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2.0 PROPOSED PROJECT PURPOSE AND NEED

This section of the Proponent's Environmental Assessment (PEA) identifies the objectives, purpose and need for San Diego Gas & Electric Company's (SDG&E) Proposed Tie-Line 637 Wood-to-Steel Project (Proposed Project), as required by the California Public Utilities Commission's (CPUC) PEA Guidelines (CPUC Information and Criteria List, Appendix B, Section V) and the California Environmental Quality Act (CEQA) Guidelines (Section 15126.6(a)). Additional information regarding the Proposed Project's purpose and need is provided in SDG&E's application to the CPUC, in accordance with CPUC General Order (G.O.) 131-D.

2.1 OVERVIEW OF PROJECT NEED

SDG&E is a regulated public utility that provides electric service to approximately 1.4 million electric customers within a 4,100-square-mile service area, covering 25 cities and unincorporated areas within San Diego County and a portion of Orange County. SDG&E requests approval of the Proposed Project to increase system reliability and replace an existing wood-pole power line with new weathering steel poles in an existing fire-prone area.

The societal impacts from both the 2003 and 2007 wildfires were significant. Many residents were evacuated (approximately 500,000 in 2007, according to the media), homes burned, services disrupted (including electric service in areas where overhead electric facilities were damaged), and other work interrupted.

The main component of the Proposed Project is the replacement of existing wood structures with new weathering steel poles along the Tie-Line (TL) 637 route between the Creelman and Santa Ysabel Substations. Over half of the existing TL 637 structures were installed prior to 1960, and some of the current structures on TL 637 were installed as early as 1949. These activities are an integral component of SDG&E's Community Fire Safety Program (CFSP). The fire hardening, or Wood-to-Steel, projects protect the electric system against wildfire damage, while also reducing the potential for power lines to be an ignition source. Fire hardening includes the use of steel poles in place of wood poles, increased phase spacing, incorporation of Avian Power Line Interaction Committee guidelines, use of high strength multi-stranded steel core conductors, and a design based on extreme wind loading criteria. Fire hardening projects are among the tools SDG&E is employing to not only protect the electric system against wildfire, but to also further reduce the risk of power line related ignitions in fire prone areas. By incorporating these fire hardening activities, the Proposed Project would increase the fire safety and service reliability of TL 637 between Creelman and Santa Ysabel Substations. This is consistent with CPUC G.O., North American Electric Reliability Corporation/Federal Energy Regulatory Commission (NERC/FERC) requirements, and SDG&E internal standards.

G.O. 95 also contains a requirement for utilities to design, construct, and maintain their facilities for "known local conditions." SDG&E has gained more data about known local conditions and now operates over 140 anemometers, employs two meteorologists providing operational weather

information and four experienced fire professionals advising about fire risk and mitigation. Known local conditions for TL 637 include severe weather conditions, including extreme temperatures, high winds, and ice. This area experiences some of the highest winds in San Diego County and it is also the area with the highest fire risk.

The Proposed Project is also required to meet California Independent System Operator (CAISO) Tariff provisions, which require operation and maintenance of facilities to avoid materially adverse impacts on the CAISO-Controlled Grid. NERC Reliability Standards for the Bulk Electric Systems of North America and FERC Standards of Conduct for Transmission¹ Providers (Order No. 717), which define reliability requirements for planning and operating electric systems in North America to ensure electric systems operate reliably, are also applicable to the Proposed Project. These standards would also be consistent with SDG&E’s Written Procedures and Compliance Plan and all associated compliance controls and procedures. In addition, the Proposed Project would avoid and minimize potential environmental effects by maximizing use of existing SDG&E rights-of-way (ROW) and existing access roads, and by following SDG&E’s robust program of environmental compliance practices and protocols (see Section 3.8, Project Design Features and Construction/Operations Restrictions).

The Proposed Project involves the replacement of existing facilities within existing 69 kilovolt (kV) power line and 12kV distribution facility corridors. The installation of the new steel poles would generally occur in close proximity to existing poles, and helicopter landing zones, staging areas, stringing sites, and other work areas would be placed, where possible, in previously disturbed areas to minimize impacts. SDG&E has also designed the Proposed Project to utilize existing access roads, where possible, improving them only as needed to perform safe and effective construction and operation and maintenance activities on the electric lines.

Additional benefits of the Proposed Project include reduction of outage potential, improved contamination resistance, reduction of facility maintenance, maximization of equipment life span potential, installation of fiber optic for enhanced digital protective relay systems, and improved avian protection.

2.2 PROPOSED PROJECT OBJECTIVES

As discussed above, SDG&E has identified the need to reconstruct TL 637 to include fire-hardening components, namely the replacement of existing wood poles with new steel poles that meet current design standards. Addressing the overall fire threat and service reliability concerns is the overall purpose of the Proposed Project, which will achieve the following objectives:

1. Increase the fire safety and service reliability of TL 637, an existing 69kV power line.
2. Minimize potential adverse environmental effects.
3. Locate proposed facilities within existing utility corridors to the extent feasible.

The Proposed Project components are presented in Section 3.0, Proposed Project Description. Each of the Proposed Project objectives is more thoroughly described below.

¹ The term “Transmission” as used herein refers to the NERC and FERC definition and is not intended to suggest that TL 637 is designed for immediate or eventual operation at 200kV or above.

2.2.1 Objective 1: Increase the Fire Safety and Service Reliability of TL 637

The fundamental objective of the Proposed Project is to increase the fire safety and service reliability of TL 637, which is located in an area of high fire risk.

Since 2007, SDG&E has focused a great deal of effort on fire prevention and fire preparedness, including the development of a Community Fire Safety Program (CFSP). The program consists of three categories, 1) Increased education and outreach to employees and customers about the risks of wildfires, 2) Implementation of new prevention measures to help reduce the risk of fires associated with electric facilities, and 3) Enhanced readiness during periods of high fire risk as well as enhanced response capabilities with fire suppression resources and emergency power supplies. The CFSP involves engineering, construction, operations, and stakeholder facets. SDG&E has partnered with fire agencies and external stakeholders to enhance fire safety for all of San Diego County. Since the inception of the CFSP, approximately four years ago, the wood-to-steel projects (or fire hardening projects) have been an integral part of the CFSP. This falls under the engineering facet discussed above.

The Proposed Project is consistent with SDG&E's efforts to improve reliability and reduce fire risks in fire-prone areas through fire-hardening projects and other enhancements. SDG&E prioritizes the maintenance of poles in each power line in high-risk fire areas according to the existing vegetation/fuel conditions, the history of high-speed winds, and age and condition of the existing infrastructure as part of a strategy to strengthen power lines connecting backcountry substations for improved reliability. SDG&E periodically reviews and updates the prioritization of poles to be replaced due to changes in field conditions, e.g., increased density of vegetation (fire fuel) in the vicinity of poles. The Proposed Project incorporates current design standards to reduce fire risks and will implement a project-specific fire plan to minimize fire risks during construction.

During the evaluation process, TL 637 met the criteria for immediate replacement based on the above factors. Specifically, these factors include (1) a designation of Very High Fire Threat as indicated on SDG&E's 2012 Fire Threat Zone map; and (2) a record of very high winds. The Proposed Project will result in the strengthening of TL 637 in the high-fire threat area, which will reduce the risk of potential fire hazard impacts under certain atmospheric conditions.

The Proposed Project has been designed to meet Objective Number (No.) 1 and construction of the Proposed Project will fully meet this objective.

2.2.2 Objective 2: Minimize Potential Adverse Environmental Effects

In addition to meeting the primary objective of fire hardening TL 637, the Proposed Project was also designed to meet Objective No. 2, which calls for the minimization of potential adverse environmental effects during the implementation of wood-to-steel project component. Avoidance and minimization of environmental impacts is a requirement of the *San Diego Gas & Electric Subregional Natural Communities Conservation Plan* (NCCP) and part of SDG&E's standard procedures and protocols.

The Proposed Project has been designed to include elements that will minimize or avoid potential adverse effects to the environment, including the following:

- Relocation of an approximately 1,170-foot section of the existing 69kV power line (including relocation of three existing poles and elimination of one pole) approximately 250 feet northwest in order to remove the alignment from an existing wet meadow and avoid future operations and maintenance impacts.
- Removal of poles (including the four poles described above that are currently located within the wet meadow) that are located within environmentally sensitive areas.
- Adherence to SDG&E environmental protection procedures and protocols, such as the NCCP.
- Utilization of existing access roads, footpaths, work areas, and disturbed areas during construction, to the extent feasible.
- Locating replacement poles as close as possible to the existing poles, generally within 6 to 8 feet, except when adjacency to environmentally sensitive areas requires relocating further away to avoid environmental impacts.

2.2.3 Objective 3: Locate Proposed Facilities within Existing Utility Corridors to the Extent Feasible

In addition to meeting the primary objective of fire hardening TL 637 and limiting the potential environmental effects, the Proposed Project was also designed to meet Objective No. 3, which calls for the utilization of existing utility corridors to the extent feasible. TL 637 is an existing 69kV power line that connects the Creelman and Santa Ysabel Substations. The Proposed Project would follow the existing TL 637 alignment and would not require the acquisition of any new ROW.

In addition, all required alterations at the Creelman and Santa Ysabel Substations will be located within the existing property and fence lines. No expansion of either facility is required. The Proposed Project is therefore consistent with the objective of following the existing alignment of TL 637.

2.3 CONCLUSION

As outlined above, the Proposed Project will meet all three project objectives and fully accomplish the fundamental purpose of increasing the fire safety and service reliability of TL 637. The Proposed Project will fire harden TL 637, which includes the associated distribution underbuild and interest poles, between the Creelman and Santa Ysabel Substations. Furthermore, the Proposed Project will fulfill the purpose and primary objective while meeting Objective Nos. 2 and 3 by avoiding potential adverse environmental effects (including removing structures and re-locating the TL 637 to avoid sensitive areas) and utilizing existing utility corridors.