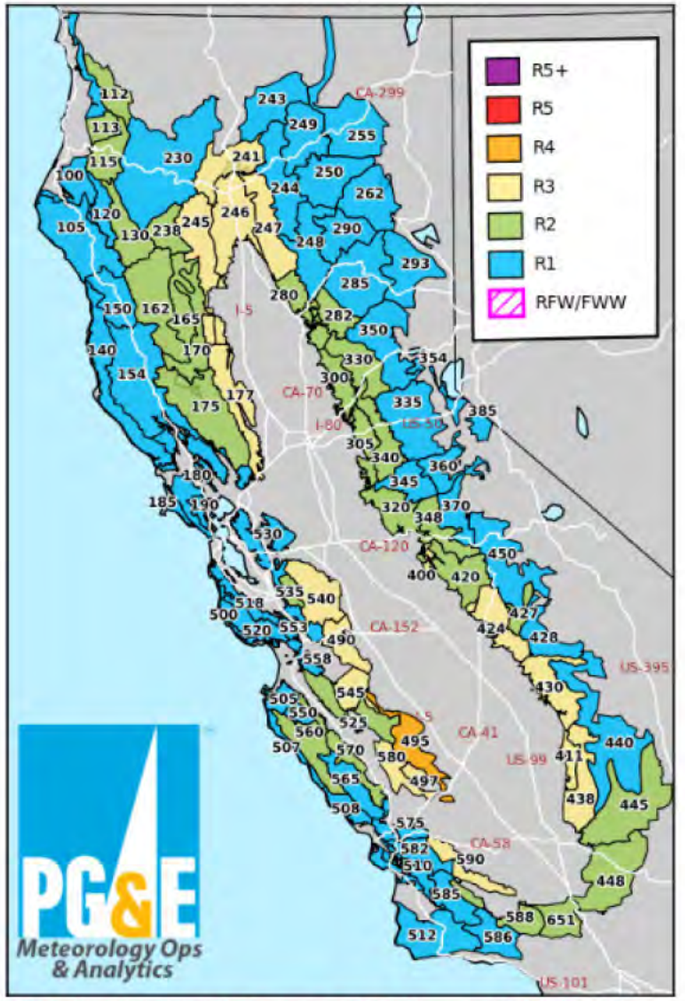
PG&E Utility Fire Potential Index Ratings
Valid for 06/13/2023



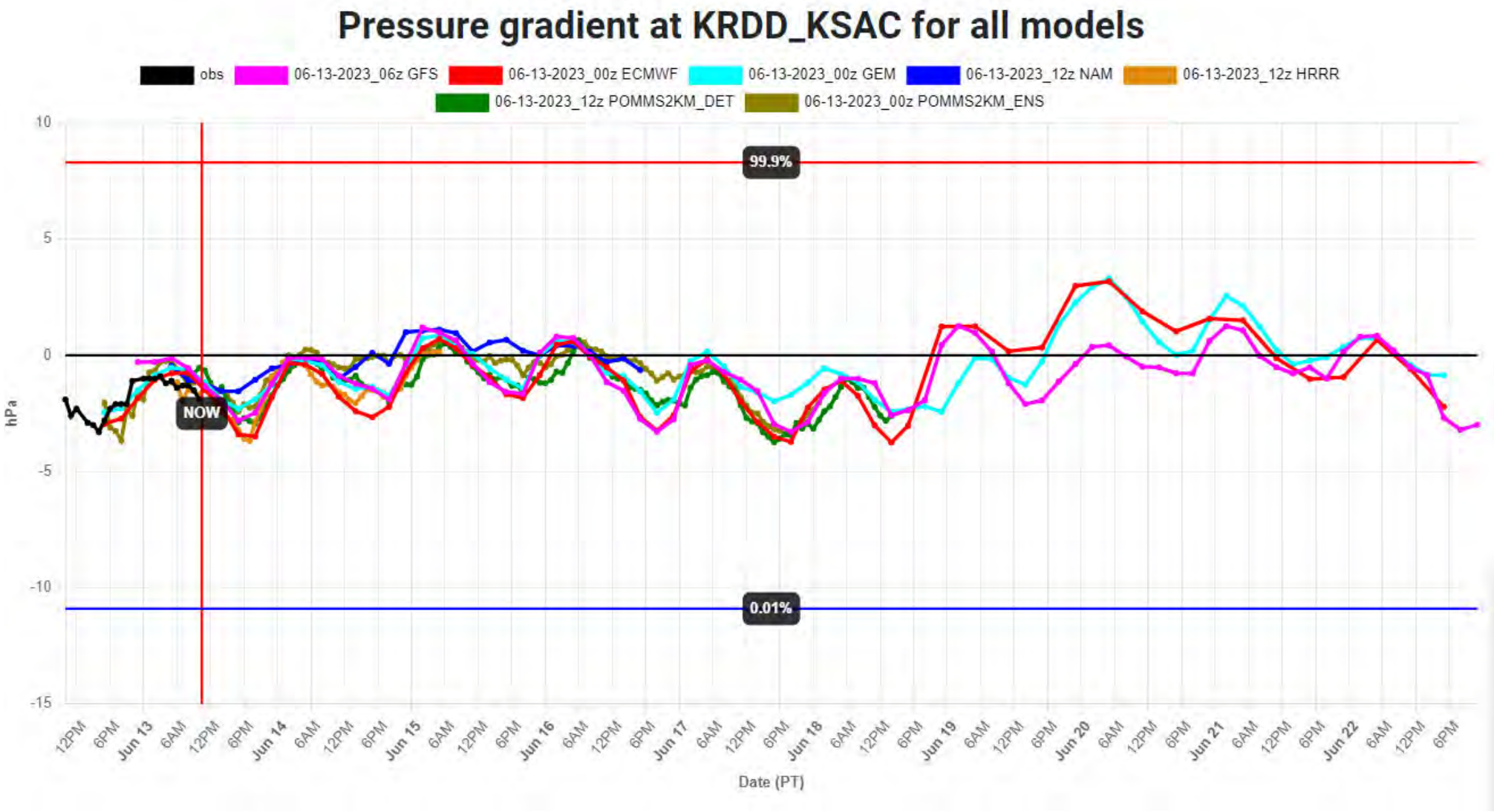
PG&E Utility Fire Potential Index Ratings
Valid for 06/14/2023



PG&E Utility Fire Potential Index Ratings
Valid for 06/15/2023



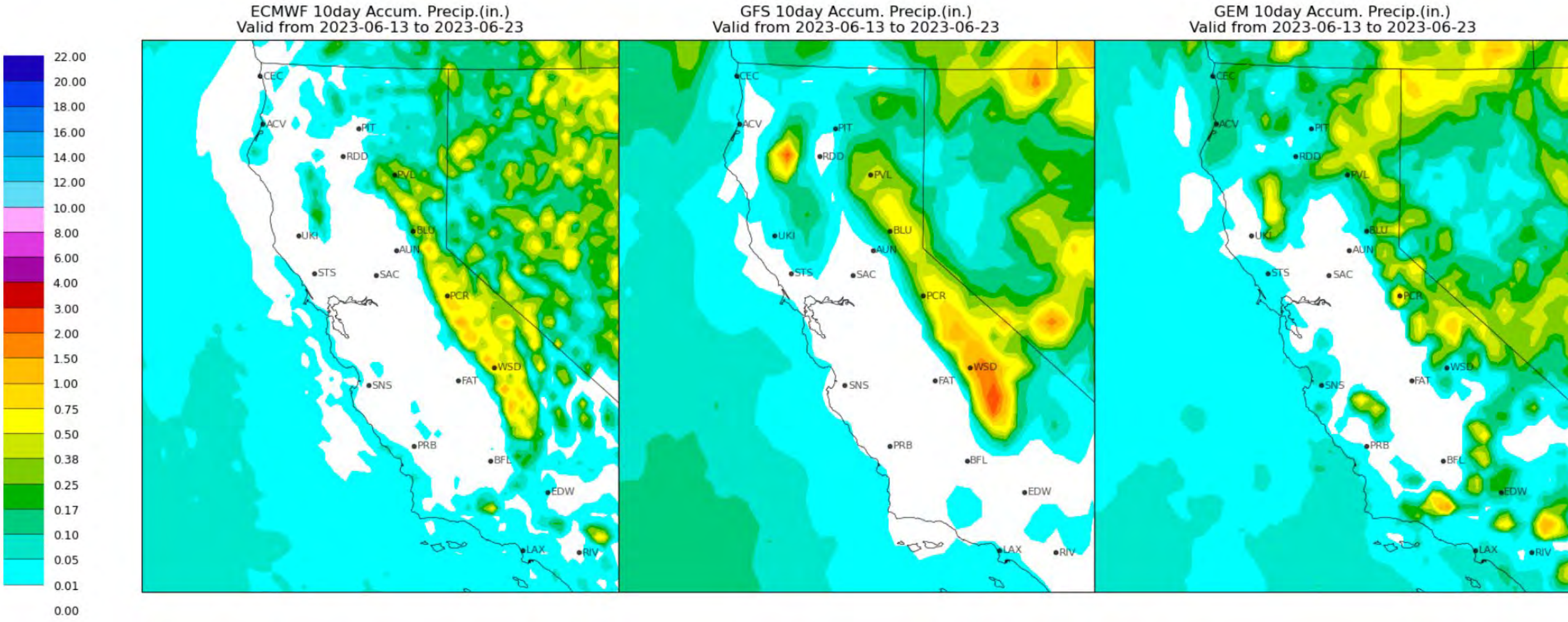
https://weatherprod.ss.pge.com/PressureGradientDashboard



No significant northerly wind events are anticipated for the next week.

http://weatherprd1/weather/models/compare-00/ecmgfsgem_APCP_10day.png

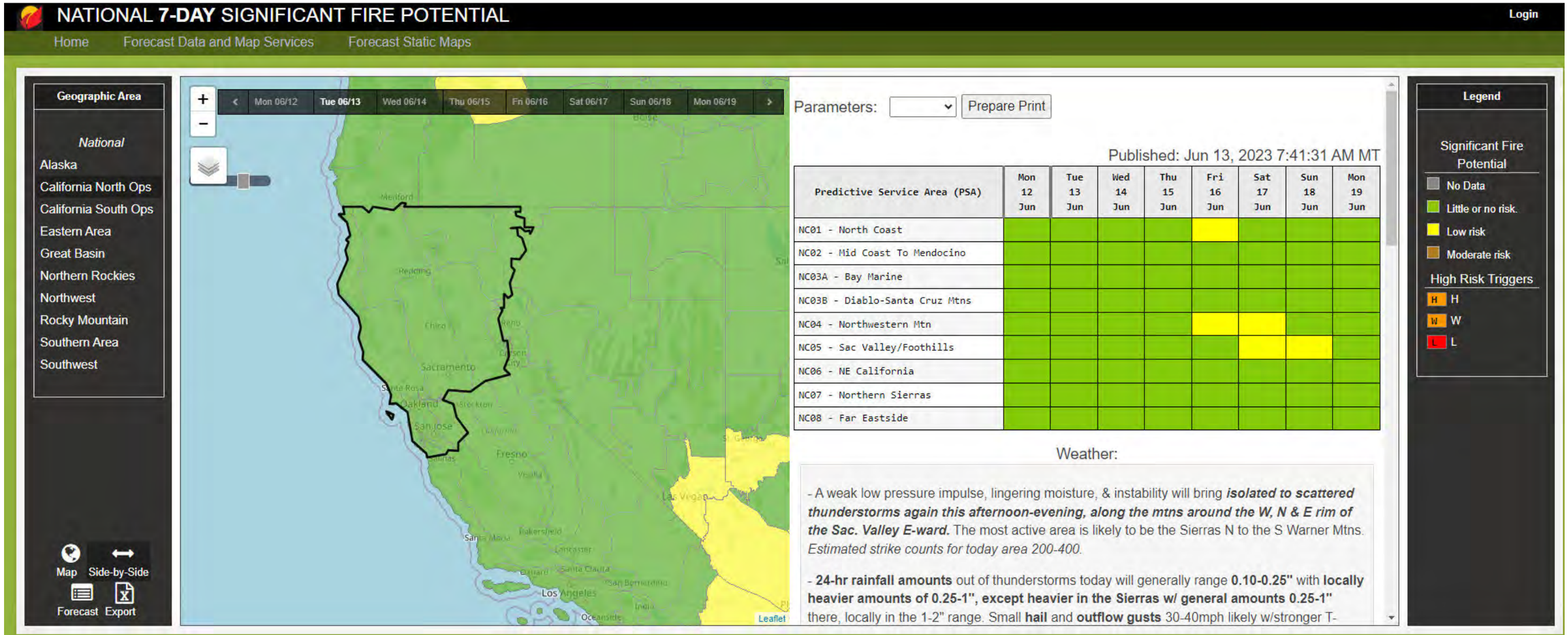
Precipitation for the next 10 days



https://fsapps.nwcg.gov/psp/npsg/forecast/#/outlooks?forecastDay=2015-07-07&forecastInView=2015-07-07&state=sideBySide&gaccId=4

North Ops: Little to no significant fire risk conditions will continue through Thu due to the mosaic of green-up (shrubs & herbaceous), recent cooler temps& higher RHs, areas of precip, & above normal higher elevation snowpack.

South Ops: The large fire threat will remain low across the region through the forecast period due to the cool weather and recent moisture. Light initial attack can be expected.



Wildfire Risk Command Center

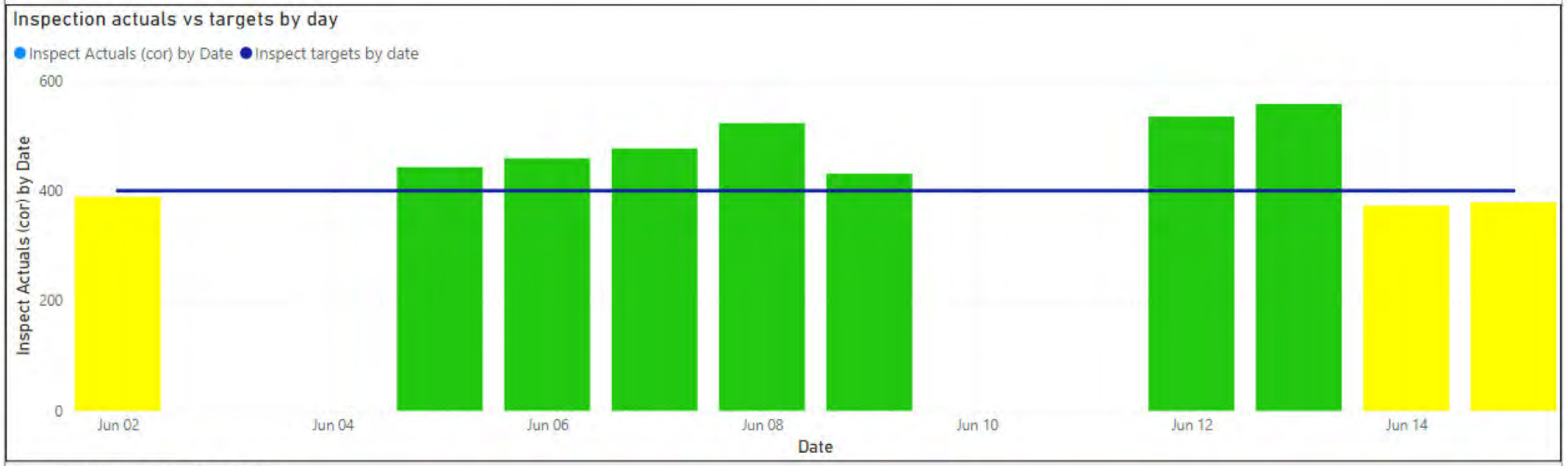
June 20, 2023: Weekly Operating Review Agenda

	Agenda	*Topic*	*Leads*	*Timing*
0	**Preface & Introductions**	• Safety • Key Takeaways	[redacted]	5 min
1	**Aerial Inspections**	• Aerial Inspections Update		5 min
2	**Quality**	• Quality Update		5 min
3	**2023 WMP Delivery**	• WMP Delivery Update • Vegetation Management Update • COA Update		15 min
4	**EPSS**	• EPSS Update	*Dave Canny*	10 min
5	**Ignitions**	• Ignitions Update	[redacted]	5 min

Aerial Inspections

Aerial distribution – daily actuals vs targets

Daily inspections | Cumulative inspections | Find rate goals | FDAs



Inspect actuals for last week

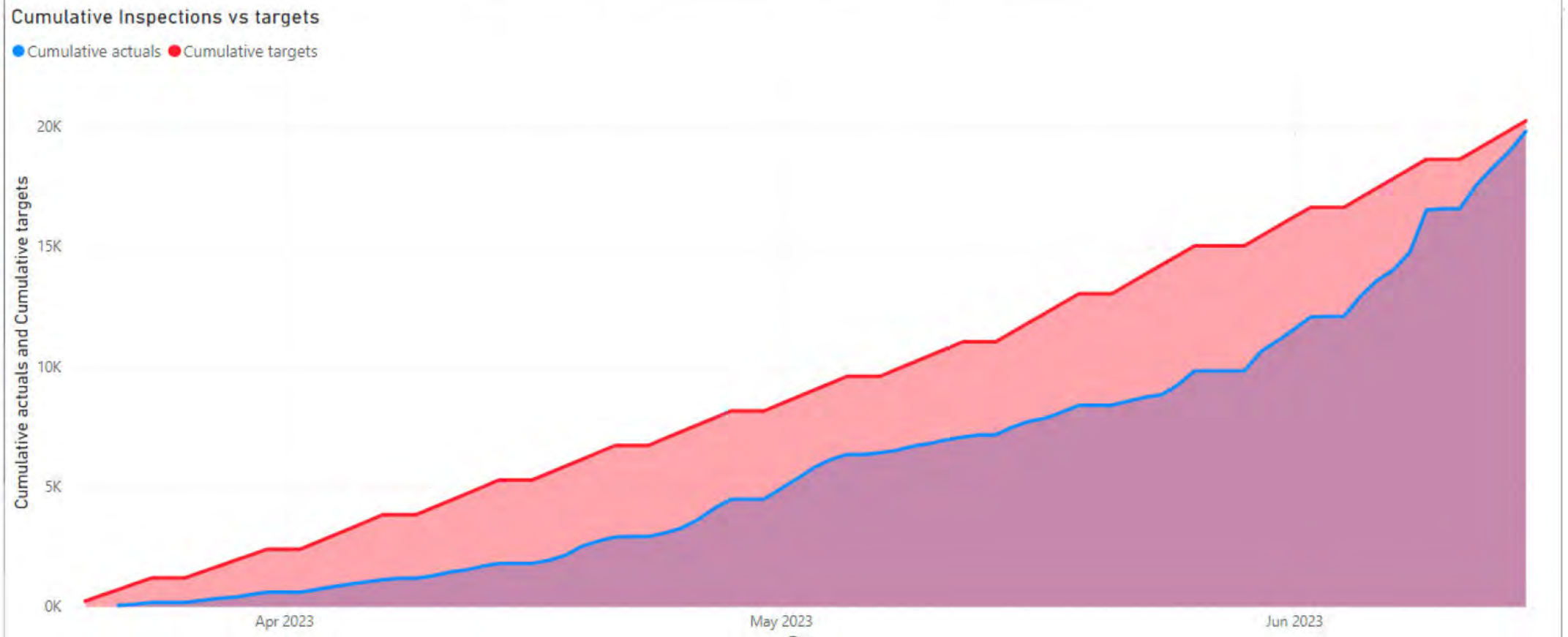
2276

Performance vs targets (last week)

276

Aerial distribution – Cumulative inspection vs targets

Daily inspections | Cumulative inspections | Find rate goals | FDAs



Inspect actuals for last week

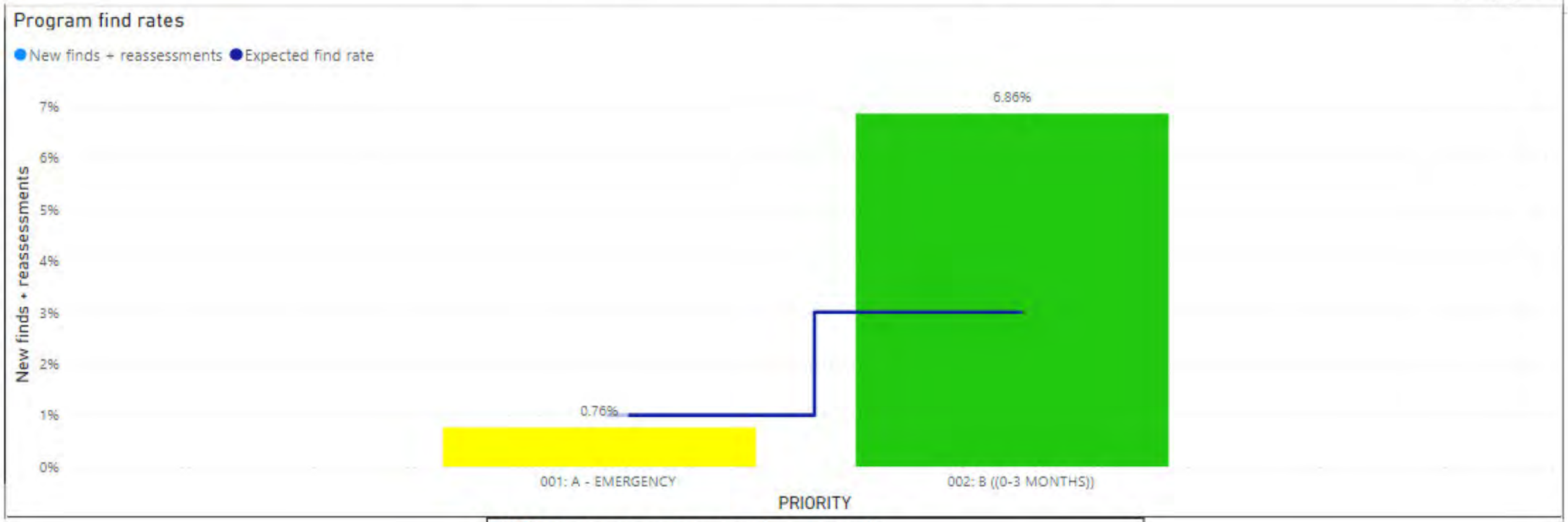
2276

Performance vs targets (last week)

276

Aerial distribution – Find rates vs targets

Daily inspections | Cumulative inspections | Find rate goals | FDAs

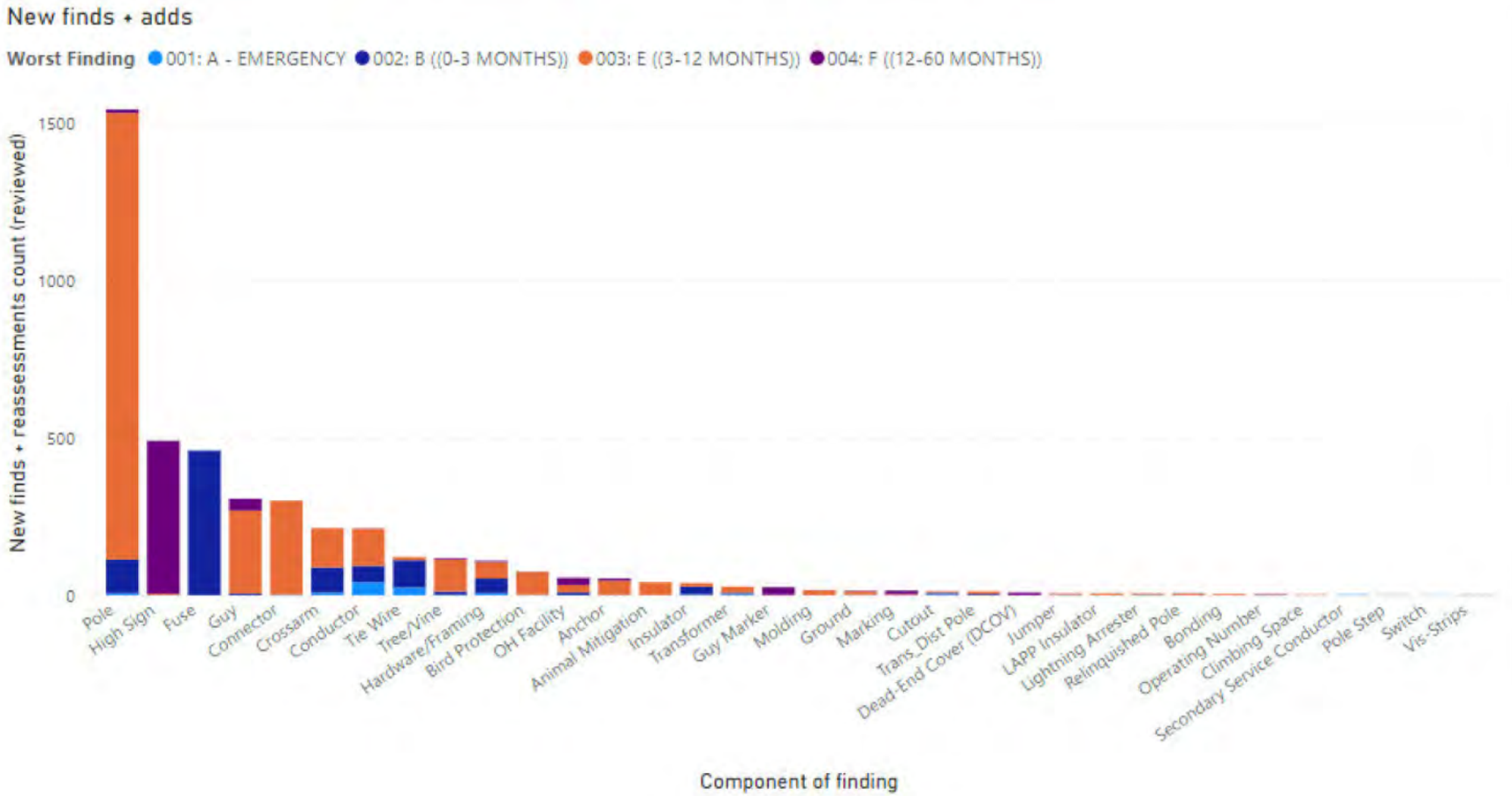


2023 program raw counts and rates (total)

Priority Text	New finds	New find rate	Reassess count	Reassess rate	Overall	Expected find rate
A	38	0.29%	62	0.47%	0.76%	1.00%
B	363	2.76%	539	4.10%	6.86%	3.00%
E	36	0.27%	2635	20.04%	20.32%	
F	5	0.04%	620	4.72%	4.75%	
Total	**442**	**3.36%**	**3856**	**29.33%**	**32.69%**	**4.00%**

Aerial distribution – Component finds

Daily inspections | Cumulative inspections | Find rate goals | FDAs



Worst Finding

- 001: A - EMERGENCY
- 002: B ((0-3 MONTHS))
- 003: E ((3-12 MONTHS))
- 004: F ((12-60 MONTHS))

Date

Last 1 Select

No filters applied

Example A findings (last seven days)

DISTRIBUTION CIRCUIT: REDBUD 1101
DESCRIPTION: FLOATING CROSSARM

Example A findings (last seven days)

SAP EQUIPMENT ID: 100720903
DISTRIBUTION CIRCUIT: BALCH NO 1 1101
DESCRIPTION: CRUSHED POLETOP

Example A findings (last seven days)

SAP EQUIPMENT ID: 103910196
DISTRIBUTION CIRCUIT: MONTICELLO 1101
DESCRIPTION: LOOSE TIE WIRE ON INSULATOR

Example A findings (last seven days)

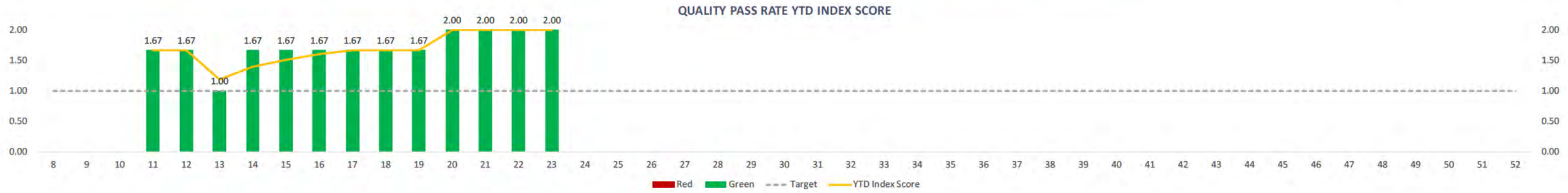
SAP EQUIPMENT ID: 103788421
DISTRIBUTION CIRCUIT: WEST POINT 1101
DESCRIPTION: MISSING COTTER KEY WITH RETAINER
PIN SLIPPAGE ON TREE CONNECT.

Quality

MID - QUALITY ASSURANCE DASHBOARD - QUALITY PASS RATE (QPR)

QUALITY PASS RATE INDEX SCORE

	WEEKLY PERFORMANCE				YTD PERFORMANCE				
	RAG Status	Index Score	Pass Rate	Target	RAG Status	Index Score	Pass Rate	Target	Target Range / Threshold
OVERALL QPR INDEX		2.00				2.00			
VMQA DISTRIBUTION INDEX SCORE		2.00	100.00%	97.26%		2.00	99.86%	97.26%	0.5 - 96.30% 1.0 - 97.26% 2.0 - 98.24%
SIQA DISTRIBUTION INDEX SCORE		2.00	94.65%	79.77%		2.00	95.81%	79.77%	0.5 - 78.00% 1.0 - 79.77% 2.0 - 81.59%
SIQA TRANSMISSION INDEX SCORE		2.00	100.00%	97.25%		2.00	99.66%	97.25%	0.5 - 96.29% 1.0 - 97.25% 2.0 - 98.23%



MID - QUALITY ASSURANCE DASHBOARD

ACCEPTABLE QUALITY LEVEL (AQL)

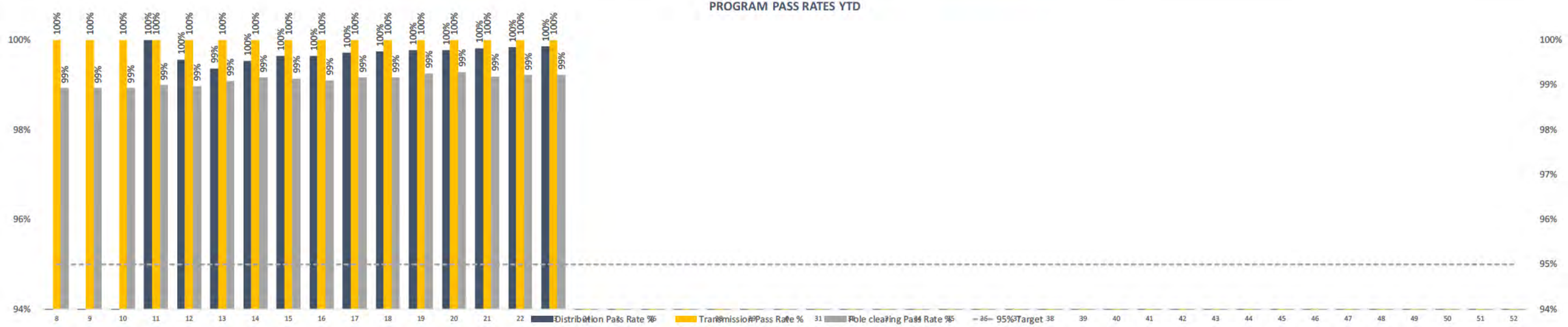
WEEKLY PERFORMANCE

	RAG Status	Pass Rate	Target
VMQA DISTRIBUTION		100.00%	95.00%
VMQA TRANSMISSION		100.00%	95.00%
VMQA VEGETATION CONTROL (VC)		100.00%	95.00%

YTD PERFORMANCE

	RAG Status	Pass Rate	Target
VMQA DISTRIBUTION		99.86%	95.00%
VMQA TRANSMISSION		100.00%	95.00%
VMQA VEGETATION CONTROL (VC)		99.23%	95.00%

PROGRAM PASS RATES YTD



MID - QUALITY ASSURANCE DASHBOARD - QUALITY PASS RATE (QPR)

VMQA DISTRIBUTION - HFTD

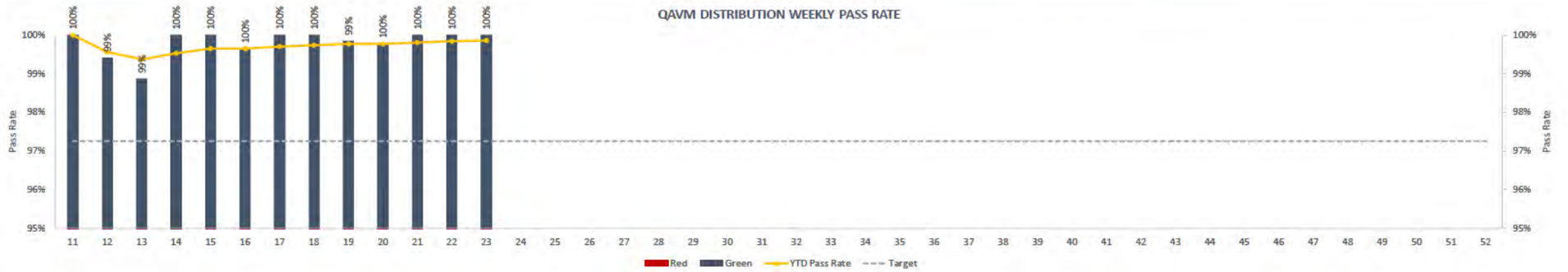
WEEKLY PERFORMANCE

	RAG Status	Index Score	Target	Pass Rate	Total Trees Comp.	Total Trees Passed	Total Trees Failed
1		2.00	97.26%	100.00%	480	480	0

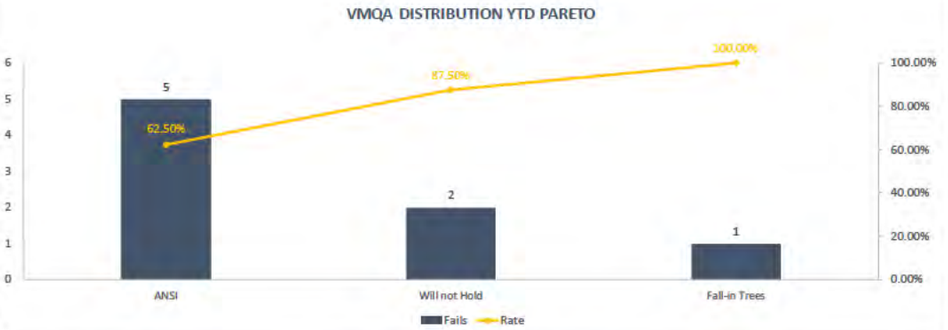
YTD PERFORMANCE

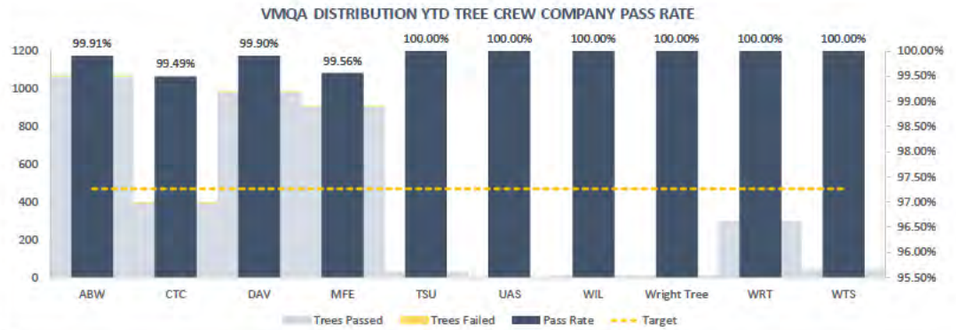
RAG Status	Index Score	Target	Pass Rate	Total Trees Comp.	Total Trees Passed	Total Trees Failed
	2.00	97.26%	99.86%	5558	5550	8

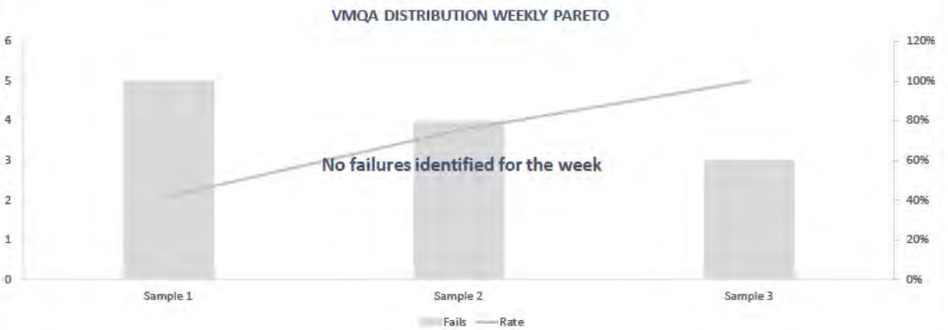
3

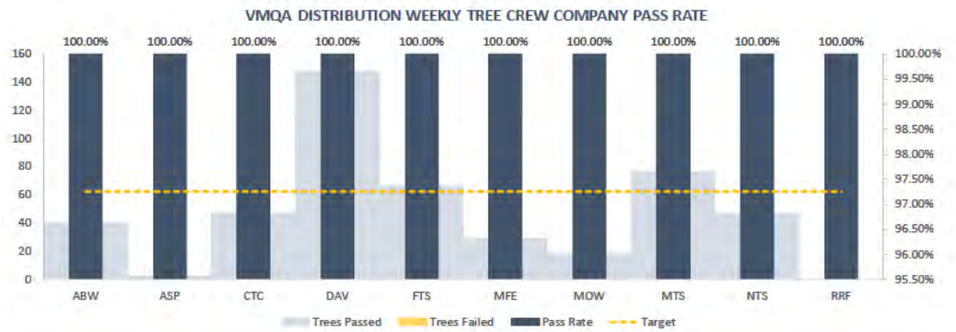


10









MID - QUALITY ASSURANCE DASHBOARD - QUALITY PASS RATE (QPR)

SIQA TRANSMISSION - HFTD

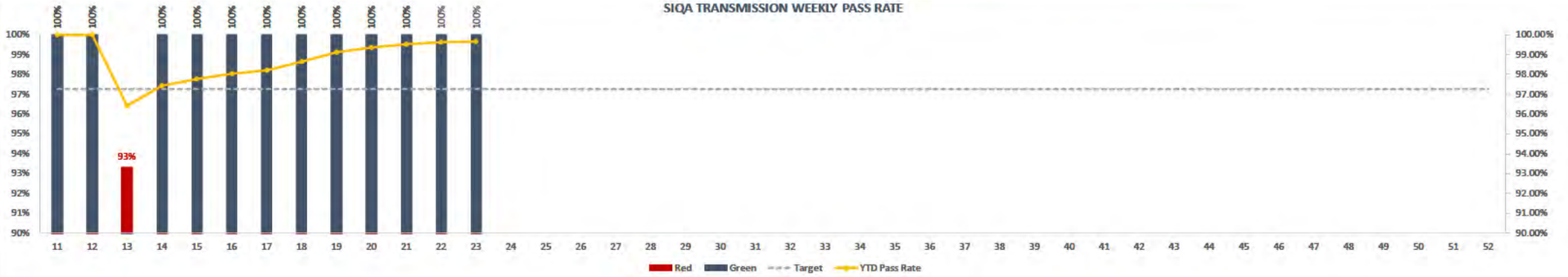
WEEKLY PERFORMANCE

RAG Status	Index Score	Target	Pass Rate	Total Eq. ID Comp.	Total Eq. ID Passed	Total Eq. ID Failed
	2.00	97.25%	100.00%	43	43	0

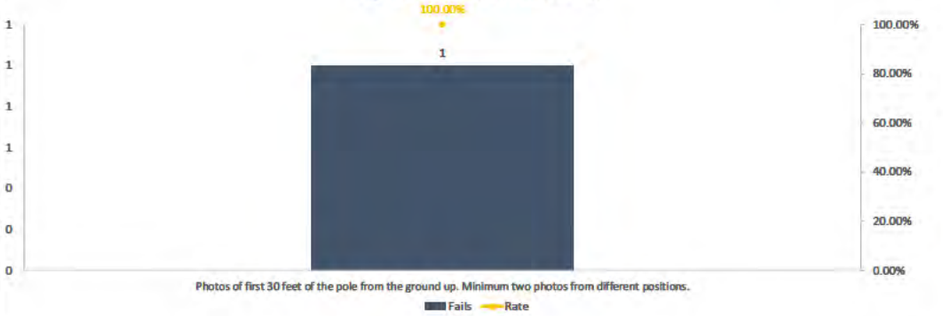
YTD PERFORMANCE

RAG Status	Index Score	Target	Pass Rate	Total Eq. ID Comp.	Total Eq. ID Passed	Total Eq. ID Failed
	2.00	97.25%	99.66%	297	296	1

SIQA TRANSMISSION WEEKLY PASS RATE



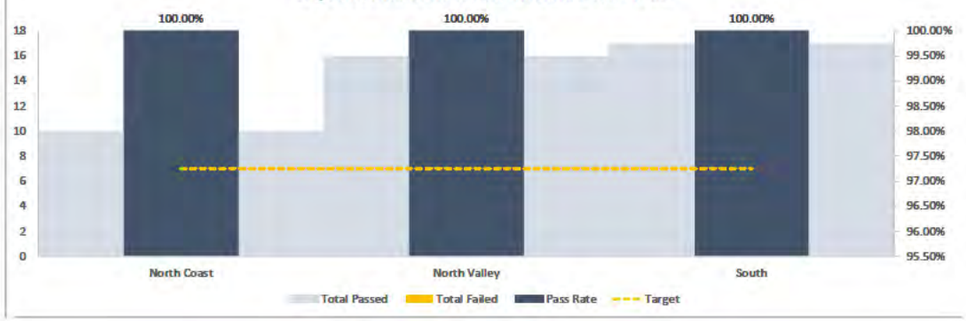
SIQA TRANSMISSION YTD PARETO



SIQA TRANSMISSION YTD REGION PASS RATE

SIQA TRANSMISSION WEEKLY PARETO

SIQA TRANSMISSION WEEKLY REGIONAL PASS RATE



MID - QUALITY ASSURANCE DASHBOARD - QUALITY PASS RATE (QPR)

SIQA DISTRIBUTION - HFTD

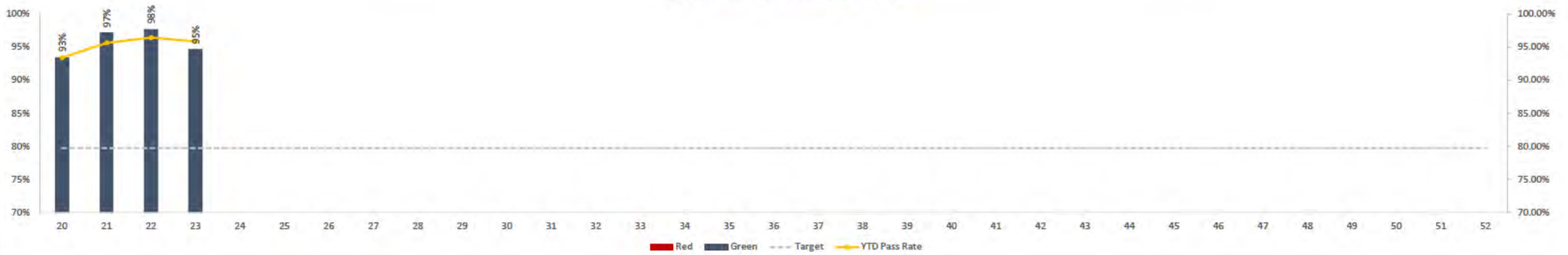
WEEKLY PERFORMANCE

RAG Status	Index Score	Target	Pass Rate	Total Eq. ID Comp.	Total Eq. ID Passed	Total Eq. ID Failed
	2.00	79.77%	94.65%	299	283	16

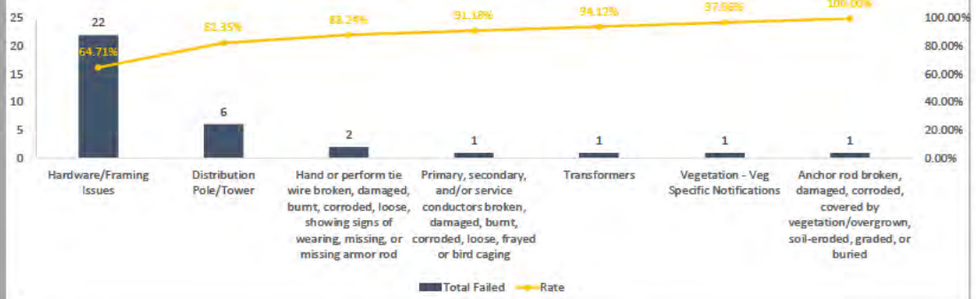
YTD PERFORMANCE

RAG Status	Index Score	Target	Pass Rate	Total Eq. ID Comp.	Total Eq. ID Passed	Total Eq. ID Failed
	2.00	79.77%	95.81%	812	778	34

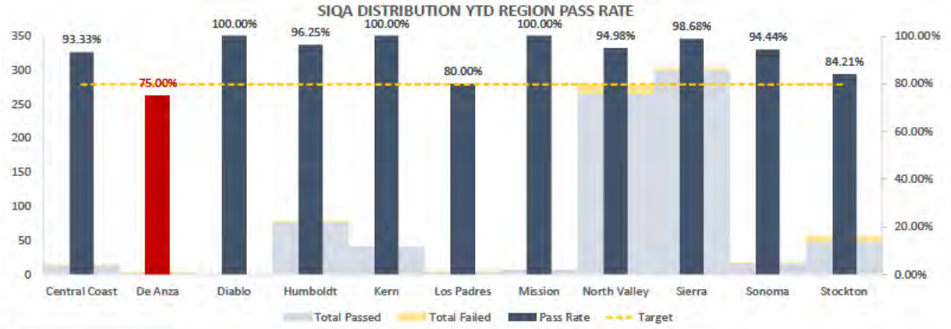
SIQA DISTRIBUTION WEEKLY PASS RATE



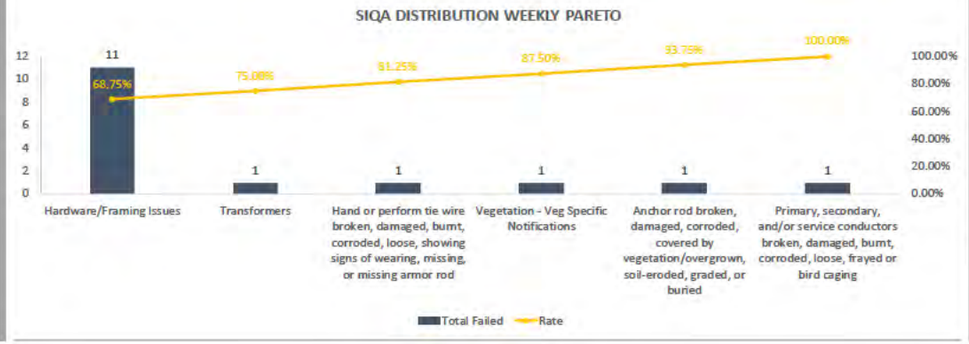
SIQA DISTRIBUTION YTD PARETO



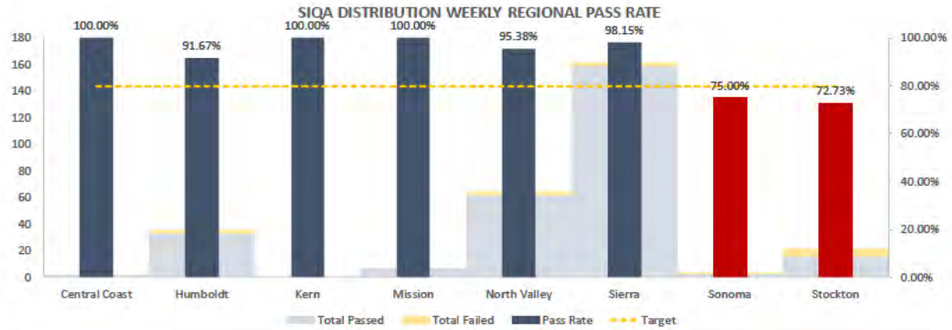
SIQA DISTRIBUTION YTD REGION PASS RATE



SIQA DISTRIBUTION WEEKLY PARETO



SIQA DISTRIBUTION WEEKLY REGIONAL PASS RATE



MID - QUALITY ASSURANCE DASHBOARD - ACCEPTABLE QUALITY LEVEL (AQL)

VMQA TRANSMISSION - HFTD

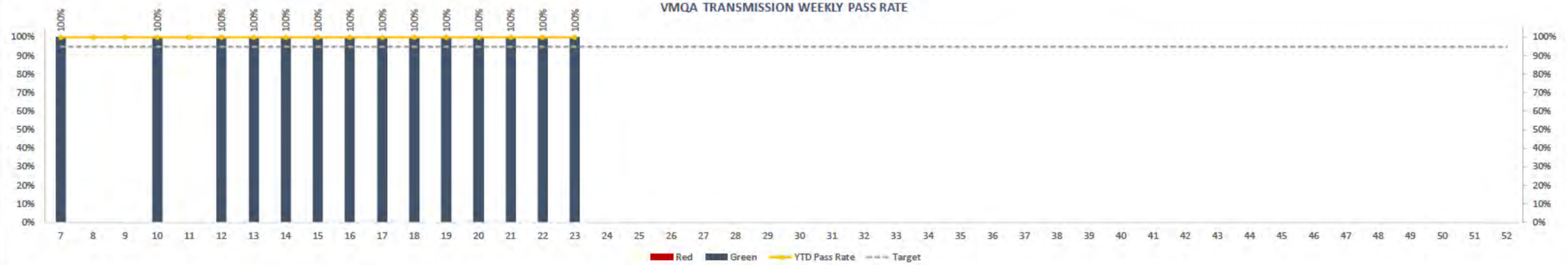
WEEKLY PERFORMANCE

RAG Status	Target	Pass Rate	Total Trees Comp.	Total Trees Passed	Total Trees Failed
1	95.00%	100.00%	45	45	0

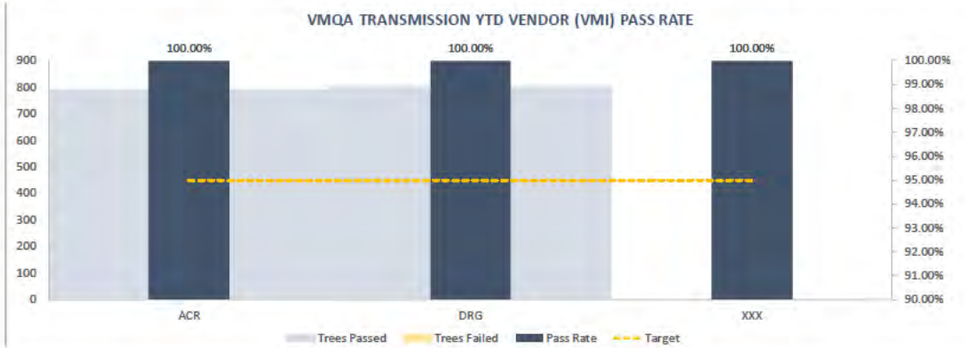
YTD PERFORMANCE

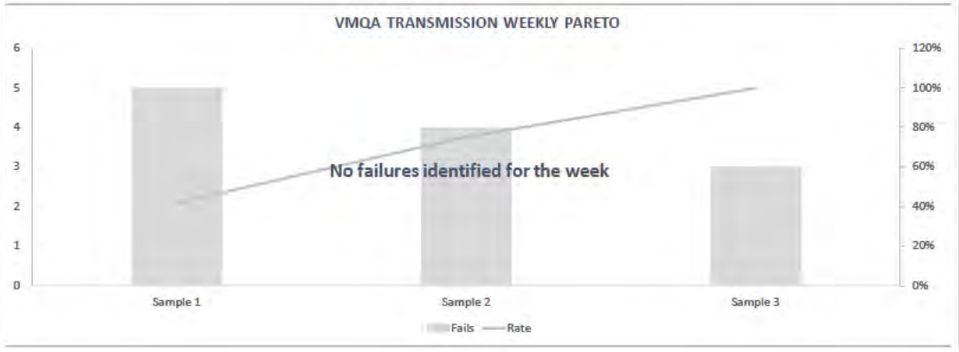
RAG Status	Target	Pass Rate	Total Trees Comp.	Total Trees Passed	Total Trees Failed
	95.00%	100.00%	1597	1597	0

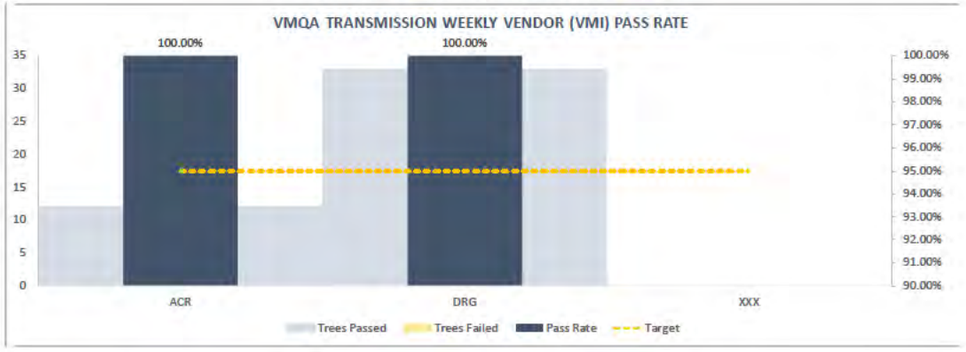
3



10







MID - QUALITY ASSURANCE DASHBOARD - ACCEPTABLE QUALITY LEVEL (AQL)

VMQA VEGETATION CONTROL (VC) - HFTD

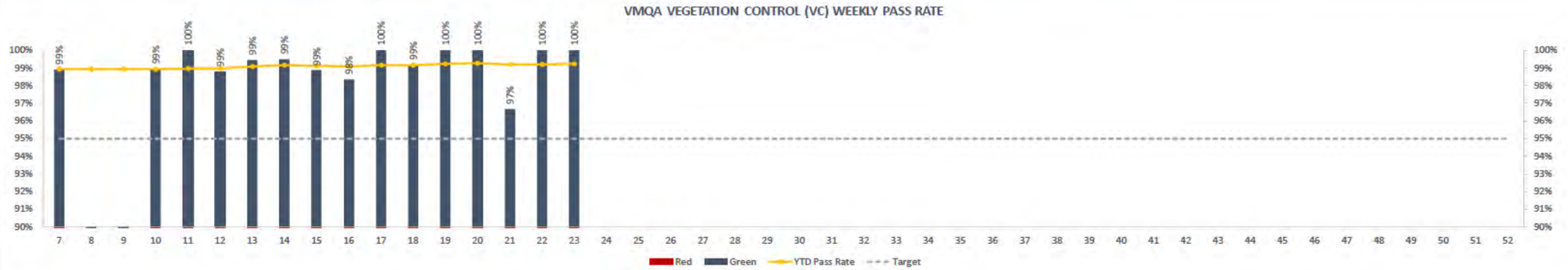
WEEKLY PERFORMANCE

	RAG Status	Target	Pass Rate	Total Trees Comp.	Total Trees Passed	Total Trees Failed
1		95.00%	100.00%	21	21	0

YTD PERFORMANCE

RAG Status	Target	Pass Rate	Total Trees Comp.	Total Trees Passed	Total Trees Failed
	95.00%	99.23%	1680	1667	13

3



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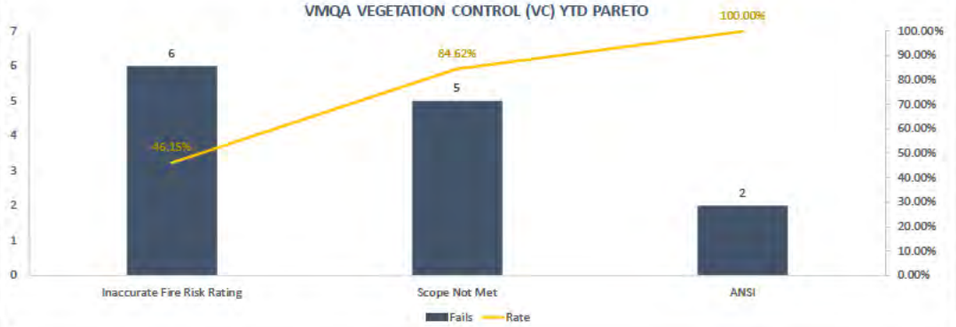
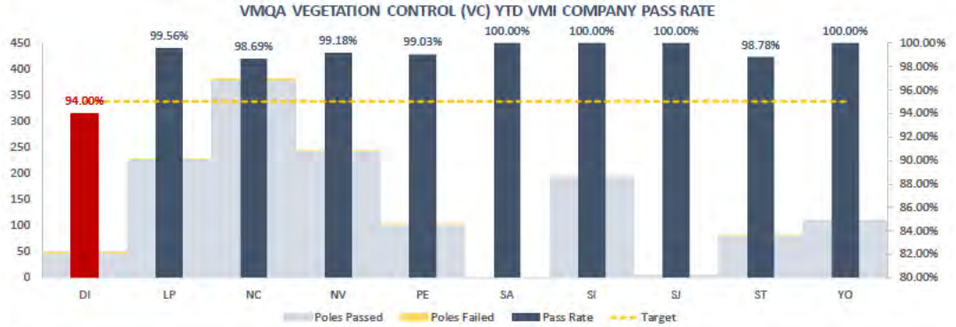
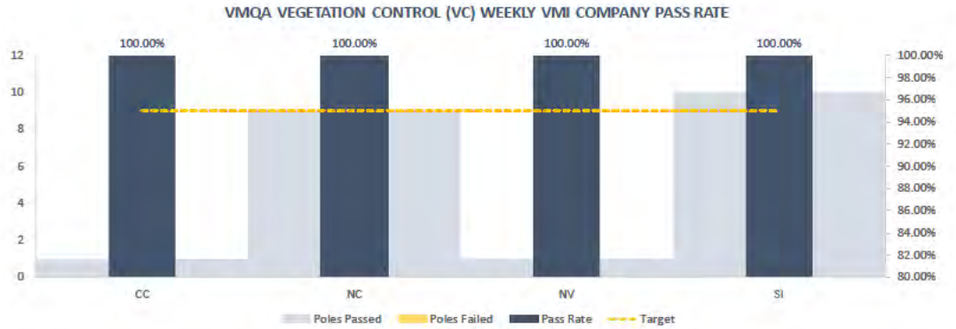




No failures identified for the week



WMP Delivery

2023-2025 WMP Commitments

Timeline Category	Not Started	On Track	At Risk	Off Track	Complete	Total
2023 Commitments	0	25	6 ↓1	0	5 ↑2	36
3 Year Objectives	2	13	0	0	0	15
10 Year Objectives	11	0	0	0	0	**11**
Total	13	38	6	0	5	**62***

Arrows Indicate weekly changes.

10 Year Objectives

Not Started	On Track	At Risk	Off Track	Complete	Total
11	0	0	0	0	11

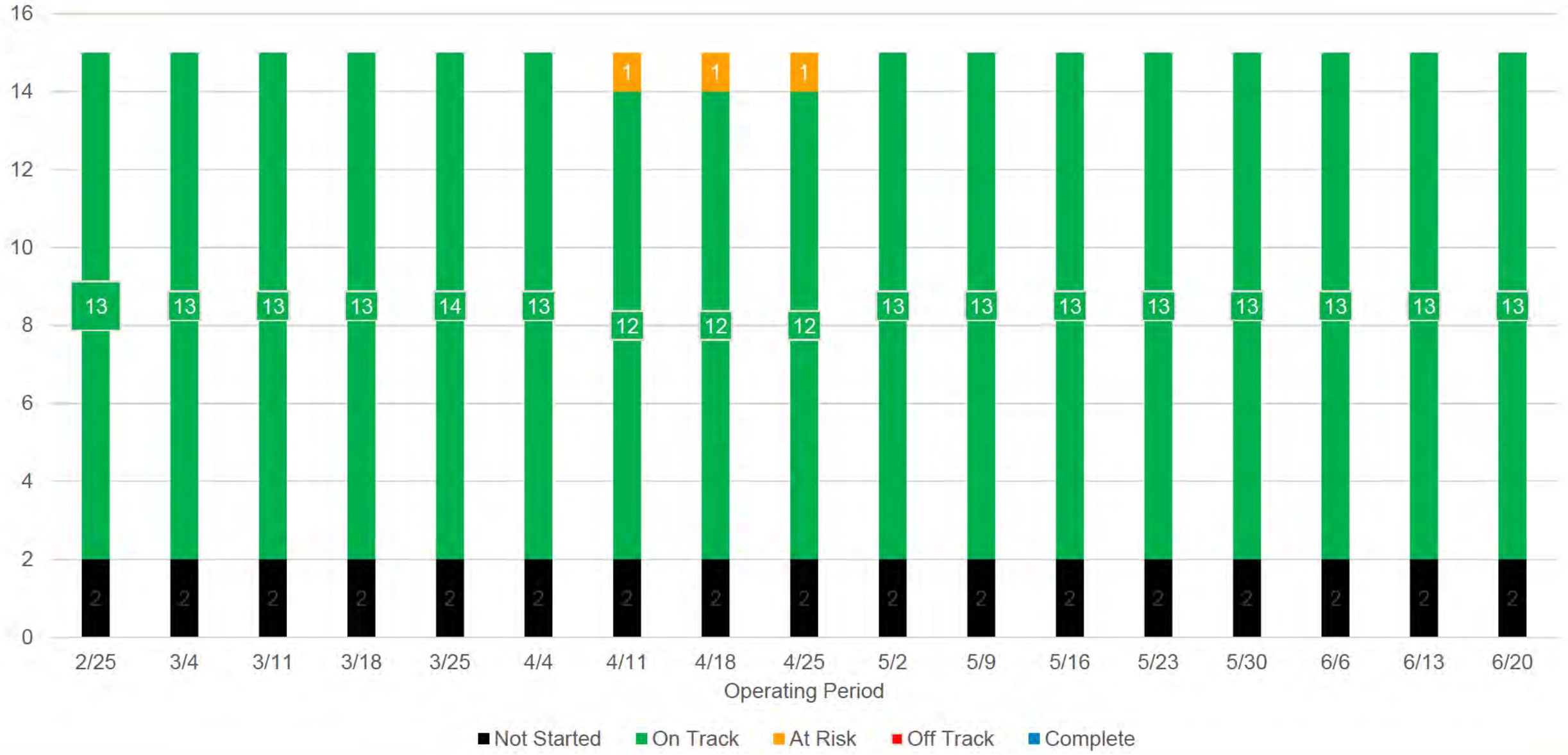
10 Year Objectives

ID	*2023 WMP Target Name*	Chief Sponsor (Execution)	WMP Start Date	Last Compliance Date
CO-03	Community Engagement - Meetings in 2026 -2032	[redacted]	1/1/2026	12/31/2032
EP-03	Maintain all hazards planning and preparedness program in 2026 - 2033	Angie Gibson	1/1/2026	12/31/2032
EP-05	Expand all hazards planning to include additional threats and scenarios in 2026 - 2033	Angie Gibson	1/1/2026	12/31/2032
GM-05	HFTD/HFRA Open Tag Reduction - Backlog Elimination - 7 Year Plan	Jeff Deal	1/1/2026	12/31/2029
PS-03	Evaluate enhancements for the PSPS Transmission guidance	Rod Robinson	1/1/2026	12/31/2032
PS-04	Evaluate incorporation of approved IPW enhancements into the PSPS Distribution guidance	Rod Robinson	1/1/2026	12/31/2032
PS-05	Battery Solutions	[redacted]	6/1/2023	12/31/2032
SA-06	Evaluate FPI and IPW Modeling enhancements in 2026 - 2033		1/1/2026	12/31/2032
VM-10	Inspections in HFTD and HFRA	Peter Kenny	TBD	12/31/2032
VM-11	Enhance and refine Focus Tree Inspection program	Peter Kenny	1/1/2026	12/31/2032
VM-12	Evaluate emerging technologies	Peter Kenny	TBD	12/31/2032

3 Year Objectives

Not Started	On Track	At Risk	Off Track	Complete	Total
2	13	0	0	0	15

3 Year Objectives Delivery Trend



3 Year Objectives

2023 WMP Targets				Q1			Q2			Q3			Q4		
ID	*2023 WMP Target Name*	Chief Sponsor (Execution)	Last Compliance Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
AI-01	Retainment of Inspectors and Internal Workforce Development	Jason Regan	12/31/2025												
AI-11	Filling Asset Inventory Data Gaps	Martin Wyspianski	12/31/2025												
CO-01	Community Engagement - Meetings	[redacted]	9/30/2025												
EP-01	Complete PSPS and Wildfire Tabletop and Functional Exercises	Angie Gibson	11/30/2023												
EP-02	Maintain all hazards planning and preparedness program in 2023 - 2025	Angie Gibson	12/31/2025												
EP-04	Expand all hazards planning to include additional threats and scenarios in 2023 - 2025	Angie Gibson	12/31/2025												
GH-02	Evaluate Covered Conductor Effectiveness	Martin Wyspianski	3/29/2024 (2023 data)												
GM-01	Asset Inspections - Quality Assurance	[redacted]	12/31/2025												
GM-04	HFTD/HFRA Open Tag Reduction - Backlog Elimination - 3 Year Plan	Jeff Deal	12/31/2025												
GM-07	Updates on EPSS Reliability Study	Dave Canny	2/15/2024 (For 2023 data)												
PS-01	Evaluate enhancements for the PSPS Transmission guidance	Rod Robinson	12/31/2025												
PS-02	Evaluate incorporation of approved IPW enhancements into the PSPS Distribution guidance	Rod Robinson	12/31/2025												
SA-05	Evaluate FPI and IPW Modeling enhancements in 2023 - 2025	[redacted]	12/31/2025												
VM-03	Focused Tree Inspection Program	Peter Kenny	12/31/2025												
VM-09	Constraint Resolution Procedural Guideline	Peter Kenny	12/31/2025												

2023 Commitments – Execution

On Track	At Risk	Off Track	Complete	Total
25	6	0	5	36

2023 WMP Commitment Delivery Trend

2023 WMP Commitment At Risk/Off Track

No	ID	WMP Target Name	Chief Sponsor (Execution)	Catch Back Plan	Meeting Catch Back	Catch Back Plan Due Date	Quarterly	WMP Target Due Date	Week(s) on list
1	GH-01	System Hardening - Distribution	Jamie Martin	Yes		6/30/2023	No	12/31/2023	6
2	GH-04	10K Undergrounding	Jamie Martin	Yes		6/30/2023	No	12/31/2023	16
3	GM-03	HFTD/HFRA Open Tag Reduction – Distribution Backlog	Jeff Deal	Yes		7/31/2023	No	12/31/2023	16
4	GM-06	EPSS - Down Conductor Detection (DCD)	Dave Canny	Yes		7/1/2023	No	12/31/2023	18
5	PS-07	PSPS Custom Impact Reduction	[redacted]	Yes		6/30/2023	No	12/31/2023	4
6	VM-04	Tree removal	Peter Kenny	Yes		6/30/2023	No	12/31/2023	7

Q2 Target Status

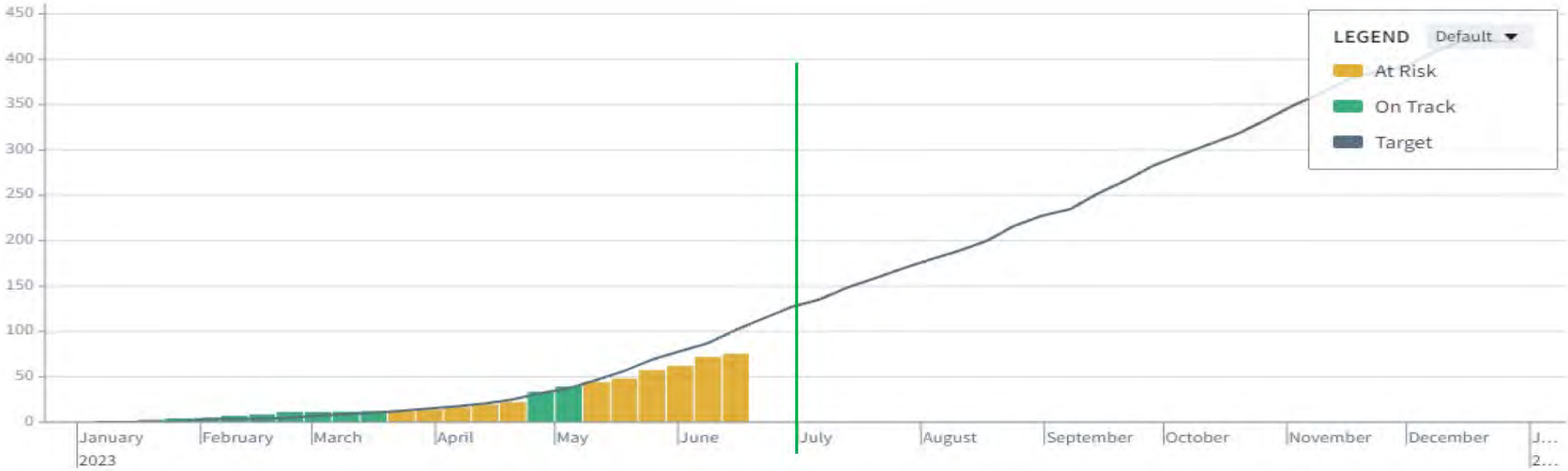
2023 Quarterly Targets										Q2
#	ID	2023 WMP Target Name	Owner	Q2 Internal Due Date	Q2 Compliance Date	Target / Target-Quarterly / Objective	YTD Actuals	Q2 Target	Q2 % Complete	WRCC Status
1	AI-02	Detailed Inspection Transmission – Ground	Jason Regan	6/15/2023	6/30/2023	Target (Quarterly)	24,521	18,000	136.23%	
2	AI-04	Detailed Inspection Transmission – Aerial	Jason Regan	6/15/2023	6/30/2023	Target (Quarterly)	22,164	17,000	130.38%	
3	AI-05	Detailed Inspection Transmission – Climbing	Jason Regan	6/15/2023	6/30/2023	Target (Quarterly)	1,616	1,200	134.67%	
4	AI-06	Perform transmission infrared inspections	Jason Regan	6/15/2023	6/30/2023	Target (Quarterly)	2,676	1,500	178.40%	
5	AI-07	Detailed Ground Inspections - Distribution	Jason Regan	6/15/2023	6/30/2023	Target (Quarterly)	54,354	30,000	181.18%	
6	AI-08	Supplemental Inspections - Substation Distribution	Jason Regan	6/15/2023	6/30/2023	Target (Quarterly)	51	46	110.87%	
7	AI-09	Supplemental Inspections - Substation Transmission	Jason Regan	6/15/2023	6/30/2023	Target (Quarterly)	34	31	109.68%	
8	AI-10	Supplemental Inspections - Hydroelectric Substations and Powerhouses	Jason Regan	6/15/2023	6/30/2023	Target (Quarterly)	40	41	97.56%	
9	CO-02	Community Engagement - Surveys	[redacted]	6/15/2023	6/30/2023	Target (Quarterly)	1	1	100.00%	
10	VM-01	LiDAR Routine Inspections - Transmission	Peter Kenny	6/15/2023	6/30/2023	Target (Quarterly)	17,808	17,500	101.76%	
11	VM-02	Pole Clearing Program	Peter Kenny	6/15/2023	6/30/2023	Target (Quarterly)	80,096	57,750	138.69%	
12	VM-05	Defensible Space Inspections - Distribution Substation	Martin Wyspianski	6/15/2023	6/30/2023	Target (Quarterly)	130	130	100.00%	
13	VM-06	Defensible Space Inspections - Transmission Substation	Martin Wyspianski	6/15/2023	6/30/2023	Target (Quarterly)	55	55	100.00%	
14	VM-07	Defensible Space Inspections - Hydroelectric Substations and Powerhouses	Andrew Williams[redacted]	6/15/2023	6/30/2023	Target (Quarterly)	61	61	100.00%	

2023 WMP Commitment Status

2023 WMP Targets								Q1			Q2			Q3			Q4		
ID	2023 WMP Target Name	Chief Sponsor (Execution)	Q2 Compliance Date	Q3 Compliance Date	Internal Due Date	Last Compliance Date	Target / Target-Quarterly / Objective	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
AI-01	Retainment of Inspectors and Internal Workforce Development	Jason Regan	N/A	N/A	11/30/2023	12/31/2025	Objective (3 Year)												
AI-02	Detailed Inspection Transmission – Ground	Jason Regan	6/30/2023	N/A	6/30/2023	7/31/2023	Target (Quarterly)												
AI-03	Develop Distribution Aerial Inspections program	Jason Regan	N/A	N/A	10/31/2023	12/31/2023	Objective												
AI-04	Detailed Inspection Transmission – Aerial	Jason Regan	6/30/2023	N/A	6/30/2023	7/31/2023	Target (Quarterly)												
AI-05	Detailed Inspection Transmission – Climbing	Jason Regan	6/30/2023	N/A	6/30/2023	7/31/2023	Target (Quarterly)												
AI-06	Perform transmission infrared inspections	Jason Regan	6/30/2023	9/30/2023	11/30/2023	12/31/2023	Target (Quarterly)												
AI-07	Detailed Ground Inspections - Distribution	Jason Regan	6/30/2023	9/30/2023	11/30/2023	12/31/2023	Target (Quarterly)												
AI-08	Supplemental Inspections - Substation Distribution	Jason Regan	6/30/2023	N/A	6/30/2023	7/31/2023	Target (Quarterly)												
AI-09	Supplemental Inspections - Substation Transmission	Jason Regan	6/30/2023	N/A	6/30/2023	7/31/2023	Target (Quarterly)												
AI-10	Supplemental Inspections - Hydroelectric Substations and Powerhouses	Jason Regan	6/30/2023	N/A	6/30/2023	7/31/2023	Target (Quarterly)												
AI-11	Filling Asset Inventory Data Gaps	Martin Wyspianski	N/A	N/A	12/1/2025	12/31/2025	Objective (3 Year)												
CO-01	Community Engagement - Meetings	[redacted]	N/A	N/A	9/30/2023	9/30/2025	Objective (3 Year)												
CO-02	Community Engagement - Surveys		6/30/2023	9/30/2023	10/31/2023	12/31/2023	Target (quarterly)												
CO-03	Community Engagement - Meetings in 2026 -2032		N/A	N/A		12/31/2032	Objective (10 Year)												
EP-01	Complete PSPS and Wildfire Tabletop and Functional Exercises	Angie Gibson	N/A	N/A	11/10/2023	11/30/2023	Objective (3 Year)												
EP-02	Maintain all hazards planning and preparedness program in 2023 - 2025	Angie Gibson	N/A	N/A	12/1/2023	12/31/2025	Objective (3 Year)												
EP-03	Maintain all hazards planning and preparedness program in 2026 - 2033	Angie Gibson	N/A	N/A		12/31/2032	Objective (10 Year)												
EP-04	Expand all hazards planning to include additional threats and scenarios in 2023 - 2025	Angie Gibson	N/A	N/A	12/1/2023	12/31/2025	Objective (3 Year)												
EP-05	Expand all hazards planning to include additional threats and scenarios in 2026 - 2033	Angie Gibson	N/A	N/A		12/31/2032	Objective (10 Year)												
EP-06	Review, and revise the CERP and 2 Wildfire Related Annexes on a yearly basis	Angie Gibson	N/A	N/A	12/1/2023	12/31/2023	Target												
GH-01	System Hardening - Distribution	Jamie Martin	N/A	N/A	12/31/2023	12/31/2023	Target												
GH-02	Evaluate Covered Conductor Effectiveness	Martin Wyspianski	N/A	N/A	3/29/2024	3/29/2024 (2023 data)	Objective (3 Year)												
GH-03	Evaluate and Implement Covered Conductor Effectiveness Impact on Inspections and Maintenance Standards	Martin Wyspianski	N/A	N/A	12/1/2023	12/31/2023	Objective												
GH-04	10K Undergrounding	Jamie Martin	N/A	N/A	12/31/2023	12/31/2023	Target												
GH-05	System Hardening - Transmission	Ahmad Ababneh	N/A	N/A	11/30/2023	12/31/2023	Target												
GH-06	System Hardening - Transmission Shunt Splices	[redacted]	N/A	N/A	10/31/2023	12/31/2023	Target												
GH-07	Distribution Protective Devices		N/A	N/A	11/30/2023	12/31/2023	Target												
GH-08	Surge Arrestor - Removals		N/A	N/A	10/31/2023	12/31/2023	Target												
GH-09	Distribution Line Motor Switch Operator (MSO) - Replacements		N/A	N/A	11/30/2023	12/31/2023	Target												
GH-10	Non-Exempt Expulsion Fuse - Removal		N/A	N/A	11/30/2023	12/31/2023	Target												
GM-01	Asset Inspections - Quality Assurance		N/A	N/A	12/1/2023	12/31/2025	Objective (3 Year)												
GM-02	HFTD/HFRA Open Tag Reduction - Transmission	Ahmad Ababneh	N/A	N/A	12/31/2023	12/31/2023	Target												
GM-03	HFTD/HFRA Open Tag Reduction – Distribution Backlog	Jeff Deal	N/A	N/A	12/31/2023	12/31/2023	Target												
GM-04	HFTD/HFRA Open Tag Reduction - Backlog Elimination - 3 Year Plan	Jeff Deal	N/A	N/A	12/31/2025	12/31/2025	Objective (3 Year)												
GM-05	HFTD/HFRA Open Tag Reduction - Backlog Elimination - 7 Year Plan	Jeff Deal	N/A	N/A		12/31/2029	Objective (10 Year)												
GM-06	EPSS - Down Conductor Detection (DCD)	Dave Canny	N/A	N/A	11/30/2023	12/31/2023	Target												
GM-07	Updates on EPSS Reliability Study	Dave Canny	N/A	N/A	2/15/2024	2/15/2024 (For 2023 data)	Objective (3 Year)												
PS-01	Evaluate enhancements for the PSPS Transmission guidance	Rod Robinson	N/A	N/A	9/1/2023	12/31/2025	Objective (3 Year)												
PS-02	Evaluate incorporation of approved IPW enhancements into the PSPS Distribution guidance	Rod Robinson	N/A	N/A	9/1/2023	12/31/2025	Objective (3 Year)												
PS-03	Evaluate enhancements for the PSPS Transmission guidance	Rod Robinson	N/A	N/A		12/31/2032	Objective (10 Year)												
PS-04	Evaluate incorporation of approved IPW enhancements into the PSPS Distribution guidance	Rod Robinson	N/A	N/A		12/31/2032	Objective (10 Year)												
PS-05	Battery Solutions	[redacted]	N/A	N/A		12/31/2032	Objective (10 Year)												
PS-06	Provide 12,000 new or replacement portable batteries to PG&E customers at risk of PSPS or EPSS		N/A	N/A	12/6/2023	12/31/2023	Target												
PS-07	PSPS Customer Impact Reduction		N/A	N/A	12/15/2023	12/31/2023	Target												
SA-01	AI in Wildfire Cameras	Angie Gibson	N/A	N/A	6/15/2023	6/30/2023	Objective												
SA-02	Line Sensor - Installations	Rod Robinson	N/A	N/A	10/31/2023	12/31/2023	Target												
SA-03	EFD and DFA Reporting		N/A	N/A	11/15/2023	12/31/2023	Objective												
SA-04	FPI and IPW Modeling - Revision Evaluation		N/A	N/A	12/1/2023	12/31/2023	Objective												
SA-05	Evaluate FPI and IPW Modeling enhancements in 2023 - 2025	[redacted]	N/A	N/A	12/1/2023	12/31/2025	Objective (3 Year)												
SA-06	Evaluate FPI and IPW Modeling enhancements in 2026 - 2033		N/A	N/A		12/31/2032	Objective (10 Year)												
VM-01	LiDAR Routine Inspections - Transmission	Peter Kenny	6/30/2023	9/30/2023	6/15/2023	12/31/2023	Target (Quarterly)												
VM-02	Pole Clearing Program	Peter Kenny	6/30/2023	9/30/2023	9/30/2023	9/30/2023	Target (Quarterly)												
VM-03	Focused Tree Inspection Program	Peter Kenny	N/A	N/A	12/1/2023	12/31/2025	Objective (3 Year)												
VM-04	Tree removal	Peter Kenny	N/A	N/A	12/1/2023	12/31/2023	Target												
VM-05	Defensible Space Inspections - Distribution Substation	Andrew Williams [redacted]	6/30/2023	N/A	9/15/2023	9/30/2023	Target (Quarterly)												
VM-06	Defensible Space Inspections - Transmission Substation	Andrew Williams [redacted]	6/30/2023	9/30/2023	6/15/2023	7/31/2023	Target (Quarterly)												
VM-07	Defensible Space Inspections - Hydroelectric Substations and Powerhouses	Andrew Williams [redacted]	6/30/2023	N/A	6/15/2023	7/31/2023	Target (Quarterly)												
VM-08	Vegetation Management – Quality Verification	[redacted]	N/A	N/A	12/1/2023	12/31/2023	Target												
VM-09	Constraint Resolution Procedural Guideline	Peter Kenny	N/A	N/A	12/1/2023	12/31/2025	Objective (3 Year)												
VM-10	Inspections in HFTD and HFRA	Peter Kenny	N/A	N/A		12/31/2032	Objective (10 Year)												
VM-11	Enhance and refine Focus Tree Inspection program	Peter Kenny	N/A	N/A		12/31/2032	Objective (10 Year)												

GH-01 System Hardening - Distribution

YTD Baseline



Week Ending	1/7	1/14	1/21	1/28	2/4	2/11	2/18	2/25	3/4	3/11	3/18	3/25	4/1	4/8	4/15	4/22	4/29	5/6	5/13	5/20	5/27	6/3	6/10	6/17	6/24	7/1	7/8	7/15	7/22	7/29	8/5	8/12	8/19	8/26	9/2	9/9	9/16	9/23	9/30	10/7	10/14	10/21	10/28	11/4	11/11	11/18	11/25	12/2	12/9	12/16	12/23
OP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
Target YTD				.6	3.5	3.5	3.5	4.7	7.1	8.7	10.3	12.5	15	17.5	20.5	25	32	37.2	46.5	56.6	69	78.2	87	101.8	114.4	127	135.2	148.4	158.7	169.5	179.5	188.8	199.8	216.5	227.7	234.8	252.2	266.6	283	294.9	306.5	317.7	332.8	349.2	362.4	378.3	386	391.1	407	419.8	420
Target Week of				.6	2.9	0	0	1.2	2.4	1.6	1.6	2.2	2.5	2.5	3	4.5	7	5.2	9.3	10.1	12.4	9.2	8.8	14.8	12.6	12.6	8.2	13.2	10.3	10.8	10	9.3	11	16.7	11.2	7.1	17.4	14.4	16.4	11.9	11.6	11.2	15.1	16.4	13.2	15.9	7.7	5.1	15.9	12.8	.2
YTD Actual	-	.8	2.3	4.2	4.6	7	8.3	11.2	11.2	11.62	12.4	12.4	13.6	16.33	19.16	22.24	33.42	39.19	44.15	47.98	57.28	62.15	72.04	75.61																											

GH-01 System Hardening - Distribution Catch Back Plan

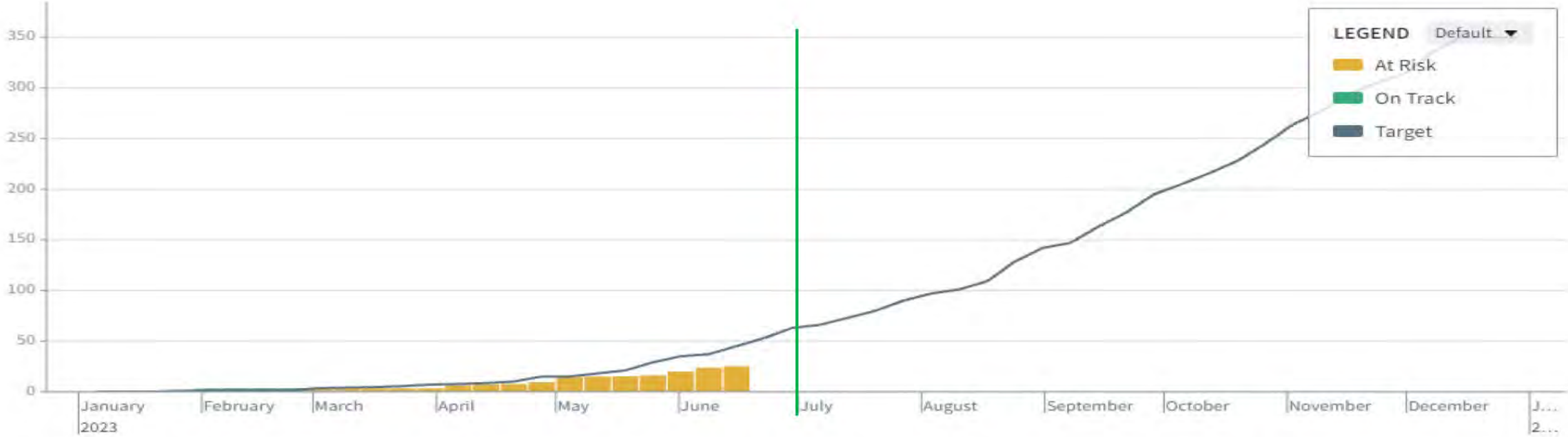
Catch Back Plan Due Date: 6/30/2023 - WMP Target Due Date: 12/31/23
Chief Sponsor: Jamie Martin

YTD Actual	YTD Target	Gap to Target
75.61	101.8	26.19

Program	Date Raised	Problem	Point of Cause	Containment Action	Containment Status	Root Cause	Countermeasure Action	Catch Back	Owner	Countermeasure Status
10K Under-grounding	3/6/23	The program is behind target with 44.2 miles completed YTD against Target of 46.5	The multiple storm/snow events in Jan/Feb and into March have prevented access to underground construction sites where work is otherwise ready to execute.	Project Management team reviewing projects ready for construction to validate that crews are scheduled to complete work as aggressively as possible. [As of 5/12 there are over 170.8 miles in construction and another 73.6 miles ready for construction.] Complete 400 system hardening UG miles out of PEND / permitting, targeting 6/1 [Some of these miles will carry over to 2024.]		2023 Underground work is still largely being executed on a "just in time basis" such that there is little buffer time (or "float") in project schedules to accommodate weather or other unforeseen delays.	Program is accelerating work readiness activities with estimating having recently completed 400 miles of work for 2023 & 2024 that will allow the program to build in some buffer against future delays. Additional focus placed on projects in PEND and with daily reporting to track progress/delays	6/30/23 Number of units to be delivered (as part of the catch back plan): 82.85 miles OH/Rem/UG Number of units delivered by Target Date: 127	[redacted] with Construction and Contract Land, Environ-mental & EPWC partners	

GH-04 10K Undergrounding

YTD Baseline



Week Ending	1/7	1/14	1/21	1/28	2/4	2/11	2/18	2/25	3/4	3/11	3/18	3/25	4/1	4/8	4/15	4/22	4/29	5/6	5/13	5/20	5/27	6/3	6/10	6/17	6/24	7/1	7/8	7/15	7/22	7/29	8/5	8/12	8/19	8/26	9/2	9/9	9/16	9/23	9/30	10/7	10/14	10/21	10/28	11/4	11/11	11/18	11/25	12/2	12/9	12/16	12/23
OP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
Target YTD				.6	1.4	1.4	1.4	1.4	3.5	4	4.5	5.5	7	7.5	8.5	10	15	15	18	21	29	35	37	45	53	63	66	73	80	90	97	101	109	128.5	142	147	163	177	195	205	216	228	245	264	277	294	305	314	335	350	350
Target Week of				.6	.8	0	0	0	2.1	.5	.5	1	1.5	.5	1	1.5	5	0	3	3	8	6	2	8	8	10	3	7	7	10	7	4	8	19.5	13.5	5	16	14	18	10	11	12	17	19	13	17	11	9	21	15	0
YTD Actual	-	-	.2	1.5	2.95	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	6.12	6.93	7.58	9.25	14.54	15.06	15.36	16.12	19.78	23.76	25.17																											

GH-04 10K Undergrounding Catch Back Plan

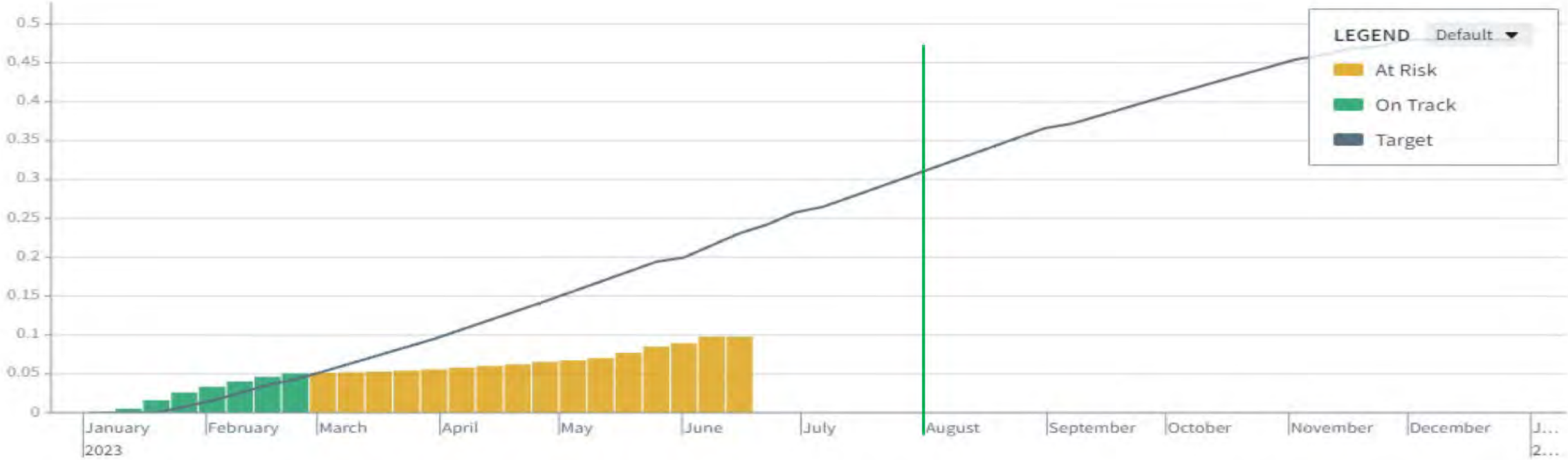
Catch Back Plan Due Date: 6/30/23 (1 change)
WMP Target Due Date: 12/31/23
Chief Sponsor: Jamie Martin

YTD Actual	YTD Target	Gap to Target
25.17	45	19.83

Program	Date Raised	Problem	Point of Cause	Containment Action	Status	Root Cause	Countermeasure Action	Containment Due Date	Catch Back	Owner	Status
10K Under-grounding	3/6/23	Program has fallen behind work delivery goals with 9.2 miles of UG completed & QA reviewed as of 5/1 against a target of 15 miles.	The multiple storm/snow events in Q1 delayed work and prevented access to underground construction sites where work was otherwise ready to execute.	Project Management team reviewing projects ready for construction to validate that crews are scheduled to complete work as aggressively as possible. [As of 5/1 there are 117 miles in construction and another 54 ready for construction.] Interim Target is 160 miles Civil Construction Complete by 6/30		2023 Underground work is still largely being executed on a "just in time basis" such that there is little buffer time (or "float") in project schedules to accommodate weather or other unforeseen delays.	Program is accelerating work readiness activities with estimating having recently completed 400 miles of work for 2023 & 2024 that will allow the program to build in some buffer against future delays.	6/30/2023 Number of units to be delivered: 160 miles civil construction complete Number of units delivered as of 5/1: 22.5	6/30/23 Number of units to be delivered (as part of the catch back plan): 60.9 Number of units delivered by Target Date: 63	[redacted] with Construction and Contract partners	
				Complete 400 system hardening UG miles out of PEND / permitting, targeting 6/1 [Some of these miles will carry over to 2024.]				6/1/2023 Number of units to be delivered: 400 miles out of PEND / permitting (some will support 2024) Number of units delivered as of 5/1: 109		[redacted] with Land, Environ-mental & EPWC partners	

GM-03 HFTD/HFRA Open Tag Reduction – Distribution Backlog

YTD Baseline



Week Ending	1/7	1/14	1/21	1/28	2/4	2/11	2/18	2/25	3/4	3/11	3/18	3/25	4/1	4/8	4/15	4/22	4/29	5/6	5/13	5/20	5/27	6/3	6/10	6/17	6/24	7/1	7/8	7/15	7/22	7/29	8/5	8/12	8/19	8/26	9/2	9/9	9/16	9/23	9/30	10/7	10/14	10/21	10/28	11/4	11/11	11/18	11/25	12/2	12/9	12/16	12/23
OP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
Target YTD				.008	.015	.026	.036	.043	.053	.063	.074	.084	.095	.107	.119	.131	.143	.156	.169	.181	.194	.2	.215	.231	.242	.257	.265	.277	.29	.302	.315	.328	.34	.353	.366	.372	.382	.393	.403	.413	.424	.434	.444	.454	.46	.468	.471	.479	.48			
Target Week of				.008	.008	.01	.01	.007	.01	.011	.011	.011	.011	.012	.012	.012	.012	.013	.013	.013	.013	.006	.016	.016	.011	.016	.007	.013	.013	.013	.013	.013	.013	.013	.013	.006	.011	.011	.011	.01	.01	.01	.01	.01	.006	.009	.002	.009				
YTD Actual	.001	.005	.016	.026	.033	.04	.046	.051	.051	.052	.053	.054	.056	.058	.06	.06	.06	.07	.07	.08	.09	.09	.1	.1																													

GM-03 HFTD/HFRA Open Tag Reduction – Distribution Backlog Catch Back Plan

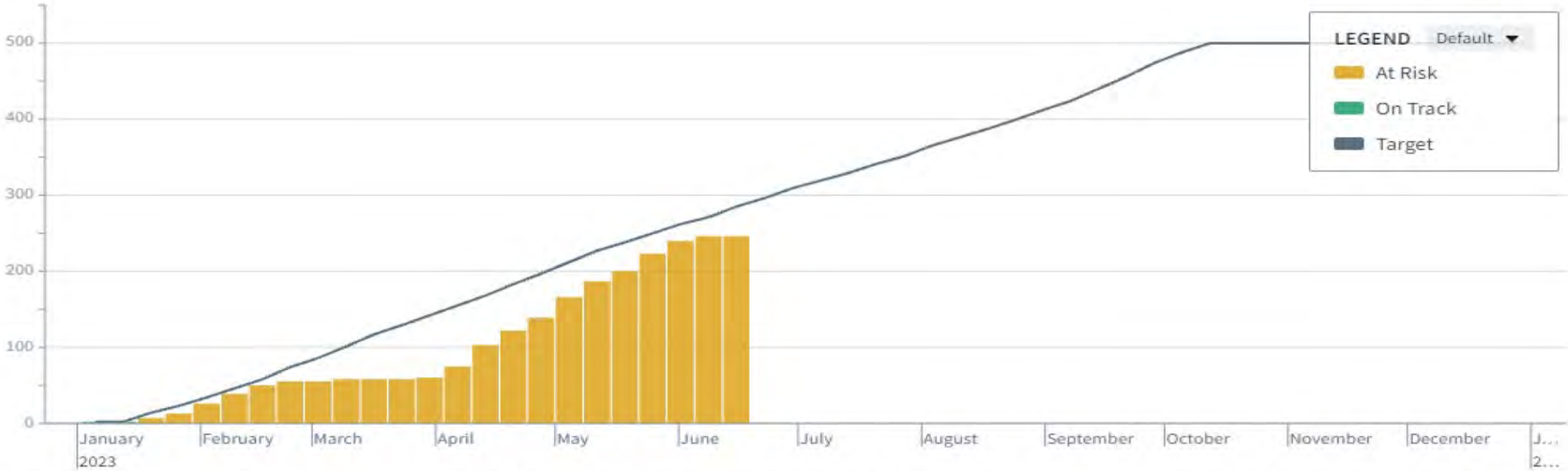
Catch Back Plan Due Date: 7/31/23 - WMP Target Due Date: 12/31/22
Chief Sponsor: Jeff Deal

YTD Actual	YTD Target	Gap to Target
0.1	0.23	0.13

Program	Date Raised	Problem	Point of Cause	Containment Action	Status	Root Cause	Countermeasure Action	Catch Back Due Date	Owner	Status
EC Notifications Risk Reduction	3/7/23	Less v3 wildfire risk points completed in 2023 then planned	Storm response has utilized most of the resources that were planned to execute this work and completed lower risk ready units earlier in the work plan	Reschedule work planned in first two months of year to Q2+		Not enough resources to complete EC notifications and storm work	Reschedule work planned in first two months of year to Q2+	**7/31/23** Number of units to be delivered (as part of the catch back plan): 38.72 Number of units delivered by Target Date: 47.14	[redacted]	

GM-06 EPSS - Down Conductor Detection (DCD)

YTD Baseline



Week Ending	1/7	1/14	1/21	1/28	2/4	2/11	2/18	2/25	3/4	3/11	3/18	3/25	4/1	4/8	4/15	4/22	4/29	5/6	5/13	5/20	5/27	6/3	6/10	6/17	6/24	7/1	7/8	7/15	7/22	7/29	8/5	8/12	8/19	8/26	9/2	9/9	9/16	9/23	9/30	10/7	10/14	10/21	10/28	11/4	11/11	11/18	11/25	12/2	12/9	12/16	12/23
OP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
Target YTD	2	2	14	23	34	46	58	74	86	101	117	129	142	155	168	183	197	212	227	238	250	262	271	285	296	309	319	329	341	351	365	376	387	399	412	424	440	456	474	488	500									0
Target Week of	2.0	0.0	12.0	9.0	11.0	12.0	12.0	16.0	12.0	15.0	16.0	12.0	13.0	13.0	13.0	15.0	14.0	15.0	15.0	11.0	12.0	12.0	9.0	14.0	11.0	13.0	10.0	10.0	12.0	10.0	14.0	11.0	11.0	12.0	13.0	12.0	16.0	16.0	18.0	14.0	12.0								
YTD Actual	2	2	7	13	26	39	50	55	55	58	58	58	60	76	104	122	139	166	187	200	233	240	246	246																											

GM-06 EPSS - Down Conductor Detection Catch Back Plan

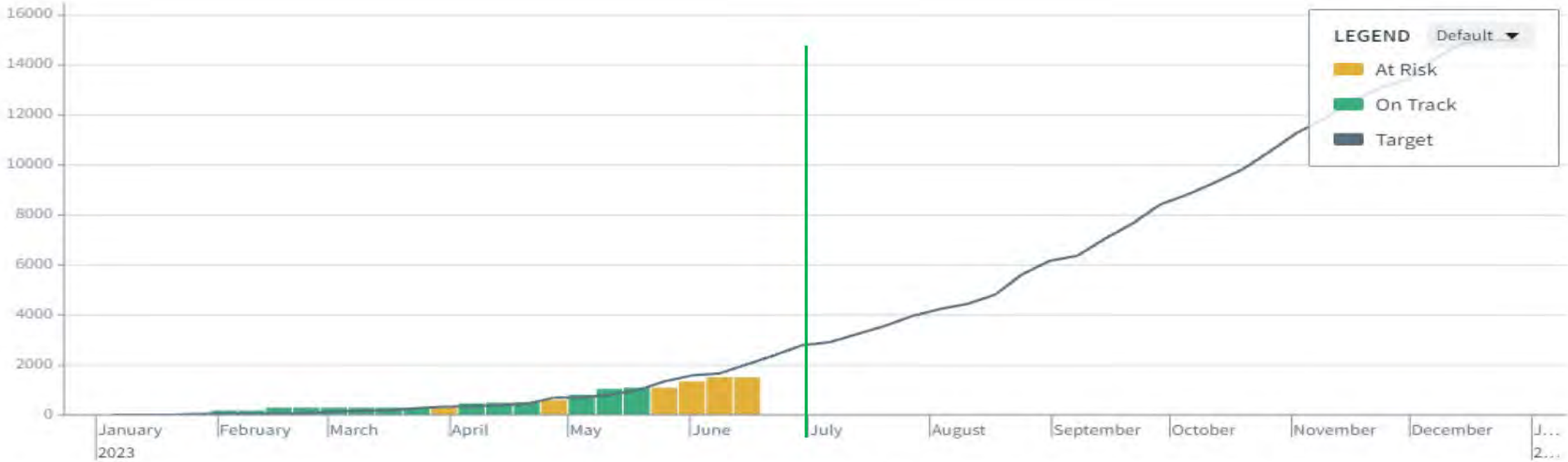
Catch Back Plan Due Date: 7/1/23 (4 changes)
WMP Target Due Date: 11/30/23
Chief Sponsor: Dave Canny

YTD Actual	YTD Target	Gap to Target
246	285	39

Program	Date Raised	Problem	Point of Cause	Containment Action	Status	Root Cause	Countermeasure Action	Target Date	Owner	Status
Down Conductor Detection	2/21/23	DCD install schedule delayed due to ADMS screen build delays, telecom issues and construction schedule constraint.	ADMS delays in building screens necessary for DCD testing, coupled with telecom communication issues, resulted in delays in Los Padres installs, while ADMS and construction schedule constraint are impacting Sierra install schedules.	Expediting DCD install schedule in non-ADMS cutover divisions (Humboldt) and installing DCD on existing/new Beckwith controllers to supplement work delays in ADMS LP/SI divisions.		DCD install cannot be completed while Telecom/SCADA communication issues remain unresolved. Due to Q1 storm impacts, construction resources and schedule availability are more limited.	ADMS/Telecom teams prioritizing issues resolution in LP. Expediting Humboldt and installing DCD on existing/new Beckwith controllers to get back on plan.	7/1/23 Number of units to be delivered (as part of the catch back plan): 254 Number of units delivered by Target Date: 309	[redacted]	

PS-07 PSPS Custom Impact Reduction

YTD Baseline



Week Ending	1/7	1/14	1/21	1/28	2/4	2/11	2/18	2/25	3/4	3/11	3/18	3/25	4/1	4/8	4/15	4/22	4/29	5/6	5/13	5/20	5/27	6/3	6/10	6/17	6/24	7/1	7/8	7/15	7/22	7/29	8/5	8/12	8/19	8/26	9/2	9/9	9/16	9/23	9/30	10/7	10/14	10/21	10/28	11/4	11/11	11/18	11/25	12/2	12/9	12/16	12/23
OP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
Target YTD				24	55.9	55.9	55.9	55.9	139.7	159.7	179.7	265	324.9	344.9	384.8	444.7	689.7	689.7	809.5	974.7	1339	1579	1659	2024	2388	2788	2907	3232	3549	3957	4237	4442	4802	4807	5630	6169	6369	6636	7053	7658	8422	8821	9305	9830	10554	11312	11877	12601	13086	13445	14283	14988	15001
Target Week of				24	31.9				83.8	20	20	85.3	59.9	20	39.9	59.9	245		119.8	165.2	364.8	239.5	79.8	364.8	364.8	392.2	119.8	324.9	324.9	399.9	279.5	205.1	364.8	823.9	539	199.6	684.2	604.3	764	399.2	484.6	524.5	724.1	758.5	564.4	724.1	484.6	359.3	838.4	598.8	118.8
YTD Actual	0	0	8	59.9	172	178	287	287	287	287	287	287	287	462	495	521	587.2	587.2	690	1091	1091	1346	1505	1505																											

PS-07 Customer Impact Reduction Catch Back Plan

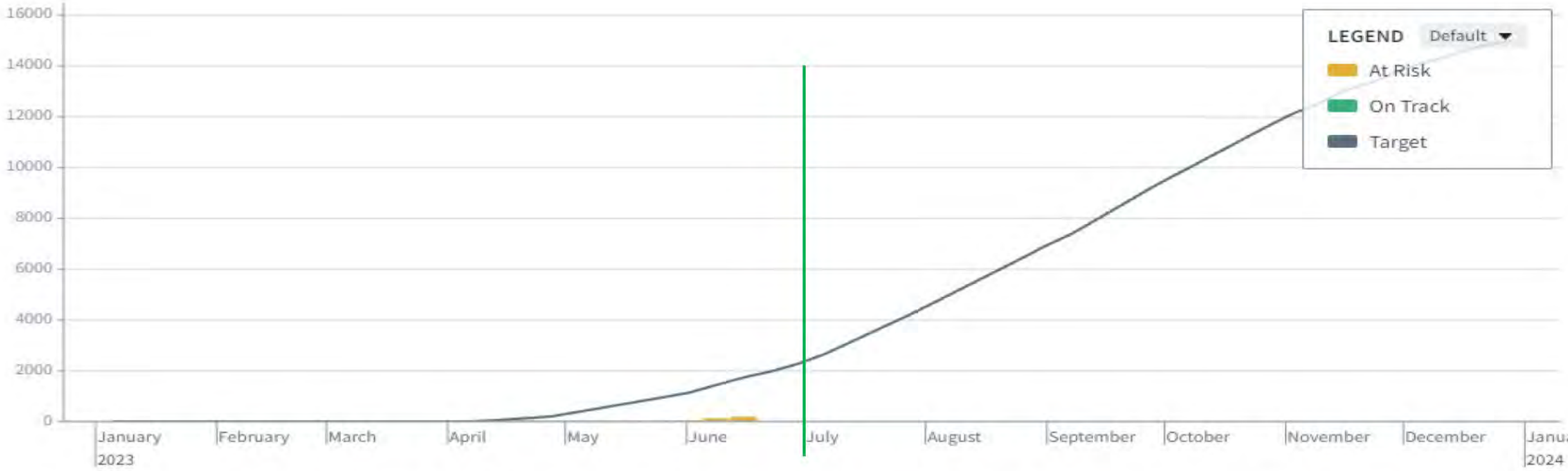
Catch Back Plan Due Date: 6/30/23 - WMP Target Due Date: 12/31/23
Chief Sponsor: [redacted]

YTD Actual	YTD Target	Gap to Target
1,505	2,023.6	518.6

Program	Date Raised	Problem	Point of Cause	Containment Action	Status	Root Cause	Countermeasure Action	Containment Due Date	Catch Back	Owner	Status
PSPS Customer Impact Reduction	5/30/23	Customer impact reduction has fallen behind YTD target of 690 customer reduction with a YTD performance of 587 customer reduction as of 5/1.	The target for PS-07 is tied to the miles of Undergrounding completed and MSO devices installed. The multiple storm/snow events in Q1 delayed work and prevented access to underground construction sites where work was otherwise ready to execute.	Interim Target is 160 miles Civil Construction Complete by 6/30. Complete 400 system hardening UG miles out of PEND / permitting, targeting 6/1 [Some of these miles will carry over to 2024.]		2023 Underground work is still largely being executed on a "just in time basis" such that there is little buffer time (or "float") in project schedules to accommodate weather or other unforeseen delays.	The Undergrounding Program is accelerating work readiness activities for 2024 and beyond work with estimating having recently completed 400 miles of system hardening work for 2023 & 2024 that will allow the program to build in some buffer against future delays.	6/30/2023 Will follow UG containment plan	6/30/23 Will follow UG catch back plan	[redacted]	

VM-04 Tree Removal

YTD Baseline



Week Ending	1/7	1/14	1/21	1/28	2/4	2/11	2/18	2/25	3/4	3/11	3/18	3/25	4/1	4/8	4/15	4/22	4/29	5/6	5/13	5/20	5/27	6/3	6/10	6/17	6/24	7/1	7/8	7/15	7/22	7/29	8/5	8/12	8/19	8/26	9/2	9/9	9/16	9/23	9/30	10/7	10/14	10/21	10/28	11/4	11/11	11/18	11/25	12/2	12/9	12/16	12/23
OP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
Target YTD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	125	200	385	570	755	940	1,134	1,434	1,734	1,974	2,274	2,674	3,174	3,674	4,174	4,710	5,255	5,800	6,345	6,906	7,406	8,031	8,656	9,281	9,851	10,421	10,991	11,561	12,107	12,531	13,061	13,379	13,866	14,181	14,496	15,000
Target Week of	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	75	75	185	185	185	185	194	300	300	240	300	400	500	500	500	536	545	545	545	561	500	625	625	625	570	570	570	570	546	424	530	318	487	315	315	504
YTD Actual	0	0	0	0	11	24	24	24	24	24	30	30	30	33	33	33	33	33	33	33	33	49	125	187																											

VM-04 Tree Removal Inventory Catch Back Plan

Catch Back Plan Due Date: 06/30/23
WMP Target Due Date: 6/30/23
Chief Sponsor: Peter Kenny

YTD Actual	YTD Target	Gap to Target
187	1,734	1,547

Program	Date Raised	Problem	Point of Cause	Containment Action	Status	Root Cause	Countermeasure Action	Catch Back Due Date	Owner	Status
VM-04 Tree Removal Inventory	04/18/23	Current technology field guides require update prior to releasing work for crews to account for new programmatic changes	New Program recently added to the Vegetation Portfolio	Develop revised guidance and implement change communication prior to work start		Robust change management plan is needed prior to introduction of new programs	Develop Process for new programs development	06/30/23 Number of units to be delivered (as part of the catch back plan): 1,974 Number of units delivered by Target Date: 1,974	[redacted]	

WMP Data Requests

2023 WMP Discovery Questions

Due Today	Due 1 Business Day	Due 2 Business Days	Due Later	Complete	Total
0	0	0	0	400	400

56 Total Requests | 400 Total Questions | 1065 Sub-Parts

WMP Data Requests

2023 WMP Discovery: By Requestor

REQUESTOR	Data Requests	Questions	Sub-Parts	% of Total Questions	Questions Requiring Extensions
OEIS	9	71	207	18%	10
CPUC - SPD	8	32	40	8%	2
CalPA	19	201	693	50%	20
TURN	13	50	113	13%	7
MGRA	6	41	9	10%	5
GPI	1	5	3	1%	0
TOTAL	56	400	1065	100%	44

WMP Data Requests

2023 WMP Discovery:
Questions & Sub-Parts per Category by Requestor

	Total		OEIS		CPUC - SPD (Safety Policy Division)		CalPA		GPI		MGRA		TURN	
WMP Section	**Questions**	**Sub-Parts**	**Questions**	**Sub-Parts**	**Questions**	**Sub-Parts**	**Questions**	**Sub-Parts**	**Questions**	**Sub-Parts**	**Questions**	**Sub-Parts**	**Questions**	**Sub-Parts**
Grid Design and System Hardening	95	249	7	12	14	24	52	179	0	0	0	0	22	34
Vegetation Management and Inspections	74	236	12	47	0	0	52	183	5	3	0	0	5	3
Risk Methodology and Assessment	43	62	3	8	1	2	7	23	0	0	28	9	4	20
Areas for Continued Improvement	37	118	16	53	5	10	8	21	0	0	0	0	8	34
Grid Operations and Procedures	35	70	1	5	1	0	23	65	0	0	10	0	0	0
Public Safety Power Shutoff	18	51	3	5	1	2	13	40	0	0	0	0	1	4
Wildfire Mitigation Strategy Development	17	58	5	11	0	0	8	42	0	0	0	0	4	5
Grid Design, Operations, and Maintenance	12	30	1	3	1	1	7	22	0	0	0	0	3	4
Emergency Preparedness	11	24	9	18	1	0	1	6	0	0	0	0	0	0
Open Work Orders	8	25	2	9	0	0	6	16	0	0	0	0	0	0
N/A	8	37	2	6	0	0	4	25	0	0	0	0	2	6
Other	42	105	10	30	8	1	20	71	0	0	3	0	1	3
Grand Total	**400**	**1065**	**71**	**207**	**32**	**40**	**201**	**693**	**5**	**3**	**41**	**9**	**50**	**113**

WMP Data Requests

2023 WMP Discovery:
Office of Energy Infrastructure Safety (OEIS)

WMP Category	# of Questions	# of Sub-Parts
Areas for Continued Improvement	**16**	**53**
ACI PG&E-22--08 Better Application of Specific Lessons Learned from Utility-Caused Fires	2	4
ACI PG&E-22--09 Evaluation of Model Reprioritization and Fire Rebuild in High-Risk Areas	1	3
ACI PG&E-22--10 Justification of Weather Station Network Density	1	1
ACI PG&E-22--20 Asset Inspection Drone Program Pilot	1	1
ACI PG&E-22--21 Asset Inspections Quality Assurance and Quality Control ACI PG&E-22--08 Better Application of Specific Lessons Learned from Utility-Caused Fires	2	6
ACI PG&E-22-24 – Progression of Vegetation Management Maturity	1	8
ACI PG&E-22-32 – Updates on EPSS Reliability Study	2	14
ACI PG&E-22-34 – Revise Process of Prioritizing Wildfire Mitigations	2	5
ACI PG&E-22-28 – Progression of Effectiveness of Enhanced Clearances Joint Study	1	0
ACI PG&E-22-31 – PSPS Wind Threshold Change Evaluations	2	3
ACI PG&E-22-33 – Progress on Filling Asset Inventory Data Gaps	1	8

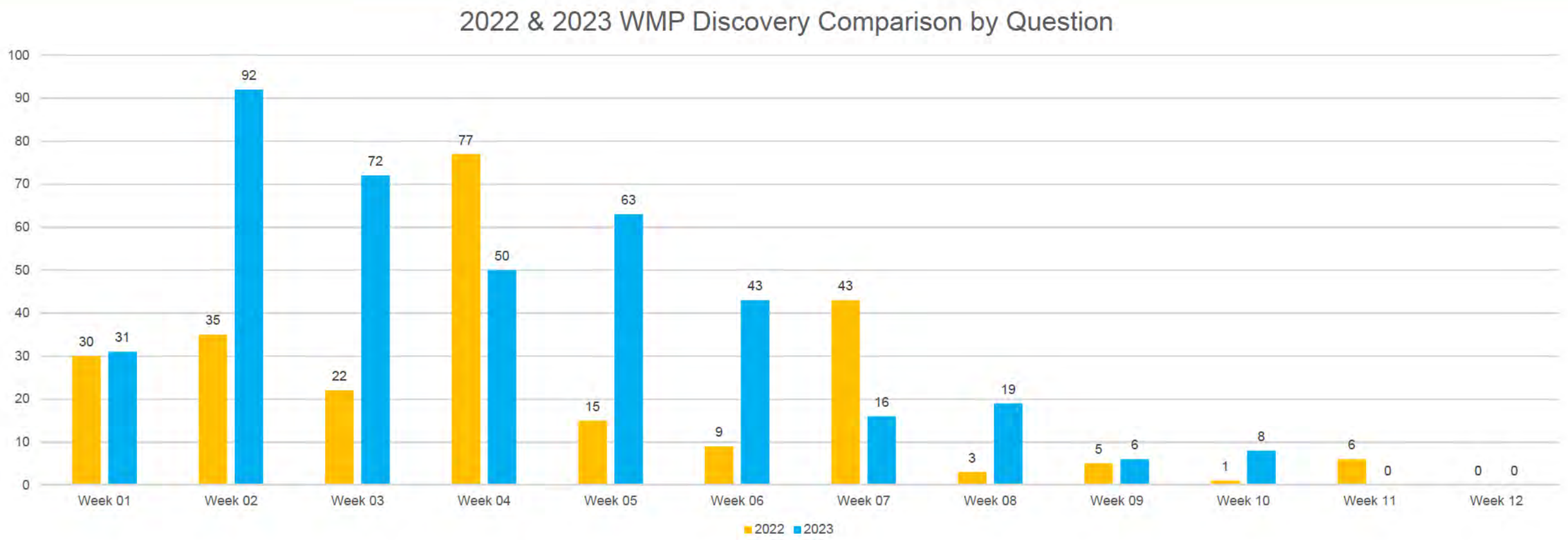
WMP Category (cont.)	# of Questions	# of Sub-Parts
Vegetation Management and Inspections	**12**	**47**
Clearance	1	2
Discontinued Programs	1	2
Focused Tree Inspections	4	17
High-Risk Species	1	3
N/A	2	10
Tree Removal Inventory	1	2
Vegetation Management Inspections	1	3
Wood and Slash Management	1	8
Emergency Preparedness	**9**	**18**
Customer Support in Wildfire and PSPS Emergencies	3	8
N/A	1	2
Objectives	2	4
Overview	1	0
Public Emergency Communication Strategy	1	0
Personnel Training	1	4

WMP Data Requests

2023 WMP Discovery:
CPUC - SPD (Safety Policy Division)

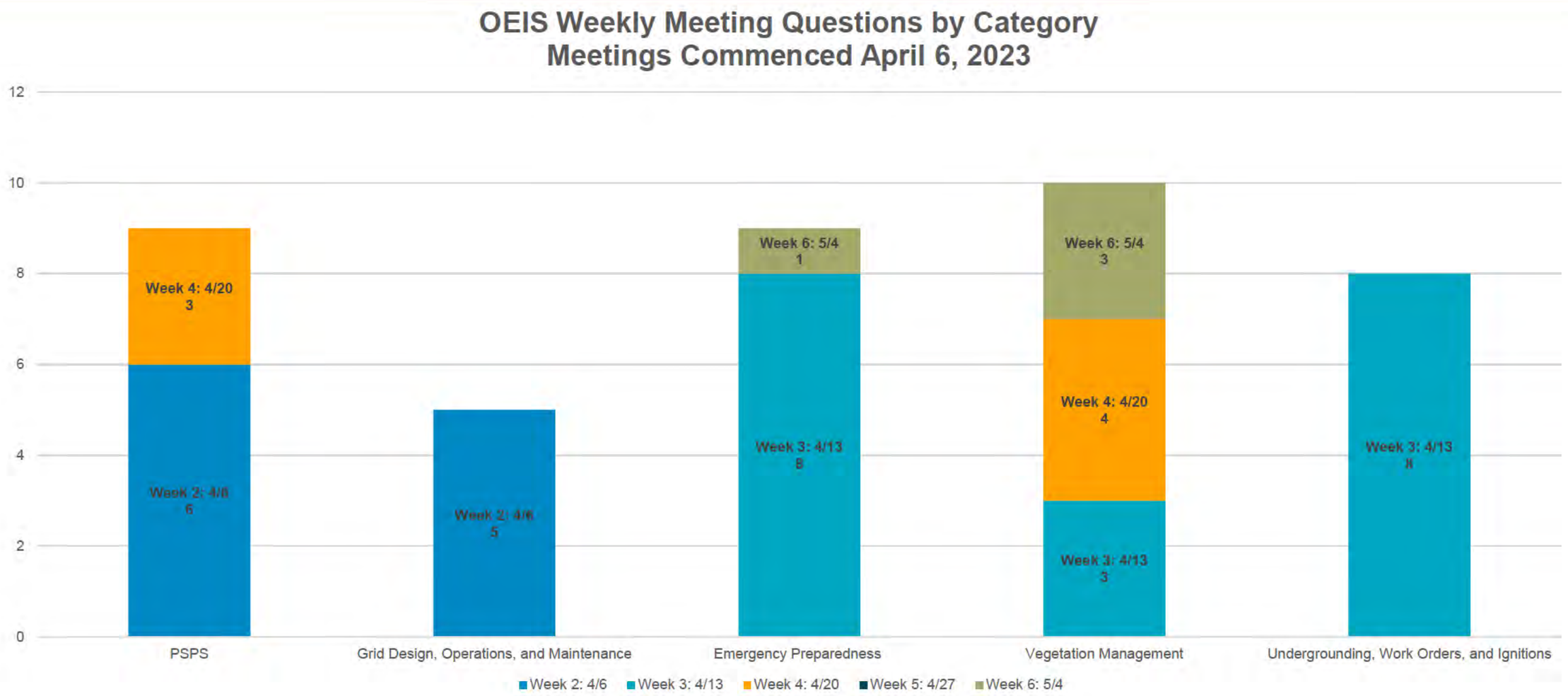
WMP Category	# of Questions	# of Sub-Parts
Grid Design and System Hardening	**14**	**24**
Covered Conductor Installation – Distribution	2	0
Undergrounding of Electric Lines and/or Equipment – Distribution	4	13
Undergrounding of Electric Lines and/or Equipment – Distribution	8	11
Areas for Continued Improvement	**5**	**10**
ACI PG&E-22-06 – Addressing Increase in Risk Events	3	6
ACI PG&E-22-16 – Progress and Updates on Undergrounding and Risk Prioritization	2	4
Situational Awareness and Forecasting	**4**	**0**
Fire Potential Index	4	0

WMP Data Requests



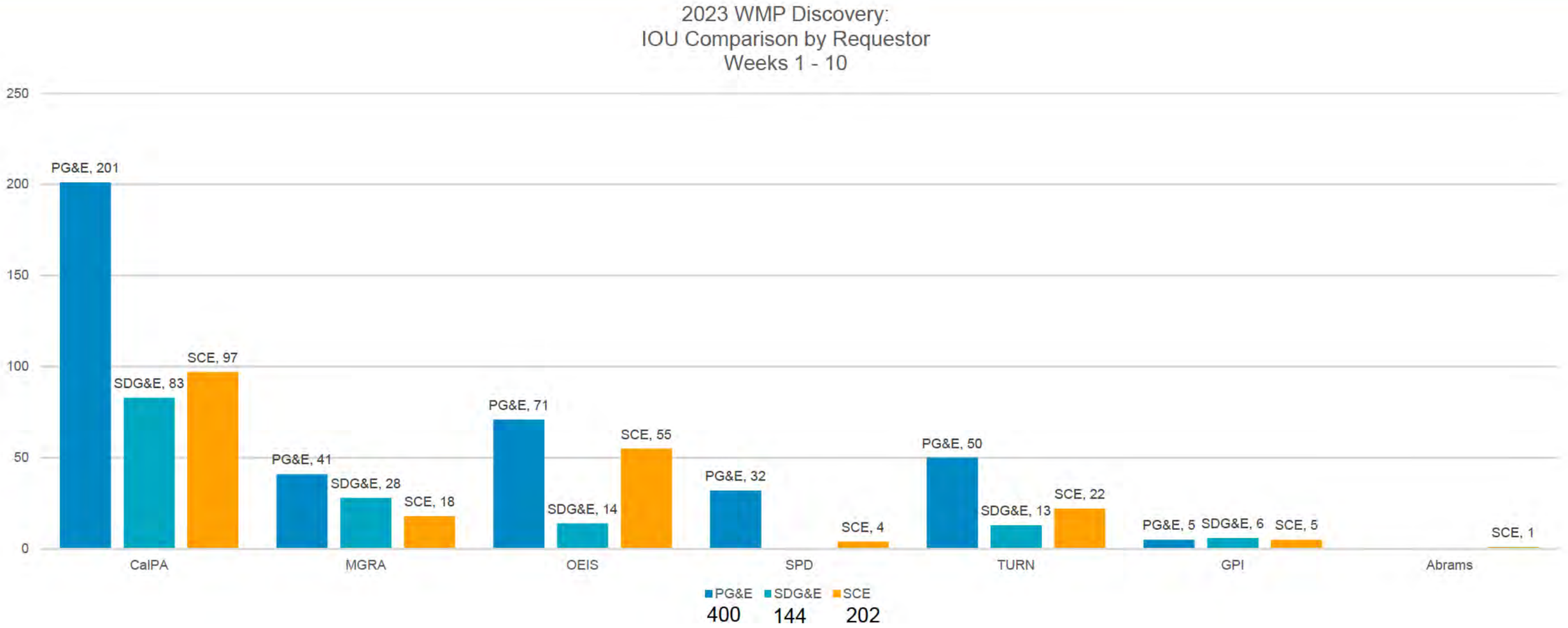
Totals: 2022 – 246 | 2023 – 400
(63% increase)

WMP Data Requests

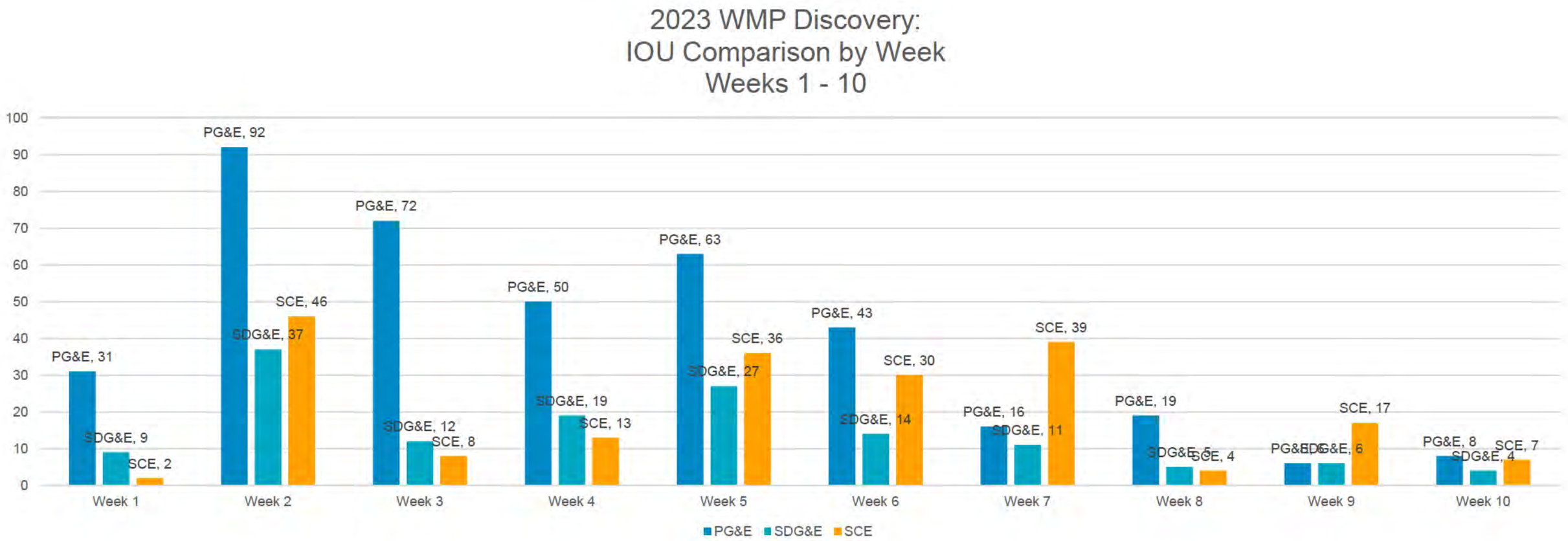


41 Total Questions

WMP Data Requests



WMP Data Requests



400 144 202

WMP Data Requests

2023 WMP Discovery:
IOU Comparison – Top 3 Categories: Weeks 1 - 10

	WMP Category	Questions
PG&E	Grid Design and System Hardening	95
	Vegetation Management and Inspections	74
	Risk Methodology and Assessment	43
SCE	Grid Design and System Hardening	83
	Vegetation Management and Inspection	39
	Risk Methodology and Assessment	23
SDG&E	Vegetation Management and Inspection	35
	Ignition Model	5
	Quality Assurance and Quality Control	3

WMP Data Requests

2023 WMP Discovery: Top 3 Areas of Focus – OEIS
Weeks 1 - 10

PG&E	# of Questions	# of Sub-Parts
Areas for Continued Improvement	**16**	**53**
ACI PG&E-22--08 Better Application of Specific Lessons Learned from Utility-Caused Fires	2	4
ACI PG&E-22--09 Evaluation of Model Reprioritization and Fire Rebuild in High-Risk Areas	1	3
ACI PG&E-22--10 Justification of Weather Station Network Density	1	1
ACI PG&E-22--20 Asset Inspection Drone Program Pilot	1	1
ACI PG&E-22--21 Asset Inspections Quality Assurance and Quality Control ACI PG&E-22--08 Better Application of Specific Lessons Learned from Utility-Caused Fires	2	6
ACI PG&E-22-24 – Progression of Vegetation Management Maturity	1	8
ACI PG&E-22-32 – Updates on EPSS Reliability Study	2	14
ACI PG&E-22-34 – Revise Process of Prioritizing Wildfire Mitigations	2	5
ACI PG&E-22-28 – Progression of Effectiveness of Enhanced Clearances Joint Study	1	0
ACI PG&E-22-31 – PSPS Wind Threshold Change Evaluations	2	3
ACI PG&E-22-33 – Progress on Filling Asset Inventory Data Gaps	1	8
Vegetation Management and Inspections	**12**	**47**
Clearance	1	2
Discontinued Programs	1	2
Focused Tree Inspections	4	17
High-Risk Species	1	3
N/A	2	10
Tree Removal Inventory	1	2
Vegetation Management Inspections	1	3
Wood and Slash Management	1	8
Emergency Preparedness	**9**	**18**
Customer Support in Wildfire and PSPS Emergencies	3	8
N/A	1	2
Objectives	2	4
Overview	1	0
Public Emergency Communication Strategy	1	0
Personnel Training	1	4

SCE	# of Questions
Grid Design and System Hardening	**15**
Asset Inspections (8.1.3)	6
Grid Design and System Hardening (8.1.2)	9
Risk Methodology and Assessment	**11**
Multiple	3
Risk Analysis Framework (6.2)	1
Risk and Risk Component Identification (6.2.1)	1
Risk Overview (6.1.1)	1
Summary of Risk Models (6.1.2)	3
Top Risk-Contributing Circuits/Segments/Spans (6.4.2)	2
Emergency Preparedness	**8**
Customer Support in Wildfire and PSPS Emergencies (8.4.6)	1
Emergency Preparedness Plan (8.4.2)	6
External Collaboration and Coordination (8.4.3)	1

SDG&E	# of Questions
Risk Methodology and Assessment	**2**
6.1.2 Summary of Risk Models	2
Environmental Monitoring Systems	**2**
8.3.2.4.1	1
8.3.2.4.2	1
Emergency Preparedness Staffing and Qualifications	**1**
N/A	1

WMP Data Requests

2023 WMP Discovery: Top 3 Areas of Focus – CPUC - SPD
Weeks 1 - 10

PG&E	# of Questions	# of Sub-Parts
Grid Design and System Hardening	**13**	**19**
Covered Conductor Installation – Distribution	2	0
Undergrounding of Electric Lines and/or Equipment – Distribution	3	8
Undergrounding of Electric Lines and/or Equipment – Distribution	8	11
Situational Awareness and Forecasting	**4**	**0**
Fire Potential Index	4	0
Areas for Continued Improvement	**4**	**10**
ACI PG&E-22-06 – Addressing Increase in Risk Events	2	6
ACI PG&E-22-16 – Progress and Updates on Undergrounding and Risk Prioritization	2	4

SCE	# of Questions
Administrative	**1**
N/A	1

SDG&E	# of Questions

COA

2023-2025 WMP Commitments

Timeline Category	Not Started	Delayed	In Progress	On Track	At Risk	Off Track	Complete	Total
2023 Commitments	25	2	4	3	2	0	0	36
3 Year Objectives	15	0	0	0	0	0	0	15
Total	40	2	4	3	2	0	0	**51**

COA WMP Target Validation 1 of 3

Progress		Status	Catch Back Plan
	YTD	On Track	As of June 20th, 2023, the validation status is “On Track” with **5** commitment(s) validated YTD against a target of **5**. Of the **5** in progress validations, COA has found that **2** are “At Risk” and **0** are “Off Track” and **3** are “On Track”
Completed	5		
Planned	5		

Validated

Number	Section	Target	Command Center Status	COA Status	Comment
AI-06	**8.1.3.1.4**	Perform Transmission Infrared Inspections	On Track	At Risk Catch Back Plan	The unit completion and records of evidence were incomplete and were also found to contain errors. Additionally, COA believes improvement opportunities exist to advance the overall program maturity, key focus areas include job aids, training, and Quality Control that will support TVAC records.
AI-08	**8.1.3.3.1**	Supplemental Inspections - Substation Distribution	On Track	On Track	Date of Inspection on Execution Tracker does not match Inspection date. Pronto forms did not reflect CIRT Review. Anomalies missing LC notification number. Electronic files missing for IR Inspections. Missing F80 Forms.
AI-09	**8.1.3.3.1**	Supplemental Inspections - Substation Transmission	On Track	On Track	Date of Inspection on Execution Tracker does not match Inspection date. Pronto forms did not reflect CIRT Review. Required photos missing . Anomalies missing LC notification number. At risk for execution.
AI-10	**8.1.3.3.1**	Supplemental Inspections - Hydroelectric Substations and Powerhouses	On Track	On Track	Date of Inspection on Execution Tracker does not match Inspection date. Pronto forms did not reflect CIRT Review. Required photos missing Anomalies missing LC notification number. At risk for execution.
VM-01	**8.2.2.1.1**	LiDAR Data Collection - Transmission	Complete	At Risk Catch Back Plan	Execution plan and Approved EDRS plan do not match. Execution plan miles did not match work plan miles. Transmission Circuit voltage not on work plan . Outdated bulletin are not in compliance with GOV-2001P.

COA WMP Target Validation 2 of 3

In-Progress

Number	Section	Target	Command Center Status	COA Status	Comments
AI-02	8.1.3.1.1	Detailed Inspection Transmission – Ground	On Track	In-progress	
AI-04	8.1.3.1.2	Detailed Inspection Transmission – Aerial	On Track	In-progress	
AI-05	8.1.3.1.3	Detailed Inspection Transmission – Climbing	On Track	In-progress	
SA-01	8.3.2.3	AI in Wildfire Cameras	On Track	In-progress	

Delayed

Number	Section	Target	Command Center Status	COA Status	Comments
GM-02	8.1.7.1	HFTD-HFRA Open Tag Reduction - Transmission	On Track	In-progress	
GM-03	8.1.7.2	HFTD-HFRA Open Tag Reduction – Distribution Backlog	At Risk	In-progress	

Upcoming Validations

Number	Section	Target	Command Center Status	COA Status	Comments
SA-01	8.3.2.3	AI in Wildfire Cameras	On Track	Up-coming	
GH-01	8.1.2.1	System Hardening - Distribution	At Risk	Up-coming	
GH-04	8.1.2.2	10K Undergrounding	At Risk	Up-coming	
GH-06	8.1.2.5.1	System Hardening - Transmission Shunt Splices	On Track	Up-coming	

COA WMP Target Validation 3 of 3

Catch Back Plan Issues Identified, Open and Resolved

Number	Section	Target	Resolved	Open	Total Identified
AI-06	**8.1.3.1.4**	Perform Transmission Infrared Inspections	7	1	**8**
AI-08	**8.1.3.3.1**	Supplemental Inspections - Substation Distribution	4		**4**
AI-09	**8.1.3.3.1**	Supplemental Inspections - Substation Transmission	3		**3**
AI-10	**8.1.3.3.1**	Supplemental Inspections - Hydroelectric Substations and Powerhouses	3		**3**
VM-01	**8.2.2.11**	LiDAR Data Collection – Transmission	1	2	**3**
Total			**18**	**3**	**21**

AI-06 Perform Transmission Infrared Inspection

Program	Date Raised	Problem	Point of Cause	Containment Action	Status	Root Cause	Countermeasure Action	Target Date	Owner	Status
Program Name	*Date issue identified*	*Description of the issue; What is the deviation between what should happen vs what actually happened?*	*Where the failure behind the problem occurred?*	*Immediate action to fix Point of Cause*		*Causation behind the Point of Cause*	*Action to fix the root cause; Countermeasure not populated until root cause verified*	*Date for completion of Countermeasure*	*Name*	
Infrared Inspection	4/4/23	**Target Validation**: Work Plan: Per the Master List there are (3050) T3 and (649) T2 they are due for inspection per the procedure. The workplan includes 543 additional circuit miles that aren't due. If not correctly flagged as required there is potential to meet the WMP commitment and still end up with missed inspections that are due.	The entire circuit is inspected therefore adds additional HFTD miles.	Asset Strategy should flag the ETL's that are due in 2023 in the workplan to ensure that execution clearly understands which units are due and avoids a miss that could lead to a self report.	Complete	Creates additional miles to be inspected.	ETLs required for compliance are indicated in Column P "Reason for Inclusion" in the '2023 IR Scope' tab of the workplan. Specifically, ETLs indicated as "High Consequence Line" or "Guest/Host of scoped line" are still part of the workplan, but not specifically part of the compliance requirement.	04/07/2023	[redacted]	Complete
Infrared Inspection	4/4/23	**Procedural Adherence**: COA found 1,158 of the 1937 circuit miles to be less than 40%. Per procedural guidance TD-1001P-14 provide "considerations" that supported these flights represent peak loading. Execution team shared that they have data to provide related to loading and timing selection.	Did not schedule time to review our 2023 IR Inspection Tracker with our partners.	Provide considerations as described in TD-1001P-14 Infrared Inspection Procedure that supported these lines at peak load.	Complete	Do not have a formal process to share historical loading data or decisions on when to time inspections.	Provide considerations as described in TD-1001P-14 Infrared Inspection Procedure that supported these lines at peak load. Add additional columns to tracker to help outline that we considered loading, timing and other factors prior to inspection.	05/01/2023		Complete

AI-06 Perform Transmission Infrared Inspection

Program	Date Raised	Problem	Point of Cause	Containment Action	Status	Root Cause	Countermeasure Action	Target Date	Owner	Status
Program Name	*Date issue identified*	*Description of the issue; What is the deviation between what should happen vs what actually happened?*	*Where the failure behind the problem occurred?*	*Immediate action to fix Point of Cause*		*Causation behind the Point of Cause*	*Action to fix the root cause; Countermeasure not populated until root cause verified*	*Date for completion of Countermeasure*	*Name*	
Infrared Inspection	4/4/23	**Record of Evidence**: TVAC Records: 2/26 IR Data Sheets uploaded to SAP reflected miles that did not match the miles reported as complete in the execution tracker.	QC Process on documentation.	Review all IR Data Sheets and confirm the correct circuit miles are reflected.	Complete	Lack of QC process.	Ensure procedure/job aid clearly defines process to capture mileage flown and reviewed as part of QC.	05/01/2023	[redacted]	Complete
Infrared Inspection	4/4/23	**Record of Evidence**: 2/26 sampled reported as complete in the execution tracker did not have data sheets uploaded in SAP and in working with the team were found to be marked complete in error.	Process.	Validate all lines currently reported as complete are correct. Consider adding a column to execution tracker to reflect completed for record of evidence review. Only report miles that reflect completed in both columns.	Complete	Do not have clearly defined process map for documentation flow.	Develop Process Map and Job Aid for IRS and clerical function to include validation.	05/01/2023		Complete
Infrared Inspection	4/4/23	**Record of Evidence**: 4 /26 sampled did not have required IR data sheets uploaded in SAP	QC Process on documentation.	Ensure for all miles reported completed in the execution file have IR data sheets uploaded in SAP.	Complete	QC process not clearly outlined and fully implemented.	Develop Process Map and Job Aid for IRS and clerical function to include validation.	05/01/2023		Complete
Infrared Inspection	4/4/23	**Record of Evidence: TVAC Records**: Procedural Adherece: Incomplete IR Data Sheet: Disk and Photo number was not found on any of the samples. This is a requirement by TD-1001P-14 Infrared Inspection Procedure Rev 3 (Team reports this task is not performed)	Update by TD-1001P-14 Infrared Inspection Procedure Rev 3 now that we moved to digitally storing data.	Start discussions with Standards to clarify procedure requirements in sections 3.4. and Form 15.	Complete	company has moved to from storing data on physical storage devises to housing data on shared servers. Therefore, disk & photo number is now obsolete.	Update TD-1001P-14 Infrared Inspection Procedure Rev 3 Form 15 to reflect current process.	12/31/2023		In Progress

AI-06 Perform Transmission Infrared Inspection

Program	Date Raised	Problem	Point of Cause	Containment Action	Status	Root Cause	Countermeasure Action	Target Date	Owner	Status
Program Name	*Date issue identified*	*Description of the issue; What is the deviation between what should happen vs what actually happened?*	*Where the failure behind the problem occurred?*	*Immediate action to fix Point of Cause*		*Causation behind the Point of Cause*	*Action to fix the root cause; Countermeasure not populated until root cause verified*	*Date for completion of Countermeasure*	*Name*	
Infrared Inspection	4/4/23	**Record of Evidence:** GEO Spatial documentation was not Provided for all IR inspections. COA reviewed two that were provided. All Geo Spatial documentation is required per define phase	GEO spatial data isn't easily accessible to those outside of the process	System Inspections to identify the best location/method to provide COA/IA/PMO access to the files.	Complete	System Inspections not fully understanding deliverable requirements therefore not having a good method to house and share data.	System Inspections to identify the best location/method to provide COA/IA/PMO access to the files.	05/01/2023	[redacted]	Complete
Infrared Inspection	4/4/23	**Record of Evidence**: Requirement to provide Weekly Report with anomalies and LC notifications. Report contains 4 anomalies but only 1 has an LC notification number. Appears to be a process delay in reviewing and generating LC's, as anomalies reflect found in February.	Lack of Process	Review 3 anomalies and create notification numbers.	Complete	System inspections reporting on all anomalies found and should only report on anomalies that have been verified with notifications. Lack of formal process around reporting anomalies.	Ensure a process is identified and documented to ensure notifications are created in a timely manner (define and monitor an acceptable timeline).	05/01/2023		Complete

VM-01 LiDAR Data Collection – Transmission

Program	Date Raised	Problem	Point of Cause	Containment Action	Containment Action Date	Status	Root Cause	Countermeasure Action	Target Date	Owner	Status
Program Name	*Date issue identified*	*Description of the issue; What is the deviation between what should happen vs what actually happened?*	*Where the failure behind the problem occurred?*	*Immediate action to fix Point of Cause*	*Immediate action to fix Point of Cause*		*Causation behind the Point of Cause*	*Action to fix the root cause; Countermeasure not populated until root cause verified*	*Date for completion of Countermeasure*	*Name*	
LiDAR Data Collection – Transmission	5/8/23	**Work Plan Validation:** There is not a standard or procedure for LiDAR data collection. • A Bulletin was found TD-7103B-003 dated 10/15/2018 however, states “This is a time-limited document expected to extend into late 2018”. It did not include LiDAR data collection cycles or the work planning process additionally. This Bulletin does not meet the guidance document GOV-2001P that requires incorporation of bulletin in procedure within 1 year (Section 4.1.1.2a)	Utility Procedure TD-7103-10 details standard procedure for LiDAR data collection. It was published 4/6/23 and becomes effective 6/6/23.	Refer to Utility Procedure TD-7103-10	Back dated to 4/6/23	Completed	Timing of the publication of Utility Procedure TD-7103-10 lagged reporting window.	Utility Bulletin TD-7103B-03 is obsolete and was replaced by TD-7103-10. Additionally, Utility Procedure TD-7103P-01 will be updated to reference Utility Procedure TD-7103-10 which incorporates the procedures from cancelled Bulletin TD-7103B-003	Utility ProcedureTD-7103B-003 was published on 4/6/23 and becomes effective 6/6/23. Utility Procedure TD-7103P-01 target to be approved and published by 6/30/2023		In-Progress
LiDAR Data Collection – Transmission	5/8/23	**Work Plan Validation:** Transmission circuit voltage not provided COA was unable to verify	The VM-01 Template does not have a column for circuit voltage.	Update form to VM-01 Template voltage and circuit ETL to avoid confusion in reporting. Column B has been added for circuit voltage. In addition, the ETL circuit IDs have been added in Column C.	Completed 5/15/23	Completed	Without column for circuit voltage, requestee was unaware these data were requested. This created confusion with circuits with the same name with different voltages with multiple deliveries.	Include additional Identification descriptors such as circuit ETL in reporting documents.	Completed 5/15/23		Completed

VM-01 LiDAR Data Collection – Transmission

Program	Date Raised	Problem	Point of Cause	Containment Action	Containment Action Date	Status	Root Cause	Countermeasure Action	Target Date	Owner	Status
Program Name	*Date issue identified*	*Description of the issue; What is the deviation between what should happen vs what actually happened?*	*Where the failure behind the problem occurred?*	*Immediate action to fix Point of Cause*	*Immediate action to fix Point of Cause*		*Causation behind the Point of Cause*	*Action to fix the root cause; Countermeasure not populated until root cause verified*	*Date for completion of Countermeasure*	*Name*	
LiDAR Data Collection – Transmission	5/8/23	**Execution:** **Execution Plan not aligned with Work plan:** • COA found 6 circuits that were not included in work plan. Additional scope must be justified and documented and approved in EDRS. • COA found 5 Circuits not found on the Execution Plan that were in the work plan • Execution Plan Miles did not match work plan miles.	• The 6 circuits that 'were not included in work plan' were include in our VM2023 execution plan. **It is unclear why these were not submitted in the work plan**. • Independent QC review and attestation records failed to include 5 circuits listed below, and these omissions propagated in our records. They are now included in **Execution Plan work plan**. • The updated work plan contained 17,784 planned miles and completed a final of 17,817 miles.	Review QC records and attestation process to make sure all circuits are reported correctly for 2023, and records are complete. TVM GIS records are complete and accurate.	5/15/23		Circuit omissions were caused by human error. Mileage differences are caused by real and regular asset changes that occur in PG&E's transmission system (e.g., reconductoring, tower/pole replacements, etc.)	Create internal review process and job aid for audit & approval for Execution Plan work plan circuits & mileages as reported in attestations	6/30/23		

8.2.2.1 VM LiDAR Inspection Transmission (VM-01)							2023 Units (Circuit Mile)							
5 Added Circuit Records the were omitted from Execution work plan	kV	ETL	NERC	Lat	Long	Scheduled Completion date (Per unit completion definition)	Planned Total Units	Final Total Miles	Tier 3 HFTD	Tier 2 HFTD	Zone 1 HFTD	HFRA Non-HFTD	Non-HFTD Tier 2/3 Buffer	Non-HFTD / Non- HFRA
CIC TAP	60	ETL.6971	N			3/3/2023	0.114	0.114						0.114
GRIZZLY TAP (SVP)	115	ETL.1231	N			3/3/2023	0.164	0.164	0.063	0.101		0.000		0.000
LAWRENCE LIVERMORE LAB #2 TAP	115	ETL.3981	N			2/6/2023	6.363	6.363						6.363
PITTSBURG #1 TAP	60	ETL.6551	N			3/3/3023	1.159	1.159						1.159
SAN JOAQUIN COGEN TAP	115	ETL.4012	N			3/3/3023	0.037	0.037						0.037

EPSS

EPSS

Materials not submitted in time for pre-read mailout.

Ignitions

CPUC Reportable Ignitions in HFRA + HFTD

YTD Total *Through 06/30/23*		**Month to Date** *06/01/23 – 06/30/23*	
23		**2**	
2022	40	8	
3-yr Average	50	14	
2023 Target	86	**June Target**	50

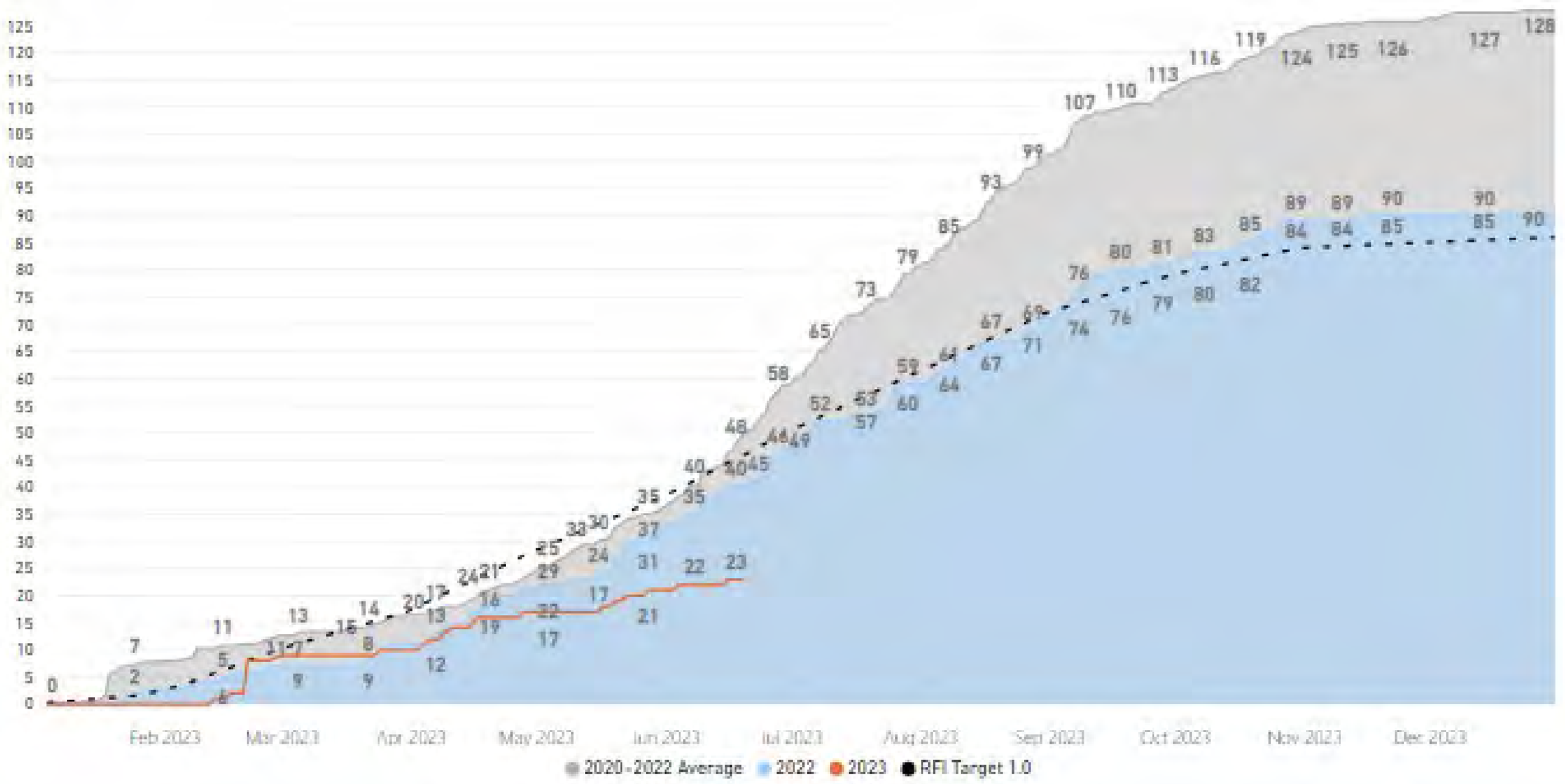
Wildfire Risk Reduction Metric

YTD Total
0

2022	0
3-yr Average	0
2023 Target	1

Under Investigation					
Index ID	*Name*	*Date*	*Size (acres)*	*Status*	*Cause*

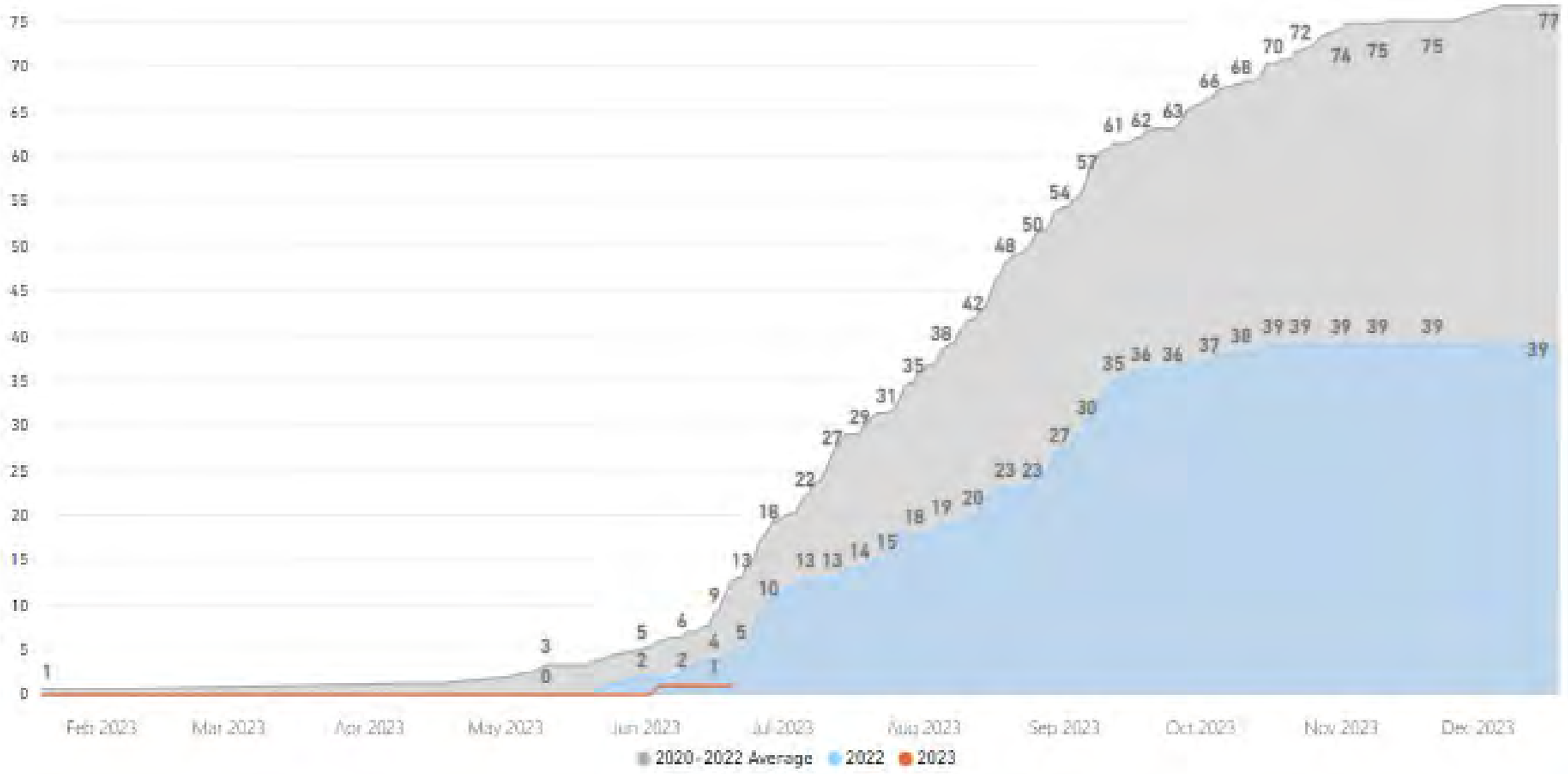
PG&E Reportable Ignitions in HFTD vs Target



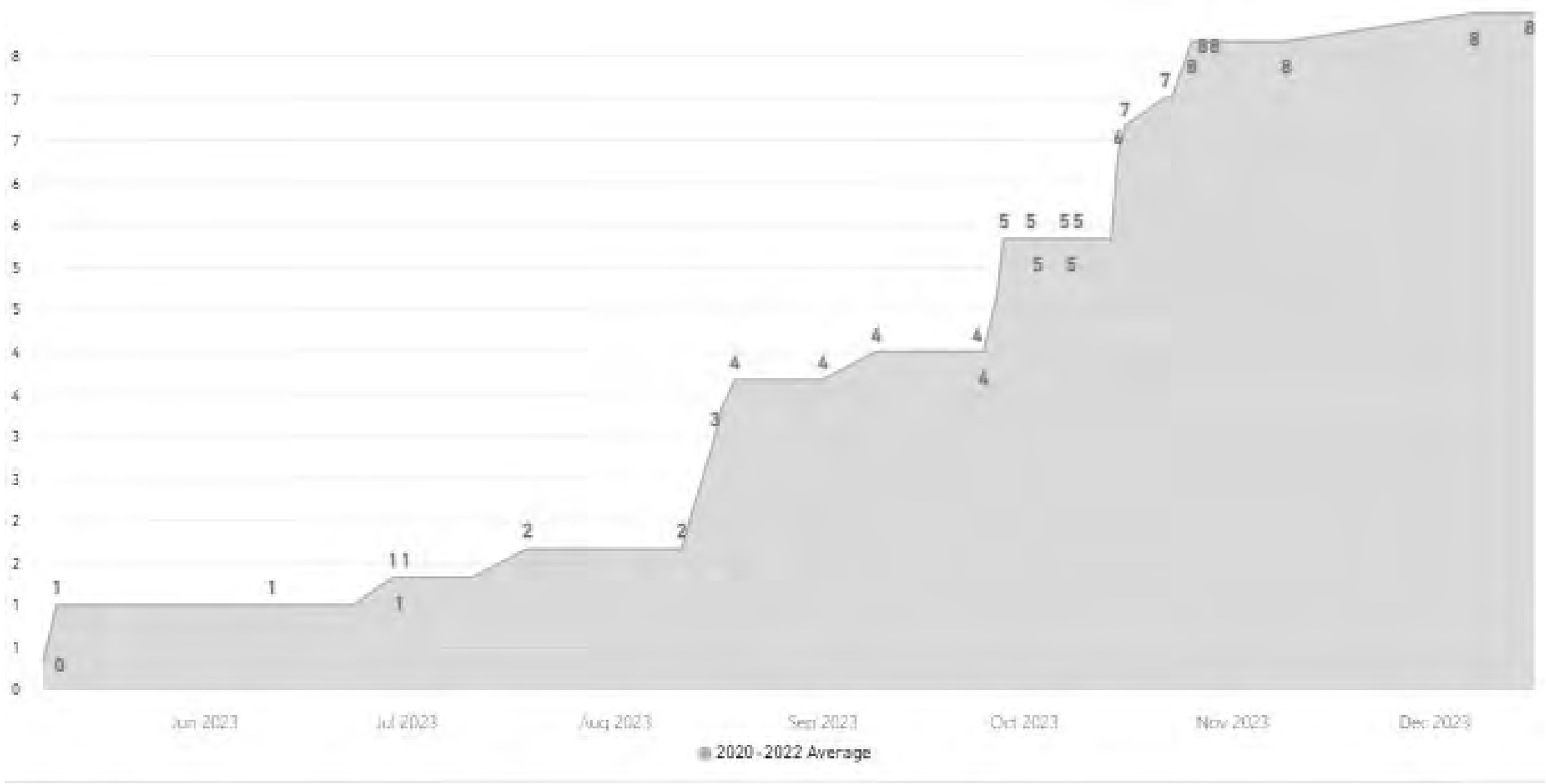
Reportable Fire Ignitions in HFRA by Weather Conditions

Risk Level	RFW	HWW	R3+	<R3
2023 YTD	0	0	1	22
2022 YTD	0	0	4	36
3-YEAR AVG	1	3	10	36
2017 YTD	0	0	0	28

PGE RFIs in HFTD – R3+ Conditions



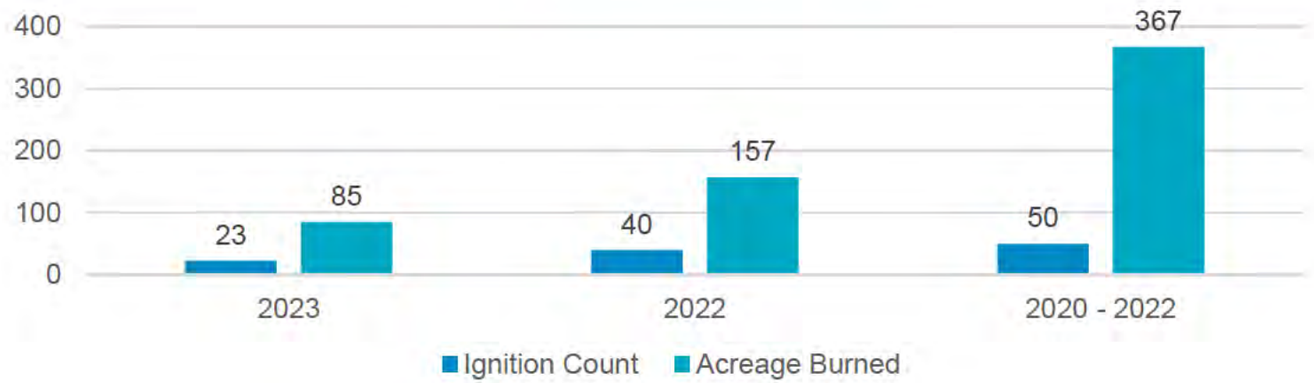
PGE RFIs in HFTD – RFW Conditions



Reportable Fire Ignitions in HFRA by FPI and Asset Type

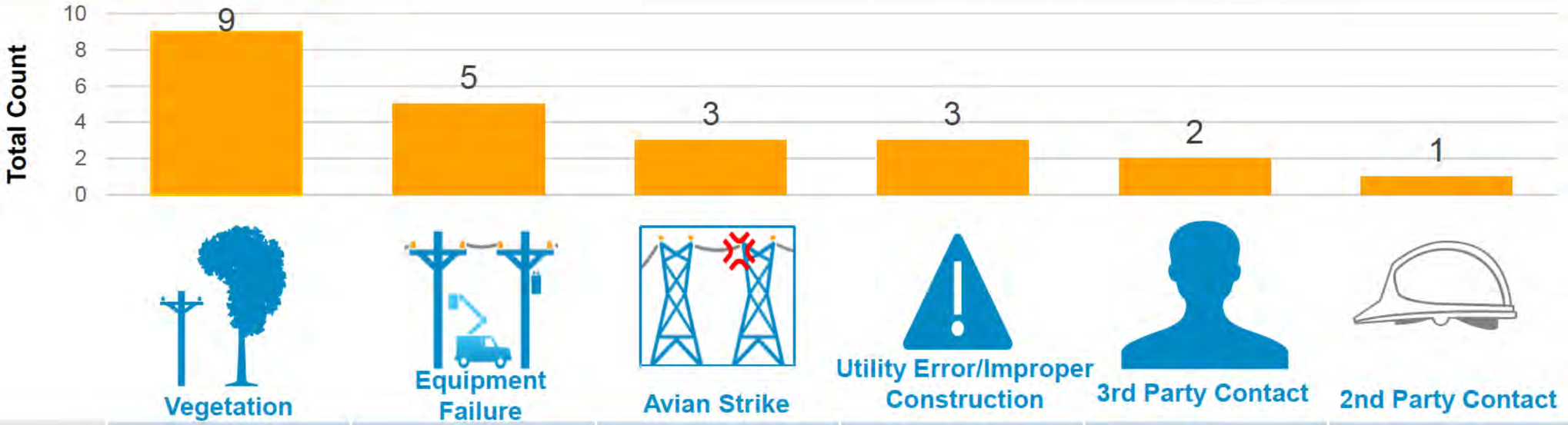
	Transmission	Dist R3+ Primary	Dist R3+ Secondary	Dist R3+ Service	Dist <R3
2023 YTD	2	0	0	0	21
2022 YTD	1	4	0	0	35
3-YEAR AVG	3	11	2	1	33

Reportable Fire Ignitions in HFTD and HFRA – Count and Acreage Burned



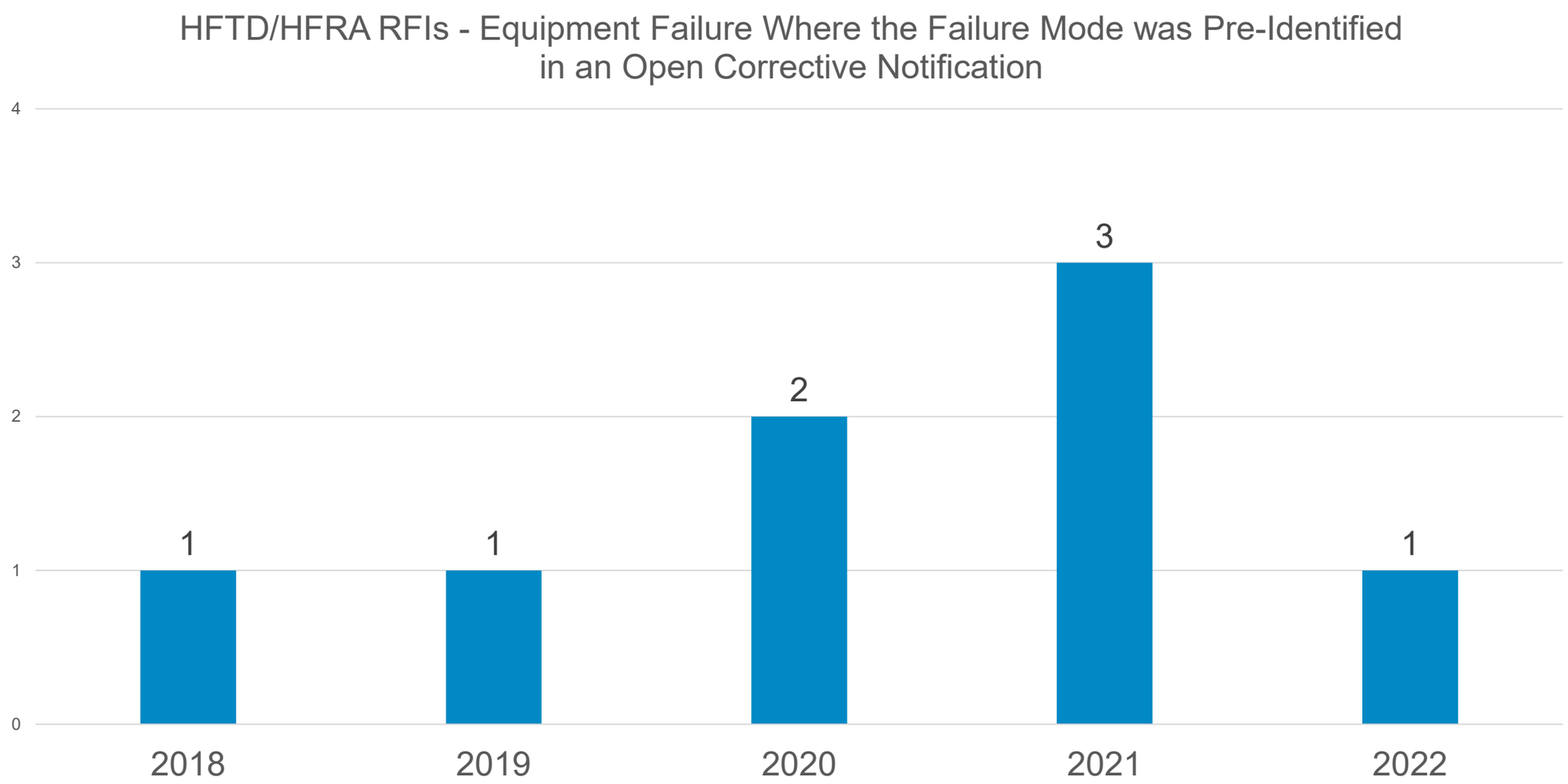
	2023 YTD	2022 YTD	2020 - 2022
IGNITION COUNT	23	40	50
ACREAGE BURNED	85	157	367

Reportable Fire Ignitions in HFTD and HFRA by Cause



	Vegetation	Equipment Failure	Avian Strike	Utility Error/Improper Construction	3rd Party Contact	2nd Party Contact
LAST WEEK	0	0	0	0	1	0
2023 YTD	9	5	3	3	2	1

RFIs – Equipment Failure Pre-Identified in Open Corrective Notification



Ignitions on EPSS Protected Facilities

Ignition ID	Date	FPI	Circuit	Cause	Fault Type
20230530	6/16/2023	R2	Clayton 2212	3rd Party Contact	Force Out (Hi-Z)

Index 530 (EPSS)

Date & Time of ignition:
June 16, 2023 @approximately 0146 hours

Location: S/S Marsh Creek Rd E/O Lydia Lane, Brentwood

Circuit: Clayton 2212 21kV OH circuit

Division: Diablo

HFTD: Tier 2

Failure Driver: Contact from object

Failure Sub-Driver: Contact – Vehicle

Fire Size: 1 meter - < 3 meters

Fire Potential Index: R2

Wildfire Risk Command Center

June 27, 2023: Weekly Operating Review Agenda

	Agenda	*Topic*	*Leads*	*Timing*
0	**Preface & Introductions**	• Safety • Key Takeaways	[redacted]	5 min
1	**EPSS**	• EPSS Update	*Dave Canny*	15 min
2	**2023 WMP Delivery**	• WMP Delivery Update • Revision Notice Update • COA Update	[redacted]	15 min
3	**Wildfire OII**	• Wildfire OII Update		5 min
4	**Tags**	• Tags Update		5 min

Safety and Security Orientation

Earthquake

- Drop
- Cover
- Hold

Fire

- Exits, escape routes, evacuation plan
- Compliant fire extinguisher

Security

- Active shooter—get out, hide out, take out
- Use badge—don't tailgate
- Lock computer
- Report Phishing emails
- Protect data privacy
- Report suspicious packages

Medical Emergency

- First aid/CPR
- 911/share location
- AED

Ergonomics

- 30/30
- Proper ergo
- RSIGuard

Keys to Life 2023 Focus

1. Pre-job safety briefings
2. Safe driving principles
3. Personal Protective Equipment (PPE)
4. Electrical safety testing & grounding

10. Hazardous environment

All 10 Keys to Life

Psychological Safety

- Care for each other
- Look out for one another
- Create a safe space for all
- Welcome new ideas from everyone
- Practice self-care

Emergency Planning

Update emergency contacts and personal emergency preparedness plan

On the road, off the phone.

Do not report to work if testing positive for COVID-19 symptoms.

Corporate Security [redacted] | **Nurse Care Line** 888-449-7787 | **Employee Assistance Program (EAP)** mypgebenefits.com/EAP

Note

Data included in this deck may change/update for the 2 PM meeting.

EPSS

WMP Delivery

2023-2025 WMP Commitments

Timeline Category	Not Started	On Track	At Risk	Off Track	Complete	Total
2023 Commitments	0	21	6	0	9 ↑4	36
3 Year Objectives	2	13	0	0	0	15
10 Year Objectives	11	0	0	0	0	**11**
Total	13	34	6	0	9	**62***

Arrows Indicate weekly changes.

10 Year Objectives

Not Started	On Track	At Risk	Off Track	Complete	Total
11	0	0	0	0	11

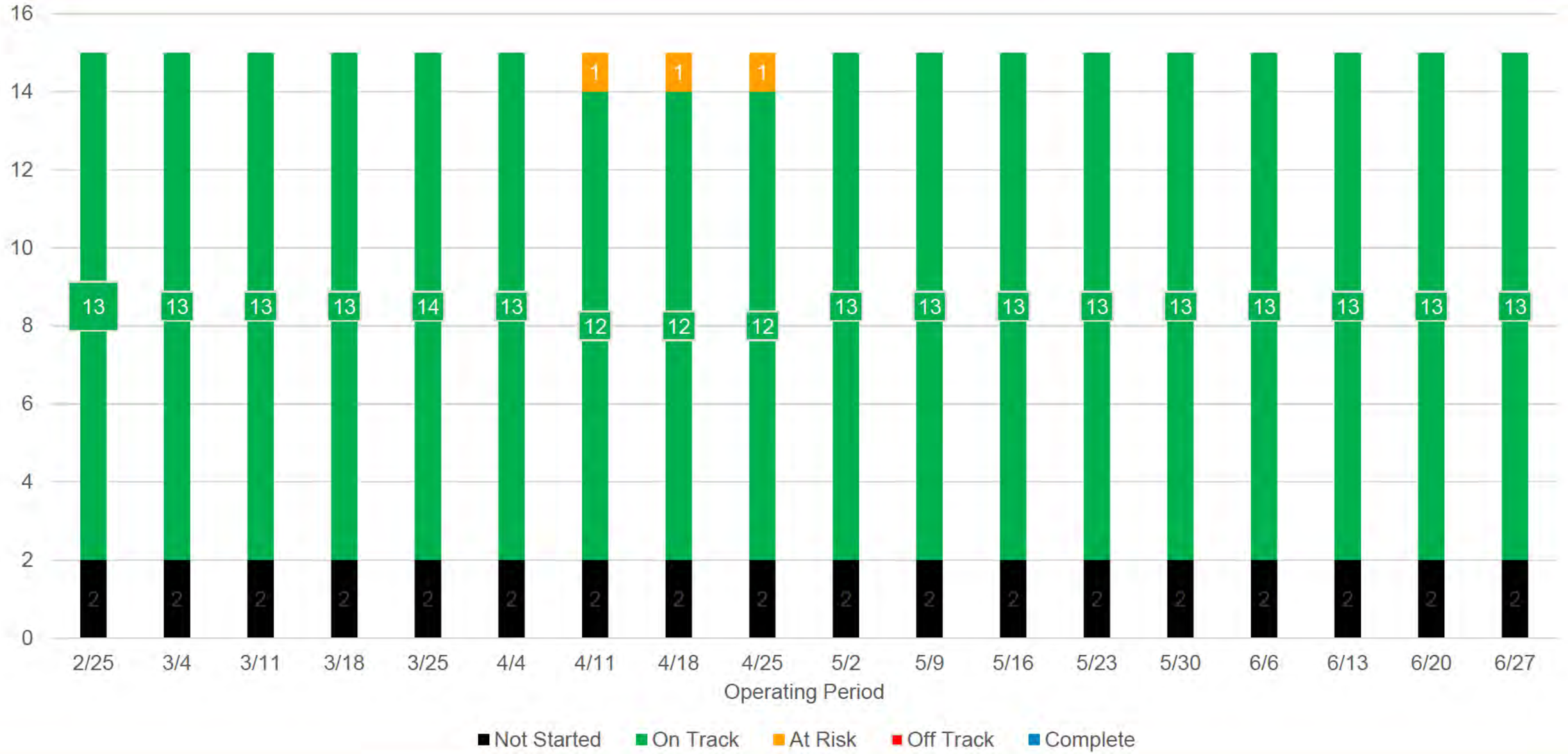
10 Year Objectives

ID	*2023 WMP Target Name*	Chief Sponsor (Execution)	WMP Start Date	Last Compliance Date
CO-03	Community Engagement - Meetings in 2026 -2032	[redacted]	1/1/2026	12/31/2032
EP-03	Maintain all hazards planning and preparedness program in 2026 - 2033	Angie Gibson	1/1/2026	12/31/2032
EP-05	Expand all hazards planning to include additional threats and scenarios in 2026 - 2033	Angie Gibson	1/1/2026	12/31/2032
GM-05	HFTD/HFRA Open Tag Reduction - Backlog Elimination - 7 Year Plan	Jeff Deal	1/1/2026	12/31/2029
PS-03	Evaluate enhancements for the PSPS Transmission guidance	Rod Robinson	1/1/2026	12/31/2032
PS-04	Evaluate incorporation of approved IPW enhancements into the PSPS Distribution guidance	Rod Robinson	1/1/2026	12/31/2032
PS-05	Battery Solutions	[redacted]	6/1/2023	12/31/2032
SA-06	Evaluate FPI and IPW Modeling enhancements in 2026 - 2033		1/1/2026	12/31/2032
VM-10	Inspections in HFTD and HFRA	Peter Kenny	TBD	12/31/2032
VM-11	Enhance and refine Focus Tree Inspection program	Peter Kenny	1/1/2026	12/31/2032
VM-12	Evaluate emerging technologies	Peter Kenny	TBD	12/31/2032

3 Year Objectives

Not Started	On Track	At Risk	Off Track	Complete	Total
2	13	0	0	0	15

3 Year Objectives Delivery Trend



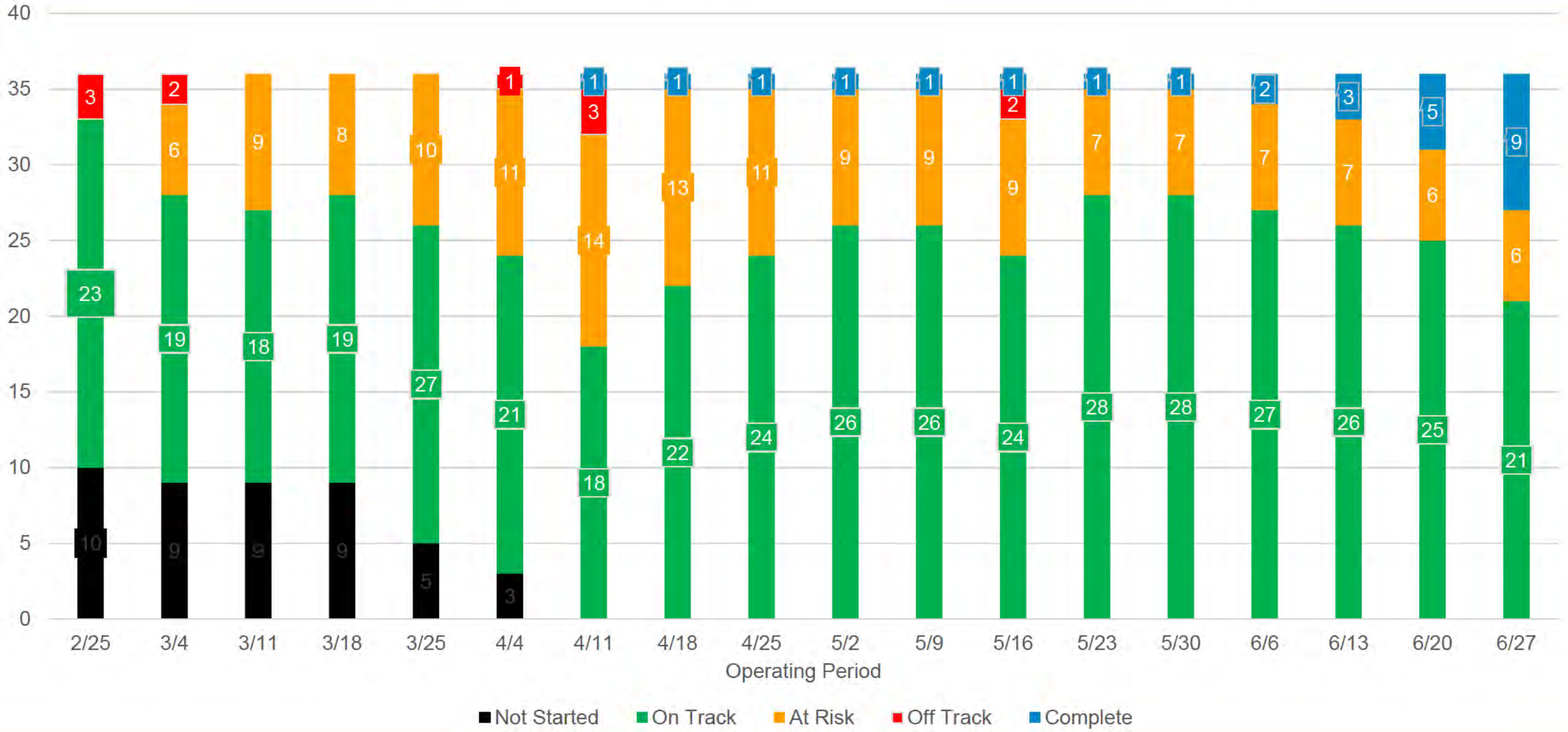
3 Year Objectives

2023 WMP Targets				Q1			Q2			Q3			Q4		
ID	*2023 WMP Target Name*	Chief Sponsor (Execution)	Last Compliance Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
AI-01	Retainment of Inspectors and Internal Workforce Development	Jason Regan	12/31/2025												
AI-11	Filling Asset Inventory Data Gaps	Martin Wyspianski	12/31/2025												
CO-01	Community Engagement - Meetings	[redacted]	9/30/2025												
EP-01	Complete PSPS and Wildfire Tabletop and Functional Exercises	Angie Gibson	11/30/2023												
EP-02	Maintain all hazards planning and preparedness program in 2023 - 2025	Angie Gibson	12/31/2025												
EP-04	Expand all hazards planning to include additional threats and scenarios in 2023 - 2025	Angie Gibson	12/31/2025												
GH-02	Evaluate Covered Conductor Effectiveness	Martin Wyspianski	3/29/2024 (2023 data)												
GM-01	Asset Inspections - Quality Assurance	[redacted]	12/31/2025												
GM-04	HFTD/HFRA Open Tag Reduction - Backlog Elimination - 3 Year Plan	Jeff Deal	12/31/2025												
GM-07	Updates on EPSS Reliability Study	Dave Canny	2/15/2024 (For 2023 data)												
PS-01	Evaluate enhancements for the PSPS Transmission guidance	Rod Robinson	12/31/2025												
PS-02	Evaluate incorporation of approved IPW enhancements into the PSPS Distribution guidance	Rod Robinson	12/31/2025												
SA-05	Evaluate FPI and IPW Modeling enhancements in 2023 - 2025	[redacted]	12/31/2025												
VM-03	Focused Tree Inspection Program	Peter Kenny	12/31/2025												
VM-09	Constraint Resolution Procedural Guideline	Peter Kenny	12/31/2025												

2023 Commitments – Execution

On Track	At Risk	Off Track	Complete	Total
21	6	0	9	36

2023 WMP Commitment Delivery Trend



2023 WMP Commitment At Risk/Off Track

No	ID	WMP Target Name	Chief Sponsor (Execution)	Catch Back Plan	Meeting Catch Back	Catch Back Plan Due Date	Quarterly	WMP Target Due Date	Week(s) on list
1	GH-01	System Hardening - Distribution	Jamie Martin	Yes		9/30/2023	No	12/31/2023	7
2	GH-04	10K Undergrounding	Jamie Martin	Yes		9/30/2023	No	12/31/2023	17
3	GM-03	HFTD/HFRA Open Tag Reduction – Distribution Backlog	Jeff Deal	Yes		7/31/2023	No	12/31/2023	17
4	GM-06	EPSS - Down Conductor Detection (DCD)	Dave Canny	Yes		7/1/2023	No	12/31/2023	19
5	PS-07	PSPS Custom Impact Reduction	[redacted]	Yes		6/30/2023	No	12/31/2023	5
6	VM-04	Tree removal	Peter Kenny	Yes		6/30/2023	No	12/31/2023	8

Q2 Target Status

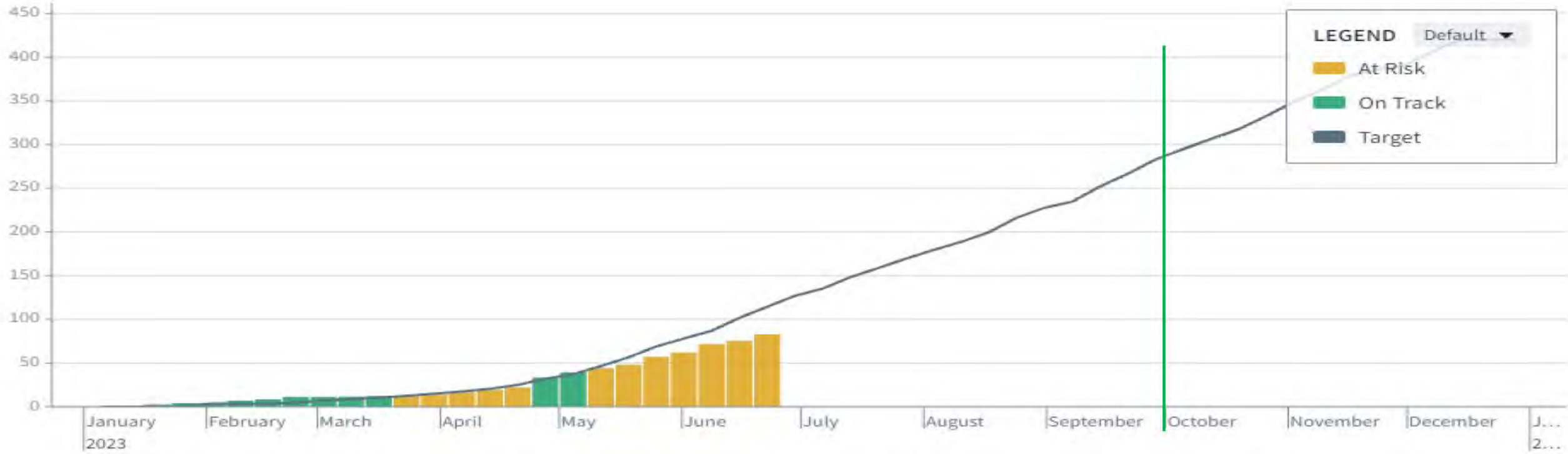
2023 Quarterly Targets										Q2
#	ID	2023 WMP Target Name	Owner	Q2 Internal Due Date	Q2 Compliance Date	Target / Target-Quarterly / Objective	YTD Actuals	Q2 Target	Q2 % Complete	WRCC Status
1	AI-02	Detailed Inspection Transmission – Ground	Jason Regan	6/15/2023	6/30/2023	Target (Quarterly)	25,981	18,000	144.34%	
2	AI-04	Detailed Inspection Transmission – Aerial	Jason Regan	6/15/2023	6/30/2023	Target (Quarterly)	23,448	17,000	137.93%	
3	AI-05	Detailed Inspection Transmission – Climbing	Jason Regan	6/15/2023	6/30/2023	Target (Quarterly)	1,803	1,200	150.25%	
4	AI-06	Perform transmission infrared inspections	Jason Regan	6/15/2023	6/30/2023	Target (Quarterly)	2,845	1,500	189.67%	
5	AI-07	Detailed Ground Inspections - Distribution	Jason Regan	6/15/2023	6/30/2023	Target (Quarterly)	54,354	30,000	181.18%	
6	AI-08	Supplemental Inspections - Substation Distribution	Jason Regan	6/15/2023	6/30/2023	Target (Quarterly)	52	46	113.04%	
7	AI-09	Supplemental Inspections - Substation Transmission	Jason Regan	6/15/2023	6/30/2023	Target (Quarterly)	34	31	109.68%	
8	AI-10	Supplemental Inspections - Hydroelectric Substations and Powerhouses	Jason Regan	6/15/2023	6/30/2023	Target (Quarterly)	41	41	100.00%	
9	CO-02	Community Engagement - Surveys	[redacted]	6/15/2023	6/30/2023	Target (Quarterly)	1	1	100.00%	
10	VM-01	LiDAR Routine Inspections - Transmission	Peter Kenny	6/15/2023	6/30/2023	Target (Quarterly)	17,808	17,500	101.76%	
11	VM-02	Pole Clearing Program	Peter Kenny	6/15/2023	6/30/2023	Target (Quarterly)	80,113	57,750	138.72%	
12	VM-05	Defensible Space Inspections - Distribution Substation	Martin Wyspianski	6/15/2023	6/30/2023	Target (Quarterly)	131	130	100.77%	
13	VM-06	Defensible Space Inspections - Transmission Substation	Martin Wyspianski	6/15/2023	6/30/2023	Target (Quarterly)	55	55	100.00%	
14	VM-07	Defensible Space Inspections - Hydroelectric Substations and Powerhouses	Andrew Williams, [redacted]	6/15/2023	6/30/2023	Target (Quarterly)	61	61	100.00%	

2023 WMP Commitment Status

2023 WMP Targets							Q1			Q2			Q3			Q4		
ID	2023 WMP Target Name	Chief Sponsor (Execution)	Q2 Compliance Date	Q3 Compliance Date	Internal Due Date	Last Compliance Date	Target / Target-Quarterly / Objective	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
AI-01	Retainment of Inspectors and Internal Workforce Development	Jason Regan	N/A	N/A	11/30/2023	12/31/2025	Objective (3 Year)												
AI-02	Detailed inspection Transmission – Ground	Jason Regan	6/30/2023	N/A	6/30/2023	7/31/2023	Target (Quarterly)												
AI-03	Develop Distribution Aerial Inspections program	Jason Regan	N/A	N/A	10/31/2023	12/31/2023	Objective												
AI-04	Detailed inspection Transmission – Aerial	Jason Regan	6/30/2023	N/A	6/30/2023	7/31/2023	Target (Quarterly)												
AI-05	Detailed inspection Transmission – Climbing	Jason Regan	6/30/2023	N/A	6/30/2023	7/31/2023	Target (Quarterly)												
AI-06	Perform transmission infrared inspections	Jason Regan	6/30/2023	9/30/2023	11/30/2023	12/31/2023	Target (Quarterly)												
AI-07	Detailed Ground Inspections - Distribution	Jason Regan	6/30/2023	9/30/2023	11/30/2023	12/31/2023	Target (Quarterly)												
AI-08	Supplemental inspections - Substation Distribution	Jason Regan	6/30/2023	N/A	6/30/2023	7/31/2023	Target (Quarterly)												
AI-09	Supplemental inspections - Substation Transmission	Jason Regan	6/30/2023	N/A	6/30/2023	7/31/2023	Target (Quarterly)												
AI-10	Supplemental inspections - Hydroelectric Substations and Powerhouses	Jason Regan	6/30/2023	N/A	6/30/2023	7/31/2023	Target (Quarterly)												
AI-11	Filling Asset Inventory Data Gaps	Martin Wyspianski	N/A	N/A	12/1/2025	12/31/2025	Objective (3 Year)												
CO-01	Community Engagement - Meetings	[redacted]	N/A	N/A	9/30/2023	9/30/2025	Objective (3 Year)												
CO-02	Community Engagement - Surveys		6/30/2023	9/30/2023	10/31/2023	12/31/2023	Target (quarterly)												
CO-03	Community Engagement - Meetings in 2026 -2032		N/A	N/A		12/31/2032	Objective (10 Year)												
EP-01	Complete PSPS and Wildfire Tabletop and Functional Exercises	Angie Gibson	N/A	N/A	11/10/2023	11/30/2023	Objective (3 Year)												
EP-02	Maintain all hazards planning and preparedness program in 2023 - 2025	Angie Gibson	N/A	N/A	12/1/2023	12/31/2025	Objective (3 Year)												
EP-03	Maintain all hazards planning and preparedness program in 2026 - 2033	Angie Gibson	N/A	N/A		12/31/2032	Objective (10 Year)												
EP-04	Expand all hazards planning to include additional threats and scenarios in 2023 - 2025	Angie Gibson	N/A	N/A	12/1/2023	12/31/2025	Objective (3 Year)												
EP-05	Expand all hazards planning to include additional threats and scenarios in 2026 - 2033	Angie Gibson	N/A	N/A		12/31/2032	Objective (10 Year)												
EP-06	Review, and revise the CERP and 2 Wildfire Related Annexes on a yearly basis	Angie Gibson	N/A	N/A	12/1/2023	12/31/2023	Target												
GH-01	System Hardening - Distribution	Jamie Martin	N/A	N/A	12/31/2023	12/31/2023	Target												
GH-02	Evaluate Covered Conductor Effectiveness	Martin Wyspianski	N/A	N/A	3/29/2024	3/29/2024 (2023 data)	Objective (3 Year)												
GH-03	Evaluate and Implement Covered Conductor Effectiveness Impact on Inspections and Maintenance Standards	Martin Wyspianski	N/A	N/A	12/1/2023	12/31/2023	Objective												
GH-04	10K Undergrounding	Jamie Martin	N/A	N/A	12/31/2023	12/31/2023	Target												
GH-05	System Hardening - Transmission	Ahmad Ababneh	N/A	N/A	11/30/2023	12/31/2023	Target												
GH-06	System Hardening - Transmission Shunt Splices	Ahmad Ababneh	N/A	N/A	10/31/2023	12/31/2023	Target												
GH-07	Distribution Protective Devices	[redacted]	N/A	N/A	11/30/2023	12/31/2023	Target												
GH-08	Surge Arrestor - Removals		N/A	N/A	10/31/2023	12/31/2023	Target												
GH-09	Distribution Line Motor Switch Operator (MSO) - Replacements		N/A	N/A	11/30/2023	12/31/2023	Target												
GH-10	Non-Exempt Expulsion Fuse - Removal		N/A	N/A	11/30/2023	12/31/2023	Target												
GM-01	Asset Inspections - Quality Assurance		N/A	N/A	12/1/2023	12/31/2025	Objective (3 Year)												
GM-02	HFTD/HFRA Open Tag Reduction - Transmission	Ahmad Ababneh	N/A	N/A	12/31/2023	12/31/2023	Target												
GM-03	HFTD/HFRA Open Tag Reduction – Distribution Backlog	Jeff Deal	N/A	N/A	12/31/2023	12/31/2023	Target												
GM-04	HFTD/HFRA Open Tag Reduction - Backlog Elimination - 3 Year Plan	Jeff Deal	N/A	N/A	12/31/2025	12/31/2025	Objective (3 Year)												
GM-05	HFTD/HFRA Open Tag Reduction - Backlog Elimination - 7 Year Plan	Jeff Deal	N/A	N/A		12/31/2029	Objective (10 Year)												
GM-06	EPSS - Down Conductor Detection (DCD)	Dave Canny	N/A	N/A	11/30/2023	12/31/2023	Target												
GM-07	Updates on EPSS Reliability Study	Dave Canny	N/A	N/A	2/15/2024	2/15/2024 (For 2023 data)	Objective (3 Year)												
PS-01	Evaluate enhancements for the PSPS Transmission guidance	Rod Robinson	N/A	N/A	9/1/2023	12/31/2025	Objective (3 Year)												
PS-02	Evaluate incorporation of approved IPW enhancements into the PSPS Distribution guidance	Rod Robinson	N/A	N/A	9/1/2023	12/31/2025	Objective (3 Year)												
PS-03	Evaluate enhancements for the PSPS Transmission guidance	Rod Robinson	N/A	N/A		12/31/2032	Objective (10 Year)												
PS-04	Evaluate incorporation of approved IPW enhancements into the PSPS Distribution guidance	Rod Robinson	N/A	N/A		12/31/2032	Objective (10 Year)												
PS-05	Battery Solutions	[redacted]	N/A	N/A		12/31/2032	Objective (10 Year)												
PS-06	Provide 12,000 new or replacement portable batteries to PG&E customers at risk of PSPS or EPSS		N/A	N/A	12/6/2023	12/31/2023	Target												
PS-07	PSPS Customer Impact Reduction		N/A	N/A	12/15/2023	12/31/2023	Target												
SA-01	AI in Wildfire Cameras	Angie Gibson	N/A	N/A	6/15/2023	6/30/2023	Objective												
SA-02	Line Sensor - Installations	Rod Robinson	N/A	N/A	10/31/2023	12/31/2023	Target												
SA-03	EFD and DFA Reporting	Rod Robinson	N/A	N/A	11/15/2023	12/31/2023	Objective												
SA-04	FPI and IPW Modeling - Revision Evaluation		N/A	N/A	12/1/2023	12/31/2023	Objective												
SA-05	Evaluate FPI and IPW Modeling enhancements in 2023 - 2025	[redacted]	N/A	N/A	12/1/2023	12/31/2025	Objective (3 Year)												
SA-06	Evaluate FPI and IPW Modeling enhancements in 2026 - 2033		N/A	N/A		12/31/2032	Objective (10 Year)												
VM-01	LiDAR Routine Inspections - Transmission	Peter Kenny	6/30/2023	9/30/2023	6/15/2023	12/31/2023	Target (Quarterly)												
VM-02	Pole Clearing Program	Peter Kenny	6/30/2023	9/30/2023	9/30/2023	9/30/2023	Target (Quarterly)												
VM-03	Focused Tree Inspection Program	Peter Kenny	N/A	N/A	12/1/2023	12/31/2025	Objective (3 Year)												
VM-04	Tree removal	Peter Kenny	N/A	N/A	12/1/2023	12/31/2023	Target												
VM-05	Defensible Space Inspections - Distribution Substation	Andrew Williams [redacted]	6/30/2023	N/A	9/15/2023	9/30/2023	Target (Quarterly)												
VM-06	Defensible Space Inspections - Transmission Substation	Andrew Williams [redacted]	6/30/2023	9/30/2023	6/15/2023	7/31/2023	Target (Quarterly)												
VM-07	Defensible Space Inspections - Hydroelectric Substations and Powerhouses	Andrew Williams [redacted]	6/30/2023	N/A	6/15/2023	7/31/2023	Target (Quarterly)												
VM-08	Vegetation Management – Quality Verification	[redacted]	N/A	N/A	12/1/2023	12/31/2023	Target												
VM-09	Constraint Resolution Procedural Guideline	Peter Kenny	N/A	N/A	12/1/2023	12/31/2025	Objective (3 Year)												
VM-10	Inspections in HFTD and HFRA	Peter Kenny	N/A	N/A		12/31/2032	Objective (10 Year)												
VM-11	Enhance and refine Focus Tree inspection program	Peter Kenny	N/A	N/A		12/31/2032	Objective (10 Year)												

GH-01 System Hardening - Distribution

YTD Baseline



Week Ending	1/7	1/14	1/21	1/28	2/4	2/11	2/18	2/25	3/4	3/11	3/18	3/25	4/1	4/8	4/15	4/22	4/29	5/6	5/13	5/20	5/27	6/3	6/10	6/17	6/24	7/1	7/8	7/15	7/22	7/29	8/5	8/12	8/19	8/26	9/2	9/9	9/16	9/23	9/30	10/7	10/14	10/21	10/28	11/4	11/11	11/18	11/25	12/2	12/9	12/16	12/23
OP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
Target YTD				.6	3.5	3.5	3.5	4.7	7.1	8.7	10.3	12.5	15	17.5	20.5	25	32	37.2	46.5	56.6	69	78.2	87	101.8	114.4	127	135.2	148.4	158.7	169.5	179.5	188.8	199.8	216.5	227.7	234.8	252.2	266.6	283	294.9	306.5	317.7	332.8	349.2	362.4	378.3	386	391.1	407	419.8	420
Target Week of				.6	2.9	0	0	1.2	2.4	1.6	1.6	2.2	2.5	2.5	3	4.5	7	5.2	9.3	10.1	12.4	9.2	8.8	14.8	12.6	12.6	8.2	13.2	10.3	10.8	10	9.3	11	16.7	11.2	7.1	17.4	14.4	16.4	11.9	11.6	11.2	15.1	16.4	13.2	15.9	7.7	5.1	15.9	12.8	.2
YTD Actual	-	.8	2.3	4.2	4.6	7	8.3	11.2	11.2	11.62	12.4	12.4	13.6	16.33	19.16	22.24	33.42	39.19	44.15	47.98	57.28	62.15	72.04	75.61	82.93																										

GH-01 System Hardening - Distribution Catch Back Plan

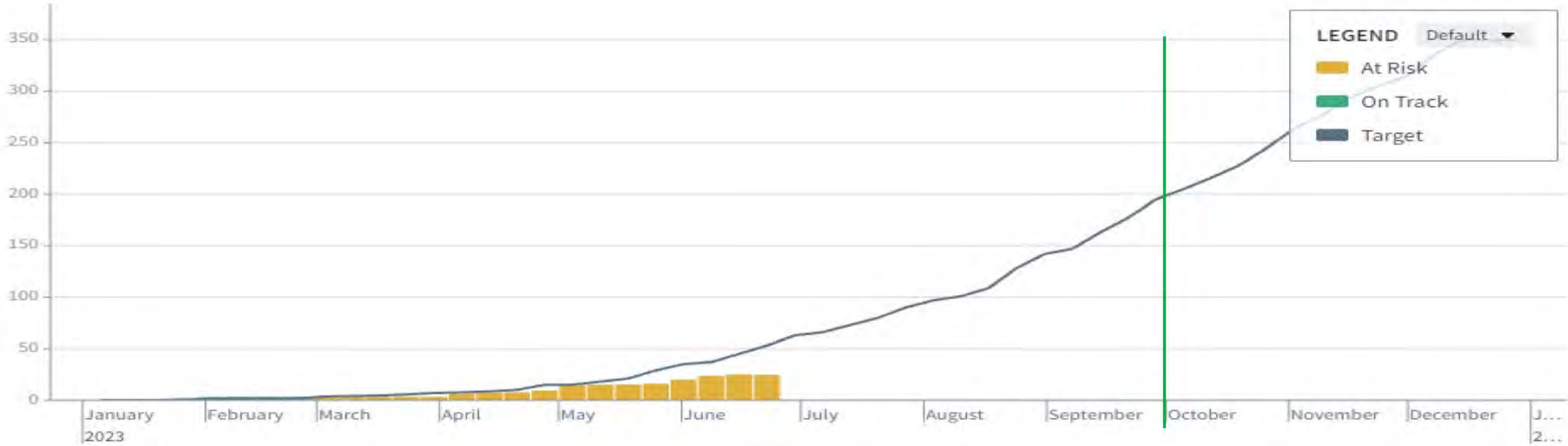
Catch Back Plan Due Date: 9/30/2023 (1 change)
WMP Target Due Date: 12/31/23
Chief Sponsor: Jamie Martin

YTD Actual	YTD Target	Gap to Target
82.93	114.4	31.47

Program	Date Raised	Problem	Point of Cause	Containment Action	Containment Status	Root Cause	Countermeasure Action	Catch Back	Owner	Countermeasure Status
10K Under-grounding	3/6/23	The program is behind target.	The multiple storm/snow events in Q1 delayed work and prevented access to overhead and underground construction sites where work was otherwise ready to execute. Additionally, some underground projects have encountered land acquisition and county permitting delays.	Project Management team is partnering with construction teams to accelerate the completion of remaining OH miles and acceleration of UG civil construction. [As of 6/12, there are 200+ miles in construction, including 70 miles of civil construction complete, with another 83 miles ready for construction.] 100+ additional miles will complete permitting and land and move into construction in the next 4-5 weeks.		2023 Underground work is still largely being executed on a "just in time basis" such that there is little buffer time (or "float") in project schedules to accommodate weather, agency, and customer delays.	Program is accelerating work readiness activities, with over 600 miles out of estimating to be worked in 2023 & 2024 that will result in having 40% - 50% of the 2024 work construction-ready by December 2023	9/30/23 WMP Commitment Date 12/31/23	[redacted] with Construction and Contract Land, Environ-mental & EPWC partners	

GH-04 10K Undergrounding

YTD Baseline



Week Ending	1/7	1/14	1/21	1/28	2/4	2/11	2/18	2/25	3/4	3/11	3/18	3/25	4/1	4/8	4/15	4/22	4/29	5/6	5/13	5/20	5/27	6/3	6/10	6/17	6/24	7/1	7/8	7/15	7/22	7/29	8/5	8/12	8/19	8/26	9/2	9/9	9/16	9/23	9/30	10/7	10/14	10/21	10/28	11/4	11/11	11/18	11/25	12/2	12/9	12/16	12/23
OP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
Target YTD				.6	1.4	1.4	1.4	1.4	3.5	4	4.5	5.5	7	7.5	8.5	10	15	15	18	21	29	35	37	45	53	63	66	73	80	90	97	101	109	128.5	142	147	163	177	195	205	216	228	245	264	277	294	305	314	335	350	350
Target Week of				.6	.8	0	0	0	2.1	.5	.5	1	1.5	.5	1	1.5	5	0	3	3	8	6	2	8	8	10	3	7	7	10	7	4	8	19.5	13.5	5	16	14	18	10	11	12	17	19	13	17	11	9	21	15	0
YTD Actual	-	-	.2	1.5	2.95	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	6.12	6.93	7.58	9.25	14.54	15.06	15.36	16.12	19.78	23.76	25.17	24.44																											

GH-04 10K Undergrounding Catch Back Plan

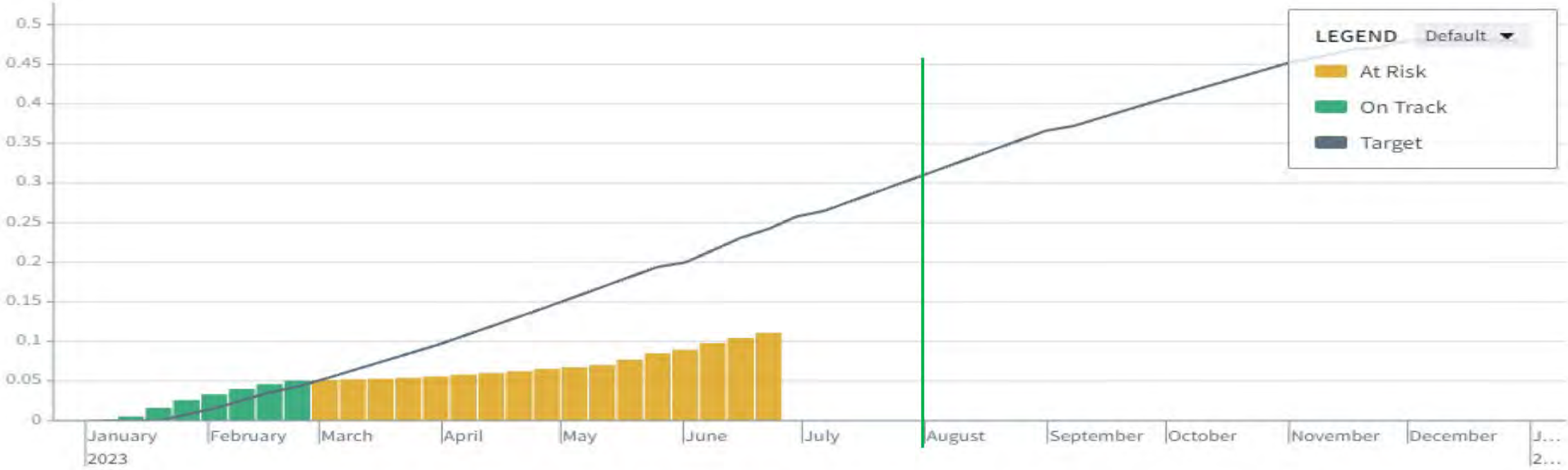
Catch Back Plan Due Date: 9/30/23 (2 changes)
WMP Target Due Date: 12/31/23
Chief Sponsor: Jamie Martin

YTD Actual	YTD Target	Gap to Target
24.44	53	28.56

Program	Date Raised	Problem	Point of Cause	Containment Action	Status	Root Cause	Countermeasure Action	Catch Back	Owner	Status
10K Under-grounding	3/6/23	Program has fallen behind work delivery goals.	The multiple storm/snow events in Q1 delayed work and prevented access to underground construction sites where work was otherwise ready to execute. Additionally, some underground projects have encountered land acquisition and county permitting delays.	Project Management team is partnering with construction teams to accelerate UG civil construction. As of 6/12, there are 185 miles in construction, including 100 miles of civil construction complete, and another 79 miles ready for construction.		2023 Underground work is still largely being executed on a “just in time basis” such that there is little buffer time (or “float”) in project schedules to accommodate weather or other unforeseen delays.	Program is accelerating work readiness activities with over 500 miles out of estimating to be worked in 2023 & 2024 that will result in having 40% - 50% of the 2024 work construction-ready by December 2023	9/30/23 WMP Commitment Date 12/31/23	[redacted] with Construction and Contract partners	
				100+ additional miles will complete permitting and land and move into construction in the next 4-5 weeks.					[redacted] with Land, Environ-mental & EPWC partners	

GM-03 HFTD/HFRA Open Tag Reduction – Distribution Backlog

YTD Baseline



Week Ending	1/7	1/14	1/21	1/28	2/4	2/11	2/18	2/25	3/4	3/11	3/18	3/25	4/1	4/8	4/15	4/22	4/29	5/6	5/13	5/20	5/27	6/3	6/10	6/17	6/24	7/1	7/8	7/15	7/22	7/29	8/5	8/12	8/19	8/26	9/2	9/9	9/16	9/23	9/30	10/7	10/14	10/21	10/28	11/4	11/11	11/18	11/25	12/2	12/9	12/16	12/23
OP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
Target YTD				.008	.015	.026	.036	.043	.053	.063	.074	.084	.095	.107	.119	.131	.143	.156	.169	.181	.194	.2	.215	.231	.242	.257	.265	.277	.29	.302	.315	.328	.34	.353	.366	.372	.382	.393	.403	.413	.424	.434	.444	.454	.46	.468	.471	.479	.48		
Target Week of				.008	.008	.01	.01	.007	.01	.011	.011	.011	.011	.012	.012	.012	.012	.013	.013	.013	.013	.006	.016	.016	.011	.016	.007	.013	.013	.013	.013	.013	.013	.013	.013	.006	.011	.011	.011	.01	.01	.01	.01	.01	.006	.009	.002	.009			
YTD Actual	.001	.005	.016	.026	.033	.04	.046	.051	.051	.052	.053	.054	.056	.058	.06	.06	.06	.07	.07	.08	.09	.09	.1	.1	.11																											

GM-03 HFTD/HFRA Open Tag Reduction – Distribution Backlog Catch Back Plan

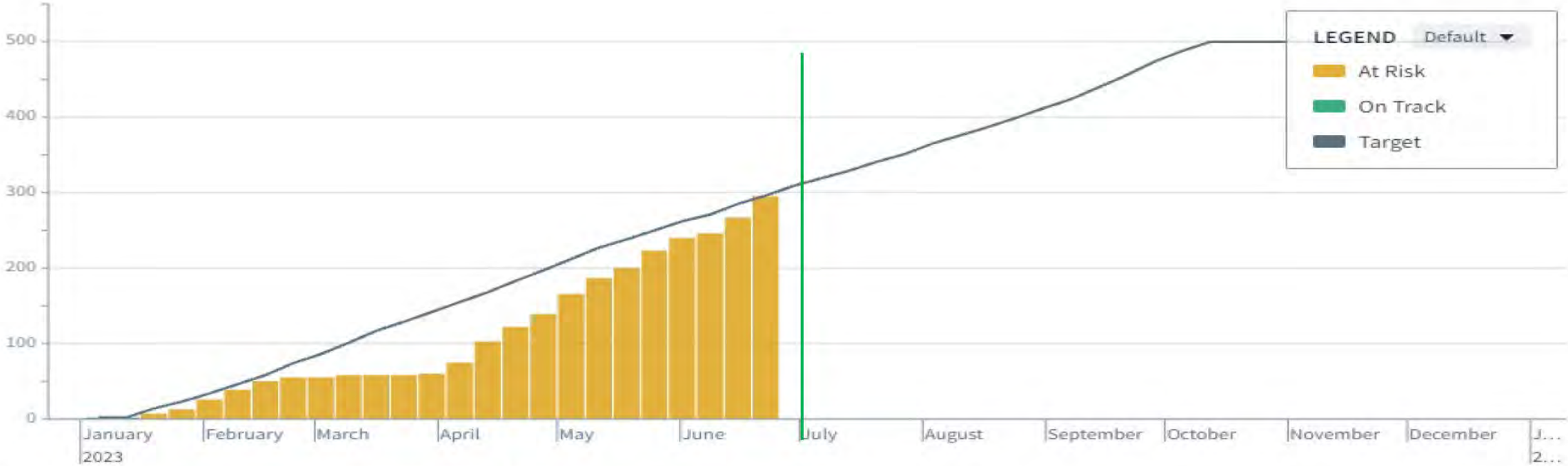
Catch Back Plan Due Date: 7/31/23 - WMP Target Due Date: 12/31/22
Chief Sponsor: Jeff Deal

YTD Actual	YTD Target	Gap to Target
0.11	0.24	0.13

Program	Date Raised	Problem	Point of Cause	Containment Action	Status	Root Cause	Countermeasure Action	Catch Back Due Date	Owner	Status
EC Notifications Risk Reduction	3/7/23	Less v3 wildfire risk points completed in 2023 then planned	Storm response has utilized most of the resources that were planned to execute this work and completed lower risk ready units earlier in the work plan	Reschedule work planned in first two months of year to Q2+		Not enough resources to complete EC notifications and storm work	Reschedule work planned in first two months of year to Q2+	**7/31/23** Number of units to be delivered (as part of the catch back plan): 38.72 Number of units delivered by Target Date: 47.14	[redacted]	

GM-06 EPSS - Down Conductor Detection (DCD)

YTD Baseline



Week Ending	1/7	1/14	1/21	1/28	2/4	2/11	2/18	2/25	3/4	3/11	3/18	3/25	4/1	4/8	4/15	4/22	4/29	5/6	5/13	5/20	5/27	6/3	6/10	6/17	6/24	7/1	7/8	7/15	7/22	7/29	8/5	8/12	8/19	8/26	9/2	9/9	9/16	9/23	9/30	10/7	10/14	10/21	10/28	11/4	11/11	11/18	11/25	12/2	12/9	12/16	12/23
OP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
Target YTD	2	2	14	23	34	46	58	74	86	101	117	129	142	155	168	183	197	212	227	238	250	262	271	285	296	309	319	329	341	351	365	376	387	399	412	424	440	456	474	488	500									0
Target Week of	2.0	0.0	12.0	9.0	11.0	12.0	12.0	16.0	12.0	15.0	16.0	12.0	13.0	13.0	13.0	15.0	14.0	15.0	15.0	11.0	12.0	12.0	9.0	14.0	11.0	13.0	10.0	10.0	12.0	10.0	14.0	11.0	11.0	12.0	13.0	12.0	16.0	16.0	18.0	14.0	12.0								
YTD Actual	2	2	7	13	26	39	50	55	55	58	58	58	60	76	104	122	139	166	187	200	233	240	246	246	295																										

GM-06 EPSS - Down Conductor Detection Catch Back Plan

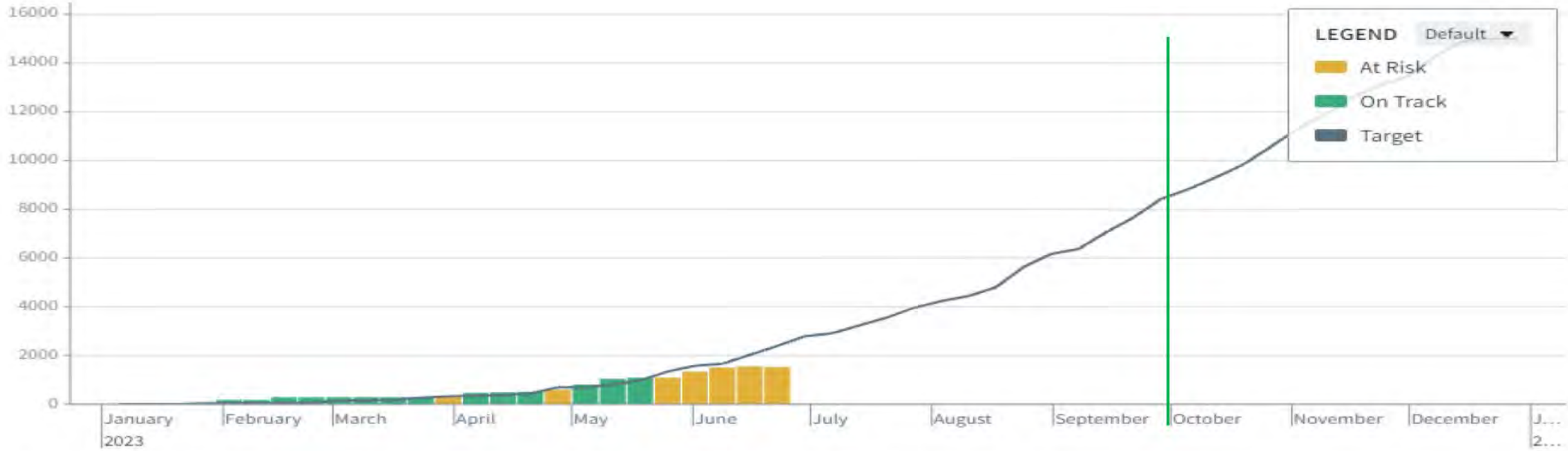
Catch Back Plan Due Date: 7/1/23 (4 changes)
WMP Target Due Date: 11/30/23
Chief Sponsor: Dave Canny

YTD Actual	YTD Target	Gap to Target
295	296	1

Program	Date Raised	Problem	Point of Cause	Containment Action	Status	Root Cause	Countermeasure Action	Target Date	Owner	Status
Down Conductor Detection	2/21/23	DCD install schedule delayed due to ADMS screen build delays, telecom issues and construction schedule constraint.	ADMS delays in building screens necessary for DCD testing, coupled with telecom communication issues, resulted in delays in Los Padres installs, while ADMS and construction schedule constraint are impacting Sierra install schedules.	Expediting DCD install schedule in non-ADMS cutover divisions (Humboldt) and installing DCD on existing/new Beckwith controllers to supplement work delays in ADMS LP/SI divisions.		DCD install cannot be completed while Telecom/SCADA communication issues remain unresolved. Due to Q1 storm impacts, construction resources and schedule availability are more limited.	ADMS/Telecom teams prioritizing issues resolution in LP. Expediting Humboldt and installing DCD on existing/new Beckwith controllers to get back on plan.	7/1/23 Number of units to be delivered (as part of the catch back plan): 254 Number of units delivered by Target Date: 309	[redacted]	

PS-07 PSPS Custom Impact Reduction

YTD Baseline



Week Ending	1/7	1/14	1/21	1/28	2/4	2/11	2/18	2/25	3/4	3/11	3/18	3/25	4/1	4/8	4/15	4/22	4/29	5/6	5/13	5/20	5/27	6/3	6/10	6/17	6/24	7/1	7/8	7/15	7/22	7/29	8/5	8/12	8/19	8/26	9/2	9/9	9/16	9/23	9/30	10/7	10/14	10/21	10/28	11/4	11/11	11/18	11/25	12/2	12/9	12/16	12/23
OP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
Target YTD				24	55.9	55.9	55.9	55.9	139.7	159.7	179.7	265	324.9	344.9	384.8	444.7	689.7	689.7	809.5	974.7	1339	1579	1659	2024	2388	2788	2907	3232	3557	3957	4237	4422	4802	4807	5630	6169	6369	7053	7658	8422	8821	9305	9830	10554	11312	11877	12601	13086	13445	14283	14881	15001
Target Week of				24	31.9				83.8	20	20	85.3	59.9	20	39.9	59.9	245		119.8	165.2	364.8	239.5	79.8	364.8	364.8	392.5	119.8	324.9	324.9	399.9	279.5	205.1	364.8	823.9	539	199.6	684.2	604.3	764	399.2	484.6	524.5	724.1	758.5	564.4	724.1	484.6	359.3	838.4	598.8	118.8
YTD Actual	0	0	8	59.9	172	178	287	287	287	287	287	287	287	462	495	521	587.2	587.2	690	1091	1091	1346	1505	1561	1532																										

PS-07 Customer Impact Reduction Catch Back Plan

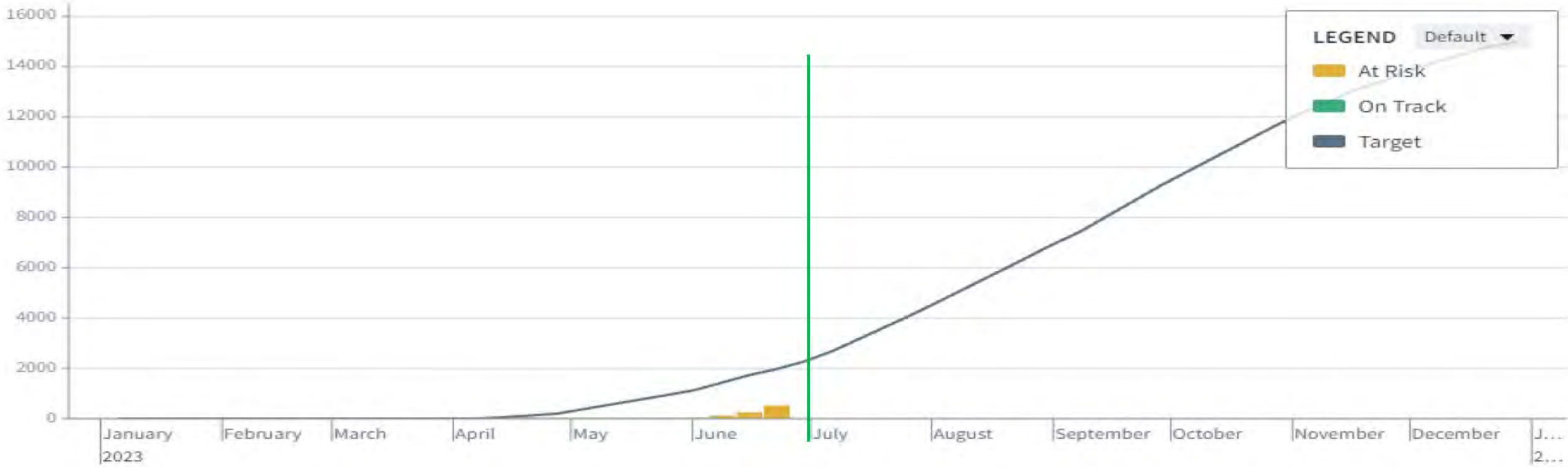
Catch Back Plan Due Date: 9/30/23 (1 change)
WMP Target Due Date: 12/31/23
Chief Sponsor: [redacted]

YTD Actual	YTD Target	Gap to Target
1,532	2,388	856

Program	Date Raised	Problem	Point of Cause	Containment Action	Status	Root Cause	Countermeasure Action	Catch Back Due Date	Owner	Status
PSPS Customer Impact Reduction	5/30/23	Customer impact reduction has fallen behind YTD target of 2,388 customer reduction with a YTD performance of 1,532 customer reduction as of 6/24.	The target for PS-07 is tied to the miles of Undergrounding completed and MSO devices installed. The multiple storm/snow events in Q1 delayed work and prevented access to underground construction sites where work was otherwise ready to execute.	Project Management team is partnering with construction teams to accelerate UG civil construction. As of 6/12, there are 185 miles in construction, including 100 miles civil construction complete, and another 79 miles ready for construction. 100+ additional miles will complete permitting and land and move into construction in the next 4-5 weeks.		2023 Underground work is still largely being executed on a “just in time basis” such that there is little buffer time (or “float”) in project schedules to accommodate weather or other unforeseen delays.	The Undergrounding Program is accelerating work readiness activities with over 500 miles out of estimating to be worked in 2023 and 2024 and that will result in having 40%-50% of the 2024 work construction-ready by December 2023.	9/30/23 Will follow UG catch back plan	[redacted]	

VM-04 Tree Removal

YTD Baseline



Week Ending	1/7	1/14	1/21	1/28	2/4	2/11	2/18	2/25	3/4	3/11	3/18	3/25	4/1	4/8	4/15	4/22	4/29	5/6	5/13	5/20	5/27	6/3	6/10	6/17	6/24	7/1	7/8	7/15	7/22	7/29	8/5	8/12	8/19	8/26	9/2	9/9	9/16	9/23	9/30	10/7	10/14	10/21	10/28	11/4	11/11	11/18	11/25	12/2	12/9	12/16	12/23
OP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
Target YTD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	125	200	385	570	755	940	1,134	1,434	1,734	1,974	2,274	2,674	3,174	3,674	4,174	4,710	5,255	5,800	6,345	6,906	7,406	8,031	8,656	9,281	9,851	10,421	10,991	11,561	12,107	12,531	13,061	13,379	13,866	14,181	14,496	15,000
Target Week of	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	75	75	185	185	185	185	194	300	300	240	300	400	500	500	500	536	545	545	545	561	500	625	625	625	570	570	570	570	546	424	530	318	487	315	315	504
YTD Actual	0	0	0	0	11	24	24	24	24	24	30	30	30	33	33	33	33	33	33	33	33	49	125	187	527																										

VM-04 Tree Removal Inventory Catch Back Plan

Catch Back Plan Due Date: 06/30/23
WMP Target Due Date: 6/30/23
Chief Sponsor: Peter Kenny

YTD Actual	YTD Target	Gap to Target
527	1,974	1,447

Program	Date Raised	Problem	Point of Cause	Containment Action	Status	Root Cause	Countermeasure Action	Catch Back Due Date	Owner	Status
VM-04 Tree Removal Inventory	04/18/23	Current technology field guides require update prior to releasing work for crews to account for new programmatic changes	New Program recently added to the Vegetation Portfolio	Develop revised guidance and implement change communication prior to work start		Robust change management plan is needed prior to introduction of new programs	Develop Process for new programs development	06/30/23 Number of units to be delivered (as part of the catch back plan): 1,974 Number of units delivered by Target Date: 1,974	[redacted]	

2023 Revision Notices

Green = No missed milestones in the Revision Notice response timeline
Red = Missed a milestone in the Revision Notice response timeline
Amber = At risk. Responses are behind in their completion and require escalation
= Complete
Y = Escalations requiring leadership action or Leadership awareness exist, N = No escalations or barriers have been identified

Working Session Scheduled (6/26) | **1st Response Drafted** (due by 6/30) | **RD/Legal/Reg/PMO comments Due** (due by 7/12) | **Final Drafts (RNs and define phases) Due** (due by 7/14) | **Resolve all SLT Comments** (due by 7/19) | **Resolve all MRD comments** (due by 7/24) | **Hard deadline for edits; send to Doc Processing** (due by 7/25)

RN	Details	Chief Sponsor	Due Date	Complexity Level	Status[1]	Escalations[2]
01	RN-PG&E-23-01: Many of PG&E's 3- and 10-year initiative objectives do not meet Energy Safety requirements as outlined in the Technical Guidelines **(Situational Awareness)**	**Angie Gibson** **Rod Robinson** [redacted]	7/14/23	L		
01	RN-PG&E-23-01: Many of PG&E's 3- and 10-year initiative objectives do not meet Energy Safety requirements as outlined in the Technical Guidelines **(Emergency Preparedness)**	**Angie Gibson**	7/14/23	M		
01	RN-PG&E-23-01: Many of PG&E's 3- and 10-year initiative objectives do not meet Energy Safety requirements as outlined in the Technical Guidelines **(Community Outreach)**	[redacted]	7/14/23	L		
01	RN-PG&E-23-01: Many of PG&E's 3- and 10-year initiative objectives do not meet Energy Safety requirements as outlined in the Technical Guidelines **(PSPS)**		7/14/23	L		
02	RN-PG&E-23-02: PG&E does not provide sample sizes and target pass rates for certain asset and vegetation management quality assurance and control programs as required by the Technical Guidelines.	**Mark Quinlan**	7/14/23	L		
03	RN-PG&E-23-03: PG&E has not adequately demonstrated workforce planning and resource allocation to address both EPSS risk and wildfire risk	[redacted] **Dave Canny**	7/14/23	M		
04	RN-PG&E-23-04: PG&E does not demonstrate how it will address its growing backlog of asset repairs	**Martin Wyspianski**	7/14/23	H		
05	RN-PG&E-23-05: PG&E's undergrounding plan may leave wildfire risk unaddressed in highest risk areas.	**Jamie Martin**	7/14/23	H		
06	RN-PG&E-23-06: PG&E does not provide targets for seven of its vegetation management inspection programs.	[redacted]	7/14/23	M		
07	RN-PG&E-23-07: PG&E does not adequately address its risk from hazard trees.	**Peter Kenny**	7/14/23	H		
08	RN-PG&E-23-08: PG&E's PSPS decision-making process does not accurately account for EPSS enabled circuits, which could potentially lead to more PSPS events than needed	[redacted]	7/14/23	L		

WMP Data Requests

2023 WMP Discovery Questions

Due Today	Due 1 Business Day	Due 2 Business Days	Due Later	Complete	Total
0	0	0	0	400	400

56 Total Requests | 400 Total Questions | 1065 Sub-Parts

WMP Data Requests

2023 WMP Discovery: By Requestor

REQUESTOR	Data Requests	Questions	Sub-Parts	% of Total Questions	Questions Requiring Extensions
OEIS	9	71	207	18%	10
CPUC - SPD	8	32	40	8%	2
CalPA	19	201	693	50%	20
TURN	13	50	113	13%	7
MGRA	6	41	9	10%	5
GPI	1	5	3	1%	0
TOTAL	56	400	1065	100%	44

WMP Data Requests

2023 WMP Discovery:
Questions & Sub-Parts per Category by Requestor

	Total		OEIS		CPUC - SPD (Safety Policy Division)		CalPA		GPI		MGRA		TURN	
WMP Section	**Questions**	**Sub-Parts**	**Questions**	**Sub-Parts**	**Questions**	**Sub-Parts**	**Questions**	**Sub-Parts**	**Questions**	**Sub-Parts**	**Questions**	**Sub-Parts**	**Questions**	**Sub-Parts**
Grid Design and System Hardening	95	249	7	12	14	24	52	179	0	0	0	0	22	34
Vegetation Management and Inspections	74	236	12	47	0	0	52	183	5	3	0	0	5	3
Risk Methodology and Assessment	43	62	3	8	1	2	7	23	0	0	28	9	4	20
Areas for Continued Improvement	37	118	16	53	5	10	8	21	0	0	0	0	8	34
Grid Operations and Procedures	35	70	1	5	1	0	23	65	0	0	10	0	0	0
Public Safety Power Shutoff	18	51	3	5	1	2	13	40	0	0	0	0	1	4
Wildfire Mitigation Strategy Development	17	58	5	11	0	0	8	42	0	0	0	0	4	5
Grid Design, Operations, and Maintenance	12	30	1	3	1	1	7	22	0	0	0	0	3	4
Emergency Preparedness	11	24	9	18	1	0	1	6	0	0	0	0	0	0
Open Work Orders	8	25	2	9	0	0	6	16	0	0	0	0	0	0
N/A	8	37	2	6	0	0	4	25	0	0	0	0	2	6
Other	42	105	10	30	8	1	20	71	0	0	3	0	1	3
Grand Total	**400**	**1065**	**71**	**207**	**32**	**40**	**201**	**693**	**5**	**3**	**41**	**9**	**50**	**113**

WMP Data Requests

2023 WMP Discovery:
Office of Energy Infrastructure Safety (OEIS)

WMP Category	# of Questions	# of Sub-Parts
Areas for Continued Improvement	**16**	**53**
ACI PG&E-22--08 Better Application of Specific Lessons Learned from Utility-Caused Fires	2	4
ACI PG&E-22--09 Evaluation of Model Reprioritization and Fire Rebuild in High-Risk Areas	1	3
ACI PG&E-22--10 Justification of Weather Station Network Density	1	1
ACI PG&E-22--20 Asset Inspection Drone Program Pilot	1	1
ACI PG&E-22--21 Asset Inspections Quality Assurance and Quality Control ACI PG&E-22--08 Better Application of Specific Lessons Learned from Utility-Caused Fires	2	6
ACI PG&E-22-24 – Progression of Vegetation Management Maturity	1	8
ACI PG&E-22-32 – Updates on EPSS Reliability Study	2	14
ACI PG&E-22-34 – Revise Process of Prioritizing Wildfire Mitigations	2	5
ACI PG&E-22-28 – Progression of Effectiveness of Enhanced Clearances Joint Study	1	0
ACI PG&E-22-31 – PSPS Wind Threshold Change Evaluations	2	3
ACI PG&E-22-33 – Progress on Filling Asset Inventory Data Gaps	1	8

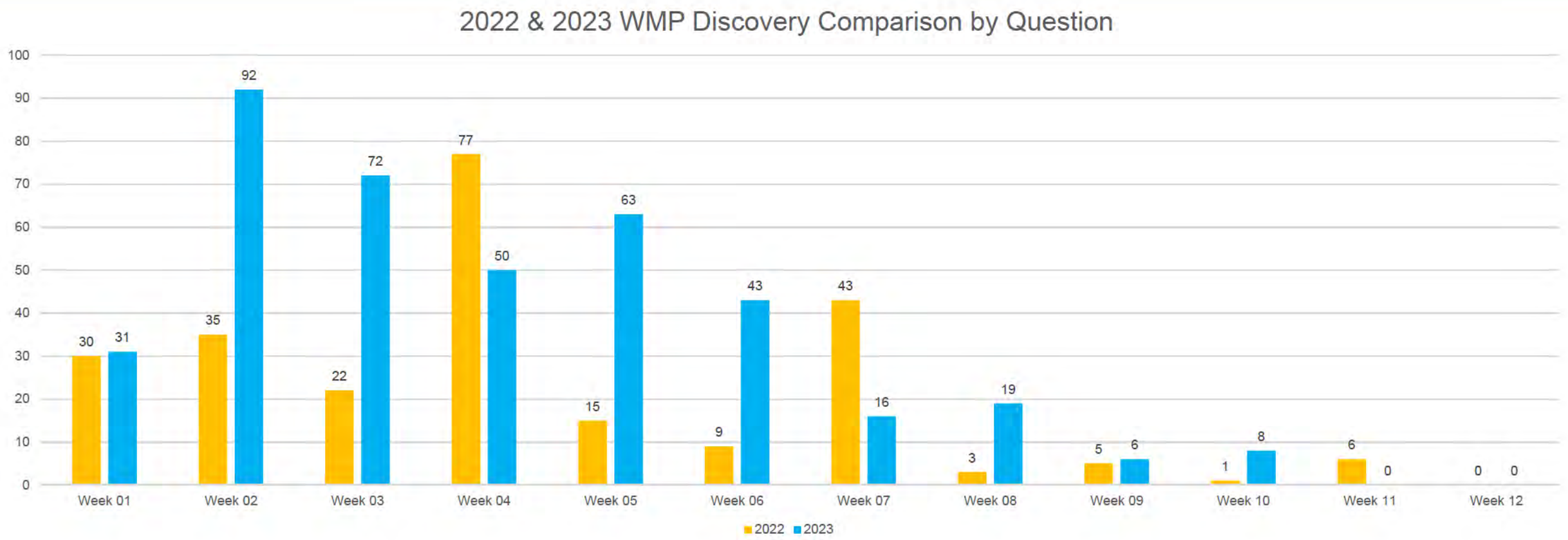
WMP Category (cont.)	# of Questions	# of Sub-Parts
Vegetation Management and Inspections	**12**	**47**
Clearance	1	2
Discontinued Programs	1	2
Focused Tree Inspections	4	17
High-Risk Species	1	3
N/A	2	10
Tree Removal Inventory	1	2
Vegetation Management Inspections	1	3
Wood and Slash Management	1	8
Emergency Preparedness	**9**	**18**
Customer Support in Wildfire and PSPS Emergencies	3	8
N/A	1	2
Objectives	2	4
Overview	1	0
Public Emergency Communication Strategy	1	0
Personnel Training	1	4

WMP Data Requests

2023 WMP Discovery:
CPUC - SPD (Safety Policy Division)

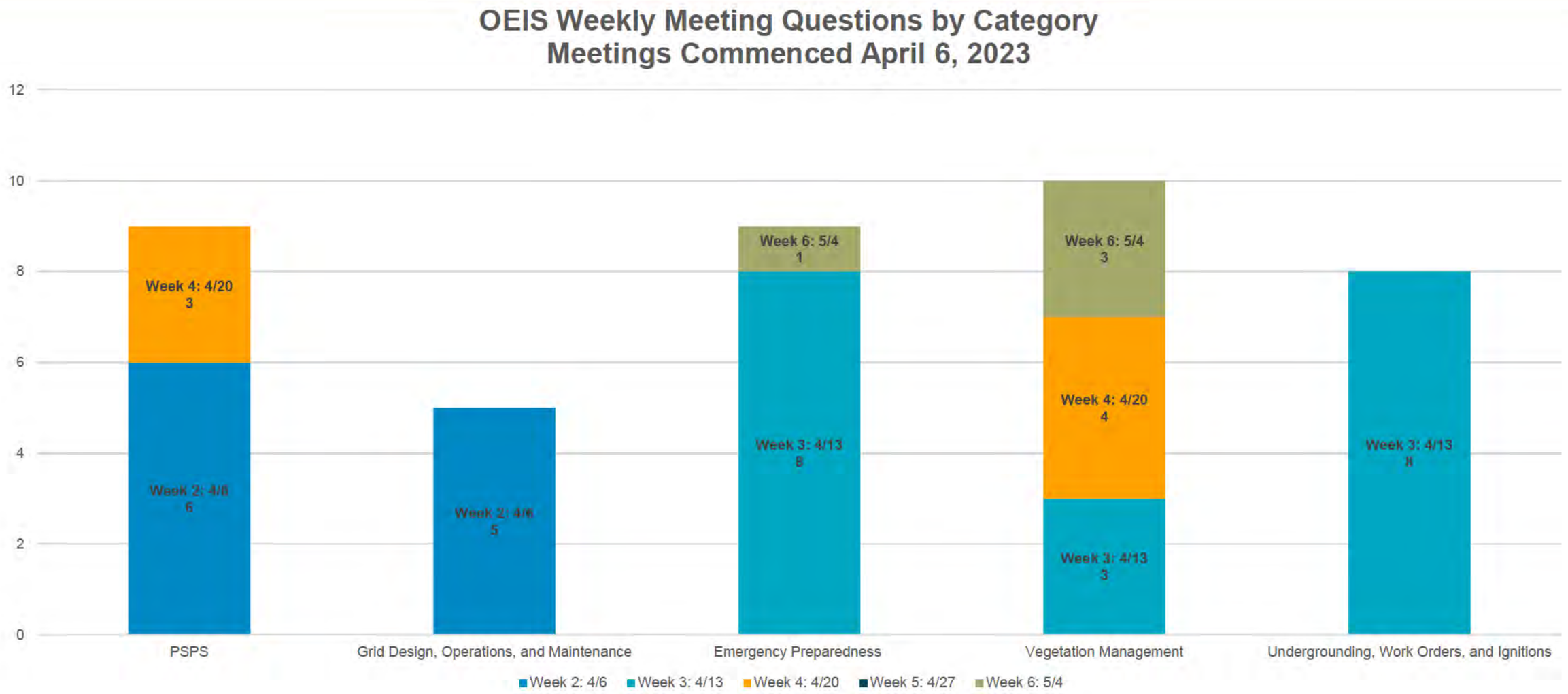
WMP Category	# of Questions	# of Sub-Parts
Grid Design and System Hardening	**14**	**24**
Covered Conductor Installation – Distribution	2	0
Undergrounding of Electric Lines and/or Equipment – Distribution	4	13
Undergrounding of Electric Lines and/or Equipment – Distribution	8	11
Areas for Continued Improvement	**5**	**10**
ACI PG&E-22-06 – Addressing Increase in Risk Events	3	6
ACI PG&E-22-16 – Progress and Updates on Undergrounding and Risk Prioritization	2	4
Situational Awareness and Forecasting	**4**	**0**
Fire Potential Index	4	0

WMP Data Requests



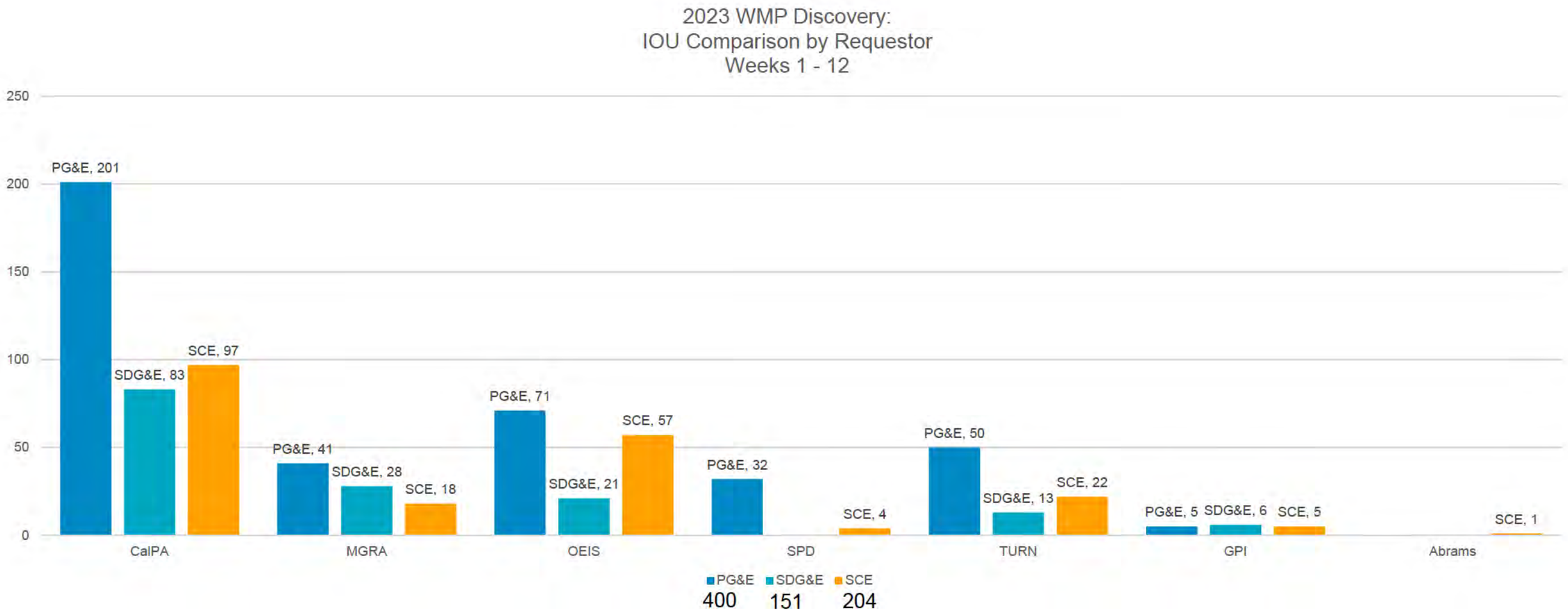
Totals: 2022 – 246 | 2023 – 400
(63% increase)

WMP Data Requests

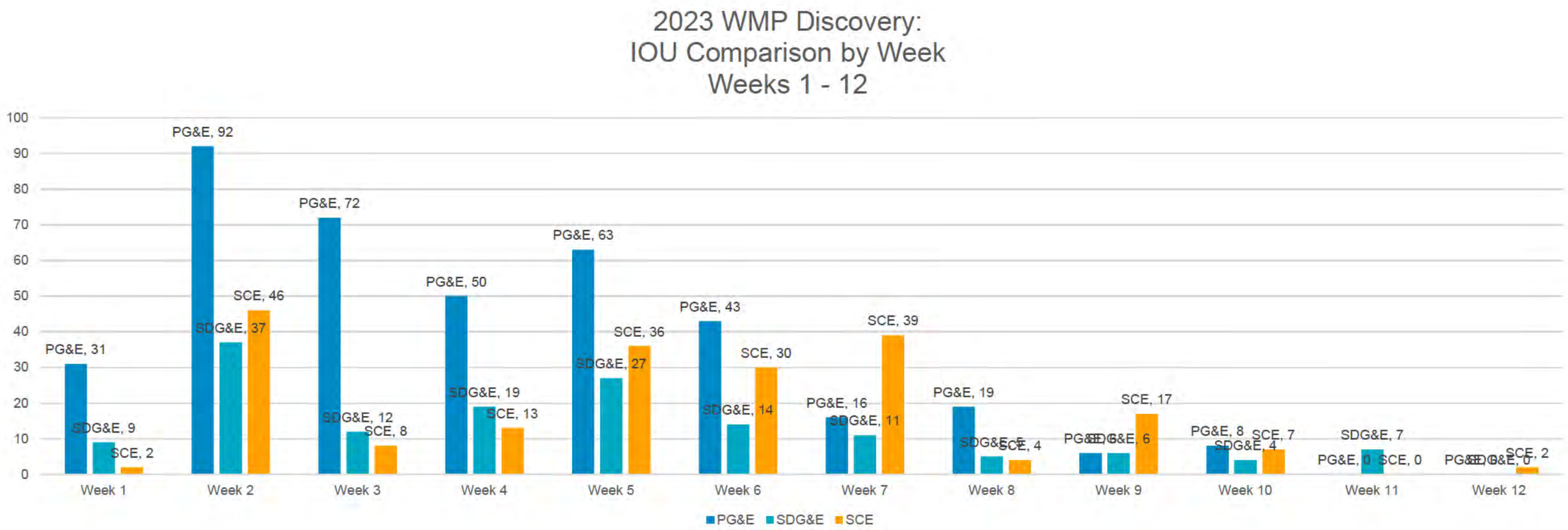


41 Total Questions

WMP Data Requests



WMP Data Requests



400 151 204

WMP Data Requests

2023 WMP Discovery:
IOU Comparison – Top 3 Categories: Weeks 1 - 10

	WMP Category	Questions
PG&E	Grid Design and System Hardening	95
	Vegetation Management and Inspections	74
	Risk Methodology and Assessment	43
SCE	Grid Design and System Hardening	83
	Vegetation Management and Inspection	39
	Risk Methodology and Assessment	24
SDG&E	Vegetation Management and Inspection	35
	Ignition Model	5
	Quality Assurance and Quality Control	3

WMP Data Requests

2023 WMP Discovery: Top 3 Areas of Focus – OEIS
Weeks 1 - 10

PG&E	# of Questions	# of Sub-Parts
Areas for Continued Improvement	**16**	**53**
ACI PG&E-22--08 Better Application of Specific Lessons Learned from Utility-Caused Fires	2	4
ACI PG&E-22--09 Evaluation of Model Reprioritization and Fire Rebuild in High-Risk Areas	1	3
ACI PG&E-22--10 Justification of Weather Station Network Density	1	1
ACI PG&E-22--20 Asset Inspection Drone Program Pilot	1	1
ACI PG&E-22--21 Asset Inspections Quality Assurance and Quality Control ACI PG&E-22--08 Better Application of Specific Lessons Learned from Utility-Caused Fires	2	6
ACI PG&E-22-24 – Progression of Vegetation Management Maturity	1	8
ACI PG&E-22-32 – Updates on EPSS Reliability Study	2	14
ACI PG&E-22-34 – Revise Process of Prioritizing Wildfire Mitigations	2	5
ACI PG&E-22-28 – Progression of Effectiveness of Enhanced Clearances Joint Study	1	0
ACI PG&E-22-31 – PSPS Wind Threshold Change Evaluations	2	3
ACI PG&E-22-33 – Progress on Filling Asset Inventory Data Gaps	1	8
Vegetation Management and Inspections	**12**	**47**
Clearance	1	2
Discontinued Programs	1	2
Focused Tree Inspections	4	17
High-Risk Species	1	3
N/A	2	10
Tree Removal Inventory	1	2
Vegetation Management Inspections	1	3
Wood and Slash Management	1	8
Emergency Preparedness	**9**	**18**
Customer Support in Wildfire and PSPS Emergencies	3	8
N/A	1	2
Objectives	2	4
Overview	1	0
Public Emergency Communication Strategy	1	0
Personnel Training	1	4

SCE	# of Questions
Grid Design and System Hardening	**15**
Asset Inspections (8.1.3)	6
Grid Design and System Hardening (8.1.2)	9
Risk Methodology and Assessment	**12**
Multiple	3
Risk Analysis Framework (6.2)	1
Risk and Risk Component Identification (6.2.1)	2
Risk Overview (6.1.1)	1
Summary of Risk Models (6.1.2)	3
Top Risk-Contributing Circuits/Segments/Spans (6.4.2)	2
Emergency Preparedness	**9**
Customer Support in Wildfire and PSPS Emergencies (8.4.6)	1
Emergency Preparedness Plan (8.4.2)	6
External Collaboration and Coordination (8.4.3)	1
Emergency Preparedness Overview (8.4.1)	1

SDG&E	# of Questions
Risk Methodology and Assessment	**2**
6.1.2 Summary of Risk Models	2
Environmental Monitoring Systems	**2**
8.3.2.4.1	1
8.3.2.4.2	1
Emergency Preparedness Staffing and Qualifications	**1**
N/A	1

2023 WMP Discovery: Top 3 Areas of Focus – CPUC - SPD
Weeks 1 - 10

PG&E	# of Questions	# of Sub-Parts
Grid Design and System Hardening	**13**	**19**
Covered Conductor Installation – Distribution	2	0
Undergrounding of Electric Lines and/or Equipment – Distribution	3	8
Undergrounding of Electric Lines and/or Equipment – Distribution	8	11
Situational Awareness and Forecasting	**4**	**0**
Fire Potential Index	4	0
Areas for Continued Improvement	**4**	**10**
ACI PG&E-22-06 – Addressing Increase in Risk Events	2	6
ACI PG&E-22-16 – Progress and Updates on Undergrounding and Risk Prioritization	2	4

SCE	# of Questions
Administrative	**1**
N/A	1

SDG&E	# of Questions

COA

2023-2025 WMP Commitments

Timeline Category	Not Started	Delayed	In Progress	On Track	At Risk	Off Track	Complete	Total
2023 Commitments	25	0	3	4	2	2	0	36
3 Year Objectives	15	0	0	0	0	0	0	15
Total	40	0	3	4	2	2	0	**51**

COA WMP Target Validation 1 of 3

Progress		Status	Catch Back Plan
	YTD	On Track	As of June 27th, 2023, the validation status is “On Track” with **8** commitment(s) validated YTD against a target of **8.** Four “On Track”, two “At Risk Catch Back Plan”, two “Off Track Pending Catch Back Plan” and three “In Progress” validations.
Completed	8		
Planned	8		

Validated

Number	Section	Target	Command Center Status	COA Status	Comment
AI-06	8.1.3.1.4	Perform Transmission Infrared Inspections	On Track	At Risk Catch Back Plan	The unit completion and records of evidence were incomplete and were also found to contain errors. Additionally, COA believes improvement opportunities exist to advance the overall program maturity, key focus areas include job aids, training, and Quality Control that will support TVAC records.
AI-08	8.1.3.3.1	Supplemental Inspections - Substation Distribution	Complete	On Track	Date of Inpsection on Execution Tracker does not match Inpsection date. Pronto forms did not reflect CIRT Review. Anomalies missing LC notification number. Electronic files missing for IR Inspections. Missing F80 Forms.
AI-09	8.1.3.3.1	Supplemental Inspections - Substation Transmission	Complete	On Track	Date of Inpsection on Execution Tracker does not match Inpsection date. Pronto forms did not reflect CIRT Review. Required photos missing . Anomalies missing LC notification number.
AI-10	8.1.3.3.1	Supplemental Inspections - Hydroelectric Substations and Powerhouses	Complete	On Track	Date of Inspection on Execution Tracker does not match Inspection date. Pronto forms did not reflect CIRT Review. Required photos missing Anomalies missing LC notification number.
GM-02	8.1.7.1	HFTD-HFRA Open Tag Reduction - Transmission	On Track	Off Track Pending Catch Back Plan	
GM-03	8.1.7.2	HFTD-HFRA Open Tag Reduction – Distribution Backlog	At Risk	Off Track Pending Catch Back Plan	
SA-01	8.3.2.3	AI in Wildfire Cameras	On Track	On Track	
VM-01	8.2.2.1.1	LiDAR Data Collection - Transmission	Complete	At Risk Catch Back Plan	Execution plan and Approved EDRS plan do not match. Execution plan miles did not match work plan miles. Transmission Circuit voltage not on work plan . Outdated bulletin are not in compliance with GOV-2001P.

COA WMP Target Validation 2 of 3

In-Progress

Number	Section	Target	Command Center Status	COA Status	Comment
AI-02	8.1.3.1.1	Detailed Inspection Transmission – Ground	On Track	In Progress	Moved out due to Tag validation
AI-04	8.1.3.1.2	Detailed Inspection Transmission – Aerial	On Track	In Progress	Moved out due to Tag validation
AI-05	8.1.3.1.3	Detailed Inspection Transmission – Climbing	Complete	In Progress	Moved out due to Tag validation

Upcoming Validations

Number	Section	Target	Command Center Status	COA Status	Comment
VM-06	8.2.2.3.1	Defensible Space Inspections - Transmission Substation	On Track	Up-coming	
VM-07	8.2.2.3.1	Defensible Space Inspections - Hydroelectric Substations and Powerhouses	Complete	Up-coming	
VM-05	8.2.2.3.1	Defensible Space Inspections - Distribution Substation	Complete	Up-coming	
GH-05	8.1.2.5.1	System Hardening – Transmission	On Track	Up-coming	
AI-07	8.1.3.2.1	Detailed Ground Inspections – Distribution	On Track	Up-coming	

COA WMP Target Validation 3 of 3

Catch Back Plan Issues Identified, Open and Resolved

Number	Section	Target	Resolved	Open	Total
AI-06	8.1.3.1.4	Perform Transmission Infrared Inspections	7	1	8
AI-08	8.1.3.3.1	Supplemental Inspections - Substation Distribution	4		4
AI-09	8.1.3.3.1	Supplemental Inspections - Substation Transmission	3		3
AI-10	8.1.3.3.1	Supplemental Inspections - Hydroelectric Substations and Powerhouses	3		3
VM-01	8.2.2.1.1	LiDAR Data Collection - Transmission	1	2	3
Total			**18**	**3**	**21**

Note: GM-02 & GM-03 Catch Back Plans are In Progress

AI-06 Perform Transmission Infrared Inspection

Program	Date Raised	Problem	Point of Cause	Containment Action	Status	Root Cause	Countermeasure Action	Target Date	Owner	Status
Program Name	*Date issue identified*	*Description of the issue; What is the deviation between what should happen vs what actually happened?*	*Where the failure behind the problem occurred?*	*Immediate action to fix Point of Cause*		*Causation behind the Point of Cause*	*Action to fix the root cause; Countermeasure not populated until root cause verified*	*Date for completion of Countermeasure*	*Name*	
Infrared Inspection	4/4/23	**Target Validation**: Work Plan: Per the Master List there are (3050) T3 and (649) T2 they are due for inspection per the procedure. The workplan includes 543 additional circuit miles that aren't due. If not correctly flagged as required there is potential to meet the WMP commitment and still end up with missed inspections that are due.	The entire circuit is inspected therefore adds additional HFTD miles.	Asset Strategy should flag the ETL's that are due in 2023 in the workplan to ensure that execution clearly understands which units are due and avoids a miss that could lead to a self report.	Complete	Creates additional miles to be inspected.	ETLs required for compliance are indicated in Column P "Reason for Inclusion" in the '2023 IR Scope' tab of the workplan. Specifically, ETLs indicated as "High Consequence Line" or "Guest/Host of scoped line" are still part of the workplan, but not specifically part of the compliance requirement.	04/07/2023	[redacted]	Complete
Infrared Inspection	4/4/23	**Procedural Adherence**: COA found 1,158 of the 1937 circuit miles to be less than 40%. Per procedural guidance TD-1001P-14 provide "considerations" that supported these flights represent peak loading. Execution team shared that they have data to provide related to loading and timing selection.	Did not schedule time to review our 2023 IR Inspection Tracker with our partners.	Provide considerations as described in TD-1001P-14 Infrared Inspection Procedure that supported these lines at peak load.	Complete	Do not have a formal process to share historical loading data or decisions on when to time inspections.	Provide considerations as described in TD-1001P-14 Infrared Inspection Procedure that supported these lines at peak load. Add additional columns to tracker to help outline that we considered loading, timing and other factors prior to inspection.	05/01/2023		Complete

AI-06 Perform Transmission Infrared Inspection

Program	Date Raised	Problem	Point of Cause	Containment Action	Status	Root Cause	Countermeasure Action	Target Date	Owner	Status
Program Name	*Date issue identified*	*Description of the issue; What is the deviation between what should happen vs what actually happened?*	*Where the failure behind the problem occurred?*	*Immediate action to fix Point of Cause*		*Causation behind the Point of Cause*	*Action to fix the root cause; Countermeasure not populated until root cause verified*	*Date for completion of Countermeasure*	*Name*	
Infrared Inspection	4/4/23	**Record of Evidence**: TVAC Records: 2/26 IR Data Sheets uploaded to SAP reflected miles that did not match the miles reported as complete in the execution tracker.	QC Process on documentation.	Review all IR Data Sheets and confirm the correct circuit miles are reflected.	Complete	Lack of QC process.	Ensure procedure/job aid clearly defines process to capture mileage flown and reviewed as part of QC.	05/01/2023	[redacted]	Complete
Infrared Inspection	4/4/23	**Record of Evidence**: 2/26 sampled reported as complete in the execution tracker did not have data sheets uploaded in SAP and in working with the team were found to be marked complete in error.	Process.	Validate all lines currently reported as complete are correct. Consider adding a column to execution tracker to reflect completed for record of evidence review. Only report miles that reflect completed in both columns.	Complete	Do not have clearly defined process map for documentation flow.	Develop Process Map and Job Aid for IRS and clerical function to include validation.	05/01/2023		Complete
Infrared Inspection	4/4/23	**Record of Evidence**: 4 /26 sampled did not have required IR data sheets uploaded in SAP	QC Process on documentation.	Ensure for all miles reported completed in the execution file have IR data sheets uploaded in SAP.	Complete	QC process not clearly outlined and fully implemented.	Develop Process Map and Job Aid for IRS and clerical function to include validation.	05/01/2023		Complete
Infrared Inspection	4/4/23	**Record of Evidence: TVAC Records**: Procedural Adherece: Incomplete IR Data Sheet: Disk and Photo number was not found on any of the samples. This is a requirement by TD-1001P-14 Infrared Inspection Procedure Rev 3 (Team reports this task is not performed)	Update by TD-1001P-14 Infrared Inspection Procedure Rev 3 now that we moved to digitally storing data.	Start discussions with Standards to clarify procedure requirements in sections 3.4. and Form 15.	Complete	company has moved to from storing data on physical storage devises to housing data on shared servers. Therefore, disk & photo number is now obsolete.	Update TD-1001P-14 Infrared Inspection Procedure Rev 3 Form 15 to reflect current process.	12/31/2023		In Progress

AI-06 Perform Transmission Infrared Inspection

Program	Date Raised	Problem	Point of Cause	Containment Action	Status	Root Cause	Countermeasure Action	Target Date	Owner	Status
Program Name	*Date issue identified*	*Description of the issue; What is the deviation between what should happen vs what actually happened?*	*Where the failure behind the problem occurred?*	*Immediate action to fix Point of Cause*		*Causation behind the Point of Cause*	*Action to fix the root cause; Countermeasure not populated until root cause verified*	*Date for completion of Countermeasure*	*Name*	
Infrared Inspection	4/4/23	**Record of Evidence:** GEO Spatial documentation was not Provided for all IR inspections. COA reviewed two that were provided. All Geo Spatial documentation is required per define phase	GEO spatial data isn't easily accessible to those outside of the process	System Inspections to identify the best location/method to provide COA/IA/PMO access to the files.	Complete	System Inspections not fully understanding deliverable requirements therefore not having a good method to house and share data.	System Inspections to identify the best location/method to provide COA/IA/PMO access to the files.	05/01/2023	[redacted]	Complete
Infrared Inspection	4/4/23	**Record of Evidence**: Requirement to provide Weekly Report with anomalies and LC notifications. Report contains 4 anomalies but only 1 has an LC notification number. Appears to be a process delay in reviewing and generating LC's, as anomalies reflect found in February.	Lack of Process	Review 3 anomalies and create notification numbers.	Complete	System inspections reporting on all anomalies found and should only report on anomalies that have been verified with notifications. Lack of formal process around reporting anomalies.	Ensure a process is identified and documented to ensure notifications are created in a timely manner (define and monitor an acceptable timeline).	05/01/2023		Complete

VM-01 LiDAR Data Collection – Transmission

Program	Date Raised	Problem	Point of Cause	Containment Action	Containment Action Date	Status	Root Cause	Countermeasure Action	Target Date	Owner	Status
Program Name	*Date issue identified*	*Description of the issue; What is the deviation between what should happen vs what actually happened?*	*Where the failure behind the problem occurred?*	*Immediate action to fix Point of Cause*	*Immediate action to fix Point of Cause*		*Causation behind the Point of Cause*	*Action to fix the root cause; Countermeasure not populated until root cause verified*	*Date for completion of Countermeasure*	*Name*	
LiDAR Data Collection – Transmission	5/8/23	**Work Plan Validation:** There is not a standard or procedure for LiDAR data collection. • A Bulletin was found TD-7103B-003 dated 10/15/2018 however, states “This is a time-limited document expected to extend into late 2018”. It did not include LiDAR data collection cycles or the work planning process additionally. This Bulletin does not meet the guidance document GOV-2001P that requires incorporation of bulletin in procedure within 1 year (Section 4.1.1.2a)	Utility Procedure TD-7103-10 details standard procedure for LiDAR data collection. It was published 4/6/23 and becomes effective 6/6/23.	Refer to Utility Procedure TD-7103-10	Back dated to 4/6/23	Completed	Timing of the publication of Utility Procedure TD-7103-10 lagged reporting window.	Utility Bulletin TD-7103B-03 is obsolete and was replaced by TD-7103-10. Additionally, Utility Procedure TD-7103P-01 will be updated to reference Utility Procedure TD-7103-10 which incorporates the procedures from cancelled Bulletin TD-7103B-003	Utility ProcedureTD-7103B-003 was published on 4/6/23 and becomes effective 6/6/23. Utility Procedure TD-7103P-01 target to be approved and published by 6/30/2023		In-Progress
LiDAR Data Collection – Transmission	5/8/23	**Work Plan Validation:** Transmission circuit voltage not provided COA was unable to verify	The VM-01 Template does not have a column for circuit voltage.	Update form to VM-01 Template voltage and circuit ETL to avoid confusion in reporting. Column B has been added for circuit voltage. In addition, the ETL circuit IDs have been added in Column C.	Completed 5/15/23	Completed	Without column for circuit voltage, requestee was unaware these data were requested. This created confusion with circuits with the same name with different voltages with multiple deliveries.	Include additional Identification descriptors such as circuit ETL in reporting documents.	Completed 5/15/23		Completed

VM-01 LiDAR Data Collection – Transmission

Program	Date Raised	Problem	Point of Cause	Containment Action	Containment Action Date	Status	Root Cause	Countermeasure Action	Target Date	Owner	Status
Program Name	*Date issue identified*	*Description of the issue; What is the deviation between what should happen vs what actually happened?*	*Where the failure behind the problem occurred?*	*Immediate action to fix Point of Cause*	*Immediate action to fix Point of Cause*		*Causation behind the Point of Cause*	*Action to fix the root cause; Countermeasure not populated until root cause verified*	*Date for completion of Countermeasure*	*Name*	
LiDAR Data Collection – Transmission	5/8/23	**Execution:** **Execution Plan not aligned with Work plan:** • COA found 6 circuits that were not included in work plan. Additional scope must be justified and documented and approved in EDRS. • COA found 5 Circuits not found on the Execution Plan that were in the work plan • Execution Plan Miles did not match work plan miles.	• The 6 circuits that 'were not included in work plan' were include in our VM2023 execution plan. **It is unclear why these were not submitted in the work plan**. • Independent QC review and attestation records failed to include 5 circuits listed below, and these omissions propagated in our records. They are now included in **Execution Plan work plan**. • The updated work plan contained 17,784 planned miles and completed a final of 17,817 miles.	Review QC records and attestation process to make sure all circuits are reported correctly for 2023, and records are complete. TVM GIS records are complete and accurate.	5/15/23		Circuit omissions were caused by human error. Mileage differences are caused by real and regular asset changes that occur in PG&E's transmission system (e.g., reconductoring, tower/pole replacements, etc.)	Create internal review process and job aid for audit & approval for Execution Plan work plan circuits & mileages as reported in attestations	6/30/23		

8.2.2.1 VM LiDAR Inspection Transmission (VM-01)							2023 Units (Circuit Mile)							
5 Added Circuit Records the were omitted from Execution work plan	kV	ETL	NERC	Lat	Long	Scheduled Completion date (Per unit completion definition)	Planned Total Units	Final Total Miles	Tier 3 HFTD	Tier 2 HFTD	Zone 1 HFTD	HFRA Non-HFTD	Non-HFTD Tier 2/3 Buffer	Non-HFTD / Non- HFRA
CIC TAP	60	ETL.6971	N			3/3/2023	0.114	0.114						0.114
GRIZZLY TAP (SVP)	115	ETL.1231	N			3/3/2023	0.164	0.164	0.063	0.101		0.000		0.000
LAWRENCE LIVERMORE LAB #2 TAP	115	ETL.3981	N			2/6/2023	6.363	6.363						6.363
PITTSBURG #1 TAP	60	ETL.6551	N			3/3/3023	1.159	1.159						1.159
SAN JOAQUIN COGEN TAP	115	ETL.4012	N			3/3/3023	0.037	0.037						0.037

Wildfire OII

Wildfire OII – Execution

On Track	At Risk	Off Track	Complete	Total
14	1	0	5	20

Note: SEI #5 has made a good faith effort to meet the external due date of 7/1/2023, it's recommended to begin closure process in Q4 2023

Wildfire OII – Execution

SEI #	Shareholder-Funded System Enhancement Initiatives (SEI)	Status	Chief Sponsor	Compliance Date	Forecast Completion Date	Actual Completion Date
1	Tree Crew Training and Certificate Program	On Track	[redacted]	7/1/2023	7/1/2023	
2	Pre-Inspector Training and Certificate Program	On Track		7/1/2023	7/1/2023	
3	Vegetation Management Oversight Pilot	Complete		7/1/2021	N/A	7/1/2021
4	Development of Recommendations for General Order 165 Revisions	Complete	Martin Wyspianski	7/1/2021	N/A	7/1/2021
5	Accelerating Commercialization of Non-Diesel Temporary Generation	At Risk	[redacted]	7/1/2023	10/1/2023	
6	LiDAR Asset Analysis	Complete		7/1/2021	N/A	7/1/2021
7	Independent Root Cause Analysis	On Track		2/1/2023	7/1/2025	
8	Fuel Reduction Funding	Complete		7/1/2021	N/A	7/1/2021
9	Resilience Centers Grant Program	On Track	Carla Peterman	7/1/2025	7/1/2023	
10	Funding to California Foundation for Independent Living Centers	Complete	[redacted]	7/1/2021	N/A	7/1/2021
11	Officer Safety Town Halls	On Track		7/1/2025	7/1/2025	
12	Semi-Annual Wildfire Mitigation Meetings	On Track	Meredith Allen	7/1/2023	7/1/2023	
13	ISO 55000 Certification	On Track	Martin Wyspianski	9/1/2024	9/1/2024	
14	Independent Wildfire Safety Audits	On Track	[redacted]	7/1/2023	7/1/2024	
15	Verification of Safety-Related Filings	On Track		7/1/2023	7/1/2023	
16	Quarterly Reporting on Electric Maintenance Work	On Track	Martin Wyspianski	7/1/2023	7/1/2023	
17	Local Government Vegetation Management Data Sharing	On Track	[redacted]	7/1/2023	7/1/2023	
18	Local Government System Hardening Data Sharing	On Track	Jamie Martin	7/1/2023	7/1/2023	
19	Documentation of “Near Hit” Potential Fire Incidents	On Track	[redacted]	7/1/2023	7/1/2023	
20	Study of Distribution and Transmission System	On Track	Martin Wyspianski	2/1/2025	12/31/2024	

Wildfire OII - Validation

N/A	On Track	At Risk	Off Track	Complete	Total
5	8	2	0	5	20

Note: SEI #17 and 18 are pending Napa outreach letter to finalize supporting documents
The 5 SEI listed with “N/A”, as their external due dates are beyond 2023.

Wildfire OII – Validation (by Internal Audit)

SEI #	Shareholder-Funded System Enhancement Initiatives (SEI)	Status	Chief Sponsor	Completion Date	Compliance Date
1	Tree Crew Training and Certificate Program	On Track	[redacted]		7/1/2023
2	Pre-Inspector Training and Certificate Program	On Track			7/1/2023
3	Vegetation Management Oversight Pilot	Complete		7/1/2021	7/1/2021
4	Development of Recommendations for General Order 165 Revisions	Complete	Martin Wyspianski	7/1/2021	7/1/2021
5	Accelerating Commercialization of Non-Diesel Temporary Generation	On Track	[redacted]		10/31/2023
6	LiDAR Asset Analysis	Complete		7/1/2021	7/1/2021
7	Independent Root Cause Analysis	N/A			7/1/2025
8	Fuel Reduction Funding	Complete		7/1/2021	7/1/2021
9	Resilience Centers Grant Program	N/A	Carla Peterman		7/1/2025
10	Funding to California Foundation for Independent Living Centers	Complete	[redacted]	7/1/2021	7/1/2021
11	Officer Safety Town Halls	N/A			7/1/2025
12	Semi-Annual Wildfire Mitigation Meetings	On Track	Meredith Allen		7/1/2023
13	ISO 55000 Certification	On Track	Martin Wyspianski		9/1/2027
14	Independent Wildfire Safety Audits	N/A	[redacted]		12/1/2025
15	Verification of Safety-Related Filings	On Track			7/1/2023
16	Quarterly Reporting on Electric Maintenance Work	On Track	Martin Wyspianski		7/1/2023
17	Local Government Vegetation Management Data Sharing	At Risk	[redacted]		7/1/2023
18	Local Government System Hardening Data Sharing	At Risk	Jamie Martin		7/1/2023
19	Documentation of “Near Hit” Potential Fire Incidents	On Track	[redacted]		7/1/2023
20	Study of Distribution and Transmission System	N/A	Martin Wyspianski		12/31/2024

Wildfire OII – Overall Spend (as of May EOM 2023)

SEI #	Shareholder-Funded System Enhancement Initiatives (SEI)	Initial Cost Forecast	Inception to Date Spend	Delta
1	Tree Crew Training and Certificate Program	[redacted]		
2	Pre-Inspector Training and Certificate Program			
3	Vegetation Management Oversight Pilot			
4	Development of Recommendations for General Order 165 Revisions			
5	Accelerating Commercialization of Non-Diesel Temporary Generation			
6	LiDAR Asset Analysis			
7	Independent Root Cause Analysis			
8	Fuel Reduction Funding			
9	Resilience Centers Grant Program			
10	Funding to California Foundation for Independent Living Centers			
11	Officer Safety Town Halls			
12	Semi-Annual Wildfire Mitigation Meetings			
13	ISO 55000 Certification			
14	Independent Wildfire Safety Audits			
15	Verification of Safety-Related Filings			
16	Quarterly Reporting on Electric Maintenance Work			
17	Local Government Vegetation Management Data Sharing			
18	Local Government System Hardening Data Sharing			
19	Documentation of “Near Hit” Potential Fire Incidents			
20	Study of Distribution and Transmission System			
	Total (Excluding Corrective Actions)			

Tags

2023 Distribution Maintenance – 48% risk reduction

[redacted] June 26, 2023

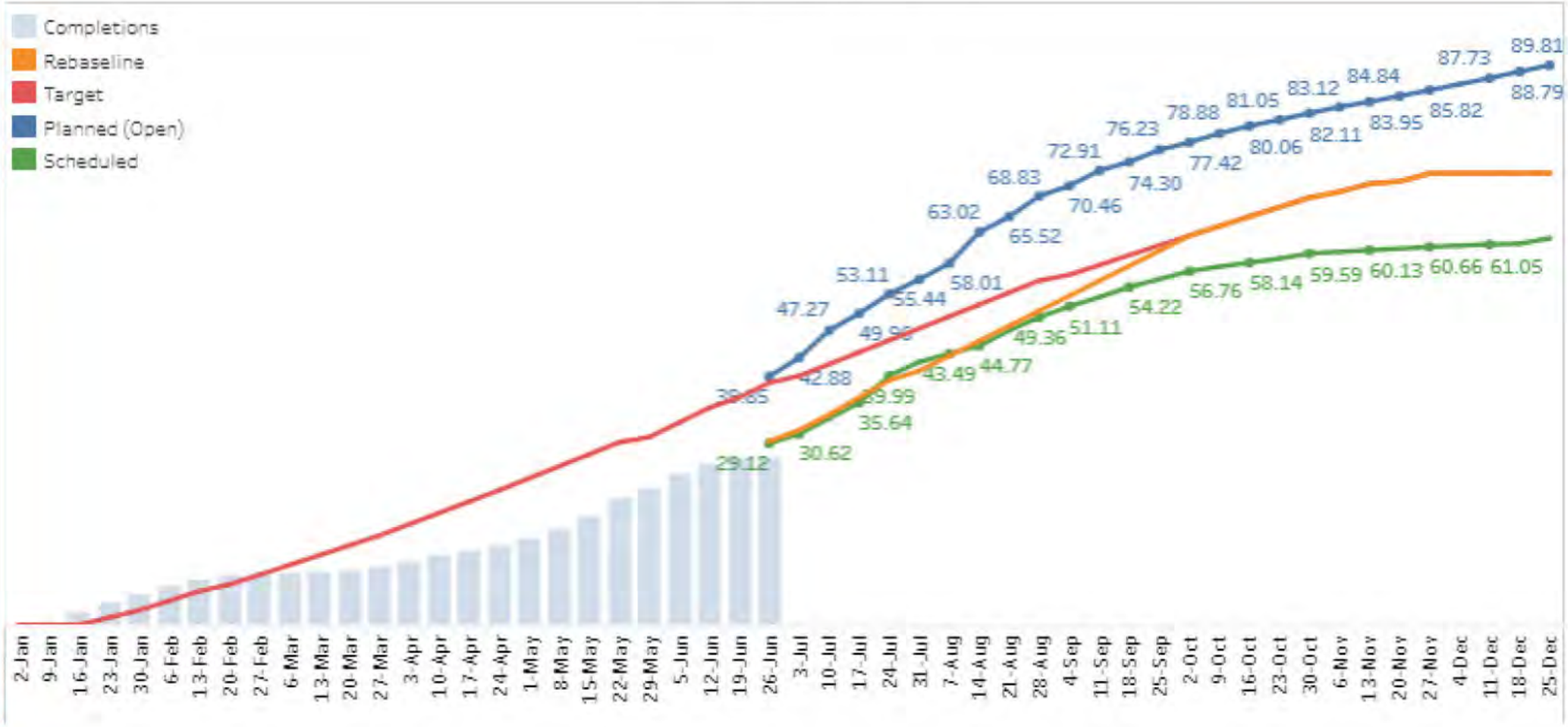
- 16K+ units scheduled
- 2023 Work plan after reprioritization has ~80 v3 WF risk points in 2023 work plan plus ~7.5 cancelled risk units
- Total 2023 Planned backlog Units = ~55K
- Work Plan designed with ~4 week buffer at end of year

1 Status

YTD V3 WFRS	Total V3 Risks	EOY Total Scheduled	EOY Total Planned	RAG Status
27.21	72.50	62.04	89.89	

3 Trend

Risks Reduced By Week



2023 Distribution Maintenance – 48% risk reduction

June 23, 2023

- WMP Table 8.1.7-2 Projected 5k poles and 24k non-poles completed in 2023

CNCL COMP - Pole COMP Non-Pole Target

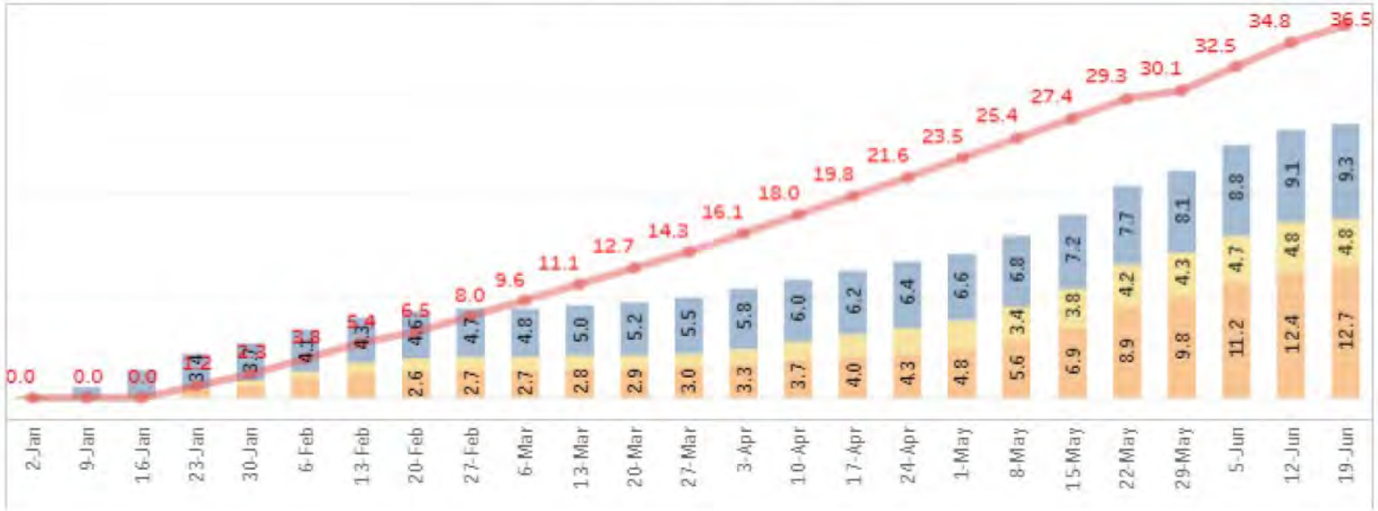
YTD V3 WFRS

26.83

% Representative of YTD Target

74%

BL V3 WildFire Risk Score



YTD BL Comps

18,068

% Representative of YTD Target

120%

BL Completed Tags vs. Weekly Target

January Tier 3 Pole E Steady-State Tags

June 23, 2023

	Estimating	Pending - Sched AFTER Due Date	Pending - No Sched Date	Ready - Sched AFTER Due Date	Ready - No Sched Date	Ready - Sched Before Due Date	Beyond CONS- No Sched Date	
Past Due				3				3
Due within 2 weeks	5			2	5	8		20
Due in 2 weeks	5		3	2	4	11		25
Due in 4 weeks	12	1	10	3	20	12	1	59
Total	22	1	13	10	29	31	1	107

Open By HFTD Tiers

	TIER 3		Total
	B	E	
2023 Jan	3	104	107

Readiness	Contract	Division	Estimating	GC	Veg	Grand Total
Estimating	**14**	**6**			**2**	**22**
Pending - No Sched Date	**12**			**1**		**13**
Pending - Sched AFTER Due Date		**1**				**1**
Ready - No Sched Date	**26**	**1**			**2**	**29**
Bay Area		1				1
Central Valley	8					8
North Coast	4				1	5
North Valley & Sierra	9					9
South Bay & Central Coast	5				1	6
Ready - Sched AFTER Due Date	**9**	**1**				**10**
Bay Area		1				1
Central Valley	3					3
North Coast	4					4
North Valley & Sierra	2					2
Ready - Sched Before Due Date	**20**	**10**		**1**		**31**
Beyond CONS- No Sched Date			**1**			**1**
Grand Total	**81**	**19**	**1**	**2**	**2**	**107**

Action	Action Owner	Target Date	RAG Status
22 Estimating jobs: 8 ESTS, 7 ADER, 7 APPR.	[redacted]	6/12/23	
Joint Pole: Clear current 10 intents		6/12/23	
Environment (1): file exemption before tag due (GC)		7/1/23	
Land (3): file exemptions before tag due (1 Division,2 Contract)		7/1/23	
Contract (35 jobs) schedule current ready work before due dates, and move the currently scheduled before due dates		6/23/23	
Division (2 jobs) schedule current ready work before due dates, and move the currently scheduled before due dates		6/23/23	

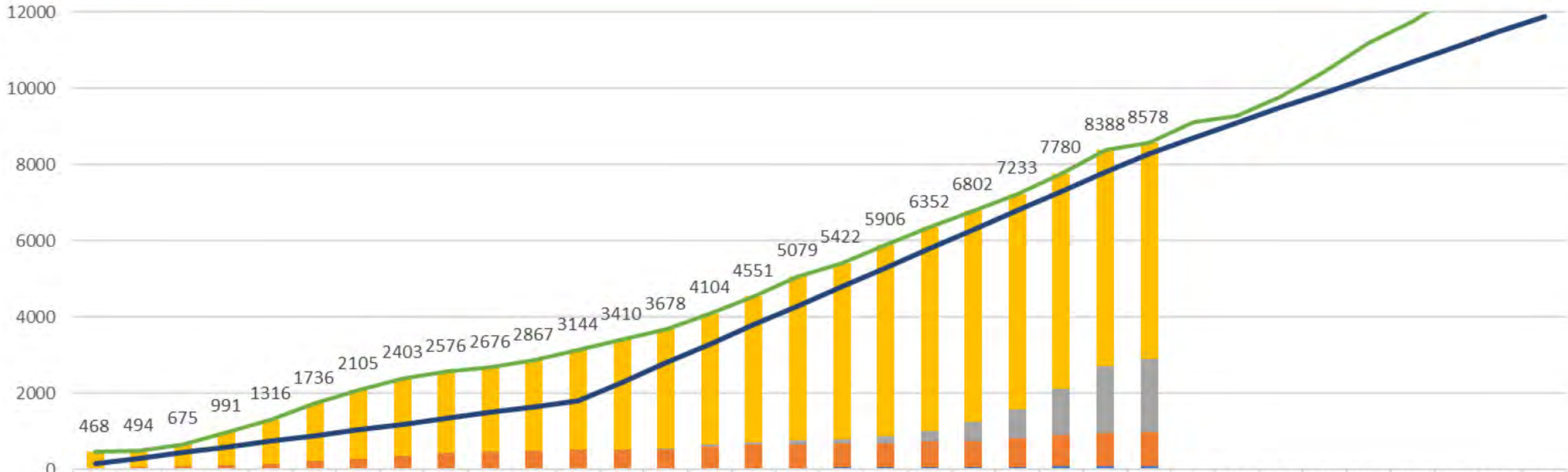
GM.XX – Open EC Notifications SteadyState Catch Back Plan

Catch Back Plan Due Date: 7/30/23 - WMP Target Due Date: Ongoing
Chief Sponsor: Jeff Deal

Program	Date Raised	Problem	Point of Cause	Containment Action	Status	Root Cause	Countermeasure Action	Catch Back Due Date	Owner	Status
Program Name	*Date issue identified*	*Description of the issue; What is the deviation between what should happen vs what actually happened?*	*Where the failure behind the problem occurred?*	*Immediate action to fix Point of Cause*		*Causation behind the Point of Cause*	*Action to fix the root cause; Countermeasure not populated until root cause verified*	*Date for completion of Countermeasure.* ***Number of units delivered by this date (to meet YTD target).***	*Name*	
EC Notifications SteadyState completion	5/30/23	Tier 3 pole E tags not uploaded to Work Plan	System failure where all tags were uploaded to work plan except tier 3 pole E tags	Daily meeting with: estimating, permitting, scheduling and divisions. Utilizing exemption process where applicable		System failure where all tags were uploaded to work plan except tier 3 pole E tags	System has been corrected and manual verification has been implemented in the process	Estimating complete 6/12 Permitting complete or exemption filed 7/1 Work assigned and scheduled throughout June & July	[redacted]	

2023 Transmission Maintenance

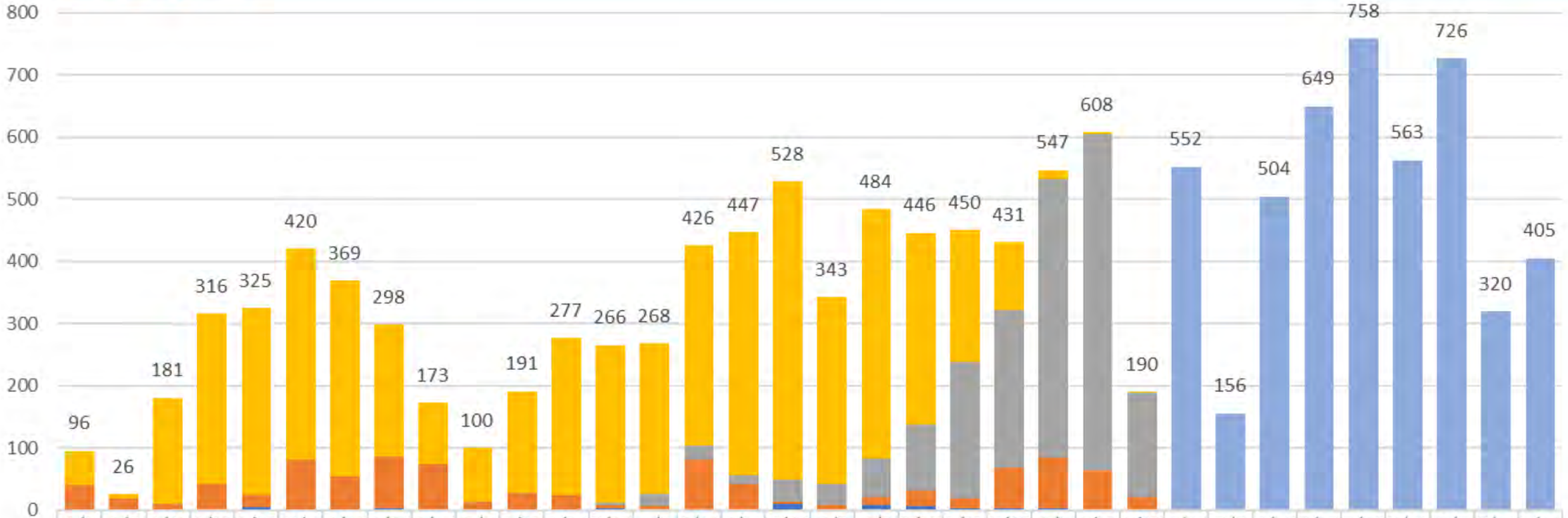
June 23, 2023



	1/2	1/9	1/16	1/23	1/30	2/6	2/13	2/20	2/27	3/6	3/13	3/20	3/27	4/3	4/10	4/17	4/24	5/1	5/8	5/15	5/22	5/29	6/5	6/12	6/19	6/26	7/3	7/10	7/17	7/24	7/31	8/7	8/14	8/21
COMP	415	421	591	864	1164	1502	1817	2029	2128	2214	2376	2629	2883	3125	3447	3838	4317	4617	5018	5326	5537	5646	5660	5663	5664									
COMP in Field	0	0	0	0	0	0	0	0	0	0	0	0	4	23	46	59	94	128	189	296	515	769	1217	1756	1924									
DLFL	40	59	69	110	129	211	264	346	419	433	460	482	486	491	570	611	615	622	635	659	676	740	821	885	904									
CNCL	13	14	15	17	23	23	24	28	29	29	31	33	37	39	41	43	53	55	64	71	74	78	82	84	86									
Total	468	494	675	991	1316	1736	2105	2403	2576	2676	2867	3144	3410	3678	4104	4551	5079	5422	5906	6352	6802	7233	7780	8388	8578									
Total+Sched	468	494	675	991	1316	1736	2105	2403	2576	2676	2867	3144	3410	3678	4104	4551	5079	5422	5906	6352	6802	7233	7780	8388	8578	9130	9286	9790	1043	1119	1176	1248	1280	1321
Target	150	300	450	600	750	900	1050	1200	1350	1500	1650	1800	2300	2800	3300	3800	4300	4800	5300	5800	6300	6800	7300	7800	8300	8700	9100	9500	9900	1030	1070	1110	1150	1190

2023 Transmission Maintenance

June 23, 2023



	1/2	1/9	1/16	1/23	1/30	2/6	2/13	2/20	2/27	3/6	3/13	3/20	3/27	4/3	4/10	4/17	4/24	5/1	5/8	5/15	5/22	5/29	6/5	6/12	6/19	6/26	7/3	7/10	7/17	7/24	7/31	8/7	8/14	8/21
COMP	55	6	170	273	300	338	315	212	99	86	162	253	254	242	322	391	479	300	401	308	211	109	14	3	1									
COMP in Field	0	0	0	0	0	0	0	0	0	0	0	0	4	19	23	13	35	34	61	107	219	254	448	539	168									
DLFL	40	19	10	41	19	82	53	82	73	14	27	22	4	5	79	41	4	7	13	24	17	64	81	64	19									
CNCL	1	1	1	2	6	0	1	4	1	0	2	2	4	2	2	2	10	2	9	7	3	4	4	2	2									
Sched (est.)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	552	156	504	649	758	563	726	320	405
Total	96	26	181	316	325	420	369	298	173	100	191	277	266	268	426	447	528	343	484	446	450	431	547	608	190	552	156	504	649	758	563	726	320	405

Ignitions

CPUC Reportable Ignitions in HFRA + HFTD

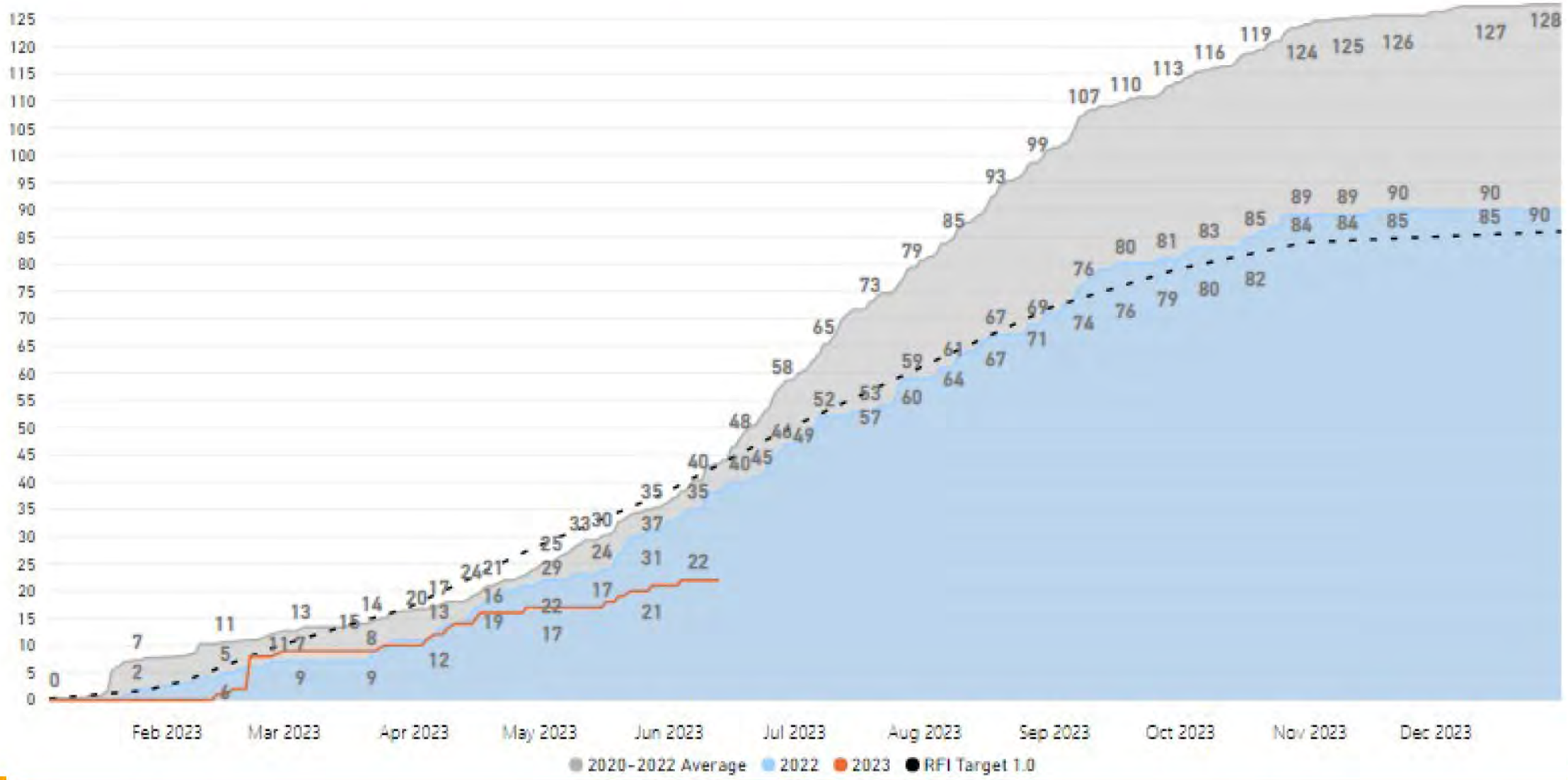
YTD Total *Through 06/30/23*		**Month to Date** *06/01/23 – 06/30/23*	
22		**1**	
2022	38	6	
3-yr Average	44	8	
2023 Target	86	**June Target**	50

Wildfire Risk Reduction Metric

YTD Total	
0	
2022	0
3-yr Average	0
2023 Target	1

Under Investigation					
Index ID	*Name*	*Date*	*Size (acres)*	*Status*	*Cause*

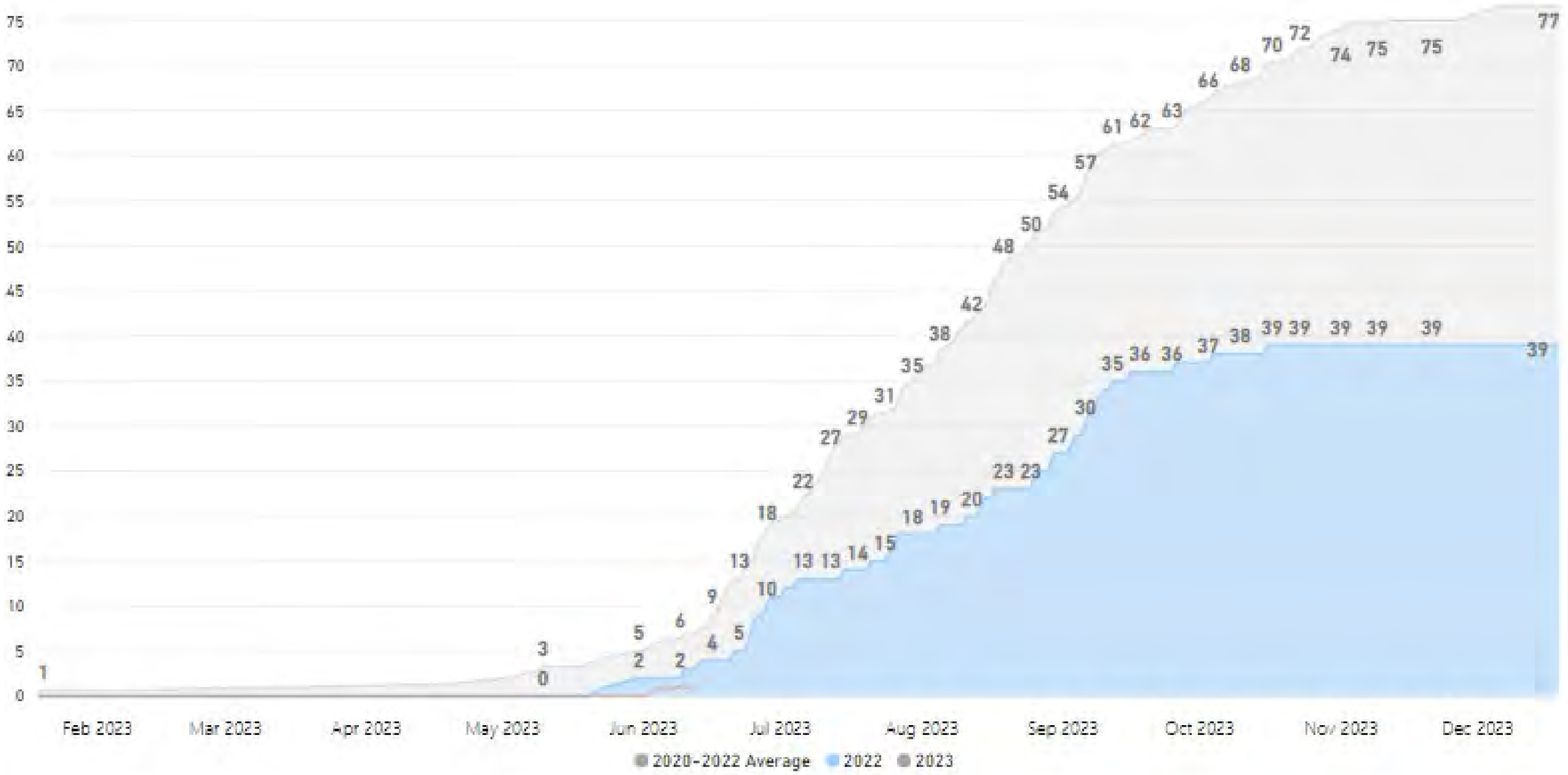
PG&E Reportable Ignitions in HFTD vs Target



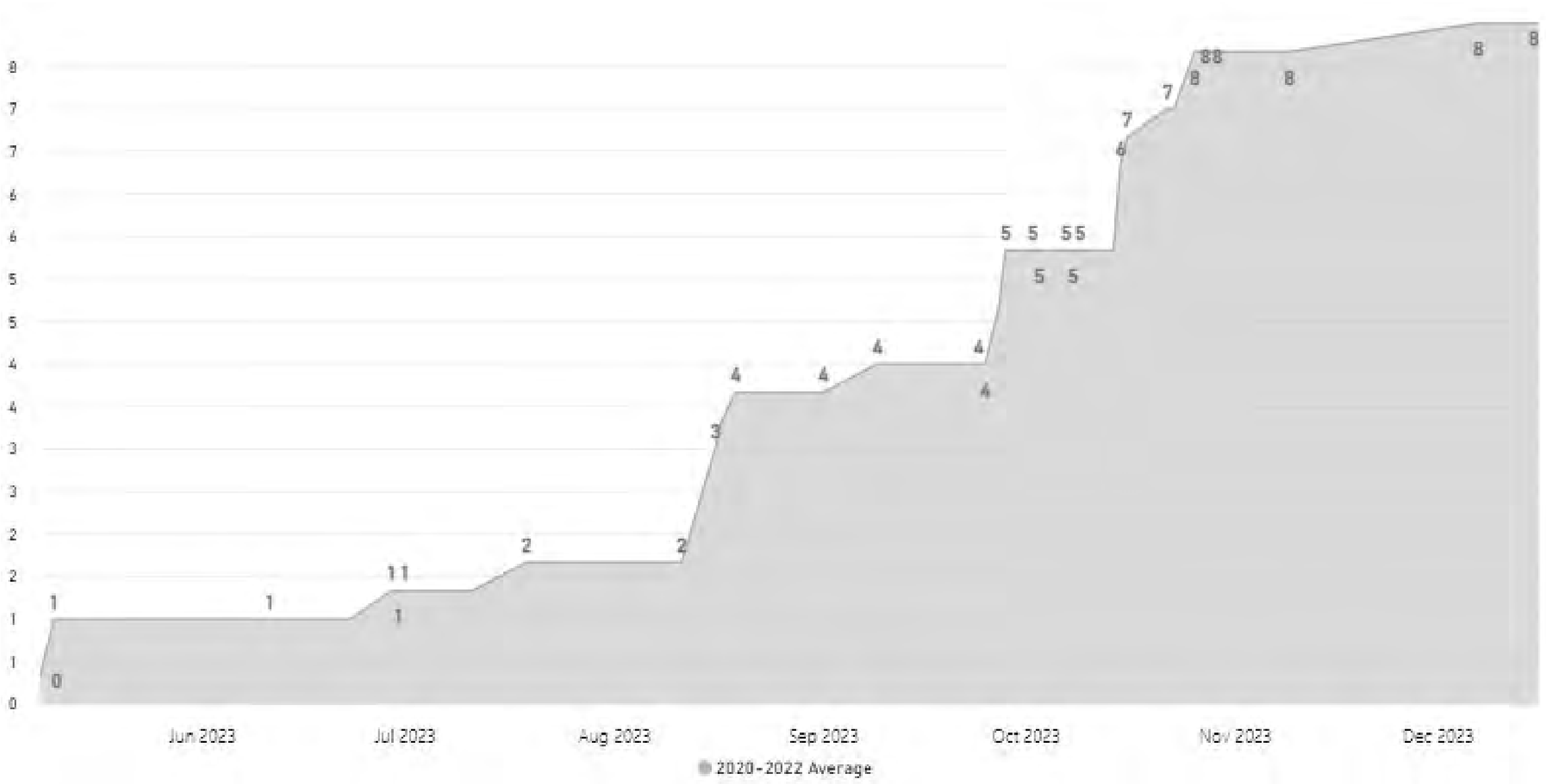
Reportable Fire Ignitions in HFRA by Weather Conditions

Risk Level	RFW	HWW	R3+	<R3
2023 YTD	0	0	1	21
2022 YTD	0	0	3	35
3-YEAR AVG	1	3	3	37
2017 YTD	0	0	0	20

PGE RFIs in HFTD – R3+ Conditions



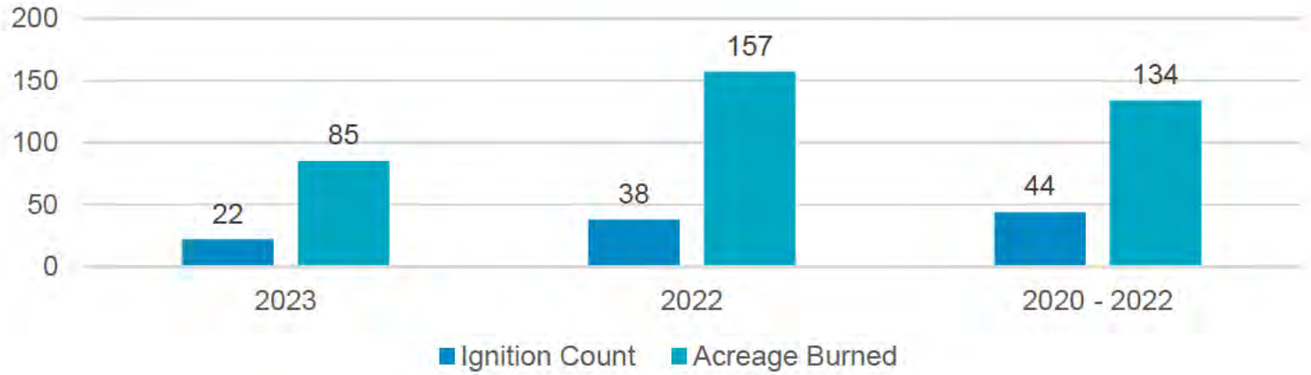
PGE RFIs in HFTD – RFW Conditions



Reportable Fire Ignitions in HFRA by FPI and Asset Type

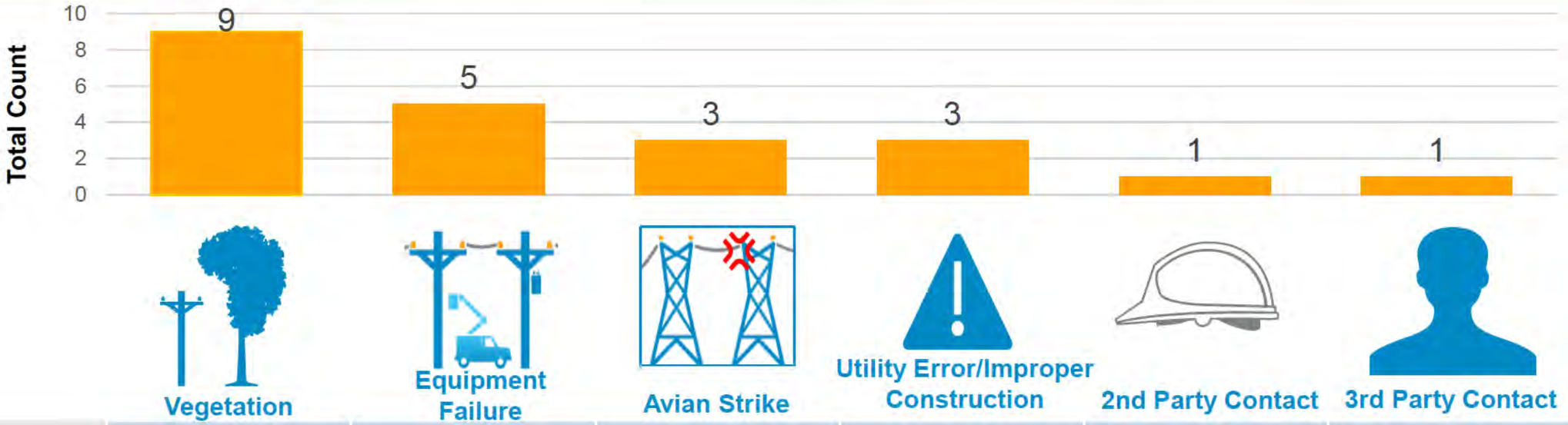
	Transmission	Dist R3+ Primary	Dist R3+ Secondary	Dist R3+ Service	Dist <R3
2023 YTD	2	0	0	0	20
2022 YTD	1	3	0	0	34
3-YEAR AVG	3	6	1	0	34

Reportable Fire Ignitions in HFTD and HFRA – Count and Acreage Burned



	2023 YTD	2022 YTD	2020 - 2022
IGNITION COUNT	22	38	44
ACREAGE BURNED	85	157	134

Reportable Fire Ignitions in HFTD and HFRA by Cause



	Vegetation	Equipment Failure	Avian Strike	Utility Error/Improper Construction	2nd Party Contact	3rd Party Contact
LAST WEEK	0	0	0	0	0	0
2023 YTD	9	5	3	3	1	1

EPSS

2023 EPSS Program Pillars

1. Further Reduce Wildfire Risk

Implement mitigations for ignition / fault types not yet fully mitigated (e.g. DCD for high impedance faults)

2. Improve Reliability & Customer Experience

Leverage a risk-informed and data-driven approach to our reliability mitigations, customer outreach, and customer support programs

3. Reduce the Human Struggle

Continuously improve the supporting processes, technology, and communications utilized in the EPSS program

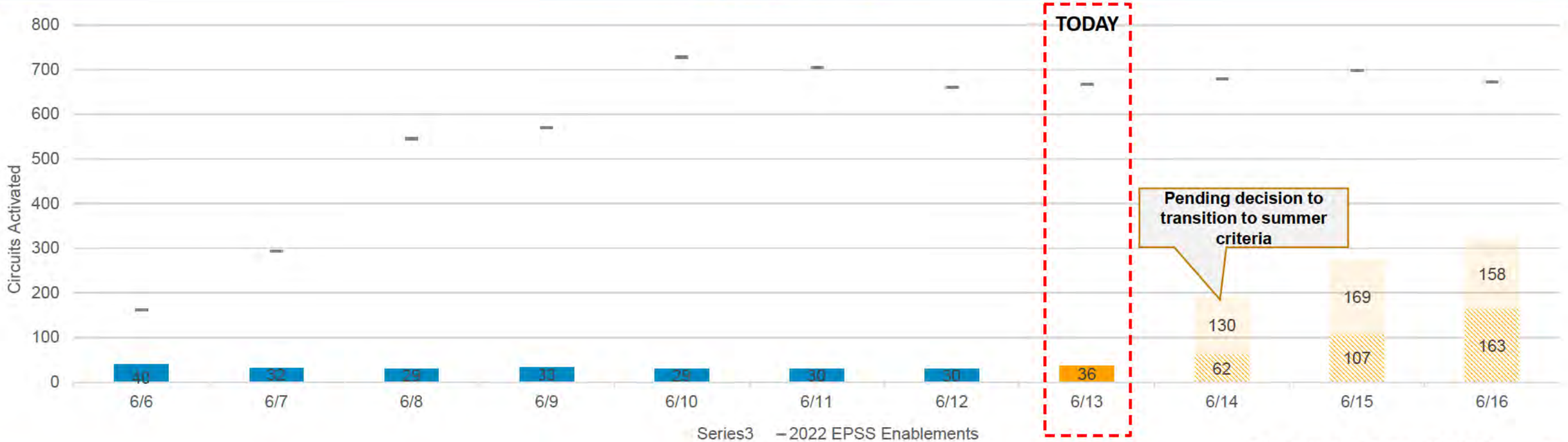
EPSS Enablement 1-Week Back / Forecast

1. Status

	2023			2022	
	Last Week	MTD	YTD	MTD	YTD
Circuits Enabled	44	175	200	773	781
Customers Protected	37,250	202,144	228,667	202,144	228,677
Miles Enabled	2,734	10,913	12,452	10,913	12,452

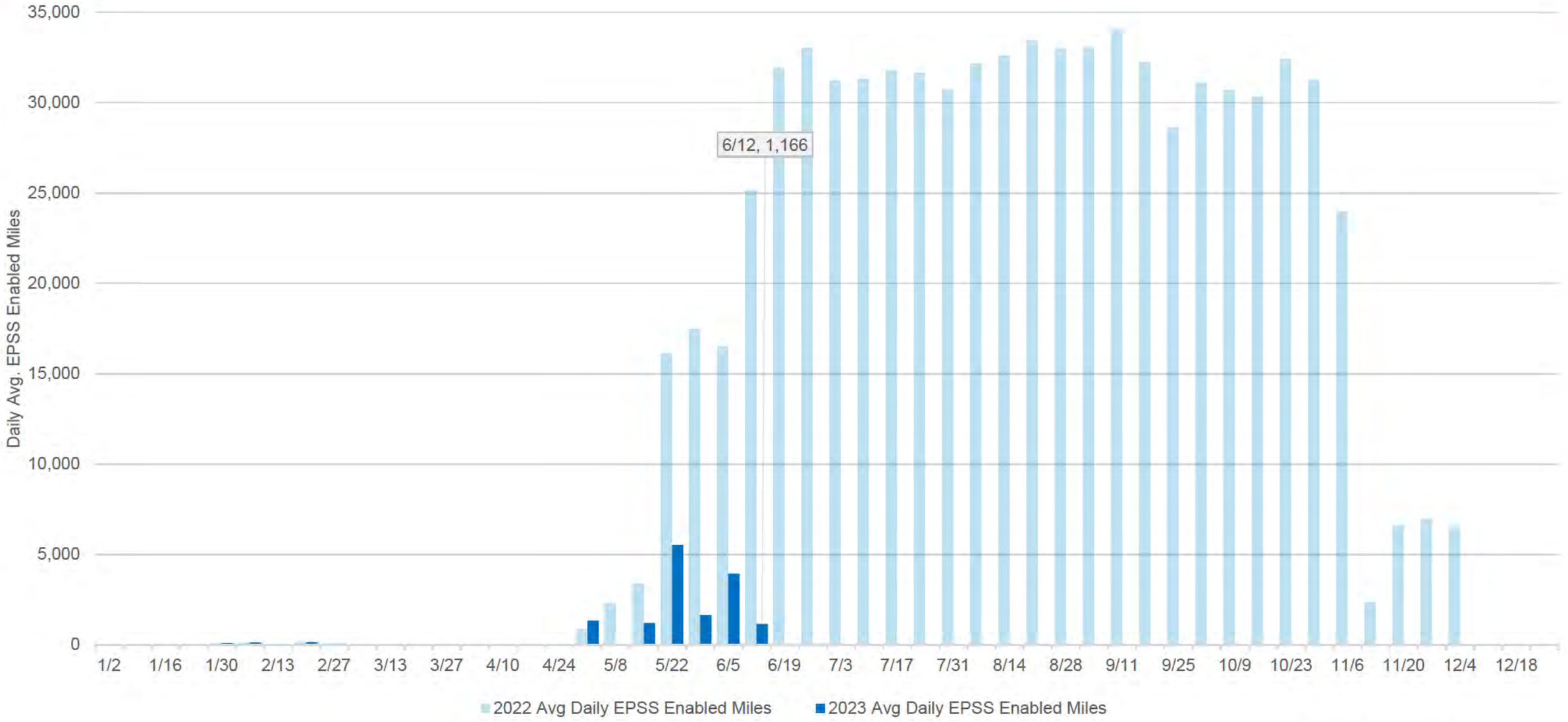
3. Trend: EPSS Enablement – Circuit Counts

One week back / forecast



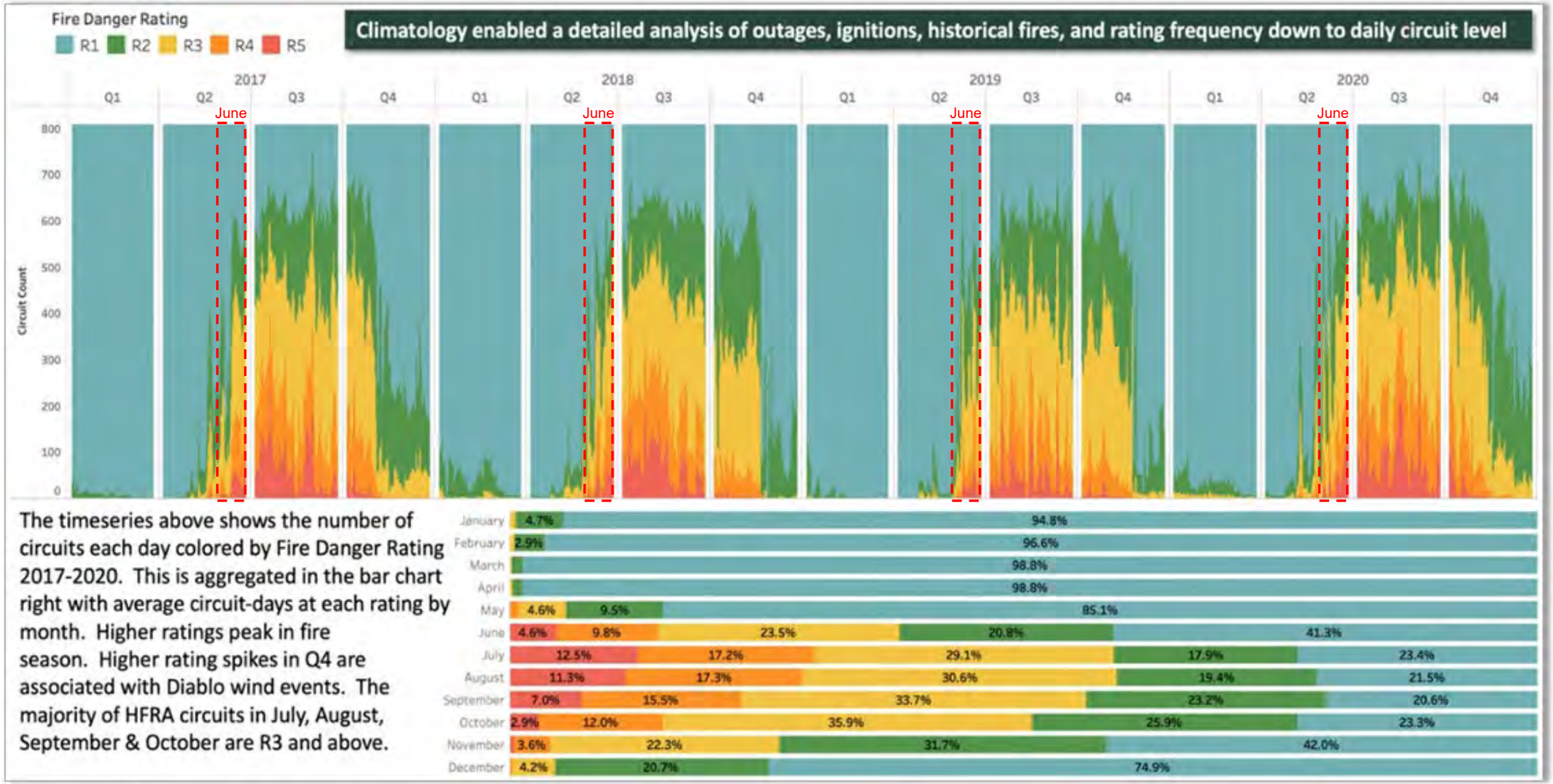
Data through 6/12/23 as of 6/12/23

Daily Average Miles EPSS Enabled by Week



Data through 6/12/23 as of 6/12/23

Historic Fire Danger Rating

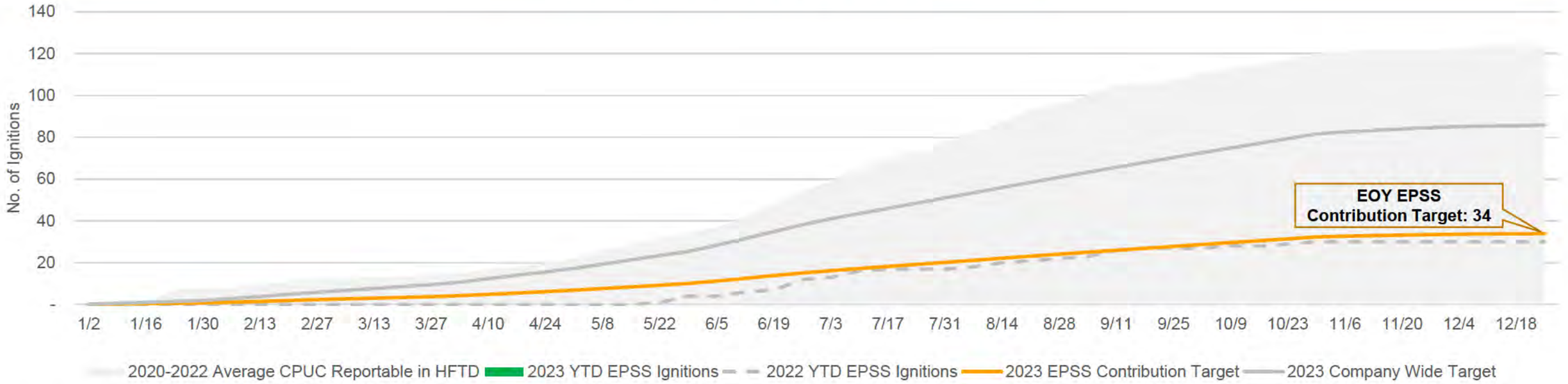


HFRA & HFTD RFIs in EPSS Enabled Zones

1. Status

	2023 EPSS			2022 EPSS in HFTD		2020 – 2022 Avg CPUC RFI in HFTD	
	Last Week[1]	MTD	YTD	MTD	YTD	MTD	YTD
HFRA & HFTD Reportable Fire Ignitions[1]	0	0	0	2	6	8	42
Target[2]	2	3	13	3	8	-	-

3. Trend: HFRA & HFTD RFIs in EPSS Enabled Zones



[1] PRELIMINARY – Incidents under investigation and ignition confirmation is not yet determined

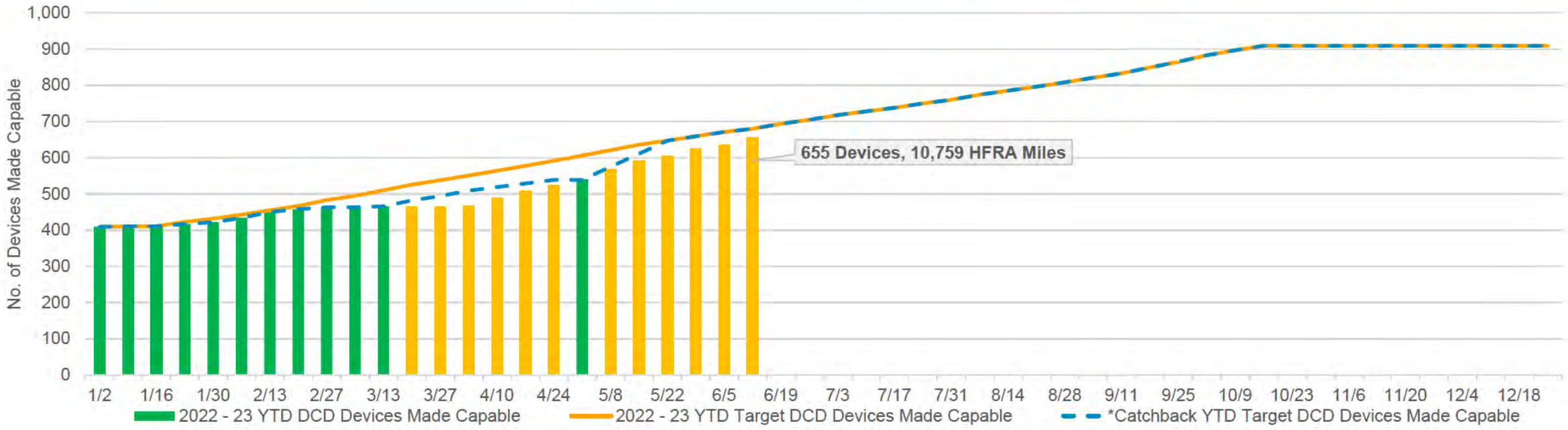
[2] Target based on EPSS contribution to 2023 CPUC Reportable Fire Ignitions on Primary Distribution and Transmission Conductor in HFRA & HFTD company target

Data through 6/11/23 as of 6/12/23

Down Conductor Detection Capability

1. Status				
	Last Week	MTD	YTD	2022 EOY Total
DCD Devices Made Capable	20	31	246	409
Target DCD Devices Made Capable	9	21	271	-
Catchback Target DCD Devices Made Capable	9	21	271	-
HFRA Miles	768	1,247	7,319	3,440

3. Trend: Down Conductor Detection Enablement



Data through 6/11/23 as of 6/12/23

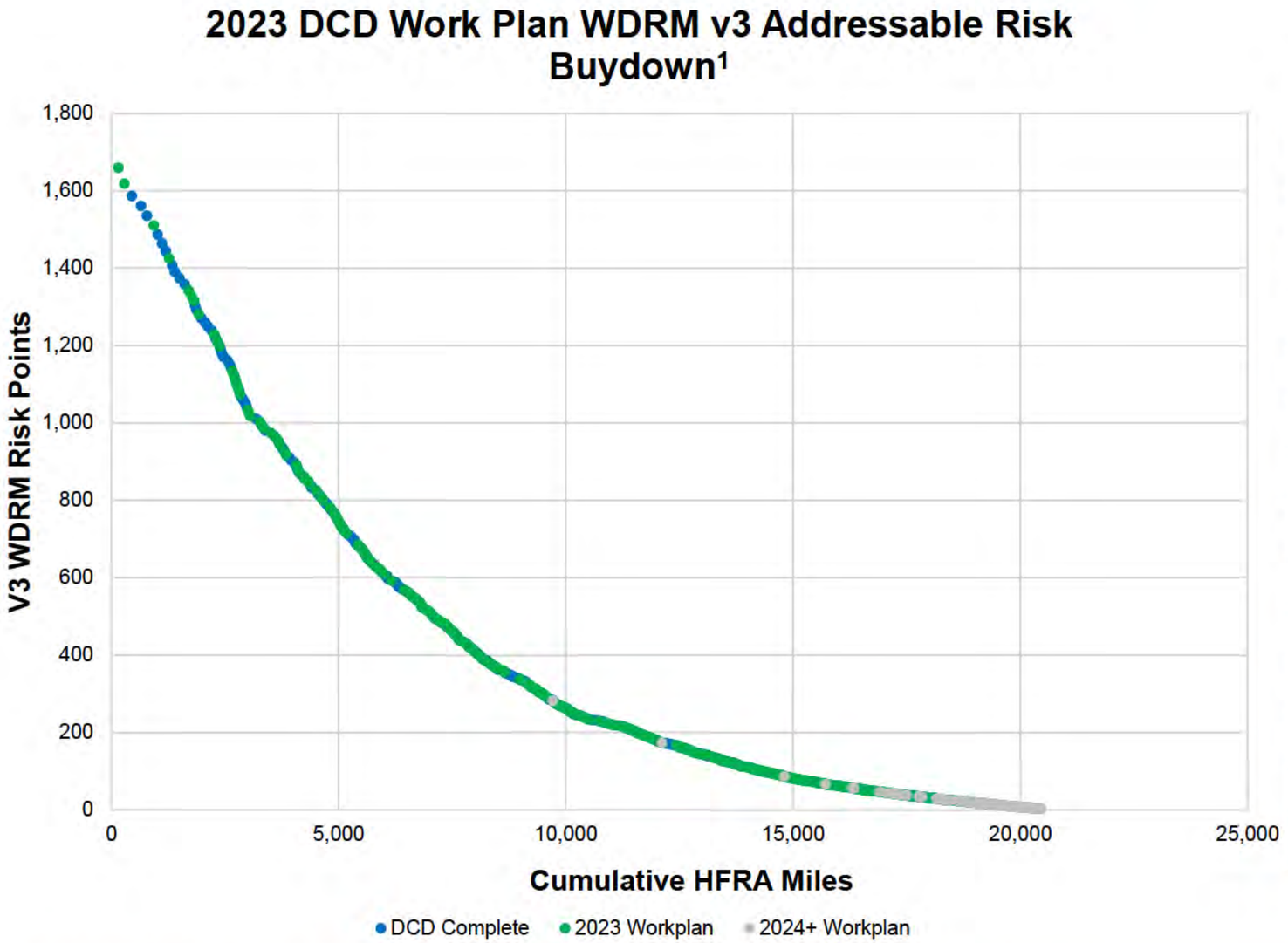
Down Conductor Detection Capability

Containment & Countermeasure									
Date	**Problem**	**Point of Cause**	**Containment Action**	**Status**	**Root**	**Countermeasure Action**	**Target**	**Owner**	**Status**
5/1/2023	DCD install schedule delayed in April due to Advanced Distribution Management System (ADMS) screen build delays, telecom issues and construction schedule constraint	ADMS delays in building screens necessary for DCD testing, coupled with telecom communication issues, resulted in delays in Los Padres installs, while ADMS and construction schedule constraint are impacting Sierra install schedules	Expediting DCD install schedule in non-ADMS cutover divisions (Humboldt) and installing DCD on existing/new Beckwith controllers to supplement work delays in ADMS LP/SI divisions	At Risk	DCD install cannot be completed while Telecom/SCADA communication issues remain unresolved. Due to Q1 storm impacts, construction resources and schedule availability are more limited	ADMS/Telecom teams prioritizing issues resolution in LP. Expediting Humboldt and installing DCD on existing/new Beckwith controllers to get back on plan	7/1/23	[redacted]	On Track

Action Items					
No.	**Action**	**Description**	**Date**	**Owner**	**Status**
1	**DCD Workplan Alignment with Stepdown Transformer**	▪ Refresh System Hardening Wildfire Risk allocation for known population of DCD eligible devices to include multi-device allocation for circuits with stepdown transformers ▪ Evaluate additional eligible DCD devices against refined risk allocation for incorporation into 2023 workplan	5/15/2023	[redacted]	Complete
2	**DCD Device Stepdown Transformer Review**	▪ Conduct Engineering review of DCD eligible devices capable of visibility bypass of stepdown transformers	~~6/1/2023~~ 6/9/2023		Complete
3	**DCD Eligible Viper Scope Evaluation**	▪ Evaluate additional eligible Viper DCD devices against refined HFRA mileage and risk allocation for incorporation into 2023 workplan	5/26/2023		Complete

Data through 6/11/23 as of 6/12/23

Down Conductor Detection Capability



Scope Type	Devices	V3 WDRM Risk Points	Total Indirect HFRA Mileage
2022 Complete	409	242	3,440
2023 Complete	246	638	7,320
WMP Device	231	590	6,814
Additional Scope	15	48	506
2023 Retrofits	298	521	6,181
WMP Device	214	397	4,811
Additional Scope	84	124	1,370
2023 Eligible Viper	81	134	1,557
WMP Device	19	41	500
Additional Scope	62	93	1,057
2023 Form6 CBs	29	80	539
2024+ Workplan	2,277	65	1,861
CBs and 4-Wire	-	433	4,888
Grand Total[1]	**3,340**	**2,113**	**25,786**

[1]Pending completion of eligible viper scope evaluation

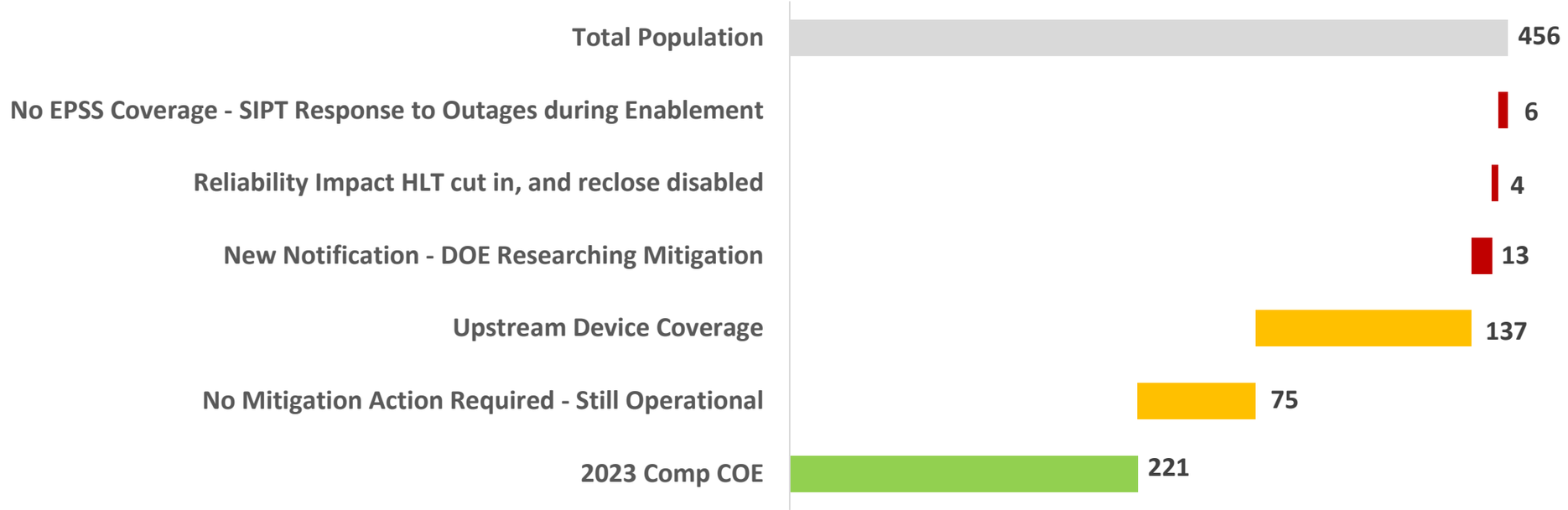
Data through 6/11/23 as of 6/12/23

EPSS on Overwatch CPZs

	CPZs EPSS Protected	EPSS Outages	Avg CESO	Response Time in 60 Minutes	CAIDI	Reportable RFI Ignitions	DCD Eligible
Year-to-Date							
2023 Overwatch CPZs	26	1	325	N/A	31	0	26
2022 Overwatch CPZs	38	0	-	-	-	0	N/A
End-of-Year							
2022 Overwatch CPZs	38	16	787	75%	169	0	N/A

Data through 6/11/23 as of 6/12/23

2023 EPSS Critical Operating Equipment



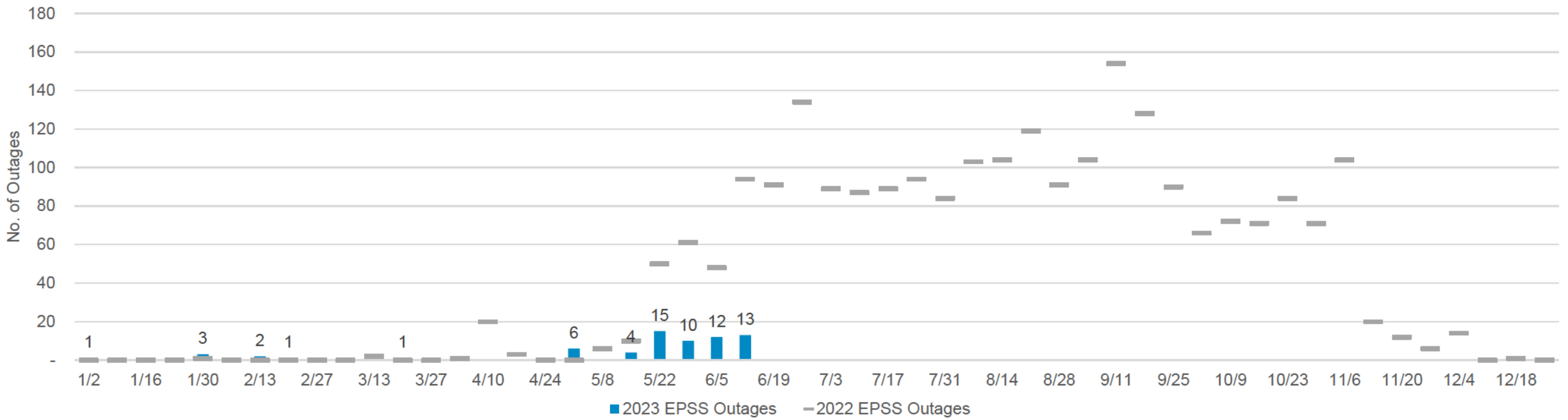
COE Tag ID	PM	Date Added	Device #	Circuit	Device	Division	HFRA Miles	Outages	Upstream Device	Status
125509585	35426892	3/1/2023	274	GEYSERVILLE 1102	Rxe	SO	5.5	11	220154	**COMPLETED 6/6/2023**
125615068	35438773	3/10/2023	625902	LOS COCHES 1101	Nova	CC	2.3		CB	Ready - Unscheduled
123442770	35344602	3/7/2023	3012>491190	DOLAN ROAD 1101	-	CC	0.1	1	CB	Ready – Unscheduled Prior Schedule 5/22/2023 from 5/19 rom 5/22 from 5/19 from 5/22 from 4/17
123221745	35354315	6/1/2022	XR462	MC KEE 1107	Wve	SJ	0.0	3	CB	Ready – Scheduled 7/8/2023 - Prior Scheduled 8/16/2023
125258739	35419925	12/31/2022	672110	DOLAN ROAD 1101	Viper	CC	0.0	1	CB	Ready – Unscheduled - Prior Scheduled 5/8/2023 Shifting to Expense – Water Intrusion Condition
125780522	35436529	4/3/2023	4724	HUMBOLDT BAY 1102	Nova	HB	0.0	-	CB	Ready – Scheduled 10/16/2023, division plans to move up in schedule to September and gain release to work from 7/10/2023 – Osprey Nest
126205139	35449696	5/22/2023	12705	SERRAMONTE 1104	Rve	PN	0.0	-	CB	Estimating – 6/17/2023 EOD – Moved from exp to cap

Data through 6/11/23 as of 6/12/23

Outages on EPSS Enabled Zones

1. Status					
	2023			*2022*	
	Last Week	**MTD**	**YTD**	**MTD**	**YTD**
Outages in Enabled Zones	13	25	70	122	280
Average CESO	526	562	987	870	773

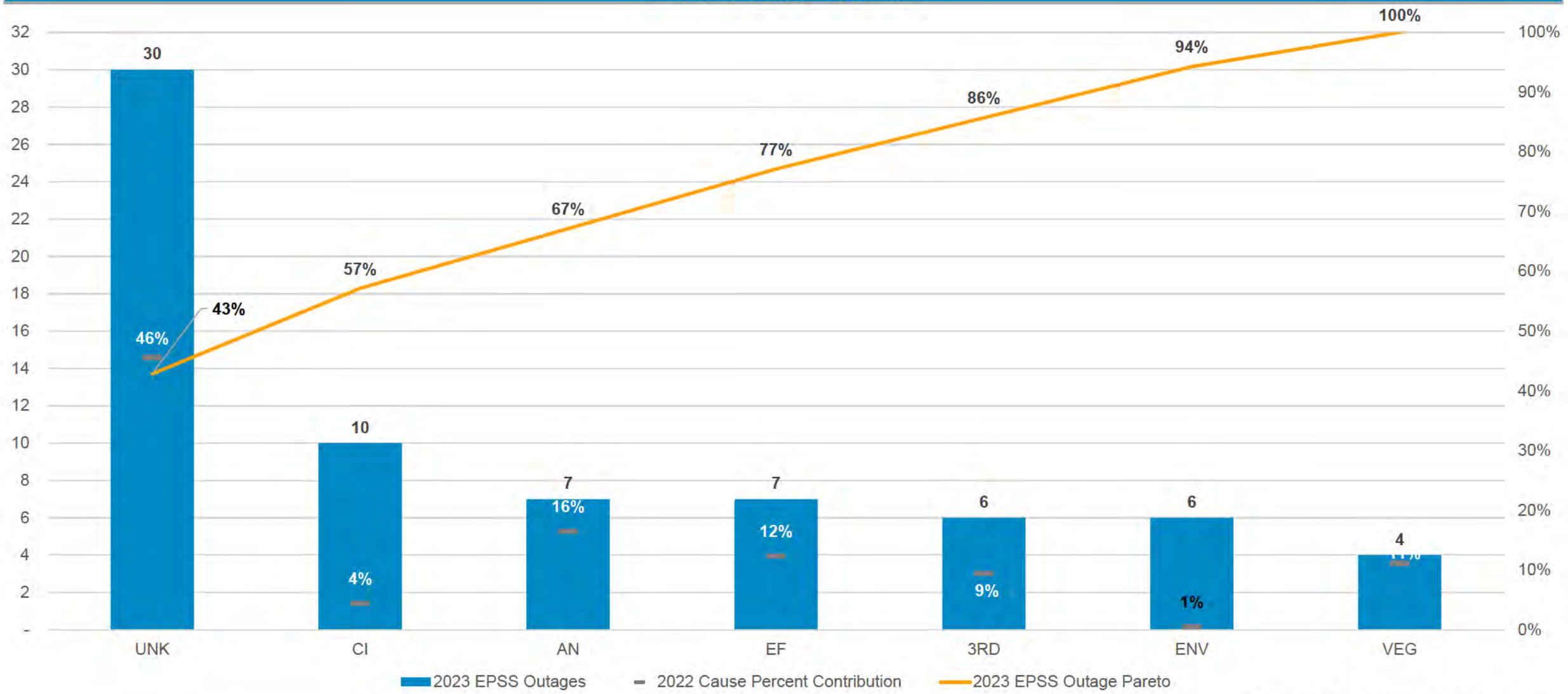
3. Trend: Outages on EPSS Enabled Zones



Data through 6/11/23 as of 6/12/23

Outages on EPSS Enabled Zones by Cause

10. Trend: Outages by Cause



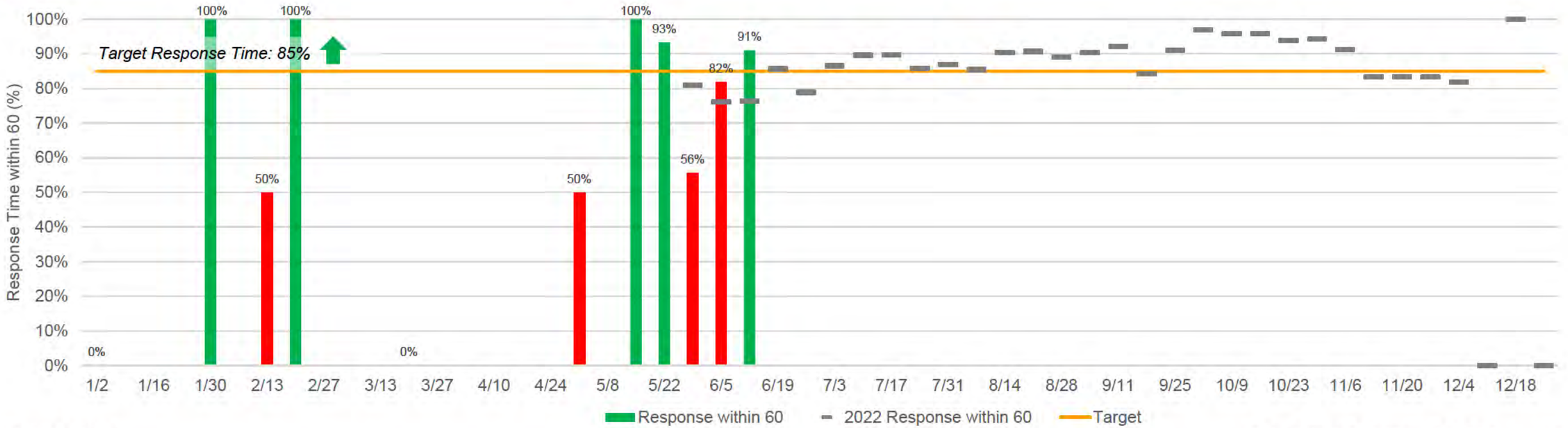
Data through 6/11/23 as of 6/12/23

Outage Response Within 60 Minutes

1. Status

	2023			2022	
	Last Week	MTD	YTD	2022 MTD[1]	2022 YTD[1]
Response within 60 Min	91%	83%	79%	77%	80%
Target	85%	85%	85%	80%	80%
Average Response Time	40	45	46	51	52

3. Trend: Outage Response Within 60 Minutes



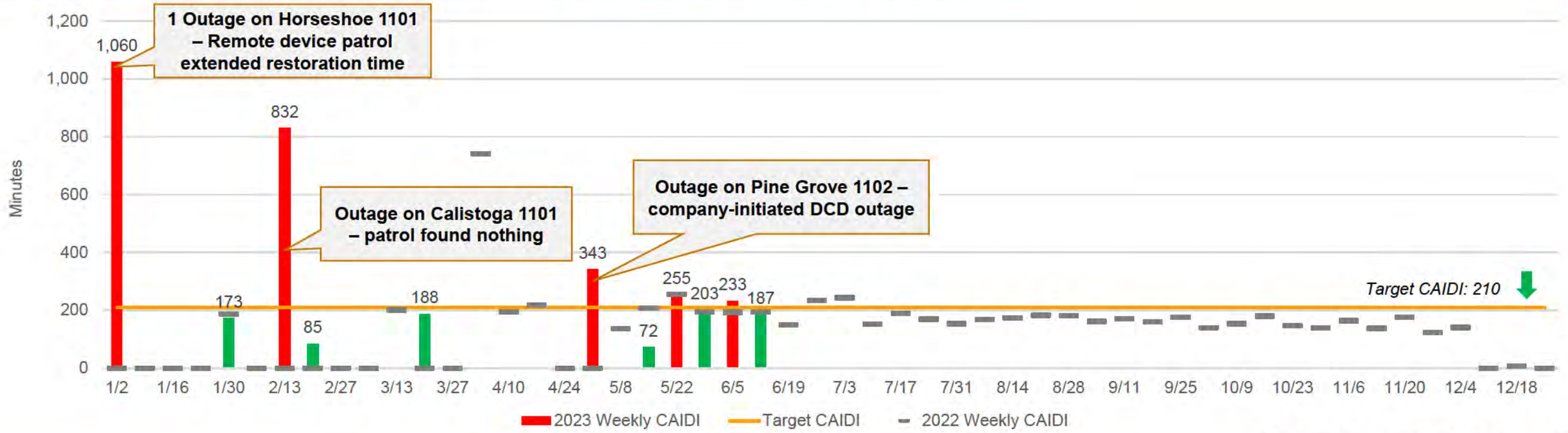
[1] Since 5/24/22

Data through 6/11/23 as of 6/12/23

EPSS CAIDI

1. Status					
	2023			2022	
	Last Week	MTD	YTD	MTD	YTD
CAIDI	187	210	213	191	203
Target	210	210	210	240	240

3. Trend: Outage CAIDI on EPSS Enabled Zones

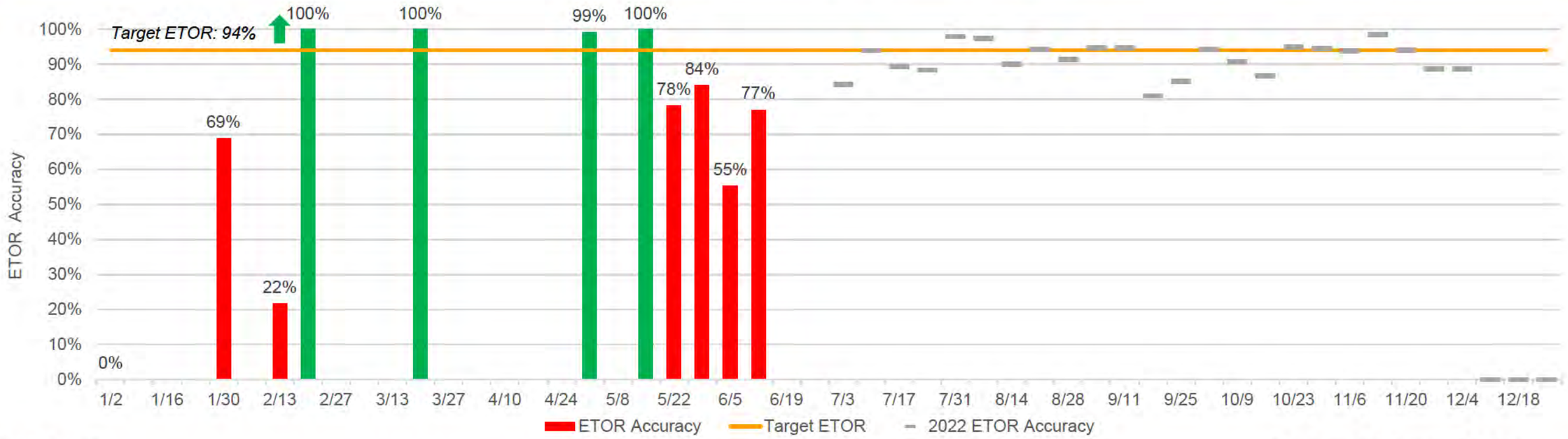


Data through 6/11/23 as of 6/12/23

EPSS ETOR Accuracy

1. Status					
	2023			2022	
	Last Week	MTD	YTD	2022 MTD[1]	2022 YTD[1]
ETOR	77%	61%	84%	N/A	N/A
Target	94%	94%	94%	94%	94%

3. Trend: Outage ETOR on EPSS Enabled Zones



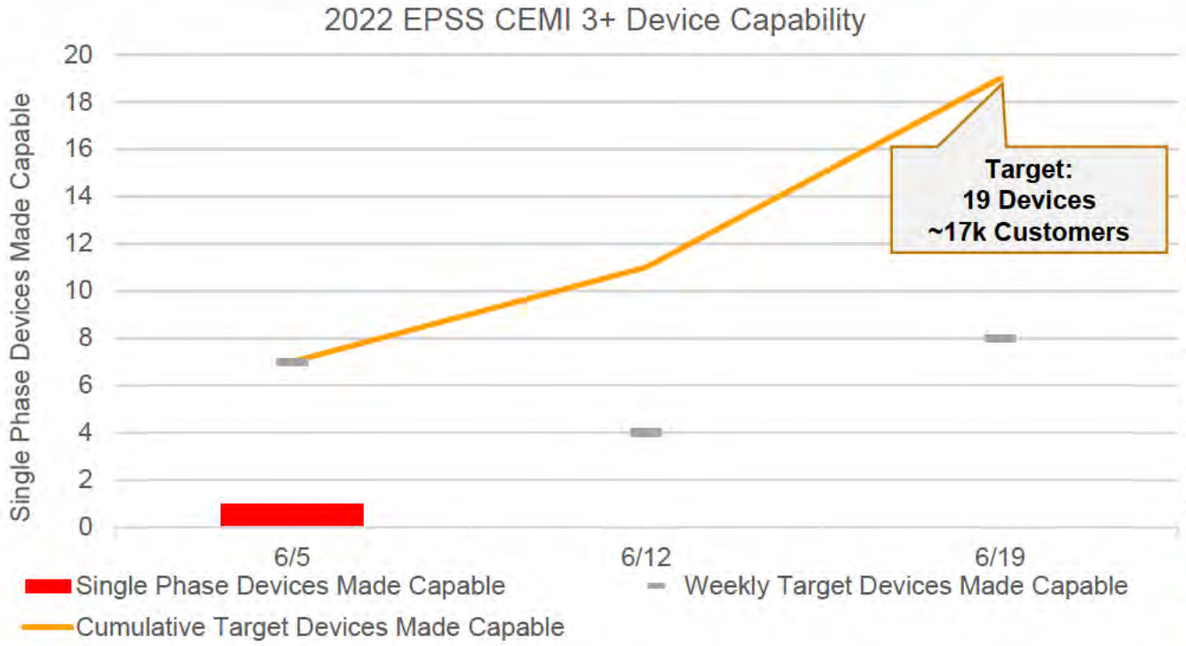
[1] Since 7/1/22

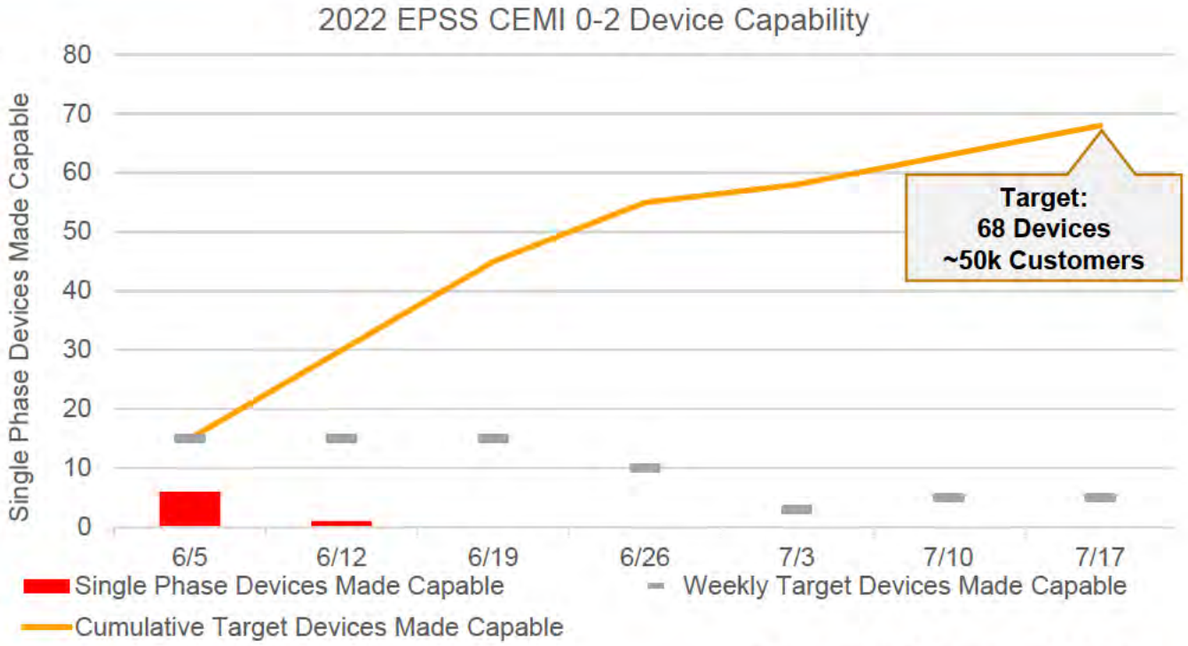
Data through 6/11/23 as of 6/12/23

EPSS Single Phase Device Capability

1. Status			
	Last Week	**MTD**	**YTD**
Total Devices	1	8	8
Total Target	19	41	41

3. Trend: Single Phase Device Capability



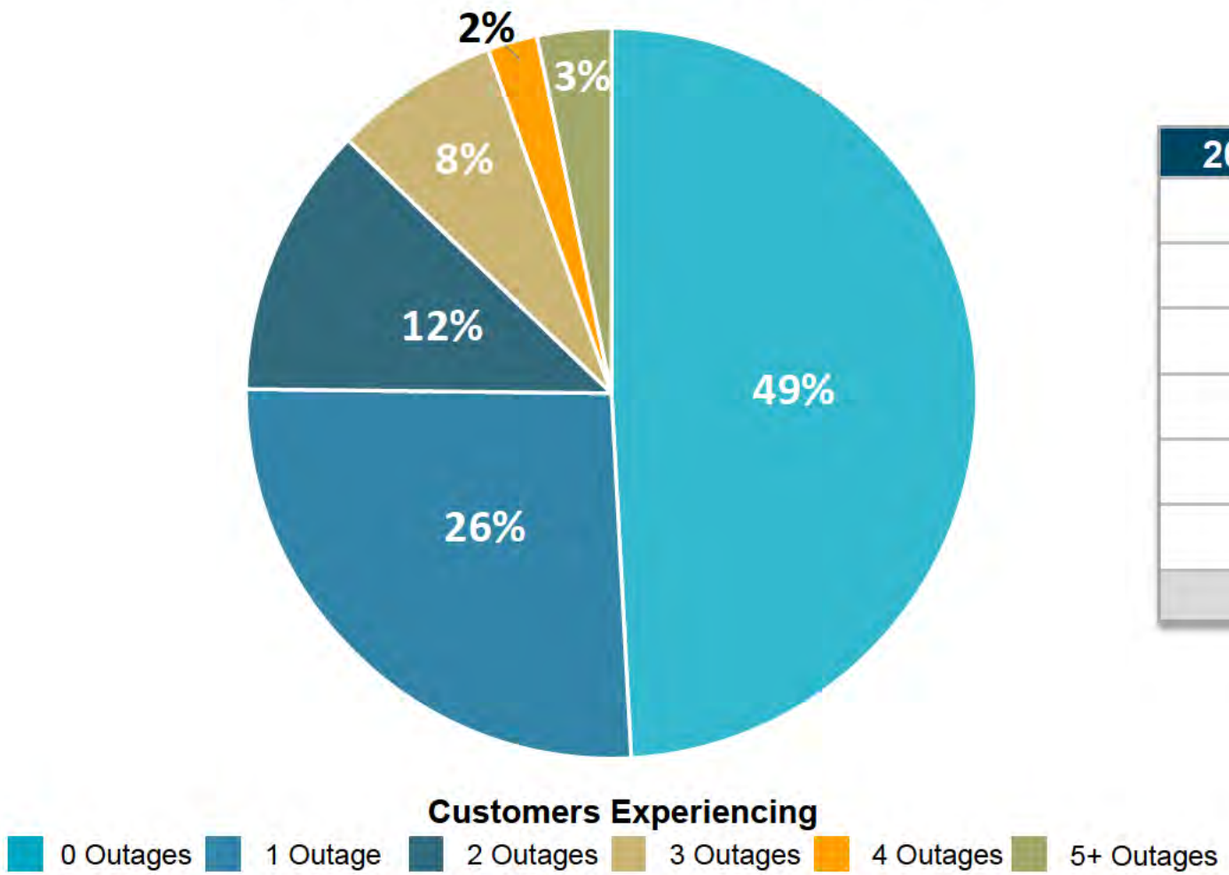


Data through 6/11/23 as of 6/12/23

EPSS Single Phase Device Capability

By making eligible single phase devices EPSS capable, over 67k customers will be descoped from the program or rescoped to EPSS buffer, further minimizing customer reliability impacts.

Service Points by 2022 EPSS CEMI



2022 EPSS CEMI	Service Points	% of Total
0	33,199	49%
1	17,594	26%
2	8,117	12%
3	4,951	7%
4	1,488	2%
5+	2,212	3%
Total	**67,561**	**-**

Data through 6/11/23 as of 6/12/23

EPSS Single Phase Device Capability

Action Items					
No.	**Action**	**Description**	**Date**	**Owner**	**Status**
1	**2023 Eligible EPSS Device Scope**	▪ Identify single phase EPSS eligible devices to be made capable to further reduce customer reliability impact	5/1/2023	[redacted]	Complete
2	**2023 EPSS Single Phase Device Capability – 2022 EPSS CEMI 3+ Devices**	▪ Execute single phase EPSS device capability workplan for devices impacting customers with a 2022 EPSS CEMI 3+	6/15/2023		At Risk
2	**2023 EPSS Single Phase Device Capability – Remaining Devices**	▪ Execute single phase EPSS device capability workplan for remaining devices	7/15/2023		At Risk

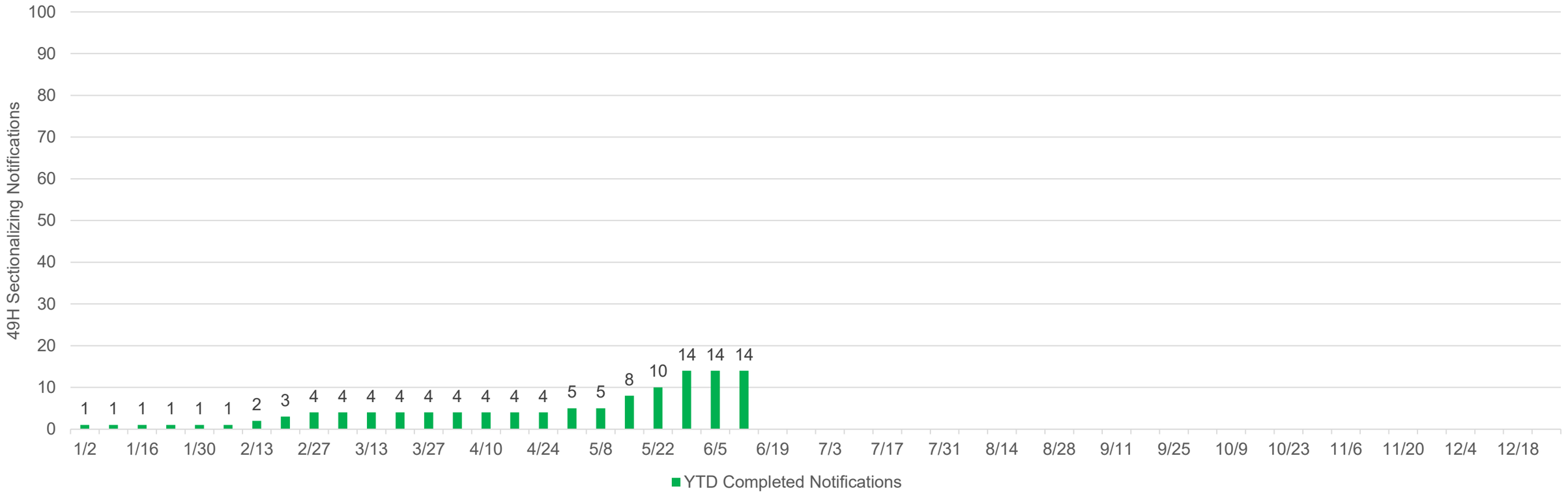
Data through 6/11/23 as of 6/12/23

49H Sectionalizing Impacting EPSS

1. Status

	Last Week	MTD	YTD
Complete	0	0	14
Target	-	-	107

3. Trend

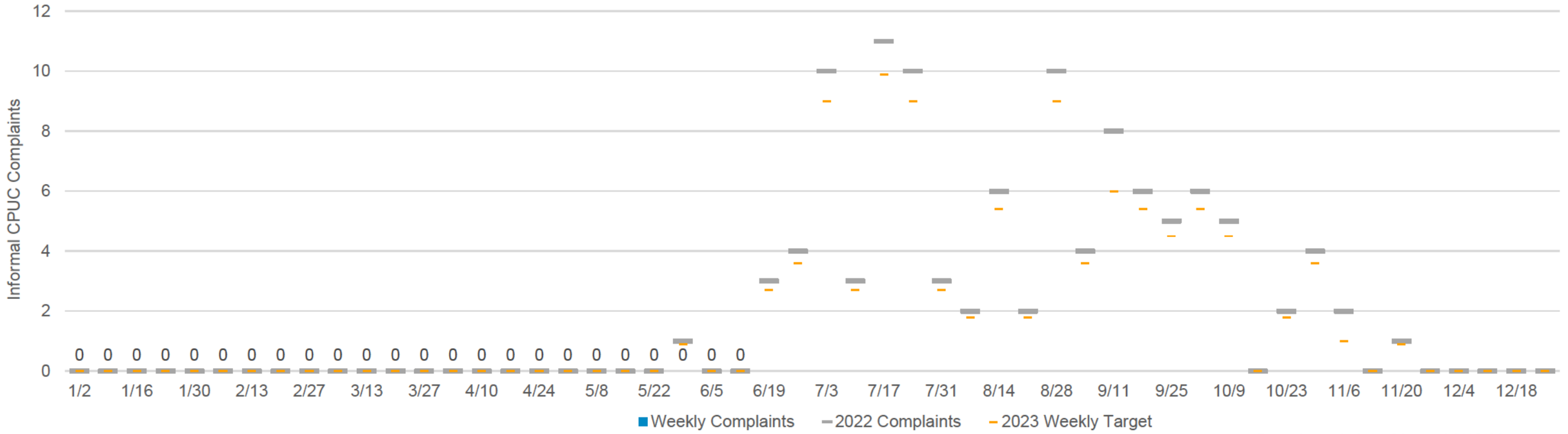


Data through 6/2/23 as of 6/7/23

EPSS Related Informal CPUC Complaints

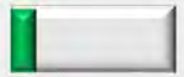
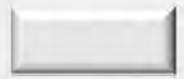
1. Status					
	2023			*2022*	
	Last Week	**MTD**	**YTD**	**2022 MTD**	**2022 YTD**
Informal CPUC Customer Complaints	0	0	0	0	1
Target	0	0	1	-	-

3. Trend: EPSS Related Informal CPUC Complaints



Data through 6/11/23 as of 6/12/23

Phases of 2023 EPSS Customer Outreach

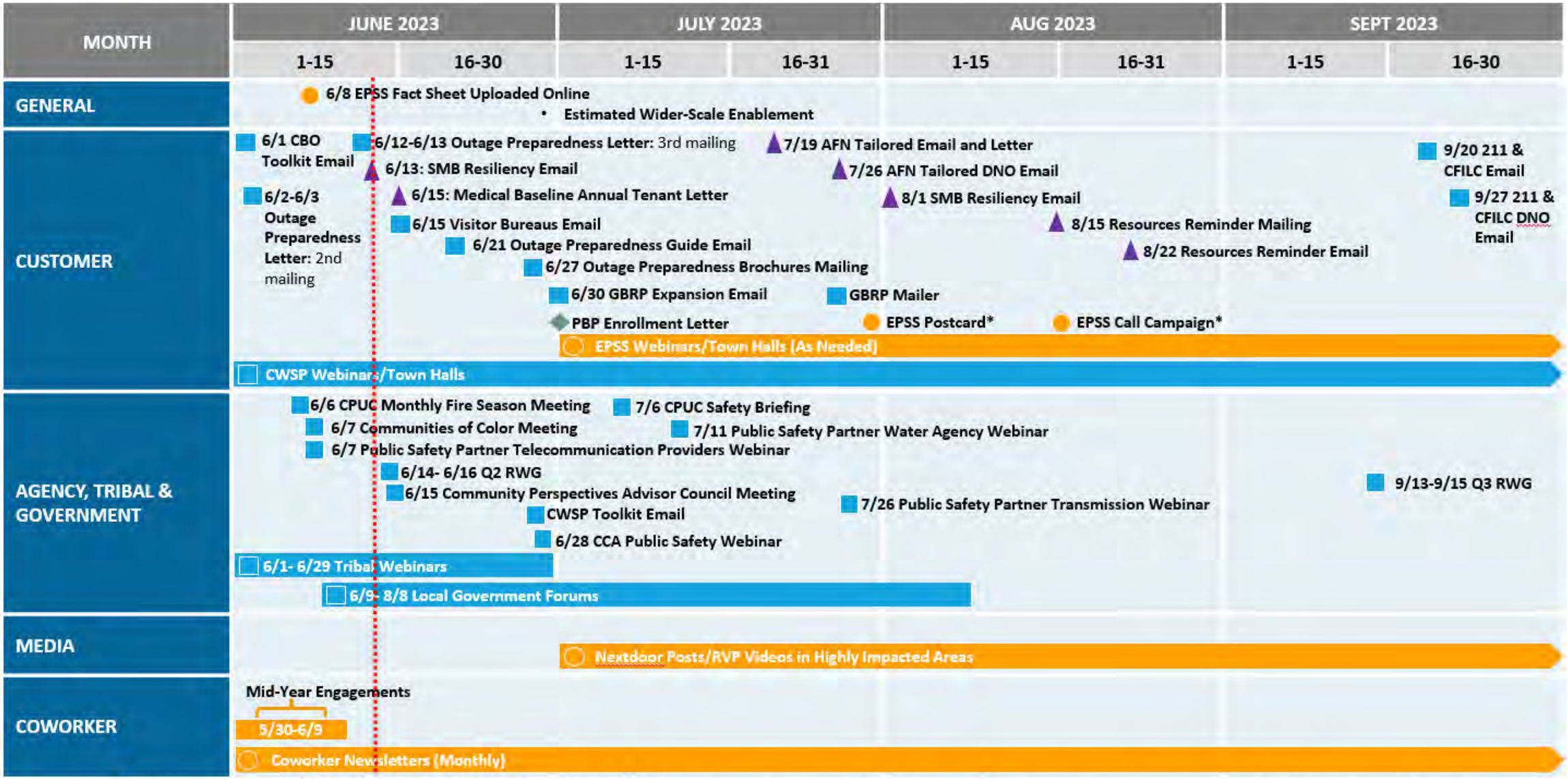
		Progress
Phase 1 – Preseason Education	• Continue to incorporate EPSS into **broader CWSP safety outage messaging** • Leverage **customer insights** from EPSS awareness testing to inform strategies • **Differentiate between customer experiences** in 2021/22	
Phase 2 – CEMI Initial Comms	• Multiple **escalation paths** – EPSS CEMI 5, outages in 30 days, etc. • Be **quicker to acknowledge** outages and show that **PG&E is taking action** • Leverage IVR, SMS, and email to **reach more customers**	
Phase 3 – CEMI Findings from MORE	• **Customer testing and interviews** for MORE process occurring in Q1 • Share **community-specific findings** and actions to improve reliability, leveraging all direct comms methods and social media • **Coordination with Regional teams** on holistic view of outage experience	
Phase 4 – Escalations	• **Ongoing communication** and support after the MORE process – direct to customer comms, community webinars, in-person town halls • Additional focus on **2022 CEMI-8+ customers –** targeted communications about actions to improve reliability, customer resiliency opportunities	

Data through 6/11/23 as of 6/12/23

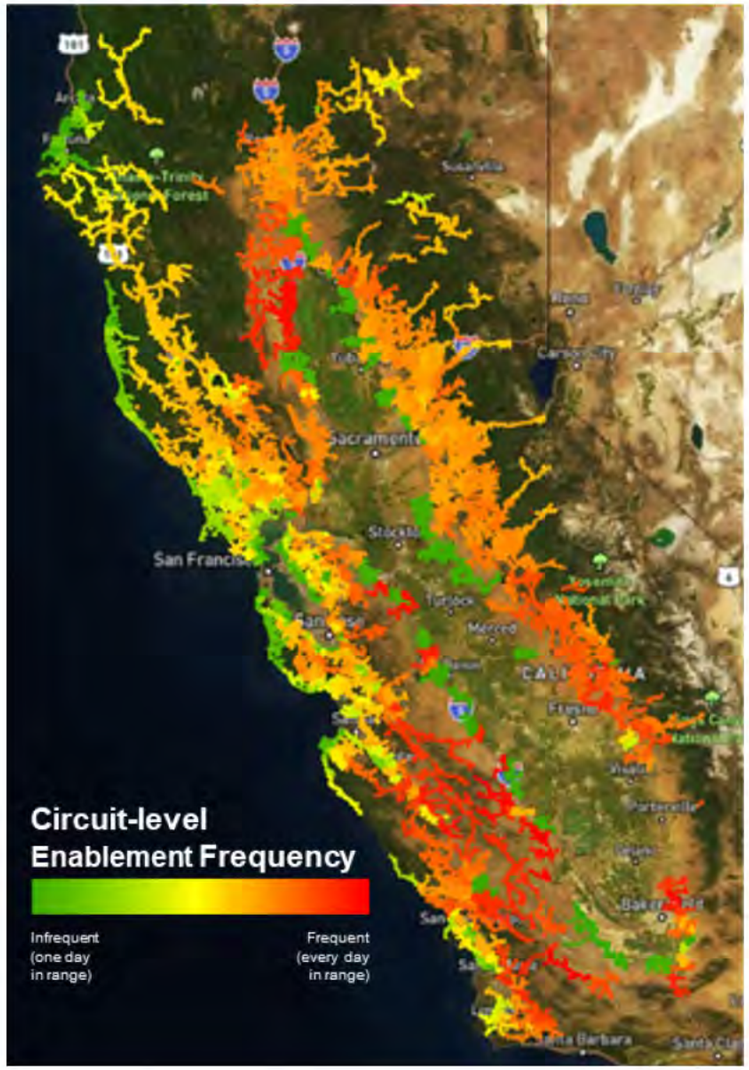
Outreach Objectives

- **Reach all customers** who may be impacted in 2023 before large-scale enablement occurs.
- **Provide additional information** to customers who were highly impacted in 2022.
- **Roll out communications strategically** to reach customers, agency partners, media and coworkers.
- **Ensure outreach is comprehensive** but not duplicative across the EPSS and CWSP workstreams.

EPSS Engagement Timeline

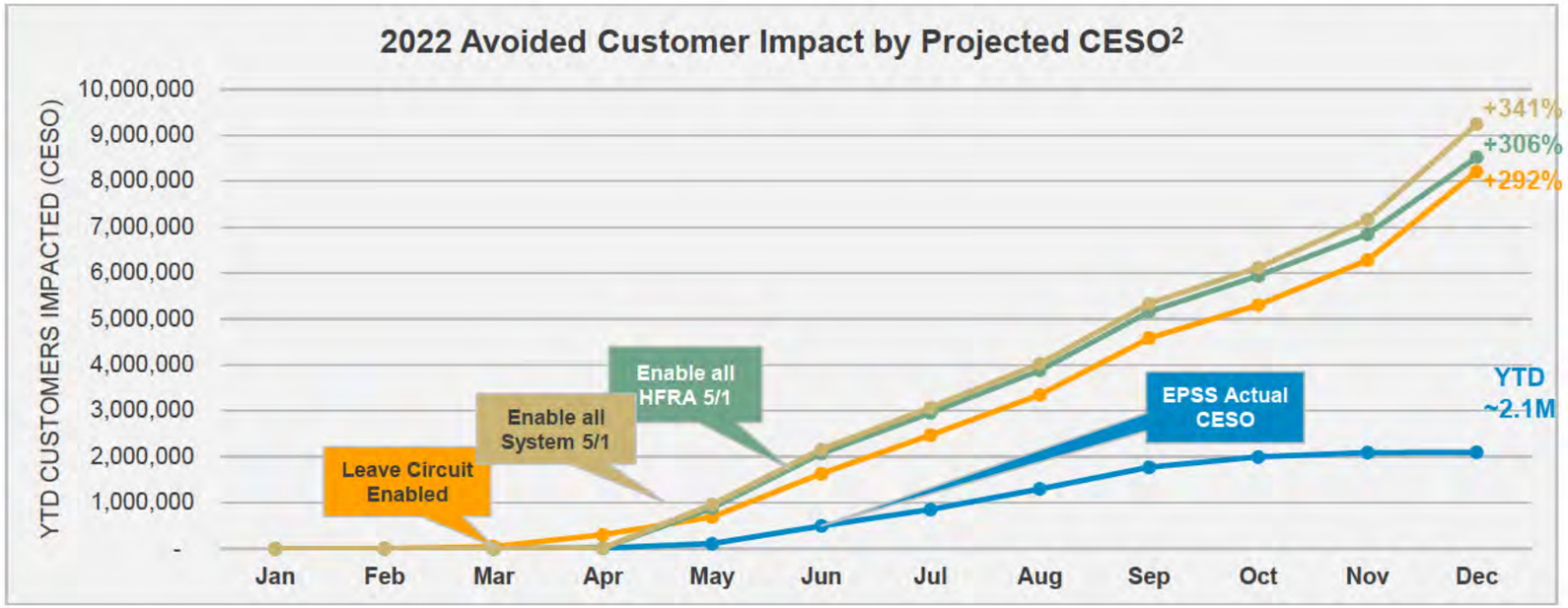


Customer Impact of Improved Operational Capabilities



Our operational capability to enable EPSS during periods of elevated wildfire risk, and return our circuits to normal when it is safe to do so has helped to reduce the scope of outages in 2022:

EPSS ENABLEMENT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
CIRCUITS ENABLED[1]	3	31	65	242	562	833	718	757	772	733	583	88
MILES ENABLED[1]	256	1,674	3,307	15,038	31,138	39,033	37,159	37,965	38,218	38,095	33,903	7,776
EPSS OUTAGES	1	-	3	23	138	416	392	458	488	321	140	8

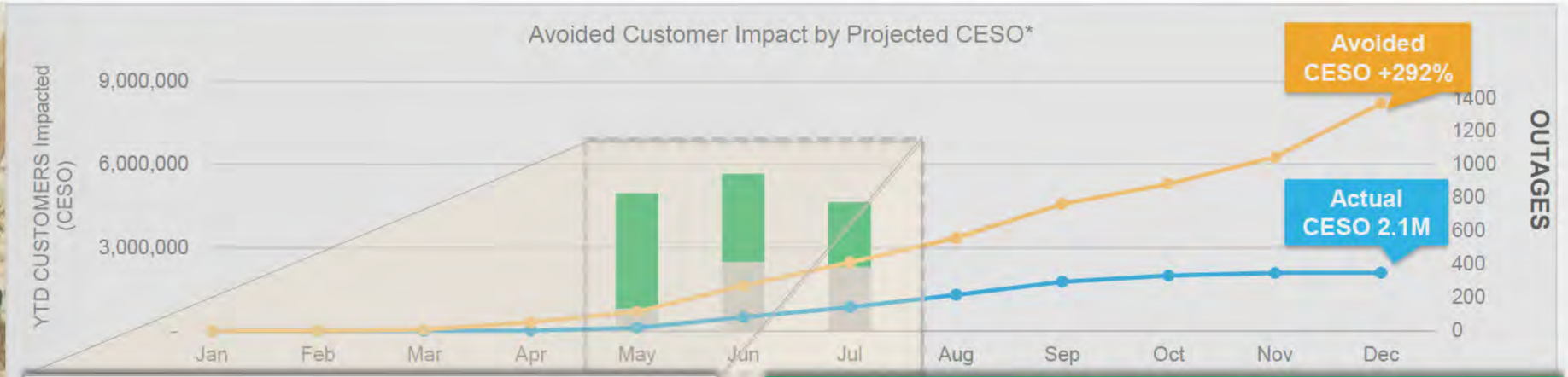


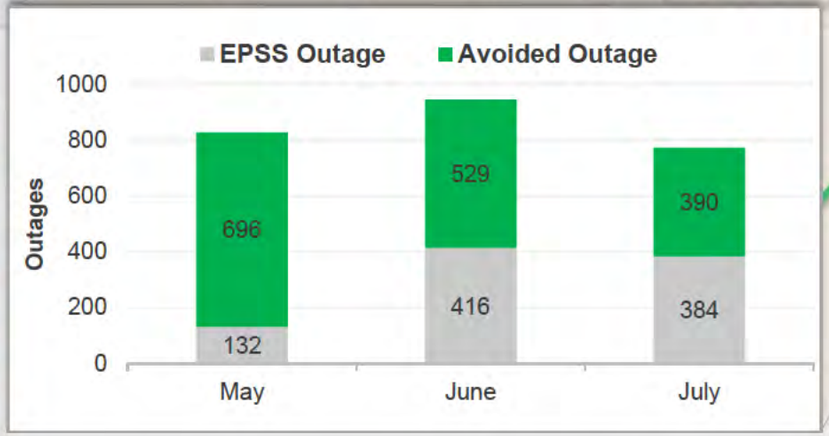
[1] Circuits and Miles enabled is the number of unique circuits and associated miles enabled each month.

Data through 6/11/23 as of 6/12/23

Avoided EPSS Outages

As a result of improved operational capability to enable and disable EPSS over 1,600 fuse, switch, or other lower-level outages were not line recloser or circuit breaker outages between May and July 2022.





Avoided Outages by Cause

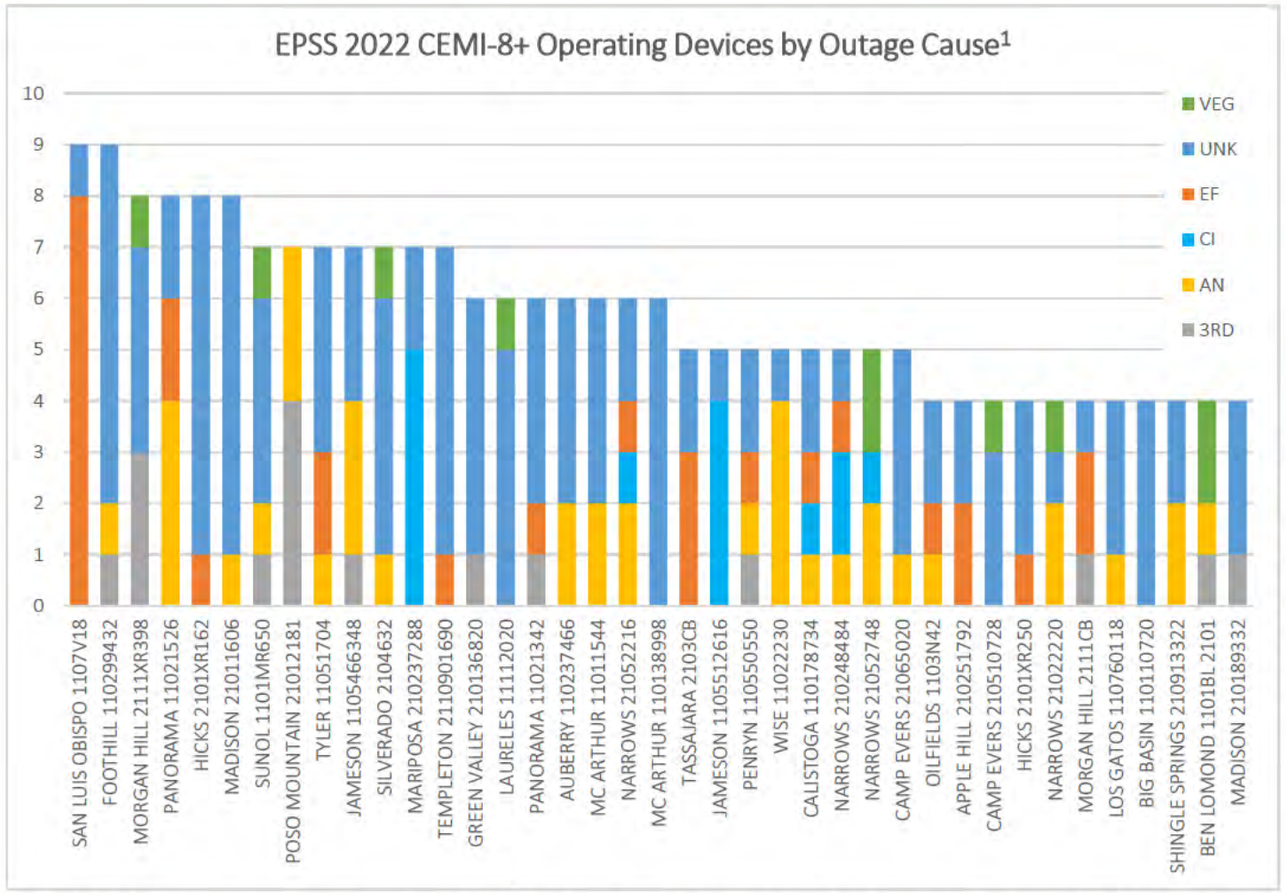
	May	June	July
ENV	4	6	1
CI	12	7	13
3RD	49	46	32
VEG	84	58	32
AN	69	66	53
EF	107	89	61
UNK	371	257	198

'Avoided Outages' aggregates increased customer impact based on presumed upstream EPSS device operation for unplanned outages on downstream fuses, trip savers, and reclosers when EPSS was not enabled.

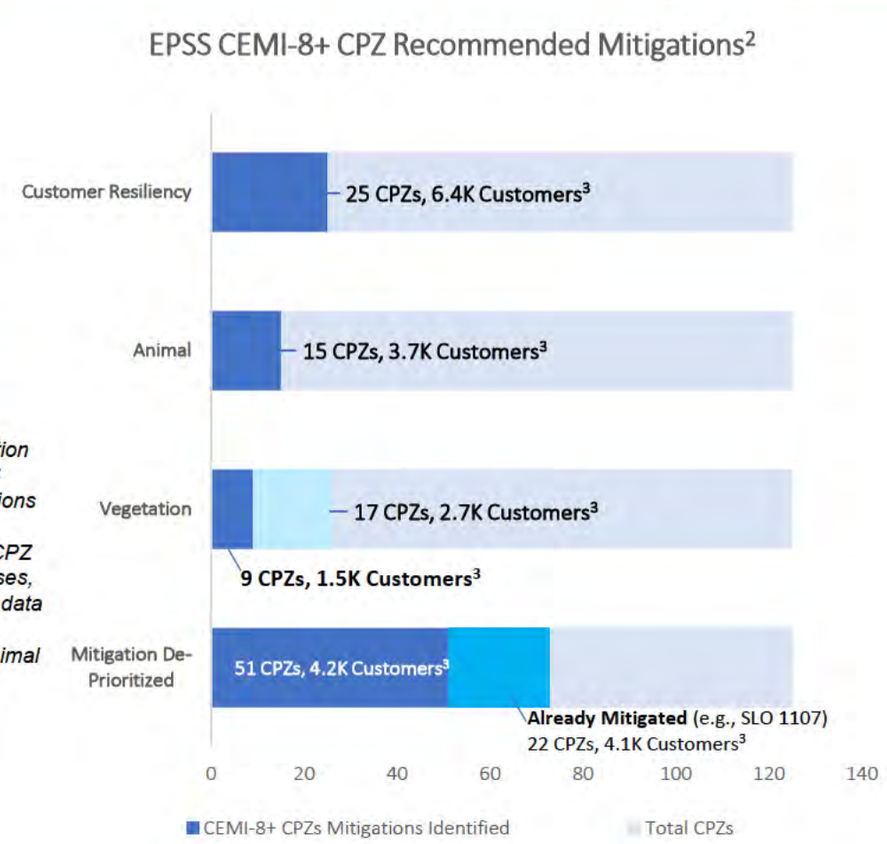
Data through 6/11/23 as of 6/12/23

EPSS CEMI-8+ Operating Device Outages by Cause

Informed by each CPZ's outage counts and causes, recommended mitigations for each CPZ have been selected for preliminary budgeting and planning purposes, with additional localized scoping pending.



Preliminary mitigation selection by EPSS PMO Field Operations and Engineering branch based on CPZ outage count, causes, location, and local data as well as 2023 Vegetation and Animal Retrofit programs.



1.Chart depicts CPZs experiencing more than four total EPSS outages. Full list of CPZs reviewed and resulting mitigations included in appendix.
2.Data as of January 31, 2022. CPZs may be included in more than one mitigation category.
3.SPIDs experiencing eight or more EPSS outages in 2022 currently located on CPZ in mitigation bucket as of January, 31 2023.

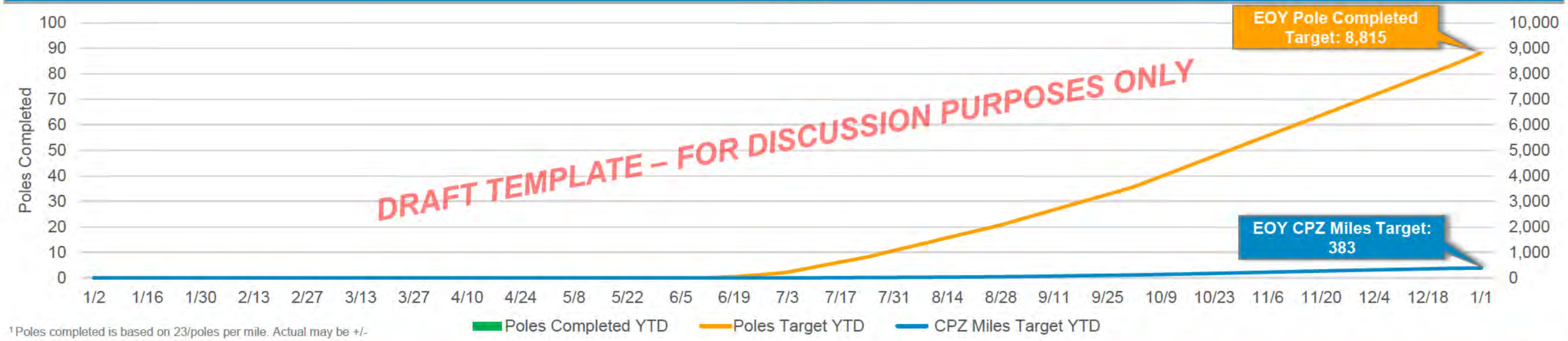
Data through 6/11/23 as of 6/12/23

Proactive Animal Mitigation

1. Status

	Last Week	MTD	YTD
Poles Completed[1]	-	-	-
Target	-	-	8,815
Direct CPZ Miles	-	-	-
Target Miles	-	-	383

3. Trend



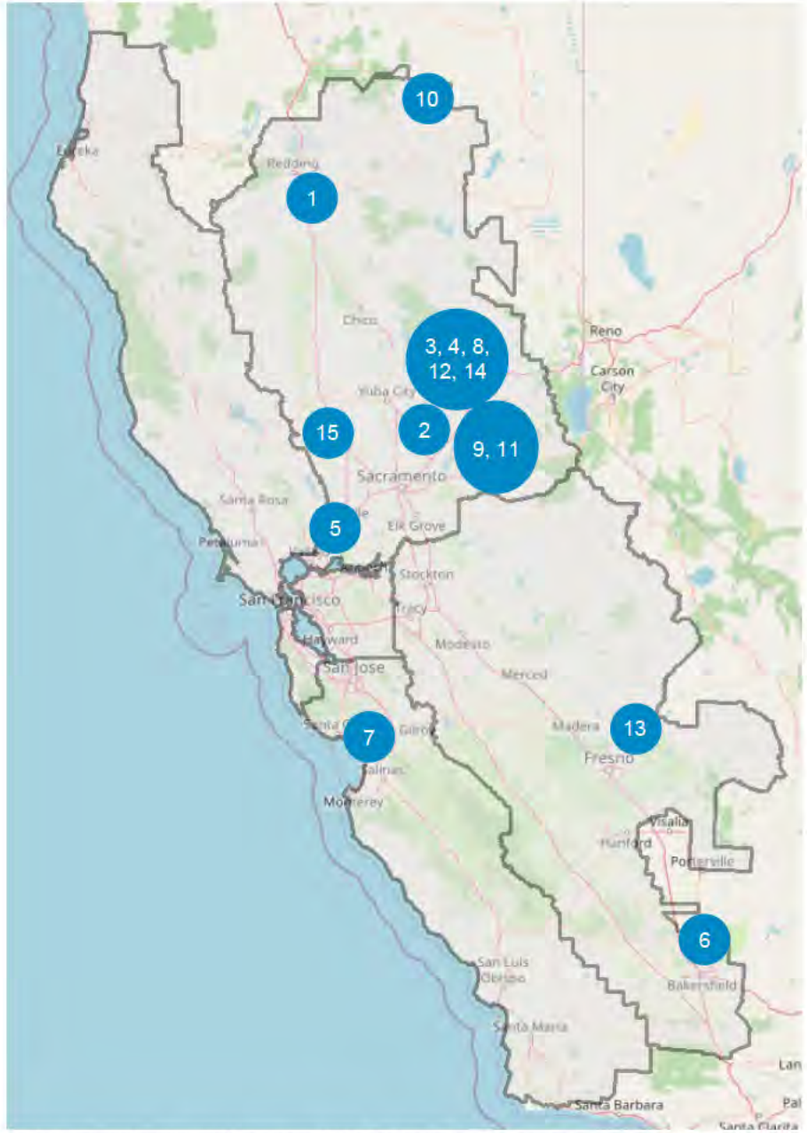
[1] Poles completed is based on 23/poles per mile. Actual may be +/-

Action Items

No.	Action	Description	Date	Owner	Status
1	**2023 Proactive Animal Mitigation Workplan Updates**	▪ Align on bird and critter mitigation workplan and resource prioritization with remaining 2023 field work ▪ Coordinate update of existing animal mitigation standards to include additional animal guard work and equipment proximity field review and execution	~~5/1/2023~~ 6/15/2023	[redacted]	Off Track

Data through 6/11/23 as of 6/12/23

Proactive Animal Mitigation



Total CPZs	Miles Mitigated	EPSS CEMI 8+ Customers Impacted[1]
15	383	~3,700

ID	CPZ	Animal Mitigations Needed?	CPZ Miles	Estimated Total Poles[2]	AN Outages	UNK Outages	Total Outages
1	PANORAMA 11021526	Yes	18	417	4	2	8
2	WISE 11022230	Yes	25	576	4	1	5
3	NARROWS 21052426	Yes	36	829	3	0	3
4	BRUNSWICK 111063100	Yes	4	96	3	0	3
5	JAMESON 1105466348	Yes	15	353	3	3	7
6	POSO MOUNTAIN 21012181	Yes	24	545	3	0	7
7	GREEN VALLEY 210112106	Yes	16	362	2	0	2
8	NARROWS 21052748	Yes	20	459	2	0	5
9	SHINGLE SPRINGS 210913322	Yes	41	942	2	2	4
10	MC ARTHUR 11011544	Yes	28	645	2	4	6
11	SHINGLE SPRINGS 21099372	Yes	19	445	2	1	3
12	NARROWS 21022220	Yes	28	653	2	1	4
13	AUBERRY 110237466	Yes	32	729	2	4	6
14	NARROWS 21052216	Yes	58	1,338	2	2	6
15	MADISON 21011606	Yes	19	426	1	7	8
			383	**8,815**	**37**	**27**	**77**

1.SPIDs experiencing eight or more EPSS outages in 2022 currently located on CPZs in proactive animal plan as of January 31, 2023. Is not reflective of all SPIDs that may be addressed.
2.Estimated Total Poles per SME input estimate of 23 poles per CPZ miles. Some poles may include animal mitigation, to be confirmed in the field.

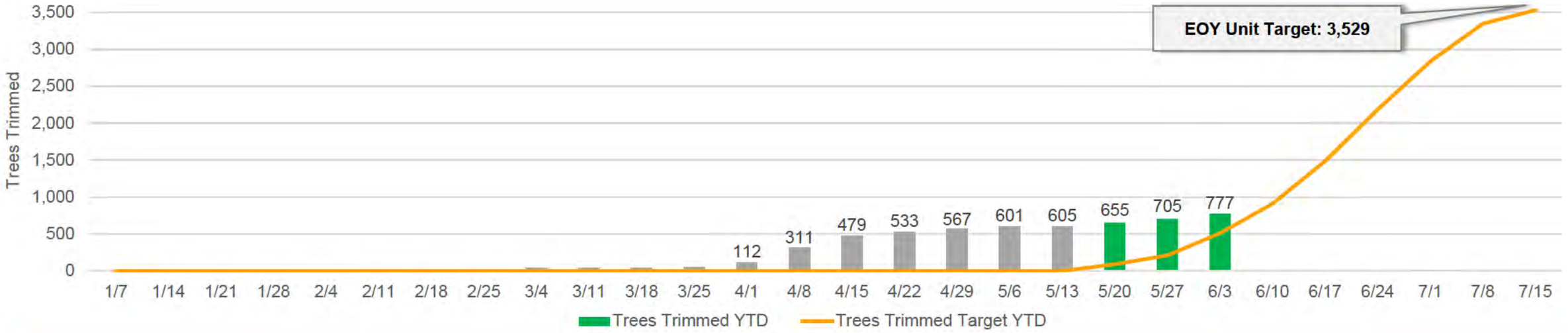
Data through 6/11/23
as of 6/12/23

VMOM – 2022 Carryover (Proactive + Reactive)

1. Status

	Last Week	MTD	YTD
Trees Trimmed[1]	74	54	777
Target[2]	300	-	511

3. Trend



Action Items

No.	Action	Description	Date	Owner	Status
1	**2023 VMOM Reporting Alignment**	▪ Align on 2023 reporting cadence and technology support for Vegetation Management for Operational Mitigation workplan	6/1/2023	[redacted]	Complete

1. Tree trimming data is reported on a weekly basis on Wednesday from the Vegetation Management team
2. As of June 3, 896 trees are constrained; these trees are tracked separately and will be added to the scope as the constraints are cleared

Data through 6/2/23 as of 6/7/23

VMOM – 2023 Extent of Condition

1. Status

	Last Week	MTD	YTD
Trees Trimmed	0	0	0
Target	0	0	0
EPSS Extent of Condition Projects	1	1	3
Past Due Extent of Condition Investigation	0	0	0

3. Trend

Action Items

No.	Action	Description	Date	Owner	Status
1	**2023 VMOM Reporting Alignment**	▪ Align on 2023 reporting cadence and technology support for Vegetation Management for Operational Mitigation workplan ▪ Assess ramp up of resources to complete first extent of conditions by June 16, 2023	6/1/2023	[redacted]	**Complete**

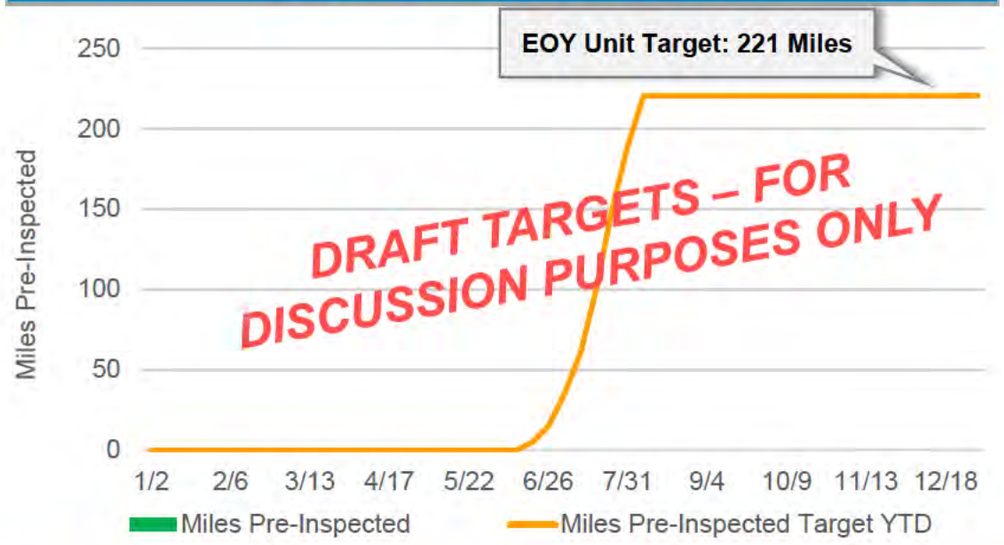
Data through 6/11/23 as of 6/12/23

VMOM – 2023 Proactive Tree Trimming

1. Status

	Last Week	MTD	YTD
Miles Pre-Inspected	0	0	0
Miles Target	0	0	0
Trees Trimmed	0	0	0
Trees Trimmed Target	0	0	0

3. Trend – Miles Pre-Inspected



3. Trend – Trees Trimmed

Action Items

No.	Action	Description	Date	Owner	Status
1	2023 VMOM Reporting Alignment	▪ Align on 2023 reporting cadence and technology support for Vegetation Management for Operational Mitigation workplan	6/1/2023	[redacted]	Complete

Tree trimming for 2023 Proactive Tree Trimming is scheduled to begin the week of June 26

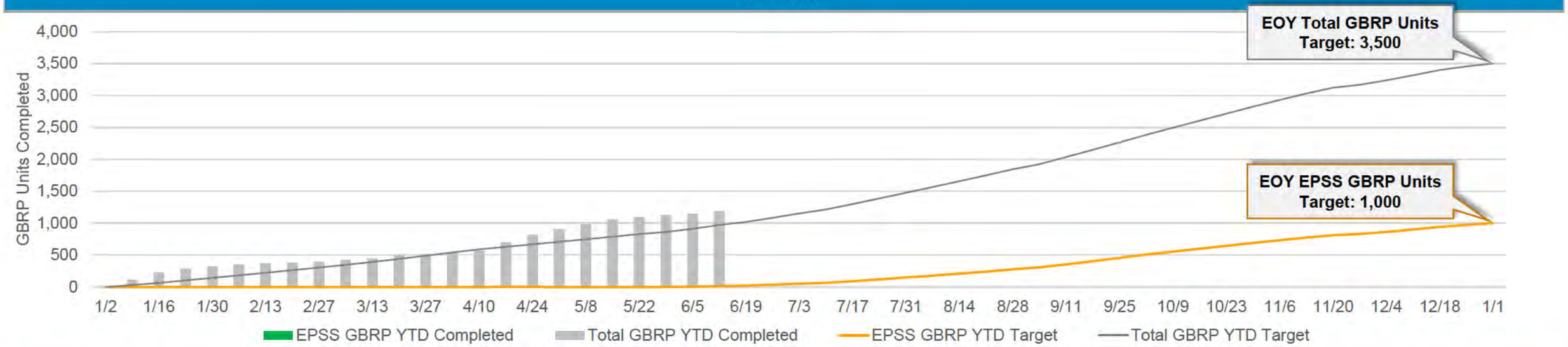
Data through 6/11/23 as of 6/12/23

Customer Resiliency – Generator & Battery Rebate Program (GBRP)

1. Status

	Last Week	MTD	YTD
EPSS GBRP	12	12	12
Target EPSS GBRP	10	14	14
Total GBRP	39	64	1,190
Target Total GBRP	52	82	959

3. Trend



Action Items

No.	Action	Description	Date	Owner	Status
1	**Customer Resiliency - GBRP Expansion Workplan Finalization and Execution**	▪ Update 2023 workplan per finalized scope	5/31/2023	[redacted]	**Complete**

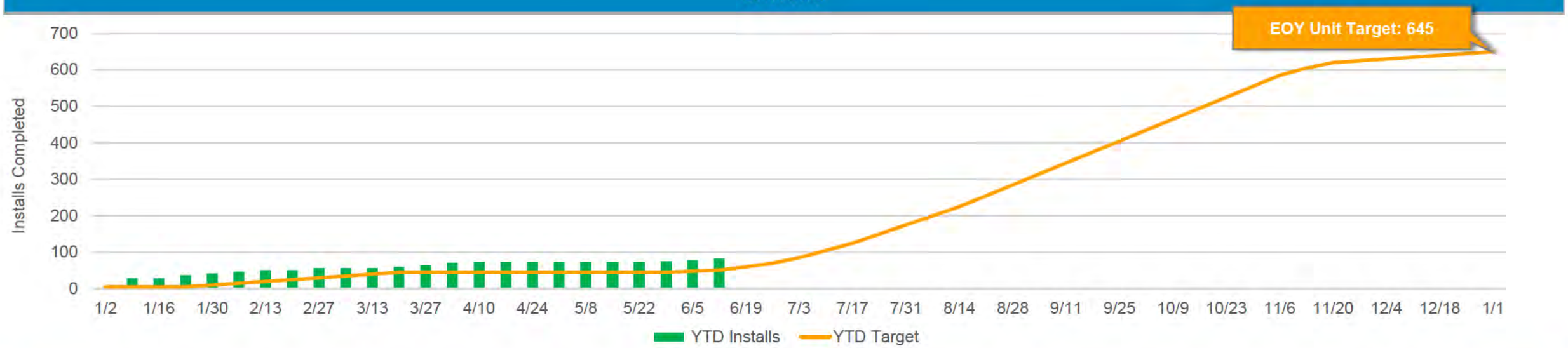
Data through 6/11/23 as of 6/12/23

Fixed Power Solutions – Residential Storage Initiative (RSI)

1. Status

	Last Week	MTD	YTD
Installs Completed	5	5	83
Target	3	6	51

3. Trend



Action Items

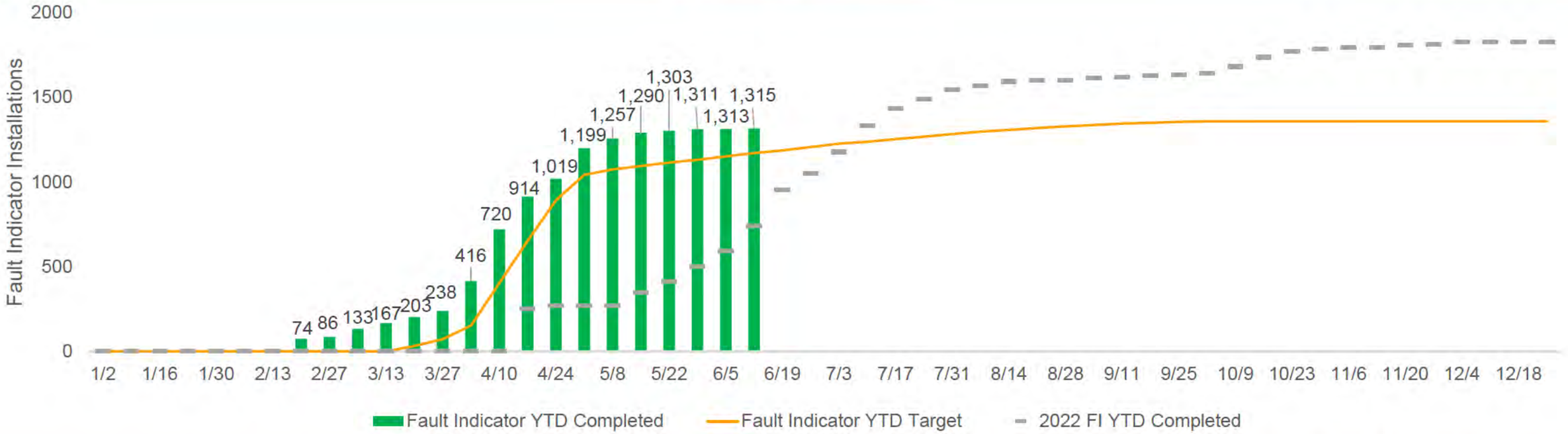
No.	Action	Description	Date	Owner	Status
1	**Customer Resiliency - RSI Workplan Finalization and Execution**	▪ Finalize Phase 2 contracts currently in Sourcing and authorize work execution for Fixed Power Solutions / RSI effort ▪ Update 2023 workplan per finalized scope	5/31/2023	[redacted]	Complete

Data through 6/11/23 as of 6/12/23

Fault Indicators

1. Status					
	2023			2022	
	Last Week	MTD	YTD	MTD	YTD
Fault Indicators Installed	2	4	1,315	148	739
Target	20	28	1,171	130	310

3. Trend: Fault Indicators



Data through 6/11/23 as of 6/12/23

Completed & Planned Engagement

Date	Meeting	LOB / Target Audience	Purpose
1/19/2023	2022 Regional Year in Review	Central Valley Field Ops	Provide each region with an overview of the 2022 EPSS program and regional performance relative to EPSS metrics and discuss program plan and goals for 2023.
1/23/2023		Bay Area Field Ops	
1/24/2023		North Coast Field Ops	
1/25/2023		Central Coast Field Ops	
1/26/2023		North Valley/Sierra Field Ops	
2/14/2023	EPSS Engagement w/ PSS	Public Safety Specialist Supervisors	Engage with PSS Supervisor team to discuss 2023 EPSS program goals and solicit feedback on opportunities for continued improvement.
Ongoing	EPSS Tmen / DLT Workshops	DLTs, Tmen	Socialize 2023 EPSS program goals and solicit feedback on 2022 program performance and opportunities for continued improvement.
5/4/2023	DCC Leader Engagement	DCC Leadership	Engage with DCC Leadership to align on 2023 program goals and enhancements.
5/18/2023	DCC Operator Engagement	North, South, and Central DCC	Socialize 2023 EPSS program goals and solicit feedback on 2022 program performance and opportunities for continued improvement.
5/25/2023	Follow-up Engagement w/ PSS	Public Safety Specialist Supervisors	Follow-up engagement with PSS Supervisor team to discuss mid-year program updates and eventual shift to peak season posture.
5/30/2023	Mid-Year EPSS Engagement	North Valley/Sierra Field Ops	Provide each region with a mid-year update of the program and progress against program goals and improvements for 2023.
5/30/2023		Central Coast Field Ops	
6/9/2023		North Coast Field Ops	
6/1/2023		Bay Area Field Ops	
6/9/2023		Central Valley Field Ops	

Data through 6/11/23 as of 6/12/23

EPSS Regional Year in Review Actions

No.	Action	Date	Owner	Status
1	Resume EPSS Outage Review DORs in partnership with Reliability Engineering team and explore integrating into existing Regional or Reliability Engineering DORs.	~~3/1/2023~~ ~~5/1/2023~~ *When applicable*	Regional Leadership w/ support from EPSS PMO	**On Track**
2	Refine and assess test-in & tail board bulletin process based around in-field conditions and improve real-time communications between field operations and meteorology.	6/30/2023	[redacted]	**On Track**
3	Target earlier distribution of AM EPSS Enablement Summary emails; begin distributing at 0500.	1/26/2023	EPSS PMO	**Complete**
4	Initiate proactive communication channels with customers to provide pre-season messaging and develop comms plan for outage communication and outage mitigation progress updates.	5/5/2023	[redacted]	**Complete**
5	Enhance ETOR procedure to improve accuracy and reliability for customers and begin tracking Level 1, blue-sky metrics for EPSS outages.	*TBD*	Outage Journey Team	**On Track**
6	Work with regional field operations teams to determine, and enhance where needed, resource availability for response and restoration of EPSS outages within our targets.	5/15/2023	Division Field Operations	**At Risk** *Due to Q1 storms*
7	Socialize the 2023 sectionalizing plan with field operations teams for appropriate planning and EPSS scope awareness.	4/15/2023	EPSS PMO	**Complete**

Data through 6/11/23 as of 6/12/23

Field Engagement Feedback

To date in 2023, we have engaged key lines of business to inform our partners on the EPSS program and solicit their feedback. We plan to continue these engagements throughout the course of the year.

Topic	Key Takeaways
Distribution Control Center Consistency	• EPSS Ops team to identify ways to support patrol strategy consistency between field crews and DCCs.
Patrol Strategies for Specific Scenarios	• Discussions around varied understanding of patrol strategies for specific scenarios reinforced our need to be engaging in-person.
Policy on Testing During Inclement Weather	• Teams voiced a desire to have a better policy on testing during inclement weather; we recognize this as a paint point and have begun discussions with key stakeholders to create and implement a solution.
Down Conductor Detection	• EPSS Ops Team to share locations and strategy for Downed Conductor Detection (DCD) devices and provide additional detail around the purpose and standards for DCD devices.
Engagement with EPSS Operations Team	• Leaders in multiple divisions requested the EPSS Ops team meet with the Field Operations teams.
Tags Canceled by CIRT Team	• The EPSS Ops Team is engaging with CIRT to ensure correct priority for EPSS related repair work and with our Restoration teams to document EPSS related issues in the tags for better tracking and support.

WMP Delivery

2023-2025 WMP Commitments

Timeline Category	Not Started	On Track	At Risk	Off Track	Complete	Total
2023 Commitments	0	26	7	0	3	36
3 Year Objectives	2	13	0	0	0	15
10 Year Objectives	11	0	0	0	0	**11**
Total	13	39	7	0	3	**62***

*62 Commitments = 31 Targets + 31 Objectives

10 Year Objectives

Not Started	On Track	At Risk	Off Track	Complete	Total
11	0	0	0	0	11

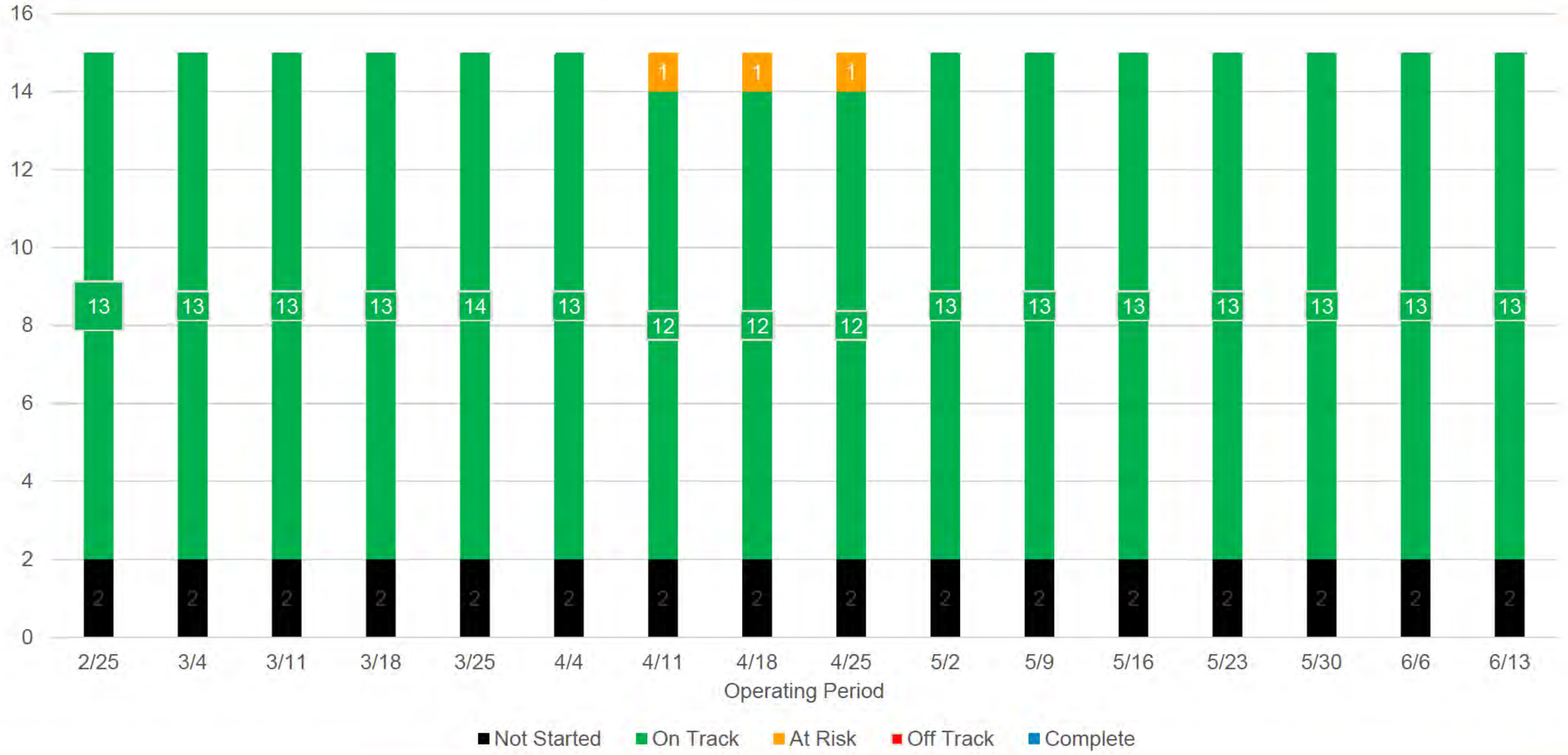
10 Year Objectives

ID	*2023 WMP Target Name*	Chief Sponsor (Execution)	WMP Start Date	Last Compliance Date
CO-03	Community Engagement - Meetings in 2026 -2032	[redacted]	1/1/2026	12/31/2032
EP-03	Maintain all hazards planning and preparedness program in 2026 - 2033	Angie Gibson	1/1/2026	12/31/2032
EP-05	Expand all hazards planning to include additional threats and scenarios in 2026 - 2033	Angie Gibson	1/1/2026	12/31/2032
GM-05	HFTD/HFRA Open Tag Reduction - Backlog Elimination - 7 Year Plan	Jeff Deal	1/1/2026	12/31/2029
PS-03	Evaluate enhancements for the PSPS Transmission guidance	Rod Robinson	1/1/2026	12/31/2032
PS-04	Evaluate incorporation of approved IPW enhancements into the PSPS Distribution guidance	Rod Robinson	1/1/2026	12/31/2032
PS-05	Battery Solutions	[redacted]	6/1/2023	12/31/2032
SA-06	Evaluate FPI and IPW Modeling enhancements in 2026 - 2033		1/1/2026	12/31/2032
VM-10	Inspections in HFTD and HFRA	Peter Kenny	TBD	12/31/2032
VM-11	Enhance and refine Focus Tree Inspection program	Peter Kenny	1/1/2026	12/31/2032
VM-12	Evaluate emerging technologies	Peter Kenny	TBD	12/31/2032

3 Year Objectives

Not Started	On Track	At Risk	Off Track	Complete	Total
2	13	0	0	0	15

3 Year Objectives Delivery Trend



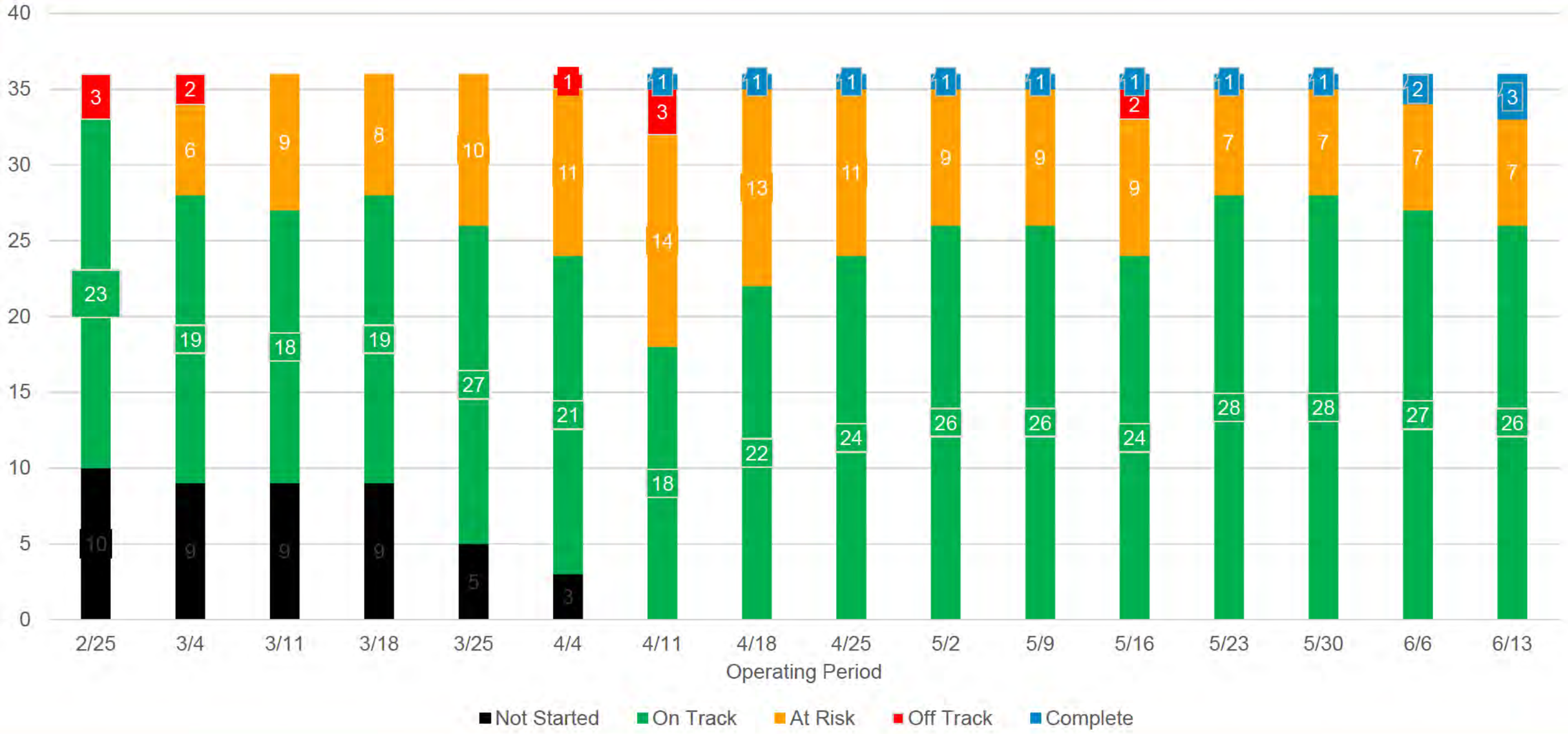
3 Year Objectives

2023 WMP Targets				Q1			Q2			Q3			Q4		
ID	*2023 WMP Target Name*	Chief Sponsor (Execution)	Last Compliance Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
AI-01	Retainment of Inspectors and Internal Workforce Development	Jason Regan	12/31/2025												
AI-11	Filling Asset Inventory Data Gaps	Martin Wyspianski	12/31/2025												
CO-01	Community Engagement - Meetings	[redacted]	9/30/2025												
EP-01	Complete PSPS and Wildfire Tabletop and Functional Exercises	Angie Gibson	11/30/2023												
EP-02	Maintain all hazards planning and preparedness program in 2023 - 2025	Angie Gibson	12/31/2025												
EP-04	Expand all hazards planning to include additional threats and scenarios in 2023 - 2025	Angie Gibson	12/31/2025												
GH-02	Evaluate Covered Conductor Effectiveness	Martin Wyspianski	3/29/2024 (2023 data)												
GM-01	Asset Inspections - Quality Assurance	[redacted]	12/31/2025												
GM-04	HFTD/HFRA Open Tag Reduction - Backlog Elimination - 3 Year Plan	Jeff Deal	12/31/2025												
GM-07	Updates on EPSS Reliability Study	Dave Canny	2/15/2024 (For 2023 data)												
PS-01	Evaluate enhancements for the PSPS Transmission guidance	Rod Robinson	12/31/2025												
PS-02	Evaluate incorporation of approved IPW enhancements into the PSPS Distribution guidance	Rod Robinson	12/31/2025												
SA-05	Evaluate FPI and IPW Modeling enhancements in 2023 - 2025	[redacted]	12/31/2025												
VM-03	Focused Tree Inspection Program	Peter Kenny	12/31/2025												
VM-09	Constraint Resolution Procedural Guideline	Peter Kenny	12/31/2025												

2023 Commitments – Execution

On Track	At Risk	Off Track	Complete	Total
26	7	0	3	36

2023 WMP Commitment Delivery Trend



2023 WMP Commitment At Risk

No	ID	WMP Target Name	Chief Sponsor (Execution)	Catch Back Plan	Meeting Catch Back	Catch Back Plan Due Date	Quarterly	WMP Target Due Date	Week(s) on list
1	GH-01	System Hardening - Distribution	Jamie Martin	Yes		6/30/2023	No	12/31/2023	5
2	GH-04	10K Undergrounding	Jamie Martin	Yes		6/30/2023	No	12/31/2023	15
3	GH-07	Distribution Protective Devices	[redacted]	Yes		8/12/2023	No	12/31/2023	11
4	GM-03	HFTD/HFRA Open Tag Reduction – Distribution Backlog	Jeff Deal	Yes		7/31/2023	No	12/31/2023	15
5	GM-06	EPSS - Down Conductor Detection (DCD)	Dave Canny	Yes		7/1/2023	No	12/31/2023	17
6	PS-07	PSPS Custom Impact Reduction	[redacted]	Yes		6/30/2023	No	12/31/2023	3
7	VM-04	Tree removal	Peter Kenny	Yes		6/30/2023	No	12/31/2023	6

Q2 Target Status

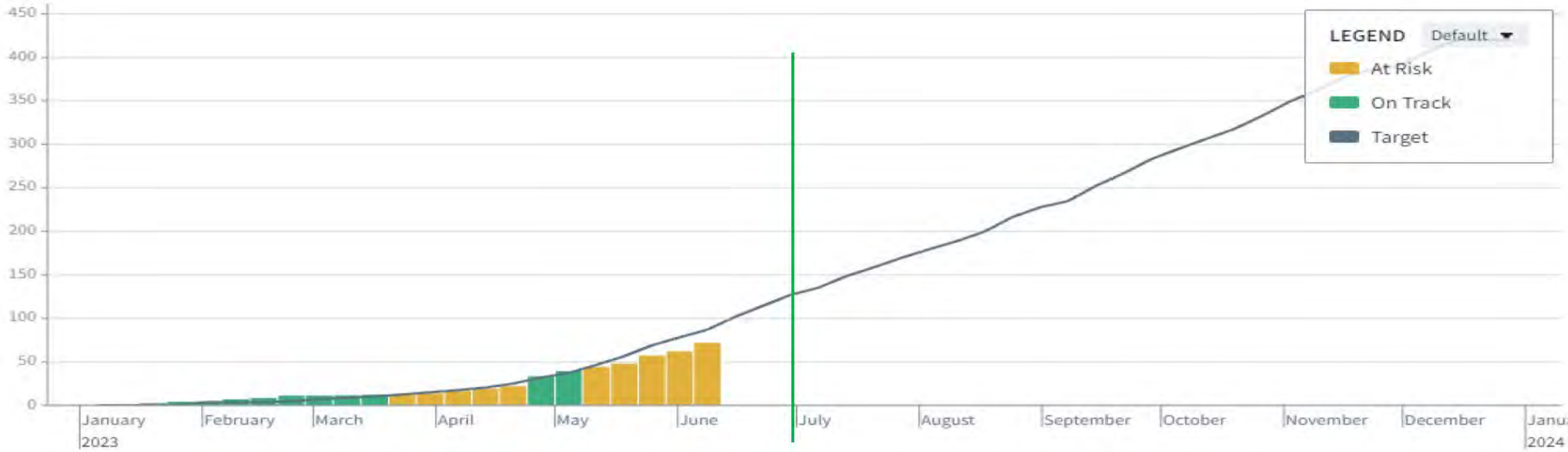
2023 Quarterly Targets										Q2
#	ID	2023 WMP Target Name	Owner	Q2 Internal Due Date	Q2 Compliance Date	Target / Target-Quarterly / Objective	YTD Actuals	Q2 Target	Q2 % Complete	WRCC Status
1	AI-02	Detailed Inspection Transmission – Ground	Jason Regan	6/15/2023	6/30/2023	Target (Quarterly)	22,708	18,000	126.16%	
2	AI-04	Detailed Inspection Transmission – Aerial	Jason Regan	6/15/2023	6/30/2023	Target (Quarterly)	20,586	17,000	121.09%	
3	AI-05	Detailed Inspection Transmission – Climbing	Jason Regan	6/15/2023	6/30/2023	Target (Quarterly)	1,616	1,200	134.67%	
4	AI-06	Perform transmission infrared inspections	Jason Regan	6/15/2023	6/30/2023	Target (Quarterly)	2,676	1,500	178.40%	
5	AI-07	Detailed Ground Inspections - Distribution	Jason Regan	6/15/2023	6/30/2023	Target (Quarterly)	43,270	30,000	144.23%	
6	AI-08	Supplemental Inspections - Substation Distribution	Jason Regan	6/15/2023	6/30/2023	Target (Quarterly)	50	46	108.70%	
7	AI-09	Supplemental Inspections - Substation Transmission	Jason Regan	6/15/2023	6/30/2023	Target (Quarterly)	34	31	109.68%	
8	AI-10	Supplemental Inspections - Hydroelectric Substations and Powerhouses	Jason Regan	6/15/2023	6/30/2023	Target (Quarterly)	38	41	92.68%	
9	CO-02	Community Engagement - Surveys	[redacted]	6/15/2023	6/30/2023	Target (Quarterly)	1	1	100.00%	
10	VM-01	LiDAR Routine Inspections - Transmission	Peter Kenny	6/15/2023	6/30/2023	Target (Quarterly)	17,808.39	17,500	101.76%	
11	VM-02	Pole Clearing Program	Peter Kenny	6/15/2023	6/30/2023	Target (Quarterly)	80,088	57,750	138.68%	
12	VM-05	Defensible Space Inspections - Distribution Substation	Martin Wyspianski	6/15/2023	6/30/2023	Target (Quarterly)	130	130	100.00%	
13	VM-06	Defensible Space Inspections - Transmission Substation	Martin Wyspianski	6/15/2023	6/30/2023	Target (Quarterly)	55	55	100.00%	
14	VM-07	Defensible Space Inspections - Hydroelectric Substations and Powerhouses	Andrew Williams	6/15/2023	6/30/2023	Target (Quarterly)	61	61	100.00%	

2023 WMP Commitment Status

2023 WMP Targets								Q1			Q2			Q3			Q4		
ID	*2023 WMP Target Name*	Chief Sponsor (Execution)	Q2 Compliance Date	Q3 Compliance Date	Internal Due Date	Last Compliance Date	Target / Target-Quarterly / Objective	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
AI-01	Retainment of Inspectors and Internal Workforce Development	Jason Regan	N/A	N/A	11/30/2023	12/31/2025	Objective (3 Year)												
AI-02	Detailed Inspection Transmission – Ground	Jason Regan	6/30/2023	N/A	6/30/2023	7/31/2023	Target (Quarterly)												
AI-03	Develop Distribution Aerial Inspections program	Jason Regan	N/A	N/A	10/31/2023	12/31/2023	Objective												
AI-04	Detailed Inspection Transmission – Aerial	Jason Regan	6/30/2023	N/A	6/30/2023	7/31/2023	Target (Quarterly)												
AI-05	Detailed Inspection Transmission – Climbing	Jason Regan	6/30/2023	N/A	6/30/2023	7/31/2023	Target (Quarterly)												
AI-06	Perform transmission infrared inspections	Jason Regan	6/30/2023	9/30/2023	11/30/2023	12/31/2023	Target (Quarterly)												
AI-07	Detailed Ground Inspections - Distribution	Jason Regan	6/30/2023	9/30/2023	11/30/2023	12/31/2023	Target (Quarterly)												
AI-08	Supplemental Inspections - Substation Distribution	Jason Regan	6/30/2023	N/A	6/30/2023	7/31/2023	Target (Quarterly)												
AI-09	Supplemental Inspections - Substation Transmission	Jason Regan	6/30/2023	N/A	6/30/2023	7/31/2023	Target (Quarterly)												
AI-10	Supplemental Inspections - Hydroelectric Substations and Powerhouses	Jason Regan	6/30/2023	N/A	6/30/2023	7/31/2023	Target (Quarterly)												
AI-11	Filling Asset Inventory Data Gaps	Martin Wyspianski	N/A	N/A	12/1/2025	12/31/2025	Objective (3 Year)												
CO-01	Community Engagement - Meetings	[redacted]	N/A	N/A	9/30/2023	9/30/2025	Objective (3 Year)												
CO-02	Community Engagement - Surveys		6/30/2023	9/30/2023	10/31/2023	12/31/2023	Target (quarterly)												
CO-03	Community Engagement - Meetings in 2026 -2032		N/A	N/A		12/31/2032	Objective (10 Year)												
EP-01	Complete PSPS and Wildfire Tabletop and Functional Exercises	Angie Gibson	N/A	N/A	11/10/2023	11/30/2023	Objective (3 Year)												
EP-02	Maintain all hazards planning and preparedness program in 2023 - 2025	Angie Gibson	N/A	N/A	12/1/2023	12/31/2025	Objective (3 Year)												
EP-03	Maintain all hazards planning and preparedness program in 2026 - 2033	Angie Gibson	N/A	N/A		12/31/2032	Objective (10 Year)												
EP-04	Expand all hazards planning to include additional threats and scenarios in 2023 - 2025	Angie Gibson	N/A	N/A	12/1/2023	12/31/2025	Objective (3 Year)												
EP-05	Expand all hazards planning to include additional threats and scenarios in 2026 - 2033	Angie Gibson	N/A	N/A		12/31/2032	Objective (10 Year)												
EP-06	Review, and revise the CERP and 2 Wildfire Related Annexes on a yearly basis	Angie Gibson	N/A	N/A	12/1/2023	12/31/2023	Target												
GH-01	System Hardening - Distribution	Jamie Martin	N/A	N/A	12/31/2023	12/31/2023	Target												
GH-02	Evaluate Covered Conductor Effectiveness	Martin Wyspianski	N/A	N/A	3/29/2024	3/29/2024 (2023 data)	Objective (3 Year)												
GH-03	Evaluate and Implement Covered Conductor Effectiveness Impact on Inspections and Maintenance Standards	Martin Wyspianski	N/A	N/A	12/1/2023	12/31/2023	Objective												
GH-04	10K Undergrounding	Jamie Martin	N/A	N/A	12/31/2023	12/31/2023	Target												
GH-05	System Hardening - Transmission	Ahmad Ababneh	N/A	N/A	11/30/2023	12/31/2023	Target												
GH-06	System Hardening - Transmission Shunt Splices	[redacted]	N/A	N/A	10/31/2023	12/31/2023	Target												
GH-07	Distribution Protective Devices		N/A	N/A	11/30/2023	12/31/2023	Target												
GH-08	Surge Arrestor - Removals		N/A	N/A	10/31/2023	12/31/2023	Target												
GH-09	Distribution Line Motor Switch Operator (MSO) - Replacements		N/A	N/A	11/30/2023	12/31/2023	Target												
GH-10	Non-Exempt Expulsion Fuse - Removal		N/A	N/A	11/30/2023	12/31/2023	Target												
GM-01	Asset Inspections - Quality Assurance		N/A	N/A	12/1/2023	12/31/2025	Objective (3 Year)												
GM-02	HFTD/HFRA Open Tag Reduction - Transmission	Ahmad Ababneh	N/A	N/A	12/31/2023	12/31/2023	Target												
GM-03	HFTD/HFRA Open Tag Reduction – Distribution Backlog	Jeff Deal	N/A	N/A	12/31/2023	12/31/2023	Target												
GM-04	HFTD/HFRA Open Tag Reduction - Backlog Elimination - 3 Year Plan	Jeff Deal	N/A	N/A	12/31/2025	12/31/2025	Objective (3 Year)												
GM-05	HFTD/HFRA Open Tag Reduction - Backlog Elimination - 7 Year Plan	Jeff Deal	N/A	N/A		12/31/2029	Objective (10 Year)												
GM-06	EPSS - Down Conductor Detection (DCD)	Dave Canny	N/A	N/A	11/30/2023	12/31/2023	Target												
GM-07	Updates on EPSS Reliability Study	Dave Canny	N/A	N/A	2/15/2024	2/15/2024 (For 2023 data)	Objective (3 Year)												
PS-01	Evaluate enhancements for the PSPS Transmission guidance	Rod Robinson	N/A	N/A	9/1/2023	12/31/2025	Objective (3 Year)												
PS-02	Evaluate incorporation of approved IPW enhancements into the PSPS Distribution guidance	Rod Robinson	N/A	N/A	9/1/2023	12/31/2025	Objective (3 Year)												
PS-03	Evaluate enhancements for the PSPS Transmission guidance	Rod Robinson	N/A	N/A		12/31/2032	Objective (10 Year)												
PS-04	Evaluate incorporation of approved IPW enhancements into the PSPS Distribution guidance	Rod Robinson	N/A	N/A		12/31/2032	Objective (10 Year)												
PS-05	Battery Solutions	[redacted]	N/A	N/A		12/31/2032	Objective (10 Year)												
PS-06	Provide 12,000 new or replacement portable batteries to PG&E customers at risk of PSPS or EPSS		N/A	N/A	12/6/2023	12/31/2023	Target												
PS-07	PSPS Customer Impact Reduction		N/A	N/A	12/15/2023	12/31/2023	Target												
SA-01	AI in Wildfire Cameras	Angie Gibson	N/A	N/A	6/15/2023	6/30/2023	Objective												
SA-02	Line Sensor - Installations	Rod Robinson	N/A	N/A	10/31/2023	12/31/2023	Target												
SA-03	EFD and DFA Reporting	Rod Robinson	N/A	N/A	11/15/2023	12/31/2023	Objective												
SA-04	FPI and IPW Modeling - Revision Evaluation		N/A	N/A	12/1/2023	12/31/2023	Objective												
SA-05	Evaluate FPI and IPW Modeling enhancements in 2023 - 2025		N/A	N/A	12/1/2023	12/31/2025	Objective (3 Year)												
SA-06	Evaluate FPI and IPW Modeling enhancements in 2026 - 2033		N/A	N/A		12/31/2032	Objective (10 Year)												
VM-01	LiDAR Routine Inspections - Transmission	Peter Kenny	6/30/2023	9/30/2023	6/15/2023	12/31/2023	Target (Quarterly)												
VM-02	Pole Clearing Program	Peter Kenny	6/30/2023	9/30/2023	9/30/2023	9/30/2023	Target (Quarterly)												
VM-03	Focused Tree Inspection Program	Peter Kenny	N/A	N/A	12/1/2023	12/31/2025	Objective (3 Year)												
VM-04	Tree removal	Peter Kenny	N/A	N/A	12/1/2023	12/31/2023	Target												
VM-05	Defensible Space Inspections - Distribution Substation	Andrew Williams/[redacted]	6/30/2023	N/A	9/15/2023	9/30/2023	Target (Quarterly)												
VM-06	Defensible Space Inspections - Transmission Substation	Andrew Williams/[redacted]	6/30/2023	9/30/2023	6/15/2023	7/31/2023	Target (Quarterly)												
VM-07	Defensible Space Inspections - Hydroelectric Substations and Powerhouses	Andrew Williams/[redacted]	6/30/2023	N/A	6/15/2023	7/31/2023	Target (Quarterly)												
VM-08	Vegetation Management – Quality Verification	[redacted]	N/A	N/A	12/1/2023	12/31/2023	Target												
VM-09	Constraint Resolution Procedural Guideline	Peter Kenny	N/A	N/A	12/1/2023	12/31/2025	Objective (3 Year)												
VM-10	Inspections in HFTD and HFRA	Peter Kenny	N/A	N/A		12/31/2032	Objective (10 Year)												
VM-11	Enhance and refine Focus Tree Inspection program	Peter Kenny	N/A	N/A		12/31/2032	Objective (10 Year)												

GH-01 System Hardening - Distribution

YTD Baseline



Week Ending	1/7	1/14	1/21	1/28	2/4	2/11	2/18	2/25	3/4	3/11	3/18	3/25	4/1	4/8	4/15	4/22	4/29	5/6	5/13	5/20	5/27	6/3	6/10	6/17	6/24	7/1	7/8	7/15	7/22	7/29	8/5	8/12	8/19	8/26	9/2	9/9	9/16	9/23	9/30	10/7	10/14	10/21	10/28	11/4	11/11	11/18	11/25	12/2	12/9	12/16	12/23
OP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
Target YTD				.6	3.5	3.5	3.5	4.7	7.1	8.7	10.3	12.5	15	17.5	20.5	25	32	37.2	46.5	56.6	69	78.2	87	101.8	114.4	127	135.2	148.4	158.7	169.5	179.5	188.8	199.8	216.5	227.7	234.8	252.2	266.6	283	294.9	306.5	317.7	332.8	349.2	362.4	378.3	386	391.1	407	419.8	420
Target Week of				.6	2.9	0	0	1.2	2.4	1.6	1.6	2.2	2.5	2.5	3	4.5	7	5.2	9.3	10.1	12.4	9.2	8.8	14.8	12.6	12.6	8.2	13.2	10.3	10.8	10	9.3	11	16.7	11.2	7.1	17.4	14.4	16.4	11.9	11.6	11.2	15.1	16.4	13.2	15.9	7.7	5.1	15.9	12.8	.2
YTD Actual	-	.8	2.3	4.2	4.6	7	8.3	11.2	11.2	11.62	12.4	12.4	13.6	16.33	19.16	22.24	33.42	39.19	44.15	47.98	57.28	62.15	72.04																														

GH-01 System Hardening - Distribution Catch Back Plan

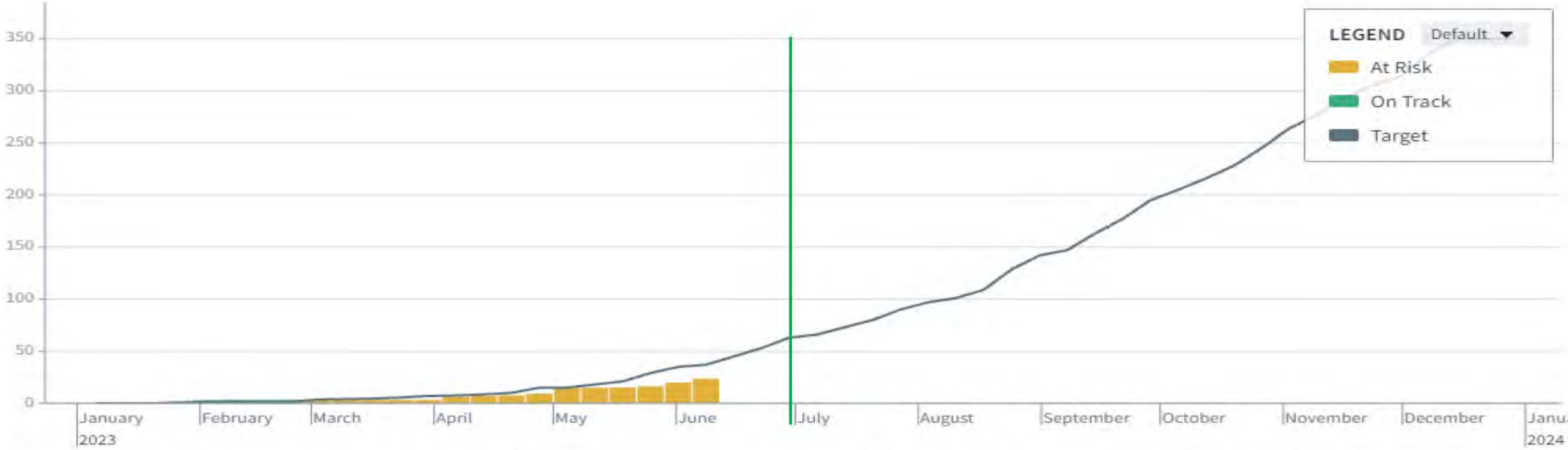
Catch Back Plan Due Date: 6/30/2023 - WMP Target Due Date: 12/31/23
Chief Sponsor: Jamie Martin

YTD Actual	YTD Target	Gap to Target
72.04	87	14.96

Program	Date Raised	Problem	Point of Cause	Containment Action	Containment Status	Root Cause	Countermeasure Action	Catch Back	Owner	Countermeasure Status
10K Under-grounding	3/6/23	The program is behind target with 44.2 miles completed YTD against Target of 46.5	The multiple storm/snow events in Jan/Feb and into March have prevented access to underground construction sites where work is otherwise ready to execute.	Project Management team reviewing projects ready for construction to validate that crews are scheduled to complete work as aggressively as possible. [As of 5/12 there are over 170.8 miles in construction and another 73.6 miles ready for construction.]		2023 Underground work is still largely being executed on a "just in time basis" such that there is little buffer time (or "float") in project schedules to accommodate weather or other unforeseen delays.	Program is accelerating work readiness activities with estimating having recently completed 400 miles of work for 2023 & 2024 that will allow the program to build in some buffer against future delays. Additional focus placed on projects in PEND and with daily reporting to track progress/delays	6/30/23 Number of units to be delivered (as part of the catch back plan): 82.85 miles OH/Rem/UG Number of units delivered by Target Date: 127	[redacted] with Construction and Contract Land, Environ-mental & EPWC partners	
				Complete 400 system hardening UG miles out of PEND / permitting, targeting 6/1 [Some of these miles will carry over to 2024.]					

GH-04 10K Undergrounding

YTD Baseline



Week Ending	1/7	1/14	1/21	1/28	2/4	2/11	2/18	2/25	3/4	3/11	3/18	3/25	4/1	4/8	4/15	4/22	4/29	5/6	5/13	5/20	5/27	6/3	6/10	6/17	6/24	7/1	7/8	7/15	7/22	7/29	8/5	8/12	8/19	8/26	9/2	9/9	9/16	9/23	9/30	10/7	10/14	10/21	10/28	11/4	11/11	11/18	11/25	12/2	12/9	12/16	12/23
OP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
Target YTD				.6	1.4	1.4	1.4	1.4	3.5	4	4.5	5.5	7	7.5	8.5	10	15	15	18	21	29	35	37	45	53	63	66	73	80	90	97	101	109	128.5	142	147	163	177	195	205	216	228	245	264	277	294	305	314	335	350	350
Target Week of				.6	.8	0	0	0	2.1	.5	.5	1	1.5	.5	1	1.5	5	0	3	3	8	6	2	8	8	10	3	7	7	10	7	4	8	19.5	13.5	5	16	14	18	10	11	12	17	19	13	17	11	9	21	15	0
YTD Actual	-	-	.2	1.5	2.95	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	6.12	6.93	7.58	9.25	14.54	15.06	15.36	16.12	19.78	23.76																													

GH-04 10K Undergrounding Catch Back Plan

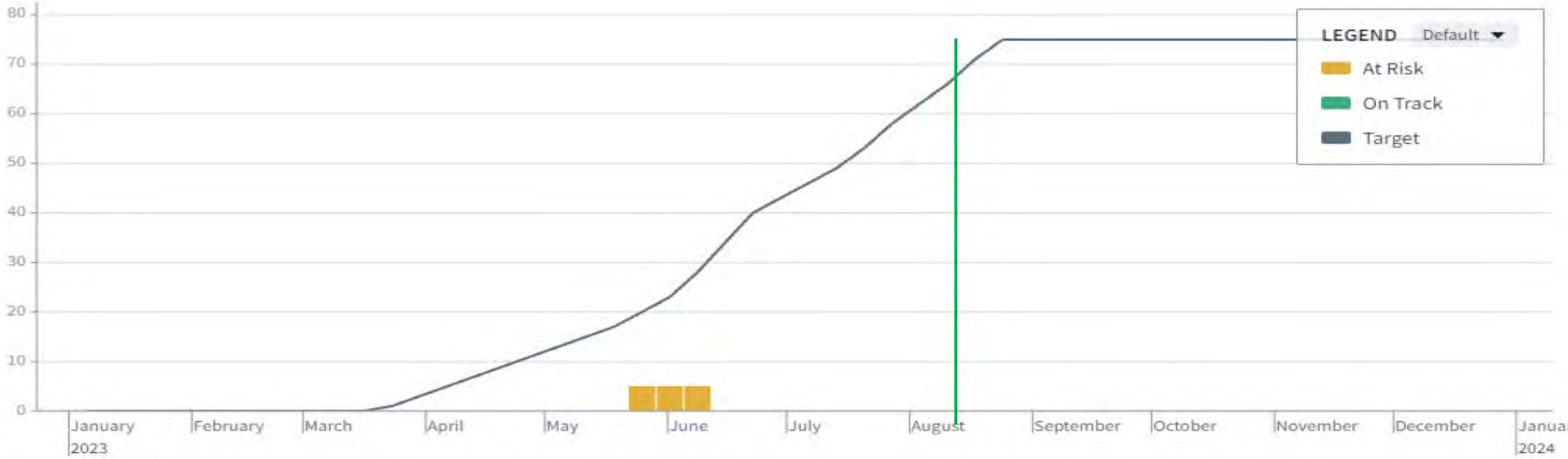
Catch Back Plan Due Date: 6/30/23 (1 change)
WMP Target Due Date: 12/31/23
Chief Sponsor: Jamie Martin

YTD Actual	YTD Target	Gap to Target
23.76	37	13.24

Program	Date Raised	Problem	Point of Cause	Containment Action	Status	Root Cause	Countermeasure Action	Containment Due Date	Catch Back	Owner	Status
10K Under-grounding	3/6/23	Program has fallen behind work delivery goals with 9.2 miles of UG completed & QA reviewed as of 5/1 against a target of 15 miles.	The multiple storm/snow events in Q1 delayed work and prevented access to underground construction sites where work was otherwise ready to execute.	Project Management team reviewing projects ready for construction to validate that crews are scheduled to complete work as aggressively as possible. [As of 5/1 there are 117 miles in construction and another 54 ready for construction.] Interim Target is 160 miles Civil Construction Complete by 6/30		2023 Underground work is still largely being executed on a "just in time basis" such that there is little buffer time (or "float") in project schedules to accommodate weather or other unforeseen delays.	Program is accelerating work readiness activities with estimating having recently completed 400 miles of work for 2023 & 2024 that will allow the program to build in some buffer against future delays.	6/30/2023 Number of units to be delivered: 160 miles civil construction complete Number of units delivered as of 5/1: 22.5	6/30/23 Number of units to be delivered (as part of the catch back plan): 60.9 Number of units delivered by Target Date: 63	[redacted] with Construction and Contract partners	
				Complete 400 system hardening UG miles out of PEND / permitting, targeting 6/1 [Some of these miles will carry over to 2024.]				6/1/2023 Number of units to be delivered: 400 miles out of PEND / permitting (some will support 2024) Number of units delivered as of 5/1: 109		[redacted] with Land, Environ-mental & EPWC partners	

GH-07 Distribution Protective Devices

YTD Baseline



Week Ending	1/7	1/14	1/21	1/28	2/4	2/11	2/18	2/25	3/4	3/11	3/18	3/25	4/1	4/8	4/15	4/22	4/29	5/6	5/13	5/20	5/27	6/3	6/10	6/17	6/24	7/1	7/8	7/15	7/22	7/29	8/5	8/12	8/19	8/26	9/2	9/9	9/16	9/23	9/30	10/7	10/14	10/21	10/28	11/4	11/11	11/18	11/25	12/2	12/9	12/16	12/23
OP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
Target YTD												1	3	5	7	9	11	13	15	17	20	23	28	34	40	43	46	49	53	58	62	66	71	75																			
Target Week of												1	2	2	2	2	2	2	2	2	3	3	5	6	6	3	3	3	4	5	4	4	5	4																			
YTD Actual	-											0	0	0	0	0	0	0	0	0	5	5	5																															

GH-07 Distribution Protective Devices Catch Back Plan

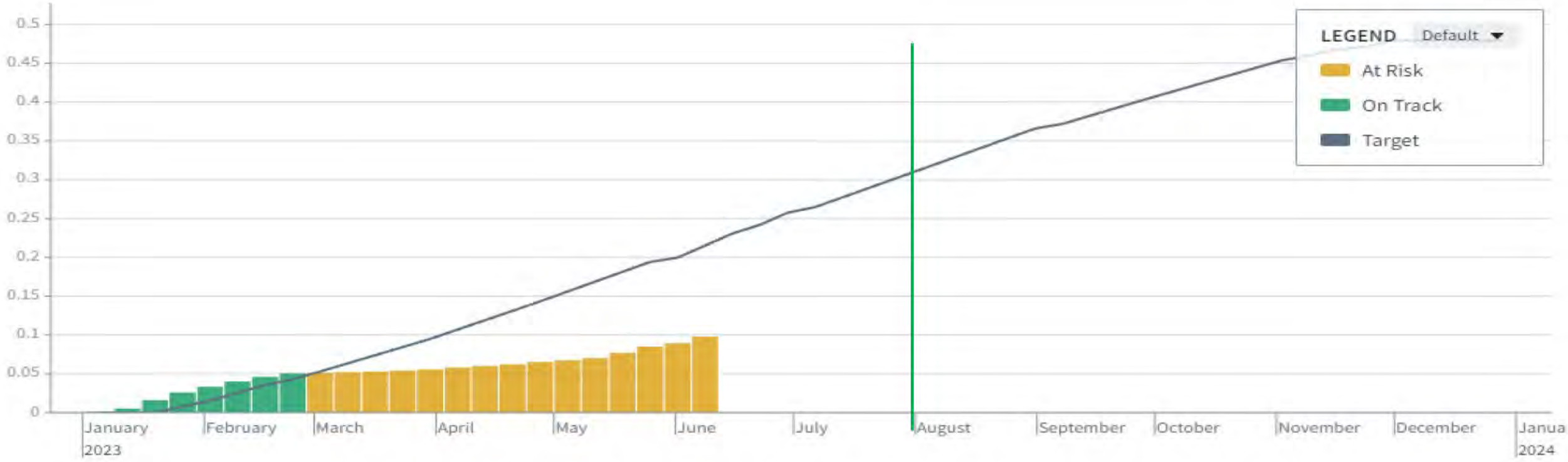
Catch Back Plan Due Date: 8/12/23 (1 change)
WMP Target Due Date: 12/31/22
Chief Sponsor: [redacted]

YTD Actual	YTD Target	Gap to Target
5	28	23

Program	Date Raised	Problem	Point of Cause	Containment Action	Containment Status	Root Cause	Countermeasure Action	Catch Back Due Date	Owner	Countermeasure Status
Dist Protective Device	03/27/2023	Program is behind due to Resource constraint and availability supporting Q1 storm restoration.	Q1 Storm caused scheduled order cancellations and deferrals due to crews supporting storms activities. Some projects are slow getting ready for construction as IT Telecom is prioritizing DCD Program	Re-schedule construction-ready jobs based on crew and DO calendar availability: Get more jobs pre commissioned and ready for construction by partnering with IT and DLT Work with execution to get all ready scheduled (construction resource availability) Partner with the DCC on prioritization to get clearances when needed Resource planning will issue a prioritization plan at the end of May which may impact this containment plan		Not completed due to resource and storm restoration, re-scheduling in progress.	Complete re-scheduling of construction-ready jobs, schedule jobs that are coming out of pre-commissioning and soon to be construction-ready with the coordination of the DO	8/12/2023 Number of units to be delivered (as part of the catch back plan): 66 Number of units delivered by Target Date: 66	[redacted]	

GM-03 HFTD/HFRA Open Tag Reduction – Distribution Backlog

YTD Baseline



Week Ending	1/7	1/14	1/21	1/28	2/4	2/11	2/18	2/25	3/4	3/11	3/18	3/25	4/1	4/8	4/15	4/22	4/29	5/6	5/13	5/20	5/27	6/3	6/10	6/17	6/24	7/1	7/8	7/15	7/22	7/29	8/5	8/12	8/19	8/26	9/2	9/9	9/16	9/23	9/30	10/7	10/14	10/21	10/28	11/4	11/11	11/18	11/25	12/2	12/9	12/16	12/23
OP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
Target YTD				.008	.015	.026	.036	.043	.053	.063	.074	.084	.095	.107	.119	.131	.143	.156	.169	.181	.194	.2	.215	.231	.242	.257	.265	.277	.29	.302	.315	.328	.34	.353	.366	.372	.382	.393	.403	.413	.424	.434	.444	.454	.46	.468	.471	.479	.48		
Target Week of				.008	.008	.01	.01	.007	.01	.011	.011	.011	.011	.012	.012	.012	.012	.013	.013	.013	.013	.006	.016	.016	.011	.016	.007	.013	.013	.013	.013	.013	.013	.013	.013	.006	.011	.011	.011	.01	.01	.01	.01	.01	.006	.009	.002	.009			
YTD Actual	.001	.005	.016	.026	.033	.04	.046	.051	.051	.052	.053	.054	.056	.058	.06	.06	.06	.07	.07	.08	.09	.09	.1																														

GM-03 HFTD/HFRA Open Tag Reduction – Distribution Backlog Catch Back Plan

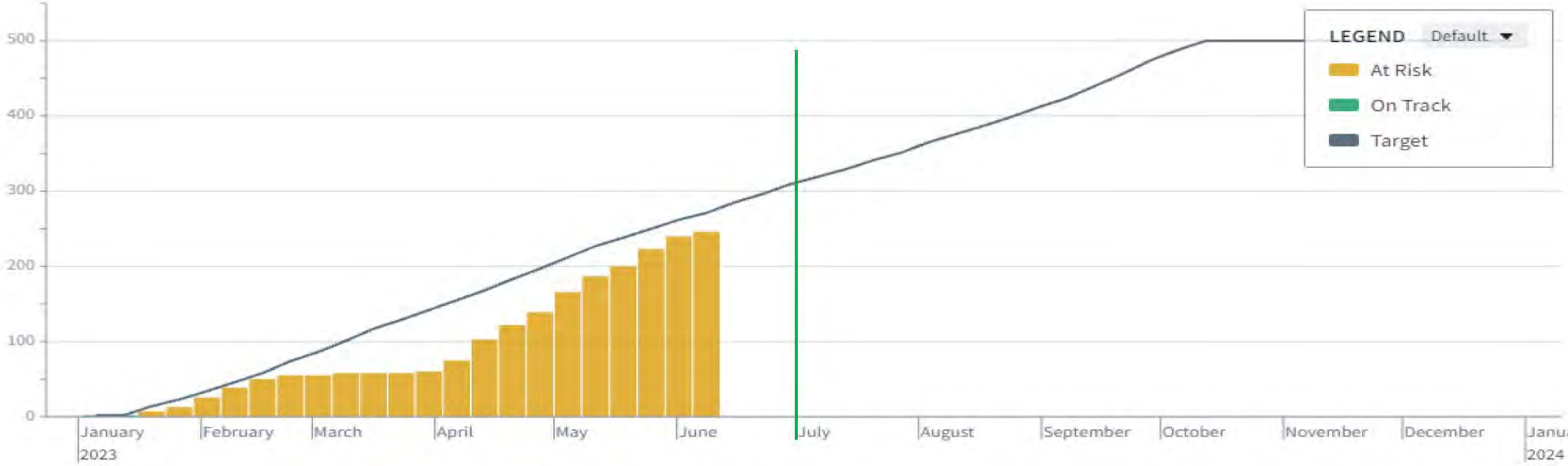
Catch Back Plan Due Date: 7/31/23 - WMP Target Due Date: 12/31/22
Chief Sponsor: Jeff Deal

YTD Actual	YTD Target	Gap to Target
0.1	0.22	0.12

Program	Date Raised	Problem	Point of Cause	Containment Action	Status	Root Cause	Countermeasure Action	Catch Back Due Date	Owner	Status
EC Notifications Risk Reduction	3/7/23	Less v3 wildfire risk points completed in 2023 then planned	Storm response has utilized most of the resources that were planned to execute this work in Q1, and New Business was prioritized in April and May.	Reschedule work planned in first two months of year to Q2+		Not enough resources to complete EC notifications and storm work	Reschedule work planned in first two months of year to Q2+	**7/31/23** Number of units to be delivered (as part of the catch back plan): 38.72 Number of units delivered by Target Date: 47.14	[redacted]	

GM-06 EPSS - Down Conductor Detection (DCD)

YTD Baseline



Week Ending	1/7	1/14	1/21	1/28	2/4	2/11	2/18	2/25	3/4	3/11	3/18	3/25	4/1	4/8	4/15	4/22	4/29	5/6	5/13	5/20	5/27	6/3	6/10	6/17	6/24	7/1	7/8	7/15	7/22	7/29	8/5	8/12	8/19	8/26	9/2	9/9	9/16	9/23	9/30	10/7	10/14	10/21	10/28	11/4	11/11	11/18	11/25	12/2	12/9	12/16	12/23
OP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
Target YTD	2	2	14	23	34	46	58	74	86	101	117	129	142	155	168	183	197	212	227	238	250	262	271	285	296	309	319	329	341	351	365	376	387	399	412	424	440	456	474	488	500									0
Target Week of	2.0	0.0	12.0	9.0	11.0	12.0	12.0	16.0	12.0	15.0	16.0	12.0	13.0	13.0	13.0	15.0	14.0	15.0	15.0	11.0	12.0	12.0	9.0	14.0	11.0	13.0	10.0	10.0	12.0	10.0	14.0	11.0	11.0	12.0	13.0	12.0	16.0	16.0	18.0	14.0	12.0								
YTD Actual	2	2	7	13	26	39	50	55	55	58	58	58	60	76	104	122	139	166	187	200	233	240	246																												

GM-06 EPSS - Down Conductor Detection Catch Back Plan

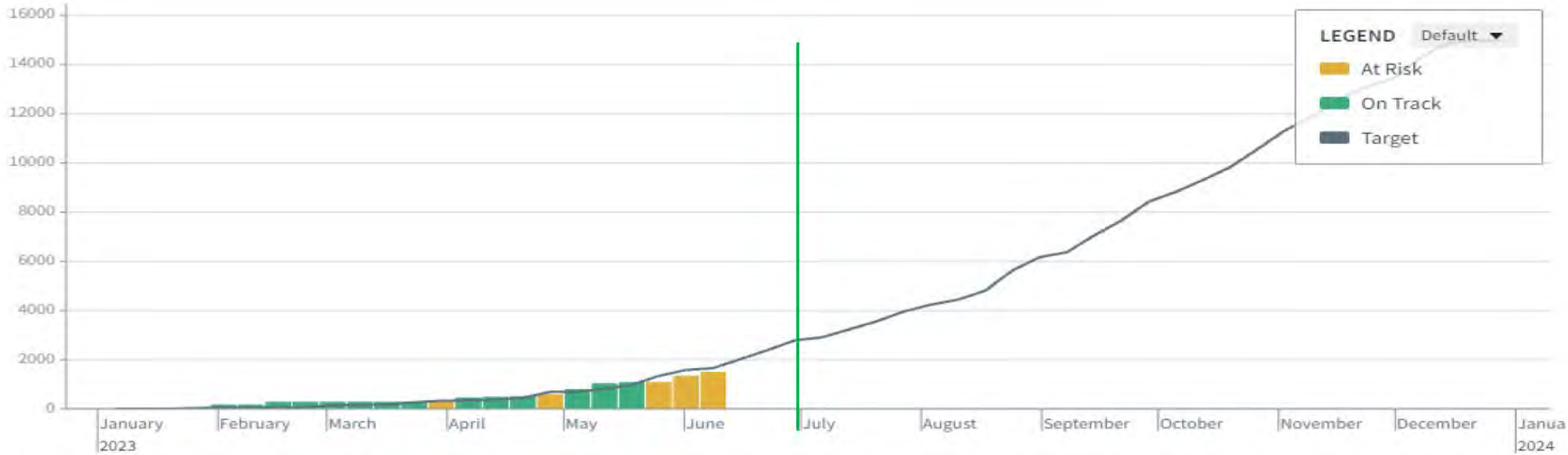
Catch Back Plan Due Date: 7/1/23 (4 changes)
WMP Target Due Date: 11/30/23
Chief Sponsor: Dave Canny

YTD Actual	YTD Target	Gap to Target
246	271	25

Program	Date Raised	Problem	Point of Cause	Containment Action	Status	Root Cause	Countermeasure Action	Target Date	Owner	Status
Down Conductor Detection	2/21/23	DCD install schedule delayed due to ADMS screen build delays, telecom issues and construction schedule constraint.	ADMS delays in building screens necessary for DCD testing, coupled with telecom communication issues, resulted in delays in Los Padres installs, while ADMS and construction schedule constraint are impacting Sierra install schedules.	Expediting DCD install schedule in non-ADMS cutover divisions (Humboldt) and installing DCD on existing/new Beckwith controllers to supplement work delays in ADMS LP/SI divisions.		DCD install cannot be completed while Telecom/SCADA communication issues remain unresolved. Due to Q1 storm impacts, construction resources and schedule availability are more limited.	ADMS/Telecom teams prioritizing issues resolution in LP. Expediting Humboldt and installing DCD on existing/new Beckwith controllers to get back on plan.	7/1/23 Number of units to be delivered (as part of the catch back plan): 254 Number of units delivered by Target Date: 309	[redacted]	

PS-07 PSPS Custom Impact Reduction

YTD Baseline



Week Ending	1/7	1/14	1/21	1/28	2/4	2/11	2/18	2/25	3/4	3/11	3/18	3/25	4/1	4/8	4/15	4/22	4/29	5/6	5/13	5/20	5/27	6/3	6/10	6/17	6/24	7/1	7/8	7/15	7/22	7/29	8/5	8/12	8/19	8/26	9/2	9/9	9/16	9/23	9/30	10/7	10/14	10/21	10/28	11/4	11/11	11/18	11/25	12/2	12/9	12/16	12/23
OP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
Target YTD				24	55.9	55.9	55.9	55.9	139.7	159.7	179.7	265	324.9	344.9	384.8	444.7	689.7	689.7	809.5	974.7	1339	1579	1659	2024	2388	2788	2907	3232	3557	3957	4237	4422	4803	4807	5630	6169	6369	7053	7658	8422	8821	9305	9830	10554	11312	11877	12601	13086	13445	14283	14881	15001
Target Week of				24	31.9				83.8	20	20	85.3	59.9	20	39.9	59.9	245		119.8	165.2	364.8	239.5	79.8	364.8	364.8	392.5	119.8	324.9	324.9	399.9	279.5	205.1	364.8	823.9	539	199.6	684.2	604.3	764	399.2	484.6	524.5	724.1	758.5	564.4	724.1	484.6	359.3	838.4	598.8	118.8
YTD Actual	0	0	8	59.9	172	178	287	287	287	287	287	287	287	462	495	521	587.2	587.2	690	1091	1091	1346	1505																													

PS-07 Customer Impact Reduction Catch Back Plan

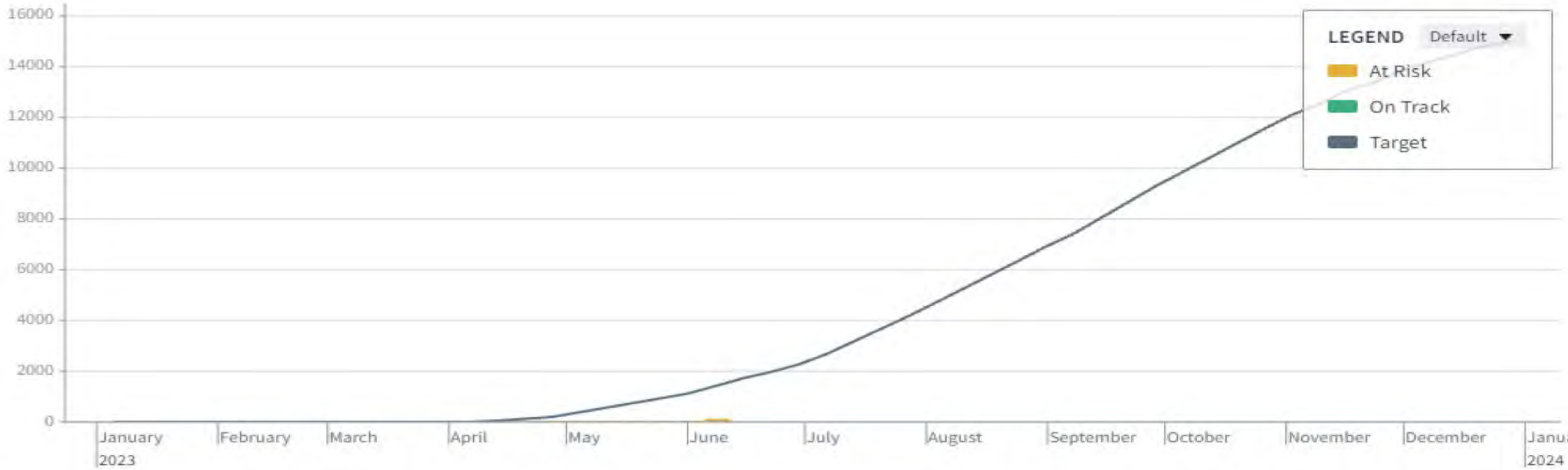
Catch Back Plan Due Date: 6/30/23 - WMP Target Due Date: 12/31/23
Chief Sponsor: [redacted]

YTD Actual	YTD Target	Gap to Target
1,505	1,658.8	153.8

Program	Date Raised	Problem	Point of Cause	Containment Action	Status	Root Cause	Countermeasure Action	Containment Due Date	Catch Back	Owner	Status
PSPS Customer Impact Reduction	5/30/23	Customer impact reduction has fallen behind YTD target of 690 customer reduction with a YTD performance of 587 customer reduction as of 5/1.	The target for PS-07 is tied to the miles of Undergrounding completed and MSO devices installed. The multiple storm/snow events in Q1 delayed work and prevented access to underground construction sites where work was otherwise ready to execute.	Interim Target is 160 miles Civil Construction Complete by 6/30. Complete 400 system hardening UG miles out of PEND / permitting, targeting 6/1 [Some of these miles will carry over to 2024.]		2023 Underground work is still largely being executed on a "just in time basis" such that there is little buffer time (or "float") in project schedules to accommodate weather or other unforeseen delays.	The Undergrounding Program is accelerating work readiness activities for 2024 and beyond work with estimating having recently completed 400 miles of system hardening work for 2023 & 2024 that will allow the program to build in some buffer against future delays.	6/30/2023 Will follow UG containment plan	6/30/23 Will follow UG catch back plan	[redacted]	

VM-04 Tree Removal

YTD Baseline



Week Ending	1/7	1/14	1/21	1/28	2/4	2/11	2/18	2/25	3/4	3/11	3/18	3/25	4/1	4/8	4/15	4/22	4/29	5/6	5/13	5/20	5/27	6/3	6/10	6/17	6/24	7/1	7/8	7/15	7/22	7/29	8/5	8/12	8/19	8/26	9/2	9/9	9/16	9/23	9/30	10/7	10/14	10/21	10/28	11/4	11/11	11/18	11/25	12/2	12/9	12/16	12/23
OP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
Target YTD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	125	200	385	570	755	940	1,134	1,434	1,734	1,974	2,274	2,674	3,174	3,674	4,174	4,710	5,255	5,800	6,345	6,906	7,406	8,031	8,656	9,281	9,851	10,421	10,991	11,561	12,107	12,531	13,061	13,379	13,866	14,181	14,496	15,000
Target Week of	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	75	75	185	185	185	185	194	300	300	240	300	400	500	500	500	536	545	545	545	561	500	625	625	625	570	570	570	570	546	424	530	318	487	315	315	504
YTD Actual	0	0	0	0	11	24	24	24	24	24	30	30	30	33	33	33	33	33	33	33	33	49	125																												

VM-04 Tree Removal Inventory Catch Back Plan

Catch Back Plan Due Date: 06/30/23
WMP Target Due Date: 12/31/23
Chief Sponsor: Peter Kenny

YTD Actual	YTD Target	Gap to Target
125	1,434	1,309

Program	Date Raised	Problem	Point of Cause	Containment Action	Status	Root Cause	Countermeasure Action	Catch Back Due Date	Owner	Status
VM-04 Tree Removal Inventory	04/18/23	Current technology field guides require update prior to releasing work for crews to account for new programmatic changes	New Program recently added to the Vegetation Portfolio	Develop revised guidance and implement change communication prior to work start		Robust change management plan is needed prior to introduction of new programs	Develop Process for new programs development	06/30/23 Number of units to be delivered (as part of the catch back plan): 1,974 Number of units delivered by Target Date: 1,974	[redacted]	

Summary of WMP Intervenor/Reply Comments

- On 5/26, we received 20 sets of comments on our 2023-2025 WMP totaling over 650 pages.
- Intervenor comments focused on:
  - Undergrounding: cost and justification.
  - System Inspections: backlog and QA/QC pass rate.
  - Vegetation Management: EVM tree removal inventory, contractor performance, and wood management.
  - Risk Modeling: risk factors and modeling guidelines.
  - EPSS: notification protocols, impact studies, and customer support.
- With a 5-page limitation for our response, we focused on the issues that were most prevalent in discovery and having a potential for a revision notice. We conducted working sessions with the functional areas to prepare the comments. We also sought feedback from the functional areas on all the issues catalogued to consider addressing any other concerns raised.
- On 6/6, we filed our reply comments with Energy Safety. We will be providing a deeper dive into our responses at the WRGSC next week.

WMP Data Requests

2023 WMP Discovery Questions

Due Today	Due 1 Business Day	Due 2 Business Days	Due Later	Complete	Total
0	0	0	0	400	400

56 Total Requests | 400 Total Questions | 1065 Sub-Parts

WMP Data Requests

2023 WMP Discovery: By Requestor

REQUESTOR	Data Requests	Questions	Sub-Parts	% of Total Questions	Questions Requiring Extensions
OEIS	9	71	207	18%	10
CPUC - SPD	8	32	40	8%	2
CalPA	19	201	693	50%	20
TURN	13	50	113	13%	7
MGRA	6	41	9	10%	5
GPI	1	5	3	1%	0
TOTAL	56	400	1065	100%	44

WMP Data Requests

2023 WMP Discovery:
Questions & Sub-Parts per Category by Requestor

	Total		OEIS		CPUC - SPD (Safety Policy Division)		CalPA		GPI		MGRA		TURN	
WMP Section	**Questions**	**Sub-Parts**	**Questions**	**Sub-Parts**	**Questions**	**Sub-Parts**	**Questions**	**Sub-Parts**	**Questions**	**Sub-Parts**	**Questions**	**Sub-Parts**	**Questions**	**Sub-Parts**
Grid Design and System Hardening	95	249	7	12	14	24	52	179	0	0	0	0	22	34
Vegetation Management and Inspections	74	236	12	47	0	0	52	183	5	3	0	0	5	3
Risk Methodology and Assessment	43	62	3	8	1	2	7	23	0	0	28	9	4	20
Areas for Continued Improvement	37	118	16	53	5	10	8	21	0	0	0	0	8	34
Grid Operations and Procedures	35	70	1	5	1	0	23	65	0	0	10	0	0	0
Public Safety Power Shutoff	18	51	3	5	1	2	13	40	0	0	0	0	1	4
Wildfire Mitigation Strategy Development	17	58	5	11	0	0	8	42	0	0	0	0	4	5
Grid Design, Operations, and Maintenance	12	30	1	3	1	1	7	22	0	0	0	0	3	4
Emergency Preparedness	11	24	9	18	1	0	1	6	0	0	0	0	0	0
Open Work Orders	8	25	2	9	0	0	6	16	0	0	0	0	0	0
N/A	8	37	2	6	0	0	4	25	0	0	0	0	2	6
Other	42	105	10	30	8	1	20	71	0	0	3	0	1	3
Grand Total	**400**	**1065**	**71**	**207**	**32**	**40**	**201**	**693**	**5**	**3**	**41**	**9**	**50**	**113**

WMP Data Requests

2023 WMP Discovery:
Office of Energy Infrastructure Safety (OEIS)

WMP Category	# of Questions	# of Sub-Parts
Areas for Continued Improvement	**16**	**53**
ACI PG&E-22--08 Better Application of Specific Lessons Learned from Utility-Caused Fires	2	4
ACI PG&E-22--09 Evaluation of Model Reprioritization and Fire Rebuild in High-Risk Areas	1	3
ACI PG&E-22--10 Justification of Weather Station Network Density	1	1
ACI PG&E-22--20 Asset Inspection Drone Program Pilot	1	1
ACI PG&E-22--21 Asset Inspections Quality Assurance and Quality Control ACI PG&E-22--08 Better Application of Specific Lessons Learned from Utility-Caused Fires	2	6
ACI PG&E-22-24 – Progression of Vegetation Management Maturity	1	8
ACI PG&E-22-32 – Updates on EPSS Reliability Study	2	14
ACI PG&E-22-34 – Revise Process of Prioritizing Wildfire Mitigations	2	5
ACI PG&E-22-28 – Progression of Effectiveness of Enhanced Clearances Joint Study	1	0
ACI PG&E-22-31 – PSPS Wind Threshold Change Evaluations	2	3
ACI PG&E-22-33 – Progress on Filling Asset Inventory Data Gaps	1	8

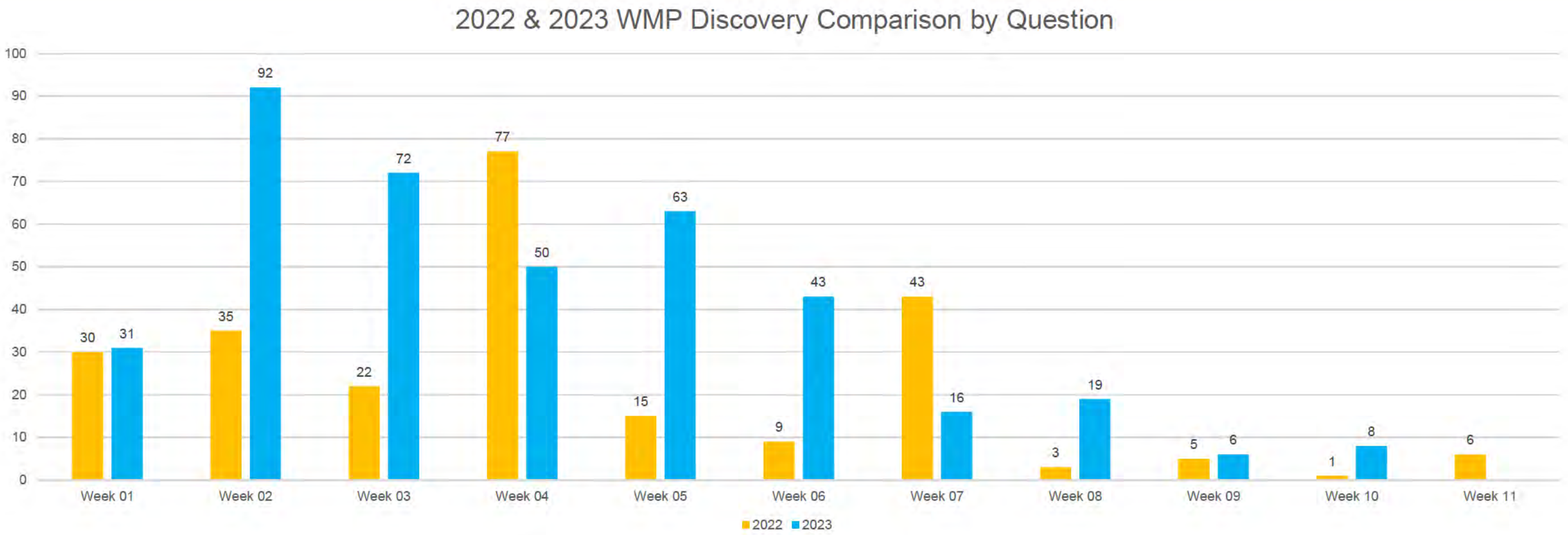
WMP Category (cont.)	# of Questions	# of Sub-Parts
Vegetation Management and Inspections	**12**	**47**
Clearance	1	2
Discontinued Programs	1	2
Focused Tree Inspections	4	17
High-Risk Species	1	3
N/A	2	10
Tree Removal Inventory	1	2
Vegetation Management Inspections	1	3
Wood and Slash Management	1	8
Emergency Preparedness	**9**	**18**
Customer Support in Wildfire and PSPS Emergencies	3	8
N/A	1	2
Objectives	2	4
Overview	1	0
Public Emergency Communication Strategy	1	0
Personnel Training	1	4

WMP Data Requests

2023 WMP Discovery:
CPUC - SPD (Safety Policy Division)

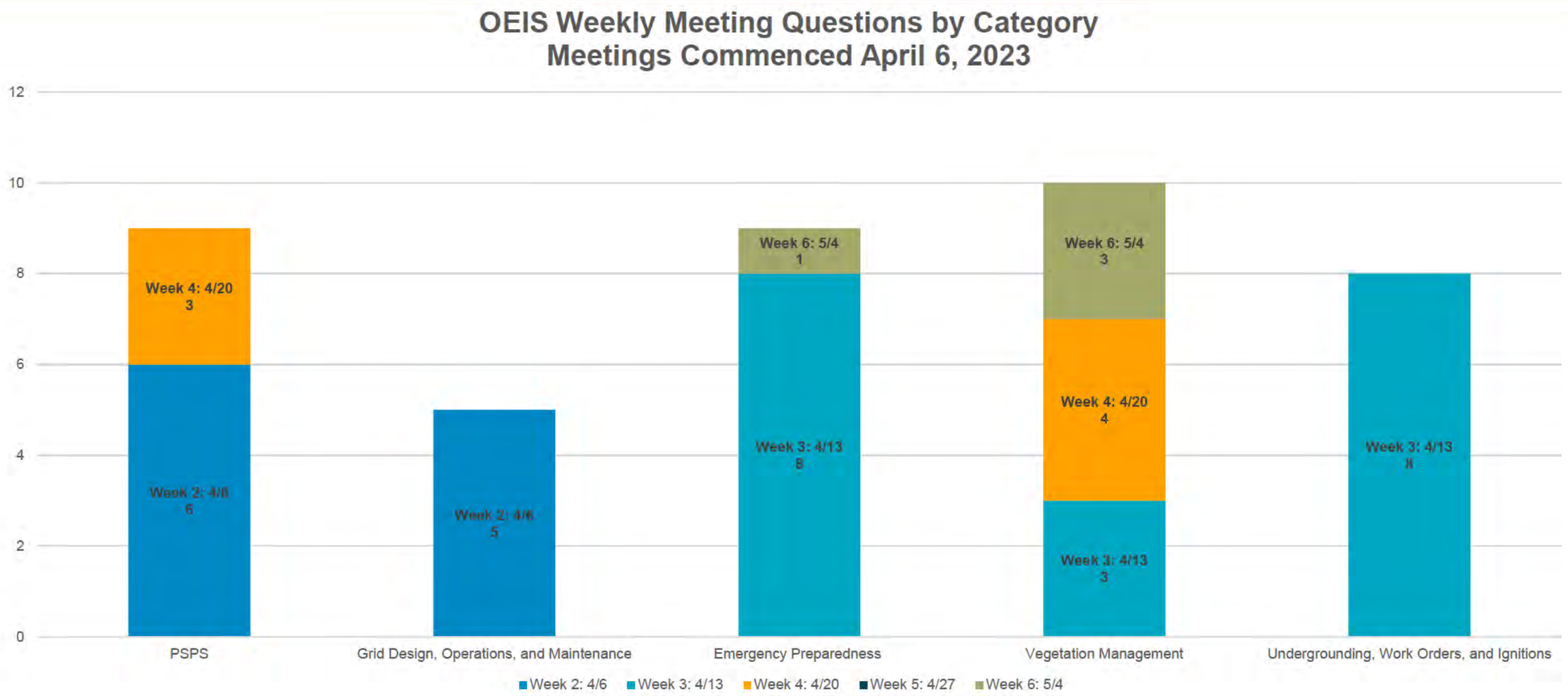
WMP Category	# of Questions	# of Sub-Parts
Grid Design and System Hardening	**14**	**24**
Covered Conductor Installation – Distribution	2	0
Undergrounding of Electric Lines and/or Equipment – Distribution	4	13
Undergrounding of Electric Lines and/or Equipment – Distribution	8	11
Areas for Continued Improvement	**5**	**10**
ACI PG&E-22-06 – Addressing Increase in Risk Events	3	6
ACI PG&E-22-16 – Progress and Updates on Undergrounding and Risk Prioritization	2	4
Situational Awareness and Forecasting	**4**	**0**
Fire Potential Index	4	0

WMP Data Requests



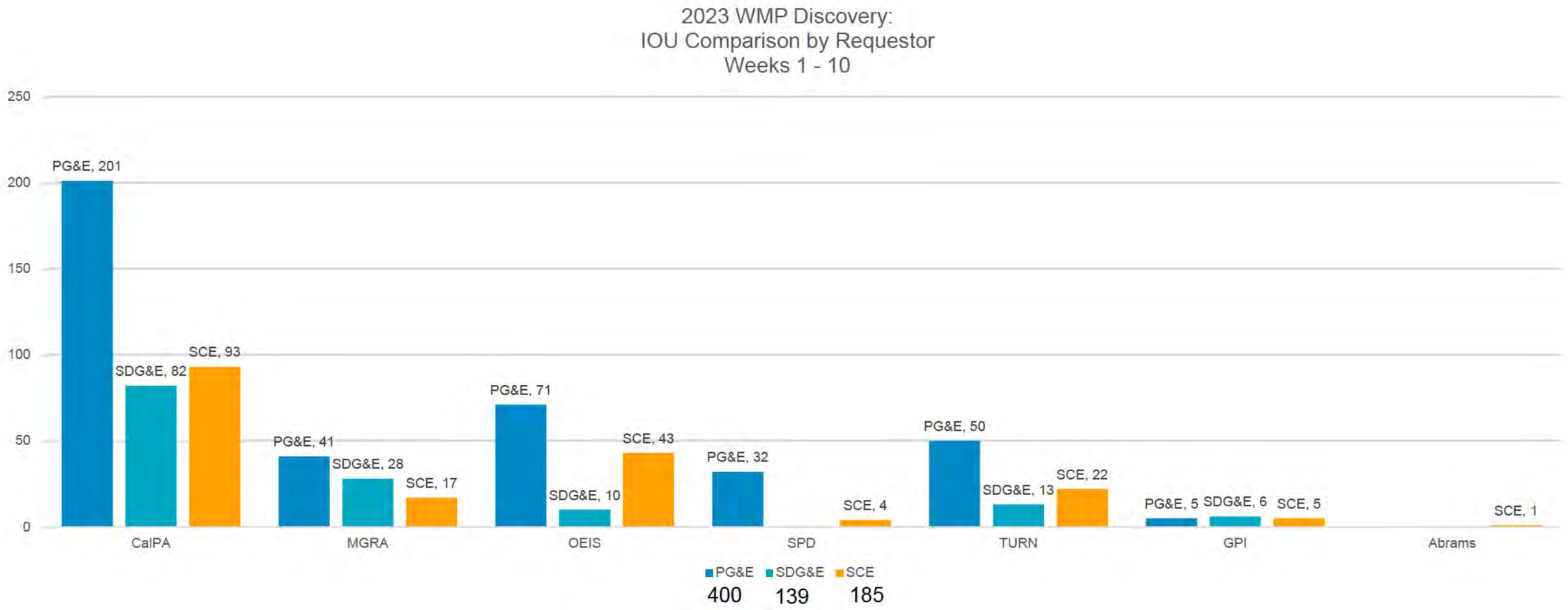
Totals: 2022 – 246 | 2023 – 400
(63% increase)

WMP Data Requests

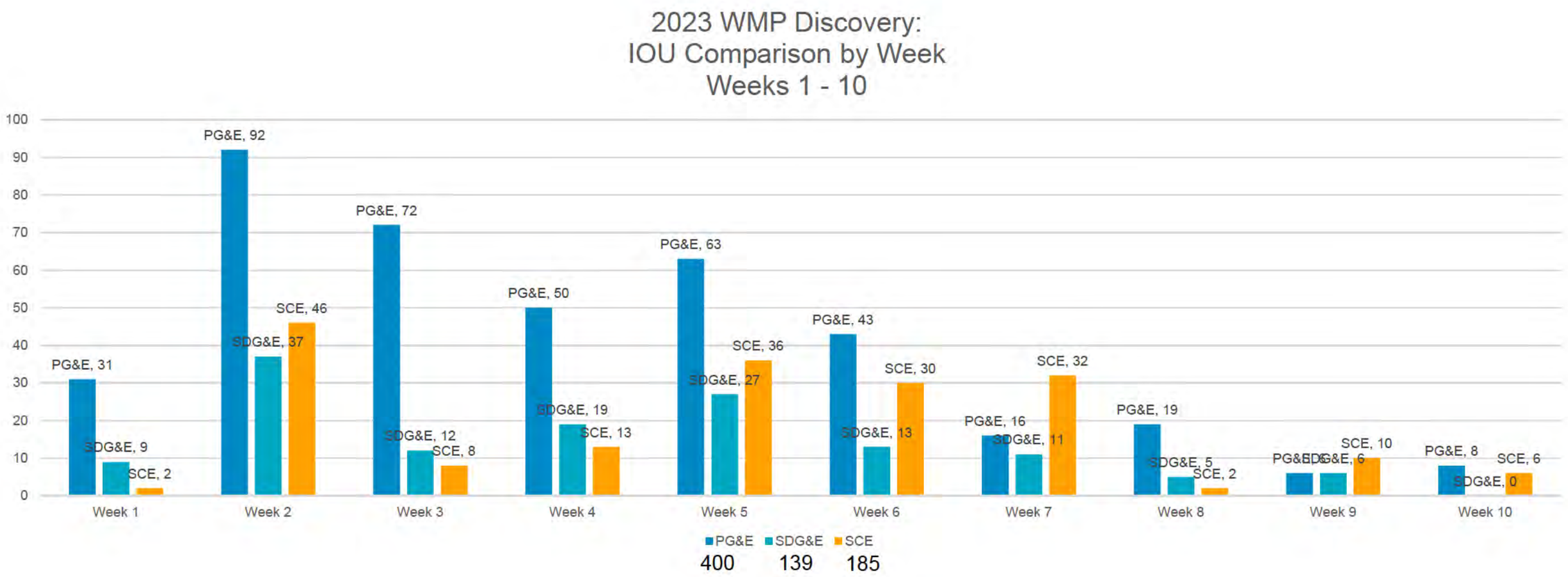


41 Total Questions

WMP Data Requests



WMP Data Requests



WMP Data Requests

2023 WMP Discovery:
IOU Comparison – Top 3 Categories: Weeks 1 - 10

	WMP Category	Questions
PG&E	Grid Design and System Hardening	95
	Vegetation Management and Inspections	74
	Risk Methodology and Assessment	43
SDG&E	Grid Design and System Hardening	81
	Vegetation Management and Inspection	39
	Risk Methodology and Assessment	22
SCE	Vegetation Management and Inspection	35
	Ignition Model	5
	Quality Assurance and Quality Control	3

WMP Data Requests

2023 WMP Discovery: Top 3 Areas of Focus – OEIS
Weeks 1 - 10

PG&E	# of Questions	# of Sub-Parts
Areas for Continued Improvement	**16**	**53**
ACI PG&E-22--08 Better Application of Specific Lessons Learned from Utility-Caused Fires	2	4
ACI PG&E-22--09 Evaluation of Model Reprioritization and Fire Rebuild in High-Risk Areas	1	3
ACI PG&E-22--10 Justification of Weather Station Network Density	1	1
ACI PG&E-22--20 Asset Inspection Drone Program Pilot	1	1
ACI PG&E-22--21 Asset Inspections Quality Assurance and Quality Control ACI PG&E-22--08 Better Application of Specific Lessons Learned from Utility-Caused Fires	2	6
ACI PG&E-22-24 – Progression of Vegetation Management Maturity	1	8
ACI PG&E-22-32 – Updates on EPSS Reliability Study	2	14
ACI PG&E-22-34 – Revise Process of Prioritizing Wildfire Mitigations	2	5
ACI PG&E-22-28 – Progression of Effectiveness of Enhanced Clearances Joint Study	1	0
ACI PG&E-22-31 – PSPS Wind Threshold Change Evaluations	2	3
ACI PG&E-22-33 – Progress on Filling Asset Inventory Data Gaps	1	8
Vegetation Management and Inspections	**12**	**47**
Clearance	1	2
Discontinued Programs	1	2
Focused Tree Inspections	4	17
High-Risk Species	1	3
N/A	2	10
Tree Removal Inventory	1	2
Vegetation Management Inspections	1	3
Wood and Slash Management	1	8
Emergency Preparedness	**9**	**18**
Customer Support in Wildfire and PSPS Emergencies	3	8
N/A	1	2
Objectives	2	4
Overview	1	0
Public Emergency Communication Strategy	1	0
Personnel Training	1	4

SCE	# of Questions
Grid Design and System Hardening	**13**
Asset Inspections (8.1.3)	4
Grid Design and System Hardening (8.1.2)	9
Risk Methodology and Assessment	**10**
Multiple	3
Risk Analysis Framework (6.2)	1
Risk and Risk Component Identification (6.2.1)	1
Risk Overview (6.1.1)	1
Summary of Risk Models (6.1.2)	3
Top Risk-Contributing Circuits/Segments/Spans (6.4.2)	1
Veg Mgmt & Inspection	**7**
Risk and Risk Components Calculation (6.2.2)	1
Vegetation Management and Inspections Overview (8.2.1)	3
Vegetation Management Inspections (8.2.2)	3

SDG&E	# of Questions
Risk Methodology and Assessment	**2**
6.1.2 Summary of Risk Models Page 54	2
Portfolio Level Risk Analysis and Risk Spend Efficiency	**1**
N/A	1
Cost-Benefit Within and Overall Decision-Making Framework	**1**
N/A	1

2023 WMP Discovery: Top 3 Areas of Focus – CPUC - SPD
Weeks 1 - 10

PG&E	# of Questions	# of Sub-Parts
Grid Design and System Hardening	**13**	**19**
Covered Conductor Installation – Distribution	2	0
Undergrounding of Electric Lines and/or Equipment – Distribution	3	8
Undergrounding of Electric Lines and/or Equipment – Distribution	8	11
Situational Awareness and Forecasting	**4**	**0**
Fire Potential Index	4	0
Areas for Continued Improvement	**4**	**10**
ACI PG&E-22-06 – Addressing Increase in Risk Events	2	6
ACI PG&E-22-16 – Progress and Updates on Undergrounding and Risk Prioritization	2	4

SCE	# of Questions
Administrative	**1**
N/A	1

SDG&E	# of Questions

COA

2023-2025 WMP Commitments

Timeline Category	Not Started	Delayed	In Progress	On Track	At Risk	Off Track	Complete	Total
2023 Commitments	25	0	6	3	2	0	0	36
3 Year Objectives	15	0	0	0	0	0	0	15
Total	40	0	6	3	2	0	0	**51**

COA WMP Target Validation 1 of 3

Progress		Status	Catch Back Plan
	YTD	On Track	As of June 6th, 2023, the validation status is “On Track” with **5** commitment(s) validated YTD against a target of **5**. Of the **5** in progress validations, COA has found that **2** are “At Risk” and **0** are “Off Track” and **3** are “On Track”
Completed	5		
Planned	5		

Validated

Number	Section	Target	Command Center Status	COA Status	Comment
AI-06	**8.1.3.1.4**	Perform Transmission Infrared Inspections	On Track	At Risk Catch Back Plan	The unit completion and records of evidence were incomplete and were also found to contain errors. Additionally, COA believes improvement opportunities exist to advance the overall program maturity, key focus areas include job aids, training, and Quality Control that will support TVAC records.
AI-08	**8.1.3.3.1**	Supplemental Inspections - Substation Distribution	On Track	On Track	Date of Inspection on Execution Tracker does not match Inspection date. Pronto forms did not reflect CIRT Review. Anomalies missing LC notification number. Electronic files missing for IR Inspections. Missing F80 Forms.
AI-09	**8.1.3.3.1**	Supplemental Inspections - Substation Transmission	On Track	On Track	Date of Inspection on Execution Tracker does not match Inspection date. Pronto forms did not reflect CIRT Review. Required photos missing . Anomalies missing LC notification number. At risk for execution.
AI-10	**8.1.3.3.1**	Supplemental Inspections - Hydroelectric Substations and Powerhouses	On Track	On Track	Date of Inspection on Execution Tracker does not match Inspection date. Pronto forms did not reflect CIRT Review. Required photos missing Anomalies missing LC notification number. At risk for execution.
VM-01	**8.2.2.1.1**	LiDAR Data Collection - Transmission	Complete	At Risk Catch Back Plan	Execution plan and Approved EDRS plan do not match. Execution plan miles did not match work plan miles. Transmission Circuit voltage not on work plan . Outdated bulletin are not in compliance with GOV-2001P.

COA WMP Target Validation 2 of 3

In-Progress

Number	Section	Target	Command Center Status	COA Status	Comments
AI-02	8.1.3.1.1	Detailed Inspection Transmission – Ground	On Track	In-progress	
AI-04	8.1.3.1.2	Detailed Inspection Transmission – Aerial	On Track	In-progress	
AI-05	8.1.3.1.3	Detailed Inspection Transmission – Climbing	On Track	In-progress	
GM-02	8.1.7.1	HFTD-HFRA Open Tag Reduction - Transmission	On Track	In-progress	
GM-03	8.1.7.2	HFTD-HFRA Open Tag Reduction – Distribution Backlog	At Risk	In-progress	
SA-01	8.3.2.3	AI in Wildfire Cameras	On Track	In-progress	

Upcoming Validations

Number	Section	Target	Command Center Status	COA Status	Comments
SA-01	8.3.2.3	AI in Wildfire Cameras	On Track	Up-coming	
GH-01	8.1.2.1	System Hardening - Distribution	At Risk	Up-coming	
GH-04	8.1.2.2	10K Undergrounding	At Risk	Up-coming	
GH-06	8.1.2.5.1	System Hardening - Transmission Shunt Splices	On Track	Up-coming	

COA WMP Target Validation 3 of 3

Catch Back Plan Issues Identified, Open and Resolved

Number	Section	Target	Resolved	Open	Total Identified
AI-06	**8.1.3.1.4**	Perform Transmission Infrared Inspections	7	1	**8**
AI-08	**8.1.3.3.1**	Supplemental Inspections - Substation Distribution	4		**4**
AI-09	**8.1.3.3.1**	Supplemental Inspections - Substation Transmission	3		**3**
AI-10	**8.1.3.3.1**	Supplemental Inspections - Hydroelectric Substations and Powerhouses	3		**3**
VM-01	**8.2.2.11**	LiDAR Data Collection – Transmission	1	2	**3**
Total			**18**	**3**	**21**

AI-06 Perform Transmission Infrared Inspection

Program	Date Raised	Problem	Point of Cause	Containment Action	Status	Root Cause	Countermeasure Action	Target Date	Owner	Status
Program Name	*Date issue identified*	*Description of the issue; What is the deviation between what should happen vs what actually happened?*	*Where the failure behind the problem occurred?*	*Immediate action to fix Point of Cause*		*Causation behind the Point of Cause*	*Action to fix the root cause; Countermeasure not populated until root cause verified*	*Date for completion of Countermeasure*	*Name*	
Infrared Inspection	4/4/23	**Target Validation**: Work Plan: Per the Master List there are (3050) T3 and (649) T2 they are due for inspection per the procedure. The workplan includes 543 additional circuit miles that aren't due. If not correctly flagged as required there is potential to meet the WMP commitment and still end up with missed inspections that are due.	The entire circuit is inspected therefore adds additional HFTD miles.	Asset Strategy should flag the ETL's that are due in 2023 in the workplan to ensure that execution clearly understands which units are due and avoids a miss that could lead to a self report.	Complete	Creates additional miles to be inspected.	ETLs required for compliance are indicated in Column P "Reason for Inclusion" in the '2023 IR Scope' tab of the workplan. Specifically, ETLs indicated as "High Consequence Line" or "Guest/Host of scoped line" are still part of the workplan, but not specifically part of the compliance requirement.	04/07/2023	[redacted]	Complete
Infrared Inspection	4/4/23	**Procedural Adherence**: COA found 1,158 of the 1937 circuit miles to be less than 40%. Per procedural guidance TD-1001P-14 provide "considerations" that supported these flights represent peak loading. Execution team shared that they have data to provide related to loading and timing selection.	Did not schedule time to review our 2023 IR Inspection Tracker with our partners.	Provide considerations as described in TD-1001P-14 Infrared Inspection Procedure that supported these lines at peak load.	Complete	Do not have a formal process to share historical loading data or decisions on when to time inspections.	Provide considerations as described in TD-1001P-14 Infrared Inspection Procedure that supported these lines at peak load. Add additional columns to tracker to help outline that we considered loading, timing and other factors prior to inspection.	05/01/2023		Complete

AI-06 Perform Transmission Infrared Inspection

Program	Date Raised	Problem	Point of Cause	Containment Action	Status	Root Cause	Countermeasure Action	Target Date	Owner	Status
Program Name	*Date issue identified*	*Description of the issue; What is the deviation between what should happen vs what actually happened?*	*Where the failure behind the problem occurred?*	*Immediate action to fix Point of Cause*		*Causation behind the Point of Cause*	*Action to fix the root cause; Countermeasure not populated until root cause verified*	*Date for completion of Countermeasure*	*Name*	
Infrared Inspection	4/4/23	**Record of Evidence**: TVAC Records: 2/26 IR Data Sheets uploaded to SAP reflected miles that did not match the miles reported as complete in the execution tracker.	QC Process on documentation.	Review all IR Data Sheets and confirm the correct circuit miles are reflected.	Complete	Lack of QC process.	Ensure procedure/job aid clearly defines process to capture mileage flown and reviewed as part of QC.	05/01/2023	[redacted]	Complete
Infrared Inspection	4/4/23	**Record of Evidence**: 2/26 sampled reported as complete in the execution tracker did not have data sheets uploaded in SAP and in working with the team were found to be marked complete in error.	Process.	Validate all lines currently reported as complete are correct. Consider adding a column to execution tracker to reflect completed for record of evidence review. Only report miles that reflect completed in both columns.	Complete	Do not have clearly defined process map for documentation flow.	Develop Process Map and Job Aid for IRS and clerical function to include validation.	05/01/2023		Complete
Infrared Inspection	4/4/23	**Record of Evidence**: 4 /26 sampled did not have required IR data sheets uploaded in SAP	QC Process on documentation.	Ensure for all miles reported completed in the execution file have IR data sheets uploaded in SAP.	Complete	QC process not clearly outlined and fully implemented.	Develop Process Map and Job Aid for IRS and clerical function to include validation.	05/01/2023		Complete
Infrared Inspection	4/4/23	**Record of Evidence: TVAC Records**: Procedural Adherece: Incomplete IR Data Sheet: Disk and Photo number was not found on any of the samples. This is a requirement by TD-1001P-14 Infrared Inspection Procedure Rev 3 (Team reports this task is not performed)	Update by TD-1001P-14 Infrared Inspection Procedure Rev 3 now that we moved to digitally storing data.	Start discussions with Standards to clarify procedure requirements in sections 3.4. and Form 15.	In Process (target date of 6/1/23)	company has moved to from storing data on physical storage devises to housing data on shared servers. Therefore, disk & photo number is now obsolete.	Update TD-1001P-14 Infrared Inspection Procedure Rev 3 Form 15 to reflect current process.	12/31/2023		Complete

AI-06 Perform Transmission Infrared Inspection

Program	Date Raised	Problem	Point of Cause	Containment Action	Status	Root Cause	Countermeasure Action	Target Date	Owner	Status
Program Name	*Date issue identified*	*Description of the issue; What is the deviation between what should happen vs what actually happened?*	*Where the failure behind the problem occurred?*	*Immediate action to fix Point of Cause*		*Causation behind the Point of Cause*	*Action to fix the root cause; Countermeasure not populated until root cause verified*	*Date for completion of Countermeasure*	*Name*	
Infrared Inspection	4/4/23	**Record of Evidence:** GEO Spatial documentation was not Provided for all IR inspections. COA reviewed two that were provided. All Geo Spatial documentation is required per define phase	GEO spatial data isn't easily accessible to those outside of the process	System Inspections to identify the best location/method to provide COA/IA/PMO access to the files.	Complete	System Inspections not fully understanding deliverable requirements therefore not having a good method to house and share data.	System Inspections to identify the best location/method to provide COA/IA/PMO access to the files.	05/01/2023	[redacted]	Complete
Infrared Inspection	4/4/23	**Record of Evidence**: Requirement to provide Weekly Report with anomalies and LC notifications. Report contains 4 anomalies but only 1 has an LC notification number. Appears to be a process delay in reviewing and generating LC's, as anomalies reflect found in February.	Lack of Process	Review 3 anomalies and create notification numbers.	Complete	System inspections reporting on all anomalies found and should only report on anomalies that have been verified with notifications. Lack of formal process around reporting anomalies.	Ensure a process is identified and documented to ensure notifications are created in a timely manner (define and monitor an acceptable timeline).	05/01/2023		Complete

VM-01 LiDAR Data Collection – Transmission

Program	Date Raised	Problem	Point of Cause	Containment Action	Containment Action Date	Status	Root Cause	Countermeasure Action	Target Date	Owner	Status
Program Name	*Date issue identified*	*Description of the issue; What is the deviation between what should happen vs what actually happened?*	*Where the failure behind the problem occurred?*	*Immediate action to fix Point of Cause*	*Immediate action to fix Point of Cause*		*Causation behind the Point of Cause*	*Action to fix the root cause; Countermeasure not populated until root cause verified*	*Date for completion of Countermeasure*	*Name*	
LiDAR Data Collection – Transmission	5/8/23	**Work Plan Validation:** There is not a standard or procedure for LiDAR data collection. • A Bulletin was found TD-7103B-003 dated 10/15/2018 however, states “This is a time-limited document expected to extend into late 2018”. It did not include LiDAR data collection cycles or the work planning process additionally. This Bulletin does not meet the guidance document GOV-2001P that requires incorporation of bulletin in procedure within 1 year (Section 4.1.1.2a)	Utility Procedure TD-7103-10 details standard procedure for LiDAR data collection. It was published 4/6/23 and becomes effective 6/6/23.	Refer to Utility Procedure TD-7103-10	Back dated to 4/6/23		Timing of the publication of Utility Procedure TD-7103-10 lagged reporting window.	Utility Bulletin TD-7103B-03 is obsolete and was replaced by TD-7103-10. Additionally, Utility Procedure TD-7103P-01 will be updated to reference Utility Procedure TD-7103-10 which incorporates the procedures from cancelled Bulletin TD-7103B-003	Utility ProcedureTD-7103B-003 was published on 4/6/23 and becomes effective 6/6/23. Utility Procedure TD-7103P-01 target for approval 6/30/2023.		
LiDAR Data Collection – Transmission	5/8/23	**Work Plan Validation:** Transmission circuit voltage not provided COA was unable to verify	The VM-01 Template does not have a column for circuit voltage.	Update form to VM-01 Template voltage and circuit ETL to avoid confusion in reporting. Column B has been added for circuit voltage. In addition, the ETL circuit IDs have been added in Column C.	Completed 5/15/23		Without column for circuit voltage, requestee was unaware these data were requested. This created confusion with circuits with the same name with different voltages with multiple deliveries.	Include additional Identification descriptors such as circuit ETL in reporting documents.	Completed 5/15/23		

VM-01 LiDAR Data Collection – Transmission

Program	Date Raised	Problem	Point of Cause	Containment Action	Containment Action Date	Status	Root Cause	Countermeasure Action	Target Date	Owner	Status
Program Name	*Date issue identified*	*Description of the issue; What is the deviation between what should happen vs what actually happened?*	*Where the failure behind the problem occurred?*	*Immediate action to fix Point of Cause*	*Immediate action to fix Point of Cause*		*Causation behind the Point of Cause*	*Action to fix the root cause; Countermeasure not populated until root cause verified*	*Date for completion of Countermeasure*	*Name*	
LiDAR Data Collection – Transmission	5/8/23	**Execution:** **Execution Plan not aligned with Work plan:** • COA found 6 circuits that were not included in work plan. Additional scope must be justified and documented and approved in EDRS. • COA found 5 Circuits not found on the Execution Plan that were in the work plan • Execution Plan Miles did not match work plan miles.	• The 6 circuits that 'were not included in work plan' were include in our VM2023 execution plan. **It is unclear why these were not submitted in the work plan**. • Independent QC review and attestation records failed to include 5 circuits listed below, and these omissions propagated in our records. They are now included in **Execution Plan work plan**. • The updated work plan contained 17,784 planned miles and completed a final of 17,817 miles.	Review QC records and attestation process to make sure all circuits are reported correctly for 2023, and records are complete. TVM GIS records are complete and accurate.	Completed 5/15/23		Circuit omissions were caused by human error. Mileage differences are caused by real and regular asset changes that occur in PG&E's transmission system (e.g., reconductoring, tower/pole replacements, etc.)	Create internal review process for audit & approval for Execution Plan work plan circuits & mileages as reported in attestations	Completed 5/15/23		

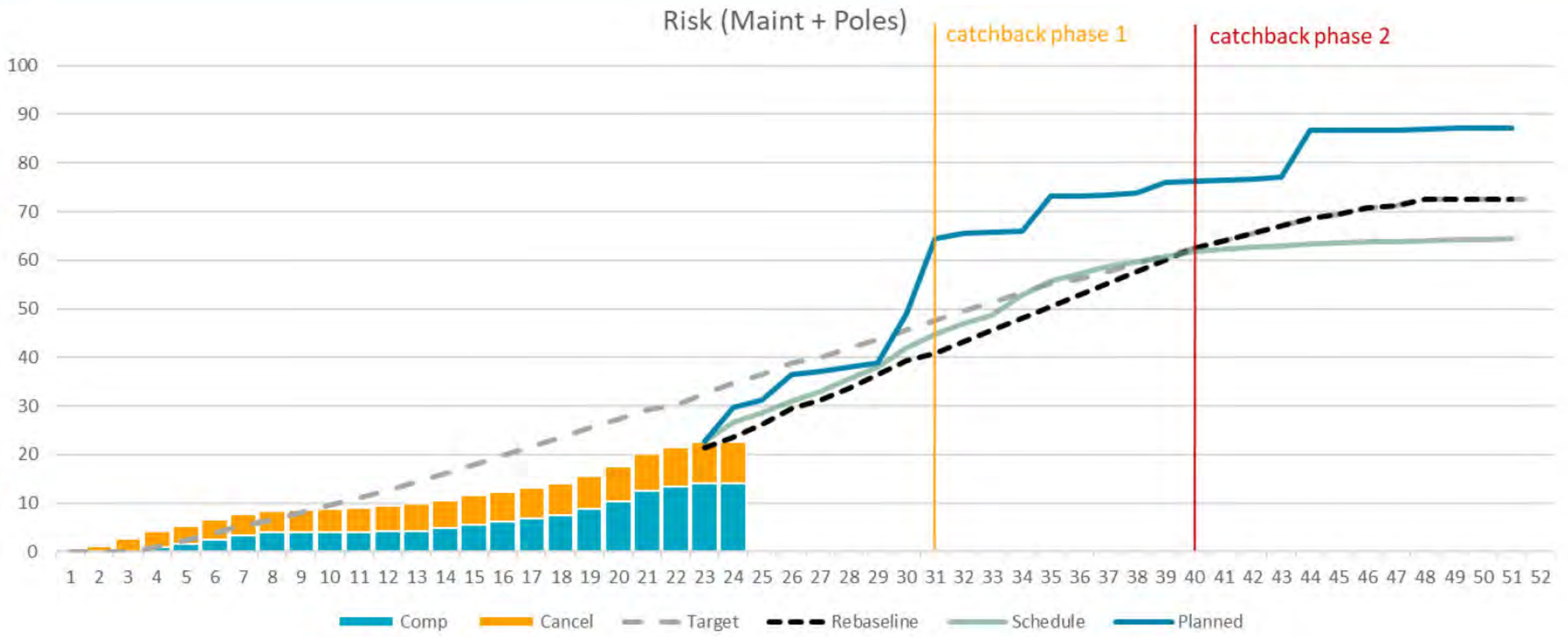
8.2.2.1 VM LiDAR Inspection Transmission (VM-01)							2023 Units (Circuit Mile)							
5 Added Circuit Records the were omitted from Execution work plan	kV	ETL	NERC	Lat	Long	Scheduled Completion date (Per unit completion definition)	Planned Total Units	Final Total Miles	Tier 3 HFTD	Tier 2 HFTD	Zone 1 HFTD	HFRA Non-HFTD	Non-HFTD Tier 2/3 Buffer	Non-HFTD / Non- HFRA
CIC TAP	60	ETL.6971	N			3/3/2023	0.114	0.114						0.114
GRIZZLY TAP (SVP)	115	ETL.1231	N			3/3/2023	0.164	0.164	0.063	0.101		0.000		0.000
LAWRENCE LIVERMORE LAB #2 TAP	115	ETL.3981	N			2/6/2023	6.363	6.363						6.363
PITTSBURG #1 TAP	60	ETL.6551	N			3/3/3023	1.159	1.159						1.159
SAN JOAQUIN COGEN TAP	115	ETL.4012	N			3/3/3023	0.037	0.037						0.037

Tags

2023 Distribution Maintenance – 48% risk reduction

[redacted] June 12, 2023

- 44K+ ready units, 16K+ scheduled
- 2023 Work plan after reprioritization has >80 v3 WF risk points in 2023 work plan plus 7.5 cancelled risk units
- Total 2023 Planned Units = ~55K
- Work Plan designed with ~4 week buffer at end of year



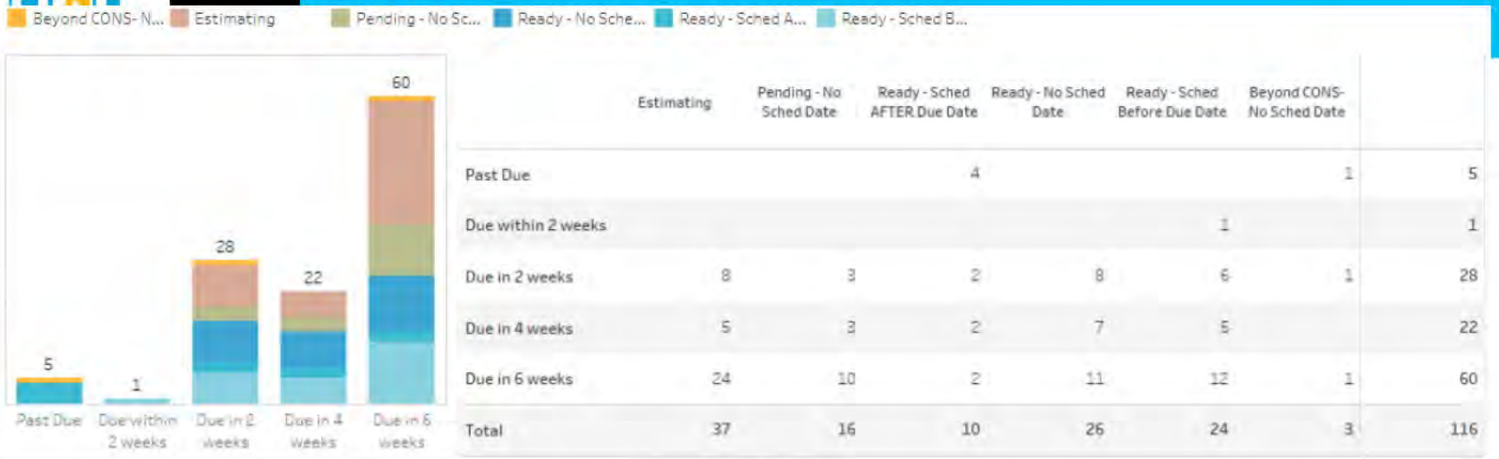
GM.03 – Open EC Notifications Risk Reduction Catch Back Plan

Catch Back Plan Due Date: 10/2/23 - WMP Target Due Date: 12/31/23
Chief Sponsor: Jeff Deal

Program	Date Raised	Problem	Point of Cause	Containment Action	Status	Root Cause	Countermeasure Action	Catch Back Due Date	Owner	Status
Program Name	*Date issue identified*	*Description of the issue; What is the deviation between what should happen vs what actually happened?*	*Where the failure behind the problem occurred?*	*Immediate action to fix Point of Cause*		*Causation behind the Point of Cause*	*Action to fix the root cause; Countermeasure not populated until root cause verified*	*Date for completion of Countermeasure.* ***Number of units delivered by this date (to meet YTD target).***	*Name*	
EC Notifications Risk Reduction	3/7/23	Less v3 wildfire risk points completed in 2023 then planned	Storm response and new business has utilized most of the resources that were planned to execute this work and completed lower risk ready units earlier in the work plan	Reschedule work planned in first two months of year to Q2 & Q3		Not enough resources to complete EC notifications, New Business and storm work	Reschedule work planned in first two months of year to Q2 & Q3	By 5/31/23 have enough tags scheduled to be at 40 risk points YTD by 7/31/232 - complete By 7/31/23 have enough tags scheduled to be at 63 risk points YTD by 9/31/2023 - complete	[redacted]	

January Tier 3 Pole E Steady-State Tags

June 12, 2023



	Estimating	Pending - No Sched Date	Ready - Sched AFTER Due Date	Ready - No Sched Date	Ready - Sched Before Due Date	Beyond CONS- No Sched Date	
Past Due			4			1	5
Due within 2 weeks					1		1
Due in 2 weeks	8	3	2	8	6	1	28
Due in 4 weeks	5	3	2	7	5		22
Due in 6 weeks	24	10	2	11	12	1	60
Total	37	16	10	26	24	3	116

Open By HFTD Tiers

	TIER 3		Total
	B	E	
2023 Jan	7	109	116

Readiness / Contract	Division	Estimating	GC	Veg	Grand Total
Estimating	**25**	**9**	**3**		**37**
Bay Area		2	1		3
Central Valley	1				1
North Coast	3	7	1		11
North Valley & Sierra	20				20
South Bay & Central Coast	1		1		2
Pending - No Sched Date	**10**	**5**		**1**	**16**
Ready - No Sched Date	**20**	**4**		**2**	**26**
Central Valley	6	4			10
North Coast	3			1	4
North Valley & Sierra	7				7
South Bay & Central Coast	4			1	5
Ready - Sched AFTER Due Date	**5**	**4**		**1**	**10**
Bay Area		1			1
Central Valley	1	2		1	4
North Coast	3				3
North Valley & Sierra	1				1
South Bay & Central Coast		1			1
Ready - Sched Before Due Date	**10**	**14**			**24**
Beyond CONS- No Sched Date			**3**		**3**
Grand Total	**70**	**36**	**6**	**2**	**2** **116**

Action	Action Owner	Target Date	RAG Status
39 Estimating jobs: 3 are duplicates with existing orders, 8 are in the approval phase, 3 are pole calcs tags (GAC tags, no field work needed). Need to expedite the rest of the 25 jobs (Approximately 10 need jobs need permits)	[redacted]	6/12/23	
Joint Pole: Clear current 7 intents with ATT (3 will be complete by 6/19, 3 by 7/5, and 1 by 7/16)		6/12/23	
Of the 39 tags that are still in Estimating: 12 of the 22 tags assigned for Division are RCR'd to contract, correct the resource in WPML		6/13/23	
Environment (1): file exemption before tag due (GC)		7/1/23	
Land (2): file exemptions before tag due (1 Division,1 Contract)		7/1/23	
Contract work that is still in estimating (currently 14 + 12 RCR'd), escalate to leadership		6/12/23	
Contract (25 jobs)/GC (1 job)/Division (8 jobs) scheduling current ready work before due dates, and move the currently scheduled before due dates		6/15/23	

GM.XX – Open EC Notifications SteadyState Catch Back Plan

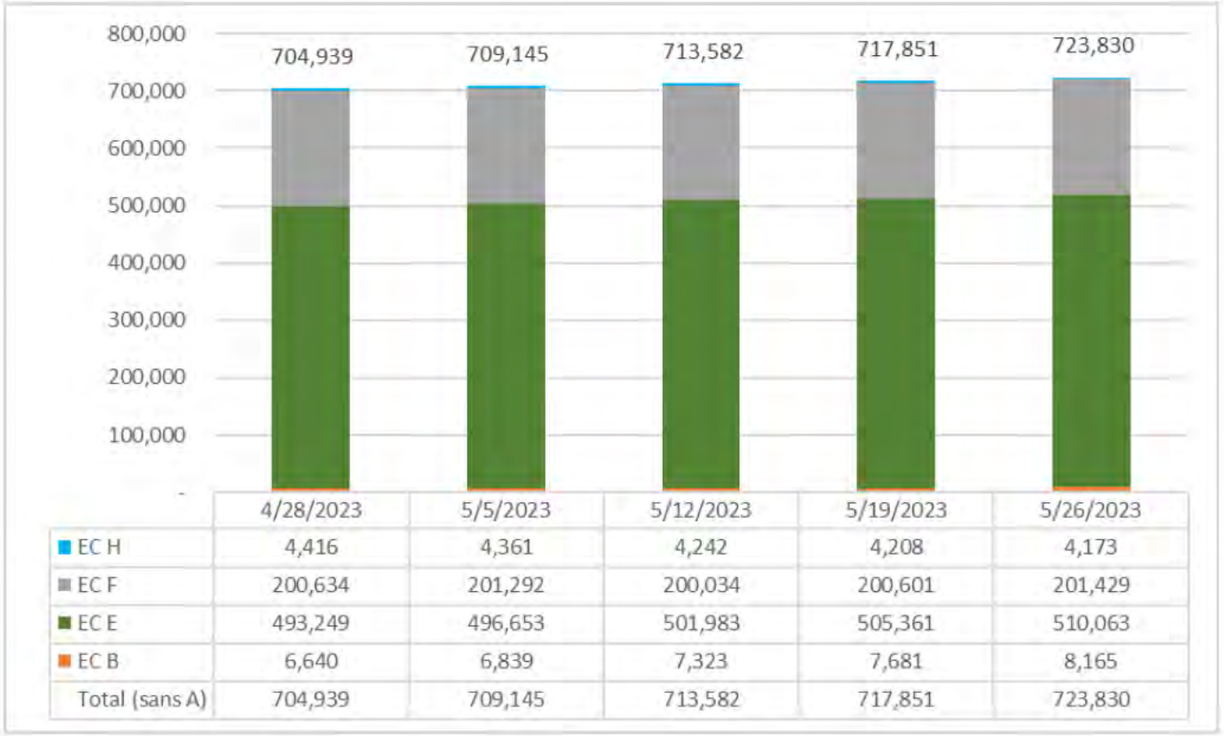
Catch Back Plan Due Date: 7/30/23 - WMP Target Due Date: Ongoing
Chief Sponsor: Jeff Deal

Program	Date Raised	Problem	Point of Cause	Containment Action	Status	Root Cause	Countermeasure Action	Catch Back Due Date	Owner	Status
Program Name	*Date issue identified*	*Description of the issue; What is the deviation between what should happen vs what actually happened?*	*Where the failure behind the problem occurred?*	*Immediate action to fix Point of Cause*		*Causation behind the Point of Cause*	*Action to fix the root cause; Countermeasure not populated until root cause verified*	*Date for completion of Countermeasure.* ***Number of units delivered by this date (to meet YTD target).***	*Name*	
EC Notifications SteadyState completion	5/30/23	Tier 3 pole E tags not uploaded to Work Plan	System failure where all tags were uploaded to work plan except tier 3 pole E tags	Daily meeting with: estimating, permitting, scheduling and divisions. Utilizing exemption process where applicable		System failure where all tags were uploaded to work plan except tier 3 pole E tags	System has been corrected and manual verification has been implemented in the process	Estimating complete 6/12 Permitting complete or exemption filed 6/30 Work assigned and scheduled throughout July	[redacted]	

OPEN Distribution Tag Weekly Summary

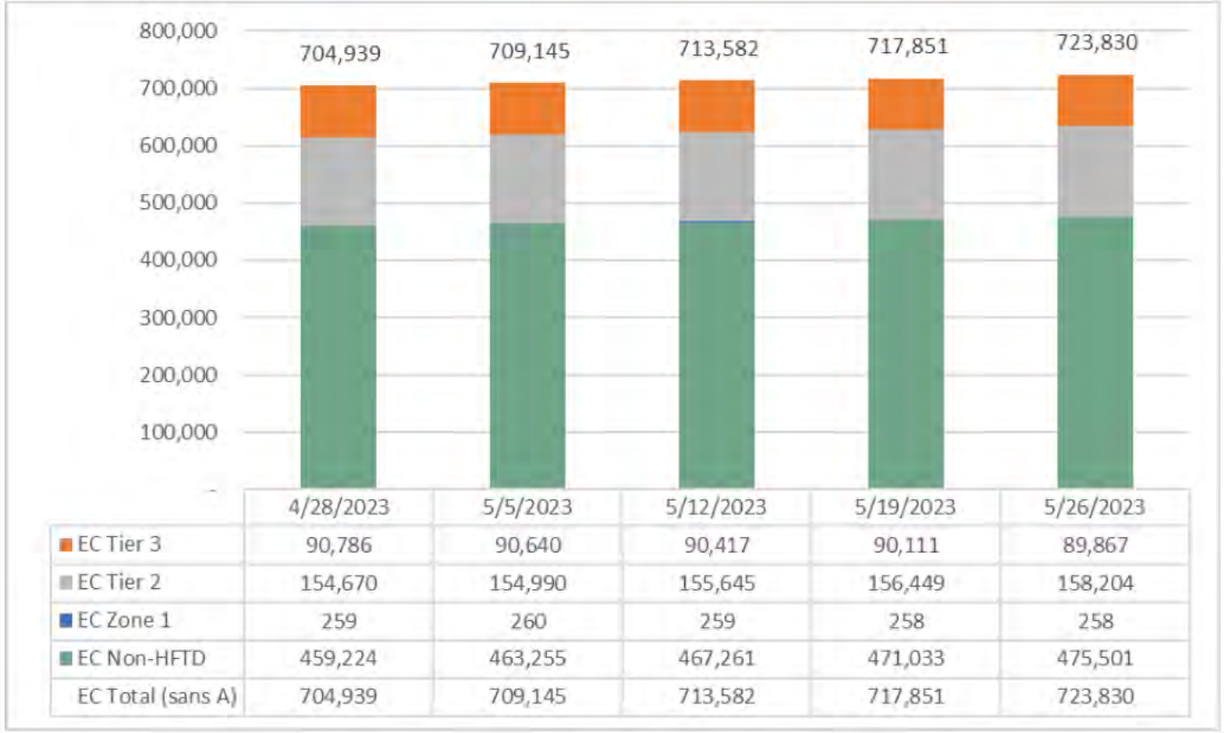
May 26, 2023

Distribution Tags OPEN By Priority



	4/28/2023	5/5/2023	5/12/2023	5/19/2023	5/26/2023
EC H	4,416	4,361	4,242	4,208	4,173
EC F	200,634	201,292	200,034	200,601	201,429
EC E	493,249	496,653	501,983	505,361	510,063
EC B	6,640	6,839	7,323	7,681	8,165
Total (sans A)	704,939	709,145	713,582	717,851	723,830

Distribution Tags OPEN By HFTD



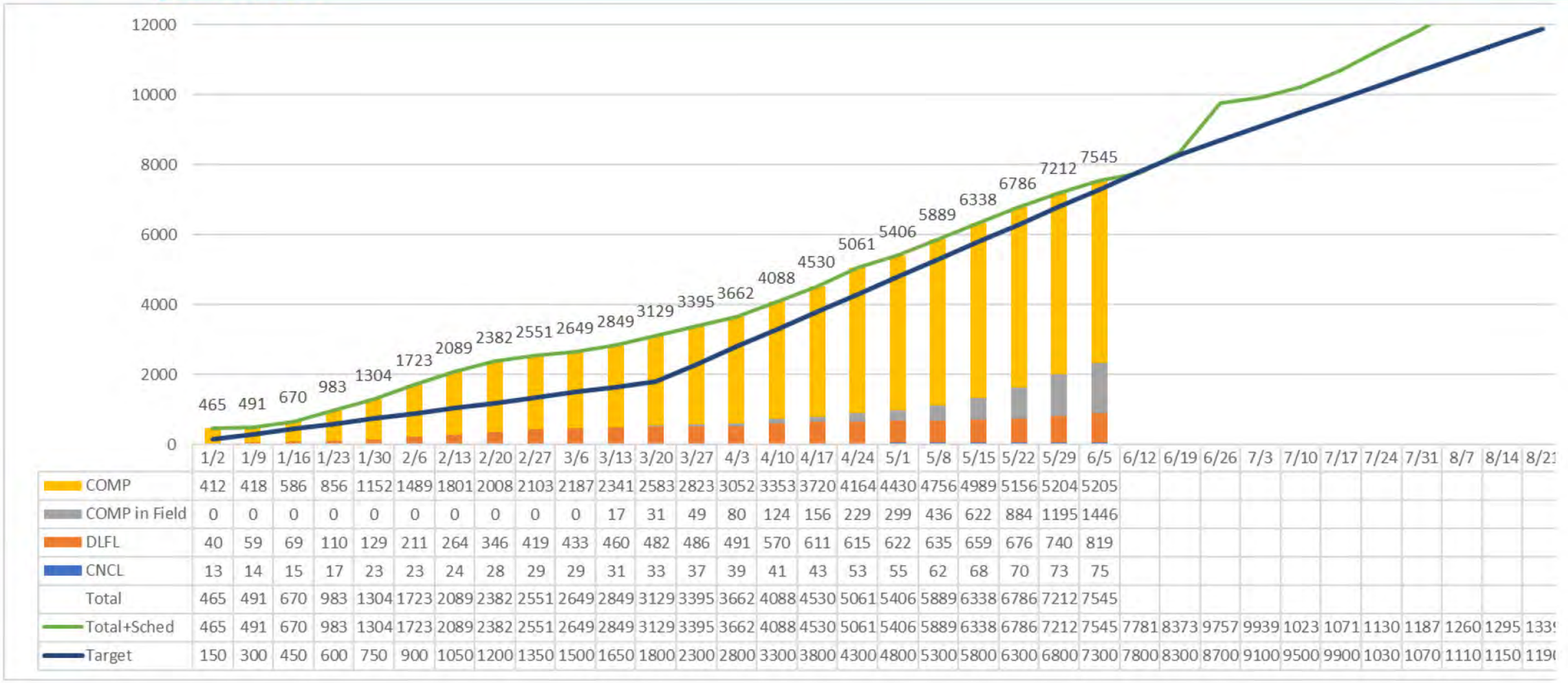
	4/28/2023	5/5/2023	5/12/2023	5/19/2023	5/26/2023
EC Tier 3	90,786	90,640	90,417	90,111	89,867
EC Tier 2	154,670	154,990	155,645	156,449	158,204
EC Zone 1	259	260	259	258	258
EC Non-HFTD	459,224	463,255	467,261	471,033	475,501
EC Total (sans A)	704,939	709,145	713,582	717,851	723,830

*A tags not included in this chart as their times series from OPEN to COMP is generally shorter, see alternate slide for A- Tag OPEN Summary.

Tag snapshot taken each Monday to represent the previous week open tag counts.

2023 Transmission Maintenance

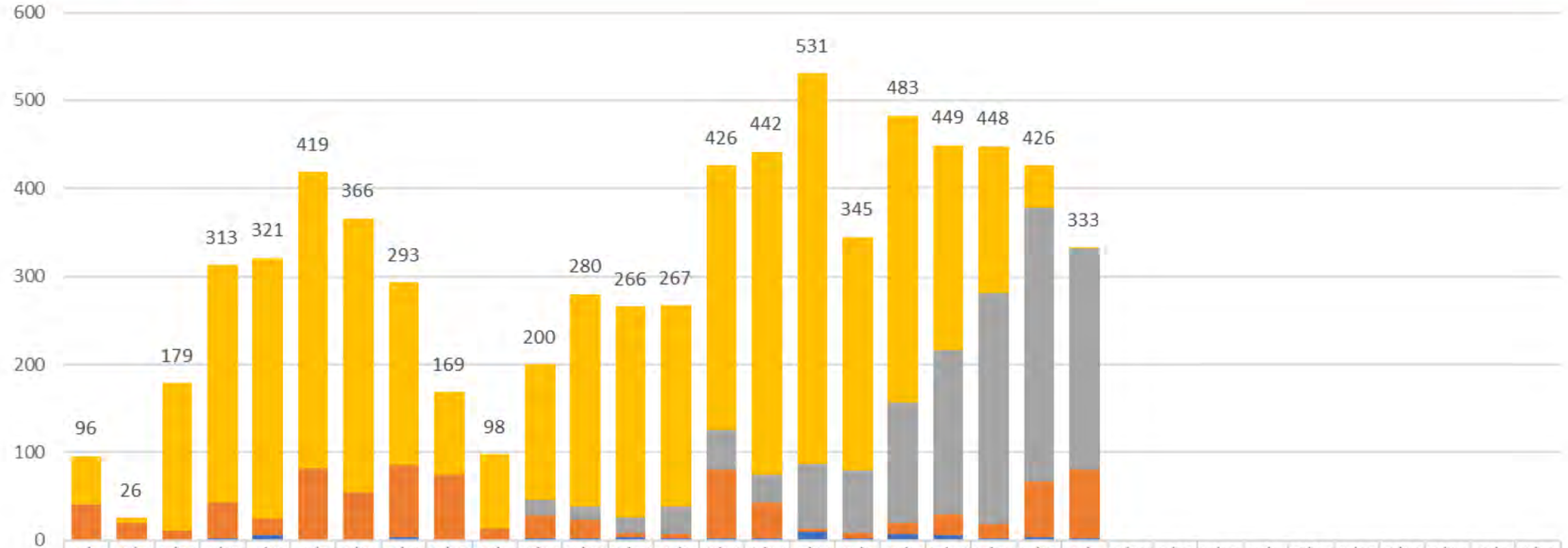
June 9, 2023



	1/2	1/9	1/16	1/23	1/30	2/6	2/13	2/20	2/27	3/6	3/13	3/20	3/27	4/3	4/10	4/17	4/24	5/1	5/8	5/15	5/22	5/29	6/5	6/12	6/19	6/26	7/3	7/10	7/17	7/24	7/31	8/7	8/14	8/21
COMP	412	418	586	856	1152	1489	1801	2008	2103	2187	2341	2583	2823	3052	3353	3720	4164	4430	4756	4989	5156	5204	5205											
COMP in Field	0	0	0	0	0	0	0	0	0	0	17	31	49	80	124	156	229	299	436	622	884	1195	1446											
DLFL	40	59	69	110	129	211	264	346	419	433	460	482	486	491	570	611	615	622	635	659	676	740	819											
CNCL	13	14	15	17	23	23	24	28	29	29	31	33	37	39	41	43	53	55	62	68	70	73	75											
Total	465	491	670	983	1304	1723	2089	2382	2551	2649	2849	3129	3395	3662	4088	4530	5061	5406	5889	6338	6786	7212	7545											
Total+Sched	465	491	670	983	1304	1723	2089	2382	2551	2649	2849	3129	3395	3662	4088	4530	5061	5406	5889	6338	6786	7212	7545	7781	8373	9757	9939	1023	1071	1130	1187	1260	1295	133
Target	150	300	450	600	750	900	1050	1200	1350	1500	1650	1800	2300	2800	3300	3800	4300	4800	5300	5800	6300	6800	7300	7800	8300	8700	9100	9500	9900	1030	1070	1110	1150	119

2023 Transmission Maintenance

June 9, 2023

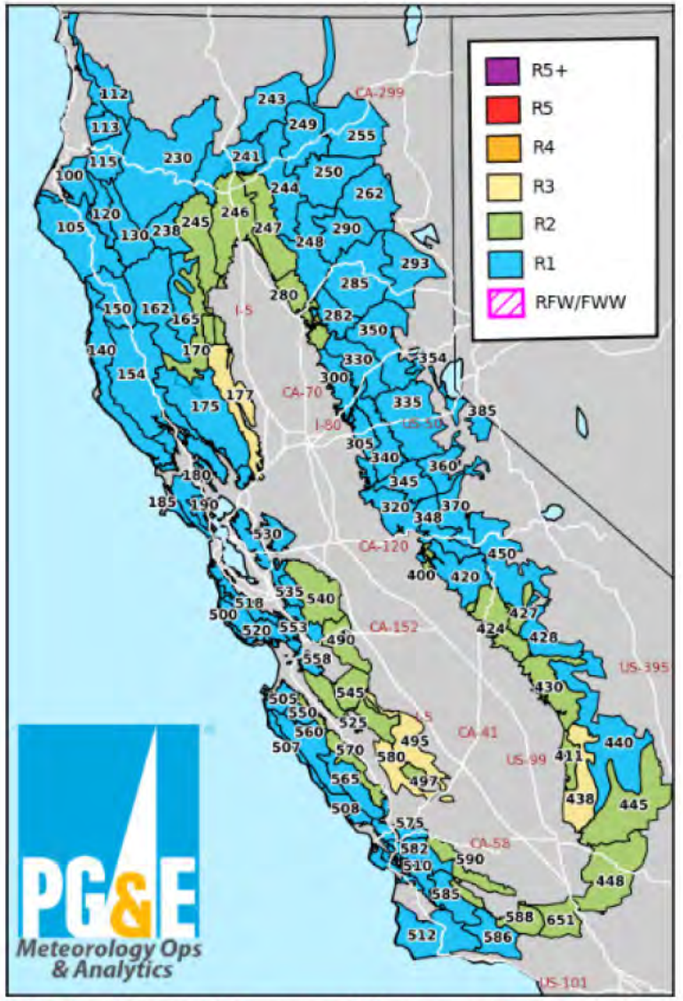


	1/2	1/9	1/16	1/23	1/30	2/6	2/13	2/20	2/27	3/6	3/13	3/20	3/27	4/3	4/10	4/17	4/24	5/1	5/8	5/15	5/22	5/29	6/5	6/12	6/19	6/26	7/3	7/10	7/17	7/24	7/31	8/7	8/14
COMP	55	6	168	270	296	337	312	207	95	84	154	242	240	229	301	367	444	266	326	233	167	48	1										
COMP in Field	0	0	0	0	0	0	0	0	0	0	17	14	18	31	44	32	73	70	137	186	262	311	251										
DLFL	40	19	10	41	19	82	53	82	73	14	27	22	4	5	79	41	4	7	13	24	17	64	79										
CNCL	1	1	1	2	6	0	1	4	1	0	2	2	4	2	2	2	10	2	7	6	2	3	2										
Total	96	26	179	313	321	419	366	293	169	98	200	280	266	267	426	442	531	345	483	449	448	426	333										

Meteorology

[redacted]

PG&E Utility Fire Potential Index Ratings
Valid for 06/13/2023



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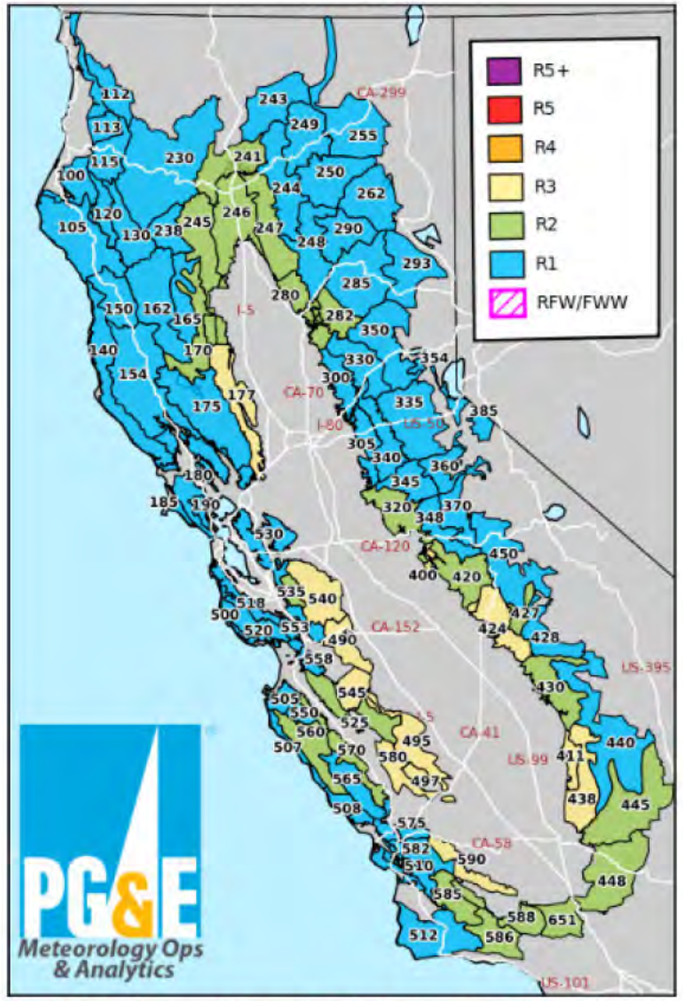
Valid for 06/14/2023



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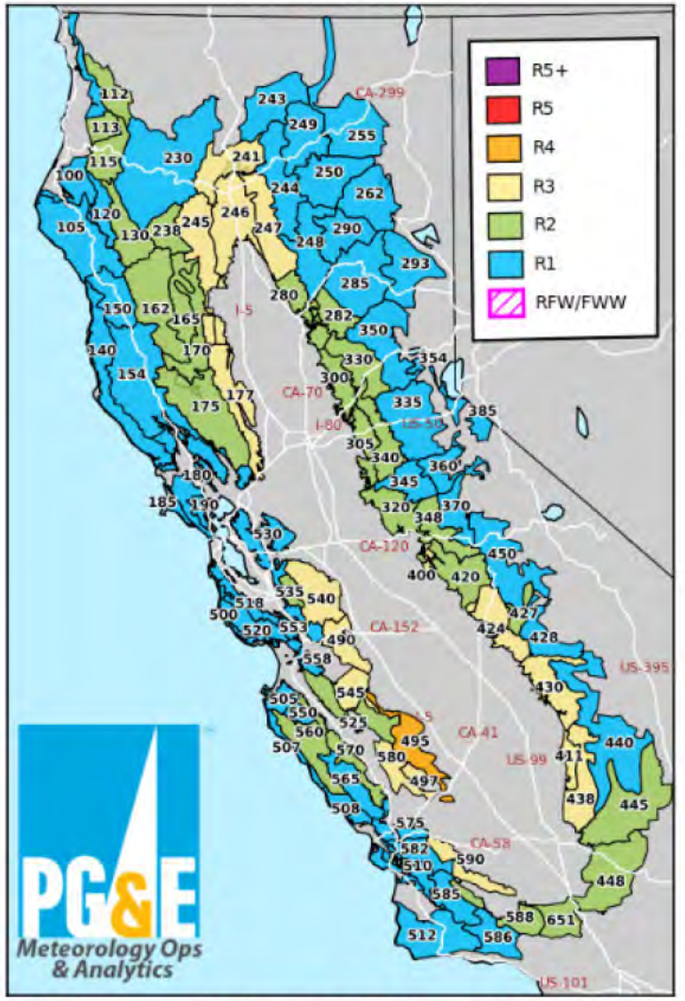
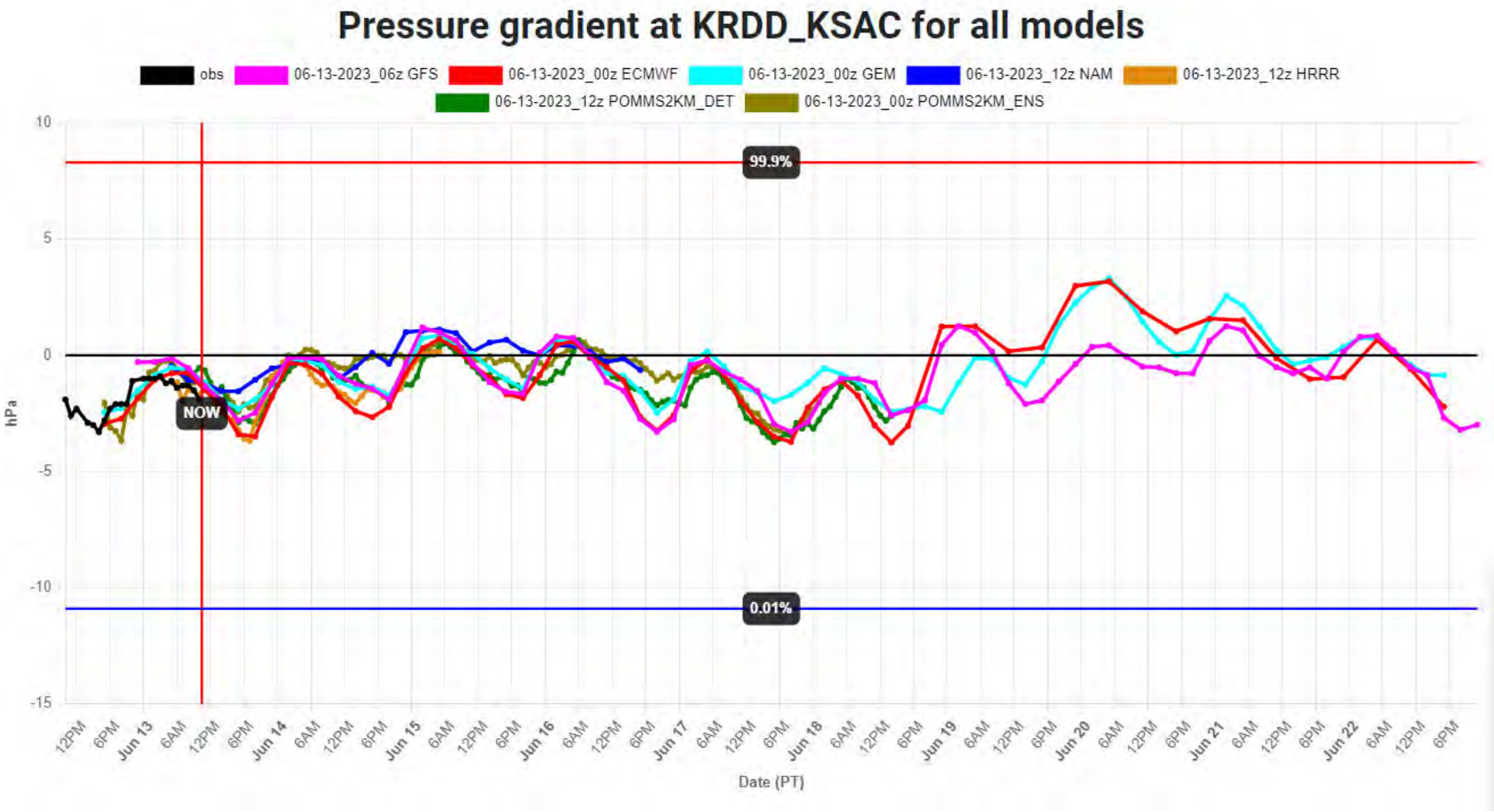


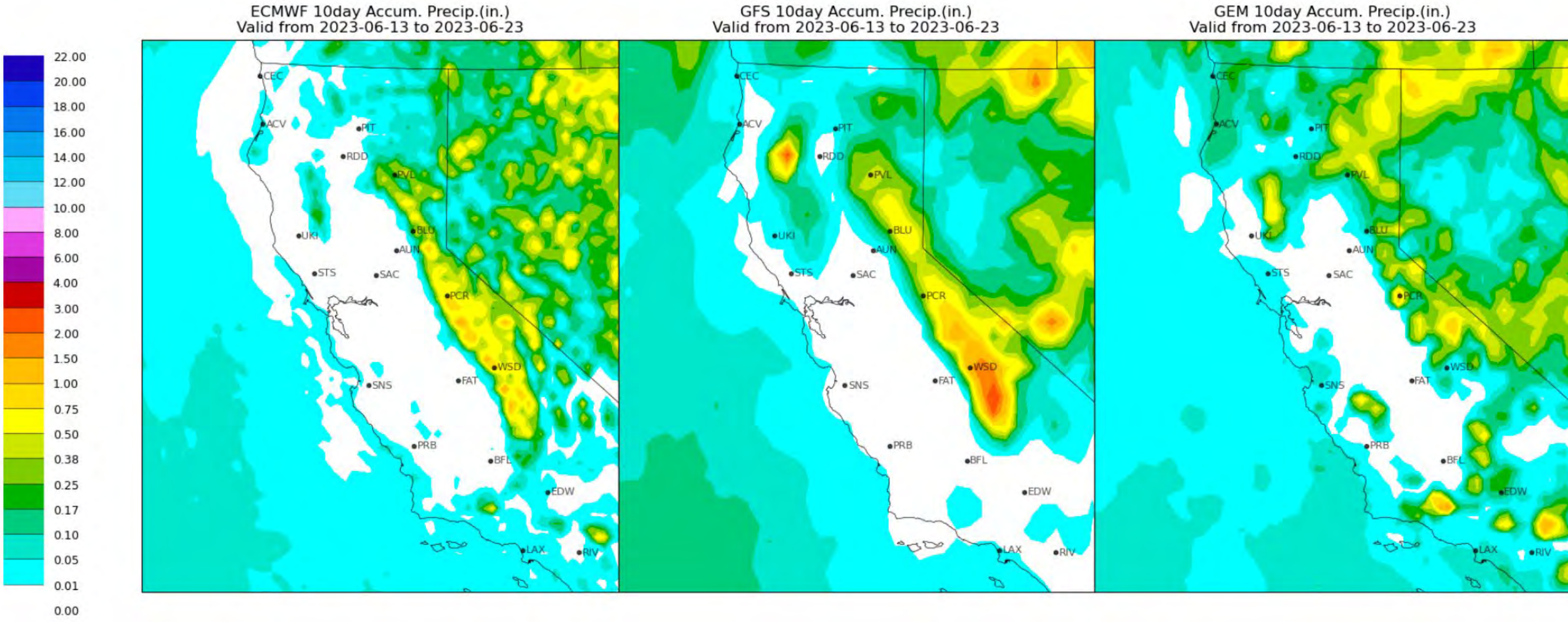
https://weatherprod.ss.pge.com/PressureGradientDashboard



No significant northerly wind events are anticipated for the next week.

http://weatherprd1/weather/models/compare-00/ecmgfsgem_APCP_10day.png

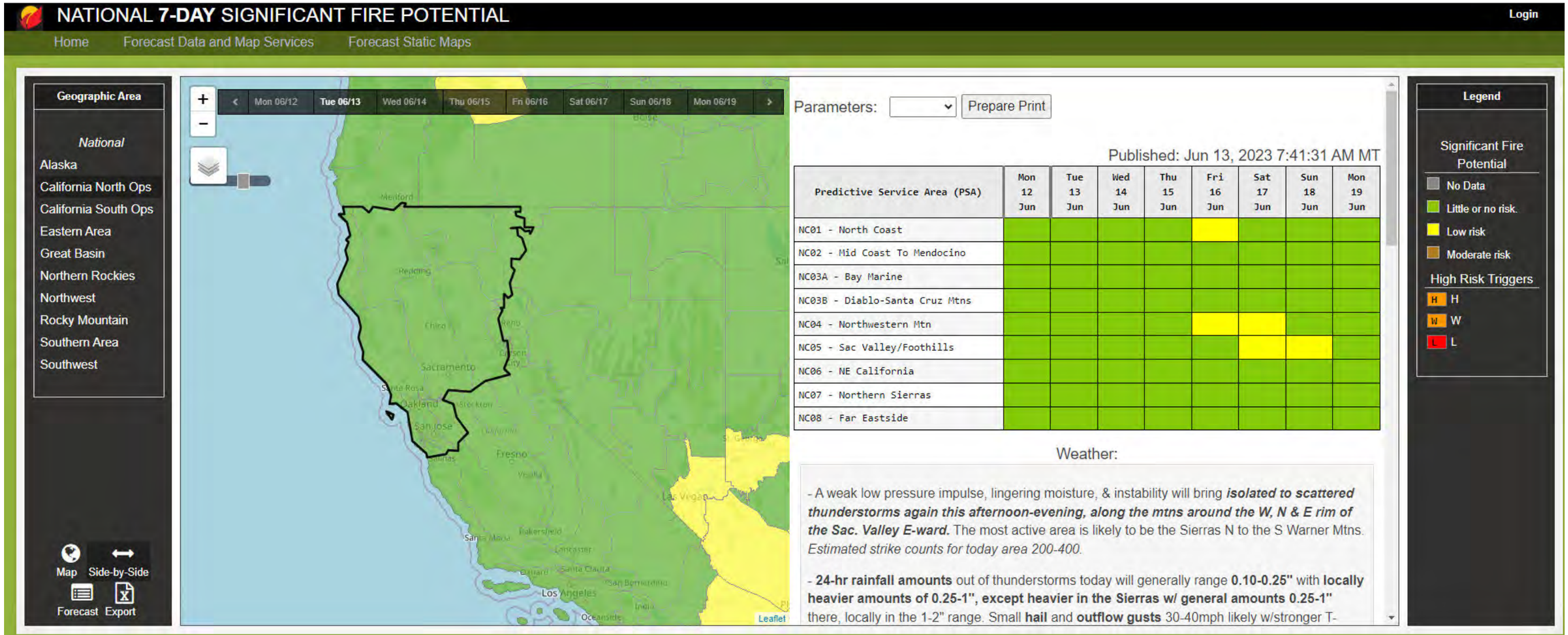
Precipitation for the next 10 days



https://fsapps.nwcg.gov/psp/npsg/forecast/#/outlooks?forecastDay=2015-07-07&forecastInView=2015-07-07&state=sideBySide&gaccId=4

North Ops: Little to no significant fire risk conditions will continue through Thu due to the mosaic of green-up (shrubs & herbaceous), recent cooler temps& higher RHs, areas of precip, & above normal higher elevation snowpack.

South Ops: The large fire threat will remain low across the region through the forecast period due to the cool weather and recent moisture. Light initial attack can be expected.



2023-2025 Wildfire Mitigation Plan

Pacific Gas and Electric Company®

March 27, 2023

Docket Title: 2023 to 2025 Electrical Corporation Wildfire Mitigation Plans
Docket #: 2023-2025-WMPs

8.3.6 Fire Potential Index

The electrical corporation must describe its process for calculating its fire potential index (FPI) or a similar landscape scale index used as a proxy for assessing real-time risk of a wildfire under current and forecasted weather conditions. The electrical corporation must document the following:

- *Its existing calculation approach and how its FPI is used in its operations;*
- *The known limitations of its existing approach; and*
- *Implementation schedule for any planned changes to the system.*

Reference the Utility Initiative Tracking ID where appropriate.

In this section we describe our approach for calculating our FPI model used for determining real-time risk of wildfires under current and forecasted weather conditions. The FPI Model is driven largely from weather forecasts and will have similar limitations discussed in Section 8.3.5.2.

8.3.6.1 Existing Calculation Approach and Use

The electrical corporation must describe.

- *How it calculates its own FPI or if uses an external source, such as the United States Geological Survey; and*
- *How it uses its or an FPI in its operations.*
- *Additionally, if the electrical corporation calculates its own FPI, it must provide tabular information regarding the features of its FPI. Table 8-32 provides a tabular list of features.*

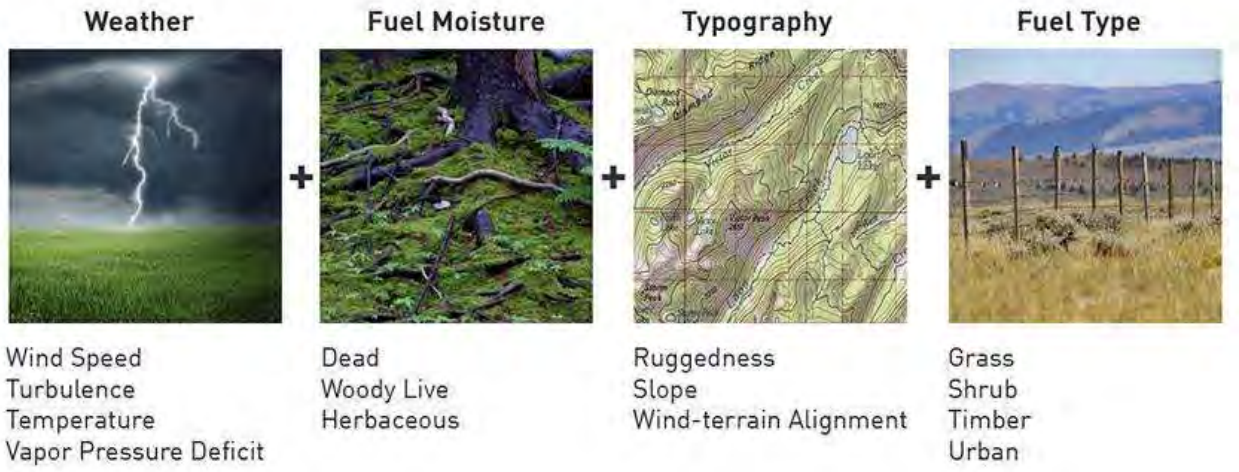
To better understand and predict the potential for large and catastrophic fires to occur across our service territory, we developed the FPI Model in 2015 and have improved it several times since. The FPI Model combines fire weather parameters (wind speed, temperature, and vapor pressure deficit), dead and live fuel moisture data, topography, and fuel model data to predict the probability of large and/or catastrophic fires.

The FPI Model was trained on an enhanced fire occurrence dataset that combines agency fire information with sub-daily growth from satellite fire detections. The FPI Model is used as a daily and hourly tool to drive operational decisions to reduce the risk of utility-caused fires. On a day-by-day basis, the FPI Model informs crews and operators what precautions must be taken to reduce the risk of fire ignitions as directed

by utility standards. The FPI Model also provides us information about the potential need for and execution of Public Safety Power Shutoff events.

Below, in Figure PG&E-8.3.6-1, highlights the main Fire Potential Index features.

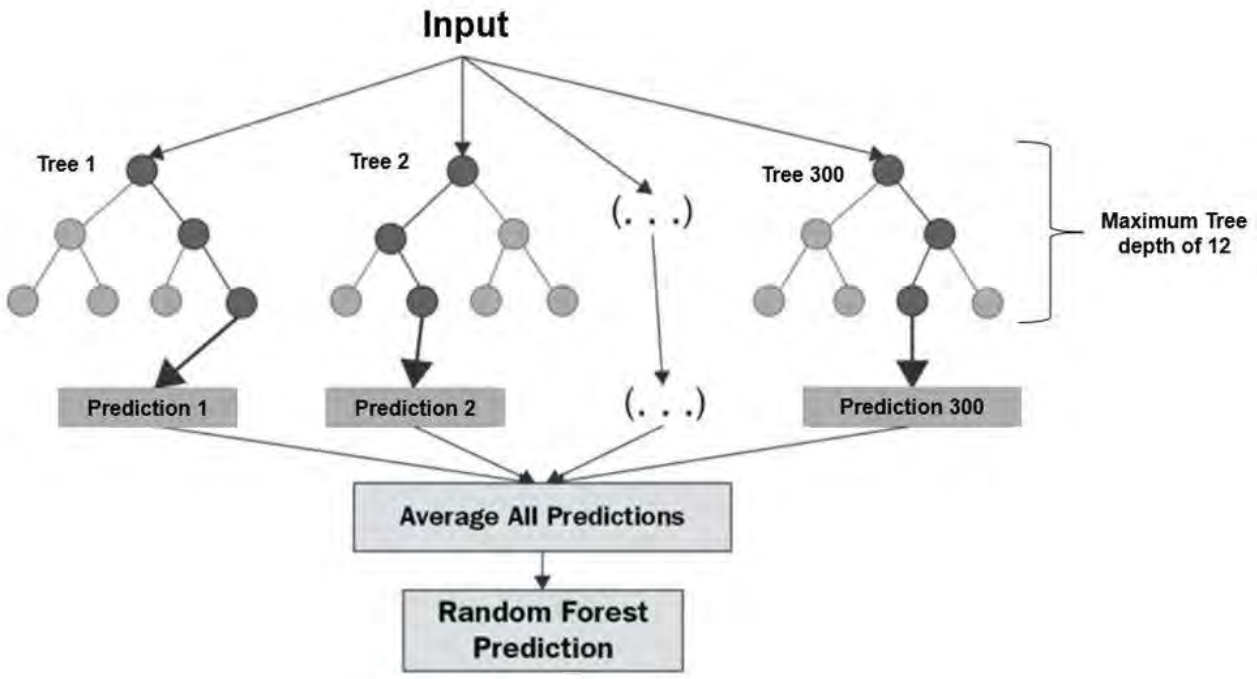
FIGURE PG&E-8.3.6-1:
FPI MODEL FEATURES



The FPI model leveraged the 2 x 2 kilometer (km) weather and fuels 30+ year climatology dataset along with an enhanced fire occurrence dataset during a model feature and methodology evaluation. Data scientists, meteorologists, and fire scientists tested dozens of new model features and various models. Among the model-types tested were logistic regression and multiple machine-learning model types. Model results were tested using a train-test split ratio of 70 percent-30 percent. This involved training the models with 70 percent of the input data and testing predictions with the remaining 30 percent.

We ultimately chose a Balanced Random Forest Classification Machine Learning (ML) model (Figure PG&E-8.3.6-2 below) for FPI based on model performance. Random Forest's framework allows collinear features and models non-linearities in their relationships. The final configuration contains 300 random trees with a tree max depth of 12. The diagram below presents a high-level overview of the FPI Random Forest Classification ML model.

FIGURE PG&E-8.3.6-2:
FPI RANDOM FOREST MODEL



The list of model features used in the ML FPI model are discussed in this section and grouped in four main categories: (1) Weather, (2) Fuel Moisture, (3) Topography, and (4) Fuel Type. The ML application has advantages over other models like linear regression because the model learns how features may interact non-linearly to contribute to catastrophic fire spread.

The weather data is sourced from the 2 x 2 km weather forecast model and 31-year climatology. The source of this information is from a numeric weather prediction expert vendor, DTN Weather Solutions. The dead fuel moisture across multiple classes and Live Fuel Moisture – Chamise is sourced from coupling the weather and climatology to models developed by Atmospheric Data Solutions (ADS). New measures of live fuel moistures that were added to the 2021 version of the FPI model were sourced from Technosylva. These take advantage of remote sensing and a model application to estimate the amount of available moisture in woody and herbaceous plant species.

Topography characteristics were also evaluated for 2021. The features included in the 2021 FPI include a measure of terrain ruggedness, which provides a measure of the terrain change in slope and aspect in each 2 x 2 km model grid cell. The slope is also considered and is shown to have a positive effect on fire size where there is existence of steep slopes. Finally, a dynamic wind-terrain alignment factor is computed for each hour to provide an assessment of the wind-terrain alignment in each 2 x 2 km grid cell. During Diablo wind events, scientific literature has shown that when the wind flow is perpendicular to terrain features, winds can accelerate down the lee of the terrain feature. During model testing, a similar pattern emerged, which shows that winds that

are perpendicular to terrain (upslope or downslope winds) have a positive relationship to fire size compared to terrain-aligned (cross slope) winds.

Finally, a continuous fuel model type is considered in each 2 x 2 km model grid cell. This information is sourced and routinely updated from Technosylva. The fuel model map baseline is the latest iteration from LANDFIRE but is adjusted to account for recent burn scars and vegetation regrowth after fire that are not considered in LANDFIRE. The native resolution of the fuel model map is 30 x 30-meter (m) resolution. For each 2 x 2 km model grid cell, the fraction of six fuel model categories is computed to provide the fraction of that area that is urban, grass, grass-shrub, shrub, Timber-litter or Timber-understory. We worked closely with Technosylva fire scientists to consolidate the 50+ fuel model types into these six parent categories.

Each model feature used in the FPI is presented in Figure PG&E-8.3.6-3 and Table 8-32 below.

FIGURE PG&E-8.3.6-3:
FPI MODEL SCHEMATIC

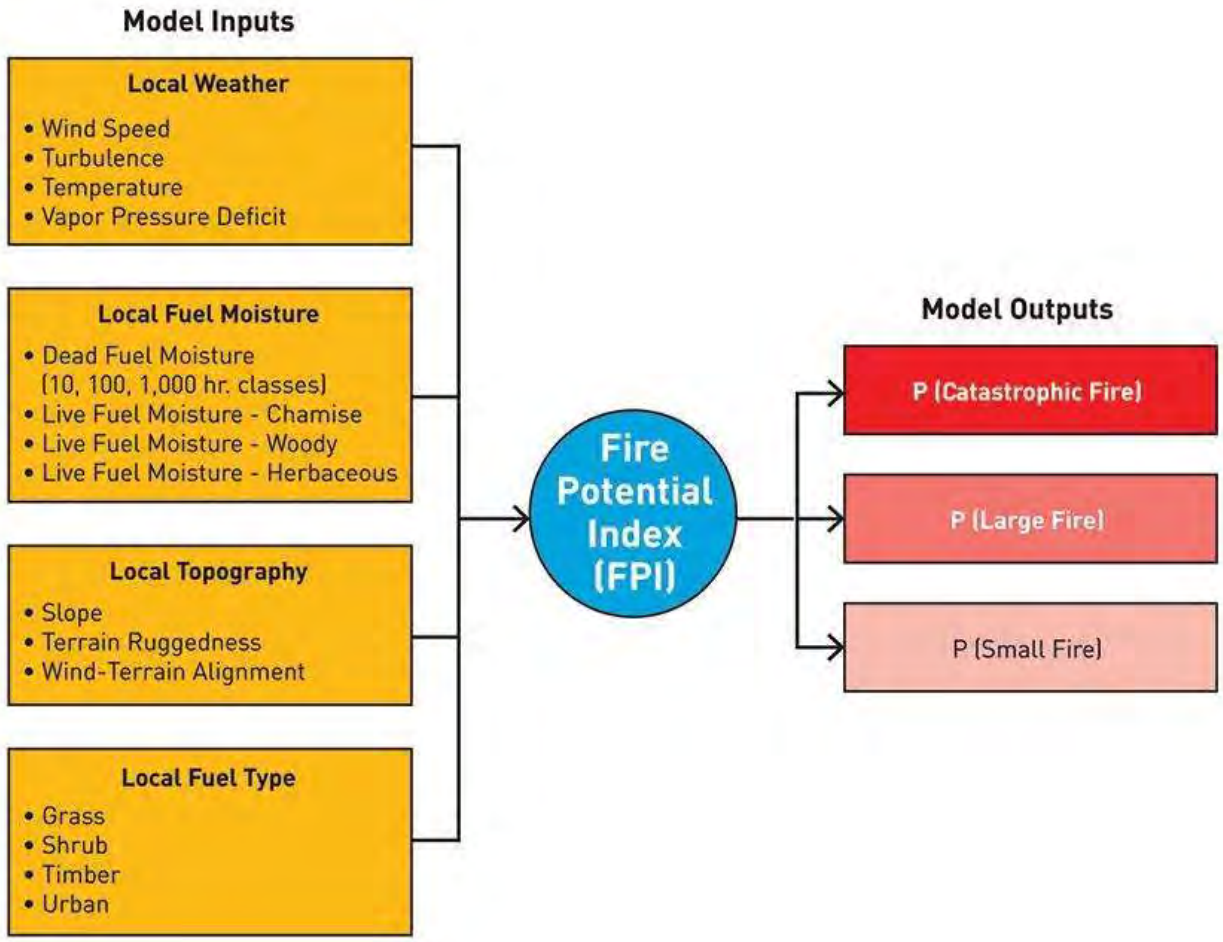


TABLE 8-32:
FIRE POTENTIAL INDEX MODEL FEATURES

Feature Group	Feature	Altitude	Description	Source	Update Cadence	Spatial Granularity	Temporal Granularity
Weather	Temperature	Surface	Temperature at the surface in Fahrenheit	Pacific Gas and Electric Company Operational Mesoscale Modeling System (POMMS)	4x per day	2 km	Hourly
Weather	Vapor Pressure Deficit	Surface	Measure of lack of water vapor relative to saturation in millibars	POMMS	4x per day	2 km	Hourly
Weather	Wind Speed (sustained)	Surface	Wind speed at the surface in mph	POMMS	4x per day	2 km	Hourly
Weather	Wind Speed (sustained)	300 m	Wind speed at 300 m above surface in mph	POMMS	4x per day	2 km	Hourly
Weather	Friction Velocity (u*)	Surface	Wind shear stress in velocity terms.	POMMS	4x per day	2 km	Hourly
Weather	Turbulent Kinetic Energy	50 m	Kinetic energy per unit mass observed in eddies characteristic of turbulent flow in Joules/kilograms	POMMS	4x per day	2 km	Hourly
Fuel Moisture	Dead Fuel Moisture – 1000hr	Surface	1000-hour fuel moisture content	POMMS & ADS	4x per day	2 km	Hourly
Fuel Moisture	Dead Fuel Moisture – 100hr	Surface	100-hour fuel moisture content	POMMS & ADS	4x per day	2 km	Hourly
Fuel Moisture	Dead Fuel Moisture – 10hr	Surface	10-hour fuel moisture content	POMMS & ADS	4x per day	2 km	Hourly
Fuel Moisture	Live Fuel Moisture – Chamise New	Surface	Live fuel moisture content of Chamise (new growth) species	POMMS & ADS	Daily	2 km	Daily
Fuel Moisture	Live Fuel Moisture – Herbaceous	Surface	Live fuel moisture content of herbaceous species	Technosylva	Daily	2 km	Daily

TABLE 8-32:
FIRE POTENTIAL INDEX MODEL FEATURES
(CONTINUED)

Feature Group	Feature	Altitude	Description	Source	Update Cadence	Spatial Granularity	Temporal Granularity
Fuel Moisture	Live Fuel Moisture – Woody	Surface	Live fuel moisture content of woody species	Technosylva	Daily	2 km	Daily
Topography	Terrain Ruggedness Mean	Surface	Terrain ruggedness average in POMMS grid cell.	United States Geological Survey (USGS) 30 m DEM (Digital Elevation Model)	USGS 30 m DEM	30 m -> 2 km	Static after being updated
Topography	Slope Degree Mean	Surface	Slope of terrain averaged over POMMS grid cell.	USGS 30m DEM	USGS release cadence	30 m -> 2 km	Static after being updated
Topography	Wind-Terrain Alignment	Surface	Alignment between wind direction and dominant aspect	POMMS & USGS 30 m DEM	4x per day	30 m -> 2 km	Hourly
Fuel Type	Urban	Surface	Fraction of fuel category in POMMS grid cell attributed to urban	Technosylva	At least once per year	30 m -> 2 km	Static after being updated
Fuel Type	Grass-Shrub	Surface	Fraction of fuel category in POMMS grid cell attributed to grass-shrub	Technosylva	At least once per year	30 m -> 2 km	Static after being updated
Fuel Type	Shrub	Surface	Fraction of fuel category in POMMS grid cell attributed to shrubs	Technosylva	At least once per year	30 m -> 2 km	Static after being updated
Fuel Type	Timber Litter	Surface	Fraction of fuel category in POMMS grid cell attributed to timber litter	Technosylva	At least once per year	30 m -> 2 km	Static after being updated
Fuel Type	Grass	Surface	Fraction of fuel category in POMMS grid cell attributed to grasslands	Technosylva	At least once per year	30 m -> 2 km	Static after being updated
Fuel Type	Timber Understory	Surface	Fraction of fuel category in POMMS grid cell attributed to timber understory	Technosylva	At least once per year	30 m -> 2 km	Static after being updated

8.3.6.2 Known Limitations of Existing Approach

The electrical corporation must describe any known limitations of current FPI calculation.

The FPI model uses a ML random forest framework. We have found ML outperforms simpler FPI models discussed in our earlier WMPs,[151] even though simpler models tend to be easier to understand, explain, and verify how small changes affect results.

The FPI Model requires the requisite input forecast data as described above to produce a forecast each hour. This high-resolution forecast data is currently available with a 4-5 day forecast horizon. The FPI Model is driven largely from the weather forecasts and will have similar limitations as weather forecasting (see Section 8.3.5.2).

8.3.6.3 Planned Improvements

The electrical corporation must describe its planned improvements for its FPI including a description of the improvement and the planned schedule for implementation.

Utility Initiative Tracking ID: SA-04; SA-05; SA-06

By the end of 2025 we will evaluate enhancements to the FPI and IPW models. This involves testing new features and types of model configurations that could improve model skill. At present we do not know if model skills can be improved, but we will attempt to do so.

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[151] 2021 WMP – Section 7.3.2 Situational Awareness and Forecasting, and/or 2022 WMP – Section 4.5.1(f) FPI Model.

Pacific Gas and Electric Company's

Safety Excellence Management System Manual

April 2023

Message from Leadership

We are committed to protecting the health and safety of our workforce and the hometowns that we are privileged to serve. To do this, we must foster a proactive and engaging safety culture. This commitment is clearly memorialized in our Safety Excellence Policy. We expect that every task be completed without injury or incident as we deliver safe, reliable, affordable and clean energy to our customers and hometowns. Our safety stand, "everyone and everything is always safe", means that nothing is more valuable than human life. To make this stand a reality, we must put safety at the heart of all our decisions and actions and have the courage to stop work if it's unsafe and only start work when it is safe. Our safety culture must encourage us to show empathy to each other and our customers. It must be modeled by our leaders and embraced by each of us.

The PG&E Safety Excellence Management System (PSEMS) is how we systematically manage risks to our processes, assets and occupational health and safety to prevent injury and illness, safely operate our assets and manage the integrity of our operating system. It supports an injury-free workplace and enables our functional areas to continually improve safety and reliability in alignment with our focus on Organizational Culture and Safety Mindset. Driven by leadership, PSEMS reflects our unwavering commitment to safety and establishes a standard for attaining world-class safety performance. It also requires us to deliver sustained value to our customers and hometowns, which will help us rebuild trust.

We all have a role in understanding and mitigating risks and assuring safeguards are in place and effective. I encourage you to read and understand PSEMS and to implement it with the ownership, tenacity and curiosity I know we all share.

Patti Poppe
Chief Executive Officer

How to Use This Manual

This manual provides an overview of PSEMS, our approach to achieving world-class safety performance and the framework for continuous improvement. Read on to learn about your role in supporting PSEMS and creating a safe and reliable organization.

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Our Safety Stands

At PG&E, our safety stands are that everyone and everything is always safe and that catastrophic wildfires shall stop. We are committed to protecting the health and safety of our workforce and hometowns by fostering a proactive and engaging organizational culture and safety mindset. At PG&E, we:

- Are committed to achieving zero public and workforce (includes coworkers and contractors) safety incidents, an injury-free workplace and the participation and engagement of the workforce.
- Create healthy and safe conditions for our workforce, customers and our hometowns that we are privileged to serve.
- Manage our assets, mitigate associated risks and improve system performance throughout lifecycles to protect our customers, workforce and environment.
- Generate and deliver safe, reliable, affordable and clean energy to our customers and our hometowns.
- Comply with legal, regulatory, internal and other health and safety requirements.
- Challenge ourselves to continuously improve and implement best practices.

PG&E's Keys to Life

We follow these 10 principles for every aspect of our work, in the field or office.

1 Conduct pre-job safety briefings prior to performing work activities.

2 Follow safe driving principles and equipment operating procedures.

3 Use personal protective equipment (PPE) for the task being performed.

4 Follow electrical safety testing and grounding rules.

5 Follow clearance and energy lockout/tagout rules.

6 Follow confined space rules.

7 Follow suspended load rules.

8 Follow safety at heights rules.

9 Follow excavation procedures.

10 Follow hazardous environment procedures.

Introducing PSEMS

PSEMS is the systematic management of our processes, assets and occupational health and safety to prevent injury and illness. The PSEMS framework is the Safety Excellence Policy (SAFE-01) and 13 elements that establish governance and operational requirements for how we operate our business to generate and deliver safe, reliable, affordable and clean energy for our customer and hometowns. We will achieve industry-leading safety performance through the disciplined application of PSEMS.

The following 13 PSEMS elements encompass our requirements around safety that all workers shall follow to keep us safe:

1 Leadership Commitment and Engagement

2 Communications and Stakeholder Engagement

3 Risk Management

4 Strategy, Objectives and Planning

5 Operational Control

6 Training and Competence

7 Emergency Preparedness and Response

8 Incident Reporting, Investigation and Corrective Action

9 Contracted Services and Purchased Goods

10 Management of Change

11 Information, Documentation and Records Management

12 Performance Evaluation and Improvement

13 Assurance

Management System Cycle

PSEMS follows the Plan-Do-Check-Act cycle to drive continual improvement across the Enterprise.

PSEMS establishes the systematic annual approach for ensuring continuous improvement:

Review Results

Periodic reviews are conducted to evaluate PSEMS performance, consider how well PSEMS is delivering the desired outcomes and verify progress.

- Reviews include Enterprise PSEMS objectives and benchmarking data.
- Output to objectives setting is focused on risks and critical internal and external business drivers.
- Evaluate maturity assessment results against strategic plans.

Establish Objectives

With workforce participation, establish, validate and/or update PSEMS objectives, metrics and targets.

- Integrate PSEMS objectives into the organization's business planning.
- Cascade PSEMS objectives, metrics and targets to all levels of the organization.

Conduct Assessment

Evaluate performance against PSEMS objectives:

- Identify gaps in leadership and culture.
- Identify gaps in the execution of processes that establish or govern PSEMS expectations.
- Validate, remove or close gaps from the prior year's assessment.
- Consider future risks, changes in business conditions and changes to business plans.
- Prioritize assessed gaps based on risk, business plan priorities and efficiency opportunities.

Prioritize and Plan

Develop gap closure plans with milestones and completion dates; evaluate and prioritize plans based on the risk profile, and consider competency, learning, human performance and technology in order to improve effectiveness.

- Identify and allocate resources to successfully execute PSEMS requirements and plans.
- Incorporate PSEMS plans into business plans and communicate them to the organization.
- Validate or update the PSEMS assurance plan priorities.

Execute and Monitor

Execute PSEMS plans to close gaps, along with other business plan activities; monitor to verify progress and effectiveness of PSEMS plans and adjust as necessary.

- Conduct periodic reviews of PSEMS performance.
- Identify and manage new corrective actions to improve controls as appropriate.
- Execute the PSEMS assurance plan priorities.

PSEMS 13 ELEMENTS

Leadership Commitment and Engagement

Leaders establish expectations and objectives, personally direct the process for continuous improvement, visibly demonstrate involvement and commitment and engage our workforce to build a strong safety culture.

Leadership Commitment

Executives and Senior Leaders communicate safety vision and establish industry-leading objectives, metrics and targets by:

- Communicating the safety vision and establishing clear, world-class safety objectives.
- Encouraging and participating in internal and external benchmarking.
- Establishing methods to hold PG&E accountable to performance objectives and expectations.
- Ensuring that appropriate resources are available and aligned.

Executives and Senior Leaders accept and promote that safety culture constantly changes and requires continuous effort to establish and sustain strength by:

- Establishing a high level of trust in the organization.
- Establishing human error-tolerant systems and capacity in work processes for safe failure.
- Ensuring that differing professional opinions are encouraged, discussed and resolved in a timely manner.
- Informing the workforce of steps taken in response to their concerns.
- Ensuring that safety culture discussions within the organization and with outside groups, including regulatory agencies and customers, are routine, open and comfortable.
- Ensuring the participation and consultation of coworkers in all aspects of PSEMS and the development and execution of communication content and plans.

Executives and Senior Leaders personally direct the process for continuous improvement and integrate PSEMS into business plans by:

- Challenging others in the area of safety culture.
- Avoiding complacency and continuously challenging existing conditions and activities in order to identify discrepancies and opportunities for improvement.
- Ensuring standards, procedures and tools align with PSEMS requirements.
- Identifying high-impact, risk-ranked items for business planning and act on opportunities to integrate PSEMS requirements into the business.
- Directing and monitoring PSEMS implementation and effectiveness reviews through focus on trends rather than absolute or specific values.

Leaders visibly demonstrate their involvement and commitment to improve safety performance by:

- Frequently conducting operational visits and engaging with coworkers.
- Encouraging a "Speak-Up" culture and questioning attitude.
- Identifying workplace risks, including unsafe conditions or situations.
- Engaging workforce on safety expectations and requirements.
- Participating in PSEMS activities, including site visits, audits, incident investigation and corrective/preventive action development.

Leaders demonstrate that safety is a personal core value and personally model behaviors to build a strong safety culture by:

- Avoiding complacency and continuously challenging existing conditions and activities to identify discrepancies that may result in error, inappropriate or noncompliant action.
- Reinforcing that every job can be completed without injury or illness.
- "Walking the talk" and addressing safety issues.
- Eliminating barriers to performance improvement and excellence in safety culture.
- Recognizing positive and leading safety behaviors.
- Holding themselves and others accountable for safety performance.

Workforce Engagement

Workers embody PG&E's safety culture and deliver results. Individuals are expected to:

- Know and exercise their obligation to start work only when safe and stop work when it is or may be unsafe.
- Know and follow PG&E's Keys to Life (KTLs).
- Avoid complacency and continuously challenge existing conditions and activities to identify discrepancies. Be outspoken advocates for safe failure.
- Be watchful for assumptions, anomalies, values, conditions, changes or activities that can have an undesirable or unintended effect on safety.
- Understand that every job and task can be completed without injury or illness and that capacity for failure resulting in no injury is mandatory.
- Participate actively in safety committees and training programs.
- Immediately report unsafe conditions, hazards, risks and barriers to safety performance to leaders.
- Identify opportunities for improvement.
- Work together to remove barriers to the desired safety culture and improve safety performance.
- Hold themselves and others, including executives and all levels of management, accountable for safety performance.

Communications and Stakeholder Engagement

Relationships with internal and external stakeholders are established and maintained through continuous and deliberate formal/informal communications and other activities. The needs and expectations of stakeholders, including linkage to legal requirements, are understood through ongoing and deliberate communications and engagement.

Programs are in place to establish and maintain positive relationships with stakeholders to ensure:

- Internal, external and functional area stakeholders are identified.
- Active engagement and dialogue with communities and community leaders to maintain public confidence in PG&E's commitment to safe and healthy operations.
- Communication of the management system policy and requirements, risk identification and management, safety performance and objectives, including:
  - The role each stakeholder group has in the performance of the management system and achieving its objectives.
  - Stop work authority and obligation.
  - The maturity of PSEMS and ongoing continual improvement efforts and outcomes.
- Coworkers are made aware of hazards present in the work performed, incidents that occur and the outcomes of investigations and their obligation to remove themselves from situations that present an imminent and/or serious danger.
- Coworkers understand their obligation and responsibility to start work only when safe and the obligation and authority to stop work at any point when work is not or may not be safe.
- Communication plans and ongoing communications with workforce, regulatory agencies, community groups and local businesses are established and documented.
- Stakeholder engagement plans are implemented that include mechanisms to monitor stakeholder audiences, systematic tracking of engagements and issues and effectiveness evaluation of communication and outreach efforts.
- Communication plans exist for emergency and crisis events.
- Information relevant to stakeholders from activities governed by other PSEMS elements is monitored, documented and communicated.
- Effective management of social, political and reputational risks to the company and that business impacts of those risks are addressed. A stakeholder engagement plan is in place to manage these requirements.

Risk Management

Risks are identified and evaluated using a defined process that includes associated hazards and consequences and the safeguards to prevent or mitigate the identified risks. A risk profile to prioritize risk reduction and assurance programs is maintained that considers the expectations of stakeholders. Lifecycle risks are evaluated and risk reduction is achieved.

A process for PG&E risk management is established and maintained that includes:

- A formal standardized process for identifying risks and assessing the consequences and likelihood of those risks being realized.
- Identification and implementation of risk control measures that manages identified risks to an acceptable level using the hierarchy of controls.
- Definition and communication of risk acceptance criteria.
- Risk tolerance decisions by levels of management appropriate to the nature and magnitude of the risk.
- Input to the safety assurance process from review of risk assessment results.
- A hazard inventory and risk profile using a Hazard and Risk Register (HRR) to prioritize risk reduction programs and manage assessed risk to acceptable levels.

RISK ASSESSMENTS ARE CONDUCTED FOR:

- All assets
- Ongoing operations
- Hazardous materials and activities
- New projects
- Products and services
- Changes defined by the management of change (MOC) process

RISK ASSESSMENTS CONSIDER RISKS TO:

- Health and safety of workforce, customers and the public
- Process Safety
- Asset integrity
- Environment
- Business continuity
- Security
- Company reputation

Additional requirements:

- Risk assessments are carried out by competent personnel with appropriate independence.
- Completed risk assessments are reviewed, approved and accepted by specific levels of management appropriate to the magnitude of the risk and decisions are documented.
- All stakeholders are kept informed about the risk assessment process and results.
- Risk assessments are updated as changes occur and reviewed and updated at a defined appropriate frequency.
- A follow-up process is in place to ensure that risk management decisions and associated mitigations are implemented and effective.
- High and critical risks and their controls are reviewed for effectiveness and updated, at least annually, with top management.

Strategy, Objectives and Planning

Planning includes consideration of the financial, human and technology resources needed to realize the intent of the Safety Excellence Policy and objectives of PSEMS. It also considers relevant internal and external factors that affect PG&E's ability to achieve the desired outcomes established by PSEMS. The needs and expectations of all stakeholders are actioned and resources needed for effective implementation of PSEMS are provided.

A process for PG&E strategy, objectives and planning is established and maintained, including:

- Identification and management of interactions between existing and future PG&E management systems and their elements, including the processes established to implement, maintain and continually improve PSEMS.
- Documented scope of the management system in as much detail as is required to capture the particulars of each functional area (or other method of organization).
  - Interactions and responsibilities between functional areas are identified.
- A process to continually scan internally and externally for issues and stakeholder needs and expectations that may affect PSEMS performance.
  - Scanning results are communicated to the organization and integrated into business planning, operations and PSEMS.
- A documented Strategic Asset Management Plan (SAMP) to deliver asset management objectives across the asset life cycle is established, implemented, maintained and continuously improved.
- Safety and asset management objectives are established, maintained, reviewed and updated at specified intervals, or as required, and communicated to stakeholders.
- Processes, methods and decision criteria used to prioritize work and allocate resources that are established, documented and communicated.
  - The prioritization of work and allocation of resources considers multiple factors including safety, risk, cost/benefit analyses, feasibility and resource availability.
- Appropriate resources are provided to meet the planned objectives of PSEMS.
- Prioritized risk reduction objectives using input from the Hazard and Risk Register (HRR).
- Construction, inspection and testing processes for systems are established and documented and are consistent with the specified requirements, regulations and applicable standards.
  - Maintenance activities are effectively managed and controlled.
- Facilities, equipment and tools are designed, constructed, inspected, tested and maintained per appropriate standards, processes and procedures including environmental and human factor considerations.

Operational Control

Hazards and risks are identified and associated work and work-related activities and processes are planned, controlled, resourced, supported and adapted to the worker. Processes, procedures, programs and tools are continually evaluated for improvement to reduce reliance on safeguards that require human intervention or action.

Planning, execution and control of work in a safe manner is the product of understanding workplace hazards, providing proper equipment and tools, assigning competent qualified personnel, following approved work procedures with embedded hazard controls, employing proper pre-work activities and exercising Stop Work authority when required.

- Processes are in place and promoted to assess the potential hazards to workers, assets and the community.
  - Programs are in place to assist workers in identifying the hazards associated with work activities and the appropriate mitigations.
  - Procedures and controls are developed and established to mitigate identified hazards using the hierarchy of controls and energy wheel, among others.
  - Coworkers are directly involved in the development of actions to eliminate hazards and reduce risk and establish controls.
- Equipment is operated safely within its design envelope and limitations.
  - Safety critical equipment is identified, tested, approved and maintained.
  - Procedures are in place to ensure tools and equipment are maintained, calibrated (as appropriate) and verified as safe for the task before use.
- Management communicates and reinforces clear operational principles, including:
  - Coworkers understand their roles and responsibilities to maintain operations within established parameters.
  - Coworkers understand and follow approved operating procedures.
  - Work is planned and executed so that capacity for failure to a safe condition without injury is established.
  - Key operating parameters necessary to ensure safety, environmental protection and compliance are established and regularly monitored.
  - Start-up, operating, emergency, maintenance and shutdown procedures are in place, regularly reviewed, updated and made available to appropriate personnel.
  - Appropriate tools are used to guide critical operations such as start-up, shutdown and emergency conditions.
  - Protocols exist to ensure effective shift turnovers.

Policies, standards and procedures are developed and maintained to address the requirements and regulations applicable to PG&E's operations. Personnel follow and management enforces applicable policies, standards and procedures.

- Operating procedures are established and implemented to address safe work practices that assure the safe conduct of operating, maintenance, emergency response activities and control of materials.
  - Processes exist to ensure procedures remain current by monitoring and evaluating changes to regulations, industry practices and PG&E requirements.
  - Programs exist to review, update and maintain procedures and other documents necessary for safe and compliant operation.
  - Personnel have access to procedures and other documents needed to perform their roles.
  - A written process exists for prior approval of deviations from operational procedures.
  - Procedures are in place to perform and document start-up readiness reviews and start-up communications with affected groups.

Training and Competence

Safe and reliable operations are contingent upon competent qualified personnel and contractors that carry out their work properly and possess an awareness of their contribution to the success and effectiveness of PSEMS. Training provides the knowledge, skills and abilities for personnel to perform their jobs proficiently.

This element ensures that people are selected and placed into roles consistent with their abilities and job requirements, people are trained to achieve and maintain competency, collective competency is maintained over time and human performance principles are applied to enable proficient work performance.

PG&E's program for training and competency ensures:

- ✓ Competence and fitness for work requirements are defined for all roles in the organization.
- ✓ Awareness and competency requirements for all workers.
  - At a minimum, hazard identification and risk management competencies relevant to the role are established, including the hierarchy of controls and energy wheel.
- ✓ Necessary levels of experience, knowledge and competency are considered when recruiting, during personnel changes and task assignments.
- ✓ Coworkers are involved in the determination of competence, training development and delivery and training evaluation.
- ✓ Initial, ongoing and refresher training of personnel and contractors that have accountabilities, responsibilities and authorities in executing the requirements of the PSEMS includes:
  - Applicable updates to elements of PSEMS that affect their job requirements.
  - Newly emerging or changing risks or problems in execution of the PSEMS that create opportunities to improve processes and procedures.
  - Consequences of failure to follow processes and procedures.

Assessments of training effectiveness are conducted periodically to ensure desired competency and behavioral outcomes are achieved.

Emergency Preparedness and Response (EP&R)

Emergency management plans and response capabilities exist to protect people, respond to emergencies and communicate with stakeholders. EP&R plans identify procedures, processes, equipment, training and personnel necessary for effective response to foreseeable emergency scenarios, non-routine tasks and other crises.

A process for PG&E emergency response, as documented in the Company Emergency Response Plan (CERP), is established, tested and maintained that incorporates the following:

- ✓ Credible emergency scenarios are identified across the Enterprise.
- ✓ Emergency management plans are risk based and address relevant emergency scenarios.
- ✓ Organizational structure, including roles and responsibilities, are defined and communicated.
- ✓ Periodic drills and exercises are conducted.
- ✓ Lessons learned from previous incidents and exercises are incorporated into plans.
- ✓ Equipment, facilities and trained personnel needed for emergency response are defined and readily available.

Incident Reporting, Investigation and Corrective Action

Incidents and near-hits are identified, reported, recorded, effectively investigated and communicated. Learning from incidents occurs and drives corrective actions, mitigation and prevention of recurrence and ensures continuous improvement.

The process for incident reporting, investigations and corrective action is established to ensure:

- Roles and responsibilities are defined for incidents and near-hit reporting and investigations, including the participation of non-managerial workers.
- Stakeholders are engaged in incident investigation and analysis and provide advice on incidents as necessary.
- Appropriate cause analysis including root cause and extent of condition is performed based on risk.
- Procedures are followed for completion and closure of actions taken to resolve deficiencies.
- Lessons learned and trends are identified and shared across the Enterprise.

A corrective action program is established for the management of corrective, preventive and improvement actions, including:

- Incident investigations
- Measurement and monitoring
- Assessments
- Inspections
- Hazard identification and risk management
- Improvement plans and suggestions
- Audits
- Observations

An effectiveness review process is established to drive continuous improvement and risk reduction.

Contracted Services and Purchased Goods

Contracted service providers' performance is improved through mandatory conformance to PG&E and regulatory safety requirements when providing services for PG&E on or off company property.

Contracted service providers conducting work for or on behalf of the Company (materials, equipment, services and labor) impact our processes, assets, public and workforce safety. Work performed must comply with contract requirements and align with company policies and business objectives. Procurement processes are established to ensure products and services meet PG&E requirements.

A process for PG&E contractor management is established and maintained, including:

- Contracted service providers undergo a qualification and selection process that assesses a contractor's capabilities to perform the work per PG&E safety requirements.
- Contracted service providers are required to provide personnel who are screened, trained, qualified and competent to perform the duties assigned.
- Management provides oversight including visible field leadership, enforcement of standards and verification of safeguards.
- PG&E and contracted service providers actively manage their relationships and interface.
- Contracted service providers are accountable to monitor, assess, improve and report their performance on an ongoing basis.
- PG&E monitors contracted service provider performance, conducts observations and provides feedback on the adequacy of contracted service providers' monitoring and assessment activities.
- PG&E actively monitors contracted service provider compliance to PSEMS when contracted service providers are conducting work for PG&E.
- PG&E assists contracted service providers in their efforts to implement safety management systems in their companies.

Procurement processes for materials, equipment, supplies and other items specify safety and quality requirements.

Management of Change

Changes to systems, process or people could introduce risk and have unintended consequences. Management of change (MOC) is a process that systematically identifies, evaluates and manages changes to facilities, equipment, operations, procedures and the organization by ensuring that unacceptable risks are not introduced into the business.

Types of MOC

- Permanent
- Temporary
- Emergency
- Organizational

The MOC process consists of the following phases:

- INITIATION
- RISK ASSESSMENT
- STAKEHOLDER REVIEW AND APPROVAL
- TRAINING AND NOTIFICATION
- IMPLEMENTATION
- CLOSEOUT AND DOCUMENTATION
- EFFECTIVENESS REVIEW

Information, Documentation and Records Management

Information Management

The organization must ensure consistency and traceability in documents, procedures, records and technical and other relevant non-financial data required to meet legal, regulatory, internal and stakeholder requirements and company objectives. Information should be current, accessible, traceable and clear and comply with retention and security requirements.

Information requirements that affect PG&E's ability to achieve the desired outcomes established by PSEMS are determined by, and must consider:

- Significance of identified risks in the determination of the requirements.
- Roles and responsibilities.
- The size of PG&E, its processes and activities as they relate to assets, procedures, products and services.
- The exchange of information with stakeholders, including service providers.
- The impact of quality, availability and management of information on decision making.
- The control and accessibility of data, information and records.

Data, information and records including documents, drawings, procedures, asset management plans and other data and information are current, accessible, traceable, clear and in as simple a form as achievable.

Processes are in place to specify, implement and maintain data, information and records management, including attribute and quality requirements, enabling technologies and collection, analysis and evaluation requirements. A process is in place for the design, implementation and maintenance of a system (or systems) for managing data, information and records.

The requirements for aligning financial and non-financial terminology are established, consistent and traceable between financial and technical data and other relevant non-financial data.

Documentation Management

A documented process for the development, identification, distribution and control of documents is established and maintained to assure:

- Examination, revision and version control of documents.
- Identification and description of documents.
- Documents are legible and identifiable.
- Review and approval of documents for adequacy before issue.
- Changes are clearly identified and the status of any revision is documented.
- Controlled identification and distribution of documents of external origin.
- Effective distribution of documents.
- Where necessary, the timely removal of obsolete documents from all points of issue and use.

Records Management

Documented processes for the systematic control of records and their related data, including active and inactive assets, is in place. The processes define controls for identification, storage, protection, retrieval, retention, preservation and disposition.

The confidentiality and security of data, information and records are maintained per PG&E standards and procedures and applicable data privacy protection laws and regulations.

Performance Evaluation and Improvement

Evaluation of PSEMS performance is a systematic, planned approach used to drive continuous progress toward world-class safety excellence performance. It is an iterative approach to effectively integrate safety objectives, plans, requirements and activities into daily operations through the lean operating model. Performance evaluation includes review of leading and lagging performance indicators and use of the Plan-Do-Check-Act (PDCA) cycle to drive improvement across the Enterprise.

Performance improvement is achieved through periodic review and evaluation of safety excellence plans, activities and performance and the actions taken to address identified gaps. The following actions are taken:

- Establish, validate, update objectives, metrics and targets through application of the lean operating model.
- Conduct an annual assessment to evaluate the performance and effectiveness of PSEMS.
- Establish and maintain a process to identify and manage performance trends.
- Develop plans with milestones and completion dates.
- Execute plans to close gaps and monitor progress and effectiveness of plans.

Management review is conducted to evaluate PSEMS effectiveness at planned intervals and to ensure its continuing suitability, adequacy and effectiveness.

The review will consider:

- Results and insights from previous performance improvement cycles, audits, assessments and management reviews.
- Changes in business conditions and plans.
- Results of internal and external scanning for factors that affect PG&E's ability to achieve desired PSEMS outcomes.
- Performance against the expectations of the PG&E Safety Excellence Policy.

Assurance

PSEMS assurance establishes the necessary controls to achieve and improve safety excellence. This assures compliance with legal, regulatory and PG&E requirements to minimize risk to the Enterprise.

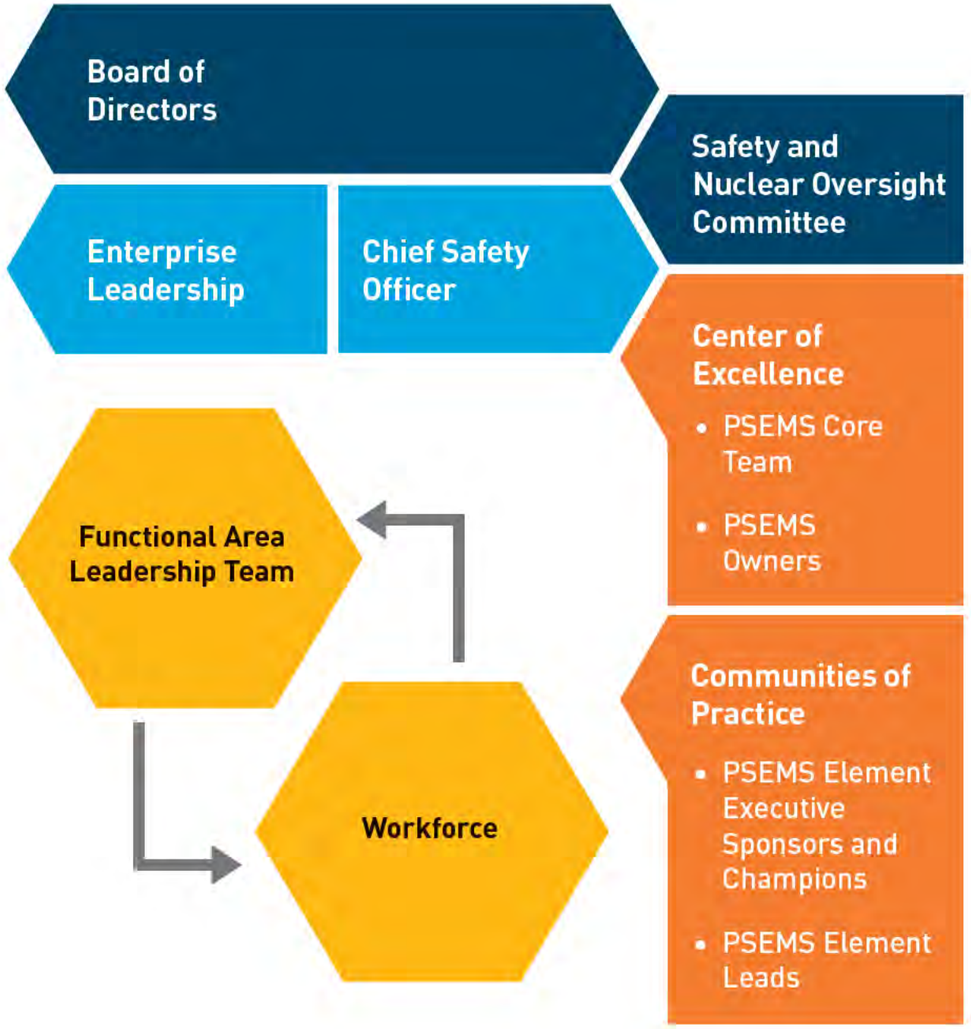
Assurance registers are documented and implemented to identify the safety excellence requirements applicable to each functional area (FA). The FA ensures the registers are associated to the corresponding requirements, controls and verifications that manage or sustain compliance, including the:

- Extent to which regulatory, company and other requirements are fulfilled.
- Activities and operations related to identified hazards, risks and opportunities.
- Methods, frequency and timing of audits and evaluations to assure compliance with requirements.
- Measurement, analysis and monitoring of compliance to evaluate performance.
- Reporting and documentation of findings and instances of potential noncompliance resulting from audits, including resolutions.

Audits and assessments, internal and external, are conducted regularly to assess compliance with PSEMS, verify that controls and verifications are designed and functioning, verify that assurance registers are developed and maintained and evaluate safety excellence performance.

Governance

Achieving world-class performance requires an effective and integrated governance structure that creates and sustains a positive, proactive safety culture. The PG&E governance structure supports PSEMS by providing appropriate oversight, leadership and technical knowledge. It identifies key roles and responsibilities at each level to support the functional areas in implementing and executing PSEMS.



Role		Description	Key Responsibilities
PG&E Board of Directors		Monitors and oversees stewardship of Company	• Oversees business strategy and performance • Ensures effectiveness of compliance programs and controls
Safety and Nuclear Oversight Committee		Monitors and oversees Company's safe operations	• Monitors Enterprise safety risks, assessment processes, mitigations and performance • Promote a strong safety culture through programs and policies
Enterprise Leadership		Responsible for strategy and safety culture	• Endorses goals, programs and policies • Sets health and safety objectives and monitors performance • Allocates resources
Chief Safety Officer		Directs development and implementation of PSEMS	• Advises on health and safety and recommends policy changes • Directs development of health and safety performance expectations • Represents PG&E externally on health and safety
Center of Excellence (COE)		Provides governance and fosters PSEMS implementation	• Implements PSEMS across the Enterprise • Integrates safety and gap closure plans into business plans; helps monitor and follow up • Establishes PSEMS standards, procedures and governance, including performance objectives, metrics and targets
COE Members	PSEMS Core Team	Maintains PSEMS to achieve world-class performance and actively participates in COE	• Supports standardization and integration in functional areas/ divisions • Fosters safety culture that enables PG&E's safety stand
	PSEMS Owners	Owns implementation of PSEMS in assigned functional area/division and actively participates in COE	• Establishes PSEMS standards, procedures and governance within assigned functional area/division • Ensures gaps are closed in assigned functional area/division • Implements PSEMS continual improvement plans
Communities of Practice (COP)		Supports implementation of assigned PSEMS Elements	• Evaluates and executes PSEMS processes and standards • Ensures gaps are closed out consistently • Disseminates best management system practices
COP Members	PSEMS Element Executive Sponsors and Champions	Coaches leaders in the implementation of PSEMS and actively participates in COP	• Approves and communicates Element requirements • Manages potential barriers to gap closure • Drives implementation of and continuous performance improvement in Elements
	PSEMS Element Leads	Serves as expert on assigned Element in assigned functional area/ division and actively participates in COP	• Understands the requirements of PSEMS and assigned Element as applied in area of functional expertise • Establishes and maintains interactions between Elements • Provides technical support for programs and improvements related to PSEMS
Functional Area Leadership Team*		Establishes and communicates a clear vision for PSEMS success	• Integrates PSEMS into operations • Provides resources to enable PSEMS, resolves obstacles and monitors performance • Establishes the Management System Cycle
Workforce		Coworkers and contractors who take personal responsibility to work safely	• Follows safe work practices and procedures, works in a controlled manner and maintains situational awareness • Identifies, communicates and mitigates hazards • Stops work when unsure and speaks up about abnormal conditions

*Functional Area Leadership Team includes all leaders from crew leads and supervisors on up

Audits

Audits play an integral role in PSEMS implementation and compliance assurance while bringing additional value to the organization. They provide an independent assessment of the effectiveness of controls and identify enhancement opportunities, and the audit process yields key insights and learning opportunities for engaged stakeholders.

Audit results update the Board of Directors and executive leadership on PSEMS implementation and effectiveness and identify resource needs across the Enterprise.

Independent Third-Party Certification and Assessment

Following international best practice, PSEMS is designed in alignment with the International Standard Organization 45001 and 55001 and American Petroleum Institute Recommended Practice 1173 standards. Conformance of PSEMS to these standards will be maintained and periodically validated by an independent third party. Existing independent third-party certification to any of the foundational standards within functional areas will be maintained and other certifications may be pursued. Certification, where achieved and maintained, demonstrates that elements are designed and implemented to improve safety performance, reduce risks and create better and safer working conditions.

Corporate Safety Audits

Corporate safety audits will be conducted across the functional areas to assess whether controls are established and in conformance with applicable safety requirements, leading to risk reduction to the acceptable and practical level for the Enterprise. Safety audits are conducted through the coordination and oversight of the Enterprise Health and Safety–Safety Assurance Group in partnership with functional areas. Findings identified by subject-matter resource audit team members are corrected using action plans and are monitored for closure.

California Public Utilities Commission (CPUC) Safety Culture Assessments

Leadership is committed to protecting the health and safety of our workforce and hometowns and fostering a proactive and engaging organizational culture and safety mindset. Internal assessments combined with external CPUC assessments of culture will be conducted.

PSEMS Self-Assessment

Annually, PSEMS is assessed by functional areas and divisions to determine if it is adequately supporting the organization in meeting its safety objectives. The design and implementation are analyzed for effectiveness. Performance is analyzed and compared to industry-leading results.

Pacific Gas and Electric Company

PG&E Currents(/) | 7.15.22

PG&E Bolsters Safety by Implementing and Evolving Wildfire Mitigation Measures

Company Has Made Substantial Progress Since 2017 and 2018 Wildfires

Pacific Gas and Electric Company (PG&E) received an independent report today detailing root cause analyses of the 2017 North Bay and 2018 Camp fires, conducted by Envista Forensics at the direction of the California Public Utilities Commission (CPUC).Safety

While Envista recommends some enhancements to PG&E's wildfire mitigation efforts, it also found that after the wildfires, PG&E instituted prudent responses to mitigate future wildfire events. According to the report, PG&E's Public Safety Power Shutoff (PSPS) and Enhanced Powerline Safety Settings (EPSS) programs have directly reduced the likelihood of electrical system wildfire ignitions.

Envista conducted the root cause analyses as required by the CPUC's 2020 Wildfire Order Instituting Investigation (OII) settlement agreement. PG&E will respond to the Envista report findings as required within 30 days.

In its formal response, PG&E will describe measures it has taken to mitigate the risk of wildfires since the 2017 and 2018 wildfires, as well as actions PG&E is taking in response to the OII settlement agreement and Envista report, which will not be paid for by customers. In its response, PG&E also will reiterate its commitment to take further action to help keep its customers and hometowns safe from wildfires and other climate-related threats.

"PG&E is committed to keeping our customers and our hometowns safe from catastrophic wildfires and we appreciate Envista's thorough review. We have made significant progress mitigating wildfire risk in the past five years, but we know our work is not done. We are constantly looking to improve and innovate to further enhance the safety of our energy system in light of the evolving wildfire risk. We always look forward to implementing recommendations that will further bolster safety for our customers," said Sumeet Singh, PG&E Executive Vice President, Chief Risk & interim Chief Safety Officer.

PG&E Wildfire Mitigation Efforts Since 2017

Since the 2017 wildfire season, PG&E has taken immediate and longer-term actions to mitigate wildfire risk on its system. These efforts include:

- **Situational Awareness and Intelligence:** Using state-of-the art weather forecasting, Artificial Intelligence, and machine learning to help detect, prevent, and respond to the risk of wildfires; installed more than 1,300 weather stations since 2018 and plans to install or optimize 100 more stations in 2022, which expands coverage to approximately one station every 20 lines miles in high fire-risk areas; installed 502 high-definition wildfire cameras since 2018 and plans to add 98 more in 2022, to provide approximately 90% viewshed coverage in the high fire-risk areas.
- **Grid Design and System Hardening:** Rebuilding the electric system from the underground up, with a bold initiative to place 10,000 miles of distribution powerlines underground in high fire-risk areas including 175 miles in 2022 and ramping up to 1,200 miles a year, completing approximately 3,600 miles by end of 2026 (roughly one-third of the program), while reducing cost per mile from $3.75 million to $2.5 million. Also continuing to install stronger poles and covered powerlines and adding temporary distribution microgrids and new remote grids as part of the broader System Hardening effort.
- **Enhanced Powerline Safety Settings**: Piloted in 2021, these safety settings provide additional safeguards against fire ignitions by shutting off power in one-tenth of a second or less when objects such as a tree or branch fall into a line. Last year, on the 45% (11,500) of line miles in High Fire-Threat District (HFTD) areas with safety settings enabled, there was an approximately 80% reduction in CPUC-reportable ignitions that could result in a potential wildfire, compared to the prior three-year average for enabled circuits. As a result of the pilot, EPSS was deployed across all 25,500 distribution line miles in high fire-risk areas, as well as an additional 18,000 line miles in areas adjacent to high fire-risk areas; additionally, conducting reliability and operational improvements to minimize customer impacts from outages on safety setting-enabled lines.
- **Asset Management and Inspections:** Inspected and performed maintenance on distribution and transmission powerlines across its service area, including high fire-risk areas, on a recurring cycle using various inspection methods including climbing, aerial and drones; in 2019 inspected all structures in the HTFD extreme and elevated fire-risk areas (Tier 3 and Tier 2). In 2020 and 2021, inspected all structures in the extreme fire-risk areas (Tier 3), and

one-third of the structures in the elevated fire-risk areas (Tier 2); finding and fixing conditions that posed an immediate safety risk, and completed other high-priority repairs on an accelerated risk-informed basis.

- **Vegetation Management and Inspections:** Implemented Enhanced Vegetation Management (EVM), which goes above and beyond regulatory requirements by expanding minimum clearances, removing overhanging branches and assessing strike potential trees in high fire-risk areas; as of June 2022, completed more than 7,000 miles of EVM safety work since the program began in 2019; in January 2022, set a goal to complete more than 1,800 miles within the calendar year, which will put total mileage at more than 8,000 in 2023.

Public Safety Power Shutoffs: Utilizing PSPS as a measure of last resort during extreme wind-driven weather conditions to mitigate the risk of catastrophic fire, while also minimizing the impact on customers; PG&E's experienced meteorologists use cutting-edge weather models, using a network of over 1,300 advanced weather stations to forecast risk on a granular basis and factoring in vegetation in proximity to overhead lines; PSPS is scoped using advanced risk models and more than 1,200 sectionalizing devices to surgically target power shutoffs.

TOP STORIES

PG&E Encouraging Eligible Customers To Sign Up for Monthly Energy Discount Program (/articles/3464-pg-e-encouraging-eligible-customers-sign-monthly-energy-discount-program)

PG&E Bolsters Safety by Implementing and Evolving Wildfire Mitigation Measures (/articles/3485-pg-e-bolsters-safety-implementing-evolving-wildfire-mitigation-measures)

'Climate Positive' by 2050: PG&E's New Climate Strategy Report Outlines Targets and Milestones on Path to Net Zero Emissions and Beyond (/articles/3466-climate-positive-2050-pg-e-s-new-climate-strategy-report-outlines-targets-milestones-path-net-zero-emissions)

[As California's Traditional Fire Season Starts, PG&E Turns on Enhanced Powerline Safety Settings Across All High Fire-Risk Areas]

[(/articles/3476-california-s-traditional-fire-season-starts-pg-e-turns-enhanced-powerline-safety-settings-high-fire-risk-areas)]

[Collaborating for a Clean Energy Future: California's First 100% Renewable Multi-Customer Microgrid Is Now Operational]

[(/articles/3470-collaborating-clean-energy-future-california-s-100-renewable-multi-customer-microgrid-operational)]

PG&E Currents(/) | 9.30.22

PG&E Explores Innovative Technologies to Reduce Wildfire Risk, Increase Grid Reliability and Resiliency for Customers

By Paul Doherty

Automated drones, artificial intelligence-enabled wildfire detection cameras, and solar-plus-storage. These are just a few of the new and emerging technologies PG&E is exploring or using to help advance its wildfire risk mitigation, increase grid flexibility, and achieve greater system resiliency.

PG&E outlines 26 projects in its 2022 Wildfire Mitigation Plan [https://www.pge.com/en_US/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan.page], a comprehensive and multi-faceted wildfire safety program filed with state regulators earlier this year.

"PG&E has been focused on innovation, and through these grid modernization and wildfire risk mitigation projects we continue making exciting progress in developing and deploying new technologies to improve grid safety and reliability and reduce costs for our customers," said

PG&E's Sumeet Singh, executive vice president, chief risk and interim chief safety officer.

PG&E's new or emerging technology project portfolio focuses on six areas: situational awareness and forecasting, grid design and system hardening, asset management and inspections, vegetation management and inspections, asset analytics and grid monitoring, and foundational capabilities.

Here's an overview of some of the projects:

Situational awareness and forecasting

- **Automated Fire Detection from Wildfire Alert Cameras** (https://www.globenewswire.com/news-release/2022/07/12/2478172/0/en/AlcheraX-Takes-Part-in-PG-E-Program-that-Tests-FireScout-s-AI-Capabilities-in-Detecting-Wildfires.html): Demonstrating improved situational awareness and providing near real-time valuable fire detection data to help PG&E, first responders and partner agencies better assess fire conditions.

Grid Design and System Hardening

- **Enhanced Powerline Safety Settings** (https://www.pgecurrents.com/2022/06/16/as-californias-traditional-fire-season-starts-pge-turns-on-enhanced-powerline-safety-settings-across-all-high-fire-risk-areas/): protecting about 3 million people, or more than 1 million customers, who live in high fire-risk areas within the company's service area. The safety settings turn off power within one-tenth of a second when a fault, such as a tree limb coming into contact with a powerline, is detected. Last year, on 170 circuits with safety settings enabled, there was an 80% reduction in CPUC-reportable ignitions in High Fire Threat Districts that could result in a wildfire, compared to the prior three-year average. Based on EPSS's success in 2021 as a proven wildfire prevention technology, PG&E has expanded the program to more than 1,000 circuits encompassing more than 25,000 distribution line miles in high fire-risk areas this year as well as approximately 18,000-line miles in adjacent portions of the system. Through the first half of 2022, there has been an 82% reduction in CPUC-reportable ignitions that could result in a wildfire compared to the three-year average (2018-2020).
- **Multi-customer, multi-use microgrids** (https://www.pgecurrents.com/2022/06/09/collaborating-for-a-clean-energy-future-californias-first-100-renewable-multi-customer-microgrid-is-now-operational/): Developed and tested the technology, processes, and business models needed to deploy and operate multi-customer microgrids to help improve reliability for communities and critical services such as airports, fire stations, and medical facilities. This included the design and development of programs to maintain visibility and operational control of the microgrid whether it is connected to the grid or operating in "stand alone" or "island" mode.
- **Microgrid resiliency:** Developing the technical capabilities and production-ready operational processes to utilize Behind the Meter (BTM) distributed energy resources (such as solar, battery energy storage and electric vehicles) for resiliency in microgrids. The project aims to reduce PG&E's use of diesel generators during safety or other emergency-related outages while helping further integrate BTM DERs within multi-customer microgrids.

Asset management and inspections

- **Automated Drone Enablement:** Demonstrating automated and "beyond visual line-of-sight" drone operation for electric system inspections and asset alert investigations. PG&E's intent is to determine whether these automated operations can both offer a more efficient alternative to transmission line and substation asset inspections than today's manual drone operations, and provide a fast, safe and effective solution for field-validating a range of sensor alerts.

Asset analytics & grid monitoring

- **Predictive Maintenance Analytics** (https://www.pgecurrents.com/articles/3356-like-car-check-engine-light-pg-e-uses-data-analytics-machine-learning-algorithm-predict-electric-maintenance-needs): Using data analytics and a machine-learning algorithm to detect early stages of wear and tear on PG&E's electric equipment so that crews can proactively reduce risk on the electric system.
- **Momentary Outage Information:** Demonstrating a new approach to proactively identify potential service issues in locations with frequent momentary power outages.

Foundational Capabilities include grid communication tools and control networks that can enable greater exchange of information required to provide real or near-real time operational visibility across the grid for enhanced decision-making. Foundational items can also increase the flexibility of the grid, providing fundamental capabilities to advance system resiliency.

- **Advanced Distributed Energy Resource (DER) Management System** (https://www.pgecurrents.com/articles/3113-pg-e-testing-innovative-der-management-system-blue-lake-rancheria-microgrid): PG&E developed a cost-effective solution to help grid operators better manage DERs equipped with smart inverters, which are required for providing key data to PG&E system control centers. PG&E has put the system into production and made this option available to all new customers interconnecting to the distribution grid with DER systems that are 1 megawatt (MW) or larger.

Many projects, including the items listed above, are supported through the Electric Program Investment Charge (https://www.cpuc.ca.gov/energyrdd/) (EPIC) — a statewide, customer-funded program that enables PG&E, other California investor-owned utilities and the California Energy Commission to execute emerging technology demonstration and deployment projects that address important grid needs. EPIC plays a vital role in helping drive the innovation needed to meet California's policy and clean energy goals while also ensuring the safe, reliable, and affordable operation of the grid.

Learn more about PG&E's overall emerging technology portfolio at https://www.pge.com/EPIC (https://www.pge.com/en_US/about-pge/environment/what-we-are-doing/electric-program-investment-charge/electric-program-investment-charge.page) and read the closeout reports for EPIC projects that PG&E has previously completed here (https://www.pge.com/en_US/about-pge/environment/what-we-are-doing/electric-program-investment-charge/closeout-reports.page).

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(/articles/3476-california-s-traditional-fire-season-starts-pg-e-turns-enhanced-powerline-safety-settings-high-fire-risk-areas)

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PG&E Currents(/) | 3.27.23

PG&E Outlines Continued Risk-Informed Improvements to Wildfire Safety Efforts Through 2025

Latest Wildfire Mitigation Plan Builds Upon Proven Layers of Protection, Introduces New Technology Solutions

Building upon proven layers of protection that have reduced wildfire risk from the company's equipment by more than 90%[1], Pacific Gas and Electric Company (PG&E) today shared its multi-faceted, risk-informed strategy aimed at continuing to close the gap on the remaining 10% of wildfire risk. PG&E's 2023-2025 Wildfire Mitigation Plan (http://www.pge.com/wildfiremitigationplan) (WMP), submitted to California's Office of Energy Infrastructure Safety (Energy Safety), details the company's continued efforts to construct, maintain and operate its system to minimize the risk of catastrophic wildfires and help keep its customers and hometowns safe.

PG&E's WMP outlines critical layers of protection that work together to reduce wildfire ignition risk and strengthen PG&E's electric grid. These measures include system hardening with stronger poles and covered powerlines; the company's 10,000-mile undergrounding program; tree trimming and removal; inspections and repairs; and improved situational awareness. When

wildfire risk is elevated, these efforts are bolstered with operational mitigations that include Enhanced Powerline Safety Settings (https://www.pge.com/en_US/residential/outages/enhanced-powerline-safety-settings/enhanced-powerline-safety-settings.page?ctx=large-business) (EPSS), and Public Safety Power Shutoffs (https://www.pge.com/en_US/residential/outages/public-safety-power-shuttoff/learn-about-psps.page) (PSPS) under extreme conditions.

The plan also introduces new technology solutions such as partial voltage detection and downed conductor technology that build upon the operational mitigations of EPSS and PSPS. These new technologies detect potential threats to the electric grid and rapidly reduce or shut off power to help prevent wildfire ignitions.

"Our system has never been safer, and we continue to make it safer every day. Our Wildfire Mitigation Plan outlines multiple layers of protection we're using to stop catastrophic wildfires in our hometowns. We're also doing more than ever to reduce the impacts of EPSS and PSPS on our customers. We want a future where our customers don't have to choose between safety and reliability—we want both and we are working every day to make that possible," said PG&E Executive Vice President, Operations and Chief Operating Officer Sumeet Singh.

"In 2022, we continued to enhance our wildfire risk models that predict where, why and how much wildfire risk occurs during a typical wildfire season, and we're using our enhanced risk models to plan and target work and programs to provide the greatest risk reduction for our customers and our hometowns that we are so privileged to serve," added Singh.

Proven layers of protection

The WMP highlights several layers of protection that have proved to be effective in reducing wildfire risk. Using these tools, PG&E achieved a 99% decrease in total acres burned in High Fire-Threat Districts in 2022, compared to the 2018-2020 average.

- **Undergrounding** powerlines in high fire-risk areas is a permanent protection that reduces the ignition risk from overhead electric distribution lines. PG&E remains committed to undergrounding 10,000 miles in high-risk areas and plans to underground 2,100 miles of powerlines between 2023-2026. Nearly all of the undergrounding work noted in the WMP is in high-risk areas.
- **Additional System Hardening** projects such as installing covered conductor, stronger poles, and wider crossarms will provide long-term ignition risk reduction by improving how the grid is constructed and operated. PG&E is also installing break-away connectors at services, which de-energize customer connections when needed to mitigate ignition risk, and is de-energizing or removing idle distribution and transmission facilities with no operational needs within high fire-risk areas.
- **Enhanced Powerline Safety Settings** were implemented across 44,000 line-miles, including over 25,000 miles in high fire-risk areas, in 2022 and contributed to a 68% reduction in California Public Utilities Commission-reportable ignitions when enabled on primary distribution lines, compared to the 2018-2020 average. More than half of customers protected by EPSS did not experience a power outage while EPSS was enabled in 2022. However, PG&E recognizes that EPSS outages, when they do occur, are an inconvenience. Compared to the pilot period in 2021, the average outage duration on EPSS-enabled

powerlines was 56% shorter in 2022. PG&E is also installing additional sectionalizing devices and animal/avian protection equipment to further reduce the impact of EPSS outages.

- **Vegetation Management** strategies have been adjusted based on a risk-informed approach to focus on the highest-risk locations and to help reduce both outages and potential ignitions caused by vegetation contacting PG&E's equipment.
- **Inspections and Repair Efforts** are informed by risk models and are part of comprehensive monitoring and data collection programs providing insight into changing environmental hazards around assets to inform mitigation actions.
- **Situational Awareness Improvements** include enabling artificial intelligence to process wildfire camera data and provide automated wildfire notifications. PG&E will continue using state-of-the-art weather forecasting and a comprehensive monitoring and data collection network that uses high-definition wildfire cameras (https://pgefdp.lovelytics.info/pge_fire_app/) and weather stations (https://pgewam.lovelytics.info/pge_weather_app/) to help detect, prevent, and respond to the risk of wildfires.
- **Public Safety Power Shutoffs** are used as a last resort during extreme weather conditions to reduce the risk of catastrophic fire. PG&E's experienced meteorologists use cutting-edge weather models, using a network of advanced weather stations to forecast risk on a granular basis and factor in vegetation in proximity to overhead electrical lines. PG&E's goal is to continue to minimize the size and duration of any PSPS and reduce impacts to customers without increase to the risk of catastrophic wildfires.

New technology solutions

The WMP introduces multiple new technology solutions that are being deployed in concert with proven wildfire risk reduction programs, including the following:

- **Downed Conductor Detection** (DCD) technology improves PG&E's ability to detect and isolate high impedance faults—lower-current fault conditions that may not reliably be mitigated by EPSS—before an ignition can occur. PG&E plans to engineer, program and install the DCD algorithm on equipment in high fire-risk areas.
- **Partial Voltage Detection Capabilities** utilize SmartMeters to alert the Control Center when voltage conditions that could present an increased ignition risk are detected. This technology helps PG&E detect and locate wire-down conditions for lower-current fault conditions—which may not reliably be mitigated by EPSS—within minutes so the line can be remotely de-energized from the Control Center for faster mitigation and to reduce the amount of time a line is energized while down.

[1] Risk scores are calculated using the scoring methodology established by the CPUC in the Safety Model Assessment Proceeding, which reflects the frequency with which various risks are expected to occur and the potential safety, reliability, and financial impacts of varying degrees of wildfire severity.

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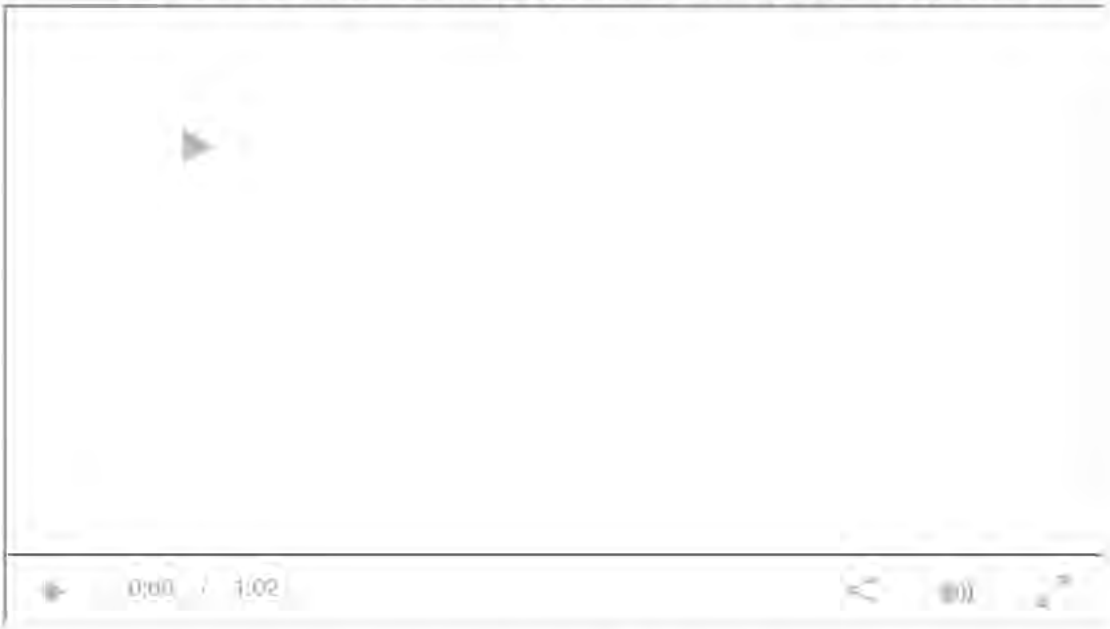
PG&E Currents(/) | 6.22.23

As Peak Wildfire Season Nears, PG&E Deploys Innovative Technologies to Enable Layers of Protection to Mitigate Wildfires

By Paul Doherty

SAN RAMON — PG&E is deploying innovative and emerging technologies, including a remotely-operated controlled-burn system, next-generation drones, and wireless remote grids, building upon the proven layers of protection that are reducing wildfire risk from its equipment by 94% (based on established methodologies) in 2023 to help keep its customers and hometowns safe.

"Our system has never been safer, and we continue to make it safer every day. We're prepared with multiple layers of protection and innovative new technologies to mitigate catastrophic wildfires in our hometowns. We want a future where our customers don't have to choose between safety and reliability — we want both and we are working every day to make that possible," said Sumeet Singh, PG&E executive vice president and chief operating officer.



Several innovations and collaborations were on display today at two PG&E facilities — the San Ramon Valley Conference Center and PG&E's Applied Technology Services Center, the company's hub of research, development and innovation. The selected technologies included:

- **Neither Overhead Nor Underground:** With novel Ground-Level Distribution Systems (GLDS), powerlines are neither suspended from utility poles nor buried underground. Instead, lines are placed inside protected and resilient conduits that rest on the ground. PG&E is exploring moving overhead powerlines to ground level to eliminate ignition risk and enhance grid resilience. PG&E anticipates this innovative approach could provide comparable risk reduction to undergrounding.
- **Fighting Fire with "Good" Fire:** South San Francisco-based Burnbot (https://burnbot.com/) offers a remotely operated, controlled-burn technology to manage landscapes and burn woody materials onsite to reduce environmental and safety issues associated with controlled burns. PG&E is testing Burnbot (https://www.pgecurrents.com/articles/3762-pg-e-demos-high-tech-low-emission-burnbot-reduce-fire-risk-help-ecosystems) as an alternative to traditional land management techniques (such as using herbicides or mowers) around its facilities to clear vegetation and to explore the potential environmental and safety benefits and determine opportunities to scale.
- **Next-Gen Drones:** Automated and beyond visual line-of-sight drone operations (https://www.pgecurrents.com/articles/3559-pg-e-explores-innovative-technologies-reduce-wildfire-risk-increase-grid-reliability-resiliency-customers) in collaboration with San Mateo-based Skydio (https://www.skydio.com/) are helping to determine how these tools can augment today's manually operated drone asset inspections and provide a fast, safe, and effective solution for field-validating a range of sensor alerts.
- **Remote microgrids for local resiliency:** To enhance local resilience and eliminate fire risk, PG&E recently deployed three new remote grid systems in Tehama and Mariposa counties with several more anticipated for deployment in 2023 and up to 30 to be deployed by 2026 (https://investor.pgecorp.com/news-events/press-releases/press-release-details/2022/Improving-Safety-and-Reliability-PGE-Developing-Several-New-Remote-Grid-Systems-to-Replace-Overhead-Powerlines-and-Promote-More-Wireless-Power-in-High-Fire-Threat-Areas/default.aspx) in collaboration with Richmond, Calif.-based NewSunRoad (https://newsunroad.com/). Locally sited solar, batteries and back-up generators provide

the same or better level of electric service reliability while serving as a permanent alternative to poles and powerlines.

- **First-of-its-Kind Easy-Connect Backup Power:** PG&E has successfully developed a first-of-its-kind personal backup power transfer meter device (https://www.pgecurrents.com/articles/3400-kind-technology-allows-pg-e-customers-safely-easily-connect-backup-power-homes) for customers that fully integrates into PG&E's existing electric SmartMeter system. The device provides customers with a safe, easy to use and more reliable solution for interconnecting backup power sources, such as portable generators, batteries, and qualified electric vehicles, to power essential devices and appliances during a power outage. PG&E has installed more than 1,500 backup power transfer meters for customers in high-fire risk areas since 2022 and plans to install thousands more through 2025. PG&E demonstrated using the on-board generator of an all-electric Ford F-150 Lightning to power devices through the backup power transfer meter.
- **Detecting a Fault, Cutting Off Power:** PG&E's Enhanced Powerline Safety Settings, which shut power off in one-tenth of a second or less when contact with a foreign object or a fault occurs on a powerline, reduced ignitions by 68% last year in High Fire-Risk Areas. Watch a similar version of the demonstration performed today: PG&E Engineers Use Laboratory to Stress Test (https://www.pgecurrents.com/articles/3494-pg-e-engineers-use-laboratory-stress-test-epss-technology?playVideo=true)EPSS Technology - PGE Currents. Building upon the operational mitigations of EPSS, PG&E is also deploying additional layers of operational mitigations including new downed conductor and partial voltage detection technology to detect potential threats to the electric grid and rapidly reduce or shut off power to help mitigate wildfire ignitions.
    - **Downed Conductor Detection** (DCD) technology improves PG&E's ability to detect and isolate high impedance faults—lower-current fault conditions that may not reliably be mitigated by EPSS—before an ignition can occur. PG&E is engineering, programming and installing the DCD algorithm on equipment in high fire-risk areas.
    - **Partial Voltage Detection** capabilities utilize SmartMeters to alert PG&E's Control Center when voltage conditions that could present an increased ignition risk are detected. This technology helps PG&E detect and locate wire-down conditions for lower-current fault conditions—which may not reliably be mitigated by EPSS—within minutes so the line can be remotely de-energized from the Control Center for faster mitigation and to reduce the amount of time a line is energized while down.
- **A Moon Shot for Wildfire Detection:** Detect and suppress a high-risk wildfire in 10 minutes or less. Pinpoint all fire ignitions across multiple states or countries from space in 60 seconds. These are the challenges for innovators of XPRIZE Wildfire (https://www.xprize.org/prizes/wildfire), a four-year, $11 million competition aimed at developing innovative technologies to improve the detection and suppression of destructive wildfires. As co-title sponsor, PG&E believes the competition can be a game changer.

Learn more about PG&E's wildfire mitigation innovation efforts in the emerging technology chapter of PG&E's 2023-2025 Wildfire Mitigation Plan (http://www.pge.com/wildfiremitigationplan).

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Together, Building a Better California

Five Minute Meeting

Date:
January 2023

Topic:
New – Fire/Ignition Reporting Form

Audience:
Field Operations, Troublemen and Electric First Responders

Required Action:
Awareness of requirements

Fire Ignition Reporting

Per RISK-6306S *Fire Incident Data Collection Plan and Reporting Standard*, PG&E is responsible for reporting all ignitions associated with PG&E's electric facilities and ignitions involved with utility maintenance. Use the Fire/Ignition Reporting Form in FAS (FieldWorker app) to report all ignition events even when the cause of the fire/ignition may be under investigation and/or disputed, regardless of the fire/ignition size.

What qualifies as an event to fill out the Fire/Ignition Reporting Form in FAS

Any fire/ignition associated or suspected to be associated from PG&E assets, regardless of damage to PG&E facilities and/or the fire size.

If you are unsure if the ignition is associated to PG&E assets, please fill out the Fire/Ignition Reporting Form in FAS. The Ignitions Investigations team will be looking into each incident.

Use the FAS Fire/Ignition Reporting Form for all situations where a fire/ignition is associated or suspected to be associated with PG&E assets and where an ignition is associated or suspected to be associated with utility maintenance. Examples include:

- Vegetation contact
  - Tree or branch contacting a line or wire down associated with an ignition
- Third-party vehicle contact (aka Car/Pole accident)
  - Wire down associated with an ignition
  - Pole broke resulting in wires down associated with an ignition
  - Impact caused wire slap associated with an ignition
- Vandalism & tampering with equipment associated with an ignition
- Overhead/Underground equipment failure associated with an ignition
  - Pole and crossarm fires (including tracking)
- Any situations where an object contacts our facilities and is associated with an ignition
  - Mylar balloons
  - Birds and bird nests
  - Squirrels
  - Kites, Drones, etc.
- Structure fire where the ignition appears to be at or around the weather head, open neutral, connectors
- Ignition or fire near and/or involving PG&E assets with an unknown cause
- Situation when the field is asked to make safe per Fire Department on site

<u>*Photos recommended</u>: If possible, attach photos to the FAS Fire/Ignition Reporting form and associated EC notification (if applicable). Providing this information helps reduce calls from internal teams reviewing the incident.

What events do not require the completion of the Fire/Ignition Reporting Form

The events below are not fires/ignitions and the FAS Fire/Ignition Reporting Form does not need to be utilized:

- Arcing equipment
- "Burnt open" conductors/connectors
- Flashed insulators where there are no signs of combustion

Your Support is Needed

We need your help to ensure all affected users are aware of the change so please share this information with your teams.

For questions or comments, please contact [redacted] or [redacted]

Internal

View of Fire/Ignition Reporting Form in FieldWorker App on iPad

Ignition / Fire

Attachments

Reason attachment not possible

Identify Incident Location

Fire Latitude

Fire Longitude

Description of Fire Incident Location

Media

Fire Out

Weather (select all that apply)

Clear

Overcast

Rainy

Misty

Stormy

Cloudy

Windy

Damp

Icy

Drizzly

Lightning

Dry

Snowy

Sunny

Light Fog

Heavy Fog

Other (comments)

Weather Comments

Estimated Temperature

Estimated Wind Speed

Suspected Cause

Suspected Cause Comments

Fire Size

Fire Size Comments

Fire Suppressed By

Fire Suppressed By Comments

Type Of Construction

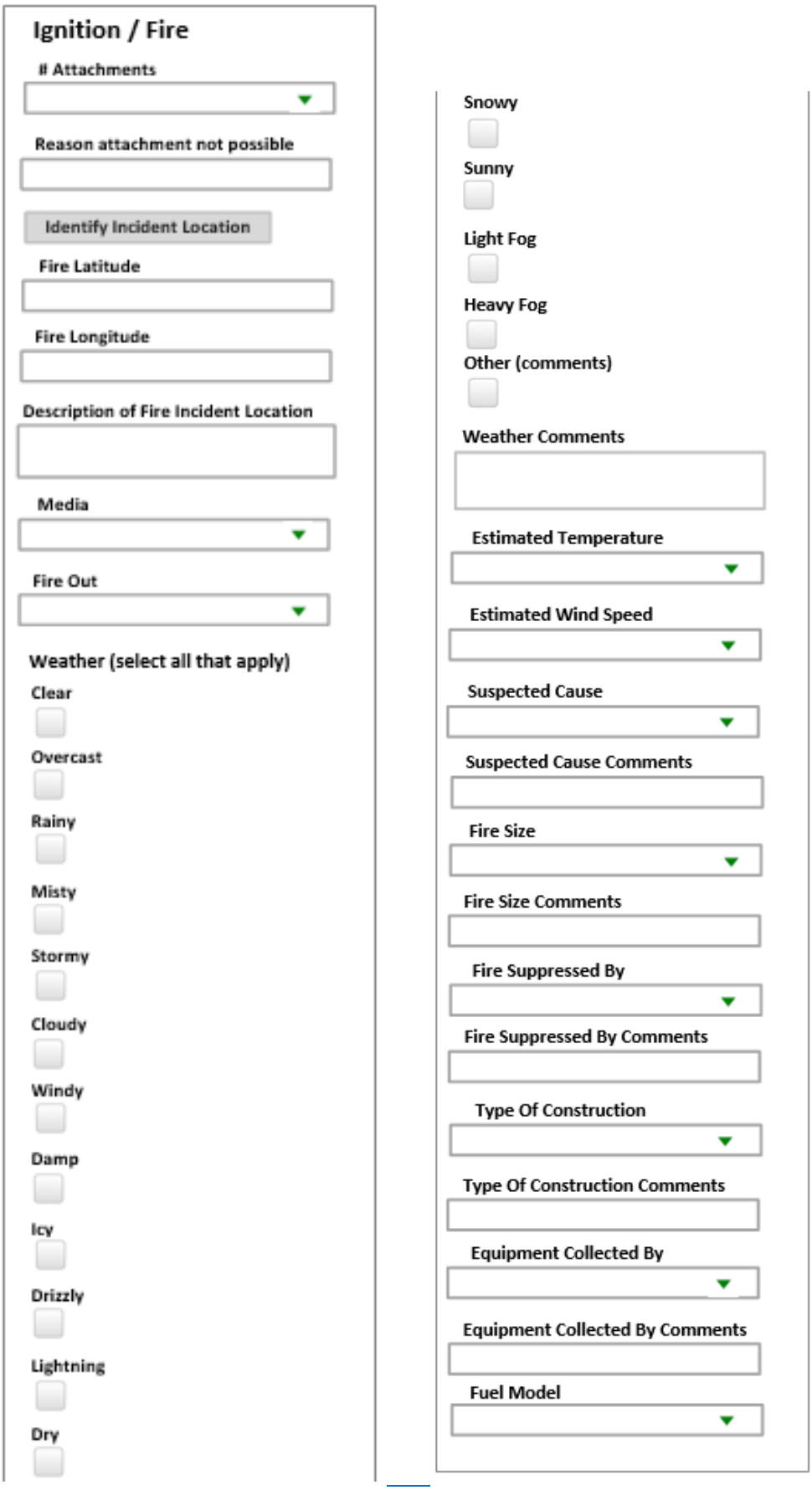
Type Of Construction Comments

Equipment Collected By

Equipment Collected By Comments

Fuel Model

View of Fire/Ignition Reporting Form in FieldWorker App on iPhone



FieldWorker Integration with Asset View:

- FieldWorker with Asset View will make it easier to obtain **Fire Latitude/Longitude** using a map
- Will ensure capturing and submitting accurate **Fire Latitude/Longitude** coordinates
- Asset View is similar to Maps+ and will be familiar to Troublemen
- Asset View and Maps+ are 2 separate apps and will require the Troubleman to download the same Electric Distribution map for each app

How to Install and Setup Asset View:

1. Launch **Apps@Work**
2. Search for "**Asset View**" and install it
3. Launch **Asset View** (if needed, login with your PG&E LAN id and Password)
4. To setup your map preferences, tap 
5. Tap **Map Manager**
6. Tap the **Electric Distribution arrow**
7. Select your **Division(s)**
8. Tap **Select**
9. Tap **Update**
10. Wait for your selected Division map(s) to download

How to use the Fire/Ignition Reporting Form with Asset View:

1. In FieldWorker:
    a. Tap **3 bars** (top right corner)
    b. Tap **Host**
    c. Tap **Fire/Ignition Reporting Form**
    d. Tap **Identify Incident Location** button
2. In Asset View:
    a. Tap **Pin**  button.
    b. Pan map until the **Pin**  is on top of the fire's location**.**
    c. Tap **Thumbs Up**  to save the fire's location.
    d. Tap **Back**  button to return to FieldWorker.
3. Once back in FieldWorker:
    a. Fill out the rest of the form
    b. Attach photos and/or screenshots
    c. Tap **Send**

Field Explanations:

The following describes the information being collected:

- **# Attachments** – the number of photos and/or screenshots attached to the Fire/Ignition Reporting form
- **Reason attachment not possible** – describes why no photos and/or screenshots were attached to the form
- **Fire Latitude** and **Fire Longitude** – GPS coordinates of fire/ignition location
- **Description of Fire Location** – please add as much details as possible around the ignition. This information will be shared with the Claims department as appropriate
- **Media** – indicates if a media source (television, radio, newspaper, etc.) arrives or is present while the troubleman or first responder is on-site
- **Fire Out** – indicates if the fire has been extinguished while the troubleman or first responder is on-site. If the fire is contained or extinguished, then it is considered out.
- **Weather** – describes the weather conditions at the time when the troubleman or first responder arrives at the outage/ignition
- **Estimated Temperature** – describes the temperature at the time when the troubleman or first responder arrives at the outage/ignition
- **Estimated Wind Speed** – describes the wind strength at the time when the troubleman or firstresponder arrives at the outage/ignition
- **Suspected Cause** – describes the item or event associated with the outage or ignition
- **Fire Size** – this field describes the size of the ignition at the time when the troubleman or first responder arrives at the ignition
- **Fire Suppressed By** – if an ignition occurs and is extinguished when a troubleman or first responder arrives to the site or during the time the troubleman or first responder is on-site, this field indicates the agency that suppresses the ignition
- **Type of Construction** – describes the type of construction of the equipment associated with the outage or ignition
- **Equipment Collected By** – this field indicates which external party collected the evidence

Together, Building a Better California

Five Minute Meeting

Date:
July 2023

Topic:
Changes to FAS (FieldWorker and MA)

Audience:
Troublemen

Required Action:
Communicate deployment of FAS enhancements

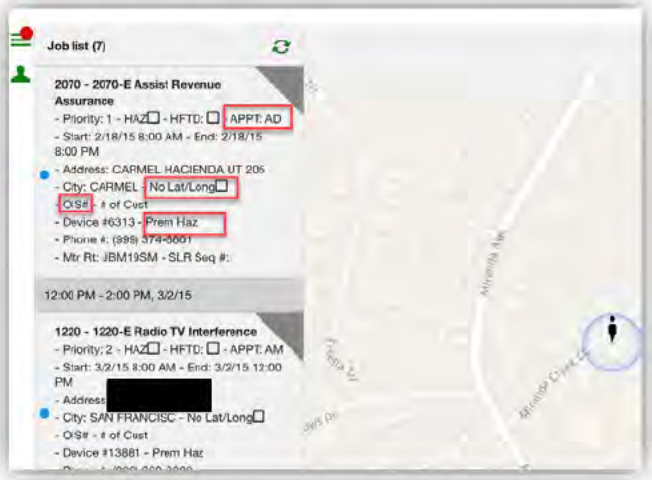
Deployment Awareness

Effective July 9, 2023, FAS enhancements to FieldWorker and Mobile Application (MA) will be deployed.

A. Added 4 new fields to the FieldWorker Job List
B. Added a new column to the MA Work Summary
C. NPAE 174024 – ability to submit Repair Crew Requested to DMS
D. Ignition form enhancements to:
   1) Indicate if Fire Location is in HFTD
   2) Require attaching at least 3 photos/screenshots
   3) Remove "Reason attachment not possible" field
   4) New validaiton message for Fire latitude

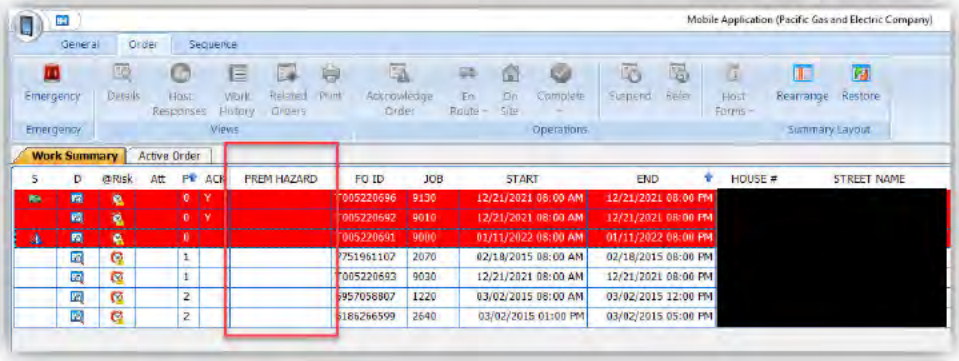
A. *FieldWorker Job List* -- Added 4 new fields to the FieldWorker Job List:

- **OIS #** – the Outage field order's OIS #
- **APPT** – the field order's appointment window (**AD, AM, NM,** or **PM**)
- **No Lat/Long** – if checked, field order has no **Latitude** and **Longitude** and its symbol on map is incorrect
- **Prem Haz** – displays hazardous situation at location/premise (**H** - hostile customer, **B** – bad dog, **F** – driving alert)



B. *MA Work Summary* -- Added to the MA Work Summary:

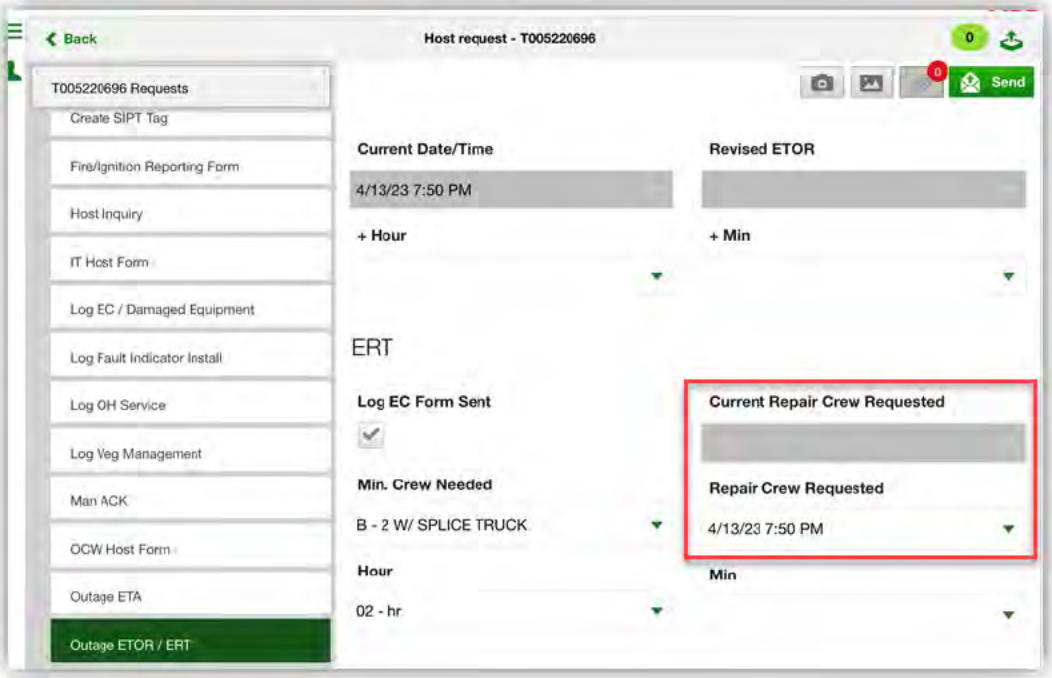
- **Prem Hazard** – hazards at location/premise (**H** - hostile customer, **B** – bad dog, **F** – driving alert)



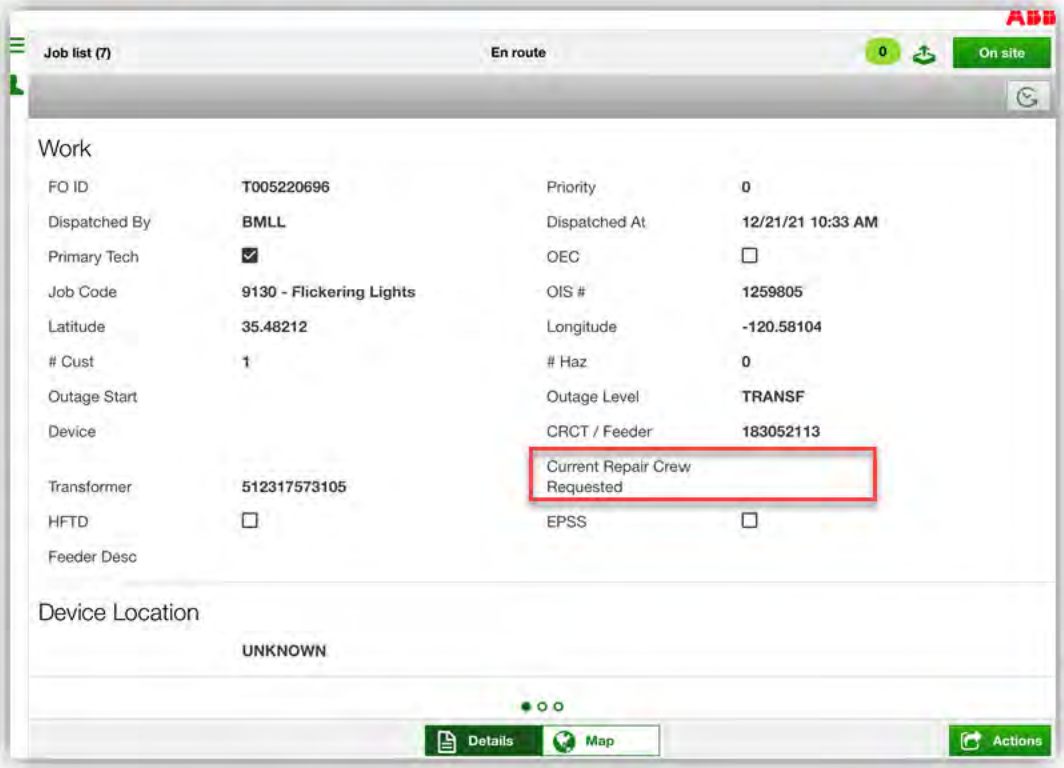
C. *NPAE 174024* -- Enabled ability to:

- submit **Repair Crew Requested** date-time of OIS# to DMS via **ETOR/ERT** host form
- display OIS #'s **Current Repair Crew Requested** date-time on **ETOR/ERT** host form
- display OIS #'s **Current Repair Crew Requested** date-time for all **Outage orders** linked to the OIS #

Enhanced ETOR/ERT Host Form



Enhanced Outage Order Detail Form



D. *Ignition Form Enhancements*

a) Asset View will now be able to determine if your selected **Fire Lat/Long** is in **HFTD** area.

TO DO: Please do the following to turn **ON** the **High Fire Thread District** layer in Asset View:

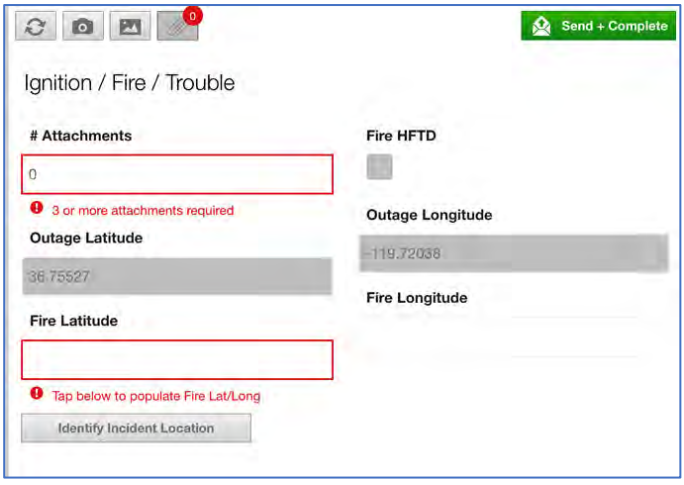
1. Launch Asset View
2. Tap **Maps Preference** button
3. Tap **Layers**, scroll down, then tap the **High Fire Threat District** button to enable it

b) To report an ignition, you are now required to attach **at least 3** photos and/or screenshots

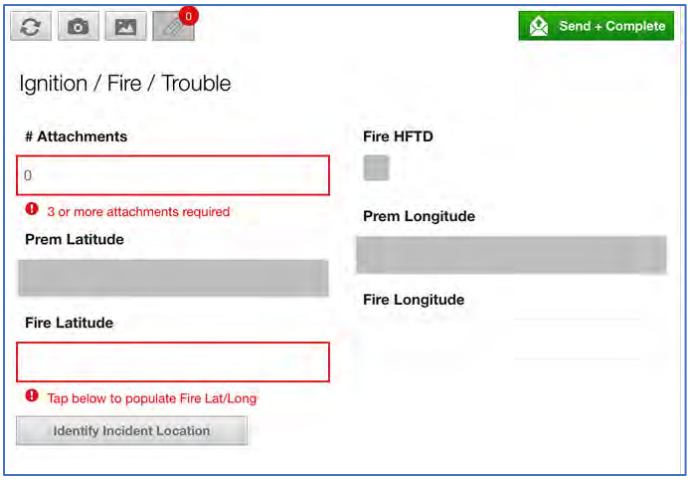
c) The **Reason attachment not possible** field has been removed

d) The message for **Fire Latitude** has been changed to "***Tap below to populate Fire Lat/Long"***

Enhanced *Outage Fire Tab*



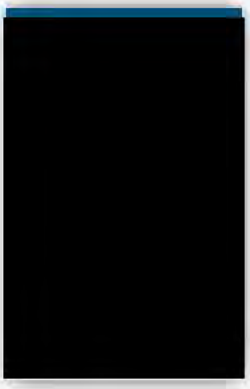
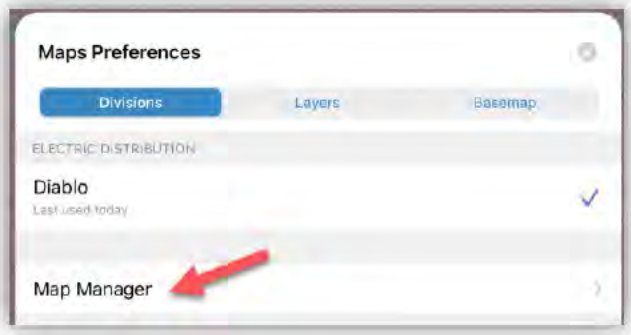
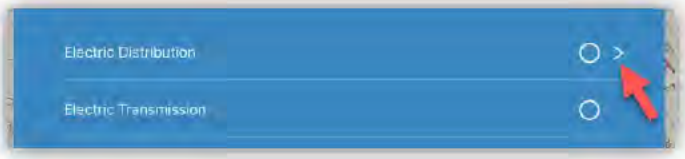
Enhanced *Electric Fire Tab*

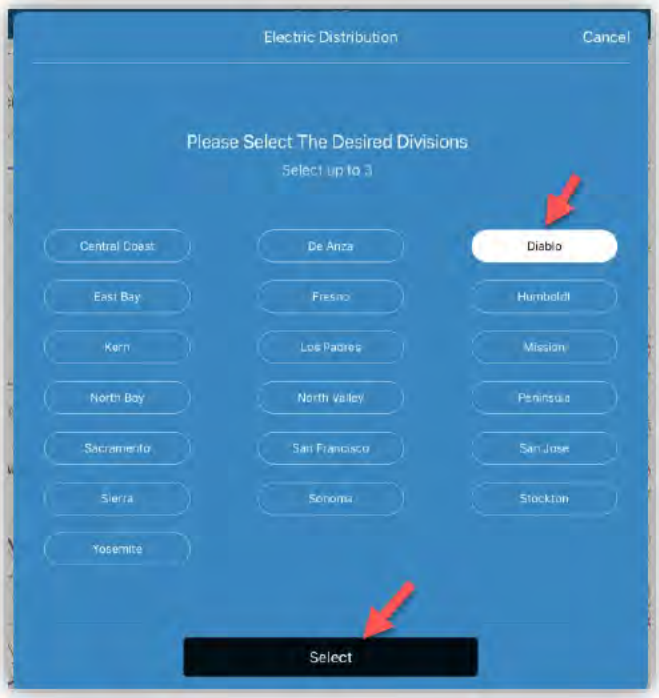
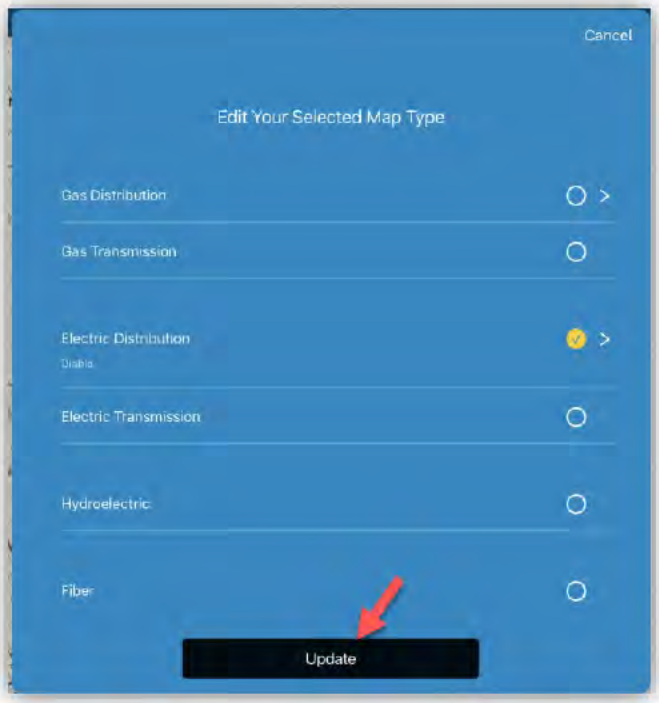


Your Support is Needed

We need your help to ensure all affected users are aware of the changes so please share this information with your teams. For any further questions or comments, please contact [redacted]

How to Download and Setup *Asset View*

1	Launch **Apps@Work** Search for "**Asset View**" and install it Launch **Asset View** (if needed, login with your **PG&E Lan ID** and network **Password**)	  
2	To set your map preferences, tap 	
3	Tap **Map Manager**	
4	Tap **Electric Distribution arrow**	

5	Select up to 3 **Divisions** Tap **Select**	
6	Tap **Update** Wait for your selected maps to download	

Roadshow 2023

Ignition, Field Automation System, and Material Problem Report

March 2023

Agenda

- Safety (1 min)
- Ignition Team (10 min)
- Field Automation System (FAS) (10 min)
- Material Problem Report (MPR) (10 min)
- Q&A (10 min)

Safety Orientation

Earthquake

Know the safest places to duck, cover, and hold, such as under sturdy desks and tables.

Fire

Know your exits, escape routes, and evacuation plan. If safe to do so, use your compliant fire extinguisher. Exit the house, and call 911.

Active Shooter

Get out, hide out, take out, and call 911.

Medical Emergency

Know who can perform first aid and CPR. Call 911 if you're alone or share your location with the call leader to send help. If you have an AED, ensure you and others in your household know where it's located and how to use it.

Psychological Safety

- ✓ I'm cared for.
- ✓ People have my back and I have theirs.
- ✓ It's safe to take risks.
- ✓ New ideas are welcome.
- ✓ I practice self-care.

Ergonomics

- ✓ Practice ***30/30*** (every 30 minutes, move & stretch for 30 seconds).
- ✓ Ensure proper ergonomics.
- ✓ Use and update RSI Guard.

Emergency Planning

- ✓ Update emergency contacts via *PG&E@Work for Me*.
- ✓ Create/update a personal emergency preparedness plan.

COVID-19

- ✓ Maintain at least 6' distance where possible.
- ✓ Wear your mask.
- ✓ Wash hands frequently.
- ✓ Visit COVID-19 employee site for latest updates and tips.

Corporate Security [redacted] | **Nurse Care Line** 888-449-7787 | **CareOnSite** 877-888-8656 | **Employee Assistance Program** 888-445-4436

Stand:

- Catastrophic wildfires shall stop

Purpose:

- To be the source of truth for PG&E ignitions
  - ✓ Track all fires and to analyze trends
  - ✓ Close the gap by working with the field and engineering team to scope in and understand equipment failure events and failure mechanisms
  - ✓ Work with leadership to propose and implement lasting solutions
  - ✓ Partner with the MPR team and their partnership with manufacturers/suppliers to improve safety, quality, reliability and cost reduction

Intake/QC

- What we need from you?
  - ✓ Detailed notes means the less we need to contact the field
  - ✓ Avoid slang to prevent potential misunderstanding and confusion
  - ✓ Pictures are extremely helpful! Different angles at any time can eliminate follow up/calls

Analysis (PIIR)/Materials Collection

- What we need from you?
  - ✓ Collect all equipment from ignition events or suspected ignition events
  - ✓ File an MPR for ALL equipment failures:
    - Equipment from ignitions
    - Observable equipment defects without an ignition
  - ✓ Contact us if there's any questions or needed assistance

Field Automation System (FAS)

FieldWorker and Asset View

Why Use FieldWorker & Asset View

- Will provide a method for electronic reporting of ignitions
- Per RISK-6306S, PG&E is responsible for reporting ignitions associated with PG&E assets. For example, ignitions due to:
  - Vegetation contacts
  - Third-party vehicle contacts (car/pole accident)
  - Wire downs
  - Wire slaps
  - Vandalism & tampering with equipment
  - Pole and crossarm ignitions
  - Contact ignitions (such as with mylar balloons, birds, bird nests, squirrels, kites, drones)
  - Structure ignitions (such as near weather heads and connectors)
- Ignition reporting allows Ignition Team to gather data and follow up as quickly as possible for investigation

FieldWorker & Asset View

- FieldWorker & Asset View Demo

Material Problem Report (MPR)

When To Write an MPR

An MPR is required in the following situations:

A. Material Quality Issue
   - ✓ Defect found on new material (functionally or visually unacceptable).
   - ✓ Defect on previously installed gas or electric material, regardless of age

B. Ignition Event
   - ✓ Distinction between Ignition (all) and MPR (equipment-related only)
   - ✓ MPRs provide a method to identify equipment/material defects, provide dispositions, and drive continuous improvement activities

How to Access/Submit MPR

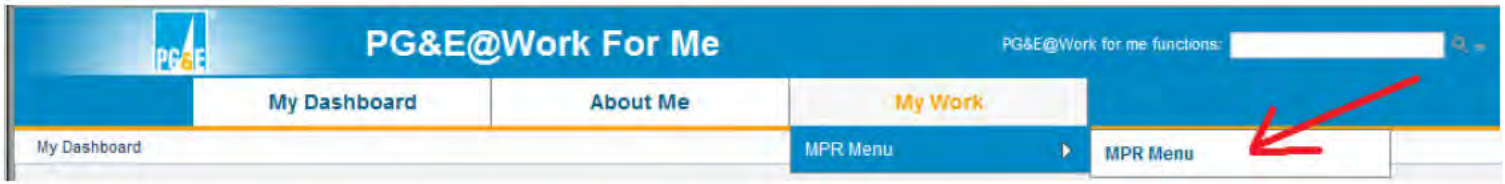
iOS MPR App (Field Friendly method)

- Apps@Work→ Search MPR → MPR → install

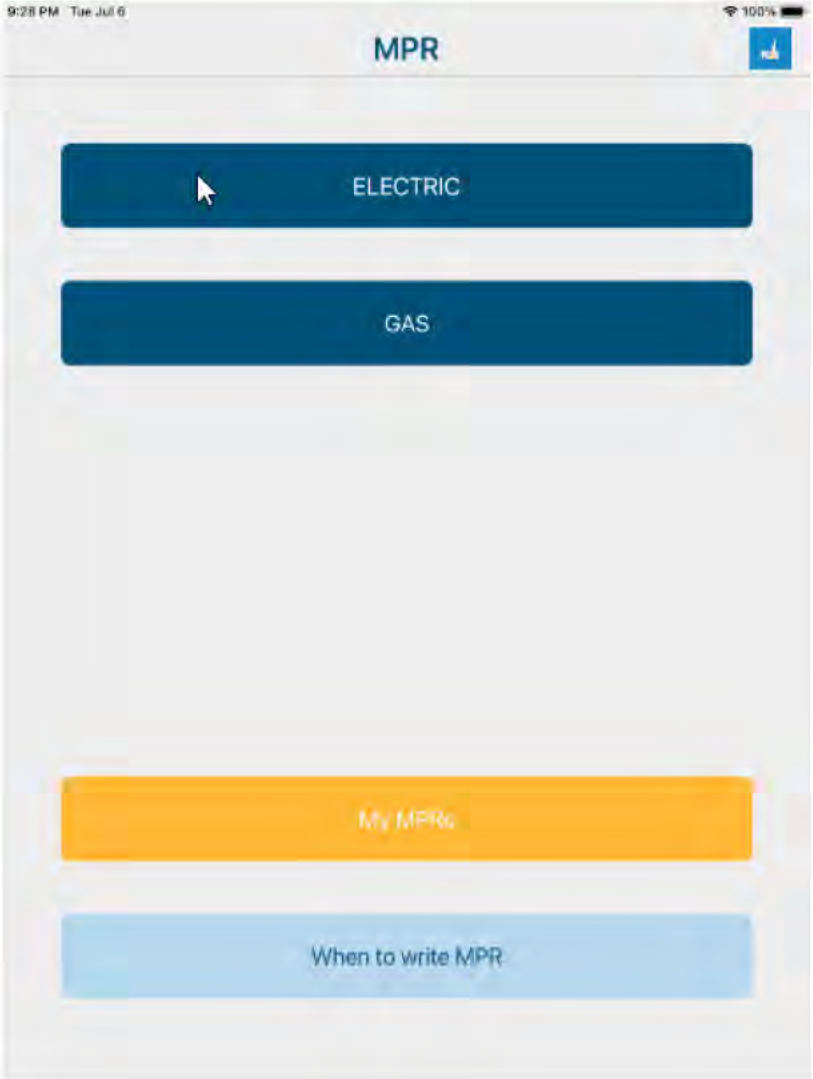
QR Code for Apps @ Work

Online Form

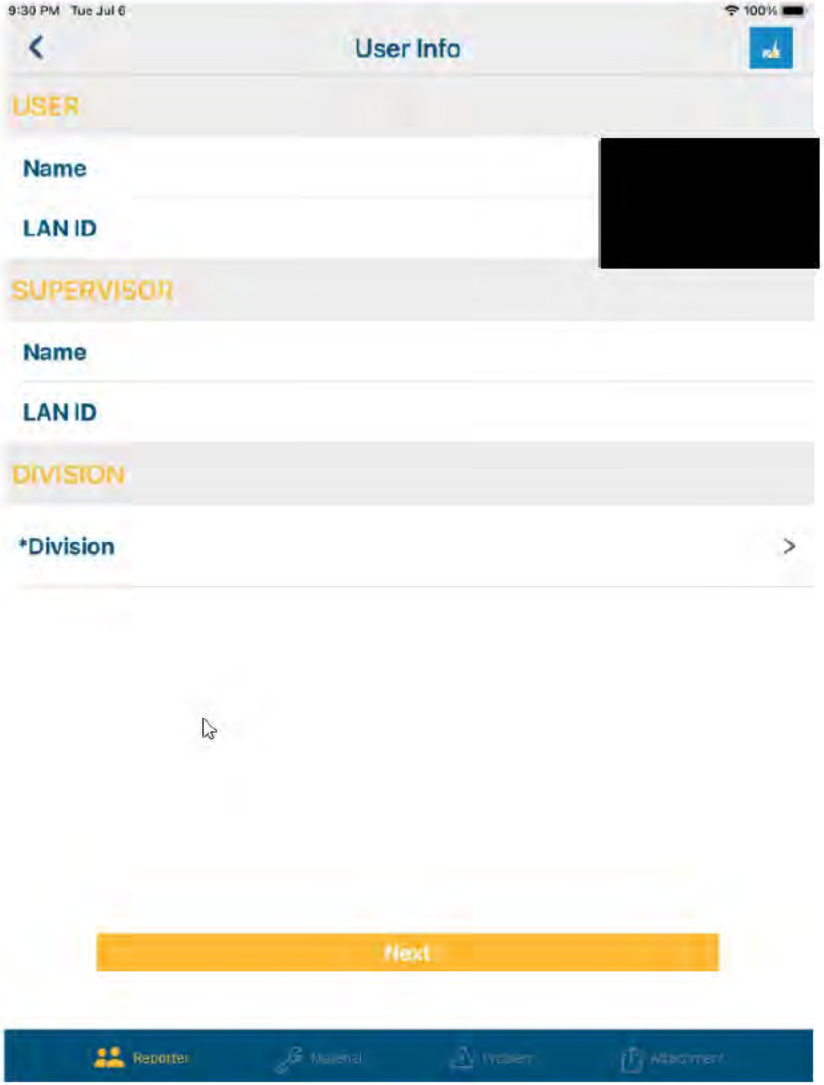
- PG&E@Work for Me → "My Work" → "MPR Menu" → "MPR Menu"

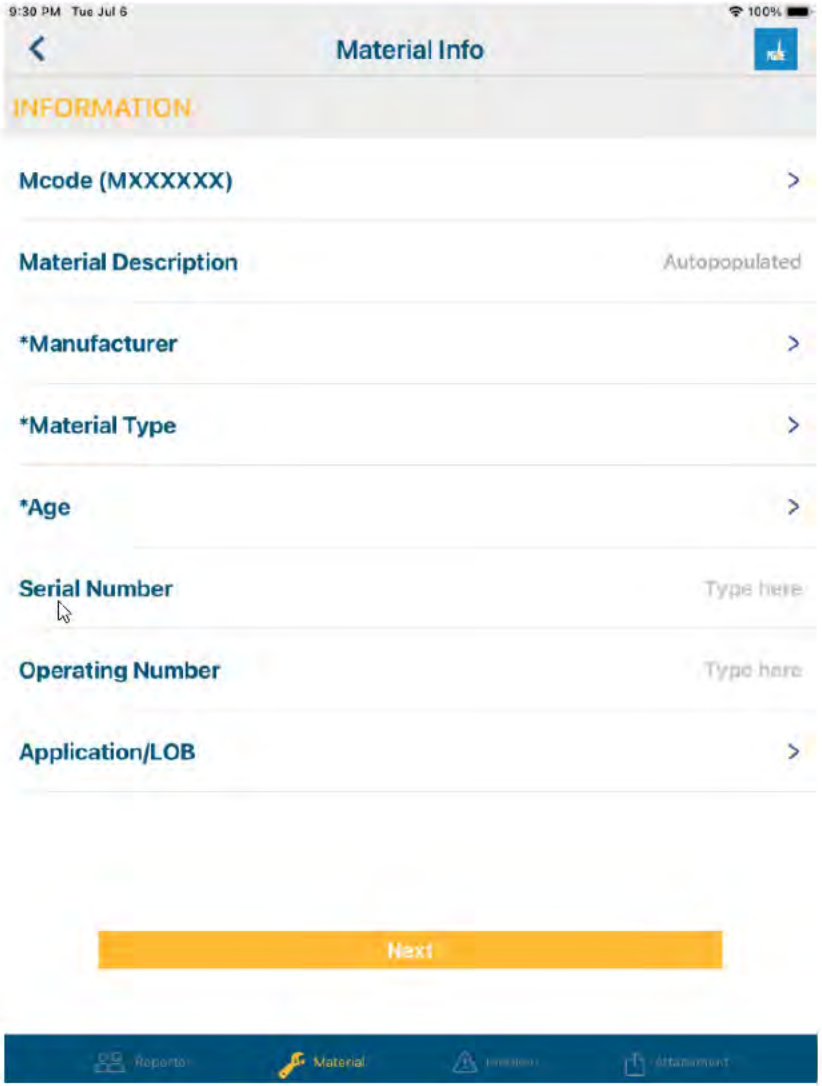


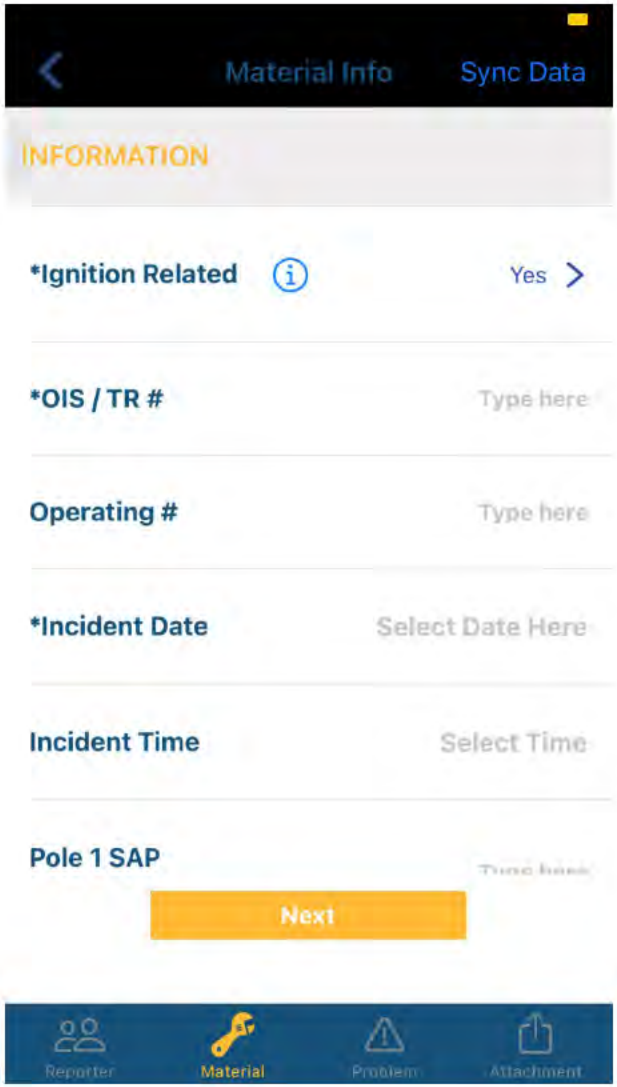
MPR App Demo

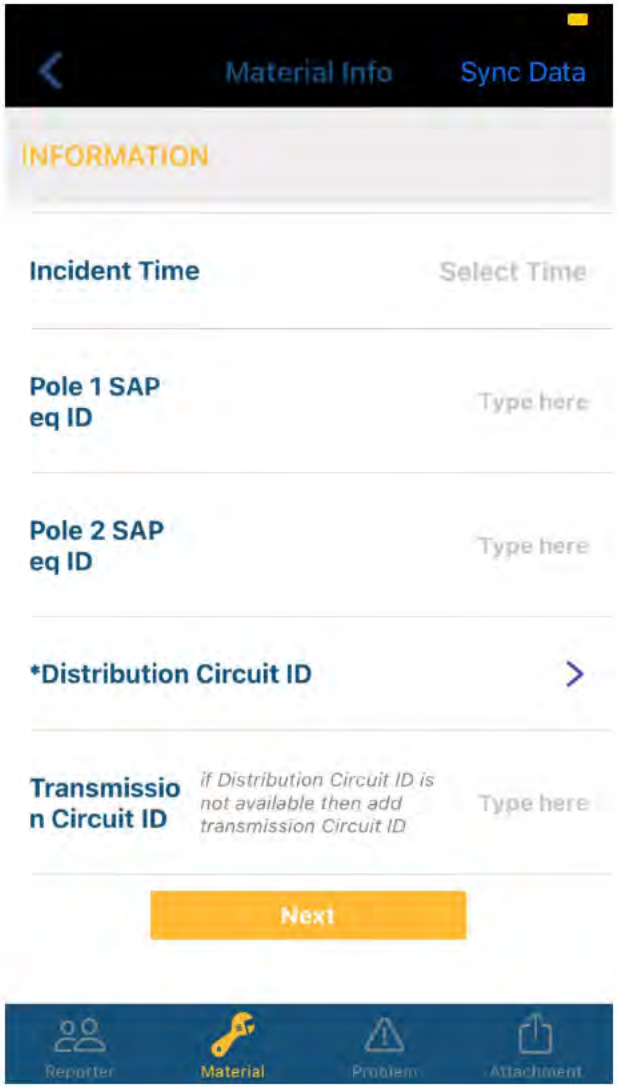

9:28 PM Tue Jul 6
100%
MPR
ELECTRIC
GAS
My MPRs
When to write MPR

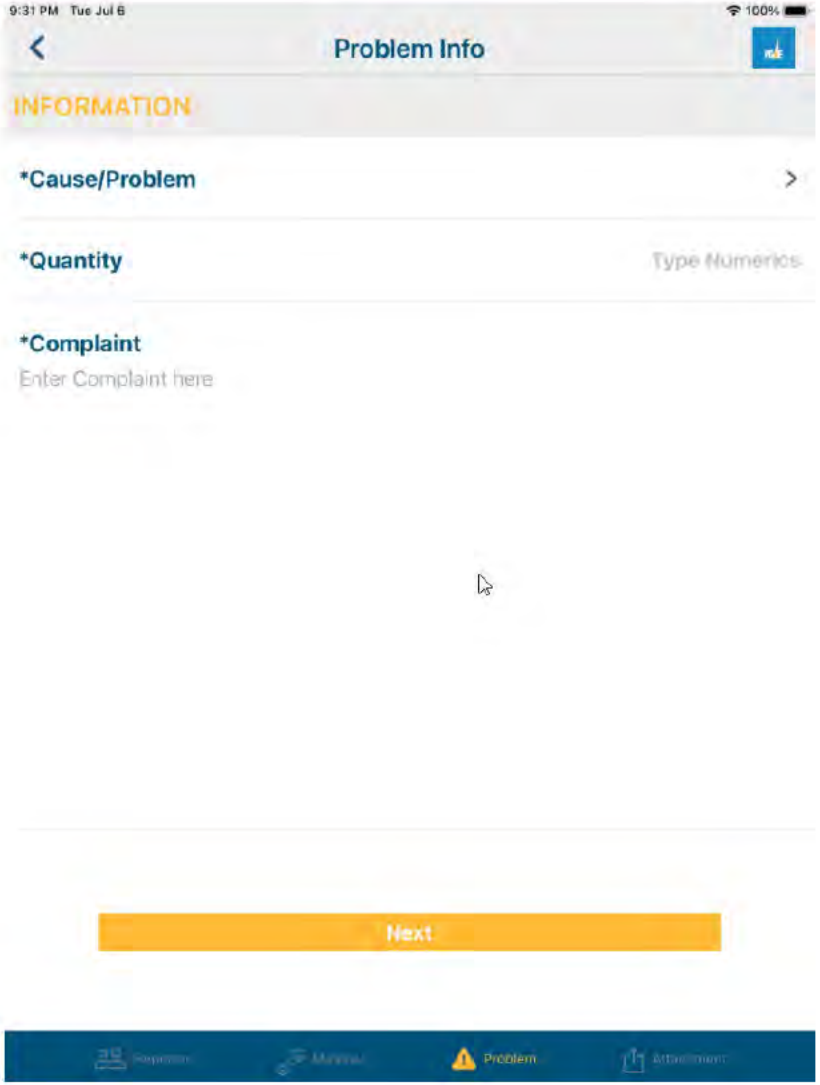

9:30 PM Tue Jul 6
100%
Back
MPR - Electric
ELECTRIC - T & D
Material
Tools
Oil - Filled Equipment
Cable & Pre-molded Devices
Meter
SUBSTATION
Material
Relay
Tools

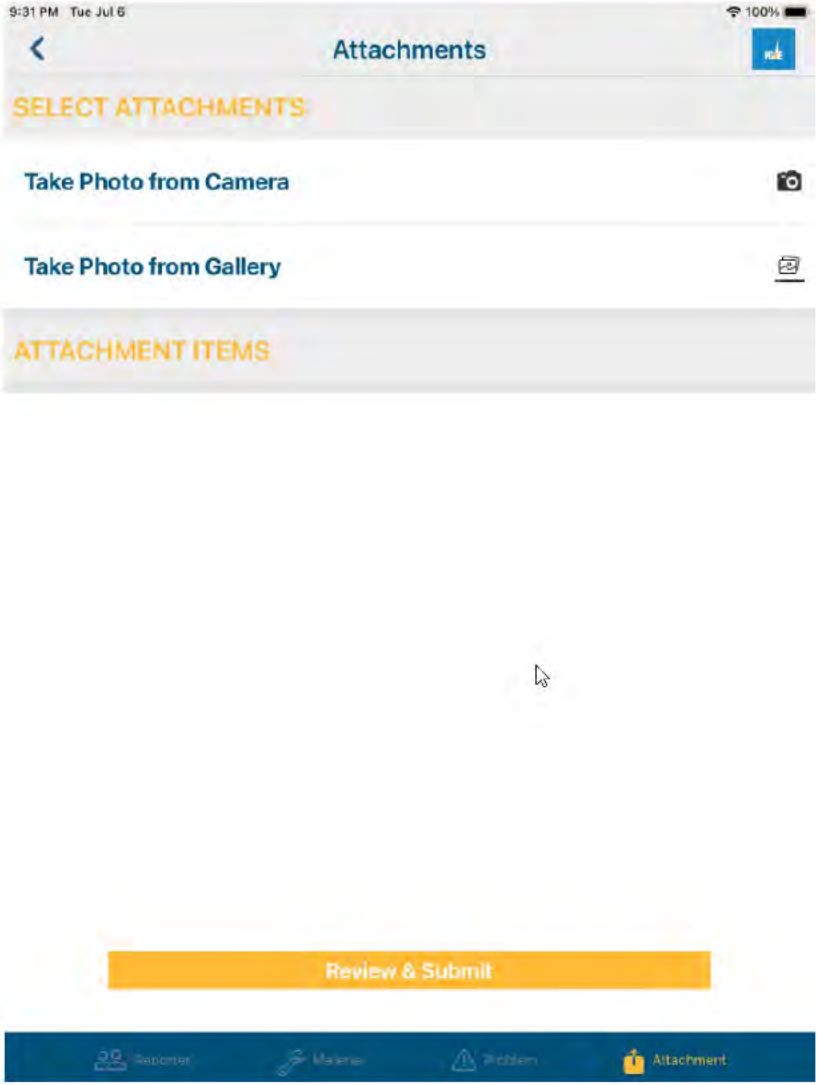

9:30 PM Tue Jul 6
100%
User Info
USER
Name
LAN ID
SUPERVISOR
Name
LAN ID
DIVISION
*Division
Next
Reporter

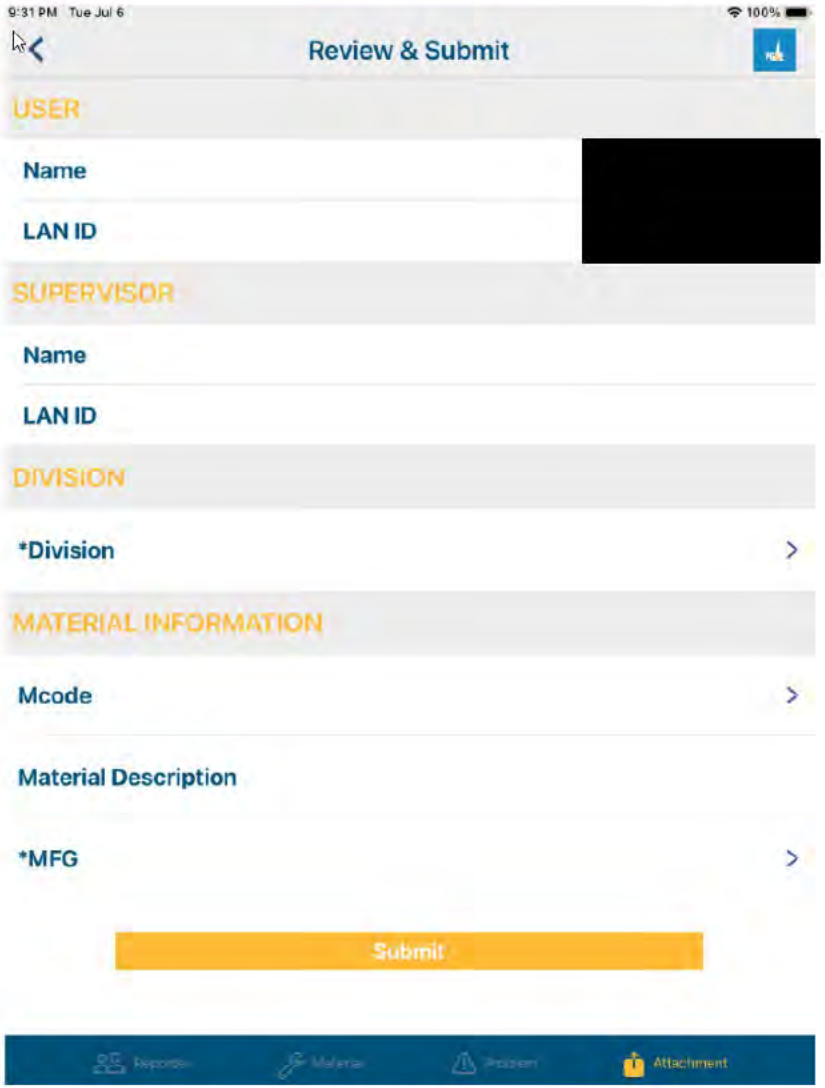

9:30 PM Tue Jul 6
100%
Material Info
INFORMATION
Mcode (MXXXXXX)
Material Description
Autopopulated
*Manufacturer
*Material Type
*Age
Serial Number
Type here
Operating Number
Type here
Application/LOB
Next
Material

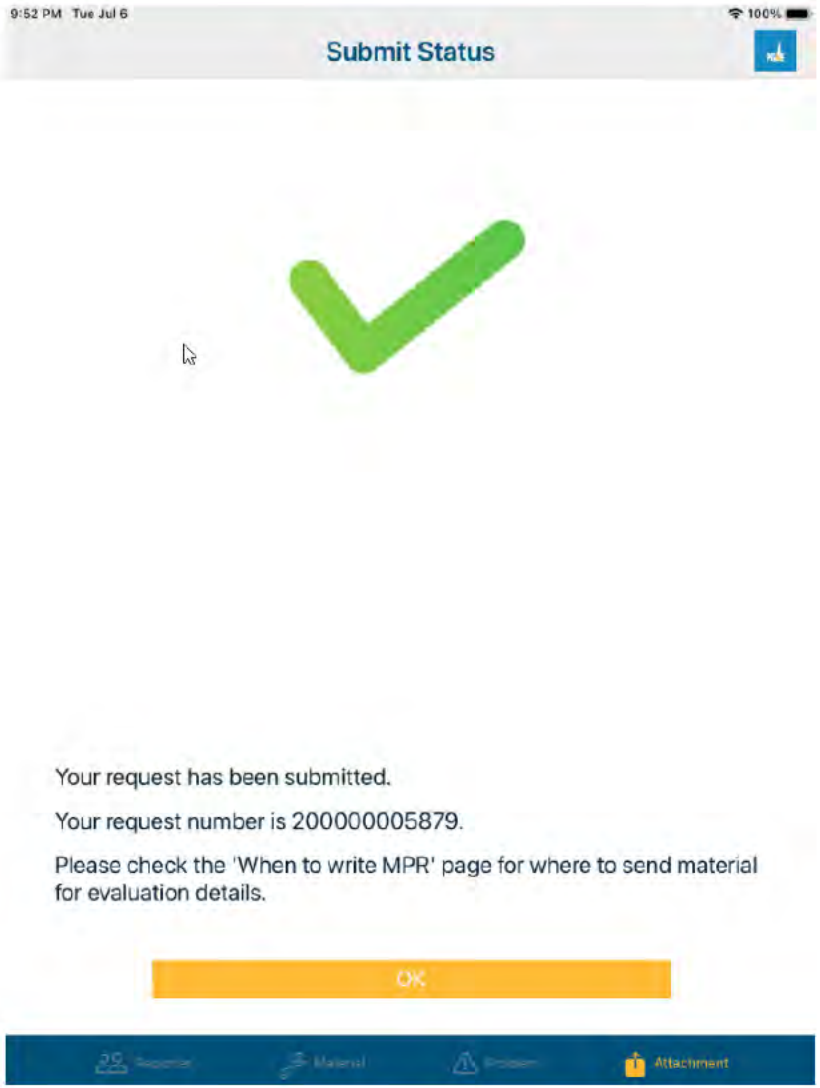

Material Info
Sync Data
INFORMATION
*Ignition Related
Yes
*OIS / TR #
Type here
Operating #
Type here
*Incident Date
Select Date Here
Incident Time
Select Time
Pole 1 SAP
Next
Reporter
Material
Problem
Attachment


Material Info
Sync Data
INFORMATION
Incident Time
Select Time
Pole 1 SAP eq ID
Type here
Pole 2 SAP eq ID
Type here
*Distribution Circuit ID
Transmission Circuit ID
if Distribution Circuit ID is not available then add transmission Circuit ID
Type here
Next
Reporter
Material
Problem
Attachment


9:31 PM Tue Jul 6
100%
Problem Info
INFORMATION
*Cause/Problem
*Quantity
Type Numerics
*Complaint
Enter Complaint here
Next
Problem


9:31 PM Tue Jul 6
100%
Attachments
SELECT ATTACHMENTS
Take Photo from Camera
Take Photo from Gallery
ATTACHMENT ITEMS
Review & Submit
Attachment


9:31 PM Tue Jul 6
100%
Review & Submit
USER
Name
LAN ID
SUPERVISOR
Name
LAN ID
DIVISION
*Division
MATERIAL INFORMATION
Mcode
Material Description
*MFG
Submit
Attachment


9:52 PM Tue Jul 6
100%
Submit Status
Your request has been submitted.
Your request number is 200000005879.
Please check the 'When to write MPR' page for where to send material for evaluation details.
OK
Attachment

MPR Contact Information

- [redacted] (Supplier Quality Engineer) – [redacted]
- [redacted] (Supplier Quality Engineer) – [redacted]

Questions?

Reference Materials

MPR Process Overview

1. **Field Personnel (Submitter)** notes material defect → creates MPR

2. **Supervisor** receives MPR notification upon submission (as an FYI only)

3. **MPR Admin** reviews & assigns MPR to Evaluator

4. **Evaluator (Standards, Commodity Engineer, Ignition Team)** reviews the failure, determines how to handle material , determines root cause, follow up for investigation

5. **Evaluator (with support from Supplier Quality)** if applicable, issues Failure Analysis request or Supplier Corrective Action Request (SCAR)

6. **Evaluator** reviews and closes MPR. Feedback automatically returned to Submitter on closure.

Where to Send Equipment

Send the material to the following locations:

IGNITION RELATED
PG&E Applied Technology Services (ATS)
ATTN: Failure Analysis Team
3411 Fostoria Way
Danville, CA 94526

Electric Material < 50 lbs via Company Mail (include copy of MPR & write MPR # on the shipping box)
MPR Box
4525 Hollis Street
Emeryville , CA 94608

Oil-filled Equipment via PSC (Attach a Warranty/MPR tag M620259 or red MPR sticker M621777 to the unit)
Emeryville Repair Facility – MPR Material
4525 Hollis Street
Emeryville , CA 94608

All Other Material
Hold material in designated MPR or isolated area until the Engineer provides direction for all other material not previously defined. Attach a completed MPR information tag (M620460) to the material.

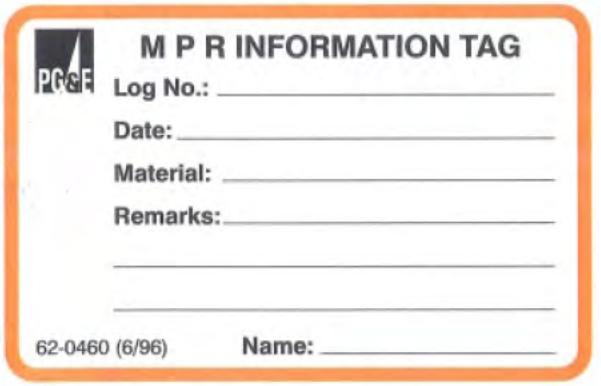
Tagging and ID (for suspect products)

- Complete MPR form with as much detail as possible
  - Supports analysis of problem
  - Reporting requirements to government agencies (e.g. CPUC, PHMSA, DOT)

- Tag and write MPR number on all non-conforming product prior to sending
  - Use MPR Tags
    - **OFE:** M620259 (Warranty/MPR Tag) or M621777 (MPR Sticker)
    - **All other material:** M620460 (MPR Information Tag)
  - Tags can now be ordered through the warehouse using the material codes listed above

- If material could not be saved indicate ”No Material Was Saved” in the MPR form
  - Supports MPR analysis closure

MPR Tag Pictures (Reference)



- Should materials that do not work well have MPRs?
  - Yes, assuming it is a quality or a design issue (e.g. difficult to operate) and not a process issue (e.g. material not installed correctly)
- Should frequent evaluation equipment failures have an MPR?
  - Yes, frequent evaluation equipment failures should still be reported and the material should be sent to the appropriate location for disposition
- Is special handling required for oil-filled equipment with MPRs?
  - No, as long as the units are properly tagged and have an MPR filled out, they can be sent to Emeryville along will all other oil-filled equipment that do not have MPRs
- How is material shipped to the MPR shed in San Ramon?
  - Company mail (PG&E Pony Express)

Additional Info (reference only)

- **Corporate Web-based MPR Training**:
  - "SAFE-0863 WBT" in "My Learning"
- **Guidance Document Library (GDL) link**:

[redacted]

  - SCM-2106P-01-JA01 "MPR Portal" - Job Aid for generating and approving MPRs
  - SCM-2106S "MPR Standard" – provides major MPR program requirements
  - SCM-2106P-01 "MPR Procedure" – procedures for creating MPRs, tagging, handling & shipping materials, and providing a disposition
  - SCM-2106-01-JA02 "MPR Disposition" – Job Aid for providing the MPR disposition. Applies to MPR owner, typically Engineering.

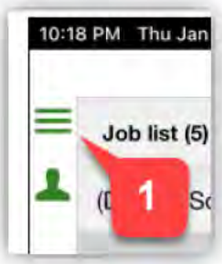
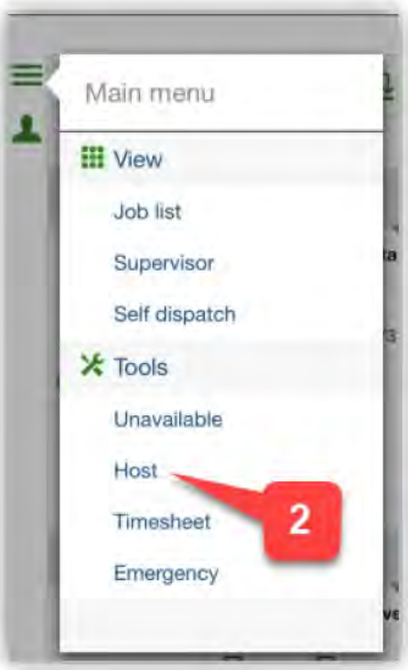
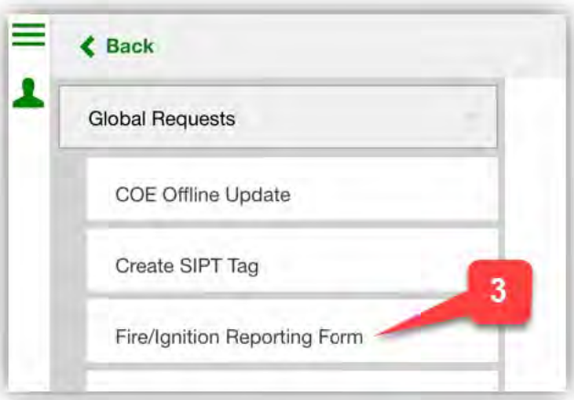
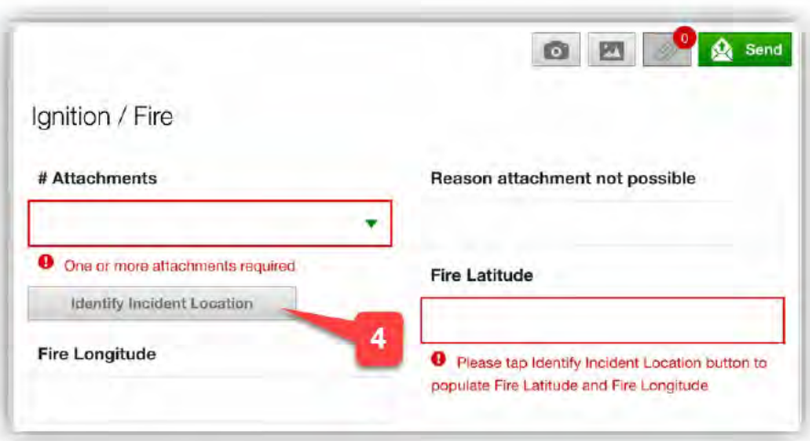
A. One-Time Setup of FieldWorker App

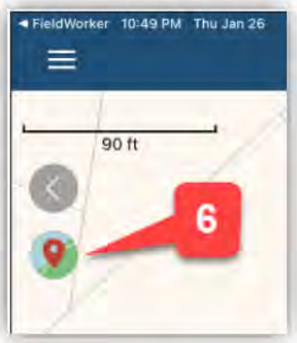
1	Launch **Apps@Work** Search for **ABB Service Suite FieldWorker** and install it If you don't already have it, search for **F5 Access** and install it	
2	Configure FieldWorker 1. Launch **FieldWorker** 2. At Login screen, tap **Server Information > Edit** 3. Populate the fields as shown on the right 4. Tap **Done > Back**	

B. How to Login to FieldWorker

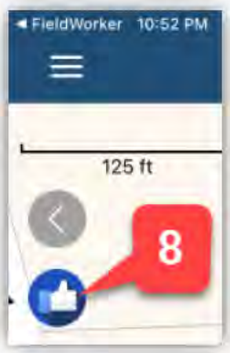
1	Tap the **FieldWorker** icon.	
2	Enter your **Tech ID**	
3	Enter your **Password**	
4	Tap **Sign In**	
5	Tap **Submit**	

C. How to Report a Fire/Ignition

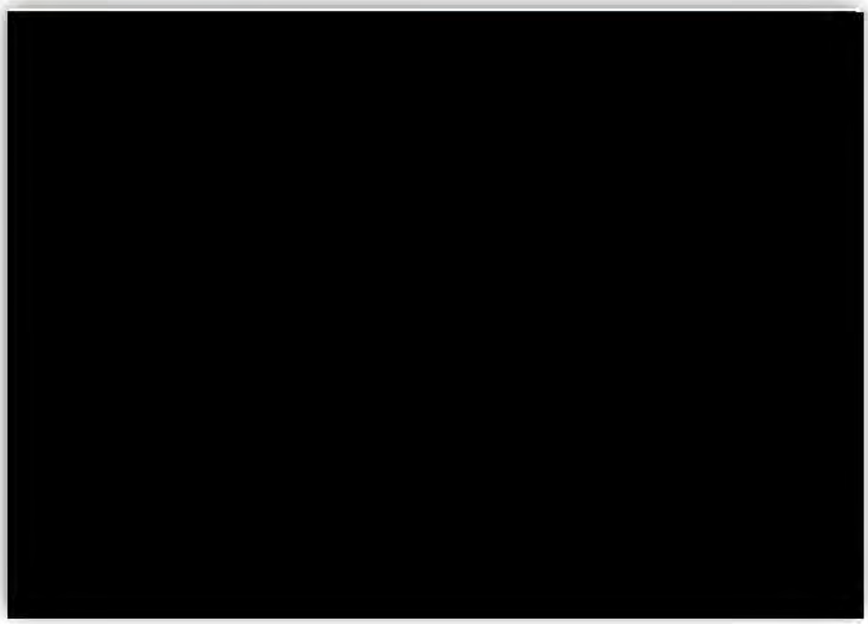
1	Login to FieldWorker Tap the "**hamburger**" button *This displays the Main Menu*	
2	Tap **Host**	
3	Tap **Fire/Ignition Reporting Form**	
4	Tap **Identify Incident Location** *This switches you to Asset View*	

5	Tap **Locate** button  *This puts your location at the center of the map as a* ***blue dot*** 	 
6	Tap **Pin** button  *This puts a* ***red pin***  *at the center of the map*	
7	Use your fingers to • zoom in/out • move map *until the* ***red pin*** *is above the* ***fire's location***	

8 Tap **Thumbs Up**



*This makes the red pin **green** and confirms the fire's location*

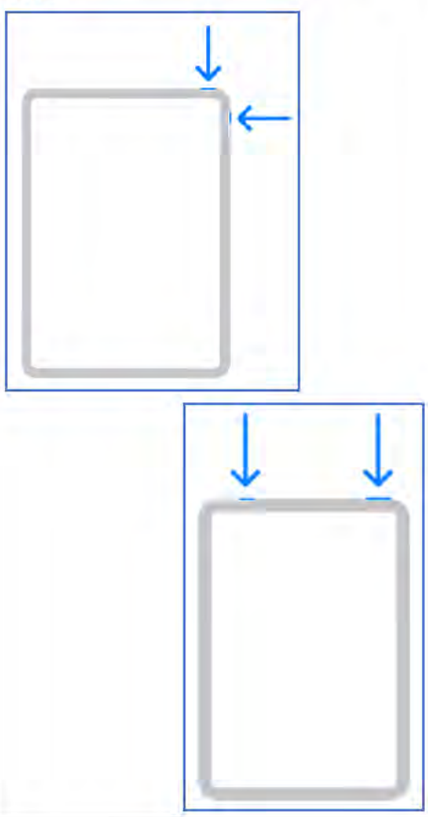


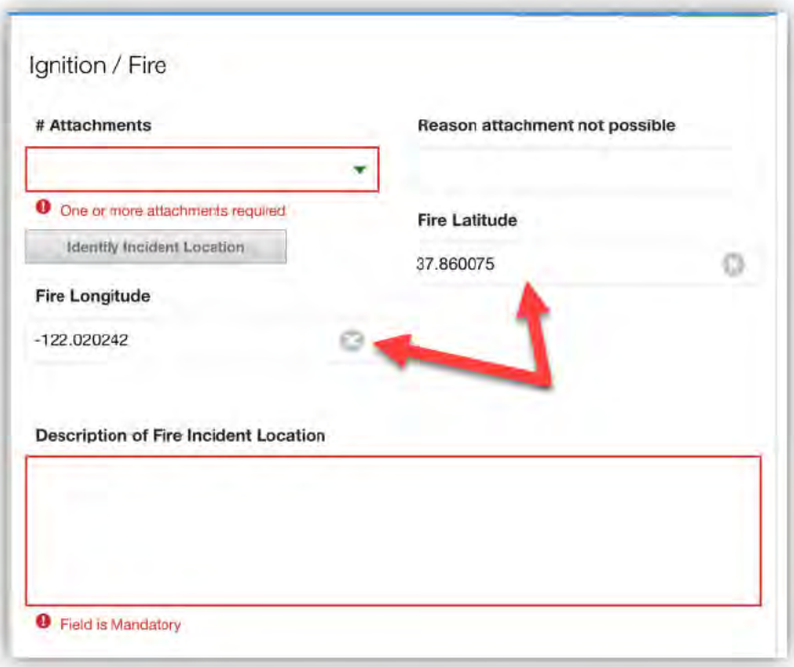
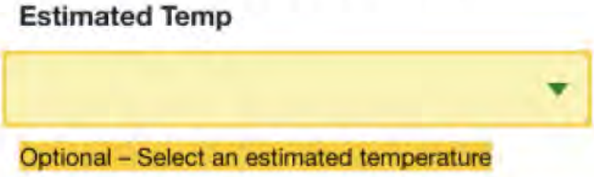
9 Take **screenshots**

Tap **Save to Photos** to save your screenshots to your iPad's photo library

If your iPad **has a** Home button, press the Top button and Home button at the same time

If your iPad **does not have** a Home button, press the Top button and either Volume button at the same time



10	Tap the **green Back** button Tap **Yes** *This switches you back to FieldWorker*	
11	**Fire Latitude** and **Fire Longitude** are auto-populated	
12	Fill out the rest of the form.	Red fields are mandatory and must be populated.  Yellow and grey fields are optional. 

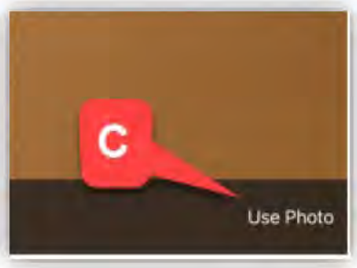
13 Attach **at least 3** photos and/or screenshots

To take and attach a photo

A. Tap the **Camera** button

B. Tap the **white Circle** to take a picture

C. Tap **Use Photo**



To attach a photo or screenshot from your iPad's **photo library**

A. Tap the **Photo Library** button

B. Tap a thumbnail

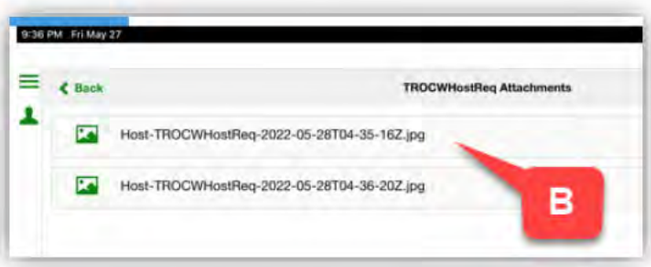
To review your currently-attached photos/screenshots

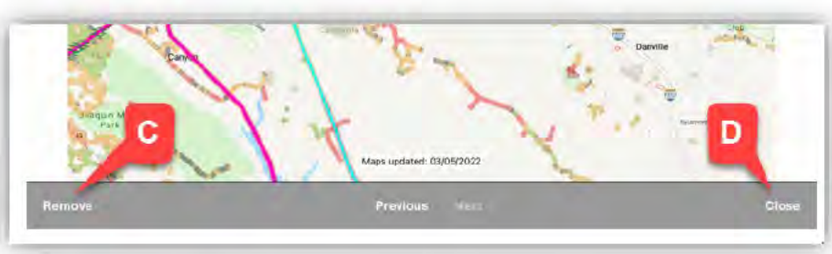
A. Tap the **Paperclip** button

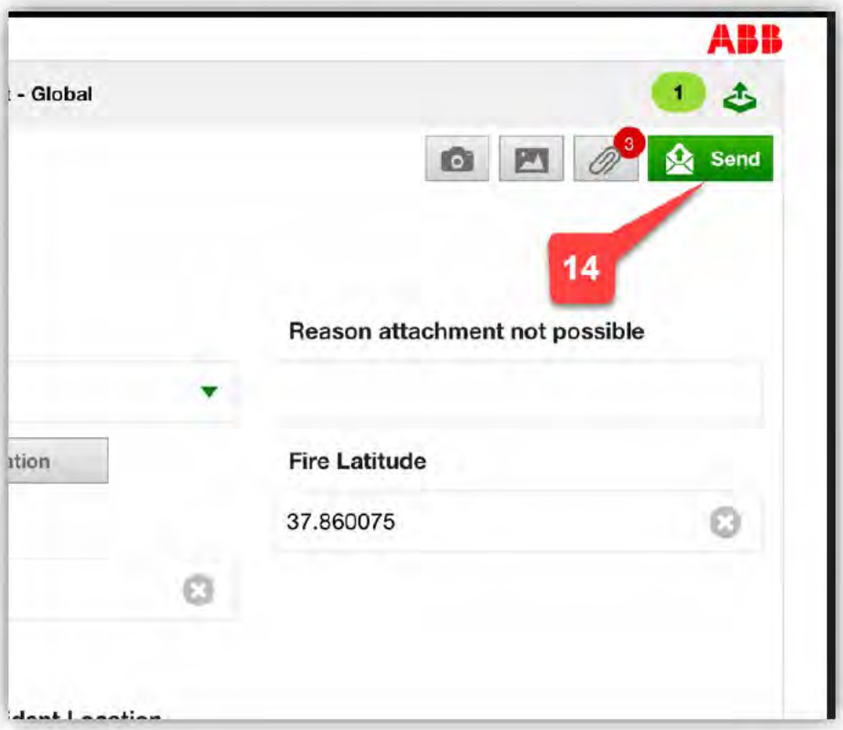
B. Tap a **row** from the list

C. Tap **Remove** to delete the photo

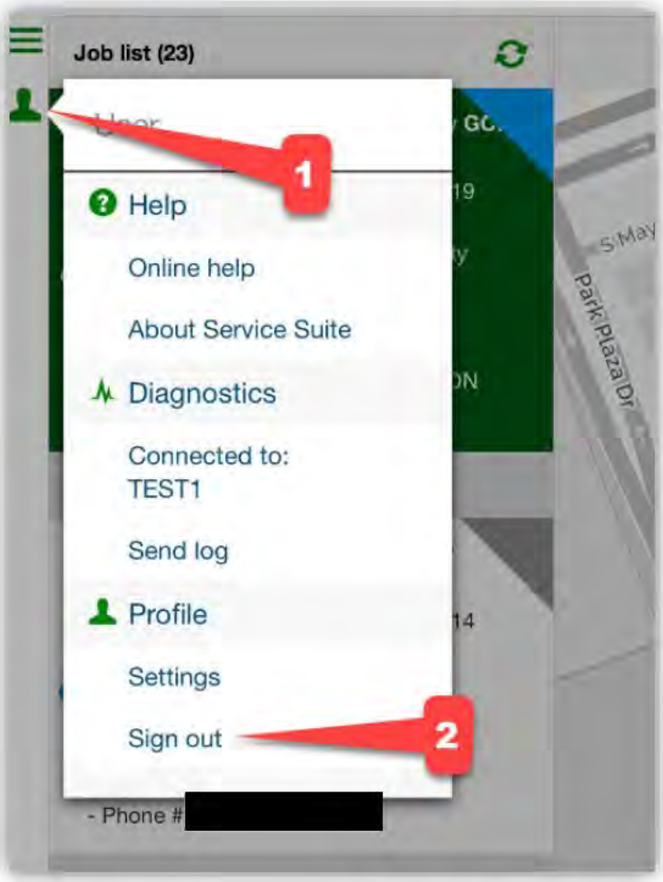
D. Or tap **Close** to keep it





14	After filling out all required fields and after attaching at least 3 photos/ screenshots tap the **Send** button to submit your Fire/Igntion form.	

D. How to Log Off FieldWorker

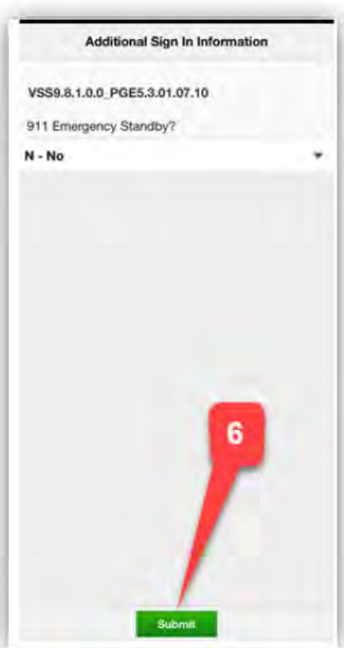
1	Tap **green person icon**	
2	Tap **Sign out**	
3	Tap **Yes**	

Fire/Ignition Reporting Form - Job Aid (iPhone)

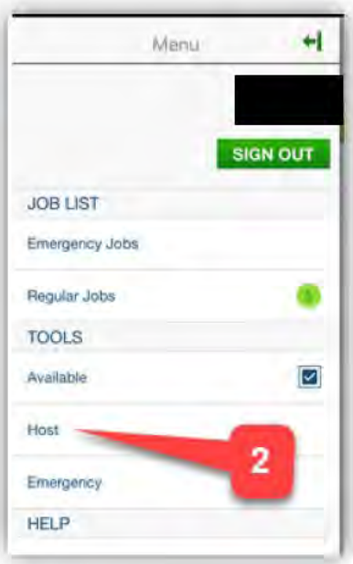
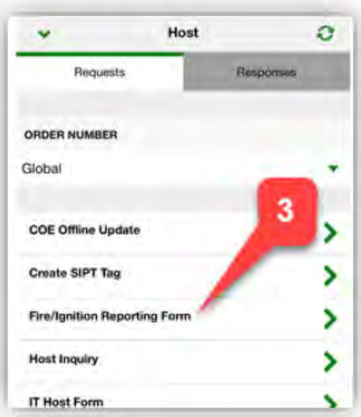
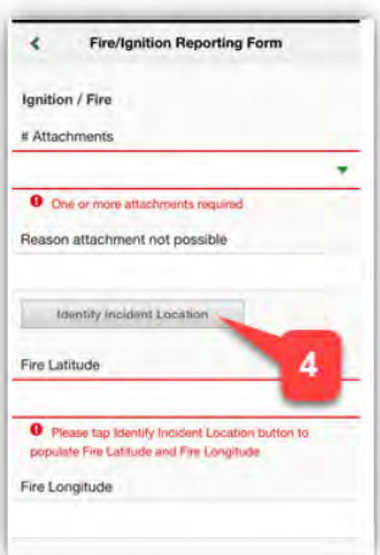
A. One-Time Setup of FieldWorker App

1	Launch **Apps@Work** Search for **ABB Service Suite FieldWorker** and install it If you don't already have it, search for **F5 Access** and install it	
2	Configure FieldWorker 1. Launch **FieldWorker** 2. At Login screen, tap **Server address** 3. Tap **Edit** 4. Populate the fields as shown on the right 5. Tap **Done** 6. Tap **<**	**Service Suite Name** Prod **Server Host** ssappprdf5.cloud.pge.com **Server Port** 25700 **Use HTTPS** On

B. How to Login to FieldWorker

1	Tap the **FieldWorker** icon.	
2	Enter your **Tech ID**	
3	Enter your **Password**	
4	Check **Remember me**	
5	Tap **Sign In**	
6	Tap **Submit**	

C. How to Report a Fire/Ignition

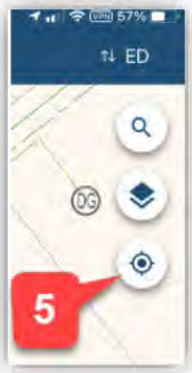
1	Login to FieldWorker Tap the "**hamburger**" button *This displays the Main Menu*	
2	Tap **Host**	
3	Tap **Fire/Ignition Reporting Form**	
4	Tap **Identify Incident Location** *This switches you to Asset View*	

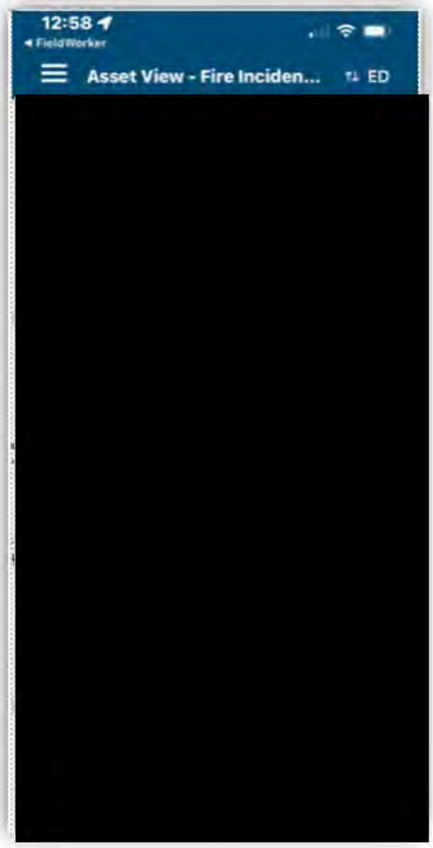
5

Tap **Locate** button 

This puts your location at the center of the map as a

blue dot 





6

Tap **Pin** button 

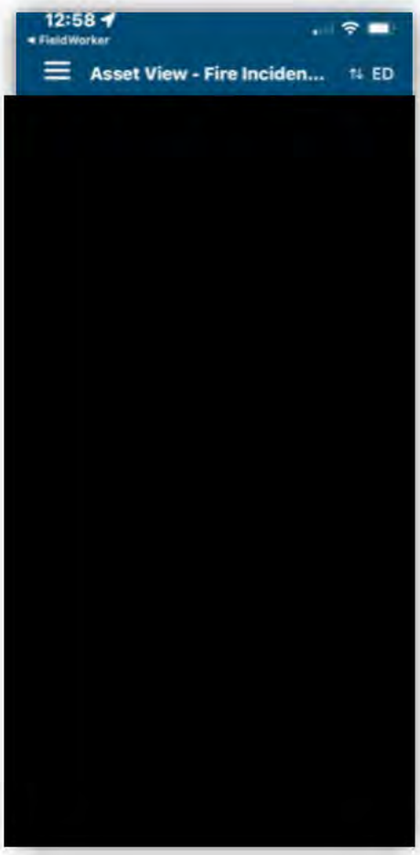
*This puts a **red pin** at the center of the map* 

7

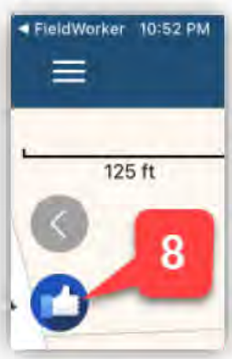
Use your fingers to

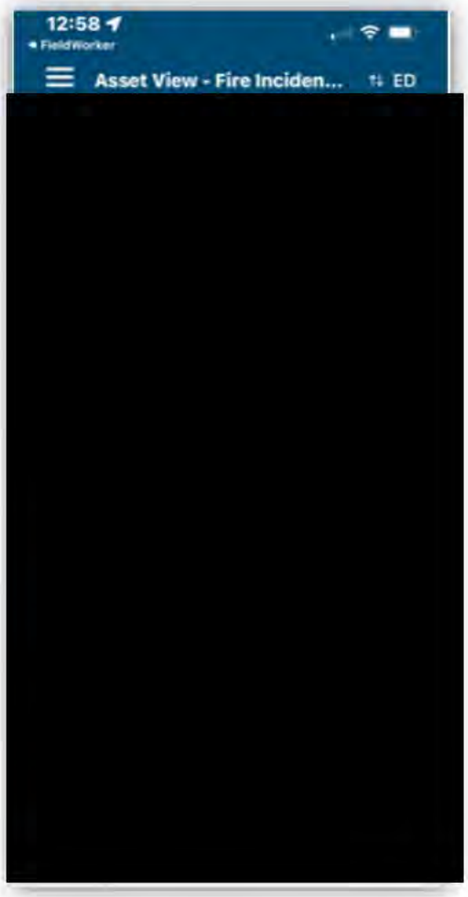
- zoom in/out
- move map

*until the **red pin** is above the **fire's location***

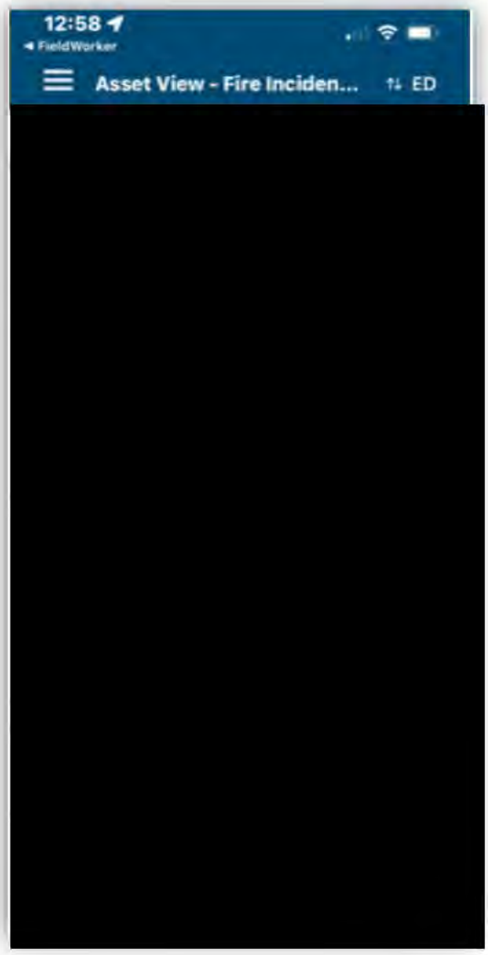
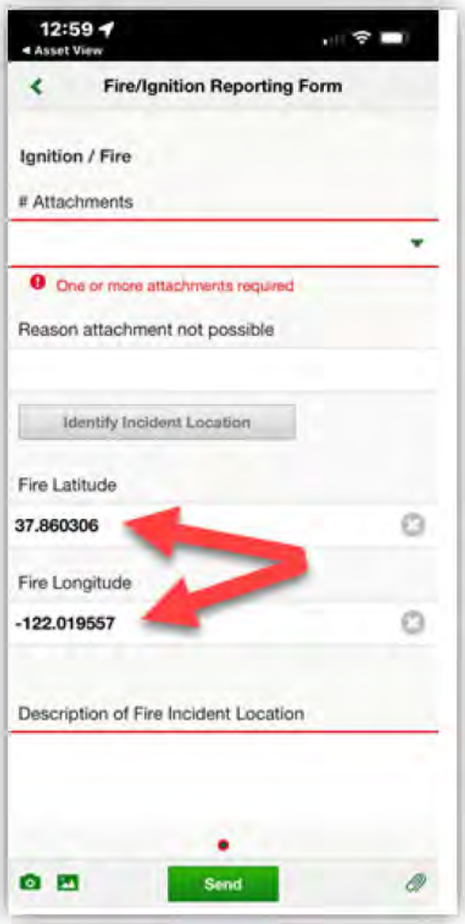


<table>
<tr>
<td>8</td>
<td>Tap Thumbs Up

This makes the red pin
green and confirms the fire's location</td>
<td colspan="2"> 


</td>
</tr>
<tr>
<td>9</td>
<td>Take screenshots

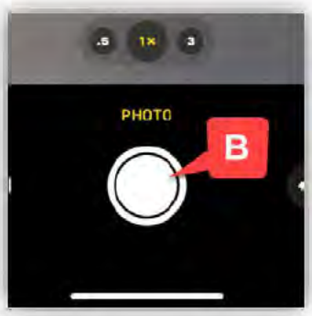
Tap Save to Photos to save your screenshots to your iPhone's photo library</td>
<td>If your iPhone has a Home button, press the Top/Side button and Home button at the same time
  </td>
<td>If your iPhone does not have a Home button, press the Side button (on right) and the Volume Up button (on left) at the same time
  </td>
</tr>
</table>

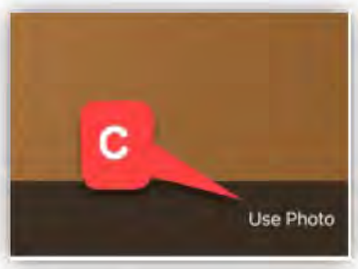
10	Tap the **green Back** button Tap **Yes** *This switches you back to FieldWorker*	
11	**Fire Latitude** and **Fire Longitude** are auto-populated	

<table>
<tr>
<td>12</td>
<td>Fill out the rest of the form.</td>
<td>Red fields are mandatory and must be populated.
Attachments
 

Yellow and grey fields are optional.
Estimated Temp
 
</td>
</tr>
<tr>
<td rowspan="2">13</td>
<td>Attach at least 3 photos and/or screenshots

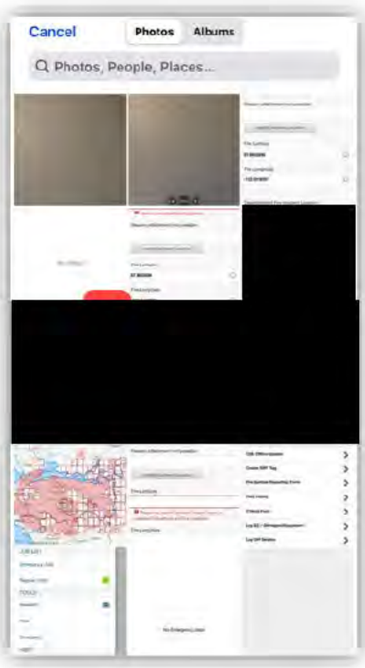
To take and attach a photo
A. Tap the Camera button
B. Tap the white Circle to take a picture
C. Tap Use Photo</td>
<td> 

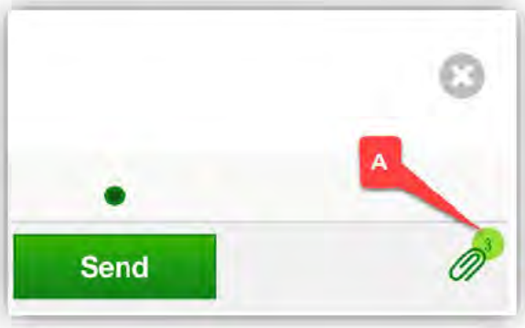
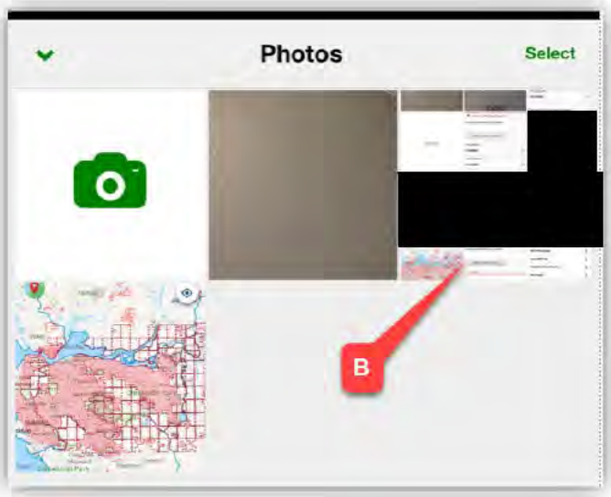
 

 
</td>
</tr>
<tr>
<td>To attach a photo or screenshot from your iPhone’s photo library

A. Tap the Photo Library button

B. Tap a thumbnail</td>
<td> 

 
</td>
</tr>
</table>

	To review your currently-attached photos/screenshots **A.** Tap the **Paperclip** button **B.** Tap a **row** from the list **C.** Tap  to delete it **D.** Or tap  to keep it	 
14	After filling out all required fields and after attaching at least 3 photos/ screenshots tap the **Send** button to submit your Fire/Igntion form.	

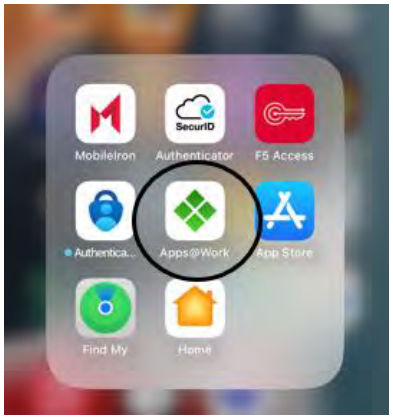
D. How to Log Off FieldWorker

1	Tap the "hamburger" button to display the Main Menu	
2	Tap **Sign out**	
3	Tap **Yes**	

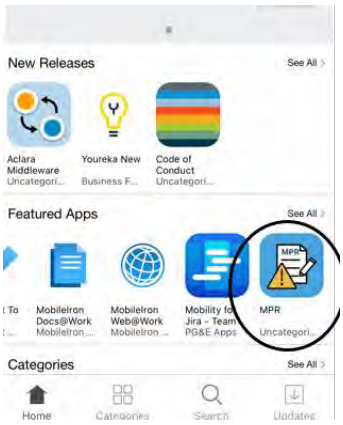
Material Problem Report (MPR) App

PPE	NA
Tools	Employee Work Phone
Guidance Document References	SCM-2106P-01, Material Problem Report Procedure
Level of Use	Reference

Step 1: Find the Apps@Work icon

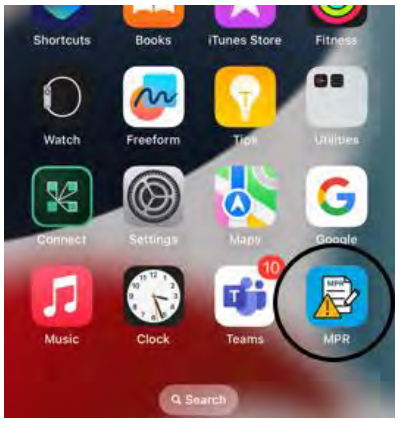


Step 2: Locate MPR App

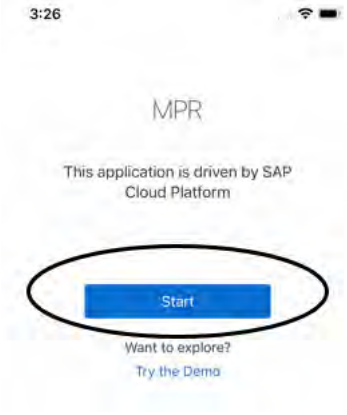


Step 3: Click to download

Step 4: Find MPR App to start



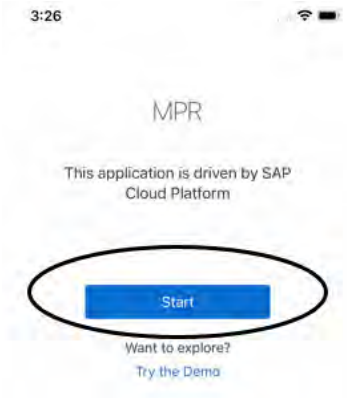
Step 5: Click 'Start' to complete initial set-up



Step 6: Login using desktop login credentials

Step 7: Choose a passcode for fast sign-ins (also allows for a password reset)

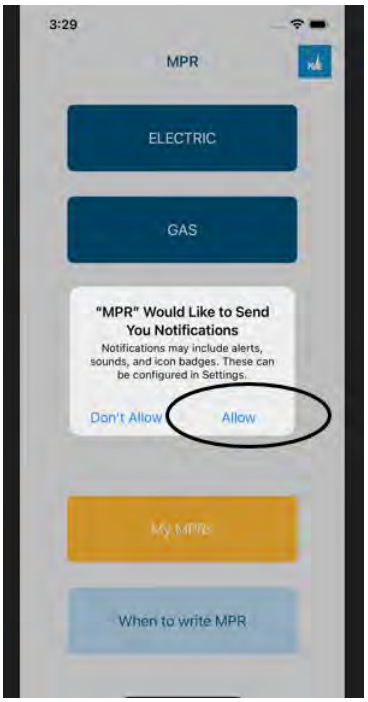
Step 8: Click 'Start' to complete initial set-up



Step 9: Wait for data sync and allow MPR to use location when submitting

Material Problem Report (MPR) App

Step 10: Accept notifications to stay up-to-date



Step 11: DONE: Select MPR type to start Submitting MPRs (or see past submissions under "My MPRs"

Revision Notes

Last Revised by:	Revision Change
[redacted] (Supplier Quality Manager)	Rev 0 – New Document

Asset Failure Analysis

Low Communication Line Ignitions

June 2023

PG&E ASSET FAILURE ANALYSIS


Low Communication Lines

Level Set | Clearance Requirements

Key Takeaway

1’

Minimum required clearance between a vehicle and an overhead span that crosses a road

14’

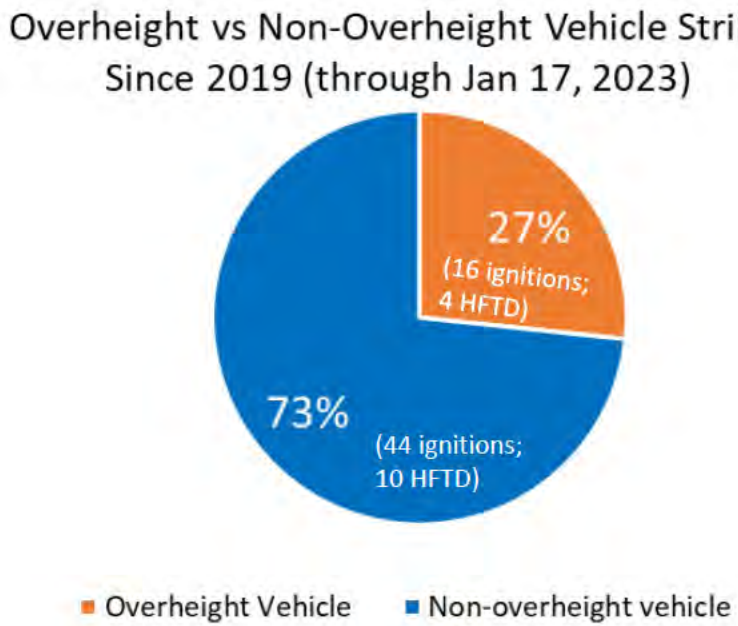
Maximum vehicle height per the **California Vehicle Code**

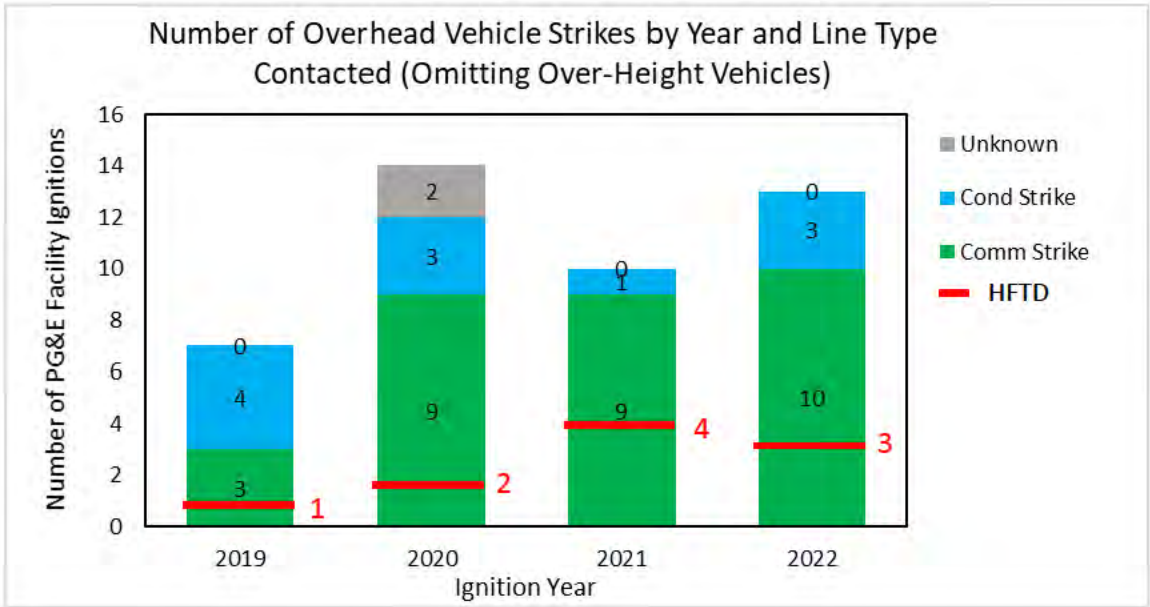
15’

Minimum height of an overhead span crossing a road per **General Order 95 Table 1**

Assessment: Low Communication Lines

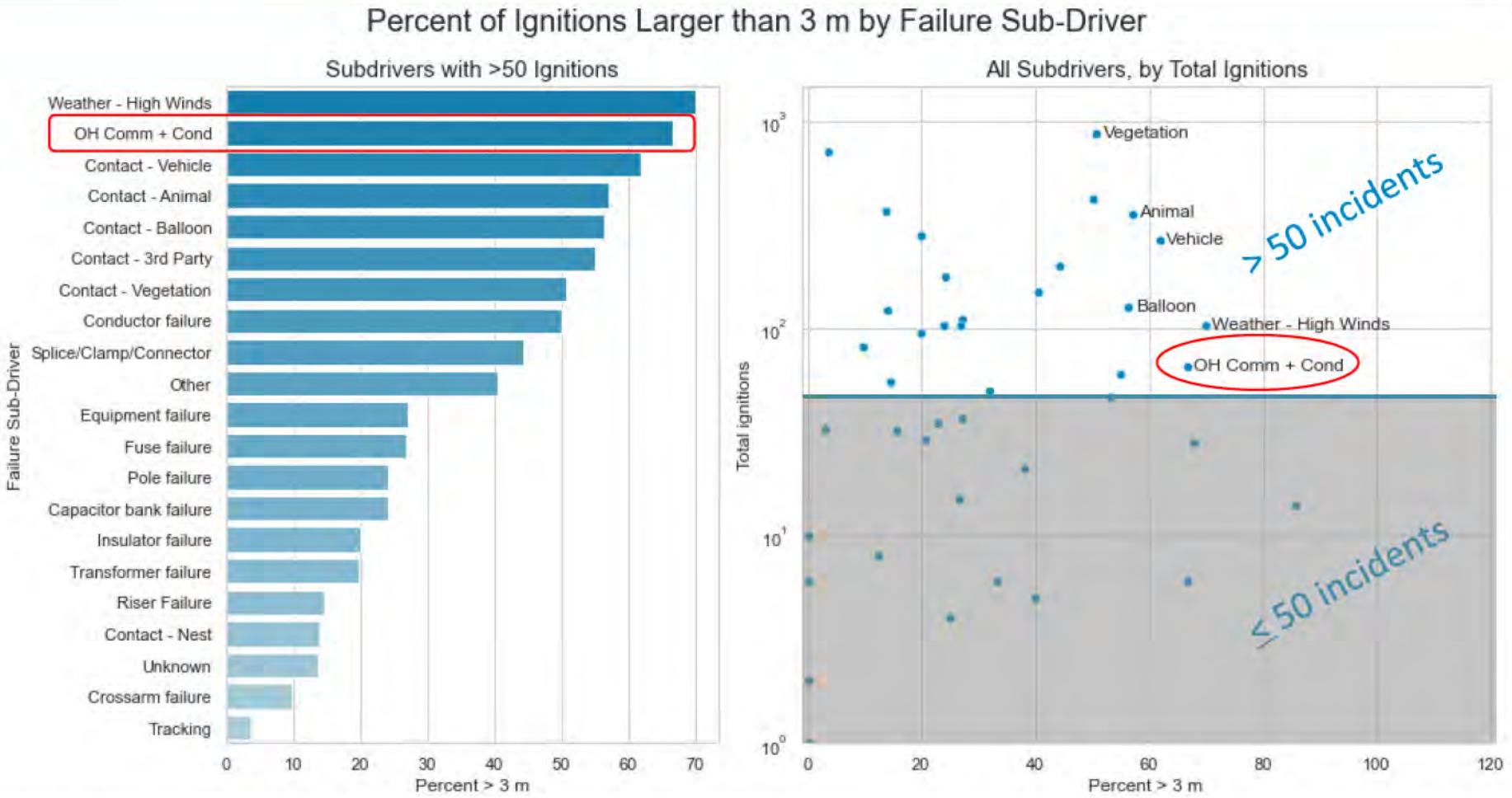
Overhead Span Vehicle Contact Ignitions | 2019 - 2022





KEY TAKEAWAY: Of the 60 vehicle strike ignitions since 2019, 44 (73%) were found to be caused by vehicles that are presumed to NOT be over-height. 31 (~70%) of these ignitions involved a presumed non-compliant communication line crossing a road.

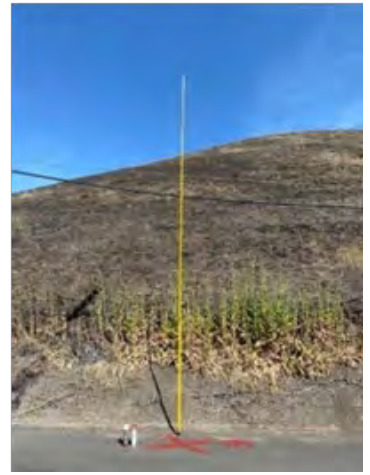
Assessment: Low Communication Lines



Key Takeaway: As a SubDriver, Vehicle Conductor/Comm line strike is the 2nd most likely to cause of a >3m ignition, only behind "High Winds"

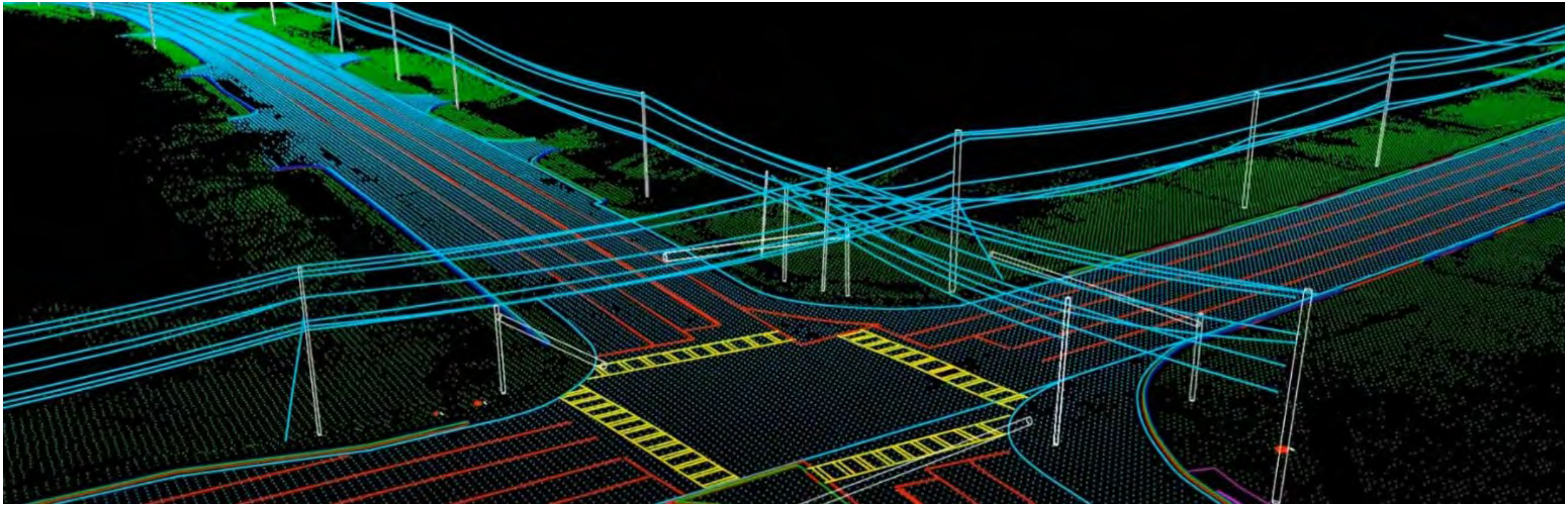
Consequential Ignitions | Index 654

- On May 23, 2022
- Livermore, CA (HFTD)
- A vehicle contacted an overhead communication span in Livermore causing the lines to slap together. The ensuing ignition was approximately 90 acres in size.
- The span in question had an open third party notification for an unauthorized attachment at the time of the ignition.



Laser Imaging, Detection and Ranging (LIDAR)

Lidar is an acronym of "light detection and ranging" or "laser imaging, detection, and ranging". It is a method for determining ranges by targeting an object or a surface with a laser and measuring the time for the reflected light to return to the receiver.



Mitigation: Low Communication Lines

LIDAR Extent of Condition (Mitigation Plan on Next Slide)

71,717

2350 circuit miles with available ground-based LiDAR with processed conductor clearance data
~3% of System
95% is non-HFTD, 4% HFTD, 1% HFRA

1,245

The LIDAR dataset includes 1,245 spans that appear to cross a road and are under 16 feet.
92% Non-HFTD, 8% HFTD

100

HFTD subset of the population above

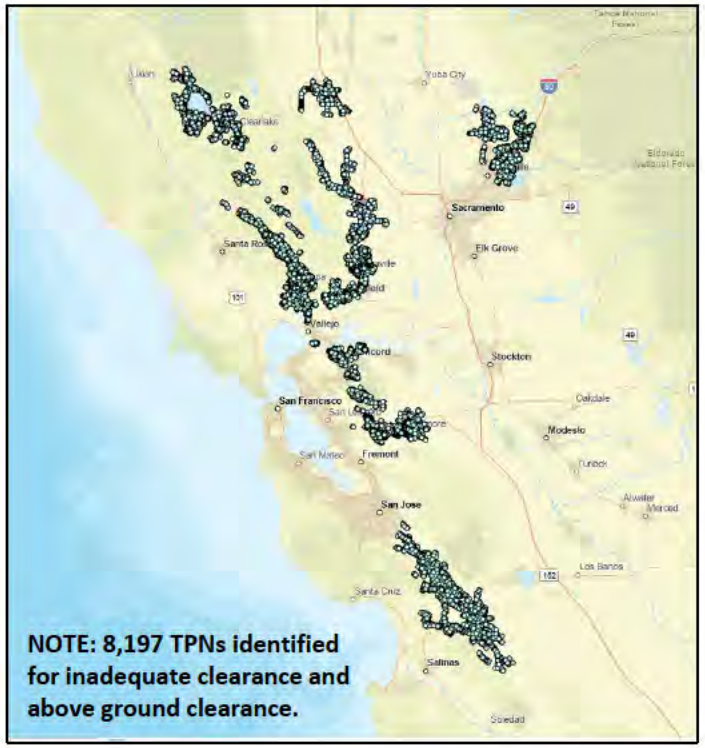
37

Desktop Review: Appears to cross a road & <16 feet[1]
30 Communication | 1 Secondary | 6 Service

15

Field Verified Non-Compliant with GO95: Crosses Road & <15 feet.[2]
(5 identified <14 feet)
All 15 were communication spans

1) 16 was used to provide a buffer for desktop analysis
2) Third Party Notifications (TPNs) were created for the communication spans



Key Finding #1: TPNs have been issued to fix the 15 low non-compliant comm spans identified

Key Finding #2: LIDAR CAN be leveraged as a tool to proactively identify low non-compliant spans

Control/Support: Low Communication Lines

Control & Support

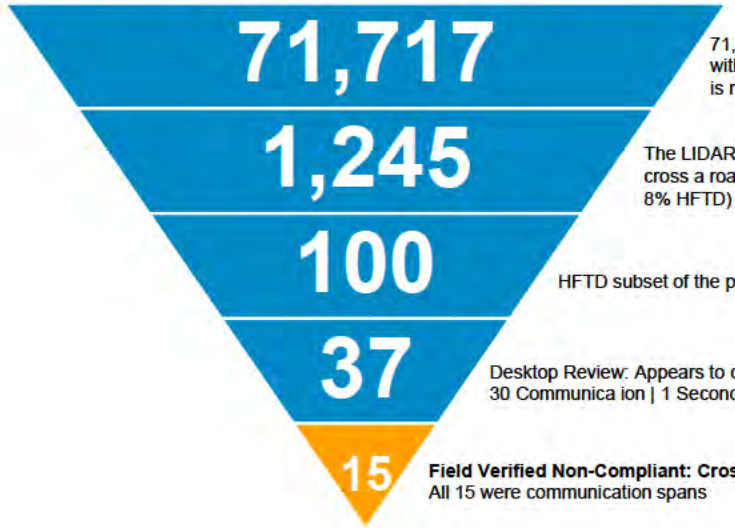
Control: Established controls to identify this risk as part of our ongoing inspection and repair process.

Support: Support needed by the team to effectively implement the aforementioned mitigation and control (e.g. alignment with Legal on "self-help" approach).

Key Finding	Recommended Control	Lead	Support Needed	Timeline
#1. Level 1 TPNs to address non-compliant low communication lines	Create Third Party Notifications for the 15 spans that were verified to not meet the minimum clearance requirement of 15 feet. Follow-up to ensure work closure.	AFA / Joint Utility	None	February 2023
#2. LIDAR data can proactively identify low spans that are at risk of being struck by a vehicle	A) Obtain funding (~$230k) to process additional LIDAR data (10,845 circuit miles*, ~94% HFTD) to identify spans that are under 15 feet and crossing a road. All remaining road accessible HFTD miles. * ~87x more HFTD miles than in this evaluation.	Remote Sensing	Funding (~$230k)	Within 30 business days of obtaining approval and funding
	B) Analyze new data when processed (Filter for spans < 16 feet and crossing a road in HFRA → desktop review → field verification → tag creation). Evaluate effectiveness.	AFA / Inspections	Field inspection and tag creation	Within 60 business days of data being processed
	C) Evaluate effectiveness of 2A and determine if LIDAR data should be collected to analyze additional non-HFTD lines that are high risk.	AFA / Remote Sensing (AT&T?)	Future Leadership Decision / Potential Funding ($TBD)	TBD
#3. Reduce friction in making quick & accurate clearance measurements	Equip inspectors with digital scopes or other means to easily and accurately measure distances between points (CAP # 125191660 – Asset Strategy)	Asset Strategy / System Inspections	Pilot Findings + Funding	Q1 2024
#4. Implement innovative ways to find low lines	Stretch Idea: 15-foot truck antennas / sensors for PG&E vehicles to alert tmen when they contact non-compliant lines.	?	EPIC?	Long Term

LIDAR Extent of Condition Overview

Original Extent of Condition (Feb 2023)
2,350 Circuit Miles



71,717 spans with available ground-based LiDAR with processed conductor clearance data (95% is non-HFTD, 4% HFTD, 1% HFRA)

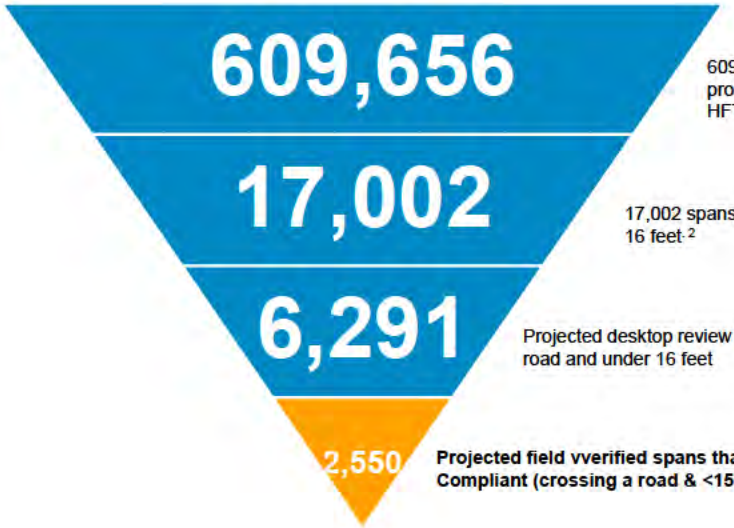
The LIDAR dataset includes 1,245 spans that appear to cross a road and are under 15 feet. (92% Non-HFTD, 8% HFTD)

HFTD subset of the population above

Desktop Review: Appears to cross a road & <16 feet
30 Communica ion | 1 Secondary | 6 Service

Field Verified Non-Compliant: Crosses Road & <15 feet.
All 15 were communication spans

Updated Extent of Condition (Projection)
19,977 Circuit Miles of Newly Processed Data



609,656 spans of ground-based LiDAR with processed conductor clearance data (100% HFTD + HFRA) [1]

17,002 spans projected to cross a road and are under 16 feet [2]

Projected desktop review results: Count of spans crossing a road and under 16 feet

Projected field vverified spans that are found to be non-Compliant (crossing a road & <15 feet) [3]

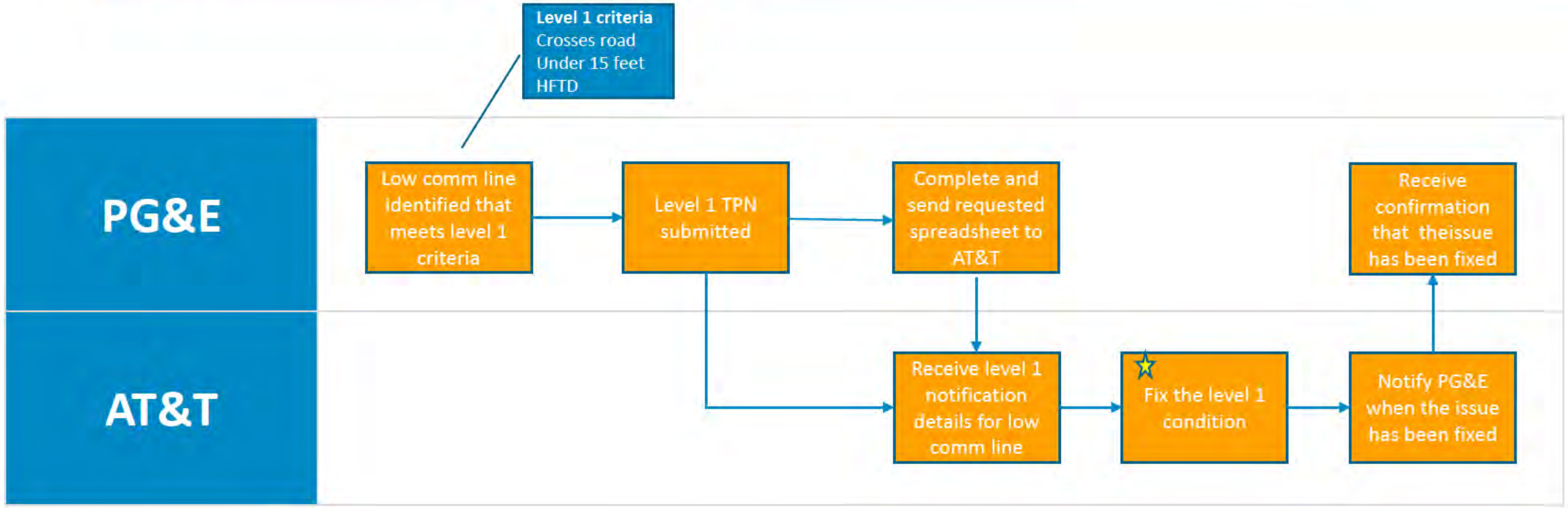
KEY TAKEAWAY: Expect to find ~ 2,550 spans that are under 15 feet and crossing a road, extrapolating from the data used in the original extent of condition.

1) Spans per circuit mile: 71,717 / 2,350 = 30.5
2) HFTD Find Rate: 100 / 3586 = 2.79%
Of the 71,717 total spans in original XoC, 4% were HFTD & 1% HFRA (3,586)
3) The new data set would be ~170x larger than the HFTD + HFRA portion of the original dataset (19,977 miles vs 118 miles).

Appendix

Level 1 TPN Process Map | Low Communication Line

DRAFT



Additional LIDAR Data

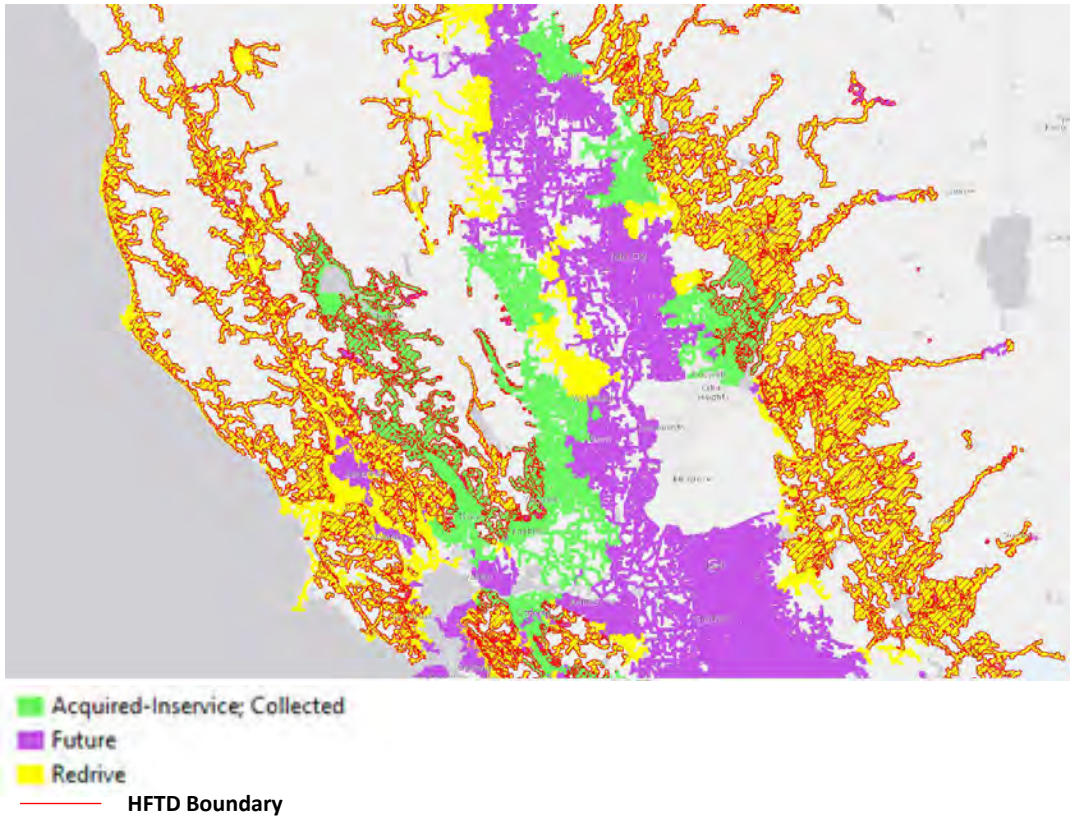
- The existing LIDAR extracts are within the green zone

Calculated Circuit Miles (2019 ground capture)	
HFTD	94
HFRA	24
Outside	2,233
Grand Total	2,350

- Areas in yellow will be the focus of additional LIDAR extracts

Calculated Circuit Miles (2019 ground capture)	
HFTD	10,163
HFRA	20
Outside	662
Grand Total	**10,845**

- Approximate required funding for LIDAR extracts of the yellow zone [redacted]

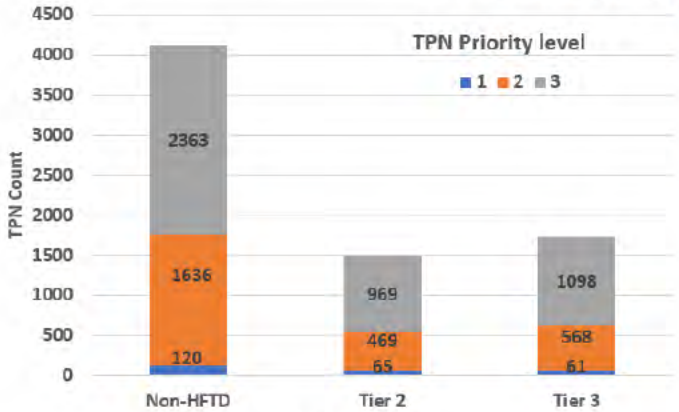


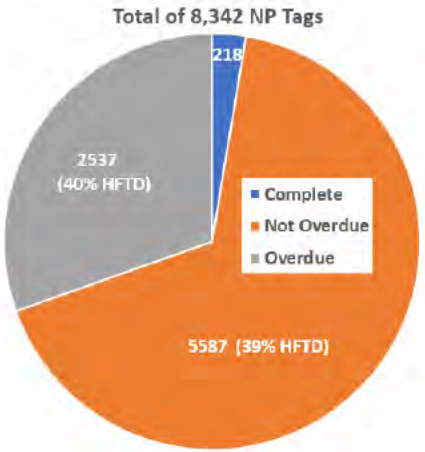
Assessment: Overhead Span Vehicle Contact

Assessment

Frequency of the risk driver associated with a telecom line contacting our OH distribution or transmission line in HFTD (e.g. inclusive of vehicle contacting a low span telecom line and subsequently contacting our electric line).

Extent of Condition (Mitigation Plan on Next Slide)





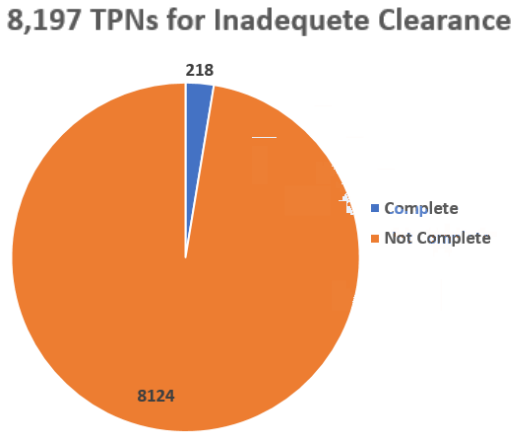
- 8,342 TPNs identified for inadequate clearance and above ground clearance.
- Found 255 A-tags had prior TPN for inadequate clearance
- Example: Index 654 – 90-acre ignition in Livermore occurred due to a Low comm span with TPN for unauthorized attachment.

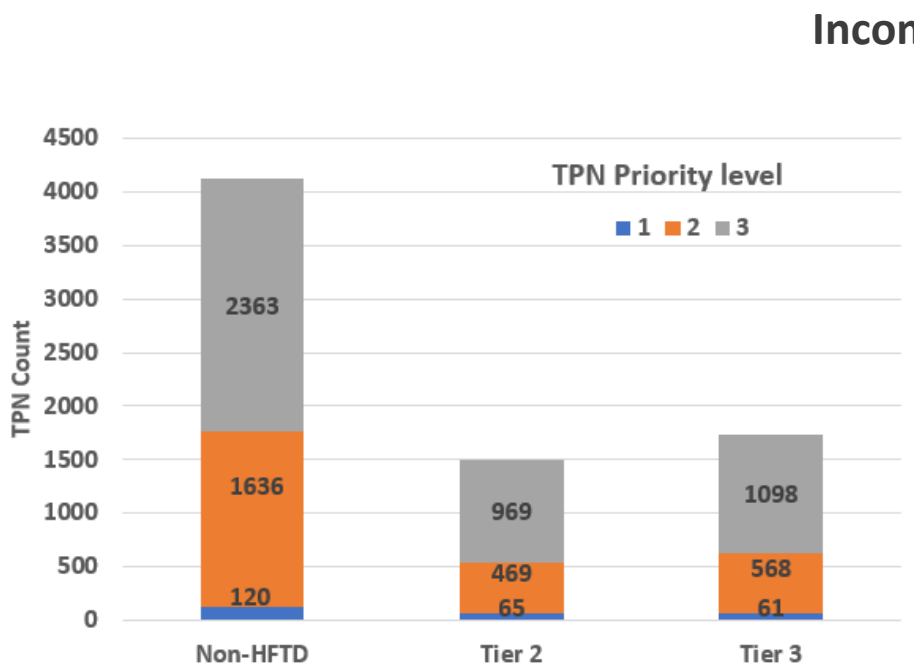
Third Party Notifications

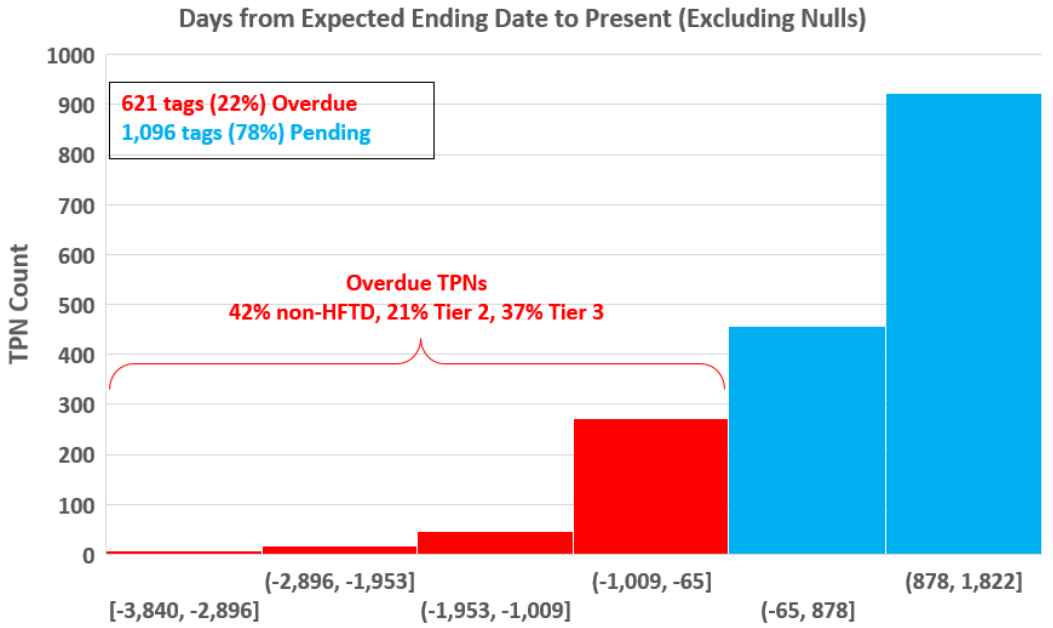
Warning—This document is draft material and work-in-progress—Significant changes may occur as a result of final quality checking

- TP notifications with the damage codes OC01 and OHC5 are looked into to identify the high-risk 3rd party lines (#8,197)

Code	Short text	Short text	Text
OC01	Overhead Conditions	Conductor - Inadequate clearance	TP
OHC4	TPNU Overhead Conditions	Conductor Clearance Above Ground	TP







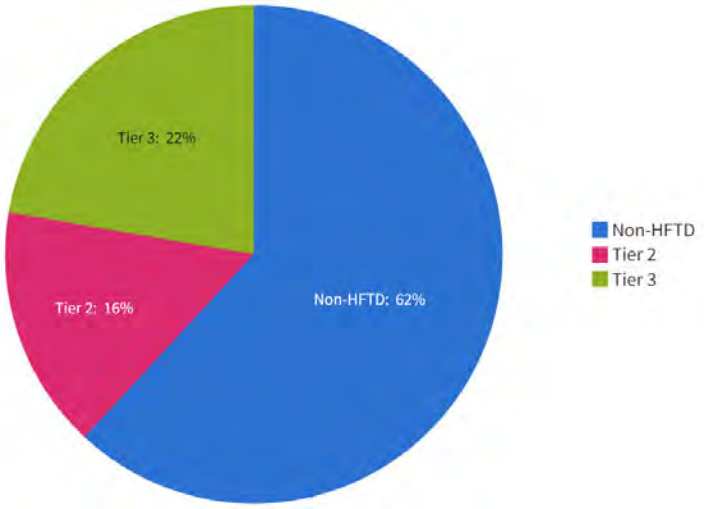
Third Party Notifications

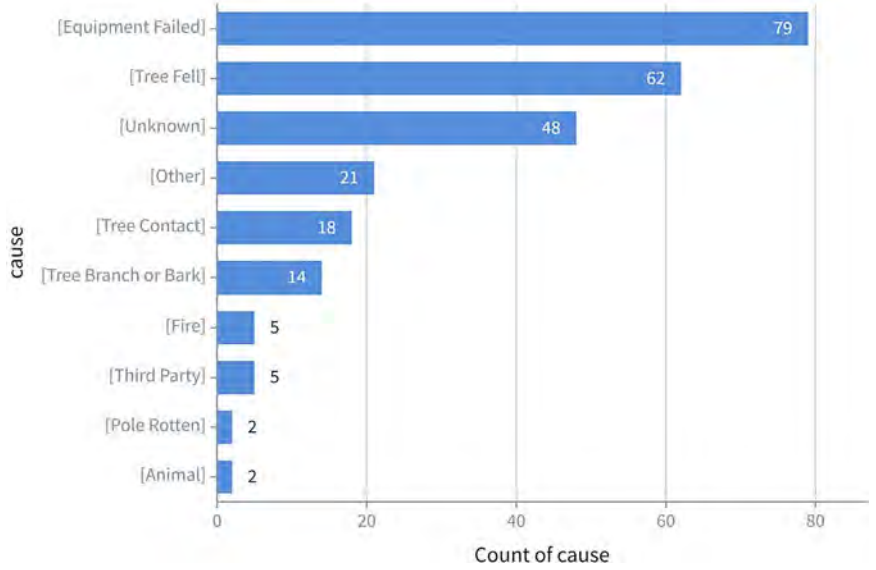
Warning—This document is draft material and work-in-progress—Significant changes may occur as a result of final quality checking

- 8,197 TPNs are matched with A-tags that are issued on the same pole after TPN issuance
  - Found 255 A-tags with prior TPN for inadequate clearance
    - 5 out of 255 A-tags are for “Third Party” cause. Only 1 concerned vehicle strike to low comm

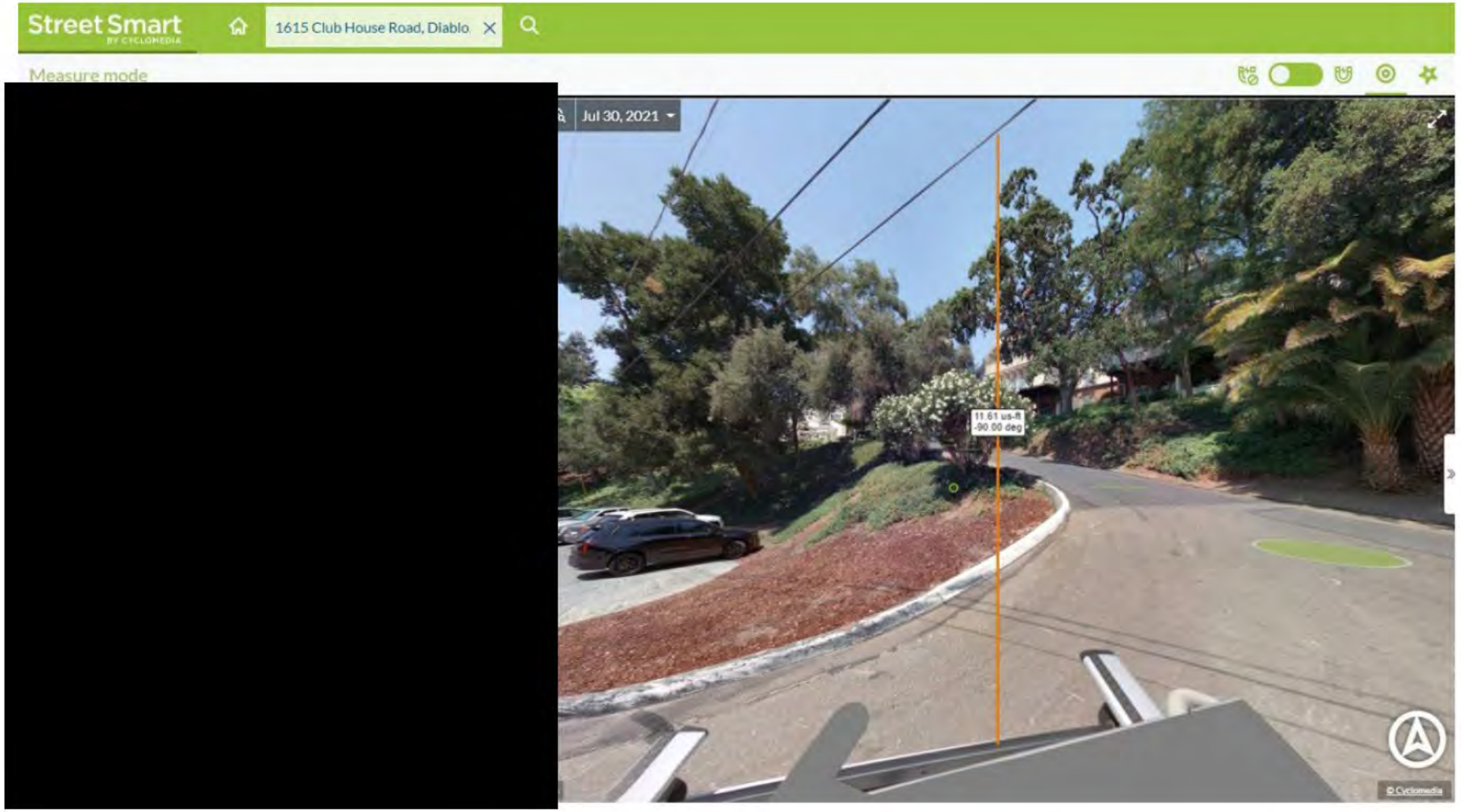
08/10/2019 13:01:34 PST INSPECTCPIC (INSPECTCPIC) - Location : 0 Crew to re-sag secondary mainline conductor . Was struck by a large vehicle in the telecom level but telecom cannot repair the line until PGE raises the secondary main line above the phone line. This originally tag came in as a B tag with notification number 117735115. The btag will be canceled

A-tags Breakdown





Examples of Low-Clearance Spans



General Order 95 – Table 1

General Order 95

Section III

Requirements for All Lines

Table 1: Basic Minimum Allowable Vertical Clearance of Wires above Railroads, Thoroughfares, Ground or Water Surfaces; Also Clearances from Poles, Buildings, Structures or Other Objects (nn) (Letter References Denote Modifications of Minimum Clearances as Referred to in Notes Following This Table)

Case No.	Nature of Clearance	Wire or Conductor Concerned						
		A Span Wires (Other than TrolleySpan Wires) Overhead Guys and Messengers	B Communication Conductors (IncludingOpen Wire, Cables and Service Drops), Supply Service Drops of 0 - 750 Volts	C Trolley Contact, Feeder and Span Wires, 0 - 5,000 Volts	D Supply Conductors of 0 - 750 Volts and Supply Cables Treated as in Rule 57.8	E Supply Conductors and Supply Cables, 750 - 22,500 Volts	F Supply Conductors and Supply Cables, 22.5 - 300 kV	G Supply Conductors and Supply Cables, 300 - 550 kV(mm)
1	Crossing above tracks of railroads which transport or propose to transport freight cars (maximum height 15 feet, 6 inches) where not operated by overhead contact wires. (a) (b) (c) (d)	25 Feet	25 Feet	22.5 Feet	25 Feet	28 Feet	34 Feet	34 Feet (kk)
2	Crossing or paralleling above tracks of railroads operated by overhead trolleys. (b) (c) (d)	26 Feet (e)	26 Feet (e) (f) (g)	22.5 Feet (h) (j) (eee)	20 Feet (ii)	25 Feet (o) (ii)	30 Feet (o) (ii)	30Feet (o) (ii) (kk)
3	Crossing or along thoroughfares in urban districts or crossing thoroughfares in rural districts. (c) (d)	18 Feet (j) (k) (ii)	18 Feet (j) (l) (m) (ii) (kkk)	19 Feet (hh) (eee)	20 Feet (ii)	25 Feet (o) (ii)	30 Feet (o) (ii)	30 Feet (o) (ii) (kk)
4	Above ground along thoroughfares in rural districts or across other areas capable of being traversed by vehicles or agricultural equipment.	15 Feet (k)	15 Feet (m) (n) (p)	19 Feet (eee)	19 Feet	25 Feet (o)	30 Feet (o) (p)	30 Feet (o) (kk)
5	Above ground in areas accessible to pedestrians only	8 Feet	10 Feet (m) (q)	19 Feet (eee)	12 Feet	17 Feet	25 Feet (o)	25 Feet (o) (kk)
6	Vertical clearance above walkable surfaces on buildings, (except generating plants or substations) bridges or other structures which do not ordinarily support conductors, whether attached or unattached.	8 Feet (r)	8 Feet (r)	8 Feet	8 Feet	12 Feet	12 Feet	20 Feet (ll)

Addressing Lashing Wire Issues

	Pacific Gas and Electric Company	Southern California Edison	SDGE
Submit Third Party Notification	✓	✓	✓
Standby Until Made Safe		✓	✓
Self-Help (Minor Repairs – i.e., cut, wrap)		✓	✓
Notify Communication Company After Self-Help is Completed		✓	✓

Benchmarking Notes | SCE

Pacific Gas and Electric Company

Southern California Edison — Energy for What's Ahead

GO 95 Rule 18 Discussion Notes
Pacific Gas & Electric and SCE
12/15/2022

Attendees

Pacific Gas & Electric	Southern California Edison
[redacted]	Alan Hernandez
	Bernice Cordero
	Erick Sanchez
	Joel Karzen
	Oscar Mejia
	Raymond Fugere
	Reeve Dunne
	Ruben Rodriguez
	Tobie Anderson

Notes:

Defining hazards according GO 95 Rule 18

SCE is in the process of defining what a priority 1 condition is and are leveraging GO 95 appendix 1 as a baseline.

A couple of conditions that SCE has agreed apply are:

- Broken lashing wire in a HFTD.
- Low wire over a road that could get snagged by a vehicle.

Broken lashing wires are mainly a concern in High Fire Threat Districts but hanging wires is a concern everywhere because it could bring down a pole. PG&E is in alignment with these hazards.

Problems with 3rd party wires

PG&E noted that a problem with these 3rd party hanging, or broken lashing wires is that PG&E can't touch the wire. Because the comms companies argue that their lines don't cause fires, they aren't quick to respond to these issues. This leads to the question of whether the troubleman needs to standby or leave knowing there's a hazard.

PG&E legal said that PG&E can't touch the lashing wire unless there's an agreement with the communication company but SCE's legal felt comfortable allowing the trouble man to perform "self-help" (tape, clamp, etc.) to mitigate the threat because it's a public safety issue. There could be benefit in PG&E and SCE legal groups talking to align stances on this issue.

Also, sometimes the trouble is that it's not known who else is on the pole. PG&E was wondering if they could send a blast email to all possible 3rd parties to fulfil the notification requirement. SCE has been doing that, identifying latitude & longitude and though a lot of the 3rd parties haven't been happy with it, it's all they can do if there's no record of who else on the pole.

Use of LiDAR

PG&E has had several 10-100 acre fires due to low lines snagged by vehicles. PG&E is beginning to use LiDAR to identify lines below 15 feet crossing roads which hasn't been available in the past. However, if LiDAR identifies a low hanging wire, a troubleman still needs to make the final call because they're qualified electrical workers. SCE follows the same logic when an inspector finds a hazard.

Contacting 3rd parties

For SCE, in Priority 1 conditions, an SCE troubleman will contact the 3rd party immediately through their Emergency Response group. A Priority 2 can be sent through a letter.

Neither utility has a clear method of contacting the 3rd parties in standby situations. When there's a significant safety issue a troubleman can't walk away from, there isn't an established line of communication with the comm companies to get it addressed quickly.

Additional SCE questions

SCE: Do you take pictures on inspections for HFTD vs non-HFTD?
PGE: Yes, the forms are the same but frequency is more for HFTD. Use an app for inspections which includes photos

SCE: Are risk-based vs compliance questions split out?
PGE: There's a fire icon on certain questions so it's clear which are ignition risks.

SCE: For underground, do you guys have a similar question process for underground inspections
PGE: For underground, inspection forms are still on paper and not electronic at this point. They will hopefully begin using the app in 2024.

Action Items

- PG&E requested SCE to send the information about the rangefinder they use.
- PG&E asked if SCE could send their inspection questions. SCE noted that [redacted] as been provided with them for a different topic.

Benchmarking Notes | SDG&E

GO 95 Rule 18 Discussion Notes
Pacific Gas & Electric and San Diego Gas & Electric
12/16/2022

Attendees

Pacific Gas & Electric	Other Utility Name
[redacted]	Jennifer Kaminsky Lonny Saldivar Stacy Lovell-Garra

Notes:

Defining hazards according GO 95 Rule 18

SDG&E considers a safety hazard as a condition that presents an imminent danger, similar to a "level 1" condition on company owned equipment. They do not walk away from the condition, and therefore provide a stand-by and use their emergency contact list with the telecom companies to ensure the condition is repaired. Otherwise, they will make safe before leaving the site.

Any other condition involving equipment of others is treated as critical or elevated and can be walked away from without repair.

SDGE keeps a list of condition codes in SAP and tracks them to completion. They align with non-conformances with the GO. In 2022, there are approximately 3000 notifications on file, and the primary mode of communication is email to the Communication Infrastructure Provider (CIP). Cox has roughly 50% of the infrastructure.

In 2007, SDGE received a citation for the Witch Fire believe to involve / caused by CIP assets. The details of the settlement are public record an contained in an exhibit. Cox was the CIP and indicated they did not receive a notification. According to SDGE, this kicked off the rulemaking for Rule 18.

Typically, if CIP assets are causing an issue, and are detected by Company employees, they go by a "see something, say something" guidance, rather than an established protocol. This could apply to assets observed in the field or through remote sensing. A QEW (or equivalent) is dispatched to investigate.

SDGE representatives agree with the conditions described (lashings, low wires) as causing issues. They concur that collaboration between the IOUs would be beneficial.

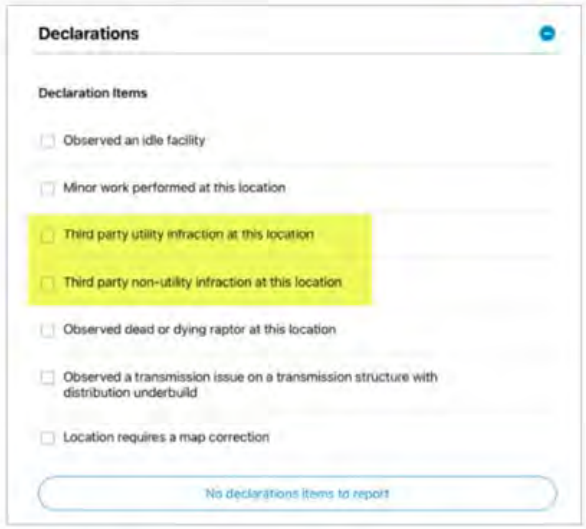
Before / After Overhead Job Aid (Comm Assets)

Before

11. Declarations

Use this section to identify field conditions that are reported on the following forms:

- Idle Facility
- Minor Work
- Third-Party Utility
- Third-Party Non-Utility
- Raptor Program
- PG&E Transmission Line
- Map Corrections



And the catchall for each section:

Select if there are risks, hazards or other maintenance conditions not previously captured in the checklist for hardware framing at this location

Antennas - Third Party Communication

1. Broken/Damaged Cellular Antenna

General Guidance: If the broken antenna is creating a non-emergency safety or reliability issue, create a third-party notification.

If the antenna is causing an emergency safety or reliability issue, contact your supervisor for instructions. Do not leave the location until it is made safe.

Minor Work: No

Related Documents: 027911

2. Third Party Communication Antenna - Inadequate Clearance

General Guidance: Create a third-party notification if a cellular antenna does not have adequate clearance from supply lines or equipment.

If the antenna is causing an emergency safety or reliability issue, contact your supervisor for instructions. Do not leave the location until it is made safe.

Minor Work: No

Related Documents: 027911, T&D Bulletin 2009-20

Before / After Overhead Job Aid (Comm Assets)

After – Low Comm Lines

3rd Party Notification

1. Utility – Cable, Phone, and other Electric Utility Partners

General Guidance: If issues are encountered with joint utility or tenant facilities on structures, create a 3rd party utility notification.

Minor Work: No

EC Notification: No

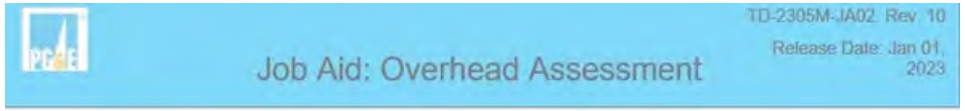
3rd Party Utility Notification: Yes

References: TD-2014P-01-F01

Example

Communication Line Extremely Sagged	
	**At this Location:** Comm sag 6' above the road, off the road, no potential for vehicle contact. **Perform Minor Work:** No **Write 3rd Party Utility Notification:** Yes **Priority:** Level 2 **Write EC Notification:** No

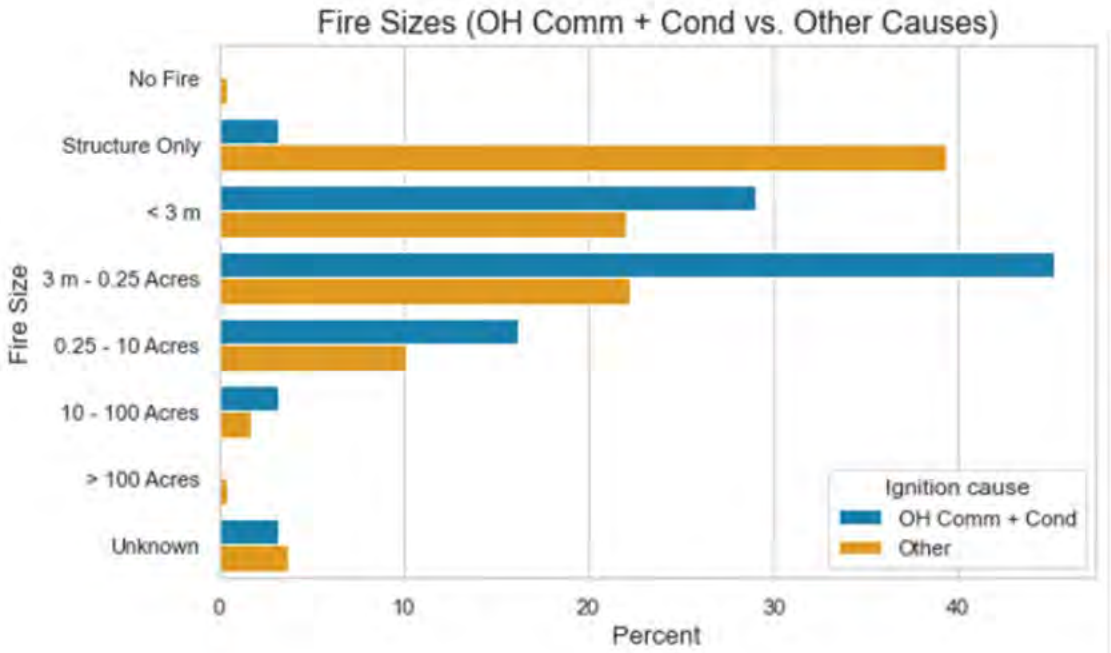
After – Lashing

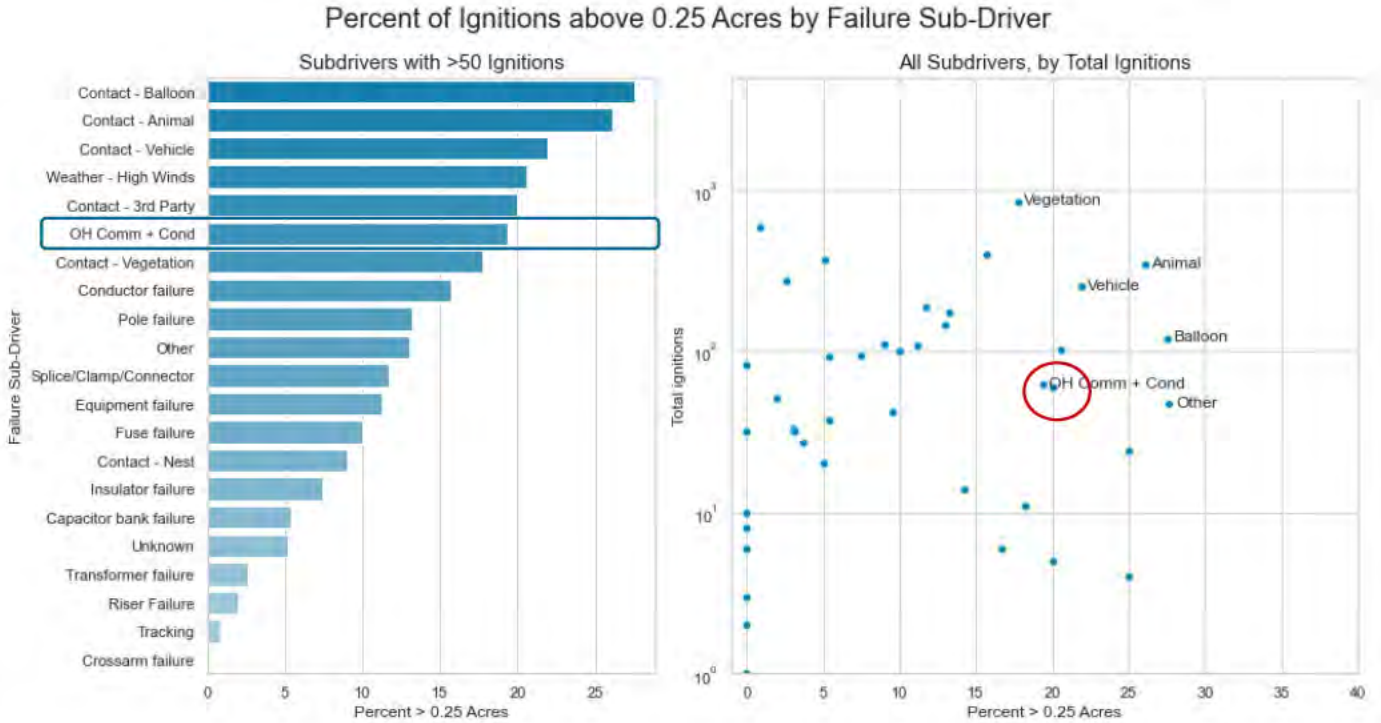


3rd Party Cable Loose Lashing Long Enough to Whip into Power Lines	
	
Before	**After - Snip Lashing and Tape**
At this Location: 3rd party communication line has a loose lashing **long enough to whip into power lines**. Stand-by situation.	
Perform Minor Work: Yes, if safe to do so	
Write 3rd Party Notification: Yes **Priority=** Level 1	
Write EC Notification: Yes, if minor work cannot be completed **FDA=** Conductor / Loose Lashing / Repair **Priority=** A Tag. Follow the emergency procedure.	
*Contact Lead/Supervisor for guidance	

Relative Consequence by Sub Driver

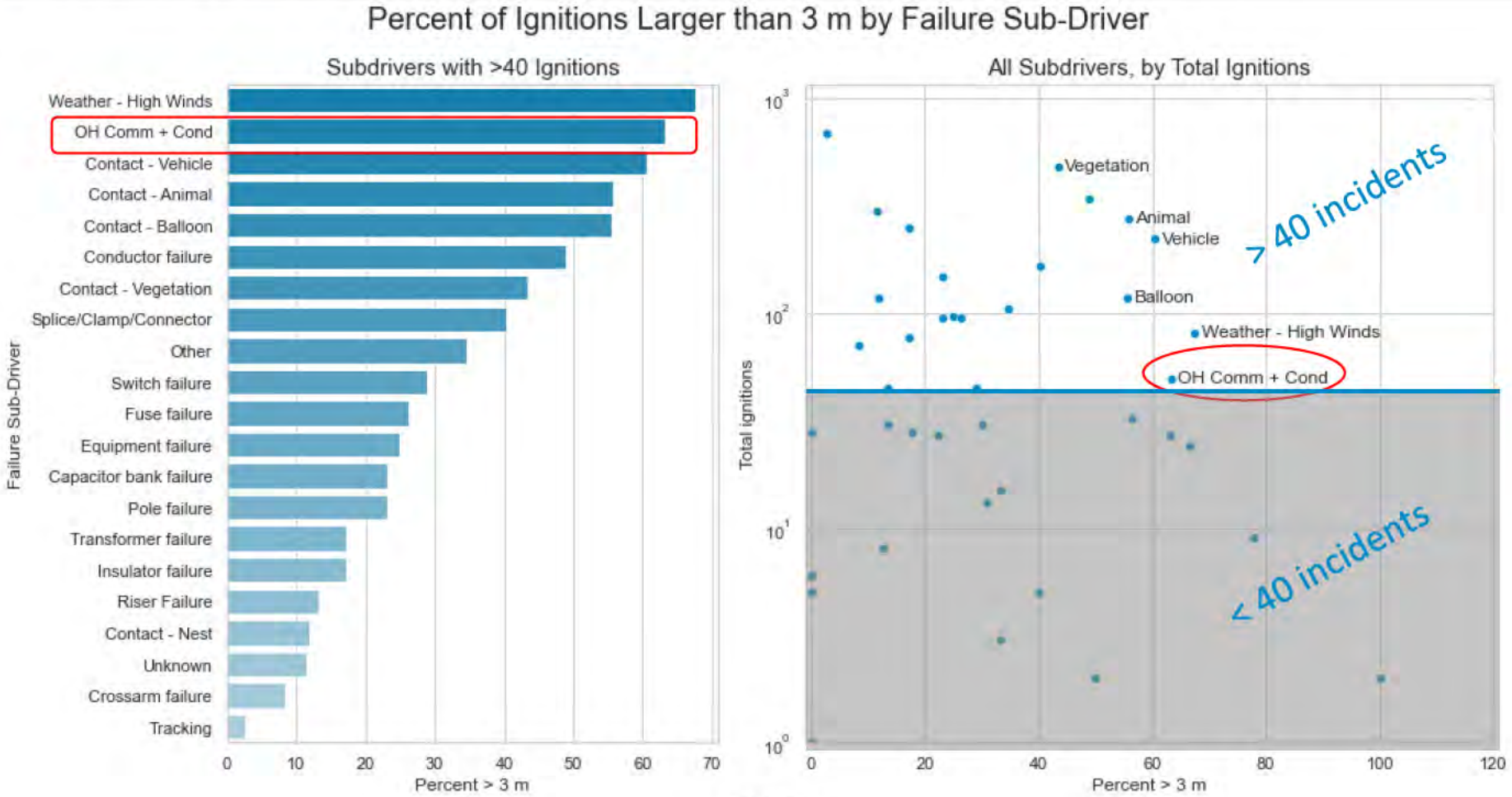
Vehicle comm/conductor contact has larger fire size than the average attributable fire





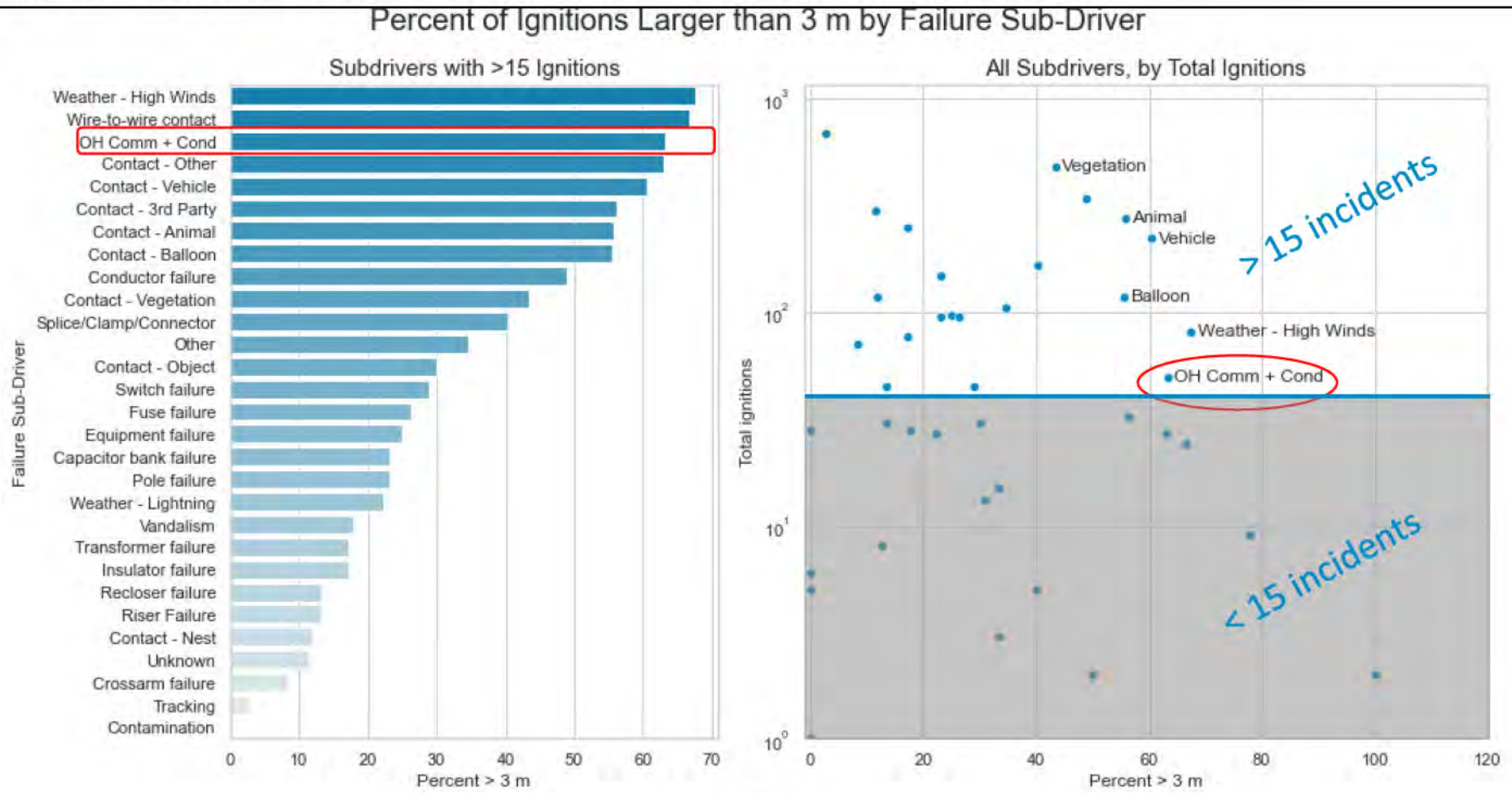
Assessment: Low Communication Lines

Key Takeaway: The consequences of Vehicle Conductor/Comm line strike is very high with the 2nd highest percentage of fires > 3m in non-HFTD Areas.



Assessment: Low Communication Lines

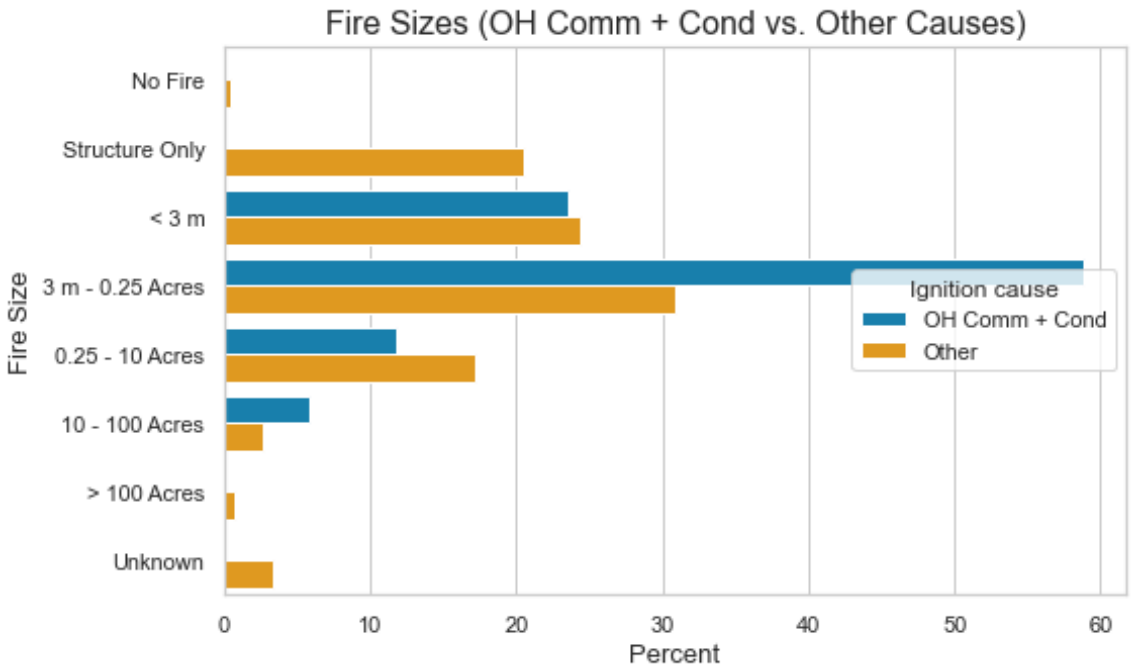
Key Takeaway: The consequences of Vehicle Conductor/Comm line strike is very high with the 3rd highest percentage of fires > 3m in HFTD Areas.



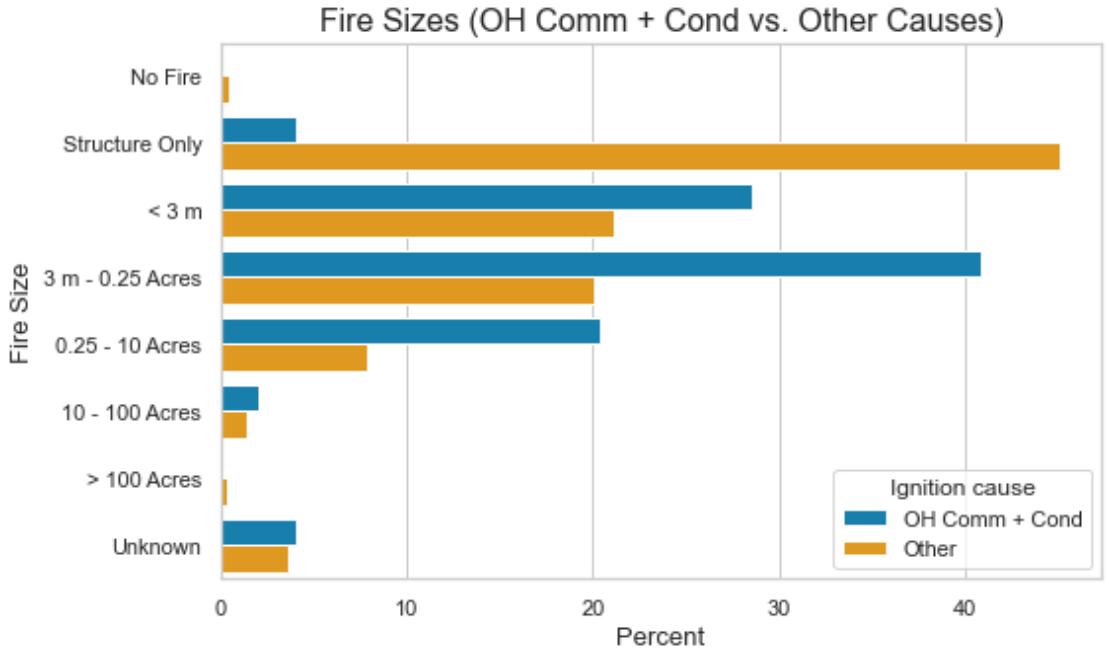
Relative Consequence by Sub Driver

Communication and conductor contact has resulted in particularly large fires in Non-HFTD.

HFTD



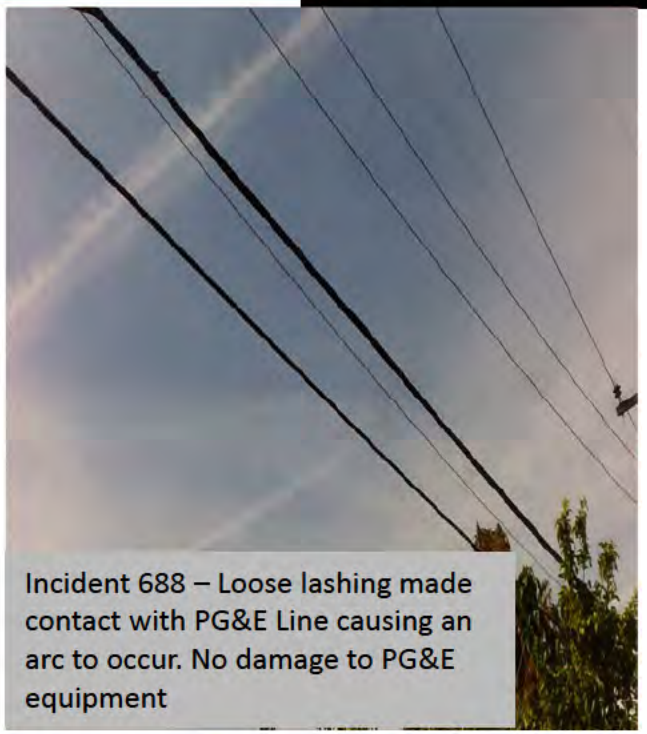
NON- HFTD



Lashing Wire Ignitions

Incident 163 – Loose lashing made contact with PG&E Line

Incident 576 – Vegetation rubbed on the aluminum lashing a bare spot on the covered energized conductor that then burned the lashing off



Incident 688 – Loose lashing made contact with PG&E Line causing an arc to occur. No damage to PG&E equipment

Year	Number of Fire Incidents with Lashing	Details (Incident Number)
2022	3	163, 688, 1478
2021	1	1258
2020	0	N/A
2019	2	1137, 1309
2018	0	N/A

NAL

Lashing Wire Process Issues – Index 2022-1478 Case Study

August 30, 2022. A loose communication lashing wire contacted a sagging secondary resulting in an ignition and small (<0.25 Acre) fire.

- Troubleman created an EC tag for conductor repair and replaced the open wire secondary with insulated Triplex.
- PG&E reached out to AT&T (joint pole owner) on 9/13/2022, and wrote Third Party Notification TPN for AT&T.
- AT&T initially responded that the wire was owned by CATV tenants.
- Follow-up with AT&T resulted in TPN submittal (from AT&T to Charter) 10/24/2022)
- After multiple follow-ups Charter and AT&T confirmed completion of the repair 11/23/22.

Internal

OH Inspection Job Aid: 2023 Update, Lashing Self Help

3rd Party Cable Loose Lashing Long Enough to Whip into Power Lines	
	
Before	**After - Snip Lashing and Tape**
At this Location: 3rd party communication line has a loose lashing **long enough to whip into power lines**. Stand-by situation.	
Perform Minor Work: Yes, if safe to do so	
Write 3rd Party Notification: Yes **Priority=** Level 1	
Write EC Notification: Yes, if minor work cannot be completed **FDA=** Conductor / Loose Lashing / Repair **Priority=** A Tag. Follow the emergency procedure.	
*Contact Lead/Supervisor for guidance	

Document last modified: Tue at 11:51 AM

TD-2014S – 3rd Party Nofi & Resolution of Potential Violations & Safety Hazards

Pacific Gas and Electric Company

Utility Standard: TD-2014S
Publication Date: 06/07/2019 Rev: 1

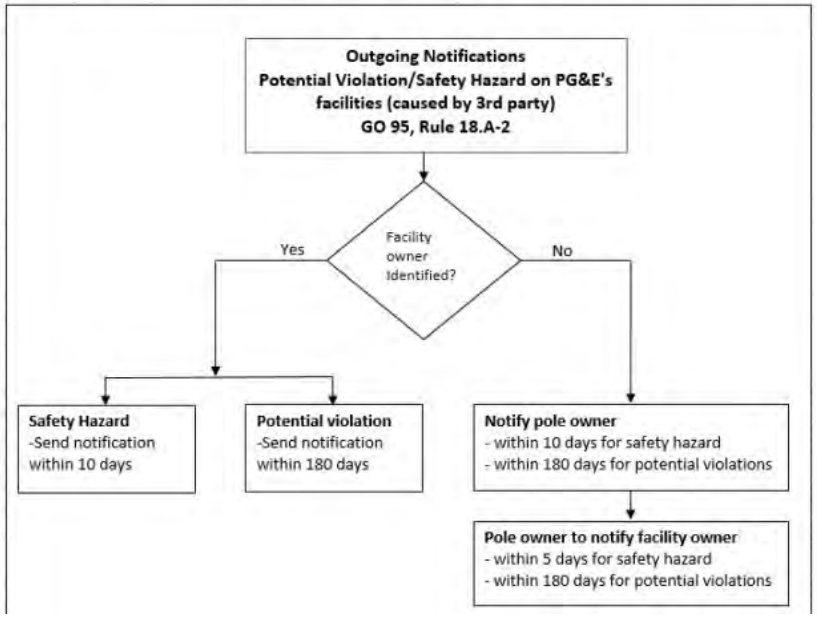
Third-Party Notification and Resolution of Potential Violations and Safety Hazards

1.2 IF PG&E discovers potential violations and/or safety hazards on its facilities caused by third-party utilities' facilities,

THEN PG&E is responsible for notifying the third-party causing the infraction, per the following time line (see Figure 2 below). However, if the safety hazard or violation requires immediate correction, the employee must remain onsite until appropriate PG&E resources arrive to resolve the condition.

1. Send notifications regarding safety hazards within 10 business days of the discovery of the condition.

2. Send notifications regarding conditions that are not safety hazards within a reasonable time, not to exceed 180 days of the discovery of the condition.



GO95 – Rule 18B: Notification of Safety Hazards

B. Notification of Safety Hazards

If a company, while performing inspections of its facilities, discovers a safety hazard(s) on or near a communications facility or electric facility involving another company, the inspecting company shall notify the other company and/or facility owner of such safety hazard(s) no later than 10 business days after the discovery. To the extent the inspecting company cannot determine the facility owner/operator, it shall contact the pole owner(s), who shall be responsible for promptly notifying the company owning/operating the facility with the safety hazard(s), normally not to exceed five business days after being notified of the safety hazard. The notification shall be documented and such documentation must be preserved by all parties for at least ten years.

Note: Each pole owner must be able to determine all other pole owners on poles it owns. Each pole owner must be able to determine all authorized entities that attach equipment on its portion of a pole.