Data Request #1

Project:	LS Power Grid's Collinsville 500/230 kV Substation Project (project)
Description:	Data Request #1
From:	California Public Utilities Commission (CPUC) and Panorama Environmental Inc. (Panorama)
To:	Pacific Gas and Electric Company (PG&E)
Date Submitted:	September 27, 2024

OVERVIEW

The data requested in Table 1 below is in reference to Pacific Gas and Electric Company's (PG&E) participation in LS Power Grid's (LSPGC) Collinsville 500/230 kV Substation Project (project), as described in the Proponents Environmental Assessment (PEA) prepared for the project. A complete copy of the PEA is available at: https://ia.cpuc.ca.gov/environment/info/panoramaenv/Collinsville/

TABLE 1 DATA REQUESTED FROM PG&E

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Application, pages 2 and 9-10 PEA Chapter 3, page 3-1 Section 3.3.1	**DR-1: PG&E Project Activities and Application Participation** The Application states: "…Certain Interconnection Facilities, Network Upgrades, and Distribution Upgrades to support the Project will be the responsibility of Pacific Gas & Electric Company (PG&E) and are analyzed in the Proponent's Environmental Assessment (PEA) included with this Application, but such PG&E facilities are not a part of the "Project" for which LSPGC seeks a CPCN pursuant to this Application." The Application also states: Also described in the PEA are certain PG&E facilities that are separate and distinct from the Project and which are not a part of this Application, but will be completed by PG&E to support the operation of the Project. The additional facilities include: 1. Interconnection Facilities – a. Modifications to the existing Vaca Dixon, Tesla, and Pittsburg Substations. b. 500 kV interconnection of the existing Vaca Dixon – Tesla 500 kV line into the Collinsville Substation. 2. Network Upgrades – PG&E is undertaking a facility scope requirements study and system studies to identify any required network upgrades. No network upgrades have been identified by PG&E or affected systems as of the date of the filing. 3. Distribution Upgrades – installation of extended distribution line facilities near the Collinsville Substation. The introduction in Chapter 3 states: "…Although PG&E's Interconnection Facilities are part of the Proposed Project being evaluated under California Environmental Quality Act (CEQA), PG&E's construction is not part of this application and does not require authorization under this specific California Public Utilities Commission (CPUC) decision. However, PG&E's work to interconnect the LSPGC facilities into PG&E's electrical system would be subject to all applicable regulatory requirements. In addition, PG&E would implement Construction Measures (CMs) during construction of its Proposed Project components, and these CMs would be considered by the CPUC in its environmental review of the Proposed Project." Section 3.10.1 sates: "… Although PG&E is not an applicant in LS Power's application for a CPCN, PG&E's scope of work is needed to interconnect the Proposed Project to PG&E's electrical grid. PG&E's substation modification and transmission line extension would be included in the CPUC's CEQA analysis. However, PG&E would likely utilize the adopted CEQA document to separately comply with the CPUC's permitting requirements under GO 131-D." PG&E is not a co-applicant; however, LSPGC states major portions of the proposed project would be constructed by PG&E and there is insufficient information in the PEA regarding PG&E work activities and impact areas. LSPGC has suggested CPUC coordinate directly with PG&E regarding the project elements described in the project description. The application and PEA are considered deficient until the CPUC	Please review PEA Chapter 3, Project Description, provided by LSPGC for accuracy and completeness. If any information is incorrect or incomplete about PG&E's involvement in the proposed project, including the PG&E project components and construction and operational activities, please provide corrections, as well as any supplemental information to further define PG&E's proposed activities that should be included in the EIR Project Description being prepared by CPUC.	LS Power did not include our latest information; we added that and updated and revised where appropriate, based upon the preliminary information available.
		Please provide PG&E interconnection studies completed for the project.	This project was initially approved by CAISO as a policy project. System impact studies are being performed by PG&E to capture impacts in addition to what was identified in the Functional Specifications. The studies are currently in progress and expected to be complete in Q3 of 2025. PG&E will provide a confidential copy upon completion. For your reference, attached is the link to the Functional Specifications starting on page G-11 from the CAISO website. Microsoft Word - AppendixG-RevisedDraft-2021-2022TransmissionPlan_R2 (2).docx
		Please explain the status of PG&E's design for their elements of the proposed project, and identify where there may be gaps in the design or unknown factors, including when and how they would be addressed.	Substation – • Tesla – Design is anticipated to start in December 2024 and complete in Q4 2025. • Vaca Dixon – Design is anticipated to start in December 2024 and complete in Q2 2026. • Pittsburg – Design started in August 2024 and anticipates completion by Q3 of 2026. T-line • Design is in progress with 60% complete. The remaining design completion is anticipated in Q3 2025. Completion of design schedule is dependent on Collinsville 500 kV final dead-end structure drawings inside the new substation. Distribution 12kV line: • Design is anticipated to start in Q1 of 2025.

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	can resolve questions related to PG&E's scope of work, PG&E's anticipated GO 131-D requirements and their reliance on the EIR for CEQA compliance, and implications for the project if PG&E's CMs are determined to be inadequate to avoid or reduce impacts to less-than-significant levels and if mitigation measures are required.		The known gaps are the line termination points at Collinsville and Pittsburg Substation. Both teams will coordinate dead-end structure designs and locations.
		Please explain PG&E's anticipated permitting pathway/regulatory compliance with GO 131-D, and expectations about how the EIR would be used for a potential GO 131-D exemption in the future.	Under the current rules and known facts, it appears that PG&E's work scope will not require a formal PTC or CPCN under GO 131-D. PG&E's work at existing substations is within existing substation boundaries and thus does not require formal permitting. The 1.2-mile extensions from the existing 500 kV line will likely be considered "extensions, expansions, upgrades or other modifications" in GO 131-D, Section III.A that will enable them to be eligible for the larger-project CEQA exemption in Section III.B.1.f., assuming that the lead agency finds no significant and unavoidable impacts from PG&E's facilities. As such, PG&E would file an advice letter/NOC using the CPUC's CEQA document.
Section 3.12, Table 3-16	**DR-2: PG&E Construction Measures** The CPUC is in the process of determining if and how PG&E's CMs, and potential mitigation measures, may or may not be enforceable since PG&E is not an applicant, and the implications for CEQA review and impact determinations. If PG&E's CMs are not adequate or enforceable, it may not be possible to obtain an exemption pursuant to GO 131-D. More information is needed about PG&E's assumptions and procedul questions related to PG&E's CMs.	Please explain the source of PG&E CMs identified in the PEA and how they were developed. If they were from or derived from existing standard measures, please provide copies or links to any sources.	PG&E's Construction Measures are project-specific. The Bio measures are generally taken from the general and applicable specific measures in the applicable programmatic area plan, here the BAHCP/ITP. A standard Nesting Birds measure is generally also included. The standard Cultural measures include worker training, inadvertent discovery and discovery of human remains; more are included if warranted by the site, as recommended by the Cultural SME. In addition, our project SMEs provided measures commonly used in similar projects for Geology, Haz Mat, Air Quality, and Hydro. We do not have a standard source for construction measures.
		Please explain PG&E proposed implementation process for the CMs identified for the project, with the assumption that a future GO 131-D exemption occurs. What is the proposed enforcement mechanism for the CMs and any mitigation measures in the EIR?	Because PG&E is not an applicant for a discretionary permit in this proceeding, there are no mitigation measures that apply to PG&E. PG&E's interconnection facilities are part of the project being evaluated under CEQA, but are not part of the project being approved. Thus, the CPUC must review the proposed PG&E construction along with its CMs incorporated to determine whether, if implemented as described, impacts from PG&E's facilities would be less than significant. If the proposed measures are not adequate to reduce impacts to less than significant, then the CPUC should notify PG&E to include additional measures. Enforceability in the CEQA context does not apply here; if PG&E is going to use the LS Power CEQA document to qualify for an exemption under GO 131-D, then it must incorporate the CMs as described in the document. Please see LS Power's Round Mountain 500 kV Area Dynamic

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			Reactive Support Project, which lists PG&E's construction measures beginning at page 5-21 of the MMCRP (Table 5-1) and provides "PG&E and its designated contractors to implement measure as described" and "PG&E to track and maintain its own compliance." The CPUC can, of course, request proof of compliance or otherwise ensure that the measures are complied with outside of the CEQA context. We had a meeting concerning this issue with Connie Cheng and CPUC legal, but perhaps we need to have another meeting that includes the CPUC consultant so that we are all on the same page.
Section 3.2.2.1.4, page 3-13 Section 3.3.1, page 3-14 Section 3.3.5, page 3-39	**DR-3: Modifications at PG&E's Existing Vaca Dixon and Tesla Substations** Section 3.2.2.1.4 states: "PG&E's existing Pittsburg Substation would be modified by shifting line positions, bus work, and modifying electrical equipment to facilitate the connection of the proposed LSPGC 230 kV Transmission Line. In addition, PG&E's existing Vaca Dixon and Tesla substations would receive modifications to their bus structures and electrical equipment to accommodate the proposed PG&E 500 kV Interconnection. All modifications would be confined within the existing substation fence lines." Section 3.3.1 of the Project Description states: "LSPGC has completed approximately 30 percent of the engineering design, and PG&E has completed approximately 30 percent of the engineering design on the Proposed Project. As such, the information in this document is based on preliminary engineering designs and is subject to change based on additional and/or final engineering designs; further studies to be performed by PG&E; regulatory requirements; conditions on the ground; and/or ongoing coordination discussions among LSPGC, PG&E, the CPUC, and CAISO." Section 3.3.5 states: "Modifications to PG&E's existing Vaca Dixon and Tesla substations would involve modifying the line relays in addition to potential series capacitor modifications at PG&E's existing Vaca Dixon Substation. Microwave modifications may also be needed at these substations to provide a high-speed communication path to the proposed LSPGC Collinsville Substation…" The potential temporary and permanent impact areas at PG&E's existing Vaca Dixon and Tesla substations have not been identified.	Please explain if any new microwave towers may be installed at or within existing PG&E substations, and if so, identify the locations.	There are no plans to install new microwave towers within existing PG&E substations. The only proposed microwave tower installation is in the new PG&E communication yard next to Collinsville Substation.
		Please identify all proposed or potential temporary and permanent impact areas for PG&E's existing Vaca Dixon and Tesla substations. Provide GIS data and figures.	New installations and modifications will be within the existing substation fence currently with developed subsurface. Temporary and permanent impact areas for Vaca Dixon and Tesla are shown in the attachment. Tesla Arial View.pdf Vaca_Dixon_500kV Yard Arial View.pdf
		Please confirm no existing substation footprints would be expanded.	There are no plans to expand existing substation footprints.
Section 3.5.13.2 Section 3.8 Section 3.8.5 Section 5.9	**DR-4: Minimum Vegetation and Equipment/Structure Clearances Distances** GO 95 is referenced in Section 3.5.13.2 of the Project Description in relation to fire breaks. GO 95 is also discussed in Section 5.9: Hazards, Hazardous Materials, and Public Safety, where it states the project would be constructed and maintained to meet GO 95 vegetation clearances for fire prevention and equipment clearances for electric shock prevention. Section 3.8 states: "The Proposed Project would be operated and maintained to meet all GO 95 requirements, including minimum vegetation and equipment	Please provide a table that identifies the minimum vegetation and equipment/structure clearance distances that PG&E would maintain (and which regulations dictate these minimum distance) for the 500 kV interconnection. Please provide both vertical and horizontal distances that would be maintained. Similar information has been requested of LSPGC based on the project description references, and PG&E and LSPGC should coordinate to ensure this requested information is consistent.	Please see case 13 from attached GO 95 table

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	clearances, in addition to the vegetation clearance requirements in California PRC Section 4292 and Title 14, Section 1254 of the California CCR." Section 3.8.f states: "In accordance with fire break clearance requirements in GO 95, PRC Section 4292 and Title 14, Section 1254 of the CCR, LSPGC and PG&E would trim or remove flammable vegetation in the area surrounding the Proposed Project and all other safety hazards. Proposed Project-specific vegetation clearances would be determined by the CPUC. One-person crews typically conduct this work using mechanical equipment consisting of weed trimmers, rakes, shovels, and leaf blowers. State-approved herbicides would also be applied to treat bare-ground areas, as needed, during O&M activities. Pesticides would not be used during O&M activities. The proposed LSPGC 230 kV Transmission Line and Collinsville Substation would be inspected on an annual basis to determine if vegetation trimming or clearing is required. LSPGC and PG&E vegetation management activities would ensure a continuous defensible area around the substation and within transmission line ROW." The CPUC would not define project-specific vegetation distances beyond what is already required by GO 95 and California PRC Section 4292 and Title 14, Section 1254 of the California CCR.		go 95 appendix e-guidlines https://ia.cpuc.ca.gov/gos/GO95/go_95_appendix_e-guidlines.html Previous Code | Main Page | GO 95 Startup Page | Change List for this Rule | Search GO 95 | Section Main Page | Next Code **General Order 95** **Appendix E** **Clearance of Poles, Towers and Structures from Railroad Tracks** The following are guidelines to Rule 35 . The radial clearances shown below are recommended minimum clearances that should be established, at time of trimming, between the vegetation and the energized conductors and associated live parts where practicable. Reasonable vegetation management practices may make it advantageous for the purposes of public safety or service reliability to obtain greater clearances than those listed below to ensure compliance until the next scheduled maintenance. Each utility may determine and apply additional appropriate clearances beyond clearances listed below, which take into consideration various factors, including: line operating voltage, length of span, line sag, planned maintenance cycles, location of vegetation within the span, species type, experience with particular species, vegetation growth rate and characteristics, vegetation management standards and best practices, local climate, elevation, fire risk, and vegetation trimming requirements that are applicable to State Responsibility Area lands pursuant to Public Resource Code Sections 4102 and 4293. **Voltage of Lines** / **Case 13 of Table 1** / **Case 14 of Table 1** Radial clearances for any conductor of a line operating at 2,400 or more volts, but less than 72,000 volt — 4 feet — 12 feet Radial clearances for any conductor of a line operating at 72,000 or more volts, but less than 110,000 volts — 6 feet — 20 feet Radial clearances for any conductor of a line operating at 110,000 or more volts but less than 300,000 volts — 10 feet — 30 feet Radial clearance for any conductor of a line operating at 300,000 or more volts — 15 feet — 30 feet Note: Added November 6, 1992 by Resolution SU-15 and revised September 20, 1996 by Decision No. 96-09-097 , August 20, 2009 by Decision No. 09-08-029, January 12, 2012 by Decision No. 12-01-032, December 21, 2017 by Decision 17-12-024.
Section 3.6.5, page 3-116 Table 3-16	**DR-5: Power Clearances and Potential Night Work** Section 3.6.5 states: "…Night work is not anticipated to be necessary, but could be required in limited circumstances, such as clearance restrictions…." The use of temporary lighting is discussed in APMs and CMs.	Please provide a detailed description of power clearances for the project related to PG&E activities, and potential night work that may be required to accommodate power clearance windows.	Clearances will be required to replace and install new line transpositions, loop in new 500kV line to Collinsville substation, rearrange and tie-in two new 230kV lines to Pittsburg substation, install 115kV reactor to the 115kV bus at Pittsburg substation, modification of existing series capacitor at Vaca Dixon substation, new relay install & upgrades in all three remote substations (Vaca, Tesla, Pittsburg) and two PG&E control centers. The plan at this point is to take long clearances during the Nov-March 2027-2028 timeframe. The plan is to construct during the day. Night activities would only occur under unforeseen and emergency conditions for restorations for both the lines and substation.
		Identify the locations of potential night work associated with power clearances and provide an estimate for the number of days night work could be required to ensure associated impacts are adequately considered.	Emergency conditions could occur during either the substation or line work. The number of days would depend on the nature of the emergency. The project is in the preliminary planning stages and all work is being planned to occur during daytime hours.
Section 3.3.4.2.1, page 3-39 Section 5.9.1.4	**DR-6: Gas Pipeline and Potential Cathodic Protection/Grounding from Induced Current** Section 5.9.1.4 states: "One gas transmission pipeline crosses the Delta and Lower Sherman Island approximately 0.6 mile east of the proposed LSPGC 230 kV Submarine Cable. Additionally, this gas transmission pipeline travels through Solano County, and the proposed LSPGC Collinsville Substation would be approximately 0.5 mile west of the pipeline. The proposed PG&E 500 kV Interconnection would parallel	Please provide the timeframe for completing the induction study.	The induction study is currently under way. The preliminary report is expected in Spring 2025.

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	this pipeline along an unnamed access road off Talbert Lane for approximately 0.4 mile." This pipeline appears to be identified on Figure 5.9-2 and a potentially associated land scar along the pipeline corridor visible in Google Earth imagery indicates that the pipeline may be roughly 80 to 130 feet away from the base of proposed 500 kV structures. Section 3.3.4.2.1 states: "…PG&E would conduct an induction study to evaluate the potential effects of the proposed PG&E 500 kV Interconnection on the pipelines in the vicinity, and would follow applicable standards of the NESC pertaining to the need for interference analysis and anti-corrosion/cathodic protection, pending final design and engineering of the interconnections…" Geneal project activities such as cathodic grounding or the installation of similar facilities are standard and foreseeable actions, particularly due to the 500 kV line's proximity to the existing gas line, and they should be defined as part of the proposed project, so the associated impacts and impact areas are considered in the EIR.	Once complete, please provide the induction study as well as a description of any project changes to address induction (compared to what is provided in the Project Description and subsequent comments provided by PG&E). Ensure the description of potential activities and any changes to project features are described in detail.	PG&E will provide the induction study report when finalized after Spring 2025
		Please estimate the approximate length of the existing pipeline and identify the specific segment location, as well as the maximum distance surrounding the pipeline, that could be subject to grounding actions and potential disturbance to address the potential for induction. This information will be used preliminarily while waiting for the results of the induction study to determine the extent of potential environmental impacts along the pipeline.	The maximum area that would be possibly affected by any mitigation would be 1 meter on either side of the pipe (2-meters side to side) and extend the length of total pipeline in parallel (approximately 1 mile).
3.5.3.1.6, page 3-43 Section 3.5.5.2, page 3-51	**DR-7: Temporary Guard Structures** Section 3.5.3.1.6 states: "Guard structures are temporary facilities that would be installed at transportation and utility crossings prior to conductor installation and removal. Due to the lack of transportation and utility crossings at the proposed overhead conductor locations, guard structures are not anticipated to be required as part of the Proposed Project." Section 3.5.5.2 states: "…Safety devices (e.g., traveling grounds, guard structures, or radio-equipped construction crews) would be in place prior to the initiation of wire-stringing activities."	Please identify the specific project locations, if any, where guard structures may be installed and provide a description of the various types and methods that may be used.	Based on the current design, temporary guard structures are not anticipated.
Section 3.8.4.1.2 , page 3-92	**DR-4: Inspection and Maintenance Access to Structures** Section 3.8.4.1.2 states: "…Should structures require direct access during maintenance, overland access consistent with easement access rights and in coordination with the landowner would be utilized…." In a separate response, LSPGC stated "…All maintenance access will be overland travel and may be different than original construction access and dependent on easement access rights with the landowner(s)." During operation and maintenance, structure and line inspections would be required and direct vehicle access to reach the structures is a foreseeable action, which would result in occasional, long-term ground impacts.	Please describe PG&E's ground access requirements and procedures for accessing the interconnection line and structures during operation and maintenance.	Minor grading for temporary access will remain in place. No formal permanent access roads will be created or required for maintenance and operation.
Sections 3.1.1, 3.3.4.1.1, 3.3.8, and 3.3.9	**DR-7: Substation Microwave Tower** The Project Description describes a new microwave tower that would be constructed, owned, and operated by PG&E within the proposed Collinsville Substation. There is insufficient information about the microwave tower design and visual characteristics included in the Project Description. While the PEA states PG&E would construct the microwave tower, basic information is needed about the structure and construction methods.	Please provide a description of the microwave tower design and form, including the tower type (i.e., monopole or lattice), surface color(s) and finish(es), foundation, construction methods, etc. Specify if the substation tower would/could require guy wires or support structures, or if it would be self-supporting.	The plan is to install roughly 120 feet of self-supported three-legged lattice for the microwave. The surface is a typical silver color with pad foundation. Traditional civil construction method is planned, with testing the concrete for cure time and assembling the tower in sections.

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Section 3.10 Table 3-13	**DR-8: Anticipated Permits and Approvals** Refer to anticipated permits and approvals identified by LSPGC for the project in Table 3-13.	Please identify and explain specific permits or approvals PG&E would obtain from jurisdictional agencies to address PG&E project features and activities (construction and operation). Please identify any existing PG&E permits that would apply to the project construction or operation.	Except for CPUC permitting and coverage under the BAHCP/ITP, and potentially a grading permit, PG&E is not expecting to obtain any additional permits.
n/a	**DR-9: Geotechnical Reports**	Please provide a timeline for completing geotechnical reports for PG&E portions of the project.	Geotechnical report is anticipated in May 2025
		Please provide the geotechnical reports prepared for PG&E portions of the project.	Geotechnical report is anticipated in May 2025
n/a	**DR-10: PG&E Bay Area Operation and Maintenance Habitat Conservation Plan (HCP)**	Please explain if and how PG&E's Bay Area Operation and Maintenance HCP would be used for the project.	The proposed PG&E interconnection project scope consists of construction of the new 500 kV transmission lines, installation or replacement of transposition towers on the Vaca-Dixon 500 kV circuit, and associated reconductoring of new and replacement transposition structures. PG&E will also conduct improvements to the Vaca-Dixon and Pittsburg substations to accommodate connection to the proposed LS Power Collinsville Substation. These covered activities appear to meet the conditions of BAHCP/ ITP Number: TE56826C-0. Verification will be obtained concerning any questions. If individual permitting is required, it will be pursued.
		Please identify any PG&E portions of the project that would not be covered by the HCP.	PG&E's proposed activities as described above and in the PEA are assumed to be covered activities under the BAHCP/ITP. Specifically, covered activity **E13. Tower Line Construction** covers new transmission line construction, and **E4. Substation Maintenance** covers minor substation modifications to accommodate interconnection with the proposed Collinsville substation. Covered activity **E9. Reconductoring**, will cover reconductoring activities associated with installation and energizing new and replacement transposition towers.
		Please identify known gaps in HCP coverage for the PG&E activities associated with the project or the covered species.	No gaps in HCP coverage for the various components of the project or species have been identified, although confirmation of coverage will be obtained. This project was reviewed for coverage by the PG&E project biologist and PG&E HCP administrator.
		Please explain PG&E's approach for obtaining ITP permits, if applicable, for potential impacts on any species that are not covered in the HCP.	PG&E plans to 1) complete a supplemental BRTR study of the reconductor/transposition tower installation sites (2) near Travis AFB, and 2) consult with CDFW if warranted after the supplemental study is completed.