Pacific Gas and Electric Company

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May 22, 2025

Tharon Wright
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California Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102
VIA EMAIL

RE: CPUC Data Request #7 for PG&E's Moraga to Oakland X 115 Kilovolt Rebuild Project (A.24-11-005)

Dear Ms. Wright,

This letter is in reply to your March 24, 2025, letter in which you request certain additional information regarding Pacific Gas and Electric Company's (PG&E's) application (A.24-11-005) for a Permit to Construct (PTC) and Proponent's Environmental Assessment (PEA) for the Moraga-Oakland X 115 kilovolt (kV) Rebuild Project (project). The original text for each data request item from the California Public Utilities Commission (CPUC) is included, followed by PG&E's response.

This letter provides PG&E's response to items ATL-2, ALT-3, ALT-4 and ALT-5. Please refer to the Data Request #7 Part A response provided on April 22, 2025 for the other items.

There are three attachments to this letter to support PG&E's response:

- Confidentiality declaration for attachments below
- Confidential Geographic Information System (GIS) data of underground PG&E electric distribution assets (file name: MOX_PGE_EDIST_UG.gdb.zip)
- Confidential GIS data of underground PG&E gas distribution assets (file name: Gas Distribution Assets - 740368555.gdb.zip)

PEA Chapter 4, Alternatives

ALT-2 What standards or slope limitations and distance trigger "special measures" for underground power line installation, such as cable grips or anchoring?

Where a cable enters or exits a vault, a cable grip or cable clamp is used to hold the cable in position. An additional vault, between the larger splice vaults, may be included in a design where necessary to address duct bank slope, cable weight, or cable movement within the conduit. Typically, "special measures" are project-specific and would be determined during detailed design. Anchoring is used in submarine cable installation, which is not part of this project.

ALT-3 PG&E's existing distribution system in the project area is both overhead and underground. Some of the roadways included in PG&E's underground alternatives contain PG&E "high voltage" vaults showing where distribution lines appear to have been placed underground.

a. Please provide a map and/or GIS data showing the locations of PG&E's existing underground distribution system within a 1-mile radius of the project right-of-way between Manzanita Drive (RN10/RS10) and the overhead-to-underground transition location at Estates Drive and Park Blvd.

Please refer to separate confidential transmittal of GIS data showing the locations of PG&E's existing electric and gas underground distribution system within a 1-mile radius of the project right-of-way between Manzanita Drive (RN10/RS10) and the overhead-to-underground transition location at Estates Drive and Park Blvd.

Additional information about the types of underground utilities in the project area is provided in the PEA at page 5.19-3 in Section 5.19.1.3, Utility Lines. For example, the City of Oakland Sewer Dashboard, accessible at https://arcg.is/mm8TG, provides locations of stormwater and sewer utilities in city roadways.

b. Specifically, Aspen observed overhead and underground distribution in segments of the following roadways: Manzanita Drive; Skyline Blvd; Colton Blvd; Heartwood Dr; Mountain Blvd; Snake Road; Scout Road; and Ascot Drive. In each segment of the aforementioned roadways that contains underground distribution lines, please state whether there would be space for 2 or 4 circuits to be installed underground in the roadway.

The space for 2 or 4 circuits to be installed underground was reviewed using the following road widths:

- At least 18 feet to install 2 circuits (one double-circuit duct bank) and vaults.
- At least 32 feet to install 4 circuits (two double-circuit duct bank) and vaults.

Where responses discuss existing utility relocation, relocation may be within the named roadway or nearby roads depending on utility density, placement of duct bank/vaults, and available road width. Please note that the discussion addresses only the road width needed to accommodate the completed underground duct banks and vaults. Additional road width may be required in some locations for geotechnical work to inform the underground power line design, construction equipment to access and operate at construction sites, or to construct retaining walls or other structures to address geotechnical issues. Refer to PEA Section 4, Description of Alternatives, for additional information.

Manzanita Drive (between Skyline Boulevard/ Pinehurst Road and Skyline Boulevard/Snake Road)
Skyline Boulevard (between Ascot Drive and Snake Road)

Manzanita Drive and Skyline Boulevard do provide adequate space for 2 circuits (one double-circuit duct bank) and vaults; however, existing underground utilities including electric distribution, sanitary sewer, communications, water, and gas distribution may need to be relocated within or adjacent to the paved road surfaces, or to nearby roads. Manzanita Drive and Skyline Boulevard does not provide adequate space for 4 circuits (two double-circuit duct banks) and vaults. For example, the road width between addresses 1965 Manzanita Drive and 2025 Manzanita Drive would not have enough space and the road width between addresses 7525 Skyline Boulevard and 7755 Skyline Boulevard would not have enough space.

Colton Boulevard (between Skyline Boulevard and Mountain Boulevard)

Colton Boulevard does provide adequate space for 2 circuits (one double-circuit duct bank) and vaults; however, existing underground utilities including sanitary sewer, communications, water, and gas distribution may need to be relocated within or adjacent to the paved road surface, or to nearby roads. Colton Boulevard does not provide adequate space for 4 circuits (two double-circuit duct banks) and vaults. For example, the road width between addresses 6706 Colton Boulevard and 6948 Colton Boulevard would not have enough space.

Heartwood Drive (between its two intersections with Colton Boulevard)

Heartwood Drive does provide adequate space for 2 circuits (one double-circuit duct bank) and vaults; however, underground utilities such as sanitary sewer and gas distribution may need to be relocated within or adjacent to the paved road surface, or to nearby roads. Heartwood Drive

does not provide adequate space for 4 circuits (two double-circuit duct banks) and vaults. No portion of Heartwood Drive provides the necessary roadway width.

Mountain Boulevard (between Colton Boulevard and Ascot Drive)

Mountain Boulevard does provide adequate space for either 2 circuits (one double-circuit duct bank) and vaults or 4 circuits (two double-circuit duct banks) and vaults.

Snake Road (between Skyline Boulevard and Mountain Boulevard)
Scout Road (between Mountain Boulevard and Ascot Drive)

Snake Road and Scout Road do provide adequate space for 2 circuits (one double-circuit duct bank) and vaults; however, several underground utilities such as sanitary sewer, storm drainage, and gas distribution may need to be relocated within or adjacent to the paved road surfaces, or to nearby roads. Snake Road and Scout Road does not provide adequate space for 4 circuits (two double-circuit duct banks) and vaults. For example, the road width between addresses 5727 Skyline Boulevard and 5851 Snake Road would not have enough space and no portion of Scout Road provides the necessary roadway width.

Ascot Drive (between Skyline Boulevard and Mountain Boulevard)

Ascot Drive does provide adequate space for 2 circuits (one double-circuit duct bank) and vaults. However, several underground utilities such as electric distribution, sanitary sewer, storm drainage, and gas distribution may need to be relocated within or adjacent to the paved road surface, or to nearby roads. Ascot Drive does not provide adequate space for 4 circuits (two double-circuit duct banks) and vaults. For example, the road width between addresses 5650 Ascot Drive and 5840 Ascot Drive would not have enough space.

ALT-4 Please discuss whether there is adequate space in Shepherd Canyon, from Fire Station 24 to its intersection with Manzanita Drive to accommodate either 2 or 4 circuits underground.

The eastern segment of Shepherd Canyon Road between Saroni Drive and Manzanita Drive was not identified as a route option in the PEA Section 4.2.1 because it is not reasonably feasible to install, operate, or maintain 2 circuits (one double-circuit duct bank) or 4 circuits (two double-circuit duct banks) because of the road width, road geometry, and geological conditions.

The segment of Shepherd Canyon Road between Saroni Drive and the City of Oakland Municipal Service Yard (across the road from the fire station) was included in the PEA Alternative C. Refer to PEA Section 4.2.3.3 at page 4-17 where the feasibility of installing two double-circuit duct banks is discussed. The road width discussion for this alternative is:

> *Saroni Drive and Shepherd Canyon Road generally are narrow roadways, which presents constraints to construction. As discussed for Alternative B, a minimum road width of 22 feet is needed to fit both double duct banks, and temporary construction areas wider than 22 feet would be needed for some construction activities.*
>
> *Shepherd Canyon Road is known to contain utilities. Maps provided by the City of Oakland show that water and sewer are in the roadway; other utilities also may be present. However, utilities, including sewer and water, natural gas distribution, and telecommunication lines, are expected to be present in the roadways in unknown locations. The utilities may present additional constraints if they cannot be relocated to provide enough room for the duct banks. Where road width is not sufficient, temporary or permanent widening of the road may be required. The Montclair Railroad Trail, a paved recreational trail located along the northern side of a portion of Shepherd Canyon Road, could potentially be used if additional width were needed. The trail would require long-term closures for geotechnical investigation and then construction. Saroni Drive likely would need to be fully closed during construction activities for several weeks and Shepherd Canyon Road between*

> *Escher Drive and Oakland Fire Station No. 24 would close for up to several months; work areas within roadways typically require the width of at least two lanes and most of the roadways do not have a road shoulder (PEA at 4-18).*

A road that accommodates the width of the duct bank is only one of the considerations when routing alternatives. Associated power line infrastructure such as power line vaults and transition stations (refer to subheading, Transition Stations, PEA at 4-13 and 4-17) also contribute to whether there is adequate space in a roadway for one or more double-circuit duct bank. In the PEA Alternative C, the extensive engineering and constructability issues, other than road width, specifically geotechnical conditions, are discussed under a subheading, Deflection and Landslides, at PEA 4-13.

ALT-5 Independent of existing utilities, what is the minimum roadway width to accommodate 2 circuits?

The road width necessary to accommodate 2 circuits is primarily driven not by the width of the circuits themselves, but the vaults and space needed to install the facilities. Refer to PEA Figure 3.3-6 for the typical duct bank width of 4 feet for a double-circuit duct bank. The associated power line vaults for a double-circuit duct bank will be approximately 22 feet by 12 feet by 10 feet. A minimum width would need to be at least 18 feet in a horizontal plane to install a vault. This width is defined by the vault size and width (12 feet) as well as excavation space needed to place the vault (3 feet on either side of vault). Independent of existing utilities, whether a roadway can accommodate the design of a double-circuit duct bank includes numerous geotechnical, engineering, construction, operation, and maintenance considerations as discussed in PEA Chapter 4.1, Description of Alternatives. For example, road geometry (including slope and grade) must be considered as well as discussed in PG&E's response to the CPUC Energy Division's DR 6 ALT-1a and ALT-1b. Road geometry of 18 feet in the horizontal plane may not always accommodate adequate lateral and longitudinal space for a double-circuit duct bank.

We trust the information provided herein is fully responsive to your requests. However, should you have any further requests, please contact me at **415-990-6001** or **BXLG@pge.com**.

Sincerely,

Principal Land Planner

cc:
Michelle Wilson, CPUC CEQA Unit
Erica Schlemer, PG&E Law Department
Colleen Taylor, Jacobs
Hedy Koczwara, Aspen Environmental Group