Pacific Gas and Electric Company®

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October 8, 2024

Via Electronic Filing

Caroline Thomas Jacobs, Director
Office of Energy Infrastructure Safety
California Natural Resources Agency
715 P Street, 20th Floor
Sacramento, CA 95814
caroline.thomasjacobs@energysafety.ca.gov

Re: PG&E's Request for 2024 Safety Certification Pursuant to Public Utilities Code § 8389

Dear Director Thomas Jacobs:

Pacific Gas and Electric Company (PG&E) respectfully submits this request for an annual safety certification pursuant to the requirements contained in paragraphs (1), (2), (3), and (5) of Public Utilities Code (Pub. Util. Code) Section 8389(e). Our most recent safety certification was issued on January 22, 2023. As required by Pub. Util. Code Section 8389(f)(2), we hereby submit this request for a new safety certificate prior to the expiration of our current certificate and as directed by the Office of Energy Infrastructure Safety (Energy Safety).[1] This request is also made in accordance with the guidance outlined in Energy Safety's final 2024 Safety Certification Guidelines (2024 Guidelines), issued on August 8, 2024.

Paragraph (1) of Section 8389(e): *"The electrical corporation has an approved wildfire mitigation plan."*

Pursuant to Pub. Util. Code Section 8389(e)(1), a utility must have an approved wildfire mitigation plan (WMP) in order to apply for a safety certification. Pub. Util. Code Section 8386.3(a) states that a utility's approved WMP "shall remain in effect" until Energy Safety approves that utility's subsequent plan. On December 29, 2023, Energy Safety approved our Base 2023-2025 WMP, and that document remains our most recently approved WMP.[2] On April 2, 2024, we submitted our 2025 WMP Update to Energy Safety.[3] On July 5, 2024, at

[1] Energy Safety Revised 2024 Safety Certification Schedule (Sep. 9, 2024).

[2] Energy Safety Decision on PG&E's 2023-2025 WMP (Dec. 29, 2023).

[3] PG&E 2025 WMP, R0 (Apr. 2, 2024).

Energy Safety's request, we filed a revision to our 2025 WMP Update.[4] On August 29, 2024, Energy Safety issued a Draft Decision approving our 2025 WMP Update.[5]

In the 2024 Guidelines, Energy Safety instructs that:

> If an element required for a Safety Certification request is missing at the time of the request (e.g., Energy Safety has not yet issued a decision on the electrical corporation's most recent WMP), an electrical corporation may submit the missing element subsequent to the initial Safety Certification request up to ten days prior to the scheduled publication date of Energy Safety's decision on the electrical corporation's Safety Certification request.[6]

Thus, we will await Energy Safety's upcoming final decision on our 2025 WMP Update and will provide supplemental materials once a final approval is issued.

Paragraph (2) of Section 8389(e): ***"The electrical corporation is in good standing, which can be satisfied by the electrical corporation having agreed to implement the findings of its most recent safety culture assessment, if applicable."***

Safety Culture Assessments Issued by Energy Safety

Pub. Util. Code Section 8389(e)(2) requires a utility to agree to implement the findings of its most recent safety culture assessment as part of the safety certification process. Our most recent Safety Culture Assessment was issued by Energy Safety on March 22, 2024.[7] The Safety Culture Assessment evaluated our safety culture through the use of workforce surveys, management self-assessments, and interviews, and found that "PG&E has exhibited continued growth in safety culture maturity."[8] The report also provided the following recommendations:

1. PG&E should strengthen its safety communications by improving safety-related communication, addressing worker concerns about the lack of easy access to information on near misses and information on wildfire conditions, and providing leadership listening sessions.

2. PG&E should optimize its safety-enabling systems to improve the quality of event investigations and improve the hazard and near-miss reporting process to align expectations on what to report and when to report. PG&E should also continue to take steps to increase workers' psychological safety, building confidence in their speak-up and stop-the-job authority.

3. PG&E should continue building on its current worker training plan by:

[4] PG&E 2025 WMP, R1 (July 5, 2024).

[5] Energy Safety Draft Decision on PG&E's 2025 WMP Update (Aug. 29, 2024).

[6] *See* 2024 Guidelines at 6-7.

[7] Energy Safety 2023 Safety Culture Assessment for PG&E (Mar. 22, 2024).

[8] Energy Safety 2023 Safety Culture Assessment for PG&E at 3.

a. Incorporating new safety-related training modalities. This should include more hands-on training and topics that enable all levels of the organization to develop a more proactive and curious mindset. It should also include assessing participant feedback and using it to make trainings more effective, relevant, and engaging.

b. Conducting post-training peer learning activities. This should include group discussions. PG&E should also cultivate a mentoring program and/or encourage the appointment of a senior team member to be a "safety steward"—someone experienced who can be an effective communicator about responding to real-life situations that involve judgement calls in the field that are not covered by standard policies or procedures.

4. PG&E should continue to recognize and take action to mitigate the risk exposure posed by interactions with the public.[9]

On April 15, 2024, we notified Energy Safety that we agreed to implement all of the findings and recommendations in the Safety Culture Assessment and committed to work with Energy Safety on this implementation.[10] Each quarter we provide Energy Safety with an update on our progress in implementing these recommendations through our Quarterly Notification letter. We also provide some recent highlights below, in the section titled "Progress Made on Implementing Safety Culture Assessment Recommendations."

Safety Culture Assessments Issued by the California Public Utilities Commission

In April 2017, NorthStar Consulting Group (NorthStar) released its first report entitled "Assessment of Pacific Gas and Electric Corporation and Pacific Gas and Electric's Safety Culture Prepared for California Public Utilities Commission" (NorthStar Report) as part of Investigation (I.) 15-08-019.[11] This report went through several iterations and the Final NorthStar Report was issued on September 16, 2022.[12] This is the most recent safety culture assessment conducted by the California Public Utilities Commission (Commission).[13]

The Final NorthStar Report contained 87 recommendations related to safety culture and PG&E worked with NorthStar and the Commission's Safety Policy Division on implementing these recommendations.[14] On May 19, 2023, the Commission closed proceeding I.15-08-019, noting that "PG&E has implemented the majority of NorthStar's recommendations, and there is a

[9] Energy Safety 2023 Safety Culture Assessment for PG&E at 3-4.

[10] *See* Agreement of PG&E to Implement the Recommendations of the Final 2023 Safety Culture Assessment Report (Apr. 5, 2024).

[11] *See* Proposed Decision Ordering PG&E to Implement Recommendations of the NorthStar Report, Appendix A (Oct. 25, 2018).

[12] Administrative Law Judge's Ruling Providing the Final NorthStar Report Update and the Safety Policy Division Staff Report (Final NorthStar Report) (Sep. 16, 2022).

[13] *See* P.U.C. § 8386.2.

[14] Final NorthStar Report at 10-17.

plan in place to continue monitoring PG&E's progress in the remaining areas."[15] Of the 87 recommendations in the Final NorthStar Report, as of June 4, 2024, the Commission determined that all 87 had been successfully implemented and that PG&E is no longer required to file bi-annual advice letters on this matter.[16]

Paragraph (3) of Section 8389(e): ***"The electrical corporation has established a safety committee of its board of directors composed of members with relevant safety experience."***

Pub. Util. Code Section 8389(e)(3) requires an electrical utility to create a safety committee of its board of directors that is composed of members with relevant experience. We established the Safety and Nuclear Oversight (SNO) Committee to promote a robust safety culture through the oversight of goals, programs, policies, and practices. The SNO Committee is comprised of members of our Board of Directors and its responsibilities include, among other things, overseeing the Community Wildfire Safety Program, the Enhanced Powerline Safety Settings (EPSS) program, and the Public Safety Power Shutoff (PSPS) program. In addition, the SNO Committee monitors and reviews the adequacy and direction of the corporate safety function, with the Chief Risk Officer and Chief Safety Officer reporting to the Committee.

The SNO Committee is composed of Chair Cheryl F. Campbell, Jessica L. Denecour, Admiral Mark E. Ferguson III, W. Craig Fugate, Michael R. Niggli, and William L. Smith. There have been no changes to the membership of the SNO Committee since our last application for safety certification. These committee members have extensive expertise in safety—across multiple critical safety industries—and collectively over 100 years of combined safety governance experience. Details of each Board member's safety-specific education, training, and professional experience are included here as Attachment A.[17]

Description of How the Safety Committee Aligns with the Overall Company Governance

It is the fundamental responsibility of the SNO Committee to advise and assist the Board of Directors on all safety matters, including both public and workforce safety. The SNO Committee is empowered to act independently of other Board committees and is not subject to direction or limitation by any other committee.[18] The Committee meets a minimum of six times per year and retains the power to utilize, at the company's expense, the services of independent third-party experts, advisors, or counsel to assist it in its responsibilities. Additionally, the SNO Committee has the right to request and receive reasonable resources from the Board to facilitate its mission. The SNO Committee's duties and responsibilities function in lockstep with our entire Board of Directors, each of whom is committed to the safety of our coworkers, our contractors, and the communities we are privileged to serve. In addition to the above, the SNO Committee also engages with the Wildfire Operations team, at least quarterly, through operating reviews and informal meetings that go beyond the topics covered in the formal committee meetings.

[15] D.23-05-009 at 35 (May 19, 2023).

[16] Commission Disposition Letter of PG&E Advice Letter 4888-G/7230-E (Jun. 4, 2024) at 3.

[17] These safety qualifications were also included with our 2021, 2022, and 2023 applications for safety certification. *See* PG&E 2021 Safety Certification Request, Attachment B (Nov. 12, 2021), PG&E 2022 Safety Certification Request, Attachment A (Sept. 14, 2022), and PG&E 2023 Safety Certification Request, Attachment A (Dec. 1, 2023).

[18] However, the SNO Committee remains subject to any applicable legal or stock exchange standards.

Report on Significant Topics Covered by the SNO Committee

As described above, the SNO Committee advises the Board of Directors on all safety matters including key topics such as wildfire safety, coworker and contractor safety, and public safety. A complete description of the topics covered by the SNO Committee is included in our Quarterly Notification submissions since our last application for safety certification.[19] Some of the significant safety topics covered by the SNO Committee include:

- PG&E's 2023 Safety Culture Assessment from Energy Safety;
- Preventing transmission systemwide blackout events;
- Preventing gas loss of containment events;
- Risks associated with large, uncontrolled water release events;
- Nuclear safety;
- Aviation safety;
- Public and workforce safety;
- Cybersecurity;
- Corporate and physical security;
- Risks associated with third-party safety incidents;
- The safety of PG&E's hydro assets;
- Preventable motor vehicle accidents;
- PG&E's Safety Excellence Management System; and
- Data, records, and information management.

Description of Actions Recommended by the SNO Committee and Implemented by PG&E

A complete list of actions recommended by the SNO Committee, as well as the implementation status of those recommendations, can also be found in our Quarterly Notifications.[20] Some of the significant recommendations made by the SNO Committee and implemented by PG&E include, among others:

- Installing temperature alarm devices on underground vaults to provide early notification to PG&E when there can be a potential asset failure;

[19] *See* PG&E 2023 Q4 Quarterly Notification (Feb. 1, 2024) at 9; PG&E 2024 Q1 Quarterly Notification (May 1, 2024) at 8-9; and PG&E 2024 Q2 Quarterly Notification (Aug. 1, 2024) at 14-15.

[20] *See* PG&E 2023 Q4 Quarterly Notification at 9-11; PG&E 2024 Q1 Quarterly Notification at 9-12; and PG&E 2024 Q2 Quarterly Notification at 15-16.

- Applying learnings from the Enhanced Powerline Safety Settings program to PG&E's engineering processes;
- Exploring anti-rollover technology for PG&E vehicles, including lane departure and mobile device suppression technology;
- Coordinating with local authorities to ensure an effective emergency action plan is in place in case of a large uncontrolled water release from one of PG&E's hydro assets;
- Expanding the contractor safety quality assurance process;
- Evaluating the use of drones with hazard detection and avoidance capabilities;
- Exploring opportunities to incorporate vegetation failure risk drivers such as species type into risk modeling; and
- Applying cybersecurity learnings from industry peers to PG&E.

We will continue to provide updates on the recommendations of the SNO Committee and our progress implementing those notifications through our future Quarterly Notification submissions.

Paragraphs (4) and (6) of Section 8389(e): ***"The electrical corporation has established an executive incentive compensation structure approved by the division and structured to promote safety as a priority and to ensure public safety and utility financial stability with performance metrics for all executive officers, including incentive compensation based on meeting performance metrics that are measurable and enforceable, for all executive officers as defined in Section 451.5" and "the electrical corporation has established a compensation structure for any new or amended contracts for executive officers as defined in Section 451.5…."***

Pub. Util. Code Sections 8389(e)(4) and (6) require that an electrical corporation provide documentation that it has established an executive incentive compensation structure that has been approved by Energy Safety. In order to obtain Energy Safety's approval, this compensation structure must promote safety as a priority, ensure public safety and utility financial stability through the use of performance metrics for executive officers, and include incentive compensation that is based on meeting measurable and enforceable performance metrics.[21] Additionally, this compensation structure must be based on, among other things, the principles of strict limitations on guaranteed cash, the elimination of guaranteed monetary incentives, incentivizing long-term performance, and the minimization of indirect compensation.[22]

[21] P.U.C. § 8389(e)(4).

[22] P.U.C. § 8389(e)(6).

On October 4, 2024, Energy Safety issued a final decision approving our 2024 executive compensation structure and concluding that it meets the statutory requirements.[23]

Paragraph (5) of Section 8389(e): ***"The electrical corporation has established board-of-director-level reporting to the commission on safety issues."***

Our Board of Directors is dedicated to achieving safe utility operations, fostering a strong safety culture, and continuing to invest substantial time and attention to safety issues. Pursuant to Pub. Util. Code Section 8389(e)(5), electrical utilities must establish board-of-director-level reporting on safety issues. We established Board-of-Director level reporting to the Commission on safety issues prior to its initial request for a safety certification in 2019 and have continued this practice to the present. Energy Safety's 2024 guidance on the safety certification process explains that this statutory section is met through a utility participating in at least one joint public meeting held by the Commission and Energy Safety in which the utility provides a detailed presentation discussing its safety performance.[24]

A joint public meeting with the Commission and Energy Safety was held on August 28, 2024. Presenting at this meeting on behalf of PG&E was: (1) Chair of the Board of PG&E and Chair of the SNO Committee Cheryl F. Campbell; (2) Executive Vice President, Operations and Chief Operating Officer Sumeet Singh; and (3) Vice President, Enterprise Health & Safety and Chief Safety Officer Matt Hayes. The presentation materials from this meeting are included here as Attachment B.[25]

Paragraph (7) of Section 8389(e): ***"The electrical corporation is implementing its approved wildfire mitigation plan" and "shall file a notification of implementation of its wildfire mitigation plan with the office and an information-only submittal with the commission on a quarterly basis that details the implementation…."***

Progress Made Toward Completing WMP Targets

Pub. Util. Code Section 8389(e)(7) requires a utility applying for safety certification to implement its approved WMP and to submit Quarterly Notifications that provide details on this implementation process. Included here are all of our Quarterly Notifications filed since our last application for a safety certification. These submissions include:

1. PG&E 2023 Q4 Quarterly Notification, dated February 1, 2024;[26]

2. PG&E 2024 Q1 Quarterly Notification, dated May 1, 2024;[27] and

[23] *See* Energy Safety Decision on PG&E's 2024 Executive Compensation Structure (Oct. 4, 2024).

[24] *See* 2024 Guidelines at 3.

[25] The materials have also been made publicly available on the Commission's website at the following link: https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/safety-policy-division/meeting-documents/pge_cpuc-safety-briefing_final_082824.pdf.

[26] *See* PG&E 2023 Q4 Quarterly Notification.

[27] *See* PG&E 2024 Q1 Quarterly Notification.

3. PG&E 2024 Q2 Quarterly Notification, dated August 1, 2024.[28]

Each of these Quarterly Notifications details our meaningful progress in the implementation of our WMP, including the continued progression toward each of the commitments set forth in our plan. Additionally, each describes the implementation of our most recent safety culture assessment, contains a statement on the recommendations of the SNO Committee meetings from the previous quarter, and describes the status of implementing such recommendations. A further detailed explanation of our progress made in implementing our safety initiatives, including wildfire mitigation work, can be found in the presentation materials for the August 28, 2024, joint public safety meeting.[29]

Our most recent Quarterly Notification provides information through the end of the second quarter of 2024. The list below offers an overview of our progress on the implementation of our WMP, as of that date:

- 10 commitments have been completed;
- 33 commitments have met all internal milestones and are on track for timely completion by the end of the year; and
- 4 commitments are on track for timely completion but have fallen behind our internal milestones, requiring the creation of catchback plans. These commitments are on track for timely completion against the timelines included in the WMP.

Please refer to our Quarterly Notifications for further details on our progress implementing our WMP commitments, including our delayed targets.

Progress Made on Implementing Safety Culture Assessment Recommendations

Additionally, as required by Energy Safety's 2024 Guidelines, we provide the following update on the progress made on our most recent Safety Culture Assessment recommendations. The following items are examples of our progress, and a more complete list of our actions can be found in our Quarterly Notifications.

- Recommendation # 1: PG&E should strengthen its safety communications by improving safety-related communication, addressing worker concerns about the lack of easy access to information on near misses and information on wildfire conditions, and providing leadership listening sessions.
    - Company-wide coworker and leadership listening sessions are now being offered during Leadership Town Hall meetings.

[28] *See* PG&E 2024 Q2 Quarterly Notification.

[29] *See* Attachment B.

- PG&E is sponsoring frontline coworkers in the development of a Grassroots Safety Council to discuss proposed solutions and innovations to systemic safety issues and the creation of a stronger safety culture mindset.
- Field-facing workshops on safety engagements are being conducted by the Functional Area Operations leaders.
- A series of Corrective Action Program roadshow events are being hosted to empower coworkers to identify, evaluate, track and resolve safety issues.
- Beginning in Q3 of this year, the Near Hit program focused efforts to provide information about specific Near Hits as well as where additional Near Hit information can be found.

- Recommendation # 2: PG&E should optimize its safety-enabling systems to improve the quality of event investigations and improve the hazard and near-miss reporting process to align expectations on what to report and when to report. PG&E should also continue to take steps to increase workers' psychological safety, building confidence in their speak-up and stop-the-job authority.
  - Field Safety Specialists were trained to perform Energy Based Observations to prioritize preemptive identification of high energy exposures and corresponding essential controls.
  - The Enterprise Cause Evaluation team provided instructor-led training to improve participant and leader knowledge of the criteria required to execute quality cause evaluations and support the development of quality cause evaluation reports.
  - PG&E's Diversity, Equity, Inclusion and Belonging (DEIB) Champions continued to promote psychological safety with their teams across functional areas. This was done through hosting webinars, team activities, and community events, and leading by example in meetings. Leaders host interactive engagement sessions with coworkers about trust and psychological safety.
  - PG&E's Diversity, Equity, Inclusion and Belonging (DEIB) leaders held monthly sessions on various psychological safety topics including trust, speak-up and conflict management.

- Recommendation # 3: PG&E should continue building on its current worker training plan by: (1) incorporating new safety-related training modalities. This should include more hands-on training and topics that enable all levels of the organization to develop a more proactive and curious mindset. It should also include assessing participant feedback and using it to make training more effective, relevant, and engaging; and (2) conducting post-training peer learning activities. This should include group discussions. PG&E should also cultivate a

mentoring program and/or encourage the appointment of a senior team member to be a "safety steward"—someone experienced who can be an effective communicator about responding to real-life situations that involve judgement calls in the field that are not covered by standard policies or procedures.

  - PG&E continues to expand training modalities and increase hands-on training for employees. Through Q2 of 2024: (1) 44,320 coworkers and contractors completed PG&E training; (2) 687,407 hours of PG&E training have been completed; (3) 68% of training was hands-on instructor-led training, while 32% was web-based; and (4) hands-on instructor-led training has increased 16% compared to the same period one year ago.
  - In addition to the 30 formal apprenticeship programs, PG&E continues to expand hands-on refresher training focused on improving coworker performance and safety.
  - Training effectiveness is now assessed through four levels: (1) all formal training includes training effectiveness surveys for the first six months that a course is delivered; (2) all formal training includes knowledge and skill checks/assessments with various remediation strategies based on the safety risks associated with the tasks covered in the training; (3) selected courses include measures to evaluate transfer of learning at least 60 days post-training through surveys, focus groups, knowledge testing, or observation of skills; and (4) selected courses evaluate how training impacts business metrics compared to baseline metrics and piloting a course before it is fully implemented.
  - In mid-September, a team of Safety Culture Coaches started working with PG&E Operations teams to integrate best practices from Edison Electric Institute (EEI) and existing fatality prevention strategies. The program's objectives are to improve frontline coworker and leader safety interactions, trust and speak-up culture, increase their knowledge and use of the Serious Injury & Fatality (SIF) Capacity and Learning Model, help them proactively identify and prevent unsafe practices or conditions and boost frontline engagement and positive impact on safety. Coaches work daily with frontline teams and provide their assessments on the SIF Capacity and Learning Model, the 10 Traits of a Healthy Safety Culture, the PG&E Safety Excellence Management System (PSEMS) Leadership Commitment and Engagement element, and on speak-up and trust. The same coaches also meet with directors and senior directors to provide similar assessments. Themes from these engagements are used to continuously refine the coaching methodology, improve PG&E's safety culture, and enhance SIF prevention efforts.

- Recommendation # 4: PG&E should continue to recognize and take action to mitigate the risk exposure posed by interactions with the public.

- Corporate Security developed a new Workplace Violence Plan that is now a company standard (SEC-2003S), as well as a Workplace Violence Prevention training video (CORP-7500WBT) which 98% of the company has completed, and a violent incident log that is available to the entire company in compliance with SB 553.
- A workplace violence prevention audit of 225 facilities was completed to ensure the company is in compliance with California state law in accordance with SB 553. The audit resulted in no findings.
- Corporate Security approved the hiring of three more Investigator positions, a 40% increase in staff, dedicated to the field security of Vegetation Management and other Electric Compliance teams.
- Corporate Security has been providing LiveSafe Training, de-escalation training coordinated with Grassroots Safety, and virtual reality training to employees.

Through our Quarterly Notification submissions, we will continue to provide Energy Safety, the Commission, and stakeholders with updates on our progress in implementing our WMP and our most recent Safety Culture Assessment recommendations. We look forward to continuing to work together to improve the safety of our workers and the communities they serve.

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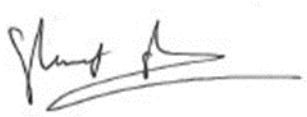
After timely submitting this request and satisfying each of the statutory requirements and guidance conditions outlined by Energy Safety, we respectfully ask Energy Safety to issue a safety certification within the prescribed statutory period. Should Energy Safety have any questions regarding this request, please do not hesitate to contact Wade Greenacre, Regulatory Affairs Director, at wade.greenacre@pge.com.

Sincerely,



Sumeet Singh
Executive Vice President, Operations and
Chief Operating Officer
Pacific Gas and Electric Corporation

Attachment A

Cheryl F. Campbell

A. SNO-Specific Education and Training

- Xcel Energy (Denver, CO), 2004 – 2018
  Senior Vice President (2011 – 2018); Vice President—Colorado Operations (2009 – 2011); Director, Asset Strategy (2004 – 2009)
  Participated in a number of safety programs and trainings, including several focused on developing safe workplace practices and behaviors, safety leadership, safety culture, identifying hazards, and behavioral safety in general. Participated in a number of safety meetings annually—including monthly work group safety meetings, quarterly regional safety meetings (with line workers), and annual working foreperson conferences for linepersons and fitters (which discussed safety issues at the line level, understanding risk, and communicating safety concerns with co-workers who are not following safety procedures). Also interacted regularly with safety speakers at these annual conferences, including individuals who had suffered serious injuries from safety incidents in the utility industry. Routinely interacted with and spoke about safety at annual safety kick-off meetings, mid-year safety campaigns, and on regular crew visits in the field.

- Pacific Gas and Electric Company and PG&E Corporation (San Francisco, CA), 2019
  Board Member
  As a member on the Boards of PG&E Corporation and Pacific Gas and Electric Company (together, PG&E), including during the on-boarding process, received general information regarding safety programs and culture at the companies, and received more targeted safety training regarding, among other things, hazards and associated mitigations for field work in connection with PG&E's gas and electric operations and power generation.

- As part of the ongoing training and education provided by PG&E, conducted 7 field visits and facility tours to meet with employees, observe employees and contractors performing work in the field, and tour safety training facilities and operating facilities.

B. Direct, Supervisorial or Management Level SNO-Specific Work Experience

- Xcel Energy (Denver, CO), 2004 – 2018
  Senior Vice President (2011 – 2018); Vice President—Colorado Operations (2009 – 2011); Director, Asset Strategy (2004 – 2009)
  As Senior Vice President, led the gas business unit across eight states with 2 million customers. Responsible for both employee and public safety. Member of the Executive Safety Team, which met quarterly with the Corporate Safety VP to review and discuss successes as well as continuous improvement for safety overall. Performance metrics in both areas improved significantly during tenure in both the gas unit and enterprise wide.

  Also served as Chair, President and CEO of WestGas InterState, Inc., a FERC-regulated interstate gas pipeline subsidiary of Xcel Energy.

  As VP of Colorado Operations, responsible for gas operations within the state of

Colorado. Began the first in-line inspection (pigging) program at Xcel Energy in Colorado in 2008. Successfully led efforts to develop a distribution asset renewal program, focused on leak prone pipe (cast iron, bare steel, and early polymers)—obtaining support from both senior executives and the Colorado PUC. This program was later rolled into Xcel Energy's Distribution Integrity Management Program (DIMP). Met regularly with field employees—at job sites and service centers—discussing safety and challenges.

As Director of Asset Strategy, led the development of integrity management programs, which are developed to reduce the risk of and improve the safety of key infrastructure. Included developing programs for performing maintenance, hydrostatic pressure testing, well testing, and processes for testing and replacing assets. Also improved record keeping and data processes across a number of areas, including asset data, maintenance records, and inspection information. Developed a data-driven risk management system in partnership with various state public utility commissions to assess risk, and set acceptable risk levels. Was a member of the Executive Safety Team from 2011 to retirement in 2018. Met quarterly to discuss safety progress, culture change, and safety culture issues. Provided direction to the Corporate Safety department on the effectiveness or specific safety programs. Regularly met with line-level employees and the technical staff, along with the safety leadership team, to discuss current safety issues and potential safety issues. Attended quarterly employee driven safety meetings, where employees would raise safety issues or concerns. Workshopped solutions to quickly implement responses to those concerns together with employees and the safety leadership team.

Worked with the Corporate Vice President for Safety to set annual safety performance targets, review program effectiveness, discuss enterprise-wide as well as gas-specific safety concerns, and identify best practices at peer firms. Also worked closely with the Xcel Energy Board of Directors, particularly the Safety and Operational Committee, to discuss gas asset risks and safety culture, safety management systems, and related topics.

In addition to the regular quarterly meetings on the Safety Executive Team, and quarterly employee-led safety meetings, met monthly with gas leaders across the enterprise from 2012 to 2018 to discuss employee and public safety issues. Focus was on close calls/near misses, incidents where employees had failed to follow safety procedures, safety management systems, and effectively implementing "change management." Began implementation of American Petroleum Institute Recommend Practice 1173, concerning the development of an Enterprise Safety Management System. Completed the initial analysis and stages or implementation during tenure.

- Colorado Interstate Gas Company (Colorado Springs, CO), 1984-2003
  Variety of positions, including Engineer to Director.
  Experience includes design, operations, strategic planning, mid-stream operations, supply management and regulatory (FERC). All leadership positions included responsibility for safety of the employees and public around system infrastructure.

Member of the leadership team during the implementation of one of the first comprehensive In-line Inspection (ILI) programs in the country—now an industry standard.

- Gold Shovel Association (Tempe, AZ), January 2019 to
  February 2020 - Executive Director
  February 2020 to present – Vice Chair of Board of Directors
  for Gold Shovel Association Executive Director
  Lead non-profit organization aimed at reducing damage to underground infrastructure, including, gas, electric, water, and telecommunications infrastructure, during excavations. Companies that participate have seen significant reductions in the damage caused during excavations. Pacific Gas and Electric Company and the City of Sacramento are members of the Association.

C. <u>SNO-Specific Board of Directors Experience</u>

- PG&E Corporation and Pacific Gas and Electric Company, 2019 – present.
  Chair of each company's Safety, Nuclear and Operations committee.
  Regularly interface with PG&E's Chief Safety Officer, setting expectations, discussing programs, reviewing metrics.

- American Gas Association Operations Management Committee (Washington, D.C.), 2009 – 2018
  Executive Committee Member, Operations Management Committee Chair (2017)
  Group meets regularly to discuss overall gas operations and safety-specific issues, including public safety, worker safety, and cyber-security. Group consists of senior industry leaders representing about 45 companies across the nation, representing the majority of customers and assets in the gas industry. Participated in meetings in the aftermath of the San Bruno tragedy and other incidents to develop proactive industry positions on improving safety and operations. Also regularly attended annual Executive Safety Summits, focusing on industry hazards, safety management systems, safety culture, interacting with local emergency responders, worker safety, and damage prevention. Participated in the AGA Peer Review program—with Xcel Energy being reviewed in 2015. As part of that commitment/participation, acted as the Executive peer reviewer for ConEd. The program is a one-week intense review of a company's programs around safety and operations, including employee interviews and site visits. At the end of the week, the Executive peer reviewer provides the company with feedback on leading practices as well as opportunities for improvement.

- Department of Transportation Gas Pipeline Advisory Committee (GPAC) (Washington, D.C.), 2014 – 2018
  Member
  The GPAC is an integral part of the process for making changes to the federal safety regulations for gas pipelines. It includes representatives from industry, government and the public. During tenure on the GPAC, the group discussed regulatory updates/changes to a wide variety of safety regulations including pipeline integrity management (transmission and distribution), plastic piping, construction inspection, damage prevention, management of change Operator Qualification, and record keeping. Also discussed and provided guidance on the implementation of congressional mandates passed in the wake of the San Bruno

tragedy. Participated in a task force aimed at reducing barriers to implement pipeline safety management systems (SMS). Worked with industry groups and individual companies to assess SMS adoption and implementation status, and assess impediments to rapid implementation.

- Dynamic Risk (Calgary, Canada), December 2018 – present
  Consultant and Independent Panel Member
  The Massachusetts Department of Utilities retained Dynamic Risk to perform an assessment of the safety and integrity of gas infrastructure within the state of Massachusetts after the Merrimack Valley event in September 2018. As an Independent Review Panel member, reviewed 11 companies—including investor-owned utilities, privately-owned providers, and municipal utilities—including plans and programs, Operations & Maintenance manuals, work procedures, and overall operations. Performed field site visits, discussing processes & procedures, employee safety and public safety with various field crews. Final report complete and available online.
  The Massachusetts Department of Utilities hired Dynamic Risk in fall 2019 to perform a safety assessment of the newly installed facilities due to several identified shortfalls in abandonment and leaks on newly installed assets. Participated and directed work on assessment – final report available in 2020.

D. <u>Other Previous and Current Board Positions</u>

- Hoffman Southwest (Orange County, CA), 2018 – Present
  Independent Director, Audit Committee Member

- JANA Technology (Toronto, Canada), January 2020 – present. Advisory Board member for privately held company focused on asset risk assessment/prediction and data management. Privately held.

- Colorado Oil & Gas Association (Denver, CO), 2010 – 2018
  Director

- Engineering Advisory Council—College of Engineering, Colorado University, Boulder (Boulder, CO), 2016 – 2018
  Member

- Building Opportunity Through Leadership & Diversity (BOLD) —College of Engineering, Colorado University, Boulder (Boulder, CO), 2012 – 2015
  Advisory Council Member

- Public Education and Business Coalition (PEBC) (Denver, CO), 2010 – 2014
  Member of the Finance Committee

- Junior Achievement of Southern Colorado (Colorado Springs, CO), 1990 – 2002
  Board Member, Member of Strategic Planning Committee

E. <u>Other Current Professional Commitments</u>

- N/A

Jessica L. Denecour

A. SNO-Specific Education and Training

- (Masters Degree awarded) M.S., Cyber Security Operations and Leadership, University of San Diego, San Diego, CA - 2017 (attended 2015-2017)
- Yearly Corporate Employee Safety and Security training at Varian Medical Systems (2006-2017)
- Stanford University Executive Institute (2008) included some material on risk management

B. Direct, Supervisorial or Management Level SNO-Specific Work Experience

- Lead cybersecurity function as Chief Information Officer at Varian Medical Systems from 2006-2017
- Lead cybersecurity function as VP of Infrastructure at Agilent Technologies (2000-2004)
- At Varian Medical as a member of the executive team, we built a safety and security culture as our products and software were under FDA regulation and our mission was to save lives (our products treated cancer). Safety was critical as we were dealing with radiation and people lives as a result.

C. SNO-Specific Board of Directors Experience

- Chair of CyberSecurity Committee (board director) at MobileIron (2017-2020)
- Member of Audit committee (board director) at MobileIron (2017-2020)
- Chair of Technology and CyberSecurity committee (board director) at Pacific Gas and Electric (June 2020 – June 2021)

D. Other Previous and Current Board Positions

- Board Director at the Children's Discovery Museum of San Jose (2010-2017) which included oversight on risk, safety, and technology/security

E. Other Current Professional Commitments

- N/A

Admiral Mark E. Ferguson III

A. SNO-Specific Education and Training

- Qualified as damage control assistant and gas fee engineer, US Navy Firefighting School, Philadelphia, PA (1992).

- Qualified as Landing Signal Officer to oversee shipboard aviation safety for operation of helicopters from vessels at sea (1992).

- Qualified as a nuclear propulsion engineer by US Navy/Department of Energy (1992). Trained in radiological controls, electrical safety and shipboard safety programs incident to the operation and maintenance of naval nuclear power plants. Qualified as engineering officer of the watch for naval nuclear power plants.

B. Direct, Supervisorial or Management Level SNO-Specific Work Experience

- Damage Control Assistant, USS South Carolina (CGN 37) (1989-1992). Responsible for management of all shipboard firefighting, flooding control, damage control, and fire safety programs for a vessel with crew of over 400 personnel. Certified as the ships' gas free engineer.

- Nuclear Propulsion Engineer, USS South Carolina (CGN-37) (1979-1983). Engineering officer of the watch, supervised the operation of shipboard nuclear power plants.

- Reactor Officer, USS Dwight D. Eisenhower (CVN-69) (1989-1992). Responsible for the safe operation, maintenance, and training and certification of 400 assigned personnel for two nuclear reactors onboard an aircraft carrier.

- Commanding Officer, USS Benfold (DDG 65) (1995-1997). Responsible for operations and the management of all safety programs for a vessel with crew of 300 personnel.

- Commander, Destroyer Squadron 18 (2000-2001). Responsible to certify safe operation and provide oversight of safety programs for six ships and 1500 personnel.

- Co-Chair, US Navy Safety Council (2011-2014). Responsible for safety policy, funding, and management of accident reporting and lost work statistics for the Navy Department and a 320,000 workforce.

- Chair, Nuclear Weapons Council (2011-2014). Responsible for management of physical security and security personnel certification for the Navy's nuclear weapons stockpile.

- Commander, US Naval Forces Europe and Africa (2014-2016). Responsible for physical security of five installations and management of personnel security, operational safety programs and vehicle safety programs for over 10,000 personnel stationed in Europe and Africa.

C. SNO-Specific Board of Directors Experience

- VSE Corporation, Alexandria VA (2017- Present). As member of audit and governance committees, oversees the VSE industrial safety programs in the refurbishment and repair of military and commercial vehicles, ships and aircraft.

D. Other Previous and Current Board Positions

- Navy Federal Credit Union, Merrifield, VA (2007-2008). Volunteer official and board member for world's largest credit union, serving members of the armed forces.

- Navy Marine Corps Relief Society, Arlington, VA (2008-2011). Society provides financial assistance, counseling, and in-home nurse care to Navy and Marine Corps service members and their families.

- Center for Naval Analyses, Arlington, VA (2017-Present). Chairman of the audit committee and member of ethics and governance committee for a not-for-profit federally-funded research and development center.

- VSE Corporation, Alexandria, VA (2017-Present). Member of the audit committee, compensation and human resources committee, and governance committee.

E. Other Current Professional Commitments

- Institute for Defense Analysis: Senior Advisor to the Defense Science Study Group (DSSG). This is a program of education and study that introduces science and engineering professors to the security challenges of the United States. The program is directed by the nonprofit Institute for Defense Analyses (IDA) and is sponsored by the Defense Advanced Research Projects Agency (DARPA).

- MK3 Global LLC: Defense consulting firm that advises on leadership, digital transformation, operational design, and planning of military operations. Evaluates the NATO exercise program with a focus on leader performance. MK3 Global LLC is a service-disabled, veteran-owned small business.

W. Craig Fugate

A. SNO-Specific Education and Training

- State of Florida: Certified Paramedic/Firefighter.

B. Direct, Supervisorial or Management Level SNO-Specific Work Experience

- Emergency Manager, Alachua County, Fl (1987-1997). Disaster Planning and Response Coordination, included hazardous materials, and the Crystal River Nuclear Power Plant (50 miles Emergency Planning Zone).

- Director, Florida Division of Emergency Management (2001-2017). Oversaw the State's Nuclear Power Plant Exercise Program, Hazardous Material Program, and response to all Governor Declared Disasters as the Governor's Authorized Representative and State Coordinating Officer.

- Administrator, FEMA (2009-2017). Coordinated on behalf of the President response and recovery to all Federally declared disasters.

C. SNO-Specific Board of Directors Experience

- N/A.

D. Other Previous and Current Board Positions

- America's Public Television Stations.

- At-Large Trustee (2017 – Present).

E. Other Current Professional Commitments

- Craig Fugate Consulting LLC.

- One Concern, Chief Emergency Management Office.

- North Florida Amateur Radio Club (Amateur Radio Emergency Services).

Michael R. Niggli

A. SNO-Specific Education and Training

- As an executive officer and director of several companies, participated in safety education and training for electric, natural gas, water and nuclear facilities. Involved in setting corporate safety metrics, establishing safety reporting procedures, directing the installation of substantial safety related equipment, and implementing new safety protocols designed to improve the level of safe operations for our employees, customers and the general public.

- Safety education and training includes body mechanics, safe work processes, hazardous chemical awareness and handling, the use of radiation measuring devices, cardio-pulmonary resuscitation, electrocution, fire response, hypothermia responses, ignition prevention and emergency communications.

- Merchant Mariners certification (Captain's License) which indicates proficiency in safe operation of small vessels.

B. Direct, Supervisorial or Management Level SNO-Specific Work Experience

- President & COO, San Diego Gas & Electric Co (2006-2013). Served in various roles including President & COO wherein had responsibility for all electric and gas operations for the Company. This included the safe operation of the electric and gas facilities, safety of employees, contractors, customers and the general public.

- President of Sempra Generation (2001-2006). President of Sempra Energy's international power generation company. This included the development, construction, operation and maintenance of power plants in California, Arizona, Nevada, Texas and the Republic of Mexico. Responsible for safe operation and compliance with all State and National standards for power plant operation.

- Chairman of the Board, CEO, & President of Sierra Pacific Resources & Nevada Power Company (1998-2001). Served in various roles with overall responsibility for operation of these two companies which were independent entities and later merged operations. The companies provided regulated utility service for electric, natural gas and water operations. Safe operation of these facilities and the production of safe drinking water for customers were top priorities.

- San Onofre Nuclear Power Plant; Administrative Committee Representative for SDG&E (approx. 1984-86). Served as the Owner's Representative for administration and operation of the SONGS facility, including reviews of safety protocols, safety protocols and operating performance.

- Following the devastating wildfires in San Diego County in 2007, had the lead responsibility for the company's efforts to enhance the safety and effectiveness of electric facilities, the safety practices of employees, and communication with customers and the general public. Instituted many new programs, processes, safety protocols and innovations over the next half dozen years. These included the first "Power Safety Power Shutoff" (PSPS) program in the State of California, installation of weather monitoring stations, employment of professional meteorologists, extensive collaboration with state and local firefighting agencies, development of

new communications tools and websites for informing the public of the status of service in fire prone areas and the potential for PSPS events, purchase of the world's largest water carrying helicopter for dual use with firefighting and construction activities, the use of "pan, tilt and zoom" cameras mounted on our electric transmission towers and equipped with infrared detection capabilities, advanced vegetation management practices, the prohibition of cell phone use in company vehicles, the "electronic tagging" of our impacted field employees to ensure that we knew of their field location during fire season, the establishment of an "aircraft operations center" to coordinate with local authorities as we constructed major electric facility additions, the mounting of high capacity fiber optic lines on our electric transmission towers for joint use of agencies and universities in our fire prevention efforts, among other initiatives.

C. <u>SNO-Specific Board of Directors Experience</u>

- Board of Directors, ESS, Inc. (2015-present).
- Board of Directors, American Transmission Co. (2016-present).
- Board of Directors, ESVAL Water Company (2015-present).
- Board of Directors, ESSBIO Water Company (2015-present).
- While serving on these Boards of Directors, acted as a primary advocate for safe operations, establishment of appropriate safety metrics, contractor safety improvement programs and employee safety improvement.

D. <u>Other Previous and Current Board Positions</u>

- ESS Inc. (2018 – Present).
- American Transmission Company (2017 – Present).
- ESVAL (2015 – Present).
- ESSBIO (2015 – Present).
- Sierra Pacific Resources, Chairman of the Board, CEO, President (2000-2001).
- Nevada Power Co., Chairman of the Board, CEO, President (1998-2000).

E. <u>Other Current Professional Commitments</u>

- Beyond the current Board assignments, also serves on the Board of Directors of the Great Basin National Park Foundation, a non-profit organization which supports the mission of environmental stewardship, public outreach and interpretation of the resources of the Great Basin National Park.

William L. Smith

A. SNO-Specific Education and Training

- Completed numerous safety and safety management classes over 37-year career with BellSouth/AT&T (1979-2016). These included general safety, safe driving, aircraft safety, office safety, trenching and shoring safety, and a variety of safety classes relating to working in aerial plant facilities.

- Completed all PG&E corporate safety classes during 2020, including helicopter safety and nuclear safety.

B. Direct, Supervisorial or Management Level SNO-Specific Work Experience

- Managed AT&T's Technology Operations organization of over 100k employees and approximately 50k contractors for several years. These responsibilities included all aspects of operational safety in a large field organization.

- Worked closely with all US Government agencies on cyber security cases, involving cyber security attacks from foreign and domestic entities.

- Worked in the heavy construction industry and operated many types of large construction equipment.

C. SNO-Specific Board of Directors Experience

- Served on several public company boards over the last twenty years, most in the tech or related to the tech industry. All included general employee safety issues.

- Represented PG&E one EEI during the second half of 2020.

- Serve on the Advisory Board of Tillman Global Holding, LLC, a provider of communications infrastructure around the world.

D. Other Previous and Current Board Positions

- Previously served as a director of Oclaro, Inc. (telecommunications) (2009 to 2012, 2018).

E. Other Current Professional Commitments

- N/A

Attachment B

Pacific Gas and Electric Company

Annual Public Safety Briefing

August 28, 2024

Topics for Discussion

1. Safety Governance
2. Safety Management System and Progress
3. Safety Performance
4. Safety Culture Assessment
5. Wildfire Safety
6. Gas Safety Performance
7. Lessons Learned

PG&E Participants

Cheryl F. Campbell
Chair of the Board of Pacific Gas and Electric Company and Chair, Safety and Nuclear Oversight Committee

Sumeet Singh
Executive Vice President, Operations and Chief Operating Officer

Matt Hayes
Vice President, Enterprise Health and Safety and Chief Safety Officer

Some of the measures included in this presentation are contemplated as additional precautionary measures intended to further reduce the risk of wildfires.

Safety Governance

Safety Governance

Safety governance is embedded at the highest levels of the company, with direct involvement from the Board of Directors and the Safety and Nuclear Oversight (SNO) Committee. Safety performance informs our decision-making and recommendations.

Board of Directors

15 members

- Supports and approves oversight of safety metrics tied to executive compensation
- Reviews annual performance

We have not altered our governance structure since successfully standing it up in 2021

SNO Committee

6 members

- Committee members share more than 100 years of Safety Governance experience
- Reviews safety, risk and operational performance and results of cause evaluations
- Provides feedback to our management for action
- Independent, with deep expertise in wildfire safety, prevention, mitigation, emergency response and management, workforce and public safety, natural gas systems, risk management, cyber security and nuclear and non-nuclear generation safety

Some of the measures included in this presentation are contemplated as additional precautionary measures intended to further reduce the risk of wildfires.

PG&E's Board of Directors

The knowledge and experience of our Board of Directors improves and informs safety outcomes.

Key areas of experience include:

- Financial planning, performance and literacy
- Public policy
- Customer experience and community leadership
- Workforce and public safety
- Audit
- Technology and cybersecurity
- Leadership in energy and utility industry
- Engineering, procurement and construction
- Clean energy innovation and technology
- Climate change mitigation and resilience
- Natural gas transmission, distribution, operation and safety
- Utility operation and engineering
- Wildfire safety, preparedness, prevention, mitigation, response and recovery
- Nuclear and non-nuclear generation safety
- Federal and state-wide emergency management
- Risk management

How we're engaging:

- Conducting field visits to bolster engagement
- Encouraging safety learnings from other industries
- Promoting mentorship between Board of Directors and executives to foster growth and continuous improvement
- Engaging in cyber exercises to mitigate evolving risk landscape

Some of the measures included in this presentation are contemplated as additional precautionary measures intended to further reduce the risk of wildfires.

Safety Management System and Progress

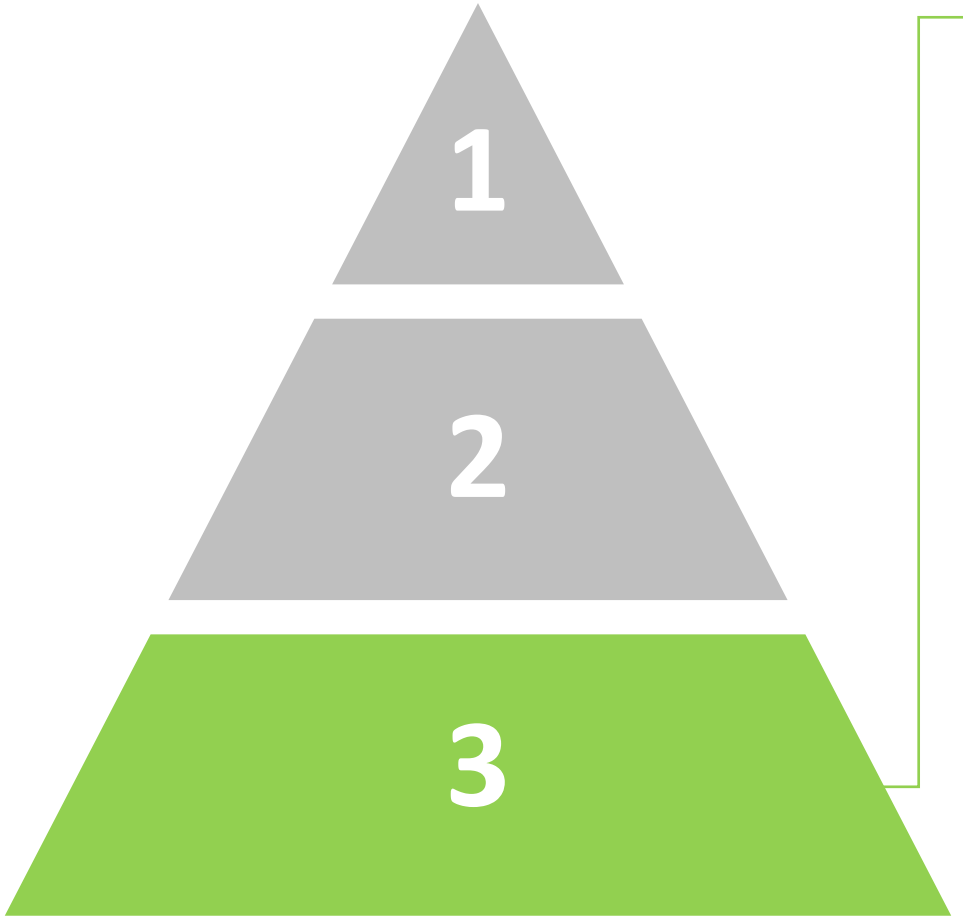
Enterprise-Wide Safety Management System

Our Safety Management System provides the strategic framework to create “fail safe capacity” and builds our safety standards and capabilities for coworkers, with safety culture as its foundation.

Some of the measures included in this presentation are contemplated as additional precautionary measures intended to further reduce the risk of wildfires.

Organizational Culture and Safety Mindset (OCSM)

We focus on 10 key traits of a healthy safety culture that promote our organizational culture and the behaviors and attitudes expected from our coworkers and contract partners.



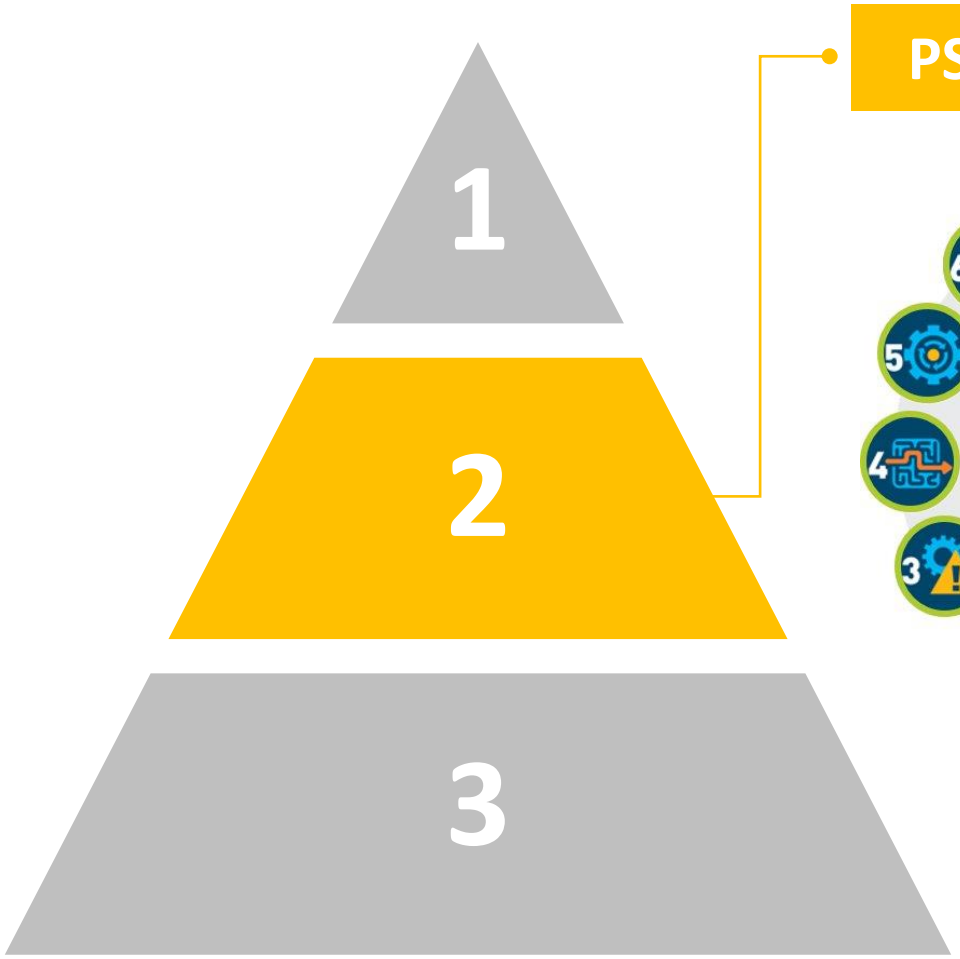
OCSM

10 Traits of a Healthy Safety Culture

Some of the measures included in this presentation are contemplated as additional precautionary measures intended to further reduce the risk of wildfires.

PG&E Safety Excellence Management System (PSEMS)

PSEMS is a structured management system that follows an annual cycle of “Plan, Do, Check, Act” to achieve continuous improvement and ensure “opportunities to fail safely” for our people, assets and the public.



PSEMS

1. Leadership Commitment and Engagement
2. Communication 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. Contractor Management and Third-party Services
10. Management of Change (MOC)
11. Information, Documentation, and Records Management
12. Performance Evaluation and Improvement
13. Assurance

Some of the measures included in this presentation are contemplated as additional precautionary measures intended to further reduce the risk of wildfires.

Working to Mature PSEMS

By implementing PSEMS, we are establishing a baseline for continuous improvement. Our annual management reviews provide an opportunity to assess the maturity of each element to meet PSEMS expectations and mitigate safety risks.

Our Most Mature Functional Areas

- Nuclear Generation
- Transportation
- Gas Operations

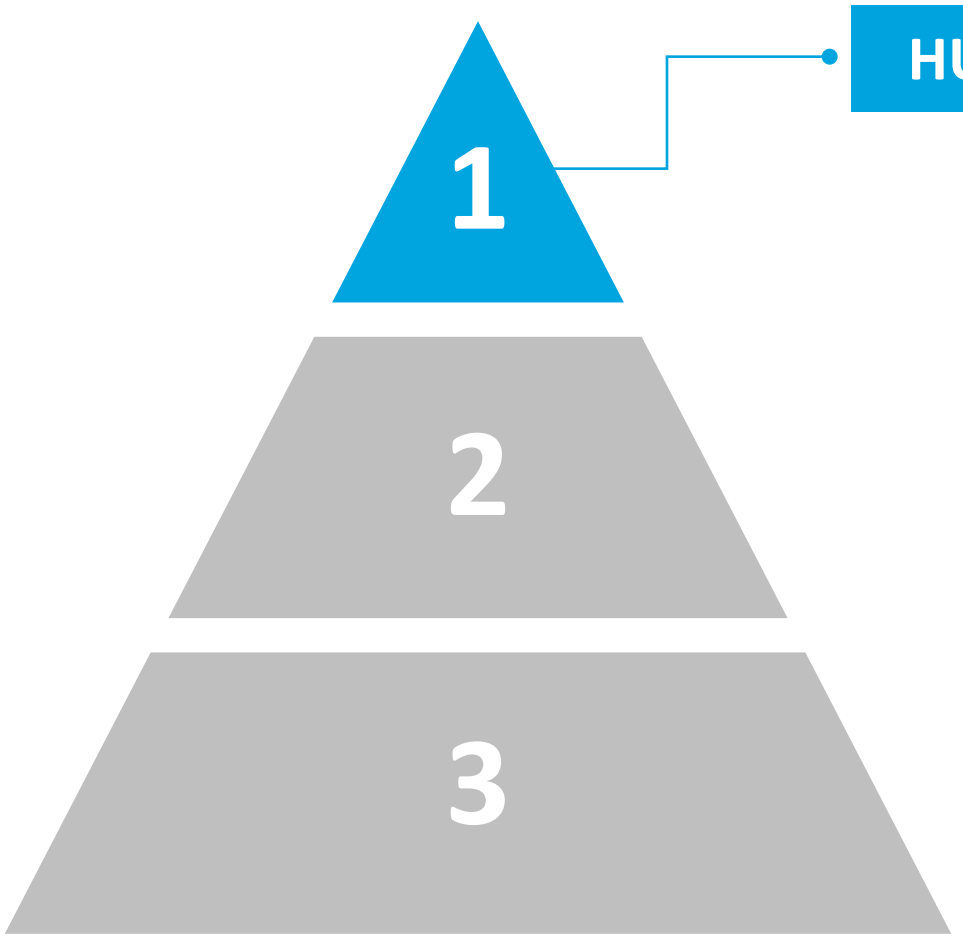
Key Focus Areas for Continued Maturation

- Land use
- Supply Chain
- Power Generation

Some of the measures included in this presentation are contemplated as additional precautionary measures intended to further reduce the risk of wildfires.

Human Performance (HU) Tools

Our HU Tools reduce coworker and contract partner mistakes by identifying and helping us mitigate the causes of human errors.



1. Place Keeping
2. Two-Minute Rule
3. Stop Think Act Review (STAR)
4. 3-way Communication
5. Phonetic Alphabet
6. Situational Awareness
7. Procedural Use and Adherence
8. Questioning Attitude
9. Pre-Job Safety Briefing
10. Stop When Unsure

Some of the measures included in this presentation are contemplated as additional precautionary measures intended to further reduce the risk of wildfires.

Reviewing and Learning from the Boeing Report

We took immediate action to proactively review the Boeing report and identify similar areas for improvement.

In the first quarter of 2024, an expert panel reviewed safety performance at Boeing, resulting in 27 findings and 53 recommendations. They highlighted deficiencies in safety culture, safety management system, organizational structure and other safety-related issues.

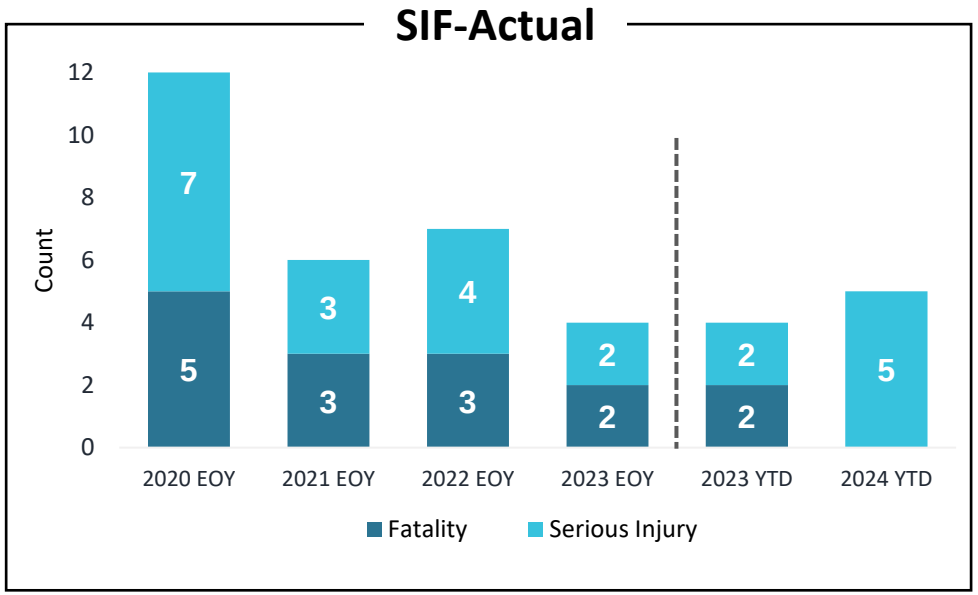
Assessments (Plan-Do-Check-Act)	SMS Roles and Responsibilities	Change Management	Build Safety and Quality Into the Work
Dedicate and develop company resources to conduct ongoing, periodic and thorough safety assessments, including on safety culture and PSEMS.	Ensure all coworkers understand their role in PSEMS.	Ensure all coworkers follow a consistent change management process for design, supplier, procedures, training, organizational and other changes.	Design of new/revised systems must have engineering controls built into the design, followed closely by safety assurance and quality control to verify design effectiveness.

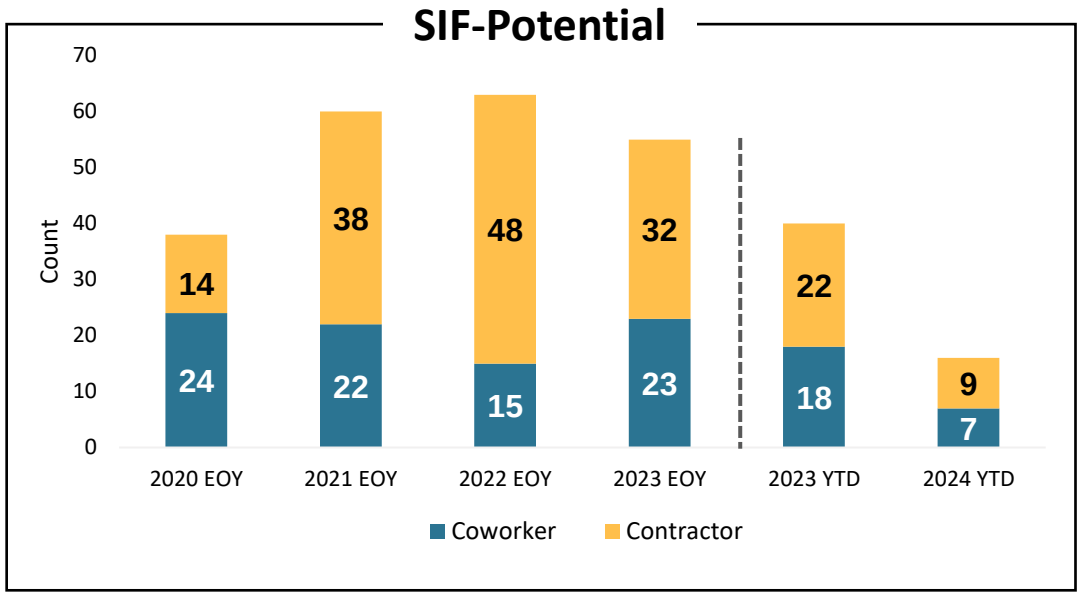
Some of the measures included in this presentation are contemplated as additional precautionary measures intended to further reduce the risk of wildfires.

Safety Performance

Serious Incidents and Fatalities (SIF)

SIF metrics are key indicators used by our Board of Directors, SNO Committee and leadership to track safety. We continuously review performance to improve safety.





Data as of August 15, 2024

Performance:

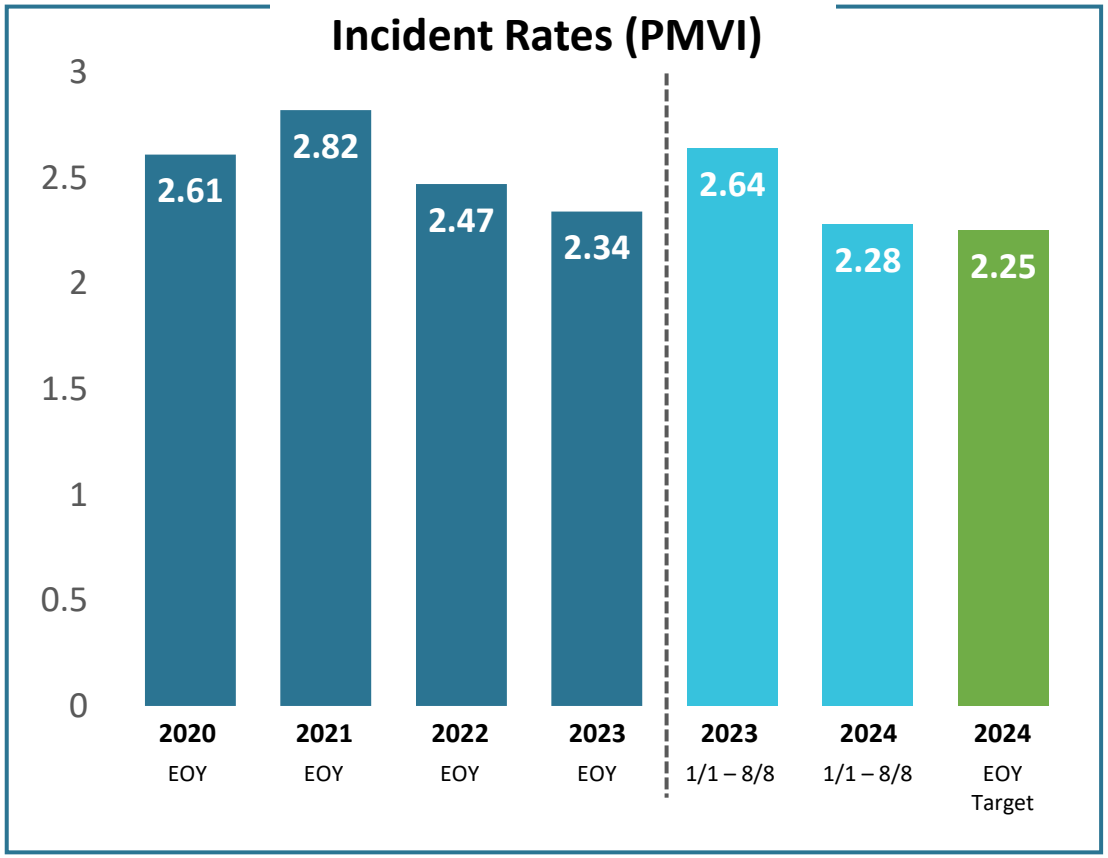
- Five coworkers have been involved in serious, non-fatal SIF-Actual incidents YTD; two fatalities and two non-fatal serious injuries occurred in 2023
- Seven coworkers and nine contract partners have been involved in SIF-Potential incidents YTD; 18 coworkers and 22 contractors were involved in incidents in 2023
- Motion, gravity, electrical and mechanical incidents are the primary drivers for SIF actuals and potentials YTD

In mid-2020, Contractors were required to start reporting SIF-Potential events. SIF-Actual: A life-threatening or life-altering injury, or a fatality. SIF-Potential: An event that reasonably could have resulted in a SIF-Actual. Lower is better.
Some of the measures included in this presentation are contemplated as additional precautionary measures intended to further reduce the risk of wildfires.

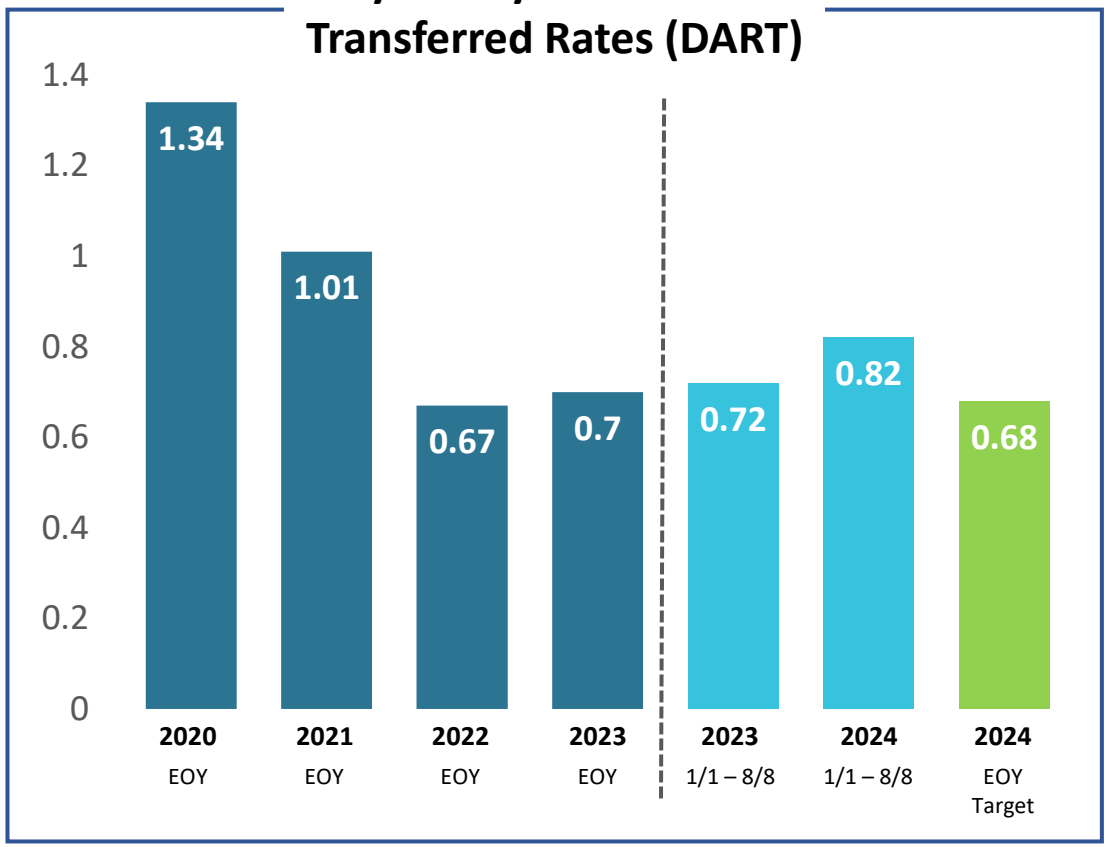
Preventable Motor Vehicle Incident (PMVI) and Days Away, Restricted, or Transferred (DART)

PMVI and DART are key safety performance indicators that inform leadership decision-making and recommendations.

Preventable Motor Vehicle Incident Rates (PMVI)



Days Away Restricted or Transferred Rates (DART)



Data as of August 8, 2024

PMVI: Number of incidents where a PG&E coworker could have but failed to take reasonable steps to prevent incident; rate based on 1,000,000 miles driven.
DART: PG&E coworker injury that results in days away, restricted, or transferred duty; rate based on 200,000 hours worked.

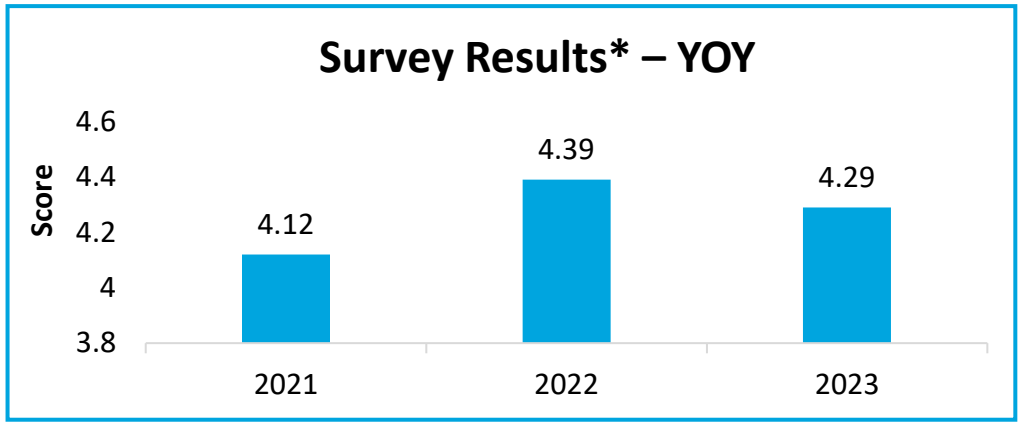
Some of the measures included in this presentation are contemplated as additional precautionary measures intended to further reduce the risk of wildfires.

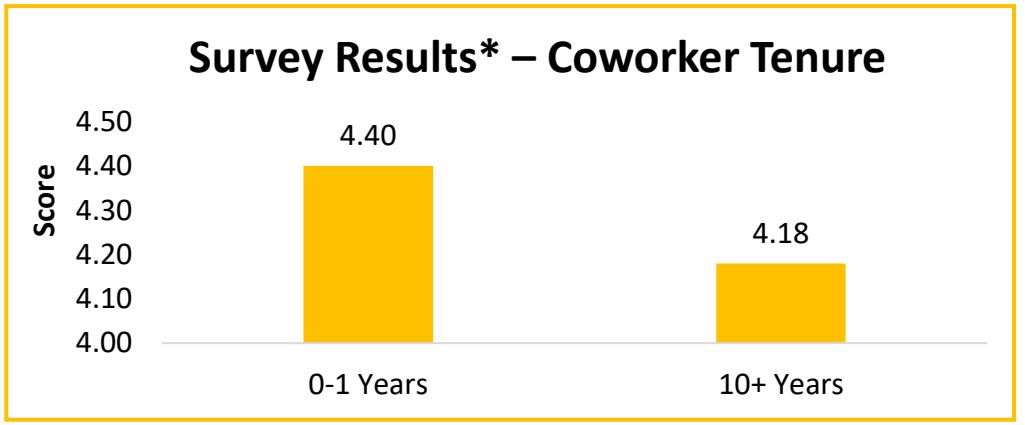
Safety Culture Assessment

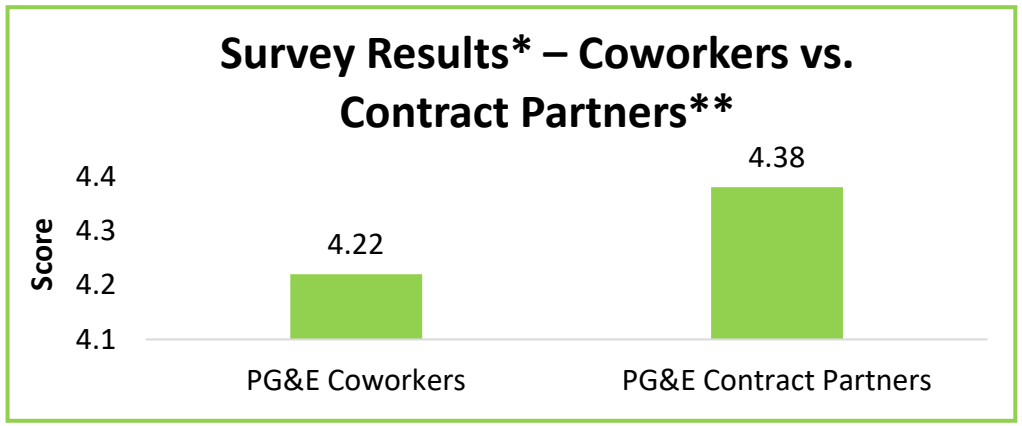
Continuing to Mature our Safety Culture

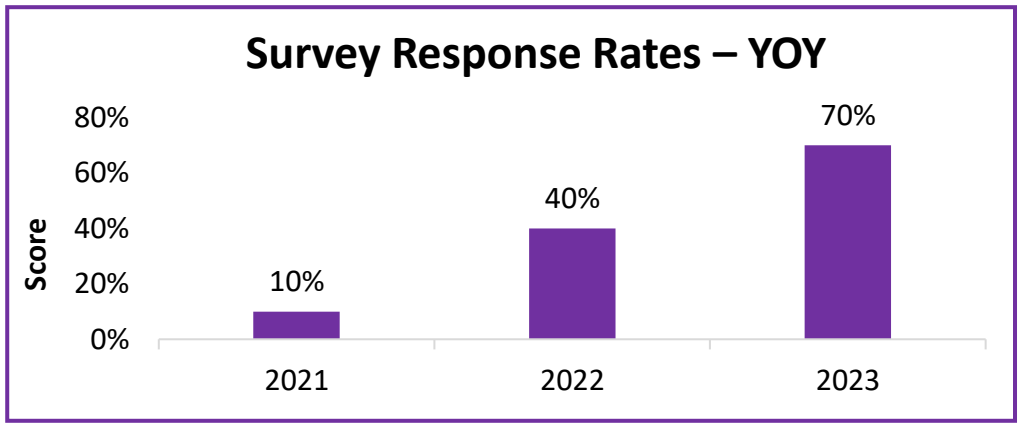
We continue to grow and mature our safety culture following the 2023 Wildfire Safety Culture Assessment. Year-over-year, our survey responses ensure we capture accurate representations of coworker perceptions.

Coworker safety assessment, by year, tenure and worker status:







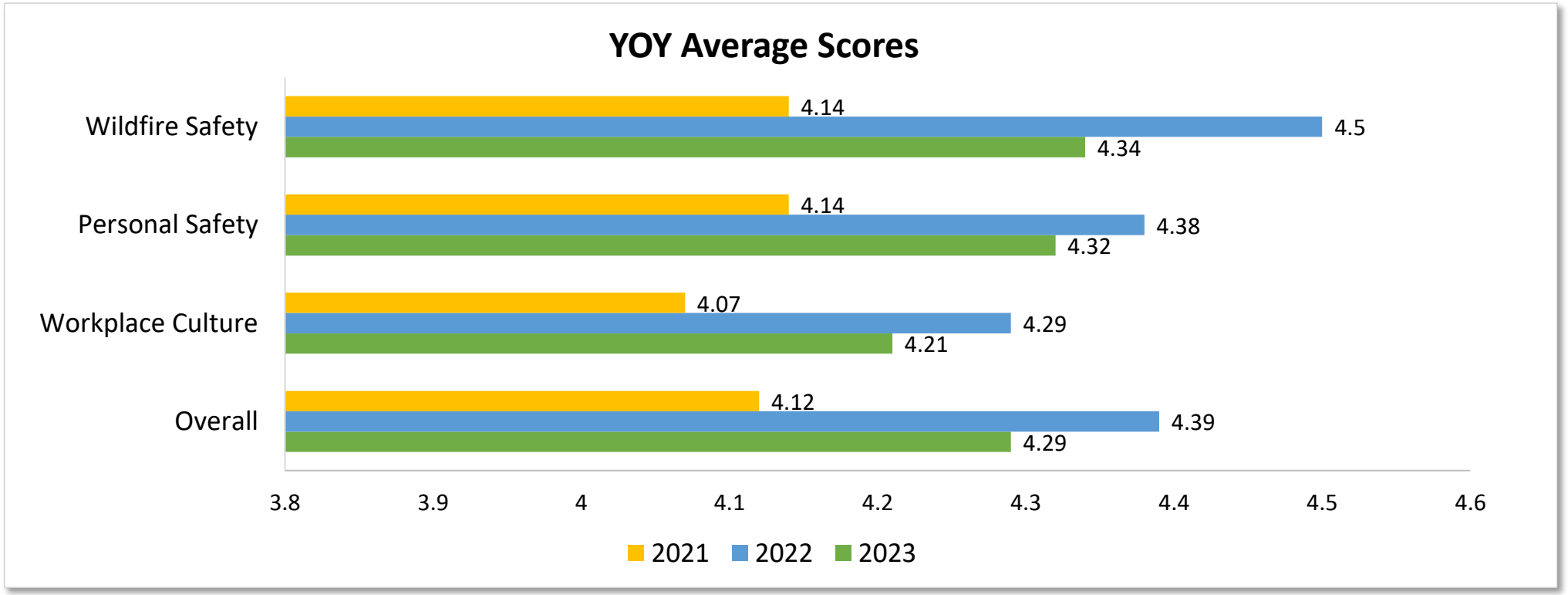


**Scores were based on a 5-point scale. **Average response score was 4.29*

Some of the measures included in this presentation are contemplated as additional precautionary measures intended to further reduce the risk of wildfires.

Benefitting From Our Speak-Up Culture

As we enhance our speak-up culture, we are identifying best practices and opportunities for improvement, including capturing feedback from coworkers.



Some of the measures included in this presentation are contemplated as additional precautionary measures intended to further reduce the risk of wildfires.

Making Progress on Recommendations

Out of the 30 survey statements, we saw improving scores for 24 statements. We received four recommendations from the remaining six statements and feedback from the focus group. We continue to make progress on these recommendations.

Recommendations	Progress
Strengthen Safety Communications	▪ Implemented a Daily Safety Message shared across our 1,200+ Daily operating Reviews (DORs) ▪ Enhanced our Enterprise Health and Safety weekly newsletter to focus on critical and topical safety and health information ▪ Held a leadership listening session in advance of Enterprise Safety Week with additional sessions planned throughout the year
Improve Safety Enabling Systems	▪ Established an Operations Safety Collaboration Center to focus on SIF prevention through hazard identification and improving safety culture ▪ Enabled Grassroots Safety Teams
Build on Current Training Plan	▪ Expanded modalities and increasing hands-on training opportunities ▪ Developed additional training courses to improve preparedness
Mitigate Public Interaction Risk Exposure	▪ Expanded use of Corporate Security Department resources and hostile customer de-escalation training for frontline coworkers

Utilizing Lean

Daily Operating Reviews (DOR) provide opportunities for safety escalations to make their way from the field to executives every morning.

We utilize Tactical Implementation Plans (TIP) to track action completion and ensure effectiveness of recommendations.

Some of the measures included in this presentation are contemplated as additional precautionary measures intended to further reduce the risk of wildfires.

Wildfire Safety

Our Wildfire Mitigation Plan Goals

Our 2023-2025 Wildfire Mitigation Plan (WMP) goals will help us make our stand that "Catastrophic Wildfires Shall Stop" a reality through our Layers of Protection.

Construct, maintain and operate our electrical lines and equipment in a manner that will **minimize the risk of catastrophic wildfires**.

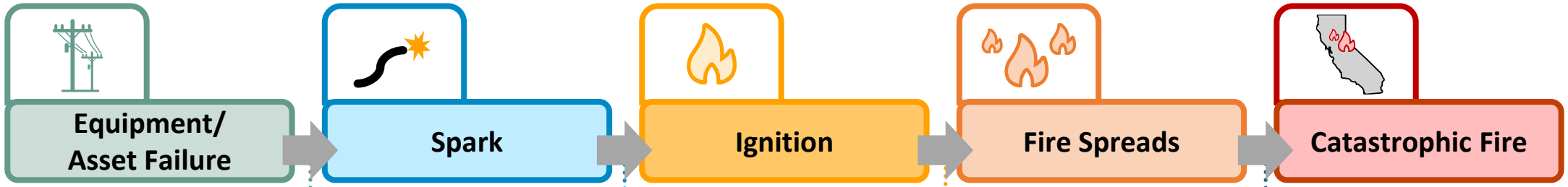
Implement programs to **limit customer disruption from our wildfire mitigation efforts**.

Continue to **enhance our situational awareness and intelligence** capabilities.

Some of the measures included in this presentation are contemplated as additional precautionary measures intended to further reduce the risk of wildfires.

Interrupting the Wildfire Sequence

Utility-attributable fires follow a common sequence. At any given location, our approach provide insight as to which mitigation strategy will be most effective.



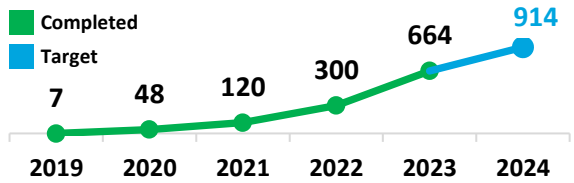
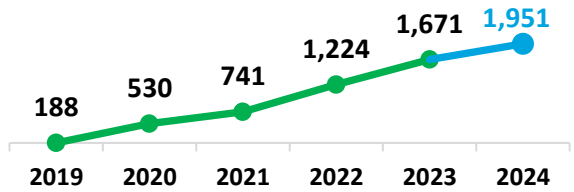
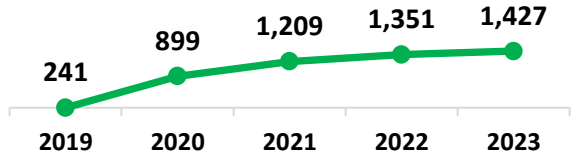
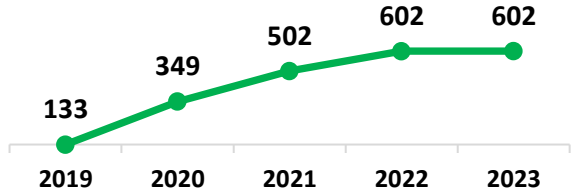
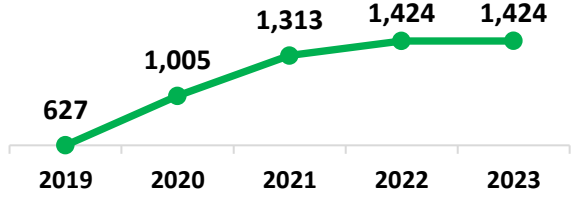
These mitigation strategies interrupt the sequence and prevent catastrophic wildfires.

Equipment/ Asset Failure	Spark	Ignition	Fire Spreads	Catastrophic Fire
PSPS	EPSS	EPSS	A.I. Wildfire Cameras	
Pole Clearing	Pole Clearing	A.I. Wildfire Cameras	Hazard Awareness and Warning Center	
Undergrounding and System Hardening	Transmission Towers Utility Defensible Space	Safety and Infrastructure Protection Teams	Safety and Infrastructure Protection Teams	
Asset Maintenance and/or Replacement		Rapid Response Capability	Rapid Response Capability	
Vegetation Management				
Targeted Continuous Monitoring (Gridscope)				
Transmission Towers Utility Defensible Space				

Different mitigation approaches may prevent catastrophic wildfire with similar effectiveness because they target different steps in the sequence.

Some of the measures included in this presentation are contemplated as additional precautionary measures intended to further reduce the risk of wildfires.

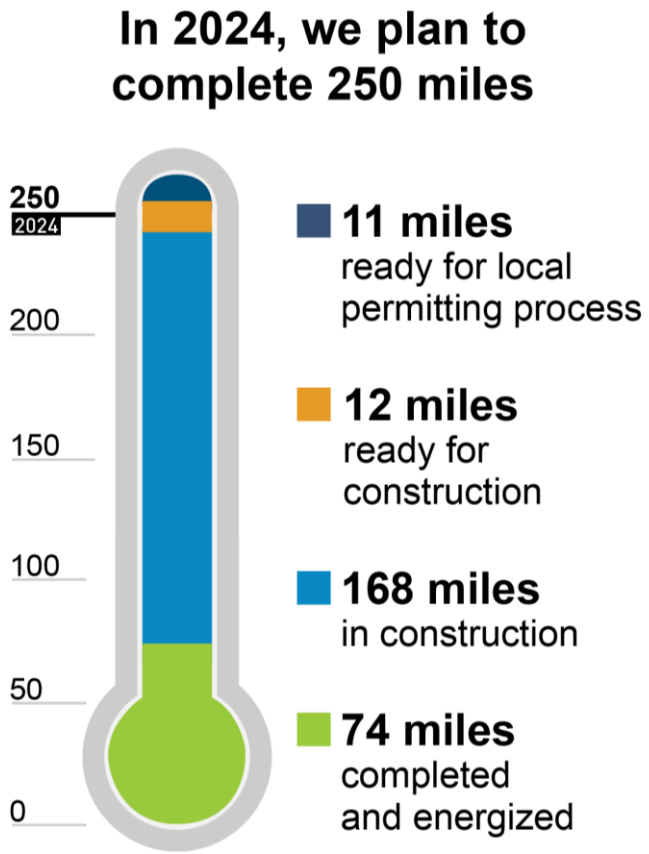
Wildfire Mitigation Plan Progress

	2019-2023 PROGRESS	2019-2023 INVESTMENTS***	TARGET	YEAR-OVER-YEAR PROGRESS
Undergrounding Our Lines Undergrounding powerlines to reduce wildfires caused by equipment	**664*** MILES COMPLETED	**$2,105,278** TOTAL (in 1,000s)	**250** MILES	
System Hardening Strengthening our grid by installing stronger poles, covered powerlines and undergrounding	**1,671**** LINE MILES HARDENED	**$1,295,162** TOTAL (in 1,000s)	**280** LINE MILES	
Sectionalizing Devices and Transmission Switches Separating the grid into smaller sections and narrowing the scope of Public Safety Power Shutoffs	**1,427** DEVICES INSTALLED	**$333,525** TOTAL (in 1,000s)	CONTINUED IMPLEMENTATION	
High-Definition Cameras** Monitoring and responding to wildfires using artificial intelligence to increase visibility and improve wildfire suppression	**602** CAMERAS INSTALLED	**$41,289** TOTAL (in 1,000s)	CONTINUED OPTIMIZATION	
Weather Stations** Better predicting and responding to severe weather threats	**1,424** STATIONS INSTALLED	**$35,709** TOTAL (in 1,000s)	CONTINUED OPTIMIZATION	

*Undergrounding represents projects completed as part of the 10,000-Mile Undergrounding Program, which began in 2021. Prior to the program's inception, an additional 47 miles of undergrounding were completed between 2019-2021. **Includes 16 System Hardening miles completed in 2018. ***2024 financial data is under validation. ****We are leveraging AI to improve capabilities and further optimization.

Some of the measures included in this presentation are contemplated as additional precautionary measures intended to further reduce the risk of wildfires.

2024 Undergrounding Progress



Data as of 7/31/2024.

We have already made significant progress toward our annual goal of undergrounding **250 miles** in 2024.

The 2024 thermometer is updated monthly at **pge.com/undergrounding**.

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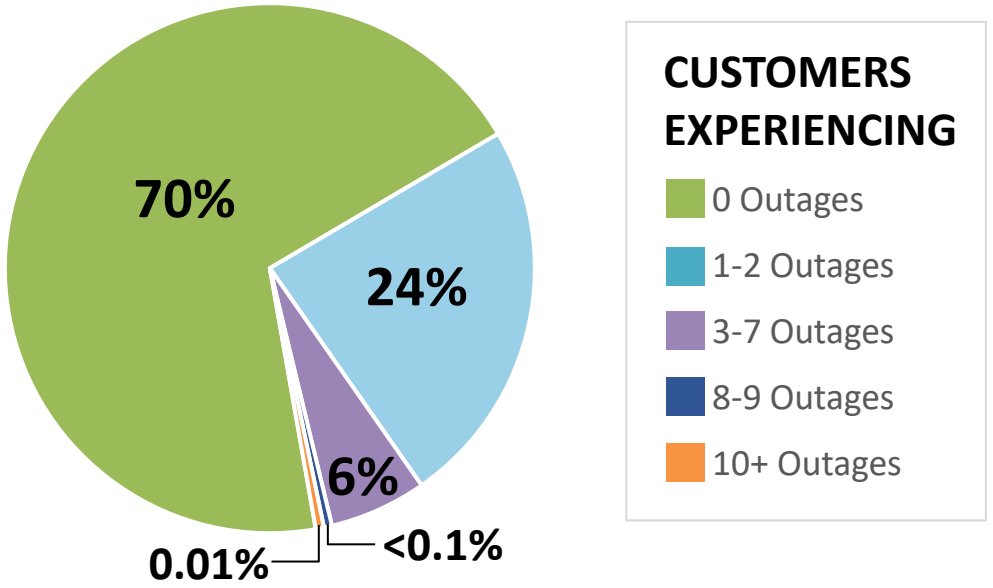
EPSS Performance: Protecting Customers

2024 EPSS Performance

Through real-time and continuous improvements, we are working to mitigate customer impacts without compromising the wildfire prevention benefits of EPSS.

1.82M Customers Protected



Data as of 8/6/2024

We are continuously working to improve reliability and minimize customer impacts.

	2023 YTD	2024 YTD	Comparison
Circuit Miles Enabled*	~2.4M	~2.9M	21% increase
Number of Outages	841	1,229	46% increase
Avg. Outage Length	3.4 hours	2.5 hours	26% decrease
Avg. Customers Impacted per Outage	889 customers	835 customers	6% decrease

*Circuit mileage is approximate and leverages current device and circuit-level configuration.
Data is approximate and as of 8/8/2024.

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Improving EPSS to Minimize Customer Impacts

We are continuing to improve reliability for all customers protected by EPSS and taking additional actions for the most impacted customers.

We are targeting mitigation efforts on the most impacted devices. These include:

- Proactive animal mitigation consisting of bird retrofitting and critter abatement
- Proactive expanded vegetation management work
- Comprehensive reliability work focused on targeted circuit protection zones
- Installing innovative technology to quickly pinpoint outages to restore power faster

We have also expanded access to customer resiliency programs.

Some of the measures included in this presentation are contemplated as additional precautionary measures intended to further reduce the risk of wildfires.

Year-Over-Year PSPS Comparison

PSPS impacts have declined significantly through new, advanced technologies and improvements to the electric system infrastructure without impacting wildfire safety.

Event Details	2019	2020	2021	2022	2023	2024 YTD
PSPS Events	8	6	5	0	2	**2**
Customers Impacted	**2,014,000**	**653,000**	**80,400**	**-**	**5,099**	**2,055**
Average Number of Counties Impacted	17	17	10	-	5	**6**
Average Number of Tribes Impacted	12	6	2	-	1	**1**
Average Outage Duration (hours)	43	35	31	-	17	**27**
Average Outage Restoration Time (hours)	17	10	12	-	5	**4**
Damage and Hazards	722	257	442	-	2	**1**
Peak Wind Gusts (MPH)	102	89	102	-	49	**58**

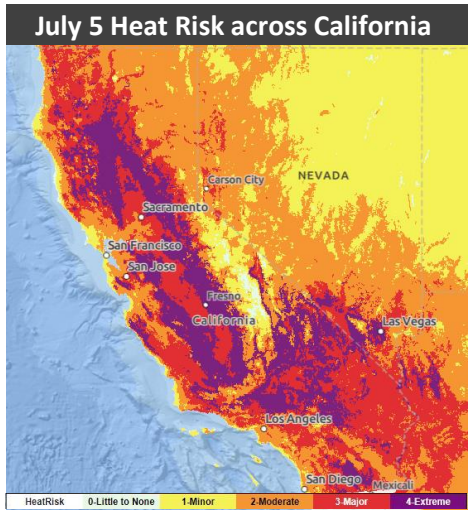
**Data is approximate and as of 08/02/24*

Some of the measures included in this presentation are contemplated as additional precautionary measures intended to further reduce the risk of wildfires.

Adapting in Real-Time to Evolving Wildfire Risk

We are taking immediate action to address increased wildfire risk. This includes continuing to identify data-driven mitigations to meet this evolving risk.

Our state is experiencing a significant increase in wildfire risk this year



The National Weather Service HeatRisk map shows "major" and "extreme" heat risk – shaded in red and purple, respectively – across most of California on Friday, July 5, 2024. (Map: National Weather Service)

This increase is due to:

- Historic heat
- 2023 rainfall leading to increased dry fuel
- High winds

	ACRES BURNED	FIRE INCIDENTS
	↑ **244%** increase	↑ **3%** increase
AS OF AUGUST 13, 2024	**812,738**	**5,087**
PRIOR FIVE-YEAR AVERAGE FOR THE SAME PERIOD	**236,000**	**4,932**

**As of 8/13/2024, compared to the prior five-year average for the same period*

We are taking immediate action to address this risk

We are continuing to proactively identify and implement solutions to mitigate this risk in addition to our existing layers of wildfire protection.

That work includes:

- Clearing vegetation at the base of **~50k additional poles, above compliance requirements**
- **Augmenting the existing A.I. camera network with 24 additional cameras** to enhance situational awareness and aid suppression efforts
- **Installing ~6,000 new Gridscope devices** by August 31, bringing targeted monitoring to 10,000 locations

We are continuing to evaluate and determine additional mitigations to address elevated wildfire risk.

Some of the measures included in this presentation are contemplated as additional precautionary measures intended to further reduce the risk of wildfires.

Gas Safety Performance

Key Gas Improvements

We have demonstrated progress and continued focus on gas system safety since 2010, achieving industry-leading gains and process safety, asset management and technology capabilities.

Industry Recognitions and Certifications

PAS 55/ ISO 55001	Best-in-Class Asset Management
API RP 1173	Pipeline Safety Management Systems
API RP 754	Process Safety Performance Indicators

Opened State-of-the-Art Facilities

- Gas Safety Academy Winters
- Gas Control Center San Ramon
- Gas Safety and Innovation Dublin

GAS ODOR RESPONSE TIMES	2010	2023	2024 YTD
Average response time in minutes	33.3	**19.8**	**19.5**
Percent response within 60 minutes	94.4%	**99.7%**	**99.8%**
SCADA VISIBILITY AND CONTROL POINTS			
Transmission pressures and flows	1,300	2,645	**2,709**
Transmission control points	870	976	**976**
Distribution pressures and flows	290	5,029	**5,101**
LEAK BACKLOG			
Grade 2 open leak average duration (Target: 150 days)	–	113 days	**91 days**
DIG-IN REDUCTION			
Third party gas dig-ins/1,000 USA tickets	3.5	**0.98**	**0.83**
GAS TRANSMISSION	**2010**	**2011-2023**	**2011-24 YTD**
Miles of pipeline replaced	9	>285	**>285**
Miles of pipeline strength tested	0	>1,614	**>1,618**
Miles of pipeline made piggable	130	>2,237	**>2,273**
Automated valves installed	0	405	**408**
GAS DISTRIBUTION	**2010**	**2011-2023**	**2011-24 YTD**
Miles of main replaced	27	>1,498	**>1,578**

2024 YTD data is approximate and through 7/31/2024

= Categories that are tracked against industry standards, and in which PG&E performed in the first quartile.

Some of the measures included in this presentation are contemplated as additional precautionary measures intended to further reduce the risk of wildfires.

Lessons Learned

2023-2024 Electric Lessons Learned

We continue to improve our electric operations based on lessons learned and benchmarking.

Technical Training

Refresher Trainings

Delivering refresher trainings, including those for rubber glove usage and grounding, to ensure coworkers are following safe procedures.

Risk Models

Utilizing Technologies

Benchmarking wildfires and respective fuel types to advance our Fire Potential Index (FPI) model.

Measuring Targets

Improved Key Performance Indicators (KPIs)

Utilizing KPIs to ensure that our targets provide actionable insight.

Preparedness and Response

Threat Identification

Enhancing threat and hazard assessments to inform an improved preparedness and response posture.

Some of the measures included in this presentation are contemplated as additional precautionary measures intended to further reduce the risk of wildfires.

2020-2024 Gas Lessons Learned

We have made improvements to our gas operations based on lessons learned over the past five years.

CNG/LNG

- **Developing A First Fill Policy:** Following a third-party CNG-fueled tractor truck failure during its first fill, injuring the driver and damaging the tractor and station, we began reviewing customer vehicle information to ensure they have been fueled prior to filling at a PG&E station as a safety measure.

Gas Distribution

- **Distribution Integrity Management Program (DIMP):** Reviewing data sources to identify new threats for inclusion in our DIMP risk assessment process.
- **Causal Evaluations:** Reviewing five year's worth of low-probability, high-consequence gas incidents to inform proactive, preventative work. These evaluations have led us to new pipe replacement intervals, inspection protocols and monitoring practices.

Gas Storage

- **Risk-Based Reinspection Interval:** Leveraging industry data and our integrity assessment to form the basis of our risk-based reinspection interval.

Gas Transmission

- **Threat Identification:** Enhancing threat identification through improved algorithms, assessments and risk models.
- **Threat Assessments:** Evaluating additional risk factors and enabling leak or rupture failure mode to focus on our highest consequence pipeline segments.
- **Utilizing Technologies:** Preventing loss through in-line inspection tools, determining hard spot susceptibility and achieving significant long-term saving opportunities by supporting ILI vendors' development of tools for small diameter pipelines.

Some of the measures included in this presentation are contemplated as additional precautionary measures intended to further reduce the risk of wildfires.

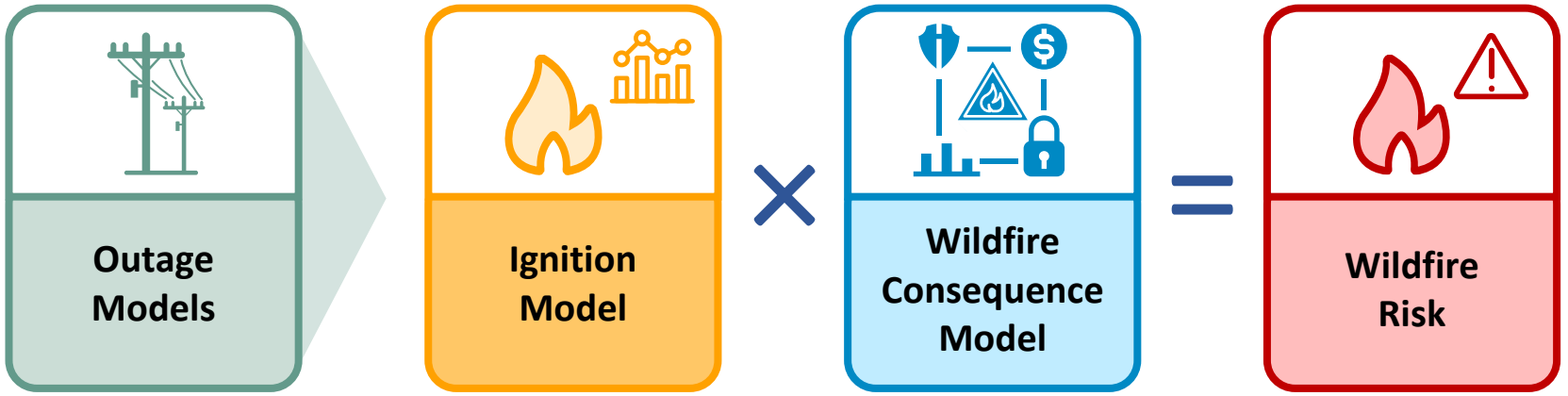
Thank You

Appendix

Modeling Risk to Prioritize Safety Work

Risk modeling involves assessing the likelihood and impacts of potential wildfires to help us prevent them in the future.

How Our Risk Model Works



By assessing the causes of outages and ignitions and the consequences of a wildfire starting, we're able to pinpoint risk across our assets and equipment.

Risk Modeling Objectives

- Provide situational awareness of risk
- Improve risk-informed decision making
- Evaluate and quantify risk reduction from wildfire mitigation initiatives

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How We Prioritize Our Wildfire Safety Efforts

Programs	Prioritization Approach	Estimated Cost (Per Year)	Reliability	Public Safety	Effectiveness*	2025 Cost Benefit Ratio (CBR)
EPSS**	• Capability implemented across all circuits in HFRA and adjacent buffer areas • Used when wildfire risk is elevated	• $192M	• Lower reliability • Improvements made year-over-year to improve reliability	• Impact to Wildfire Risk: High • Impact to Reliability AFN, customers	**~73%****	• 41.8
PSPS	• Capability across all circuits in HFRA • Used when wildfire risk is elevated during high-wind days	• $59M	• Lower reliability • Improvements made year-over-year to improve reliability	• Impact to Wildfire Risk: High • Impact to Reliability, AFN customers	**~79%**	• 104
Undergrounding	• Targets riskiest 10,000 miles of 25,000 total HFRA miles • Wildfire risk models with a feasibility overlay provide prioritization approach	• $1,168M	• Highest reliability	• Best benefits for system resiliency, public safety and reliability overall	**98%**	• 4.4
Overhead Covered Conductor	• Targets the remaining 15,000 riskiest HFRA miles • Wildfire risk models guide prioritization approach	• $241M	• Medium reliability	• Medium benefits for public safety and reliability overall	**64%**	• 7.9
Vegetation Programs***	• Compliance-driven • Wildfire risk models guide prioritization approach for hazard tree work	• $1,190M • Ongoing cost that will increase over time	• Limited reliability benefit	• Limited public safety benefit	**<0.1% - 15%**	• 0.7 – 6.8, depending upon VM program

**Based on the most accurate and current empirical data. **Includes benefits from Downed Conductor Detection and Partial Voltage Force Out.*

****Includes VM Distribution Focused Tree Inspections, VM Distribution Operational Improvements, VM Tree Removal, Routine VM and Second Patrols.*

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