

DATA NEEDS #6 FOR PETITION FOR MODIFICATION #1

PG&E FULTON-FITCH MOUNTAIN RECONDUCTORING PROJECT – A.15-12-005;  
D.17-12-012

Table 1 Data Needs #6 for Petition for Modification #1

ID	Applicant References	Issue	Data Need	PG&E Response
<b>Project Description</b>				<b>PG&amp;E Response</b>
PD-01	2017 IS/MND: 2.5.1 Conductor Supplemental PEA: 2.3.1.1 Southern Segment Data Needs #3: PD-01 and	<p><b>Existing and Proposed Conductor</b></p> <p>Note: this data need is a duplicate of Data Needs #5 (PD-01). It was included for clarity, so all remaining data needs are collected in one document. The CPUC requested that PG&amp;E respond by March 14, 2019. Minor clarifications regarding the data needs have been added and are <u>underlined</u>.</p> <p>Section 2.5.1 of the 2017 IS/MND describes existing and approved conductor modifications in the Southern Segment for the 60 kV line (Fulton-Hopland line) and the two 230 kV lines (Geysers #12-Fulton and Geysers #17-Fulton lines). Section 2.3.1.1 of the Supplemental PEA describes proposed changes to the approved conductor modifications in the Southern Segment based on PG&amp;E's proposal to replace existing tubular steel poles (TSPs) described in PFM #1. For clarity, existing, approved, and proposed conductor details are summarized in Tables 2a, 2b, and 2c below.</p> <p>More information is needed to determine if proposed pole and</p>	<p>a. Review conductor specifications provided in Tables 2a, 2b, and 2c for accuracy and completeness. Provide any additional or revised information as applicable.</p> <p>b. Specify if proposed conductor is fire resistant. Specify if proposed conductor is insulated <u>or covered</u>. Specify whether insulated <u>or covered</u>, fire resistant conductor exists for 60 kV or 230 kV.</p> <p>c. Provide a summary list and brief description of current design standards for proposed pole and conductor conditions (e.g., state and federal laws, regulations, or orders). Identify recent design standards imposed by CPUC to address wildfire hazards.</p> <p>d. Specify (a) which design standards have been incorporated into the proposed design already; (b) which design standards would be incorporated prior to construction with an explanation; and, (c) which design standards would not be incorporated with a rationale for why not.</p>	<p>a: Table 2C does not indicate that the existing 1113AAC 230 kV conductor will be transferred for 1.3 miles of the Geysers #12 and #17. See added columns at the bottom.</p> <p>b, c, d: Pending.</p>

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		<p><i>conductor modifications would meet current design standards for wildfire safety.</i></p>		
<b>Hydrology and Water Quality</b>				
<p><b>HWQ-1</b></p>	<p><b>Final IS/MND:</b> 3.9 Hydrology and Water Quality</p> <p><b>Supplemental PEA:</b> 2.4.6 Erosion, Sediment, and Pollution Control</p> <p><b>Data Needs #2:</b> GEO-01</p> <p><b>Data Needs #3:</b> HWQ-1</p>	<p><b>Dewatering during TSP Foundation Construction</b></p> <p>Construction of TSP foundations could require extensive dewatering based on the descriptions in the geotechnical investigation report and potential for encountering shallow ground groundwater.</p> <p>On February 15, 2019, PG&amp;E provided information on dewatering activities in response to Data Needs #3 (HWQ-01). PG&amp;E identified two options for disposing groundwater removed from foundation excavations: (1) transport off site to approved disposal facilities, or (2) discharge to land in accordance with State Water Resources Control Board Water Quality Order No. 2003-0003-DWQ, <i>Statewide General Waste Discharge Requirements for Discharges to Land with a Low Threat to Water Quality</i> (land discharge permit). A copy of the land discharge permit was provided; however, the covered activities do not specify TSP foundation construction or land discharges at volumes estimated by PG&amp;E (10,000 to 100,000 gallons or greater).</p>	<p>a. Confirm the land discharge permit covers the proposed activities and volumes identified. Identify any additional/alternative discharge permits that will be obtained, if necessary.</p> <p>b. Identify the locations where land discharge would occur. There appear to be few, if any, locations where land discharge could occur in the Southern Segment without issue. Discharge locations should be within a project area and meet the requirement specifications detailed in the permit.</p> <p>c. Complete the “pre-project” evaluation requirements specified in the land discharge permit, including identifying potential known contaminants as specified in the permit. Provide CPUC with the results and assessment of known contaminants that may be encountered.</p>	<p>a. <i>Per communication with Rachel Prat (Environmental Scientist, Regional Water Quality Control Board) on March 11, 2019, State Water Resources Control Board Water Quality Order No. 2003-0003-DWQ is applicable for land discharge of groundwater from excavation dewatering related to TSP foundation construction.</i></p> <p>b. <i>PG&amp;E and/or third-party property will be utilized for discharge of groundwater to land in accordance with applicable permit requirements. Dependent upon the volume of groundwater encountered and location of dewatering activities, PG&amp;E proposes to beneficially reuse groundwater for dust suppression within the Fulton Substation located at 605 River Road Fulton CA, 95439 or within the approved work area boundary of Helicopter Landing Zone #3 pending property owner authorization. Any excess groundwater will be beneficially reused at another suitable location or transported to an approved offsite disposal facility.</i></p> <p>c. <i>Based upon the State Water Resource Control Board GeoTracker Database, there are no known contamination sites within 1,500 feet of the proposed TSP foundation excavation locations. Contaminated groundwater is not anticipated to be encountered.</i></p>

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				<p><i>If groundwater exhibited an unusual color, sheen or smell that could suggest possible contamination, PG&amp;E would containerize and collect representative groundwater samples for characterization. Groundwater not meeting discharge limits specified in State Water Resources Control Board Water Quality Order No. 2003-0003-DWQ would be transported offsite by PG&amp;E's authorized waste hauler for disposal at an approved disposal facility.</i></p>
<b>Utilities</b>				
<b>UTL-01</b>	<b>Supplemental PEA:</b> 2.4.4.2 Pole Installation  <b>Data Needs #1:</b> UTL-01 and UTL-02  <b>Data Needs #2:</b> UTL-01 and UTL-02  <b>Data Needs #3:</b> TT-04  <b>Underground Utilities Maps (PG&amp;E 2019)</b>  <b>Arcing Risk Mitigation Requirements for Poles 9 and 10 (Corrosion Service 2019)</b>	<b>Underground Utilities Study</b> On February 20, 2019, PG&E provided maps showing underground utilities. These maps alone are insufficient and fail to provide information that has been requested regarding underground utilities. A complete Underground Utilities Study must be prepared by qualified engineers and submitted to the CPUC. The study should include a risk assessment for underground utilities at each TSP location and identify design measures to avoid impacts or an increase in hazards. The format of the study is flexible (i.e., report, memo, or detailed letter), but must include the information listed under item a.  Some but not all of the data requested under items b through g are redundant to this list and should	a. Provide a complete Underground Utilities Study (i.e., report, memo, or letter with adequate details) that has been prepared by qualified engineers, and at a minimum, includes the following information: <ul style="list-style-type: none"> <li>i. Utility details (i.e., size, pressure, capacity, voltage, and material considerations)</li> <li>ii. Utility owner and operator</li> <li>iii. Proximity to the proposed TSP foundations (rather than the point center point), including the excavation hole</li> <li>iv. An assessment of potential direct impacts and design measures for avoidance</li> <li>v. An assessment of potential indirect impacts on utilities and design measures for avoidance</li> <li>vi. An assessment of potential</li> </ul>	<i>Pending.</i>

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		<p>be incorporated into the Underground Utilities Study.</p>	<p>hazards associated with underground utilities and electrical lines (i.e., arcing, induced current, and other electrical interference) and design measures for avoidance</p> <ul style="list-style-type: none"> <li>vii. Methods, standards, and thresholds used in the study</li> <li>viii. Conclusions and limitations of the study</li> <li>ix. Preparer names, organizations, and professional qualifications</li> </ul>	
		<p><b>Potential Direct Impacts on Underground Utilities and Design Measures</b></p> <p>The underground utility maps show the center point of new TSP locations that are less approximately 7 feet from underground utilities for Poles 9, 10, 13, 14, 17, 18, and 19. Pole 14 appears to be directly on top of a gas line and electrical line. The supplemental PEA states concrete pier foundations for new TSPs would be 5 to 7 feet in diameter.</p> <p>PG&amp;E's response to Data Needs #3 (TT-04) states "Currently, based on the underground survey provided, there is no plan to modify existing underground facilities as part of the project" and no work areas were identified where utilities may need to be relocated, as requested. This statement appears to be contradicted by the underground</p>	<ul style="list-style-type: none"> <li>b. Explain the distances shown in underground utility maps in relation to the TSP foundations and excavation holes. Explain how close foundation excavations could be to the utilities before resulting in a direct impact, and when avoidance measures would be implemented.</li> <li>c. Clarify if any utilities may need to be relocated, such as at the proposed location for Pole 14 where an underground gas line and electrical line are shown.</li> <li>d. The Underground Utilities Study should clearly identify all TSPs and utilities where direct impacts could occur and explain how they would be avoided by repositioning the proposed TSP or relocating underground utilities. In such cases, PG&amp;E must provide either (1) the adjusted TSP locations or (2) engineering drawings for relocating the utilities, construction</li> </ul>	<p><i>Pending</i></p>

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		<p>utility maps that were provided. Apparent conflicts between underground utilities and the foundations for proposed TSPs must be addressed by qualified engineers. Design measures must be implemented to avoid direct impacts on utilities, such as adjusting the TSP location or relocating the utilities. This information is required to complete the CEQA review for PFM 1.</p>	<p>procedures, and records of coordination with non-PG&amp;E utility owners and operators.</p>	
		<p><b>Arcing Risks and Design Measures</b>                      On February 15, 2019, PG&amp;E provided two design drawings titled "Arcing Risk Mitigation Requirements" for TSPs 9 and 10 where grounding plans were identified along a PG&amp;E gas pipeline.                      More information is needed about the risk assessment methods, standards, thresholds, and need for mitigation to ground or reposition TSPs. A risk assessment is needed for all other TSPs in the Southern Segment.                      The arcing risk drawings include notes under the calculation summary table that reference additional explanation is provided in "PGE (AFS2017) PRO-001". This referenced document is needed to adequately interpret the calculation values and safe distances that are identified.</p>	<p>e. Provide the full report referenced in the arcing risk mitigation diagrams: "PGE (AFS2017) PRO-001."                      f. Unless provided separately in "PGE (AFS2017) PRO-001," provide methods, standards, voltage thresholds, and distance thresholds used to determine potential arcing risks and the need for risk mitigation identified in the drawings, including grounding or pole relocation.                      g. Provide the arcing risk assessments and calculations for all the TSPs that would be replaced in the Southern Segment beyond Poles 9 and 10. Provide design drawings for risk mitigation at any other TSPs like Poles 9 and 10.</p>	<p>e &amp; f. See attached Arcing Distance Assessment Studies                      g Pending</p>

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<b>Traffic and Transportation</b>			
TT-01	<p><b>Supplemental PEA:</b> 2.4.7 Traffic Control</p> <p><b>Data Needs #1:</b> TRA-02</p> <p><b>Data Needs #2:</b> TRA-01</p> <p><b>Data Needs #3:</b> TT-01</p> <p><b>Traffic Control Plans (Parameter General Engineers &amp; Services Inc. 2018)</b></p>	<p><b>Traffic Control Plans</b></p> <p>PG&amp;E's response to Data Needs #3 regarding workhours identified in the traffic control plans is not adequate. As stated previously, MM Noise-1 restricts work between 7:00 am and 10:00 pm. Operating equipment in the Southern Segment between 6:00 am and 7:00 am would violate MM Noise-1. The proposed workhours of 6:00 am to 7:00 pm should be shifted back by 1 hour to be consistent with MM Noise-1.</p> <p>In response to Data Needs #3, PG&amp;E described 1-minute traffic stops on River Road for ingress/egress to a "temporary staging area" at the Fulton Substation park and ride. This location is identified as Pull Site 1 in the Final MND and is not an approved staging area. Limited staging is acceptable at this location during conductor installation; however, the work area should not be used as a primary staging area or for storing poles. Extensive traffic stops on River Road for ingress/egress would substantially disrupt circulation and create an avoidable traffic hazard. Staging activities at Pull Site 1 should be limited to periods when conductor removal and installation occur at the adjacent poles.</p>	<p>a. Revise the Traffic Control Plans to list workhours that comply with MM Noise-1 (between 7:00 am and 10:00 pm).</p> <p>b. Given the response, specify where primary staging and pole storage would occur during construction in the Southern Segment. Specify when Pull Site 1 would be used, the number of days and weeks, and roughly how many traffic stops would be required per day for ingress/egress.</p>

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		Primary staging activities and pole storage should be directed to an approved staging area in the Southern Segment, such as SA/LZ-1, -2, and -3, or the PG&E's Airport Yard.		
TT-02	<b>Supplemental PEA:</b> 2.4.7 Traffic Control <b>Data Needs #1:</b> TRA-02 <b>Data Needs #2:</b> TRA-01 <b>Data Needs #3:</b> TT-03 <b>Traffic Control Plans (Parmeter General Engineers &amp; Services Inc. 2018)</b>	<b>Coordination with Sonoma County Regarding Road Closures and Detour Routes</b> MM Traffic-1 requires PG&E to coordinate with Sonoma County to obtain encroachment permits and review proposed detour routes. In Data Needs #3 (TT-03), CPUC requested that PG&E initiate this process with the County; provide the County with proposed traffic control plans and a detailed project schedule; and, to submit the County's comments and any traffic plan revisions to the CPUC. In response to Data Needs #3, PG&E stated the "Plan is currently being reviewed by Sonoma County."	c. Provide the schedule for County review of the traffic control plans and when the requested information will be provided to CPUC. d. Per Data Needs #3 (TT-03), ensure that all the requested information is provided to the County, including a detailed schedule of work activities when traffic controls would occur. e. Provide the County's comments on the traffic control plans and requested revisions. f. Incorporate the County comments into the final traffic plans and submit to CPUC.	<i>Pending, under County (Susan Milliron) review</i>
<b>Wildfire</b>				
WF-01	<b>PG&amp;E's Wildfire Mitigation Plan (February 2019)</b> <b>Data Needs #5:</b> WF-01	<b>Senate Bill (SB) 901 and PG&amp;E's Wildfire Mitigation Plan</b> Note: this data need is a duplicate of Data Needs #5 (WF-01). It was included for clarity, so all remaining data needs are collected in one document. The CPUC requested that PG&E respond by March 14, 2019. <i>SB 901 requires electric utilities to prepare and submit wildfire</i>	a. <i>Specify if proposed conditions applicable to PFM #1 meet PG&amp;E's recent Wildfire Mitigation Plan. Specify any plan elements that would not be met and provide a rationale for why not.</i> b. <i>Provide any revisions to PFM #1 and Supplemental PEA information that may be necessary to address PG&amp;E's recent Wildfire Mitigation Plan.</i>	<i>PG&amp;E will implement the provisions of PG&amp;E's Amended 2019 Wildfire Safety Plan, filed February 6, 2019 in response to SB 901 and the CPUC's Order Initiating Rulemaking in R.18-10-007. The Plan describes PG&amp;E's wildfire reduction programs and measures, including enhanced vegetation management, inspections, system hardening, real-time weather monitoring, enhanced SCADA and other controls, and the newly-initiated Public Safety Power Shutoff</i>

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		<p><i>mitigation plans that describe the utilities' plans to prevent, combat, and respond to wildfires affecting their service territories. On February 6, 2019, PG&amp;E and other utilities submitted their initial plans to the CPUC.</i></p> <p><i>Information is needed about PG&amp;E's recent Wildfire Mitigation Plan and its consistency with proposed conditions applicable to PFM #1.</i></p>	<p><i>(PSPS) Program. The system hardening program, an ongoing, long-term capital investment program to rebuild portions of PG&amp;E's overhead electric distribution system, calls for replacing bare overhead distribution conductors with covered conductors, select undergrounding of distribution where appropriate, replacing equipment with equipment identified by CAL FIRE as low fire risk, and upgrading or replacing transformers to operate with more fire-resistant fluids. For both distribution and transmission lines, the Plan calls for installing more-resilient steel poles to increase pole strength and fire resistance.</i></p> <p><i>The proposed project, including its proposed APMs, is consistent with PG&amp;E's Amended 2019 Wildfire Safety Plan, and no changes need to be made to PFM #1 or the Supplemental PEA. PG&amp;E will replace existing tubular steel poles with new tubular steel poles, and will not replace distribution line conductors. The new steel poles and cross arms will be stronger than the existing steel poles and cross arms, increasing their ability to withstand wildfires and reducing the risk of structure or cross arm failure. For added safety, the poles will have a larger phase-to-steel separation than required by GO 95 or PG&amp;E design criteria. The poles will also have higher conductor attachment points so that the conductors will be higher above the</i></p>

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				<i>ground, adding distance from vegetation and structures. These factors will add to the safety of the existing utility lines, reducing risks from wildfires.</i>
WF-02	<b>Supplemental PEA (Revised):</b> 3.18 Wildfires  <b>Data Needs #4:</b> EA-01	<b>CEQA Guidelines</b> On February 28, 2019, PG&E provided a partial response to Data Needs #4 regarding additional analysis in the Supplemental PEA to address the 2019 CEQA Guidelines. PG&E reported that the remaining PEA analysis on wildfire topics would be submitted the week of March 4, 2019.	c. Provide the schedule for when the remaining PEA analysis on wildfire topics will be provided.	<i>The Wildfires chapter is attached.</i>
<b>CEQA Process</b>				
CP-01	n/a	<b>Affected Properties for Mailing List</b> According to Section 15163 (c) of the CEQA Guidelines, a “supplement to an EIR shall be given the same kind of notice and public review as is given to a draft EIR under Section 15087.” Updated information on affected properties in the Southern Segment is needed to prepare the mailing list, including the associated GIS data to verify the list, as was provided during the initial application review.	a. Using current assessor information, provide an updated list (MS Excel spreadsheet) and associated GIS parcel data of affected properties in the Southern Segment within 300 feet of project facilities. Include the APN number, owner mailing address, and parcels physical address.	<i>List was sent previously. Please see attached pdf parcel maps.</i>

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**Table 2a Existing Conductor in the Southern Segment**

Existing Lines	Voltage (kV)	Existing Conductor Type	Total Length
Fulton-Hopland	60	4/0 aluminum	1.8 miles
Geysers #12-Fulton	230	Bundled 113 <i>kcmil</i> <sup>1</sup> all-aluminum conductors (AAC)	1.8 miles
Geysers #17-Fulton	230	Bundled 113 <i>kcmil</i> AAC	1.8 miles

**Table 2b Approved Reconductoring in the Southern Segment (2017 Final IS/MND)**

Existing Lines	Voltage (kV)	New Conductor Type	Reconductoring Length	Transfer Length
Fulton-Hopland	60	477 <i>kcmil</i> aluminum composite steel-supported (ACSS) & 477 <i>kcmil</i> aluminum conductor composite reinforced	1.8 miles	--
Geysers #12-Fulton	230	954 <i>kcmil</i> ACSS 54/7 "Cardinal" conductor	1.4 miles	0.4 mile
Geysers #17-Fulton	230	n/a	--	1.8 miles

**Table 2c Proposed Reconductoring in the Southern Segment (2018 PFM #1)**

Existing Lines	Voltage (kV)	New Conductor Type	Reconductoring Length	Transfer Length
Fulton-Hopland	60	477 <i>kcmil</i> ACSS conductor	1.8 miles	--
Geysers #12-Fulton	230	Single-strand 945 <i>kcmil</i> ACSS	400 feet	
Geysers #17-Fulton	230	Single-strand 945 <i>kcmil</i> ACSS	400 feet	
Geysers #12-Fulton	230	n/a	--	1.3 miles
Geysers #17-Fulton	230	n/a	--	1.3 miles

<sup>1</sup> *kcmil* (1,000 circular mils) is a unit of measure for the size of a conductor. *Kcmil* wire size is the equivalent cross-sectional area in thousands of cmils. A *cmil* is the area of the circle with a diameter of 0.001 inch.

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