Pacific Gas and Electric Company

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November 1, 2022 **BY ENERGY SAFETY E-FILING**

Stephen P. Lai
Data Manager, Data Analytics Division
Office of Energy Infrastructure Safety
California Natural Resources Agency
715 P Street, 20th Floor
Sacramento, CA 95814

Re: **Q3 2022 Spatial and Non-Spatial Data Submissions**
Docket: 2022-QDR

Dear Mr. Lai:

In their 2019 and 2020 WMPs, electrical corporations were requested to provide GIS data which required significant interpretation and effort to address. Pacific Gas and Electric Company (PG&E) appreciates the Office of Energy Infrastructure Safety's (Energy Safety) effort to refine its guidance and provide standardization through the Draft GIS (Geographic Information System) Data Reporting Requirements and Schema (GIS Data Standard) released on August 5, 2020, and updated on February 4, 2021 (V2), September 17, 2021 (V2.1), and most recently January 14, 2022 (V2.2). Below we provide updates on our Q3 2022 GIS data submission, regulatory developments relating to our GIS data submission, and general challenges and technical limitations relating to this submission.

Similarly, we are also providing a narrative outlining the general challenges and technical limitations relating to our Q3 2022 non-spatial data submission that is included in our Quarterly Data Report (QDR).

Q3 2022 Spatial Data Submission Updates

In Q3 2022, PG&E further progressed alignment between data included within the GIS Data Standard (Spatial QDR) and the Quarterly Initiative Update (QIU). With the goal of providing more continuity in these submittals, PG&E assessed for incorporation all remainder WMP initiative program data as shared in the QIU into the Spatial QDR. Post-assessment, PG&E initiated working sessions with business data stewards and technical/system leads to determine the feasibility and requirements for integration of net new data into our GIS Data Standard submission. As a result of our collection, curation, transformation, and quality control efforts, PG&E has incorporated eight net new QIU-aligned datasets into our Q3 2022 GIS Data Standard submission. These include:

1. Early Fault Detection (EFD) Technology – WMP Section 7.3.2.2.3;
2. Generation for PSPS Mitigation – Temporary Distribution Microgrids – WMP Section 7.3.3.11.1 C;
3. Undergrounding of Electric Lines and / or Equipment (*"10K" Initiative*) – WMP Section 7.3.3.16;
4. HFTD/HFRA Open Tag Reduction – Distribution – WMP Section 7.3.4.17;
5. HFTD/HFRA Open Tag Reduction – Transmission – WMP Section 7.3.4.17;
6. Updates to Grid Topology to Minimize Risk of Ignition in HFTDs – Remote Grid – WMP Section 7.3.3.17.5;
7. Infrared Inspections of Distribution Electric Lines & Equipment – WMP Section 7.3.4.4; and
8. Pole Clearing in State Responsibility Areas – WMP Section 7.3.5.2.

PG&E also incorporated, for the first time, grid hardening photos of completed projects for select initiatives: SCADA Recloser Equipment Installation and Fuse Saver Installation. To obtain photos, PG&E facilitated working sessions with members of our Construction Quality Assurance organization to assess the documents and media submitted for a project's internal close-out / QA audit. PG&E was able to manually access an array of post-installation photos for individual projects, select the photo of best available information, and save it to a directory for final report assembly. Further evaluation is required to assess the sustainability of this manual effort before expanding to a larger scale, and automation efforts are being explored.

PG&E continues to leverage our enterprise data platform, Palantir Foundry, to transform data into Energy Safety's schemas and improve data quality. PG&E enhanced our reporting on the10K Undergrounding program through the integration of Fire Rebuild programs into Foundry. Foundry enables automation of this initiative by creating links across a variety of undergrounding data sources and packaging them together geospatially in line shapes. PG&E also focused on enhancing data quality in the Q3 GIS Data Standard submittal by bringing in more CircuitID values in the 3.1.2 Connection Device feature class. In previous submissions, the 3.1.2 Connection Device feature class had approximately 8,000 distribution splice records where CircuitID was not included. As stated in our metadata, this is due to PG&E's limited collection of splice and related circuit data. To support reporting quality, technical working sessions with subject matter experts and GIS analysts were conducted and led to the creation of a lookup table in Foundry to better correlate these data sets. The lookup table resulted in an increase of over 7,000 net new circuit ID records for the distribution splice data.

Similarly, PG&E expanded on the information in our metadata. For all eight newly included WMP initiatives, PG&E collected key metadata information for the Description, Credits, and Use Limitations sections. PG&E also updated existing information for the 3.5.2 Vegetation Management Projects. For example, PG&E improved metadata descriptions associated with our core Enhanced Vegetation Management and Defensible Space Pole Clearing programs – notably for the EncroachPermit and EnvPermit fields.

Q3 2022 Regulatory Developments Relating to Spatial Data Submission

On August 16, 2022, Energy Safety hosted its third quarterly data check-in this year with electrical corporations to align on key issues, document feedback, and provide guidance, where applicable on compliance reporting. This discussion focused on how best to show one-to-many relationships between structures, circuits, substations, and other assets. The working session concluded that an asset relate table would provide benefit in depicting complex one-to-many asset relationships.

General Challenges & Technical Limitations Relating to Spatial Data Submission

In this section, PG&E reiterates the general challenges and technical limitations that have been outlined in previous cover letters and in our submitted GIS Data Standard versioning change comments. PG&E's submissions of the requested Status Report and Data Submission (collectively referred to as "GIS Data Standard Submission") are not fully complete as we do not have all the requested data or have all the data in the format requested. Energy Safety anticipated that this process would take time to accomplish, and that all data would not be immediately available as noted in Section 1 of the Draft GIS Data Standard (V2.2):

> Energy Safety understands that electrical corporations are at different stages of their data journeys and employ differing business practices, which may impact certain electrical corporations' abilities to fully comply with the requirements in this document. Energy Safety expects to routinely review and refine its GIS data requirements, in executing its mission of reducing risk of catastrophic wildfire ignitions from electrical facilities and equipment through a data-driven approach. As such, Energy Safety's GIS data standard is best viewed as a living document and will continue to evolve as data quality and capabilities grow.

Producing data at the scale required by the GIS Data Standard on a quarterly cadence does not provide sufficient time for a comprehensive quality check of the data, metadata, and associated Status Report included in our submission.[1] [2] Additionally, some of the inputs in the submission report necessarily reflect preliminary estimates and may not reflect final results. For example, 'Planned Initiative' data reflects forecasts that are subject to change based on operational developments. For data not provided in the current submission, the Status Report inputs for "Estimated Delivery Timeframe" represent approximations that have significant dependencies, including, but not limited to, resourcing, procedural and technological developments, which could impact timeframes for delivery.

For data not currently collected or architected per Energy Safety's required schema, PG&E is exploring the feasibility and resource requirements to collect, transform, and ultimately submit these data. These assessments are accomplished through workshops with cross-functional

[1] Reference for scale of submission: PG&E's Q1 2022 Submission included approximately 14.7M records.

[2] Select data in this submission was requested through June 30, 2022, and due by August 1, 2022, providing less than five weeks to collect, curate, transform, perform antivirus scanning, and submit the data in a file-geodatabase (FGDB) format.

teams (Asset Owners, Subject Matter Experts, Technical/System Experts), and PG&E will assess the feasibility and prioritization of future potential improvements.

PG&E's existing data and system architecture were independently developed over decades to address specific operational uses and, as a result, often lack integration capability and a cohesive data schema. This presents significant challenges to accessing and aligning data to meet Energy Safety's GIS Data Standard. The various data requested exist across disparate systems and in the current state require significant time and resources to manually align data sets to the GIS Data Standard schemas and extract and format the data. Many of the resources who curate the data are simultaneously involved in core operations work, including emergency response and Public Safety Power Shutoff (PSPS) readiness.

Though PG&E significantly progressed our alignments of the GIS Data Standard and Quarterly Initiative Update as formerly described, technical limitations challenge our ability to fully align in select cases. Data included in the GIS Data Standard Submission must meet specific technical criteria for inclusion, including the ability to transform data into Energy Safety's schema and represent geospatially. Tabular reports such as the QIU are not subject to these requirements which can result in differentials across reports. In addition, each report contains: (i) differentials in technical and schematic requirements; (ii) differentials in timing of data readiness; and (iii) differentials in data types reported on. This is further described through our Comment on Draft GIS Data Standard V2.2.[3]

PG&E understands Energy Safety is using data included in the GIS Data Standard submission to inform efforts related to their Compliance Division field inspections. While many use limitations, assumptions and definitions for data submitted are described via our metadata, additional complexities occur when combining distinct datasets for analyses or operations. These complexities can lead to misinterpretations and/or conflicting results when assessing data submitted against field inspection findings. In addition, timing differentials between collection of initiative data and the population of said data into a geospatial format/database (GIS) due to the processes needed to document data, verify work performance, and update (map) geospatial records. Until a project is completed and mapped, detailed information remains in the design systems and paper job packages. Once data is mapped in PG&E's GIS systems, it can be formatted to meet the requirements of Energy Safety's File Geodatabase schema and included in our GIS Data Standard Submissions. Thus, a job may be visible in the field, but will not be present in our submission until these processes are completed. PG&E's GIS Data Standard Submission represents the best available data that can feasibly be aligned with Energy Safety reporting requirements; this data can provide general insights but is subject to limitations related to data quality and completeness. PG&E welcomes additional working sessions with Energy Safety to better understand its intended use of data included in our GIS Data Standard Submission and provide feedback regarding various applications and/or potential limitations.

[3] *See* PG&E Comment on Draft GIS Data Reporting Standard Version 2.2 (Dec. 27, 2021).

General Challenges & Technical Limitations Relating to Non-Spatial Data Submission (QDR)

PG&E's Q3 2022 non-spatial data submission is subject to certain internal and external limitations, which are outlined below, as well as in note format in our actual QDR submission.

New Update to Data as of PG&E's Q3 2022 Submission

Table 8 of the QDR seeks information regarding the current baseline state of our HFTD and non-HFTD service territory, as located in urban versus rural versus highly rural areas, and includes a subset of data for the Wildland-Urban Interface (WUI). WUI is defined as areas where homes are built near or among lands prone to wildland fires. We identify WUI areas within PG&E's service territory based upon data provided by the University of Wisconsin-Madison SILVIS Lab.[4] As of Q3, we received, and began using, the latest WUI layers data which provide the most recent available data which is from 2020.

Continuing Existing Data Limitations

Starting with the Q1 2022 submission, PG&E began using 2020 census data and this more recent data has impacted the Urban, Rural, and Highly Rural layers, and may cause discrepancies when comparing this data to previous years. Previously, these layers were based on 2010 census data.

It should also be noted that QDR Table 8 data for the years 2015 to 2018 has not been provided for two reasons. First, PG&E planned and executed a multi-year project starting in 2013 that included converting legacy sources of electric facility information into a single enterprise GIS database. The conversion started in 2014 and was completed in 2018. This conversion was executed, reviewed, and accepted in phases for the entire PG&E service territory during these project years. There is no historical database of the electric facilities during the requested years from 2015 to 2018 that would contain a complete and accurate inventory of all the electric facilities metrics requested in Table 8. Second, PG&E's GIS system is a dynamic 'real-time' system that reflects the current assets in PG&E's service territory; when old assets are removed or replaced, they are removed from the GIS system. Therefore, snapshots of asset information at prior points in history, before the WMP process began in 2019, are not available.

Another limitation exists for the Access and Functional Needs (AFN) customer data. Customers belonging to the AFN population dataset are based on Medical Baseline Customers only and do not reflect the revision to the AFN definition from the 2021 WMP guidelines. This is the result of a system limitation of the data within PG&E's various systems that are not currently connected to the enterprise GIS database.

Lastly, it is important to remember that, given the real-time dynamic nature of PG&E's GIS system, the data provided in the QDR is only a view of a specific moment in time and will continue to change as our system evolves in the coming months and years.

[4] *See* http://silvis.forest.wisc.edu/data/wui-change/.

Conclusion

PG&E continues to improves our GIS Data Standard data quantity and/or quality on a quarterly basis. Additional enhancement opportunities will largely require more involved operational and technological changes, and a significant investment of resources and time to collect, curate, and organize the submissions on a recurring basis. Given the estimated level of effort required to meet the standard, regular collaboration with Energy Safety is needed to align on expectations, prioritization of data and information, technical feasibility issues, and help shape modifications to the schema. PG&E appreciates the August 16, 2022, Technical Workshop with Energy Safety and the Electrical Corporations. PG&E looks forward to the upcoming Quarterly Technical Workshops to help drive priorities, shape schema modifications, and facilitate future data submissions.

Very truly yours,

/s/ Jay Leyno

Jay Leyno
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APPENDIX:

HISTORICAL SUBMISSION UPDATES AND REGULATORY DEVELOPMENTS

Q2 2022 Submission Updates

- PG&E incorporated 9 new WMP initiative programs, enhanced quality, and expanded use limitations and definitions in our metadata for our spatial quarterly data reporting.
    - New programs included:
        - LiDAR Ground Inspections Distribution - WMP Section 7.3.5.7;
        - Install Settings on Distribution Line Devices EPSS - WMP Section 7.3.6.8;
        - EPSS Reliability Improvements - WMP Section 7.3.6.8;
        - SCADA Reclosure Installation - WMP Section 7.3.3.9.1;
        - Stakeholder Cooperation and Community Engagement - WMP Section 7.3.10.1;
        - Rincon Transformer Fuse Replacement - WMP Section 7.3.3.11.2;
        - Emergency Back-up Generation - WMP Section 7.3.3.11.3;
        - Butte County Rebuild (Undergrounding) - WMP Section 7.3.3.17.6; and
        - Line Sensor Installation - WMP Section 7.3.2.2.5.
- Developed Stakeholder Community Engagement and Butte County Rebuild Undergrounding initiative data in Palantir Foundry to enable automation of joins across individual data points to package and geospatially represent it through polygon or line dimensions.
- Proactively enhanced data quality by expanding the descriptors in the 'WMPInitiativeActivity' field for the System Hardening Distribution program by adding four additional hybrid activity descriptors: (1) Hybrid project: Covered conductor installation and undergrounding of electric lines and/or equipment; (2) Hybrid project: Removal and retirement of OH conductor and undergrounding of electric lines and/or equipment; (3) Hybrid project: Covered conductor installation and removal and retirement of OH conductor; and (4) Hybrid project: Covered conductor installation, removal and retirement of OH conductor, and undergrounding of electric lines and/or equipment.
- Collected and updated existing information for, but not limited to, 3.1.4 Lightning Arrester, 3.4.2 Wire Down Event, 3.5.1 Vegetation Inspections, 3.5.2 Vegetation Management Projects, 3.5.3 Asset Inspections, and 3.5.4 Grid Hardening. For example, in the 3.5.3.2 and 3.5.3.3 Asset Inspection Log and Point, PG&E clarifies that asset inspection data in the Q2 submission is better aligned to the Quarterly Initiative Update as both reports now reflect inspections that took place in High Fire Risk Areas (HFRAs) or High Fire Threat Districts (HFTDs).

Q2 2022 Regulatory Developments

- On May 17, 2022, Energy Safety hosted their second quarterly data check-in this year with electrical corporations to align on key issues, document feedback, and provide guidance, where applicable on compliance reporting. Much of the feedback raised from the electrical corporations during the working session were topics reiterated from February's quarterly check-in. Additionally, Energy Safety acknowledged responses are underway to provide guidance to PG&E against the discussion topics shared on March 1, 2022.
- Energy Safety also presented their Geographical Information System (GIS) Data Standard Version 2.2 Guidelines for adoption. PG&E provided additional reply

comments for this version of the GIS Data Standard on June 8, 2022.[5] Comments outlined technical challenges and urged Energy Safety to employ a phased approach with clear prioritization for closing outstanding requirement gaps.

Q1 2022 Submission Updates

- PG&E incorporated 10 new WMP initiatives programs, 3 new field attributes, and enhanced quality in the metadata and in several existing fields in our spatial quarterly data reporting.
    - New programs included:
        - System Hardening Transmission – WMP Section 7.3.3.17.2;
        - Fuse Saver (Single Phase Reclosers) Installations – WMP Section 7.3.3.9.2;
        - Defensible Space Inspections on Distribution Substation – WMP Section 7.3.5.17.1;
        - Defensible Space Inspections on Transmission Substation – WMP Section 7.3.5.17.2;
        - Defensible Space Inspections on Hydroelectric Substations and Powerhouses – WMP Section 7.3.5.17.3;
        - Utility Defensible Space – WMP Section 7.3.5.20;
        - High-Definition Camera Installations – WMP Section 7.3.2.1.4;
        - Weather Station Installations and Optimizations – WMP Section 7.3.2.1.3;
        - LiDAR Routine Vegetation Transmission Inspections – WMP Section 7.3.5.8; and
        - Distribution Fault Anticipators (DFA) Installations – WMP Section 7.3.2.2.3.
    - Net new fields include:
        - Substation Rating – 3.1.6 Substation Feature Class; and
        - Conductor Overall Diameter and Conductor Ampacity – 3.2.3 Secondary Distribution Line Feature Class.
    - Enhanced fields include:
        - Exempt Status – 3.1.10 Transformer Detail Table; and
        - Exempt Status (for distribution splices) – 3.1.2 Connection Device Feature Class.
- Leveraged Palantir Foundry to incorporate camera installation and weather station installation or optimization into the submission which also marked the first '3.5.5 Other Initiative' reporting.
- Expanded on the information included in our metadata including, but not limited to, definitions and methodology used to identify and report on substation facilities.

[5] *See* PG&E Comment on OEIS Geographic Information Systems Data Standard, Version 2.2 (June 8, 2022).

Q1 2022 Regulatory Developments

- Energy Safety finalized version 2.2 of the GIS Data Standard on January 14, 2022. Initial draft comments provided by PG&E, Southern California Edison, and Cal Advocates, although acknowledged by Energy Safety, largely were not incorporated in the final version of the GIS Data Standard.
- On February 15, 2022, Energy Safety held their joint, quarterly data check-in meeting with the electrical corporations to communicate submission expectations around 2022 WMP data reporting. Additionally, electrical corporations had the opportunity to provide comments relating to the GIS Data Standard. Key topics included: challenges aligning spatial and non-spatial reports; one-to-many data relationships; request for technical themed workshops on feature dataset sections and confidentiality; and request for a phased approach, prioritization, and partnership to addressing reporting gaps.

Q4 2021 Submission Updates

- Adopted Energy Safety's updated schema (V2.2), incorporating two notable changes – provide scientific name for tree species and match units used for initiative targets with geometry of feature. To adopt these changes PG&E built a lookup table to include the new vegetation genus, species, and common name data.
- Net new data for Conductor Overall Diameter and Ampacity Rating fields added to 3.2.1 Transmission Line and 3.2.2 Primary Distribution Line.
- Included net new data reflecting developments in PG&E's Non-Exempt Surge Arrester Replacement Program (WMP Section 7.3.3.17.3) as part of the 3.5.4.2 Grid Hardening Log and 3.5.4.3 Grid Hardening Point Feature Classes.
- Leveraged Palantir Foundry to include new primary and foreign key identifiers that relate PSPS Event tables to the PSPS Damages tables. For PSPS Event tables we are using multiple data types to create primary key inputs, including Date, Circuit ID, and Isolation Device ID which can be correlated with Primary key inputs for PSPS Damage Event ID tables which include Date and CircuitID.
- Improved the organization and quality of information provided in the metadata for majority of the feature classes and related tables provided in our Q4 2021 submission. Specific improvements included: (i) shifting Summary section inputs to the Description section to align with V2.2's reporting requirements 5; (ii) inclusion of Energy Safety's outlined subsections within each primary section; and (iii) populating the methodology subsection with file and table names for feature classes and related tables provided in the Q4 submission.

Q4 2021 Regulatory Developments

- On December 17, 2021, Energy Safety released V2.2 of the GIS Data Standard. Version 2.2 was the fourth version of the GIS Data Standard used throughout 2021. PG&E filed comments on this latest version of the Data Standard on December 27, 2021.[6] Through these comments, PG&E highlighted (i) the need for technical

[6] *See* PG&E Comment on Draft GIS Data Reporting Standard Version 2.2 (Dec. 27, 2021).

8 See PG&E Comment on Draft GIS Data Reporting Standard Version 2.2 (Aug. 27, 2021)

workgroups for collaboration and consistent implementation of the GIS Data Standard; (ii) request for additional time to assess changes applied to version changes and for release of all files simultaneously (including the need for alignment across guidance materials); (iii) request for clarification regarding geometry requirements; (iv) technical limitations regarding alignment with tabular reports and confidentiality labels.

Q3 2021 Submission Updates

- Adopted Energy Safety's updated schema (V2.1), accomplished through a series of working sessions with technical and business resources to apply revisions to existing data automation logic used to transform PG&E internal source system data into Energy Safety's updated data schema.
- Developed a Domain Quality Checker Tool via our Foundry Data Management Platform to help ensure that domain values in PG&E's FGDB aligned with Energy Safety's prescribed schema. This tool automates the comparison of PG&Es data outputs (FGDB domain structures) with the domain structures prescribed by Energy Safety.
- Added Expulsion Non-Exempt Fuse Replacements, Transmission Switches, and MSO Switch Replacements in Feature Class 3.5.4.2 & 3.5.4.3 (Grid Hardening Log and Point).

Q3 2021 Regulatory Updates

- On August 20, 2021, Energy Safety released an updated PDF document introducing a new release (V2.1) of the GIS Data Standard. On September 17th, 2021, Energy Safety reissued its GIS Data Standard (V2.1) that incorporated data fields and applied changes to the structure of the data schema with the expectation that electrical corporations adopt this schema for the Q3 2021 submission due November 1st, 2021.
- For its V2.1 assessment, PG&E found discrepancies and misalignments across Energy Safety's requirements documentation, including the PDF document and FGDB, which introduced considerable complexity and resulted in rework to ensure accurate assessment findings.
- PG&E filed Comments on the GIS Data Standard V2.1 on August 27, 2021, highlighting the following: (i) elements of the data schema that are subject to technical limitations; (ii) field requirements that are subject to interpretation and require clarification or are out of alignment with Energy Safety's PG&E 2021 WMP Action Items (iii) proposed methods to improve consistent implementation of the GIS Data Standard across electrical corporations, including the potential benefits of a formalized working group.[8] In addition, PG&E's V2.1 Comment highlighted the technical limitations of labeling confidentiality designations at the record level and outlined our approach to help mitigate the risk of mislabeling confidential records.

Q2 2021 Submission Updates

- Provided data in accordance with the GIS Data Standard (V2).
- Added transmission splice data in Feature Class 3.1.2 – Connection Device and other utility-owned power line data in Feature Class 3.6.1. – Other Power Line Connection Location.

- Progressed data quality through consolidation of Distribution Outage data across multiple source systems and trackers in Palantir Foundry. In addition, leveraged this platform to create connectivity across source systems that contain data for Feature Class 3.4.3 – Ignitions, enabling association between Ignition events and near weather station.

Q2 2021 Regulatory Developments

- On June 23, 2021, Energy Safety held a joint meeting with the electrical corporations to communicate expectations around 2021 WMP data reporting, including desired alignments across spatial and non-spatial reports.
- PG&E performed an initial assessment of overlaps in data reported between the Quarterly Data Report (QDR, non-spatial) and Energy Safety GIS Data Standard (spatial) submissions.

Q1 2021 Submission Updates

- Adopted Energy Safety's updated schema (V2) which introduced significant change. This was accomplished through re-development of existing queries, re-training of Data Stewards (SMEs), and changes in overall data collection, curation, and transformation techniques.
- Incorporated additional fields (e.g., PSPSDays and PSPSDaysDateBasis in the Critical Facilities feature class) and feature classes such as 3.6.5 Major Woody Stem.
- Developed a minimum viable product with our new data management platform to help manage data pipelines across source systems and automate reporting for select feature classes. This platform will continue to develop in future quarters.

Q1 2021 Regulatory Development

- On February 4, 2021, Energy Safety released an updated GIS Data Standard (V2) that incorporated new feature classes and data fields as well as changes to the structure of the data schema.

Q4 2020 Submission Updates

- Expanded mapping of Energy Safety GIS Schema to PG&E's internal SAP schema for feature dataset 3.1 (Asset Point) and 3.2 (Asset Line).
- Enhanced the quality by addressing prioritized findings from Energy Safety Evaluation. For example, PG&E increased the specificity of the Status Report and enhanced its accuracy relative to the FGDB data submitted. Additionally, a baseline Metadata entry was delivered.
- On February 4, Energy Safety released GIS Data Standard Version 2 which incorporated new feature classes and data fields as well as changes to the data schema structure.

Q3 2020 Submission Updates

- Instituted multiple measures to improve the quantity and quality of our submission
- Increased number of Feature Classes and data attributes submitted while providing a more comprehensive Status Report.

- Implemented data collection processes to enable more efficient data collection, curation, and organization, and mapping ES GIS Schema to PG&E's internal GIS schema for 3.1 (Asset Point) and 3.2 (Asset Line).

Q3 2020 Regulatory Developments

- On January 8, 2021, the Wildfire Safety Division (for ease of reference, the Wildfire Safety Division will be referred to by its new name, Energy Safety, throughout this document) provided its Evaluation of Pacific Gas and Electric Company's First Quarterly Report (Energy Safety Evaluation) detailing findings on completeness and quality of GIS data submitted by PG&E on September 9, 2020.

Q2 2020 Submission Updates

- Included 15 of 38 feature classes and 4 of 15 related tables in the FGDB format.
- Data for another 4 feature classes and 2 related tables was submitted in tabular format as an appendix file.

Q2 2020 Regulatory Developments

- Energy Safety released its Draft GIS (Geographic Information System) Data Reporting Requirements and Schema (GIS Data Standard) on August 5, 2020.