April 2, 2025

*VIA EMAIL*

Ms. Connie Chen
California Environmental Quality Act Project Manager
California Public Utilities Commission Energy Division
505 Van Ness Avenue
San Francisco, California 94201

**RE: LSPGC Response to CPUC Data Request #2 for LS Power Grid California, LLC's Collinsville 500/230 Kilovolt Substation Project (A.24-07-018)**

Dear Ms. Chen,

As requested by the California Public Utilities Commission (CPUC), LS Power Grid California, LLC (LSPGC) has collected and provided the additional information that is needed to continue the environmental review of the Collinsville 500/230 kV Substation Project (Application 24-07-018). This letter includes the following enclosures:

- A Response to Data Request Table providing the additional information requested in the Data Request #2, received March 7, 2025.
    - Attachment A: Submarine Cable Depth
    - Attachment B: Land Use GIS
    - Attachment C: Alternative Substation Site Analysis
    - Attachment D: Landing Location Selection
    - Attachment E: Land Ownership Parcel Data
    - Attachment F: Submarine Installation Methods Analysis

The attachments listed above can be accessed via the following link:

LSPGC Response to CPUC DR-2

Please contact me at (925) 808-0291 or djoseph@lspower.com with any questions regarding this information. If needed, we are also available to meet with you to discuss the information contained in this response.

Sincerely,

Dustin Joseph

Dustin Joseph
Director of Environmental Permitting

Enclosures

cc: Jason Niven (LSPGC)
Doug Mulvey (LSPGC)
Lauren Kehlenbrink (LSPGC)

Clayton Eversen (LSPGC)
David Wilson (LSPGC)
Michelle Wilson (CPUC)
Aaron Lui (Panorama)

## LSPGC DATA REQUEST #2 RESPONSE

### PEA Section 3: Project Description

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| EIR Admin Draft Project Description | **DR-1: Review of Admin Draft EIR Project Description**<br>On February 27, 2025, the CPUC shared a copy of the Admin Draft EIR Project Description (dated 2/19/25) with LSPGC and PG&E including a copy of Appendix A: Detail Route Maps. The CPUC requested that LSPGC and PG&E review the information in these documents for accuracy and completeness, and to respond to the requests for clarification or additional information directed identified in the comment bubbles. | A | The CPUC requests responses from LSPGC and PG&E by March 14, 2025 (e.g., as tracked change edits and responses to the comments). | LSPGC responded to the CPUC's Admin Draft EIR Project Description on 3/18/25. |
| Deficiency Report #1; DR-2<br>PEA Section 3.3.4.1.2 and 3.5.6.4.1 | **DR-2: Submarine Cable Depth, Erosion Projections, and Maintenance**<br>The revised PEA Project Description currently states: "…The submarine cables would be buried 6 to 15 feet below the sediment surface, or as specified by engineering and/or permitting agency requirements, to protect them from mechanical damage..."<br>The erosion/deposition projections in the Seabed Morphology Analysis report (January 20, 2025) prepared by Coast & Harbor Engineering suggests exposure of the submarine cable could occur after 25 years. If the cable becomes exposed, it may be at increased risk of damage, such as due to an anchor strike or from sand mining activities/dredging. More information is needed about how LSPGC would determine the appropriate submarine cable depth to minimize risks to the submarine cables, and what installation depths are possible using the proposed jet-sled. In addition, more information is needed about possible maintenance of submarine cables if they were left exposed and were to be damaged. | A | Please explain if a specific depth for the submarine cable would be targeted to address the findings in the Seabed Morphology Analysis report to reduce the potential erosion and exposure of the cables? | Initially, the proposed project aimed for an approximately 6-foot maximum burial depth. Since then, LSPGC, in coordination with the USACE, has identified that a deeper burial depth would be required. Based on the seabed morphology/scour analysis, LSPGC has identified that a depth of approximately 10 feet would reduce the potential exposure risk to less than 1% of the cable, over 25 years. LSPGC has also taken into account areas of high scour and has sited the submerged cables to avoid these higher risk areas. With this information, LSPGC aims for an approximate 10-foot burial depth across the majority of the river, with areas near shorelines being closer to 6 feet, and the USACE navigation channel crossings being closer to 15 feet. |
| | | B | What is the maximum depth possible the submarine cables could be installed using the jet-sled method proposed? | Jet-sled/hydroplow technology allows for installation up to approximately 15 feet. |
| | | C | Please explain what maintenance activities/steps would be taken to determine if submarine cables have become exposed (such as periodic studies or inspections), what risks would occur if the submarine cables were exposed, and what maintenance activities could occur to rebury or cover the cables after they are initially installed. | LSPGC expects to have regular on-going geophysical surveying, including side-scan sonar. LSPGC would compare the new data to previous data to determine cover depth and update estimated on if a cable may become exposed or vulnerable to mechanical damage (i.e., anchor strikes).<br>If a cable appears to be becoming exposed, LSPGC would preemptively work with state and federal agencies to prevent complete exposure. The exact method of maintenance activity to prevent exposure would be determined and approved in-coordination with state and federal agencies but may include placing concrete mattresses over areas or covering areas with stone. |
| | | D | If cables become damaged and they must be replaced, could the cables be removed from the waterway and disposed of or would they be abandoned within the Delta riverbed. | The defective portion of the cable spliced out and would be abandoned in place within the riverbed. |

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| PEA Section 3.3.4.1.2 and 3.5.6.4.1 | **DR-3: Submarine Cable Depth**<br>The revised PEA Project Description currently states: "…The submarine cables would be buried 6 to 15 feet below the sediment surface, or as specified by engineering and/or permitting agency requirements, to protect them from mechanical damage..."<br>According to USACE, USACE have identified specific areas where the cable should be buried at a minimum of 10 feet or a minimum of 15 feet, as well as other areas where less than 10 feet are acceptable. Specific locations and minimum cable depths consistent with the USACE directions are requested. | A | Please provide a map and GIS data identifying the submarine cable routes and minimum installation depths that would be met following USACE directions. The maps should identify the widths of federal navigation channels and other features where these depths must be achieved. | Please see **Attachment A**, Submarine Cable Depth. |
| PEA Section 3.5.10.1: Water Use | **DR-4: Water Use by Entity/Component**<br>The revised PEA Project description provides the estimated water use volume combined for all project components (what is the value?). A further breakdown and explanation of estimated water use and volumes are needed. | A | Please provide a detailed breakdown of water use volume by LSPGC project components and PG&E project components, including for the construction and operation of each component. Identify and provide estimated values for each activity that would or could require the use of water. | During construction, LSPGC 's water use would account for approximately 96% of the total and PG&E would account for the remaining 4%.<br>Of the LSPGC water allocation, LSPGC's substation construction would account for approximately 94% (approximately 5,400,000 gallons) of the water usage (e.g., concrete work, dust control), and approximately 6% (approximately 350,000 gallons) for transmission line construction (e.g., dust control). PG&E's water usage would be primarily used for dust control during transmission line installation. During operations, water usage would be negligible. |
| PEA Section 3.5.12.1: Solid Waste | **DR-5: Waste Volumes by Entity/Component**<br>The revised PEA project description states that construction debris volumes are estimated at a total of 2,750 cubic yards. A breakdown of this information is needed by LSPGC vs PG&E project components. | A | Please provide a breakdown of waste volume estimates by LSPGC vs PG&E project components. | During construction, LSPGC would account for approximately 78% of the total waste volume and PG&E would account for the remaining 22%.<br>Of the LSPGC waste volume allocation, LSPGC's substation construction would account for approximately 80% (approximately 1,700 cubic yards) of the waste volume and the transmission line would account for approximately 20% (approximately 425 cubic yards). During operations, waste would be negligible. |
| NA | **DR-6: Wind Turbine Throw Distances**<br>Additional information is needed regarding the potential risks, positioning, and design considerations associated with the proposed project's locations adjacent to existing wind turbines. | A | Please explain the potential risk to proposed project facilities or personnel working at the facilities associated with adjacent wind turbines, such as but not limited to a thrown blade. Identify the height ranges of adjacent wind turbines and explain the potential hazard area where blades could be thrown, and how the proposed project facilities would or would not be within these zones. Please explain if and how this risk has been considered in the siting and design of the proposed project. | LSPGC considered failure of a wind turbine when looking at the routing and siting of the proposed project.<br>The risk of wind turbine failure (e.g., complete turbine failure and collapse/blade throw) of the surrounding infrastructure was taken into consideration during the routing and siting of the Proposed Project components. There is no national or state set regulation or law to define appropriate setback distances. A typical industry standard is 1.1 times tip height of the wind turbine to the nearest infrastructure. LSPGC and SMUD have discussed that a 1.1x tip height is appropriate for infrastructure near their turbines.<br>All substation and 500kV transmission line components are located outside of the turbine failure buffer. All 230kV overhead transmission line structures are located outside of the turbine failure buffer with the exception of approximately |

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| | | | | 400 feet. The risk associated with this portion of the line was determined to be minimal; however, a minor alteration to the 230kV overhead alignment is being reviewed by LSPGC engineering to determine if the line can be completely removed from the turbine failure buffer. LSPGC will provide the CPUC with an update on the potential 230 kV route alteration by 04/25/2025. |
| NA | **DR-7: Underground Telecommunication Lines Interconnection Construction** | A | Please explain the process for coordinating construction activities associated with the underground telecommunication line in the City of Pittsburg, where the line would be located adjacent to the Marine Community Center and on the associated property. Clarify how access would be maintained to the community center and parking area/driveway. | A third party (e.g., AT&T, Comcast), would be responsible for installing the telecommunications line. The third party would follow their best standard practices for installation and access to public and private property. |
| PEA Section 3.10.2 | **DR-8: Proposed Substation Property Size**<br>The revised PEA Project Description states that "LSPGC would obtain rights for an approximately 32-acre portion of a parcel from an existing private landowner…" and that this area includes the temporary construction areas needed to construct the substation, as well as the potential 4-acre future buildout area. The area identified for the substation in the GIS data that was provided is 28.8 acres, which includes the surrounding temporary and permanent workspaces and potential future buildout area south and west of Stratton Lane. | A | Please explain how the 32-acre substation property was determined and where the limits of the proposed property. Does the property extend north or east of Stratton Lane and if so, where? | The proposed parcel which the Proposed LSPGC Collinsville Substation would be located on is a 61.05-acre parcel (Parcel ID: 0090-12-0300) which also extends to the north of Stratton Lane.<br><br>The area south of Stratton Lane is approximately 44 acres. The PEA Proposed approximately 32-acres of constructable area within the 44-acres south of Stratton Lane. This approximate area was chosen based on engineering feasibility for potential future expansion and being primarily in upland areas. The Proposed 32-acres should be revised to approximately 30 acres. (as shown in the GIS). |

**PEA Section 5.3: Air Quality**

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| PEA, Section 5.3.4.4, page 5.3-22<br>Deficiency Report #1, DEF-13<br>Health Risk Assessment (HRA)<br>Data Request #1: DR-3: HRA | **DR-9: Health Risk Assessment**<br>In Response #2 to Data Request #2, LSPGC provided a Health Risk Assessment (Ldn Consulting, Inc. February 2025). Staff with Baseline Environmental Consulting have identified the follow-up data requests listed in the columns to the right. | A | **Uncontrolled Scenario (Data Request #1, DR-3C follow-up)**<br>Baseline requested the uncontrolled emission scenario to be analyzed in the previous round of review. However, the uncontrolled emission scenario was not added to the revised HRA. LSPGC states that because the APM was provided by the applicant as a part of the Project Description (PD), the uncontrolled scenario would not be a project condition, and therefore not analyzed. This statement is not consistent with CPUC CEQA compliance guidelines for Pre-filing and PEA as well as Office of Environmental Health Hazard Assessment's (OEHHA's) Guidance Manual for Preparation of Health Risk Assessments (2015) which required that AQ section should "include a summary of uncontrolled AQ emissions (prior to application of any APMs) and controlled AQ emissions (after application of APMs). Clearly identify the assumptions that were applied in the controlled emissions estimates." Although this requirement is for criteria air pollutant emissions, the health risk assessment should be prepared in a manner that is consistent with the rest of the AQ section.<br>Please revise the HRA so the uncontrolled emission scenario is analyzed. | The Health Risk Assessment will be updated to address this comment as well as incorporating changes made to the Project schedule and construction assumptions. The update HRA will be provided to the CPUC on April 25, 2025. |

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| | | B | **Averaging Period (Data Request #1, DR-3E follow-up)**<br>Please update the averaging period for both the Collinsville Substation and the Pittsburg Substation based on the most up-to-date project description. The discrepancies for the Collinsville Substation was listed in the previous round of review. For the PG&E Substation Modifications, PD Table 3-12 shows that the estimated total number of active workdays for (denoted as P-19 of Attachment 5.3-A) should be 102 working days (June 2026 to October 2026), not 250 days. This is important because if the construction duration is only 4 months in total for three substations (P-19: Vaca Dixon, Tesla, and Pittsburg Substation), then construction at each location will be less than 2-months and HRA at this location may not be needed. | The Health Risk Assessment will be updated to address this comment as well as incorporating changes made to the Project schedule and construction assumptions. The update HRA will be provided to the CPUC on April 25, 2025. |
| | | C | **Exhaust Emissions (Data Request #1, DR-3F follow-up)**<br>At the bottom of page 8, it states that "the total diesel particulate emissions during the construction activities (P-19) would cumulatively generate 0.0084 tons of diesel particulates 10 microns or smaller (PM10) which is the primary TAC considered in this analysis." Please confirm that the total emissions should be 0.0084 tons instead of 0.0034 tons. | The Health Risk Assessment will be updated to address this comment as well as incorporating changes made to the Project schedule and construction assumptions. The update HRA will be provided to the CPUC on April 25, 2025. |
| | | D | **TAC DPM Emission Rates for both the Collinsville and Pittsburg Substations**<br>On page 10, it states that "Over the construction duration, the project would emit 0.222 tons over 651-day elapsed period which works out to an average of 0.0036 grams of PM10 exhaust per second (g/s)." It appears this 0.0036 g/s exhaust PM10 emission rate was estimated based on the assumption of 24-h of construction activities on every calendar day. Please provide the assumptions in the HRA and discuss whether this assumption is more conservative than assuming emissions would occur on active workdays during daylight hours. Same comment for Pittsburg Substation TAC DPM discussion on page 11. | The Health Risk Assessment will be updated to address this comment as well as incorporating changes made to the Project schedule and construction assumptions. The update HRA will be provided to the CPUC on April 25, 2025. |
| | | E | **Grading Area (Data Request #1, DR-3H follow-up)**<br>On page 10, under Collinsville Substation TAC DPM, it was mentioned that "Based on the site configuration, the average emission rate over the grading area is 1.05x10-7 grams/second per meter squared (g/s-m2)". Please clarify which figure or Site Plan was referenced here. It is unclear to us how the source area was determined (does it refer to the total area of disturbance? If so, was the area of disturbance determined based on a site plan or map?). Same comment for Pittsburg Substation TAC DPM discussion on page 11. | The Health Risk Assessment will be updated to address this comment as well as incorporating changes made to the Project schedule and construction assumptions. The update HRA will be provided to the CPUC on April 25, 2025. |
| | | F | **Additional Information to Confirm the HRA Results (Data Request #1, DR-3K follow-up)**<br>The AERMOD files are provided as Attachment A, B, E, and F show the model parameters but did not include reference and justification for the model parameter used. Please provide reference or justification for the model parameters used, such as release height and initial vertical dimensions.<br>Provide meteorological data source. | The Health Risk Assessment will be updated to address this comment as well as incorporating changes made to the Project schedule and construction assumptions. The update HRA will be provided to the CPUC on April 25, 2025. |

## PEA Section 5.4: Biological Resources

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| NA | **DR-10: Take Permits for Listed Species**<br>Information is needed about anticipated permits that will be obtained by LSPGC and PG&E regarding specific state and federally listed species. | A | Please provide a list of state-listed and/or candidate species for which LSPGC plans to file incidental take permit applications with CDFW. | LSPGC does not anticipate acquiring an ITP for any CDFW listed species. |
| | | B | Please provide a list of state listed and/or candidate species for which PG&E plans to file incidental take permit applications with CDFW. Separately provide a list of species that PG&E already has take coverage for under existing permits that cover the proposed PG&E project activities, if any. | PG&E addresses this in their response to PG&E Data Request #3. |
| | | C | Please provide a list of federally listed and/or candidate species for which LSPGC plans to obtain Section 7 take coverage and file applications with federal agencies. | LSPGC does not anticipate acquiring take coverage for any USFWS listed species. |
| | | D | Please provide a list of federally listed and/or candidate species for which PG&E plans to obtain Section 7 take coverage and file applications with federal agencies. Separately provide a list of species that PG&E already has take coverage for under existing permits that cover the proposed PG&E project activities, if any. | PG&E addresses this in their response to PG&E Data Request #3. |
| | | E | Please provide a copy or public link to PG&E's existing take permits. | PG&E addresses this in their response to PG&E Data Request #3. |
| NA | **DR-11: In-water Work Periods and Restrictions**<br>The proposed in-water work is identified between July 1 through November 30, to protect listed fish species. Please clarify if this period is consistent with NMFS recommendations for all federally protected marine species that could occur in the area. | A | Please clarify if this period is consistent with NMFS recommendations for federally protected marine species that could occur in the area. | This period is consistent with the NMFS recommendation for federally protected marine species. |

## PEA Section 5.11: Land Use and Planning

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| PEA Land Use Figure 3 Special Land Uses | **DR-12: Special Land Uses**<br>PEA Section 5.11 includes Figure 5.11-3: Special Land Uses in the Proposed Project Vicinity which depicts the boundaries of various special land uses in the Project vicinity. | A | Please provide the GIS source(s) of these special area boundaries, and explain if the features were digitized or obtained published GIS data sources. | • The Priority Habitat Restoration Area, Delta, and Suisun Marsh layers were digitized from page 15 of the following source:<br>  ○ Delta Stewardship Council. 2013. The Delta Plan. Online. https://deltacouncil.ca.gov/pdf/delta-plan.pdf.<br>• The Lower Sherman Wildlife Area layer was obtained from the following source:<br>  ○ GreenInfo Network. 2023. California Protected Areas Database (CPAD). Online. https://calands.org/get-data/.<br>• The Browns Island layer was obtained from the following source:<br>  ○ GreenInfo Network. 2023. CPAD. Online. https://calands.org/get-data/.<br>• The Collinsville Special Study Area (CSSA) layer was digitized from page 69 of the following source: |

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| | | | | ○ Solano County. 2008. Chapter 2 Land Use. Online. https://www.solanocounty.com/civicax/filebank/blobdload.aspx?BlobID=6492.<br>• The Suisun Marsh layer was obtained from the following source:<br>○ San Francisco Bay Conservation & Development Commission. 2021. Suisun Marsh Protection Plan Management Areas. Online. https://data-bcdc.opendata.arcgis.com/search?tags=boundary. |
| | | B | Please provide copies of the GIS layers used in Figure 5.11-3. | Please see **Attachment B,** Land Use GIS |

**PEA Section 5.15: Mineral Resources**

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| PEA Section 5.12.4 Impact Analysis | **DR-13: Lind Marine Sand and Gravel Operation**<br>PEA Section 5.12 details information regarding the Lind Marine Mine (note that after research, this lease appears to be owned by Suisun Associates which includes Lind Marine). The PEA text describes "The LSPGC 230 kV Transmission Line submarine segment is anticipated to require a 450-foot-wide right-of-way along the approximately 1,200-foot-long crossing, resulting in the loss of availability of approximately 12.4 acres of the 367-acre area authorized for dredging." | A | Please explain how the 12.4-acre loss of authorized dredging area was calculated. | This value is outdated, as the cable routes have been modified. The value is calculated by taking the proposed ROW for the submerged cables across lease PRC 7781. Across the entirety of the sand mining lease, there may be a loss of approximately 45 acres of sand mining activity, which includes a 75-foot offset from the outer most cables. However, discussions revolving around the permanent loss of mining in those areas are on-going and continual mining is being evaluated based on engineering design and discussions between CSLC, Suisun Associates, and LSPGC.<br>In coordination with the CSLC, the CSLC stated that as part of the lease approval process, LSPGC and Suisun Associates would have to finalize an agreement on the loss of mining, or continual mining. As such, LSPGC will work with the CSLC and Suisun Associates to finalize an agreement that would allow for the coexistence of mining operations and the submarine cables, or LSPGC would compensate Suisun Associates for any permanent loss of mining areas. |
| | | B | Please provide the source information regarding the 367-acre area. | This value is incorrect and may have been a legacy number, accidentally left in. The value is approximately 838 acres for the lease referred to as PRC 7781. A KMZ with the PRC 7781 lease area was provided to the CPUC previously via e-mail on 3/20/25. |

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| | | C | Please state how crossing the mine would specifically result in impacts on mining operations. Could dredging continue over the buried submarine cables? If not, explain why. | The PEA looked at worst case scenario, which is the loss of mining activities in areas where the cables would be buried. However, discussions revolving around the permanent loss of mining in those areas are on-going and continual mining could be adopted, depending on engineering design and discussions with LSPGC, CSLC, and Suisun Associates.<br><br>In coordination with the CSLC, the CSLC stated that as part of the lease approval process, LSPGC and Suisun Associates would have to finalize an agreement on the loss of mining, or continual mining. As such, LSPGC will work with the CSLC and Suisun Associates to finalize an agreement that would allow for the coexistence of mining operations and the submarine cables, or LSPGC would compensate Suisun Associates for any permanent loss of mining areas |
| | | D | What depth would the submarine cables need to be buried for dredging along the submarine corridor to continue without damaging the lines? Provide information on the feasibility and potential methods for installing the submarine cables to this depth. | Discussions revolving around the permanent loss of mining in those areas are on-going and an agreement allowing for the continual mining could be adopted, depending on engineering design and discussions with LSPGC, CSLC, and Suisun Associates. LSPGC requests that the impacts associated with permanent loss of the approximately 45 acres of sand mining be reviewed as part of the CEQA analysis. |

**PEA Section 5.19: Utilities**

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| Revised PEA Page 3-88 | **DR-14: Water Source Information**<br>The PEA states that water may be obtained from the Solano County Water Agency and Rio Vista and trucked to the site but does not identify the location where water tanks would be filled. The revised PEA states that five percent of the water for the project could be obtained from wells. Additional information is needed on potential sources of water. | A | Please identify the location (or distance from the site) that water would be obtained/trucked in from? | An exact location has not yet been determined by LSPGC. An estimate of approximately 18 miles away (Rio Vista) is proposed; however, a suitable location may be identified closer to the proposed substation site. |
| | | B | Please identify the location of the well that would be used to supply up to five of the project water. What is the current use of the well? | SMUD identified that a well was installed nearby to support the recent wind farm expansion. LSPGC included this as an option for water, if needed. At this time, LSPGC does not have the location of this well. |
| PEA Page 5.19-13 and 5.19-14 | **DR-15: Existing Utilities in the City of Pittsburg**<br>The PEA does not include consideration of potential water, sewer, stormwater, or natural gas lines in the city of Pittsburg along the underground telecommunication path. | A | Please provide GIS data or other available data on the location of buried electric, water, sewer, stormwater, or natural gas facilities along the proposed underground telecommunications path. | A third party (e.g., AT&T, Comcast), would be responsible for installing the telecommunications line. The third party would follow their best standard practices for installation and access to public and private property. The party would be responsible for industry standard practices of avoiding existing buried utilities and would meet standard vertical and horizontal clearance requirements. |

## PEA Section 4: Alternatives

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| Chapter 4: Description of Alternatives | **DR-16: Identification of Additional Potential Alternate Substation Sites and Supporting Information**<br>One alternative site for the proposed Collinsville Substation was identified in the PEA, which is located approximately 0.8 mile north of the site identified for the Proposed Project. CPUC requests the identification of additional potential alternative substation sites for the project to consideration in the CPUC's alternatives screening analysis and in the EIR.<br>At a minimum, the identification of conceptual alternative sites is needed based on the criteria listed to the right. Ensure one or more alternative sites are identified for each of the scenarios listed and identify the associated project components and alignments that would change under each scenario compared to the Proposed Project. | A | Please provide any additional background information and locations regarding other alternative substations that LSPGC may have considered beyond the one alternate site identified in the PEA. | LSPGC reviewed four alternatives for the Collinsville Substation location. These include the proposed and alternate locations included in the PEA, an additional location just south of the proposed PG&E 500 kV interconnection point, and an alternative location proposed by California Forever. The alternative location proposed by California Forever is located in the general area of Scenario B (described below).<br><br>Details regarding the PEA Alternative, the additional LSPGC alternative (Additional Alternative), and the California Forever alternative (Scenario B) have been included in **Attachment C**, Alternative Substation Site Analysis. |
| | | B | Regardless of feasibility, please identify one or more potential alternate locations for the proposed Collinsville Substation for the following scenarios:<br>• **Scenario A:** Near the existing wind resource area substations located along the Vaca-Dixon 500 kV Transmission Line, approximately 3 miles north of the Proposed substation site.<br>• **Scenario B:** Along the Vaca-Dixon 500 kV Transmission Line, in the range of roughly 1.5 to 3.5 miles east of the proposed 500 kV interconnection loop tie-in location.<br>• **Scenario C:** On publicly owned lands in the vicinity of the Vaca-Dixon 500 kV Transmission Line including but not limited to the federally owned land located along the norther shore of the Delta roughly 2.3 miles or greater southeast of the proposed substation site.<br>• **Scenario D:** Within previously developed or disturbed land northeast of the Pittsburg Substation where the vacant Pittsburg Power Plant is currently located.<br>• **Scenario E:** Within previously developed or disturbed land south of the Pittsburg Substation where vacant storage tanks are currently located. | Please see **Attachment C,** Alternative Substation Site Analysis. |
| | | C | Please provide maps and associated GIS data layers identifying any previously reviewed substation sites (request part A) and the requested scenarios listed above (request part B). Please provide GIS data layers for the conceptual project components associated with these alternatives like those provided for the Proposed Project, including the following:<br>• LSPGC Collinsville Substation (all temporary and permanent work areas, including potential future expansion areas)<br>• LSPGC 230 kV Collinsville-Pittsburg Transmission Line (overhead segment, submarine segment, and underground segment)<br>• LSPGC telecommunication lines interconnection<br>• PG&E 500 kV interconnection loop<br>• PG&E 12 kV distribution line (substation power connection)<br>• Any permanent access roads/driveways | Please see **Attachment C,** Alternative Substation Site Analysis.<br><br>Scenarios A, B, and C and the LSPGC alternatives (North and South) utilize the same 230kV underground, 230kV submarine, and telecom scope as the PEA proposed project.<br><br>Scenarios D and E include revised 500kV overhead and 500kV submarine that is common between them.<br><br>In addition, please see **Attachment D,** Landing Location Selection. This helps explain why all alternatives with the |

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| | | | Please also provide these GIS layers for the alternative substation site identified in the PEA. GIS data was provided for one alternative substation site and the basic 230 kV and 500 kV alignments differences, but additional details are requested as listed above. | substation located on the north side of the river utilize the same submarine landing location and design. |
| | | D | Please provide a table listing alternative substation sites considered, including the PEA alternative substation site, any other sites considered that were not included in the PEA (request part A), and the requested scenarios listed above (request part B). In the table, provide LSPGC's understanding of feasibility issues and any other major challenges for each alternative. Also identify any key differences in the type of or extent of environmental impacts that LSPGC may be aware of in comparison to the Proposed Project, that will support the CPUC's alternatives screening review. | Please see **Attachment C,** Alternative Substation Site Analysis. |
| NA | **DR-17: Land Ownership Data**<br>Detailed property and landowner information for Salano County is needed along portions of the existing Vaca-Dixon 500 kV Transmission Line to support the CPUC's alternative screening review. | A | Provide GIS data identifying property and landowner information within 2 miles on either side of the existing Vaca-Dixon 500 kV Transmission Line, along a corridor that extends approximately 5 miles north and south of the proposed interconnection loop tie-in location (10 mile long by 4-mile-wide buffered corridor). At a minimum, the data should include parcel information and identify the name of the landowner or entity that controls the land, and if the land is publicly or privately owned. | Please see **Attachment E,** Land Ownership Parcel Data. |
| NA | **DR-18: Tubular Poles instead of Lattice Towers Alternative, and Avian Deterrents**<br>A scoping comment has suggested LSTs have greater potential to attract avian nesting and perching activities within the SMUD wind farm area, that could result in impacts on avian species associated with the adjacent wind turbines. Information on the feasibility of using tubular poles/towers (either steel monopoles or multi-pole structures) instead of the proposed lattice steel towers (LSTs) is requested. This also applies to the proposed LST for the microwave tower. | A | Please explain if tubular steel monopoles could be used in lieu of the proposed LTSs along the PG&E 500 kV interconnection loop. Explain any potential design or construction differences that could apply if used, such as the number of structures needed or the heights. | PG&E addresses this in their response to PG&E Data Request #3. |
| | | B | Please explain if other types of multi-pole tubular steel pole structures (like H-frames structures) could be used in lieu of the proposed LTSs along the PG&E 500 kV interconnection loop. Explain any potential design or construction differences that could apply if used, such as the number of structures needed or the heights. | PG&E addresses this in their response to PG&E Data Request #3. |
| | | C | Please explain if a tubular pole could be installed for the microwave tower in lieu of the proposed LST structure. Explain any potential design or construction differences that could apply if used. | PG&E addresses this in their response to PG&E Data Request #3. |
| | | D | Please explain PG&E design guidelines that would be followed, if any, to deter avian nesting and perching on their structures for the Proposed Project. | PG&E addresses this in their response to PG&E Data Request #3. |
| NA | **DR-19: Potential Alternate Submarine Cable Installation Methods**<br>Additional information is needed regarding the potential use of alternate or hybrid methods to install the submarine cables. | A | **Horizontal Directional Drilling (HDD).** Please explain if horizontal directional drilling (HDD) methods could be used to install the submarine cables in part or in full. Please identify any segments of the alignment where HDD methods may be used, such as but not limited to the mining area, or where the method could be used to minimize sediment dispersion and impacts on fish. Please explain the pros and cons of such methods, and how the construction schedule could change if used. | LSPGC reviewed the feasibility of Horizontal Directional Drilling (HDD) during the design of the proposed submarine cable routing. HDD is not feasible to install the submarine cables across the sand mining lease, as the cables are not spliced together, rather one continuous cable. If an HDD was used in these locations, an HDD would be required across the entire 4.5-mile route through the river, which is not feasible. HDD is feasible at the end points of the cable (i.e., shorelines); however, due to engineering constraints of the cables, the required depth of the HDD would introduce additional cables required in order to meet specified cable ratings resulting in additional impacts and time constraints in-river. Due to this, and the potential for frac-out in the river in critical habitat, HDD was not proposed. |

| Section/Page Reference | CPUC Comment | Request ID | CPUC Request | LSPGC Response |
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| | | B | **Mechanical Trenching.** Please explain if mechanical trenching methods could be used to install the submarine cables in part or in full. What is the maximum burial depth that could be achieved through mechanical trenching methods? What is the approximate width of disturbance on either side of the cables with such methods. Please identify any segments of the alignment where mechanical trenching methods may be used, such as but not limited to the mining area. | Mechanical trenching was reviewed by LSPGC during design of the proposed submarine cable installation. Specifically, this was reviewed as options for shoreline transitions. While feasible for areas near the shoreline, the increased turbidity and potential risk of take of sensitive species were major concerns during construction. In addition, the time required to mechanically trench separate cable paths put additional restrictions to navigation in the river for longer periods of time. Mechanical trenching long stretches across the river, including within the mining area, would introduce longer work windows, increased hazards to navigation, increased risk of take, and increased turbidity within the river. |
| | | C | **Rock Cutting or Pre-Sweeping.** Please explain if rock cutting or pre-sweeping methods could be used to install portions of the submarine cables. What is the maximum burial depth that could be achieved through mechanical trenching methods? What is the approximate width of disturbance on either side of the cables with such methods. Please identify any segments of the alignment where mechanical trenching methods may be used, such as but not limited to the mining area. | Please see **Attachment F,** Submarine Installation Methods Analysis. |