

**San Diego Gas & Electric Company (SDG&E) and Southern California Gas Company (SoCalGas) Responses  
A.15-09-013 Pipeline Safety & Reliability Project (PSRP or Proposed Project)  
California Public Utilities Commission (CPUC) Data Request No. 01 – April 21, 2017**

| DG#                             | Resource Area/Topic           | Source/Proponent's Environmental Assessment (PEA) Page | Data Gap (DG) Question  | CPUC's Notes                       | Draft Response   |
|---------------------------------|-------------------------------|--|---|------------------------------------|--|
| <b>Project Purpose and Need</b> |                               |  |   |                                    |  |
| 1.1                             | Purpose and Need and Land Use | --   | On December 15, 2015, the San Diego City Council unanimously approved the Climate Action Plan that would move the city to 100% renewables by 2035. Please explain how the proposed project would be affected by the city of San Diego's mandated shift to renewable energy. | Previously Deficiency Item 1.2.4-1 | <p>The Proposed Project is not affected by the City of San Diego's (City) 2015 Climate Action Plan (CAP). The CAP does not discuss the Proposed Project, and the purpose and need for the Proposed Project, which exists independent of the City's CAP, is not "to implement the City's CAP." In addition, the CAP does not impose a "mandated shift" to 100 percent renewable energy. Rather, the CAP requires the City to undertake various studies and to obtain City Council approval of implementation ordinances of individual goals in each of these sections. As discussed below, the Proposed Project does not conflict with the City's CAP but rather will facilitate implementation of the CAP and California's decarbonization efforts.</p> <p>The City of San Diego is one of 27 cities, in addition to the unincorporated areas of the County of San Diego and the County of Orange County, that receive electric service from SDG&amp;E and therefore would benefit from the additional electric reliability offered by Proposed Project. The City of San Diego constitutes roughly 40 percent of SDG&amp;E's overall electric load.</p> <p>SDG&amp;E has been a supporter of the City's efforts to reduce greenhouse gas (GHG) emissions through the CAP, and SDG&amp;E and SoCalGas (jointly, Applicants) believe that the Proposed Project is consistent with the goals of the CAP. The City's CAP mandates overall GHG emissions reductions from transportation, electricity, natural gas, solid waste and waste water, and water sectors. As noted above, the CAP requires the City to undertake various studies and to obtain City Council approval of implementation ordinances of individual goals in each of these sections. The 100 percent renewable electricity goal is among these individual goals and is subject to ongoing studies, an active request for information solicitation, and future Council approval.</p> <p>As explained in response to PEA Deficiency Item 1.2.4-1 (submitted on May 26, 2016 and July 22, 2016), the Applicants believe the Proposed Project will facilitate meeting some of the City's CAP goals. The Applicants assume Energy Division's question arises from the CAP's a goal of moving to 100-percent renewable electric energy by the year 2035. The implementation of that goal is still under review by the City.<sup>1</sup> The City of San Diego's goal of achieving 100 percent renewable electric supply does not mean that the San Diego region would cease to rely on natural gas to meet demand and to provide electric reliability, especially at daily peak hours and on peak days, yearly.</p> <p>Importantly, even assuming implementation of this goal excludes the use of natural gas to meet the City's electric generation (EG) needs, the CAP does not prohibit the use of natural gas for heating San Diegans' homes and businesses, powering their residential and commercial stoves, and heating water, among other uses. Roughly 60 percent of SDG&amp;E's natural gas demand is from residential, commercial, and industrial use. This demand is independent from electrical generation demand for natural gas.</p> <p>Also notably, natural gas plays a vital role in meeting several of the other goals of the CAP. For example, natural gas promotes reduction of GHG emissions from the transportation sector through the reduced use of petroleum.<sup>2</sup> According to the 2010 community-wide emissions inventory in the CAP, the transportation sector contributes the largest output of GHG emissions of any source in the City at 55 percent.<sup>3</sup> The CAP attributes the transportation sector's status as the largest single contributor of GHG emissions "to the high frequency of single-occupancy vehicles [sic] trips"<sup>4</sup> and establishes an express goal to "increase the use of mass transit." Much of the mass transit in San Diego has been converted from higher-emitting</p> |

<sup>1</sup> The CAP adopts an overall emissions cap calculated on the basis of emission reductions that could be achieved through specifically identified measures, provides for periodic review and expressly contemplates that the City "may amend the CAP when circumstances require the CAP actions to provide additional flexibility or clarity," according to City of San Diego 2015 CAP at 29.

<sup>2</sup> The CAPs of the cities of San Marcos, Del Mar, Carlsbad, National City, Vista, and Escondido also contain GHG reduction targets that will be supported by the Proposed Project. Many of these plans include SDG&E as an implementation partner for achieving the plan's measures.

<sup>3</sup> City of San Diego 2015 CAP at 19.

<sup>4</sup> City of San Diego 2015 CAP at 19.

| DG# | Resource Area/Topic | Source/ Proponent's Environmental Assessment (PEA) Page | Data Gap (DG) Question | CPUC's Notes | Draft Response  |
|-----|---------------------|---|------------------------|--------------|---|
|     |                     |   |                        |              | <p>diesel to compressed natural gas (CNG). For example, the San Diego Metropolitan Transit System (MTS), which operates almost 30 million miles per year, has converted 90 percent of its fleet of 612 fixed-route diesel buses to CNG.<sup>5</sup> Additionally, the Mayor of San Diego announced in 2016 that implementation of the CAP will include the conversion of City recycling and refuse trucks to CNG trucks.<sup>6</sup> These CAP goals are dependent on safe and reliable natural gas infrastructure.</p> <p>By switching from traditional transportation fuels to natural gas, vehicle GHG emissions can be reduced by as much as 15 percent.<sup>7</sup> Conversion of medium- and heavy-duty fleet vehicles used for the transportation of goods to natural gas engines represents the greatest opportunity for transportation-based emission reductions. In 2015, the CARB and the United States (U.S.) Environmental Protection Agency certified the first Near Zero engine (0.02 grams per brake horsepower of nitrogen oxides), which produces emissions that are 90-percent below current standards. This natural gas engine, produced by Cummins Westport Innovations, became commercially available in 2016 and is currently being used by transit fleets and waste haulers. The Supplemental Testimony of Allison Smith (at page 30)—served on February 21, 2017 in this proceeding—includes additional information about the ways that natural gas vehicles will reduce GHG emissions in the transportation sector and the technology that already exists that will facilitate these reductions.</p> <p>Additionally, two goals of the City's CAP are to “divert solid waste and capture landfill methane gas emissions” and “capture methane gas from wastewater treatment.” Reliable natural gas infrastructure, like the Proposed Project, could potentially be used for delivery of increasing amounts of biogas, a fuel derived from landfills and wastewater treatment plants with extremely low GHG emissions. This is important for achieving GHG emission reduction goals because 80 percent of methane emissions come from organic sources. The methane that is captured from landfill and wastewater treatment facilities operated by the City can potentially be transported into the natural gas transmission system. The City's CAP cites work that is already being done at the Point Loma Wastewater Treatment Plant, where excess gas is processed “to produce green gas and inject it into the SDG&amp;E natural gas pipeline, which is being used by the 4.5 MW of ultra clean fuel cells owned by a private contractor.”<sup>8</sup></p> <p>It is worth noting that, natural gas plays an important role in stabilizing the electric grid as more renewables are integrated into energy portfolios beyond the City of San Diego. Wind and solar are intermittent energy sources, which are subject to rapid and often unpredictable fluctuations based on factors such as the weather, time of day, and temperature.<sup>9</sup> Additional fuels are necessary when the sun is not shining and the wind is not blowing.<sup>10</sup> SDG&amp;E has procured, contracted, and submitted for regulatory approval energy storage projects that total 189.5 megawatts of storage on SDG&amp;E's system, a system whose all-time peak was 4,890 MWs in September of 2014.<sup>11</sup> Integration of more renewable energy on the grid is dependent on natural gas-fired electric generation to offset the intermittency of renewable generation, stabilize the grid, and ensure the ability to meet peak electric demands. The California Energy Commission (CEC) acknowledges that “[a]s more variable renewable electricity generating resources, like wind and solar, are added to California's electricity resource mix, it becomes more challenging to integrate them while maintaining grid reliability, safety, and security.”<sup>12</sup> Because natural gas is a reliable energy source that can be swiftly and flexibly deployed, natural complements renewable energy.<sup>13</sup></p> <p>Importantly, the incremental local natural gas capacity provided by the Proposed Project will facilitate the integration of increasing amounts of renewable energy onto the electric system, which extends well beyond the City of San Diego. The</p> |

<sup>5</sup> MTS press releases, available at <https://www.sdmts.com/inside-mts/mts-express/leed-ing-way-greener-tomorrow>, <https://www.sdmts.com/inside-mts/news-release/mts-board-approves-108-million-capital-improvement-program>, and <https://www.sdmts.com/inside-mts/mts-express/wheels-bus>; California Natural Gas Vehicle Coalition, *Natural Gas Vehicles: A Key Path to 2020 and 2050 GHG Reductions*.

<sup>6</sup> City of San Diego 2015 CAP, Appendix A, at 30 [100% conversion of city trash trucks to natural gas by 2035].

<sup>7</sup> The chart on page 10 of the Game Changer Whitepaper, published by Gladstein Neandross Associates, compares the GHG emissions of alternative fuels based on the California Air Resources Board's (CARB's) Low Carbon Fuel Standard carbon intensity scoring after adjusting for the relative efficiency of different technologies, as described at [http://www.gladstein.org/gna\\_whitepapers/game-changer-next-generation-heavy-duty-natural-gas-engines-duced-by-renewable-natural-gas/](http://www.gladstein.org/gna_whitepapers/game-changer-next-generation-heavy-duty-natural-gas-engines-duced-by-renewable-natural-gas/).

<sup>8</sup> City of San Diego 2015 CAP at 24.

<sup>9</sup> See 2016 Integrated Energy Policy Report (IEPR) Update at 5-6; 20-22 [“Flexibility is necessary to compensate for hourly changes in variable renewable generation and energy demand, as well as outages for power plant maintenance and seasonal variations in hydropower generation. Natural gas-fired power plants offer the most flexibility for quickly, reliably, and cost-effectively ramping up or down to balance supply and demand.”].

<sup>10</sup> See 2016 IEPR Update at 5-6; 20-22.

<sup>11</sup> <https://www.sdge.com/newsroom/press-releases/2014-09-19/electric-use-san-diego-reaches-new-all-time-peak-record>

<sup>12</sup> 2016 IEPR Update at 20-21.

<sup>13</sup> The CEC finds that natural gas-fired power plants currently offer the most flexibility for “quickly, reliably, and cost-effectively” ramping up or down to balance electricity supply and demand,” according to the 2016 IEPR Update at 6.

| DG#  | Resource Area/Topic | Source/ Proponent's Environmental Assessment (PEA) Page  | Data Gap (DG) Question   | CPUC's Notes | Draft Response  |         |       |      |      |   |     |                                     |  |     |     |               |  |     |     |                                     |  |     |     |       |             |     |     |               |  |     |      |                                     |  |      |      |               |  |      |      |                                     |  |      |      |       |                    |      |      |               |  |      |      |                                     |  |      |      |               |  |
|--|---------------------|--|--|--------------|---|---------|-------|------|------|---|-----|-------------------------------------|--|-----|-----|---------------|--|-----|-----|-------------------------------------|--|-----|-----|-------|-------------|-----|-----|---------------|--|-----|------|-------------------------------------|--|------|------|---------------|--|------|------|-------------------------------------|--|------|------|-------|--------------------|------|------|---------------|--|------|------|-------------------------------------|--|------|------|---------------|--|
| California Independent System Operator (CAISO) determines which EGs to dispatch based on a number of operational and other considerations. The Proposed Project enables CAISO to dispatch EGs in San Diego when needed to support the integration of more renewable resources onto the entire electric grid. |                     |  |  |              |   |         |       |      |      |   |     |                                     |  |     |     |               |  |     |     |                                     |  |     |     |       |             |     |     |               |  |     |      |                                     |  |      |      |               |  |      |      |                                     |  |      |      |       |                    |      |      |               |  |      |      |                                     |  |      |      |               |  |
| <b>Project Description</b>   |                     |  |  |              |   |         |       |      |      |   |     |                                     |  |     |     |               |  |     |     |                                     |  |     |     |       |             |     |     |               |  |     |      |                                     |  |      |      |               |  |      |      |                                     |  |      |      |       |                    |      |      |               |  |      |      |                                     |  |      |      |               |  |
| 2-1  | Project Description | PEA pages 3-41, 3-47, and 3-48; PEA Figures 3-5, 3-6, 3-12, and 3-13; geographic information system (GIS) shapefiles with Design Refinements submitted 1/31/2017 | <p>Define the proposed construction methods in more detail.</p> <p>Based on review of the centerline and workspaces dated 1/31/2017, construction appears to occur in roads, road shoulders, areas adjacent to road shoulders, and in cross-country areas. To enhance understanding and establish consistency, please address the following:</p> <ul style="list-style-type: none"> <li>• How was “road shoulder” defined?</li> <li>• Provide a table with mileposts (MPs) that indicates where construction will occur: <ul style="list-style-type: none"> <li>○ 1) entirely within the road/road shoulder (as depicted in Figures 3-5 and 3-12),</li> <li>○ 2) within “available temporary work area adjacent to the roadway” and “ROW adjacent to the road shoulder” will be used, and</li> <li>○ 3) in cross-country areas (as depicted in Figure 3-6 and 3-13).</li> </ul> </li> <li>• Provide workspace shapefiles broken into the workspace scenarios described above.</li> <li>• Provide a figure similar to Figure 3-5 that shows construction extending beyond the road shoulder in “ROW adjacent to the road shoulder” or where “available temporary work area adjacent to the roadway” will be used.</li> <li>• The first paragraph of Section 3.6.2 provides a detailed description of how efforts would be made to preserve trees in urban areas. The second paragraph, discussing methods in cross-country areas, only discusses removal of brush and topsoil – no mention of how trees would be handled in cross-country areas. Please provide more information about the approach to pipeline construction in cross-country treed areas. Would all trees and woody vegetation be cleared for the width of the right-of-way (ROW)?</li> <li>• Identify by MP where construction will block one lane of traffic, where it will block more than one, and where it will require temporary road closure.</li> <li>• Where construction occurs within roads and road shoulders: <ul style="list-style-type: none"> <li>○ What is the maximum length of trench that will be opened at any one time?</li> <li>○ Will any ditch be left open overnight?</li> </ul> </li> </ul> |              | <p>Based on the current engineering and design of the Proposed Project, Applicants provide the following information regarding their proposed construction methods.</p> <ol style="list-style-type: none"> <li>1. As used in the PEA, the term “road shoulder” includes “available temporary work area adjacent to the roadway” and “ROW [right-of-way] adjacent to the road shoulder” and is the area within the dedicated road ROW that is immediately adjacent to the paved road surface and is either denude of vegetation or has low-lying vegetation. The road shoulder can be paved or unpaved. An unpaved road shoulder is identified as a potential workspace if it is absent of trees or heavy vegetation that will otherwise prevent vehicle access.</li> <li>2. The following table indicates where construction will occur. Workspace that is described as “available temporary work area adjacent to the roadway” and “ROW adjacent to the road shoulder” is synonymous with the definition of a dirt road shoulder, as defined previously.</li> </ol> <table border="1" data-bbox="1858 848 2675 1423"> <thead> <tr> <th>MP From</th> <th>MP To</th> <th>Type</th> <th>Note</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>3.3</td> <td>Road/Road Shoulder/Adjacent to Road</td> <td></td> </tr> <tr> <td>3.3</td> <td>3.8</td> <td>Cross-Country</td> <td></td> </tr> <tr> <td>3.8</td> <td>8.2</td> <td>Road/Road Shoulder/Adjacent to Road</td> <td></td> </tr> <tr> <td>8.2</td> <td>8.3</td> <td>Other</td> <td>Park &amp; Ride</td> </tr> <tr> <td>8.3</td> <td>9.2</td> <td>Cross-Country</td> <td></td> </tr> <tr> <td>9.2</td> <td>11.6</td> <td>Road/Road Shoulder/Adjacent to Road</td> <td></td> </tr> <tr> <td>11.6</td> <td>12.8</td> <td>Cross-Country</td> <td></td> </tr> <tr> <td>12.8</td> <td>29.5</td> <td>Road/Road Shoulder/Adjacent to Road</td> <td></td> </tr> <tr> <td>23.7</td> <td>23.7</td> <td>Other</td> <td>Line 1601 Crosstie</td> </tr> <tr> <td>29.5</td> <td>30.7</td> <td>Cross-Country</td> <td></td> </tr> <tr> <td>30.7</td> <td>43.5</td> <td>Road/Road Shoulder/Adjacent to Road</td> <td></td> </tr> <tr> <td>43.5</td> <td>46.6</td> <td>Cross-Country</td> <td></td> </tr> </tbody> </table> <p>Note that the pipeline travels outside of the road ROW for short distances at some mainline valve (MLV) locations that extend onto private property. These are located at the following locations: MLV 1 at MP 1.5, MLV 2 at MP 6.2 and MLV 10 at MP 43.9.</p> <ol style="list-style-type: none"> <li>3. The workspace shapefiles broken into the workspace scenarios described previously are provided in Confidential Exhibit A: Workspace Scenarios Shapefiles, which contains <b>confidential information provided pursuant to California Public Utilities Code (P.U. Code) Section 583, General Order (G.O.) 66-C, Commission Decision (D.) 16-08-024 and the accompanying declaration.</b></li> <li>4. Exhibit B: Typical Urban Right-of-Way Cross-Section depicts typical urban construction extending beyond the paved road shoulder.</li> <li>5. In cross-country areas, vegetation—including trees—will be removed within the ROW limits during the clearing phase and prior to grading as necessary to facilitate construction. Consideration will be given to trying to work</li> </ol> | MP From | MP To | Type | Note | 0 | 3.3 | Road/Road Shoulder/Adjacent to Road |  | 3.3 | 3.8 | Cross-Country |  | 3.8 | 8.2 | Road/Road Shoulder/Adjacent to Road |  | 8.2 | 8.3 | Other | Park & Ride | 8.3 | 9.2 | Cross-Country |  | 9.2 | 11.6 | Road/Road Shoulder/Adjacent to Road |  | 11.6 | 12.8 | Cross-Country |  | 12.8 | 29.5 | Road/Road Shoulder/Adjacent to Road |  | 23.7 | 23.7 | Other | Line 1601 Crosstie | 29.5 | 30.7 | Cross-Country |  | 30.7 | 43.5 | Road/Road Shoulder/Adjacent to Road |  | 43.5 | 46.6 | Cross-Country |  |
| MP From  | MP To               | Type   | Note   |              |   |         |       |      |      |   |     |                                     |  |     |     |               |  |     |     |                                     |  |     |     |       |             |     |     |               |  |     |      |                                     |  |      |      |               |  |      |      |                                     |  |      |      |       |                    |      |      |               |  |      |      |                                     |  |      |      |               |  |
| 0  | 3.3                 | Road/Road Shoulder/Adjacent to Road  |  |              |   |         |       |      |      |   |     |                                     |  |     |     |               |  |     |     |                                     |  |     |     |       |             |     |     |               |  |     |      |                                     |  |      |      |               |  |      |      |                                     |  |      |      |       |                    |      |      |               |  |      |      |                                     |  |      |      |               |  |
| 3.3  | 3.8                 | Cross-Country  |  |              |   |         |       |      |      |   |     |                                     |  |     |     |               |  |     |     |                                     |  |     |     |       |             |     |     |               |  |     |      |                                     |  |      |      |               |  |      |      |                                     |  |      |      |       |                    |      |      |               |  |      |      |                                     |  |      |      |               |  |
| 3.8  | 8.2                 | Road/Road Shoulder/Adjacent to Road  |  |              |   |         |       |      |      |   |     |                                     |  |     |     |               |  |     |     |                                     |  |     |     |       |             |     |     |               |  |     |      |                                     |  |      |      |               |  |      |      |                                     |  |      |      |       |                    |      |      |               |  |      |      |                                     |  |      |      |               |  |
| 8.2  | 8.3                 | Other  | Park & Ride  |              |   |         |       |      |      |   |     |                                     |  |     |     |               |  |     |     |                                     |  |     |     |       |             |     |     |               |  |     |      |                                     |  |      |      |               |  |      |      |                                     |  |      |      |       |                    |      |      |               |  |      |      |                                     |  |      |      |               |  |
| 8.3  | 9.2                 | Cross-Country  |  |              |   |         |       |      |      |   |     |                                     |  |     |     |               |  |     |     |                                     |  |     |     |       |             |     |     |               |  |     |      |                                     |  |      |      |               |  |      |      |                                     |  |      |      |       |                    |      |      |               |  |      |      |                                     |  |      |      |               |  |
| 9.2  | 11.6                | Road/Road Shoulder/Adjacent to Road  |  |              |   |         |       |      |      |   |     |                                     |  |     |     |               |  |     |     |                                     |  |     |     |       |             |     |     |               |  |     |      |                                     |  |      |      |               |  |      |      |                                     |  |      |      |       |                    |      |      |               |  |      |      |                                     |  |      |      |               |  |
| 11.6   | 12.8                | Cross-Country  |  |              |   |         |       |      |      |   |     |                                     |  |     |     |               |  |     |     |                                     |  |     |     |       |             |     |     |               |  |     |      |                                     |  |      |      |               |  |      |      |                                     |  |      |      |       |                    |      |      |               |  |      |      |                                     |  |      |      |               |  |
| 12.8   | 29.5                | Road/Road Shoulder/Adjacent to Road  |  |              |   |         |       |      |      |   |     |                                     |  |     |     |               |  |     |     |                                     |  |     |     |       |             |     |     |               |  |     |      |                                     |  |      |      |               |  |      |      |                                     |  |      |      |       |                    |      |      |               |  |      |      |                                     |  |      |      |               |  |
| 23.7   | 23.7                | Other  | Line 1601 Crosstie   |              |   |         |       |      |      |   |     |                                     |  |     |     |               |  |     |     |                                     |  |     |     |       |             |     |     |               |  |     |      |                                     |  |      |      |               |  |      |      |                                     |  |      |      |       |                    |      |      |               |  |      |      |                                     |  |      |      |               |  |
| 29.5   | 30.7                | Cross-Country  |  |              |   |         |       |      |      |   |     |                                     |  |     |     |               |  |     |     |                                     |  |     |     |       |             |     |     |               |  |     |      |                                     |  |      |      |               |  |      |      |                                     |  |      |      |       |                    |      |      |               |  |      |      |                                     |  |      |      |               |  |
| 30.7   | 43.5                | Road/Road Shoulder/Adjacent to Road  |  |              |   |         |       |      |      |   |     |                                     |  |     |     |               |  |     |     |                                     |  |     |     |       |             |     |     |               |  |     |      |                                     |  |      |      |               |  |      |      |                                     |  |      |      |       |                    |      |      |               |  |      |      |                                     |  |      |      |               |  |
| 43.5   | 46.6                | Cross-Country  |  |              |   |         |       |      |      |   |     |                                     |  |     |     |               |  |     |     |                                     |  |     |     |       |             |     |     |               |  |     |      |                                     |  |      |      |               |  |      |      |                                     |  |      |      |       |                    |      |      |               |  |      |      |                                     |  |      |      |               |  |

| DG#     | Resource Area/Topic | Source/ Proponent's Environmental Assessment (PEA) Page | Data Gap (DG) Question  | CPUC's Notes | Draft Response  |         |       |                     |      |      |                        |      |      |                        |      |      |                               |      |      |                               |
|---------|---------------------|---|---|--------------|---|---------|-------|---------------------|------|------|------------------------|------|------|------------------------|------|------|-------------------------------|------|------|-------------------------------|
|         |                     |   | <ul style="list-style-type: none"> <li>Will safe access to other roads, parking lots, and driveways be assured through steel plating or other means?</li> </ul> |              | <p>around high-value biological resources (e.g., oak trees) where this can be reasonably accomplished. While the cross-country portions of the alignment primarily cross brush and grasslands, woody vegetation and trees will be encountered. When necessary, trees will be removed at ground level, and the root systems will be left in place when feasible. However, if tree stumps or root systems present a safety concern, they will be removed by the grading crew. Figure A-4: Vegetation Communities Map of the Biological Resources Technical Report and Attachment C: Biological Resources Technical Report Addendum to the January 31, 2017 minor design refinements provide the location of where woody vegetation and/or where trees may be encountered.</p> <p>6. Estimating the number of lane closures is heavily influenced by the local jurisdiction through encroachment permit conditions and the final alignment, which occurs immediately prior to construction. Attachment 4.16-A: Traffic Analysis in the PEA provides potential scenarios for road and lane closures. The currently proposed alignment will be refined once the locations of existing utilities are determined through potholing. Potholing has only been completed for approximately two percent of the total distance of the line at four locations along the proposed route. The pothole data at these four locations provides enough information to speculate on the number of lanes that may need to be closed during construction, as provided in the following table.</p> <table border="1" data-bbox="1889 802 2635 1040"> <thead> <tr> <th>MP From</th> <th>MP To</th> <th>Anticipated Closure</th> </tr> </thead> <tbody> <tr> <td>26.1</td> <td>26.3</td> <td>Temporary road closure</td> </tr> <tr> <td>27.8</td> <td>28.1</td> <td>Temporary road closure</td> </tr> <tr> <td>34.4</td> <td>34.7</td> <td>Closure of more than one lane</td> </tr> <tr> <td>37.8</td> <td>37.9</td> <td>Closure of more than one lane</td> </tr> </tbody> </table> <p>Where construction occurs in roads and road shoulders, the maximum length of a trench that will be typically open at a given time is 1,200 feet for a single crew. There will be three crews working simultaneously within city streets throughout portions of the Proposed Project. Limitations on trench length are typically dictated by permit conditions or the cost to plate the trench if the approved traffic control plans require lanes to be re-opened during non-construction hours. If lanes are permitted to remain closed during non-working hours, then K-rails or fencing is more economical than installing plating. Plating will be utilized when trenching obstructs access to intersecting roads, parking lots, or driveways that do not have any alternative access points.</p> | MP From | MP To | Anticipated Closure | 26.1 | 26.3 | Temporary road closure | 27.8 | 28.1 | Temporary road closure | 34.4 | 34.7 | Closure of more than one lane | 37.8 | 37.9 | Closure of more than one lane |
| MP From | MP To               | Anticipated Closure                                     |   |              |   |         |       |                     |      |      |                        |      |      |                        |      |      |                               |      |      |                               |
| 26.1    | 26.3                | Temporary road closure                                  |   |              |   |         |       |                     |      |      |                        |      |      |                        |      |      |                               |      |      |                               |
| 27.8    | 28.1                | Temporary road closure                                  |   |              |   |         |       |                     |      |      |                        |      |      |                        |      |      |                               |      |      |                               |
| 34.4    | 34.7                | Closure of more than one lane                           |   |              |   |         |       |                     |      |      |                        |      |      |                        |      |      |                               |      |      |                               |
| 37.8    | 37.9                | Closure of more than one lane                           |   |              |   |         |       |                     |      |      |                        |      |      |                        |      |      |                               |      |      |                               |
| 2-2     | Project Description | PEA page 3-37   | Define "commerce impacts" as used in describing the Fiber Optic Intrusion and Leak Detection System Associated with Line 3602                                   |              | "Commerce impacts," as used in the PEA, refer to an event that results in a significant economic disruption to the area.  |         |       |                     |      |      |                        |      |      |                        |      |      |                               |      |      |                               |
| 2-3     | Project Description | Supplemental PEA page 2-5                               | Describe the location and provide a shapefile of the existing Kearny Villa Pressure-Limiting Station.   |              | As the Applicants indicated in an email dated April 18, 2017, due to internal information technology (IT) issues, the shapefile of the existing Kearny Villa Pressure Limiting Station will be provided by no later than April 28, 2017.  |         |       |                     |      |      |                        |      |      |                        |      |      |                               |      |      |                               |
| 2-4     | Project Description | PEA page 3-41   | Clarify terms.<br>Define and describe "all known underground facilities" and what is meant by "other facilities." Define and describe substructure.             |              | As used on page 3-41 in the PEA, "all known underground facilities" was used to describe "underground utilities," such as vaults, culverts, municipal separate storm sewer systems, drop-inlet structures, etc. "Other facilities" (identified as "other utilities" in the PEA) refers to underground utilities, such as electrical, waterlines, fiber optic, sewer, etc. The term "substructure" was used to describe man-made structures installed below the ground surface that will be located using potholing techniques prior to trenching activities.  |         |       |                     |      |      |                        |      |      |                        |      |      |                               |      |      |                               |

| DG#                 | Resource Area/Topic                       | Source/ Proponent's Environmental Assessment (PEA) Page | Data Gap (DG) Question  | CPUC's Notes | Draft Response  |
|---------------------|---|---|---|--------------|---|
| 2-5                 | Project Description                       | --  | <p>Provide a typical for each wetland and waterbody crossing method that may be used during construction.</p> <p><i>Clarification from L. Weaver on April 7, 2017</i><br/>           Provide typical drawings for any wetland or waterbody crossing techniques. We have Figures 3-16 and 3-17 for HDD and bore crossings, but are looking for drawings for other potential crossing methods. Is there a typical drawing that shows what is described in Section 3.6.9 of the PEA?</p>   |              | <p>In addition to Figures 3-16, 3-17, and 3-18 in the PEA, which provide typical drawings for horizontal directional drilling (HDD) and bore crossings, another method for crossing waterbodies and wetlands is open trench. Exhibit C: Typical Drainage and Wetland Crossings provides typical drawings for open cut drainage crossing and wetland crossing.</p>   |
| 2-6                 | Project Description                       | --  | <p>Update the southern terminus of the proposed route.</p> <p>In their March 20, 2017 letter to the Applicants, MCAS Miramar expressed that they do not want the project to cross the aqueduct road. Given that MCAS Miramar does not object to the change in the proposed project to terminate at Line 2010, as requested by the Applicants, please provide an update to the PEA that identifies the new terminus location and include updated GIS. Updated GIS should include:</p> <ul style="list-style-type: none"> <li>• MPs of the proposed new terminus</li> <li>• The alternative terminus appears to consist of two pipelines; confirm this or send a new centerline</li> <li>• Shapefile for the proposed facility at MP 46</li> <li>• Confirm that other than the proposed facility at MP 46, all aboveground facilities, laydown areas, and bore pits would remain the same.</li> </ul> <p>Confirm that the proposed project will remain on the east side of the aqueduct road with the change in terminus.</p> |              | <p>The GIS files for Proposed Project's refined southern terminus are provided in Confidential Exhibit D: Refined Southern Terminus Shapefiles, which contains <b>confidential information provided pursuant to P.U. Code Section 583, G.O. 66-C, D.16-08-024 and the accompanying declaration</b>. Updated GIS includes the following:</p> <ul style="list-style-type: none"> <li>• The refined southern terminus point is at MP 46.6.</li> <li>• The refined southern terminus point consists of the proposed 36-inch pipeline (Line 3602) connecting to two 20-inch pipelines as part of the existing Line 2010 loop.</li> <li>• The shapefile for the proposed facility at MP 46.6 is provided in Confidential Exhibit D: Refined Southern Terminus Shapefiles.</li> <li>• Other than the changes associated with moving the terminus facility of proposed Line 3602 to MP 46.6, all other aboveground facilities will remain the same as initially proposed.</li> </ul> <p>With the refined southern terminus point, the Proposed Project will remain on the east side of Aqueduct Road across the Marine Corps Air Station (MCAS) Miramar base.</p>   |
| <b>Alternatives</b> |   |   |   |              |   |
| 3-1                 | Alternatives / Applicant Proposed Project | PEA, Figure 5-2 (map 3 of 3)                            | <p>Provide additional information about proposed project on MCAS Miramar.</p> <p>Provide updated correspondence between the Applicants and the San Diego County Water Authority about the Authority's future plans along the aqueduct road on Miramar. Discuss if and how the proposed route is being designed to prevent future conflicts with the water authority. Describe steps the Applicants are taking to analyze both sides of the aqueduct to allow for flexibility as plans develop. Does the route have to cross from the east to the west side of the road? If yes, explain why.</p>  |              | <p>On December 21, 2016, the Applicants met with the San Diego County Water Authority (SDCWA) to brief the agency on the Proposed Project and discuss the locations where the Proposed Project will cross SDCWA water lines. During this meeting, SDCWA representatives indicated that they are contemplating turning over one of the three water pipelines on MCAS Miramar to the City. They commented that this conceptual plan will require some pipeline re-lining and a joint use agreement between the SDCWA and the City. They also mentioned that if they did turn over the pipeline to the City, they will consider constructing a replacement pipeline. The SDCWA representatives did not share with the Applicants whether these future planning options were simply conceptual or not. Other than the verbal discussions at this meeting, the Applicants and SDCWA have not further corresponded on the SDCWA's future plans along Aqueduct Road.</p> <p>The Proposed Project was routed on the east side of Aqueduct Road to minimize impacts to vegetation and to limit the amount of grading required to establish the ROW during construction. The east side of Aqueduct Road is disturbed and includes the existing Aqueduct Road, which will be used during construction and subsequent operation and maintenance (O&amp;M) activities. However, in response to this request and discussions with MCAS Miramar on January 12, 2017, the Applicants will preliminarily design an alternative alignment on the west side of the aqueducts and conduct a preliminary habitat assessment in spring 2017 of the area that was not previously surveyed.</p> |

| DG# | Resource Area/Topic                                      | Source/ Proponent's Environmental Assessment (PEA) Page | Data Gap (DG) Question   | CPUC's Notes | Draft Response  |
|-----|--|---|--|--------------|---|
| 3-2 | Alternatives / Rainbow to Santee Non-Miramar Alternative | PEA, page 5-25  | <p>Provide additional information about the Rainbow to Santee Non-Miramar Alternative.</p> <p>The PEA indicates that the Rainbow to Santee Non-Miramar Alternative could potentially be infeasible. Please provide an update to the PEA with a revised Rainbow to Santee Non-Miramar Alternative route that is consistent with the modifications discussed on a phone call between the Applicants and the California Public Utilities Commission (CPUC) on March 29, 2017, including updated GIS files. Discuss in detail any concerns with the feasibility of the revised Rainbow to Santee Non-Miramar Alternative route. Indicate whether route variations or mitigation can be developed to avoid or minimize any impacts that may make feasibility a concern.</p> |              | <p>Energy Division and MCAS Miramar communicated their desire to carry forward the Rainbow to Santee Non-Miramar Alternative only recently, March 17, 2017. Following that discussion, Applicants have made an effort to refresh the analysis and revisit the assumptions made two years ago, when the PEA was in development. Applicants' preliminary findings to date are presented below.</p> <p>Based on new information and changed circumstances, Applicants have refined the Rainbow to Santee Non-Miramar Alternative from what was presented in the PEA, primarily to avoid a new housing development currently being constructed in the City of Santee. The Refined Rainbow to Santee Non-Miramar Alternative would follow the northern alignment of the Proposed Project from the Rainbow Metering Station until the intersection of Pomerado Road and Scripps Poway Parkway, where the route would veer to the east, avoiding MCAS Miramar and traveling south until its termination in the City of Santee. The refined alignment would total approximately 52 miles in length, which is approximately six miles longer than the Proposed Project. While this route would avoid entering federal land within MCAS Miramar, approximately 1.7 miles of the alignment would cross the Goodan Ranch/Sycamore Canyon Preserve (Preserve) and the recently appointed West Sycamore/Mission Trails Regional Park—where it would travel to the east of MCAS Miramar.</p> <p>Although the Goodan Ranch/Sycamore Canyon Preserve does not appear to have any explicit land use restrictions prohibiting the placement of a natural gas transmission pipeline, the preserve is part of the County's Multiple Species Conservation Program (MSCP) Metro-Lakeside-Jamul Segment and is currently designated as an Open Space Preserve with "very high habitat value." It is also part of the Wildlife Agencies' Pre-Approved Mitigation Area (PAMA), which may make condemnation difficult or unlikely. Under Article 7 Condemnation for More Necessary Public Use, Section 1240.680 of the California Code of Civil Procedure, "property is presumed to have been appropriated for the best and most necessary public use if the property is appropriated to public use as" open space or recreation area. Therefore, if SDG&amp;E had to condemn this property, the condemnation action would need to overcome this statutory presumption or prove that an underground pipeline would not interfere with the open space use of the property. Further, this alternative may require additional coordination with the County of San Diego for the placement of utility facilities on that portion of the route. While there are no known deed restrictions or zoning regulations that prohibit the use of the land for utilities, the California Environmental Quality Act (CEQA) would require analysis of the alternative's compliance with the County's Subarea Plan and the County's Biological Mitigation Ordinance, which may create a land use impact. This alternative would cross approximately 1.7 more miles of privately owned land than the Proposed Project, potentially requiring a greater amount of landowner agreements or the potential acquisition of private property, contrary to the Applicants' routing criteria.</p> <p>The Refined Rainbow to Santee Non-Miramar Alternative extends 4.2 miles through open space along or parallel to paved and unpaved portions of Sycamore Canyon Road. Sycamore Canyon, West Sycamore, and Goodan Ranch consist of County of San Diego Preserve Areas and sensitive natural communities and aquatic resources, including vernal pools, mixed chaparral, coastal sage scrub, grasslands, oak woodland, riparian habitat, and creeks and tributaries that flow into San Diego River. This area supports special-status plants and wildlife, including coastal California gnatcatcher and least Bell's vireo. The riparian areas also support numerous special-status and Migratory Bird Treaty Act protected bird species. When compared to the Proposed Project, the U.S. Fish and Wildlife Service (USFWS)-designated critical habitat that would be crossed is approximately 2.3 miles greater and there are 10 more California Natural Diversity Database (CNDDDB) records within one mile. The large open space area consists of numerous hiking trails that are parallel to and/or cross this alternative, which provides habitat corridors and linkages for wildlife. Construction could disrupt use of these trails by both wildlife and park visitors; however, the trail system could be completely restored following construction.</p> <p>As previously mentioned, Sycamore Canyon and Goodan Ranch are part of the MSCP, which has specific resource preservation goals outlined in the 2013 Resource Management Plan. These goals include ensuring the long-term viability and sustainability of native ecosystem function and natural processes throughout the Preserve; protecting the existing and restored biological resources from disturbance causing or incompatible activities within and adjacent to the Preserve while accommodating compatible public recreational uses; and enhancing the full range of native plant associations and functional wildlife connections to adjoining habitat. This area is not easily accessible and a new permanent patrol road would need to be constructed and maintained. The permanent impacts associated with the patrol road could conflict with the long-term goals of the Resource Management Plan and coordination with the County would be required to ensure that the established goals could be maintained in concert with operation of the pipeline.</p> |

| DG# | Resource Area/Topic   | Source/ Proponent's Environmental Assessment (PEA) Page | Data Gap (DG) Question   | CPUC's Notes | Draft Response  |
|-----|---|---|--|--------------|---|
|     |   |   |  |              | <p>This alternative would also have greater impacts to hydrological resources as the alignment travels within and parallel to a riparian corridor and dry wash, which would pose additional environmental permitting challenges and concerns with exposing the pipeline to long-term scour, an impact that the Proposed Project does not encounter. However, it is anticipated that impacts to the riparian corridor could be minimized through engineering and subsequent constructability reviews to locate the centerline outside of the riparian corridor to the extent possible. ROW widths could be minimized to 75 feet for short distances to reduce impacts to vegetation, but in order to salvage and store topsoil and to perform the required grading to establish a level work area, a 100-foot-wide right-of-way is expected. Assuming a 100-foot-wide right-of-way for construction and a permanent 12-foot-wide patrol road, permanent impacts to oak woodland/riparian, non-native grasslands, and chaparral within Goodan Ranch and Sycamore Canyon are estimated at up to approximately nine acres. Cultural sensitivity for the Proposed Project and for this alternative were both low. In addition, the potential for encountering hazardous materials, based on the number of existing hazardous sites within 0.25 miles of the route, was determined to be high.</p> <p>The Refined Rainbow to Santee Non-Miramar Alternative would meet the Proposed Project's objectives and does not appear to have underlying land use restrictions within the Preserve that were previously considered to make land acquisition infeasible. However, due to the designation of "open space", if the property owner will not provide an easement, the Applicants would need to commence a lengthy process to condemn this property, which would likely cause significant delays in the project. Because of the Civil Code Section described above, the property is already presumed to be used in the "best and most necessary" use and it would be more difficult (and potentially not possible) for SDG&amp;E to acquire this property. Up to nine acres of high-quality habitat would likely need to be mitigated at a ratio of greater than 1 to 1 for permanent impacts resulting from a patrol road and up to 75 additional acres would need to be mitigated for temporary impacts. Mitigation options are not known at this time, but could pose a challenge during the permitting phase for this alternative. The Refined Rainbow to Santee Non-Miramar Alternative also has greater impacts to recreation and private property. For these reasons, the Rainbow to Santee Non-Miramar Alternative and the Refined Rainbow to Santee Non-Miramar Alternative were not chosen.</p> <p>The GIS shapefiles for the Refined Rainbow to Santee Non-Miramar Alternative were provided on April 14, 2017.</p> |
| 3-3 | Alternatives / Rainbow to Santee Non-Miramar Alternative    | PEA, page 5-25  | If the revised Rainbow to Santee Non-Miramar Alternative route would not tie in to Line 2010, explain why.   |              | <p>The Refined Rainbow to Santee Non-Miramar Alternative was preliminarily routed to connect to the existing Line 3600, essentially at the point where Line 2010 and Line 3600 interconnect, which would allow gas to be efficiently fed into both lines. Upon further review, as an additional alternative termination point, it may be possible to refine the route to terminate the proposed Line 3602 farther to the east into the existing Line 2010 at the Carlton Hills Pressure Limiting Station.</p>   |
| 3-4 | Alternatives / Spring Canyon Road Route Segment Alternative | PEA, page 5-49  | <p>Rename and provide additional information about the Spring Canyon Road Route Segment Alternative.</p> <p>The alternative route segment labeled Spring Canyon Road Route Segment Alternative follows a fuel break rather than a road. Please rename this to clarify. Discuss whether or not the pipeline could withstand use of the unimproved firebreak by heavy equipment conducting operations, including tanks. Also confirm that the pipeline could withstand maintenance activities along the break, including controlled burns.</p> |              | <p>Going forward, the Applicants will refer to the Spring Canyon Road Route Segment Alternative as the Spring Canyon Fuel Break.</p> <p>The proposed Line 3602 will be installed with a minimum of 42 inches of cover along this route segment alternative with no aboveground facilities other than pipeline markers. The Applicants calculate that the pipeline would be able to safely withstand tracked vehicle loads consistent with those imparted by an M1A2 Abrams military tank weighing approximately 140,000 pounds. The Applicants welcome the opportunity for additional consultation with MCAS Miramar as part of further developing design elements associated with this route segment alternative to avoid impacts to mission-critical operations and ensure compatibility with all base activities.</p> <p>As mentioned previously, the pipeline will be buried with a minimum of 42 inches of cover and is not anticipated to be affected by brush management activities, including controlled burns along the fuel break.</p>  |

| DG# | Resource Area/Topic   | Source/ Proponent's Environmental Assessment (PEA) Page | Data Gap (DG) Question   | CPUC's Notes | Draft Response  |
|-----|---|---|--|--------------|---|
| 3-5 | Alternatives / Kearny Villa Road Route Segment Alternative                                      | PEA, page 5-50  | <p>Provide additional information about the Kearny Villa Road Route Segment Alternative.</p> <ol style="list-style-type: none"> <li>1. Confirm that this alternative segment contemplates the pipeline entering the Kearny Villa Road easement north of the MCAS Miramar boundary and stays within the road easement until the crossing of SDG&amp;E Line 2010. If it does not, explain why.</li> <li>2. Identify the easement holder(s) of Kearny Villa Road. Provide correspondence or supporting documentation from consultation with the appropriate easement holder(s) regarding the concept of placing the pipeline in the easement and describe any legal or practical limitations with this co-location. Clarify which sections along Kearny Villa Road are under California Department of Transportation authority and which are under City of San Diego or local authority.</li> <li>3. Discuss whether or not the segment could interconnect with Line 2010 near the point of intersection with Kearny Villa Road. If the interconnection must be outside of the existing road easement, identify the minimum distance required with supporting information.</li> <li>4. Explain why the additional 2 miles of pipeline east of the Kearny Villa Road intersection is part of the Kearny Villa Road Segment. This segment appears to be in new pipeline ROW. Provide a version of this alternative that avoids the additional 2 miles. Identify one or more reasonable locations near the Kearny Villa Road/Line 2010 intersection point for the required interconnection facility for Line 3602 and Line 2010. In addition, explain why the existing Line 1600/2010 interconnection facility would not be feasible (i.e., impossible) to use.</li> </ol> |              | <ol style="list-style-type: none"> <li>1. The Kearny Villa Road Route Segment Alternative contemplates the pipeline entering the Kearny Villa Road ROW north of the MCAS Miramar boundary at Miramar Road and staying within the ROW until it would cross State Route (SR-) 163. At this location, it may be necessary to route the pipeline outside of the Kearny Villa Road ROW to allow for the construction of the freeway crossing in an alignment that conforms to the California Department of Transportation's (Caltrans') requirements.</li> <li>2. Per "Relinquishment of Highway Right of Way in the City of San Diego, Road 11-SD-15-R12.0/R14.8 Request No. 24315," Caltrans relinquished all rights, title, and interest to its ROW to the City from SR-163 to Miramar Road in 1983, as provided in Exhibit E: Relinquishment of Highway Right-of-Way. The Caltrans "Right of Way Map No. 395" and "Relinquishment Key Map No. 24315" are provided in Exhibit F: Relinquishment and Right-of-Way Maps and show the location and details of this segment. The Applicants have not consulted with the City about the placement of a pipeline in Kearny Villa Road because the Applicants consider Kearny Villa Road to be governed by the Franchise Agreement between SDG&amp;E and the City. Under the Franchise Agreement with the City, SDG&amp;E may use the City's "streets" for the transmission and distribution of gas. The Franchise Agreement defines "streets" as "the public freeways, highways, streets, ways, alleys and places as the same now or may hereafter exist within the City."</li> <p>In addition, during a phone conversation with the Applicants' outside counsel on March 31, 2017, MCAS Miramar counsel John Stimson confirmed that a route along Kearny Villa Road would require an easement from the U.S. Department of the Navy, because despite the ROW being operated by the City, Kearny Villa Road is still located on MCAS Miramar land.</p> <li>3. The Kearny Villa Road Route Segment Alternative could interconnect with Line 2010 just southeast of SR-163 on land located outside of the existing road ROW between Kearny Villa Road and Interstate (I-) 15. To perform future In-Line Inspections for the proposed pipeline, a new permanent easement measuring approximately 100 feet by 150 feet is required for the piping interconnection, pig receiver, communication antennae, and control cabinets.</li> </ol> <p>The initial routing for the Kearny Villa Road Route Segment Alternative would terminate in the same location as the proposed route due to concerns with potential impacts to vernal pools near the existing Kearny Villa Pressure Limiting Station, as well as concerns with potentially sensitive cultural resources. Upon further analysis, the Kearny Villa Road Route Segment Alternative may be terminated as described previously in item 3 as the concern over potentially sensitive cultural resources has been resolved. The existing Line 1600/2010 interconnection area has environmental constraints (i.e., vernal pools) that make the potential of expanding the existing Kearny Villa Pressure Limiting Station very challenging. Terminating the proposed 36-inch pipeline at the Line 1600/2010 interconnection is technically feasible, but expanding the existing Kearny Villa Pressure Limiting Station is likely infeasible due to the vernal pools. To feasibly interconnect the proposed Line 3602 to Line 2010 in this general location, a new aboveground facility would have to be sited to the east of the Kearny Villa Pressure Limiting Station on the east side of Kearny Villa Road. Please refer to Exhibit G: Kearny Villa Alternative Layout.</p> |
| 3-6 | Alternatives / Spring Canyon Road Route Segment and Kearny Villa Road Route Segment Alternative | PEA, page 5-49 to 5-50                                  | <p>Provide survey information for the Kearny Villa Road and Spring Canyon Road Route Segment Alternatives.</p> <p>During a phone call between the applicants and the CPUC on March 29, 2017, the applicants said that they had done field surveys of the Kearny Villa Road and Spring Canyon Road Route Segment Alternatives. Provide reports of these surveys and associated GIS files.</p>   |              | <p>During the initial survey effort, a proposed route had not been determined between Pomerado Road and the proposed termination point on MCAS Miramar. To minimize access to MCAS Miramar, Insignia Environmental (Insignia) mapped vegetation along the Proposed Project and the Spring Canyon Fuel Break and Creek Road route segment alternatives simultaneously. The data for the Spring Canyon Fuel Break and Creek Road route segment alternatives are limited to vegetation maps created in the field. Because the Proposed Project better met the routing criteria established in the PEA, the Biological Resources Technical Report did not include any survey data for the other two alternatives that would cross MCAS Miramar. No field surveys were conducted for the Kearny Villa Road Route Segment Alternative as it was developed after the field effort was complete and was later determined to not be the preferred route.</p> <p>Exhibit H: Spring Canyon Fuel Break Route Segment Alternative Vegetation Communities Map provides a detailed map of the vegetation communities along the Spring Canyon Fuel Break Route Segment Alternative. Exhibit I: Spring Canyon Fuel Break Route Segment Alternative Vegetation Shapefiles includes the GIS shapefiles for the vegetation data.</p>  |

| DG#                                    | Resource Area/Topic         | Source/ Proponent's Environmental Assessment (PEA) Page | Data Gap (DG) Question  | CPUC's Notes                       | Draft Response  |
|--|-----------------------------|---|---|------------------------------------|---|
| 3-7                                    | Alternatives / MCAS Miramar | --  | Provide on-base infrastructure map and GIS data<br>Provide complete SDG&E on-base infrastructure map in legible electronic format /pdf. Provide all associated GIS data for on-base infrastructure. If not available, explain why.  |                                    | As the Applicants indicated via email dated April 18, 2017, due to internal IT issues, the map and shapefiles for SDG&E's on-base gas and electric infrastructure will be provided by no later than April 28, 2017. |
| <b>Environmental Impact Assessment</b> |                             |   |   |                                    |   |
| <b>Aesthetics</b>                      |                             |   |   |                                    |   |
| 4.1-1                                  | Aesthetics                  | PEA, p. 4.1-8   | Provide kmz files containing all KOP locations and points of each photograph location. Three additional visual simulations were requested during a teleconference held January 21, 2016. The visual simulations were requested for the following locations: 1) Location #3, Photograph #6; 2) Location #9, Photograph #27; and 3) Location #14, Photograph #36. Simulations were requested for views from these locations showing the anticipated appearance of the proposed project at 1 year following construction and at a period of 3 to 5 years following construction. In addition, the CPUC's consulting aesthetic resources specialist requested that the three additional visual simulations be prepared as panorama photos to show the surrounding area as context for the proposed project. Provide the additional panorama visual simulations to the CPUC. | Previously Deficiency Item 1.4.1-3 | The requested visual simulations were provided on August 11, 2016 and were re-sent via email on April 12, 2017. Please clarify whether anything further is being requested at this time.                            |

| DG#                | Resource Area/Topic | Source/ Proponent's Environmental Assessment (PEA) Page    | Data Gap (DG) Question  | CPUC's Notes | Draft Response  |
|--------------------|---------------------|--|---|--------------|---|
| <b>Air Quality</b> |                     |  |   |              |   |
| 4.3-1              | Air Quality/ GHG    | Attachment A: Minor Design Refinements submitted 1/31/2017 | <p>Provide air quality and greenhouse gas (GHG) data for minor design refinements.</p> <p>Minor design refinements listed in Attachment A include eight new laydown yards, temporary workspace reconfigurations, and additional design modifications that imply changes in temporary disturbance acreage and potentially in the construction equipment and vehicle use required during construction.</p> <ul style="list-style-type: none"> <li>• Provide revised fugitive dust emissions estimates associated with the proposed minor design refinements.</li> <li>• Clarify whether the proposed minor design refinements would require additional or less criteria air pollutant sources (i.e., construction equipment and vehicles), compared to as those assumed in the PEA and Supplemental PEA submittals.</li> <li>• Provide revised GHG estimates associated with the proposed minor design refinements. Clarify whether the proposed minor design refinements would require additional or less GHG direct emission sources (i.e., construction equipment and vehicles) compared to those assumed in the PEA and Supplemental PEA submittals.</li> </ul> |              | <p>As described in the PEA, the main sources of construction-related criteria air pollutant emissions are the anticipated tailpipe emissions from construction equipment and on-road vehicle use, fugitive dust emissions from ground-disturbing activities, and dust from on-road vehicle travel. The January 31, 2017 minor design refinements are not anticipated to change the proposed construction schedule or equipment list presented in the PEA. As a result, the total tailpipe emissions from construction equipment and vehicle use will not change with the criteria air pollutant emissions from vehicle and construction equipment use, and the GHG emissions will not be affected by the implementation of these refinements.</p> <p>The minor design refinements will result in an approximately 38.7-acre increase in temporary impacts when compared to the Proposed Project design that was included in the PEA. This increase has the potential to generate additional fugitive dust emissions that were not accounted for in the previously submitted air quality calculations.</p> <p>Of the approximately 38.7 acres that were added, approximately 23.6 acres are associated with eight new laydown yards and approximately 15.1 acres are associated additional workspace. The maximum daily fugitive dust emissions associated with laydown yard use will result from the initial clearing and grading of the site prior to use. Following this process, the yard will be stabilized as described in the PEA.</p> <p>The Emmanuel Church Lot, Arbolitos Field Yard, and Montiel Yard (totaling approximately 7.8 acres) are currently in developed or urban areas; therefore, no ground-disturbing activities will be required to prepare these sites, and no fugitive dust emissions are anticipated.</p> <p>Of the remaining five yards (totaling approximately 15.8 acres), the largest yard is the approximately 5.2-acre Montego Yard. This yard is similar in size to the approximately five-acre Laydown Yard #5 identified in the PEA (renamed to be the Nutmeg Street Yard as part of the minor design refinements). It is assumed that only one yard will be cleared and graded in a single day. As a result, the maximum increase in uncontrolled daily fugitive dust emissions associated with the inclusion of the eight additional yards is anticipated to be approximately four pounds of particulate matter (PM) with a diameter of 10 microns or less (PM<sub>10</sub>) and 3.6 pounds of PM with a diameter of 2.5 microns or less (PM<sub>2.5</sub>). With the implementation of the Proposed Project's applicant-proposed measures (APMs), which require graded areas to be stabilized, the controlled emissions will be reduced to approximately 1.8 pounds of PM<sub>10</sub> and 1.6 pounds of PM<sub>2.5</sub>.</p> <p>Due to the linear nature of the Proposed Project, the approximately 15.1 acres of additional temporary impacts will be dispersed across the Proposed Project alignment. Approximately 280 working days have been allocated for construction of the Proposed Project; therefore, less than 0.05 acre of additional workspace will be impacted each day of construction. This will result in an approximately one-pound increase of uncontrolled daily PM<sub>10</sub> emissions and approximately 0.95 pound of uncontrolled daily PM<sub>2.5</sub> emissions. With the implementation of the Proposed Project's APMs, which require disturbed areas to be stabilized, the controlled emissions will be reduced to approximately 0.45 pound of PM<sub>10</sub> and 0.4 pound of PM<sub>2.5</sub>. As a result, the total increase in daily uncontrolled fugitive dust emissions will be approximately five pounds of PM<sub>10</sub> and 4.6 pounds of PM<sub>2.5</sub>. The Proposed Project APMs will reduce these emissions to approximately 2.3 pounds of PM<sub>10</sub> and two pounds of PM<sub>2.5</sub>. These changes represent an increase between one and 1.6 percent and will not trigger any additional exceedances of the applicable San Diego Air Pollution Control District emissions thresholds.</p> <p>As described in the PEA and subsequent Deficiency Request Responses, the sources of GHG emissions during construction will be tailpipe emissions from heavy equipment and vehicle use, as well as the venting of natural gas from existing pipelines. Because the minor design refinements to the Proposed Project will not change the duration and intensity of use for construction equipment and vehicles, the tailpipe emissions will also not change. The proposed venting of natural gas will not be affected either; therefore, there will be no change to the GHG emissions associated with construction of the Proposed Project with the inclusion of the minor design refinements.</p> <p>Tailpipe emissions from construction equipment and vehicles required to conduct regular inspection and repair of the pipeline facilities will generate criteria air pollutant and GHG emissions during the O&amp;M phase of the Proposed Project. The intensity of these activities is driven by the number of aboveground facilities and length of the pipeline. Because the minor design</p> |

| DG#                         | Resource Area/Topic  | Source/ Proponent's Environmental Assessment (PEA) Page           | Data Gap (DG) Question   | CPUC's Notes | Draft Response   |
|-----------------------------|----------------------|---|--|--------------|--|
|                             |                      |   |  |              | <p>refinements do not increase the overall length of the pipeline or the number of aboveground facilities, the anticipated criteria air pollutant emissions and GHG emissions from these activities will not change with the inclusion of the refinements.</p> <p>Periodic venting of natural gas during inspection, repair, and operation of the pipeline may also occur and will be a source of GHG emissions. As stated previously, the length of the pipeline and number of aboveground facilities will not change as a result of the minor design refinements; therefore, the quantity of natural gas that will be released during O&amp;M activities of the Proposed Project is not anticipated to change based on the inclusion of the refinements. As a result, the total GHG emissions associated with the O&amp;M phase will not increase.</p>   |
| <b>Biological Resources</b> |                      |   |  |              |  |
| 4.4-1                       | Biological Resources | Wetlands Delineation Report submitted 2/10/17                     | <p>Clarify delineation reporting.</p> <p>The PRSP Wetlands Delineation Report only includes those features classified as wetlands. Provide documentation of drainage delineations or a schedule for these delineations and submittal of related report(s).</p>   |              | <p>Non-wetland waters of the U.S. and waters of the State were mapped between February 23 and May 20, 2015, and the results were presented in the Preliminary Wetlands and Waters Assessment dated September 2015. A list of drainages crossed by the Proposed Project is provided in Attachment C: Wetland and Water Survey Results of the Preliminary Wetlands and Waters Assessment. All of the drainages that are listed in Attachment C: Wetland and Water Survey Results are presumed to be jurisdictional by the U.S. Army Corps of Engineers (USACE), CDFW, and/or Regional Water Quality Control Board (RWQCB), as identified in Table C-1: Drainage Features of Attachment C: Wetland and Water Survey Results.</p> <p>While mapping drainages, Insignia biologists also noted non-jurisdictional linear features, such as swales, erosional features, and other ephemeral features. These features are not under the jurisdiction of the USACE, CDFW, or RWQCB. These non-jurisdictional features are included in Attachment A: Hydrologic Region Map of the Preliminary Wetlands and Waters Assessment. Concrete-lined ditches with ephemeral flow that were neither relocated tributaries nor excavated in a tributary were determined to be non-jurisdictional according to <i>The Clean Water Rule: Definition of Waters of the United States</i>, and were not further documented. These non-jurisdictional ditches appeared to carry water only from anthropogenic sources (e.g., landscape run-off, etc.).</p> <p>The Wetland Delineation Report dated February 2017 documents the results of the formal wetland delineations that were conducted in accordance with the USACE's Wetlands Delineation Manual. These delineations were conducted between September 21 and December 20, 2016 on the potential wetlands identified in the Preliminary Wetlands and Waters Assessment dated September 2015. The jurisdiction for drainages is based on connectivity and other factors associated with the USACE's <i>The Clean Water Rule: Definition of Waters of the United States</i> and/or the Porter-Cologne Water Quality Control Act and is not dependent on the same three parameters as wetlands. The drainage data remain unchanged; therefore, the information presented in the Preliminary Wetlands and Waters Assessment dated September 2015 represents all of the drainages assumed to be jurisdictional, as identified in the assessment.</p> |
| 4.4-2                       | Biological Resources | Biological Resources Technical Report (BRTR) Addendum Section 3.1 | <p>Clarify whether wetland features were included in the BRTR Addendum.</p> <p>There are no wetland features mentioned in the BRTR Addendum. Section 3.1 "Hydrologic Features" states that "No drainages were documented within the 2016 survey area." Provide justification as to why only drainages were mentioned and not wetlands.</p> |              | <p>Page 3, Section 2 of the Biological Resources Technical Report Addendum describes that, during the habitat assessment, the biologists mapped vegetation communities, surveyed for hydrological features (e.g., potentially jurisdictional drainages, wetland features, and vernal pools), assessed habitat for special-status plant and wildlife species, and documented plant and wildlife species within the Biological Resources Survey Area (BRSA). Page 11, Section 3.1 presents the results of the hydrological features (i.e., potentially jurisdictional drainages, wetland features, and vernal pools), but inadvertently only references the drainages. The section was intended to conclude that no potentially jurisdictional drainages, wetland features, or vernal pools were identified within the 2016 BRSA.</p>  |

| DG#                                 | Resource Area/Topic  | Source/ Proponent's Environmental Assessment (PEA) Page  | Data Gap (DG) Question   | CPUC's Notes | Draft Response   |
|-------------------------------------|----------------------|--|--|--------------|--|
| 4.4-3                               | Biological Resources | Wetlands Delineation Report, Section 4.2, and Preliminary Wetlands and Waters Assessment, Appendix E | <p>Provide explanation and/or justification for the change in potentially jurisdictional wetlands assessed during 2015 wetlands assessments and 2016 jurisdictional delineations.</p> <p>A comparison of "Table 1: 2016 Wetland Delineation Summary" (from 2017 Wetland Delineation Report) and "Table E-2: Wetland Features" (from Attachment C, of Wetlands and Waters Assessment, 2015) shows that there are 8 wetland features assessed during 2016 delineations that were not included in the list of 17 potentially jurisdictional features to be temporarily impacted by the project during the initial "Wetland and Waters Assessment (2015)". Provide justification of this change in potentially jurisdictional wetlands and whether or not it is simply due to route adjustments.</p> |              | <p>In 2015, potentially jurisdictional wetlands were mapped within the BRSA, which extends beyond the proposed workspace limits. In 2016, formal wetland delineations were conducted for all of the potentially jurisdictional wetlands within the proposed workspaces that will likely be impacted during construction. In addition, any potentially jurisdictional wetlands within the proposed workspace limits for the minor design refinements were also delineated. In particular, minor design refinements at MP 3.3, SR-76, and I-15 resulted in the crossing of eight additional potentially jurisdictional wetlands that were previously mapped within the BRSA in 2015, but not formally delineated. Therefore, they were added to the 17 potentially jurisdictional features and formally delineated in the field.</p>   |
| <b>Geology, Soils and Resources</b> |                      |  |  |              |  |
| 4.6-1                               | Geology              | PEA page 4.6-6 and 4.6-19, Attachment A: Minor Design Refinements submitted 1/31/2017                | <p>Update Tables 4.6-1 and 4.6-4.</p> <p>To account for changes from the refined project alignment, update the MP's designations in Tables 4.6-1 and 4.6-4 that relate to locations of particular geologic formations and soil types.</p>  |              | <p>MP designations were not provided in Table 4.6-1: Geological Formations within the Proposed Project Area or Table 4.6-4: Soils in the Proposed Project Area in the PEA. Both tables have been updated to include the revised MP designations. The revised tables are provided in Exhibit J: Revised Geology Tables.</p>   |
| 4.6-2                               | Geology              | PEA page 4.6-6 and 4.6-19, Attachment A: Minor Design Refinements submitted 1/31/2017                | <p>Update Tables 4.6-1 and 4.6-4</p> <p>Update tables 4.6-1 and 4.6-4 to provide geology and soils data for all proposed laydown yards and permanent patrol roads described in the minor design refinement.</p>  |              | <p>Geologic formations underlying the proposed laydown yards and permanent access roads are now presented in Revised Table 4.6-1: Geologic Formations within the Proposed Project Area. Soils underlying the proposed laydown yards and permanent patrol roads are now presented in Revised Table 4.6-4: Soils in the Proposed Project Area. The revised tables are provided in Exhibit J: Revised Geology Tables.</p>   |
| 4.6-3                               | Geology              | PEA Attachment 4.6-A, Attachment A: Minor Design Refinements submitted 1/31/2017                     | <p>Update Geologic Hazard Assessment.</p> <p>Update Geologic Hazard Assessment (PEA Attachment 4.6-A) text, tables, maps, and mileposts to include analysis and mapping of the eight new laydown yards and the two new permanent patrol roads as well as to reflect the refined project alignment MP's.</p>  |              | <p>As presented in Exhibit J: Revised Geology Tables, geological data were reevaluated to include the revised MP designations, permanent patrol roads, and the eight new laydown yards. With the exception of less than 25 feet of the Proposed Project alignment crossed by Ramona gravelly sandy loam soils, the revised data revealed that the new MP designations, permanent patrol roads, and laydown yards were underlain by the same geological formations and soil types that were previously described in the PEA. As presented in Exhibit J: Revised Geology Tables, Ramona gravelly sandy loam soils are characterized by the same soil criteria described for other Ramona series soils in the PEA. Therefore, no new soil types or geological formations indicate the presence of additional geologic hazards in the Proposed Project area. As such, the conclusions presented in Attachment 4.6-A: Geologic Hazard Assessment still apply to the Proposed Project and associated minor design refinements.</p> |

| DG#                                    | Resource Area/Topic             | Source/ Proponent's Environmental Assessment (PEA) Page                     | Data Gap (DG) Question  | CPUC's Notes | Draft Response  |
|--|---------------------------------|---|---|--------------|---|
| <b>Hazards and Hazardous Materials</b> |                                 |   |   |              |   |
| 4.8-1                                  | Hazards and Hazardous Materials | PEA page 4.8-15, Attachment A: Minor Design Refinements submitted 1/31/2017 | Update Table 4.8-1 to be consistent with revised project.<br>Update nearest MP and distance to project component in Table 4.8-1 to reflect the addition of eight new laydown yards and two permanent patrol roads identified in the refined alignment.  |              | Table 4.8-1: Hazardous Materials Sites Records Review was updated to include the revised MPs, laydown yards, and permanent patrol roads. The updated Project components and associated distances to these components are provided in Exhibit K: Revised Hazards and Hazardous Materials Tables.<br><br>With the exception of the Montiel Yard, the minor design refinements were captured within the search radii established for the previously generated Environmental Data Resources (EDR) reports included in Attachment 4.8-A: Phase I Environmental Site Assessment of the PEA. Therefore, an additional EDR report was prepared for the Montiel Yard and was reviewed by Haley & Aldrich. No hazardous sites were identified in the vicinity of the Montiel Yard.<br><br>A review of the previously generated EDR reports revealed one additional hazardous site (i.e., Flynn Rainbow Nursery/Hines Nursery/Hines Horticulture, Inc. in the community of Fallbrook) in the vicinity of the Rainbow Creek Road Yard. Based on a review of available regulatory information, this site is closed and is located approximately 0.1 mile south of the Rainbow Creek Road Yard. Therefore, this site does not pose a significant risk to the Proposed Project. A summary of this hazardous site is provided in Exhibit K: Revised Hazards and Hazardous Materials Tables. |
| 4.8-2                                  | Hazards and Hazardous Materials | PEA page 4.8-28, Attachment A: Minor Design Refinements submitted 1/31/2017 | Update Table 4.8-2 to be consistent with revised project.<br>In Table 4.8-2, update MPs and distances from project components to reflect the refined alignment.   |              | Table 4.8-2: Schools within 0.25 Mile of the Proposed Project was updated to include the revised MP locations, laydown yards, and permanent patrol roads. The updated Project components and associated distances to these components are provided in Exhibit K: Revised Hazards and Hazardous Materials Tables.  |
| <b>Hydrology and Water Quality</b>     |                                 |   |   |              |   |
| 4.9-1                                  | Hydrology and Water Quality     | PEA Section 4.9-2; Attachment C Preliminary Wetlands and Waters Assessment  | Include information about the number and type of drainages crossed by the proposed project as surveyed in the Preliminary Wetlands and Waters Assessment.<br><br>While surface waterbodies in "Table 4.9-2. USGS Blue Line Hydrologic Features Crossed by the Proposed Project" are the largest and most significant, Attachment C indicates 145 drainages were identified that are potentially jurisdictional. Please update Table C-1 with new MPs to reflect the refined alignment and the new proposed endpoint. If the updates result in a change to acreage and/or linear feet crossed, update Table 3 as well. |              | A more detailed discussion of the number, type, and potential impacts to drainages is provided in Chapter 4.4 Biological Resources of the PEA. A summary of temporary impacts to potential USACE-jurisdictional drainages is provided in Table 4.4-11: Impacts to Potential USACE-Jurisdictional Drainages. Table C-1: Drainage Features of Attachment C: Preliminary Wetlands and Waters Assessment within Attachment 4.4-A: Biological Resources Technical Report has been updated to include revised MPs and is included as Exhibit L: Revised Table C-1: Drainage Features. Feature D-221 was removed from Exhibit L: Revised Table C-1: Drainage Features because it no longer occurs in the Proposed Project area and the totals were updated. The minor design refinements did not result in any additional potential impacts to wetlands or waters because no wetlands or waters were identified within the minor design refinement areas.  |
| 4.9-2                                  | Hydrology and Water Quality     | PEA Section 4.9.2, Table 4.9-2  | Please confirm that the Blue Line Hydrologic Features data source is equivalent to the National Hydrography Dataset.<br><br>The National Hydrography Dataset is a commonly used source for identifying surface water features. Our understanding is that the Blue Line Hydrologic Features represents surface water features that are mapped on United States Geological Survey (USGS) Quad maps. If the data sets are not equivalent, please send us the Blue Line Hydrologic data set.  |              | The Blue Line Hydrologic Features data was obtained from the U.S. Geological Survey National Hydrography Dataset.   |

| DG#                           | Resource Area/Topic | Source/ Proponent's Environmental Assessment (PEA) Page | Data Gap (DG) Question  | CPUC's Notes | Draft Response   |
|-------------------------------|---------------------|---|---|--------------|--|
| <b>Population and Housing</b> |                     |   |   |              |  |
| 4.12-1                        | Population/Housing  | PEA Section 3.6.20                                      | <p>Estimated average/peak construction workforce and duration of peak construction periods.</p> <p>Additional information needed to assess potential population/housing impacts and cumulative impacts:</p> <ul style="list-style-type: none"> <li>The PEA describes workforce as “125 to 150 construction personnel per construction segment will work daily, with a peak of approximately 600 workers.” It goes on to describe three crew types. Please clarify how many construction segments there will be. Please clarify if the peak of 600 workers is a peak per construction segment or a total of all construction segments.</li> <li>estimated duration of peak construction periods, if known</li> <li>average and peak workforces for connected projects, if any (#)</li> </ul> |              | <p>There will be four construction segments that will each have a peak of 150 construction personnel, which equates to a total of 600 construction personnel for the entire Proposed Project. The following provides additional information on population/housing and cumulative impacts</p> <ul style="list-style-type: none"> <li>It is difficult to estimate the peak construction period without a detailed execution plan, which will be prepared by the contractor before construction. However, based on preliminary planning, the peak construction period is estimated to be 200 working days.</li> <li>It is estimated that there will be between 20 and 80 construction personnel working on derating Line 1600. The average workforce is estimated to be 50 personnel.</li> <li>As discussed in the PEA, when planned and proposed projects are evaluated in conjunction with the Proposed Project, there is potential for cumulative impacts to population and housing; however, the Proposed Project's impacts on population and housing will be minor and temporary in nature. No planned or proposed residential projects, as analyzed in the PEA, are anticipated to be completed before construction of the Proposed Project; therefore, no cumulative population increase or increased demand on housing needs is expected during construction of the Proposed Project. Further, the larger planned and proposed projects have construction timelines that will occur in phases and are anticipated to take 10 to 15 years to complete, while the Proposed Project will be constructed within 15 to 21 months. Due to the long construction timeframes associated with these planned and proposed projects and the type of construction involved, they are more likely to utilize the local workforce and will not require significant importation of workers for construction. As a result, all of the planned and proposed projects that may be constructed during the same timeframe are not likely to require temporary housing for the construction personnel. Therefore, a significant cumulative impact to population and housing during construction is not anticipated.</li> </ul> <p>The Proposed Project will have no impacts to population growth during O&amp;M activities because no new employees will be required to operate the pipeline. Therefore, O&amp;M activities for the Proposed Project will not contribute to a cumulative impact to population and housing.</p> |