Pacific Gas and Electric Company

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March 20, 2025

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

RE: CPUC Data Request #4 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 February 26, 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.

There is one attachment to this letter to support PG&E's response:

- Attachment 1 – Two Figures Supporting AES-4b Response
  - Figure 1 – DR4 AES-4b Existing and Proposed View
  - Figure 2 – DR4 AES-4b Existing and Proposed View with Interset Structures.

CPUC Data Request Item AES-4

Aesthetics

PEA Table 5.1 3 (Summary of Visual Change at KOPs) and PEA Section 5.1.4 (Key Observation Point 6a: Balboa Drive at West Circle)

AES-4 PEA Figure 5.1-8B presents a visual simulation that captures an inline view of two taller replacement lattice steel poles (LSPs) (Structure Nos. RN15 and RS15 - 133 feet tall each) in the foreground primary cone of vision of eastbound travel on Balboa Drive/West Circle and two taller LSPs and two tubular steel poles (TSPs) farther upslope that would replace six existing LSTs ranging in height from 67 feet to 86 feet. The foreground pair of replacement structures would be substantially taller than the existing structures (82% increase in structural heights).

a. Please explain the need for PG&E's proposed increase of heights to Towers RN15/RS15 as no adjacent towers are proposed for removal and the span length would be similar to the existing line.

b. With the addition of a pair of interset towers upslope from RN15/RS15 and approximately mid-way to the next pair of structures (RN14/RS14), what would the resulting tower heights be for the interset towers, Towers RN15/RS15, and Towers RN14/RS14?

c. Please provide information on the necessity for and location of cranes and any temporary road closures, if needed to support installation of interset towers upslope of RN15/RS15.

d. How many trees would need to be replace and/or trimmed with the placement of interset towers in this location?

PG&E's Response

a. Please explain the need for PG&E's proposed increase of heights to Towers RN15/RS15 as no adjacent towers are proposed for removal and the span length would be similar to the existing line.

The proposed heights of rebuild structures RN15/RS15 are based on construction constraints and safety and design requirements. A profile view of the existing and proposed structures being discussed in this response is provided in Attachment 1, Figure 1. This figure shows the topography of this section of the project alignment with residential roads appearing as "benches" in the hillside.

Safety and design considerations for the proposed heights of RN15/RS15 include the following items:

- RN5/RS15 will be lattice steel poles (LSP) which have a narrower profile than the existing lattice steel towers (LST). These types of structures were selected because the RN15/RS15 location is accessed from the adjacent narrow, windy Balboa Drive. LSP structures can be constructed in smaller sections that are transported and lifted into place with smaller transport vehicles and construction equipment which can navigate the narrow, windy road.
- Both sets of structures to either side of RN15/RS15 are at higher elevations, as shown in Figure 1. The conductors on the LSPs are held by insulators that are suspended, or hang from, the end of each structure arm. If RN15/RS15 were designed with shorter structure heights, uplift conditions would occur that would push the suspended insulators upwards, putting stress on the conductor, insulators, and their connections. The proposed structure height avoids uplift conditions.
- To meet current design standards, the proposed insulators are longer than existing necessitating taller structures to achieve the required distance above the ground for safe operation.
- RN15/RS15 are positioned at a slight angle in the line. An angle causes the outside insulator to swing closer to the supporting arm under wind conditions. A taller structure reduces the insulator swing and creates a safer operating condition.
- To accommodate forecasted load growth, the proposed conductor type is a larger size than existing. The proposed structure height is approximately 5 feet taller to accommodate the conductor tension required for the proposed conductor type.
- West of RN15/RS15, the existing structure EN17A between EN17/ES19 (RN16/RS16) and EN18/ES20 (RN17/RS17) is proposed to be removed. To accommodate this removal, RN16/RS16 would be 93 ft/91ft respectively, taller than the existing 72 ft/73 ft existing structures to meet required clearances and other design standards. Those increased heights to the west contribute to RN15/RS15s increased heights.
- Additionally, while not a CEQA issue, the proposed design adds 10 feet above the necessary height to increase the distance of the line from the surrounding residential land use per the project's electromagnetic field (EMF) field management plan. This design element was proposed in consideration with the CPUC's policies governing the mitigation of EMF effects using low-cost and no-cost measures.

In order to reduce the height of proposed structures at this location PG&E would need to install either a dead-end TSP or dead-end LST, which can withstand greater uplift conditions. Balboa Drive limits the length of transport vehicles for rebuild structure lengths and construction equipment size. The longer transport vehicles needed to install a dead-end TSP or dead-end LST cannot fit around the curves of Balboa Drive. PG&E is restricted from using helicopters to transport structure materials to the work site due to close proximately to habitable structures.

b. With the addition of a pair of interset towers upslope from RN15/RS15 and approximately mid-way to the next pair of structures (RN14/RS14), what would the resulting tower heights be for the interset towers, Towers RN15/RS15, and Towers RN14/RS14?

Because of the slope and topography in that area, interset structures between RN14/RS14 and RN15/RS15 potentially only would reduce the height of the RN15/RS15 by approximately 20 feet (from approximately 133 feet to approximately 113 feet). The interset dead-end structures, likely TSPs or LSTs, would be approximately 172 feet if located at latitude 37.83286218 and longitude -122.19689455, between Paso Robles Drive and Sayer Drive, approximately. See Attachment 1, Figure 2 for a profile view with that interset structure.

c. Please provide information on the necessity for and location of cranes and any temporary road closures, if needed to support installation of interset towers upslope of RN15/RS15.

Self-driving crane trucks would be used to reach the interset structures location near the intersection of Paso Robles Drive and Woodrow Drive and downslope to the west of the interset structures location. Depending on the crane operator's constructability site assessment, they may also choose to park the self-driving crane on Sayre Drive, upslope and to the east of the interset structures. Given the narrow road width, temporary road closures would be expected given the typical work area required for a crane to safely operate. Traffic would be temporarily re-routed to other nearby streets per the encroachment permit conditions provided by the City of Oakland in compliance with their emergency evacuation plan and in coordination with local emergency responders.

d. How many trees would need to be replace and/or trimmed with the placement of interset towers in this location?

A preliminary desktop review using aerial images identified approximately three medium coast live oaks (*Quercus agrifolia*) and one large Monterey pine tree Pine (*Pinus radiata*) that would likely need to be removed for construction access to place interset structures at this location.

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,

Brandon Liddell
Principal Land Planner

Attachment:
Attachment 1 – Figures Supporting AES-4b Response
Figure 1 – DR4 AES-4b Existing and Proposed View
Figure 2 – DR4 AES-4b Existing and Proposed View with Interset Structures

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

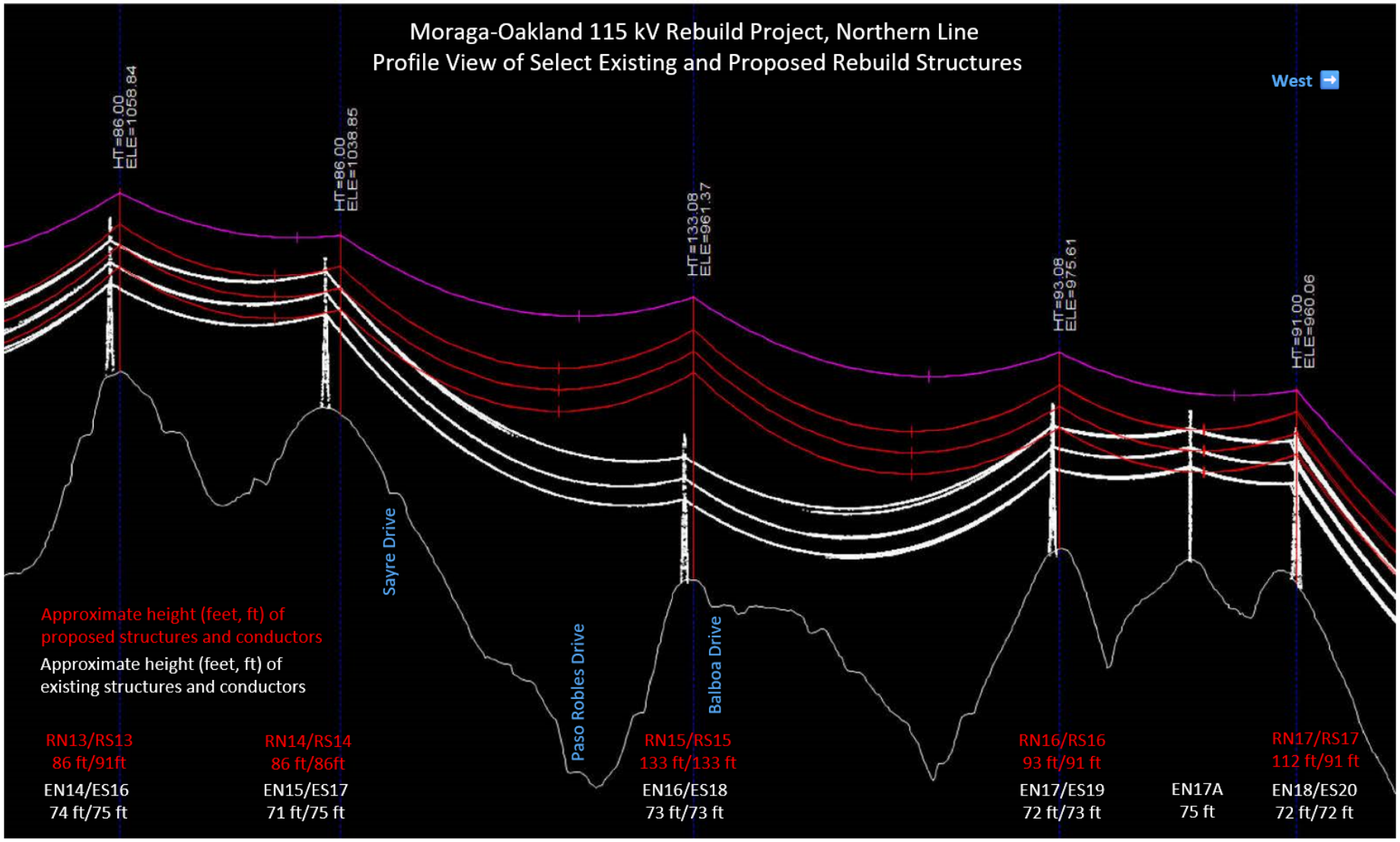

Figure 1
DR4 AES-4b Existing and Proposed View
Moraga-Oakland X 115 kV Rebuild Project
Pacific Gas & Electric Company

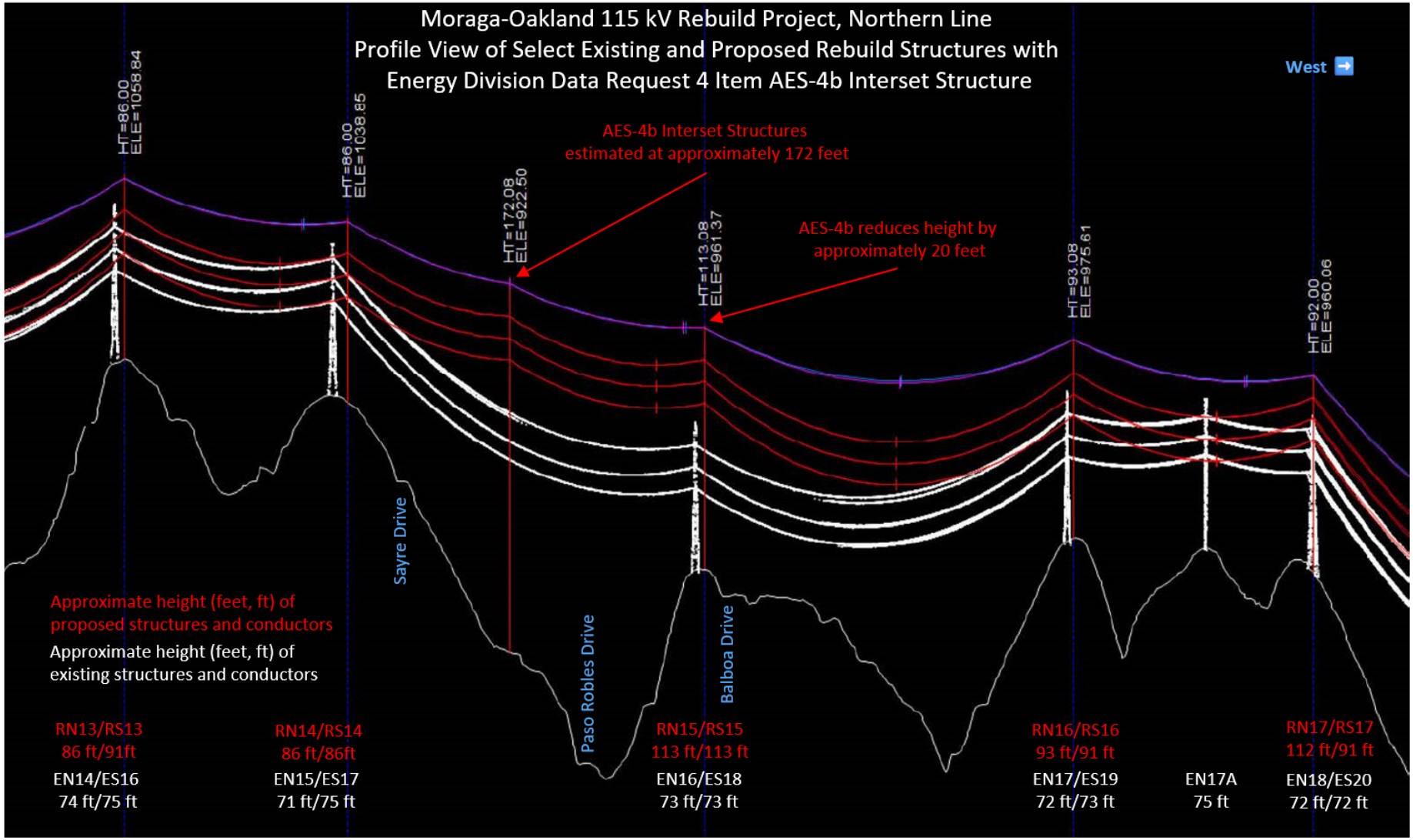

Figure 2
DR4 AES-4b Existing and Proposed View with Interset Structures
Moraga-Oakland X 115 kV Rebuild Project
Pacific Gas & Electric Company