## TABLE OF CONTENTS

THIS PAGE IS INTENDED TO BE LEFT BLANK

# 2.0 PROJECT PURPOSE AND NEED

This section of the Proponent's Environmental Assessment (PEA) identifies the purpose and need for San Diego Gas & Electric Company's (SDG&E) Proposed Tie-Line (TL) 695 and TL 6971 Reconductor 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 Guidelines ("CEQA Guidelines") (14 California Code of Regulations Sections 15124(b) and 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 (GO) 131-D.

## 2.1 BACKGROUND

SDG&E is a regulated public utility that provides electric service to approximately 3.4 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 southern Orange County.

### 2.1.1 Existing Electric System Constraints

Electric transmission facilities are required to comply with mandatory North American Electric Reliability Corporation (NERC), Western Electric Coordinating Council and California Independent System Operator (CAISO) standards. NERC standards require that all transmission or power lines[1] and transformers in service remain within their normal and emergency ratings (i.e., the maximum total current and voltage in an electrical circuit, expressed in terms of megavolt amperes [MVA]), and that all transmission or power lines and transformers that remain in service following the loss of a single transmission or power line or transformer will remain within applicable MVA ratings.

The electric system consists of various elements, such as transmission or power lines, substations, transformers, capacitors, synchronous condensers, etc. A NERC Category B violation occurs if the loss of a single element in that system is projected to cause a transmission or power line to exceed its applicable MVA rating, resulting in an overload. When there is an overload on a line, there is a chance that the line will be "tripped" out of service, causing a power loss for SDG&E customers. With respect to the Proposed Project, the potential outage of a segment of TL 690 would result in an overload on TL 695 and TL 6971, and thus there is a NERC Category B violation with respect to these two tie lines.

The CAISO conducts a Transmission Planning Process (TPP) each year, which is a roughly 15-month planning cycle. The TPP begins in January of each year, when the three Participating Transmission Owners (Pacific Gas and Electric Company, Southern California Edison, and SDG&E) provide the

[1] As defined in GO 131-D, a transmission line is a line designed to operate at or above 200 kilovolts (kV). A power line is designed to operate between 50 and 200kV. The Proposed Project operates at 69kV and is therefore described as a power line throughout this PEA.

CAISO with updated system data (completed projects, load forecasts, etc.). The CAISO staff, in conjunction with planners from each of the Participating Transmission Owners, then assesses the reliability of the system over a 10-year window (for example, the current 2014/2015 planning cycle studies the system for years 2014-2024).

In the 2011/2012 TPP, SDG&E identified a NERC Category B violation on segments of TL 695 resulting from the loss of one segment of TL 690. During the 2011/2012 planning cycle, CAISO approved the reconductoring of TL 695, with a 2014 in-service date, to mitigate the overload. Subsequently, the new Basilone Substation was placed in service in 2013, which resulted in a change in scope of the original TL 695 reconductoring project. The original TL 695 was split in two segments (TL 695 and TL 6971) to feed the Basilone Substation to support the growing load in this area. The line ratings in both segments were adjusted as the result of the new substation and because of the limitations of existing conductor, TL 695 and TL 6971 are limited to 24 and 32 MVA respectively. The NERC Category B violation identified in the 2011/2012 TPP continues to apply to TL 695, as well as the recently created TL 6971.

#### 2.1.1.1 Fire Safety

Fire safety is critical in SDG&E's service area. The impacts from both the 2003 and 2007 wildfires in San Diego County were substantial and far-reaching. In May 2014, additional wildfires occurred in the San Diego region, including the Pulgas Fire and the Tomahawk Fire within MCB Camp Pendleton.

The Proposed Project involves reconductoring, the removal of existing wood pole structures, and the installation of new steel pole structures within an area currently devoted to electric utilities. The proposed 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 pole structures in the place of wood pole structures, increased phase spacing, incorporation of avian protection, use of multi-stranded core conductors, and a design based on extreme wind loading criteria. By incorporating these fire hardening measures, the Proposed Project will increase the fire safety and service reliability of TL 695 and TL 6971. This is also consistent with CPUC GO 95, NERC/Federal Energy Regulatory Commission requirements, and SDG&E internal standards.

## 2.2 PROJECT PURPOSE AND NEED

A project's purpose is defined as a set of objectives the project intends to meet whereas a project's need is the deficiency that the project was initiated to address. In this context, the Proposed Project's purpose and need is defined below.

### 2.2.1 Purpose of the Project

The purpose of the Proposed Project is to increase electrical reliability to meet MCB Pendleton's and the surrounding area's electrical needs in the long term as summarized in the objectives below:

1. To eliminate a NERC Category B violation to increase reliability.
2. To increase the fire safety and service reliability of TL 695 and TL 6971.
3. To minimize adverse environmental impacts to the extent feasible.

These objectives are discussed in further detail in Section 2.3, Project Objectives.

### 2.2.2 Need for the Project

The current TL 695 and TL 6971 lines have a NERC category B violation based on the existing conductors installed; therefore, reconductoring is necessary to eliminate the Category B violation. The need for the Proposed Project is to prevent an overload and associated power outages to the existing system in the surrounding area and on MCB Pendleton, which is primarily served by the existing SDG&E system.

Additionally, the impacts from both the 2003 and 2007 wildfires in San Diego County were substantial. Approximately 500,000 people were evacuated (San Diego Association of Governments 2008), homes were burned, services were disrupted (including electric service in areas where overhead electric facilities were damaged), and work and other activities were interrupted. To reduce the likelihood of outages due to fire damage and to reduce the likelihood of igniting a wildfire, SDG&E has been systematically removing existing wood pole structures and installing new steel pole structures throughout its territory to increase fire reliability. Therefore, the need for the Proposed Project is to increase reliability by avoiding wildfires and having a stronger system during wildfire events by removing wood pole structures and installing new dull galvanized steel pole structures along the TL 695 and TL 6971 alignments.

## 2.3 PROJECT OBJECTIVES

The Proposed Project components are presented in more detail in Chapter 3.0, Proposed Project Description, while each of the Proposed Project objectives is described in more detail below.

### 2.3.1 Objective 1: Eliminate a NERC Category B Violation to Increase Reliability

In an effort to prevent overload/damage to conductors and to improve system reliability, SDG&E proposes to reconductor the existing TL 695 and TL 6971 located primarily within MCB Camp Pendleton. TL 695 will be reconductored from SDG&E's Talega Substation to the Basilone Substation, while TL 6971 will be reconductored from Basilone Substation to Japanese Mesa Substation. The Proposed Project will eliminate the NERC violation by replacing old infrastructure and reconductoring the existing overhead conductor to achieve a 60 MVA rating. As a result, the Proposed Project will increase reliability and thereby eliminate the NERC violation.

The Proposed Project has been designed to meet Objective 1, and construction of the Proposed Project will fulfill this objective and meet the need.

### 2.3.2 Objective 2: Increase the Fire Safety and Service Reliability of TL 695 and TL 6971

One of the objectives of the Proposed Project is to increase the fire safety and service reliability of TL 695 and TL 6971, which are located in an area of high fire risk. Since 2007, SDG&E has focused on fire prevention and fire preparedness, including the development of the CFSP. 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. The Proposed Project incorporates current design standards to reduce operational fire risks and will implement a project specific fire plan to minimize fire risks during construction.

SDG&E prioritizes the maintenance of pole structures in each power line in high-risk fire areas according to the existing vegetation/fuel conditions, the history of high-speed winds, and the 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 wood pole structures to be replaced due to changes in field conditions (e.g., increased density of vegetation [fire fuel] in the vicinity of pole structures).

During the prioritization process, TL 695 and 6971 met the criteria for immediate replacement. Specifically, these factors include: (1) a designation of Very High Fire Threat as indicated on SDG&E's 2014 Fire Threat Zone map, and (2) a record of very high winds. The Proposed Project will result in the strengthening of TL 695 and 6971 in the high fire threat area which will reduce the risk of potential fire hazard impacts under certain weather conditions.

The Proposed Project has been designed to meet Objective 2, and construction of the Proposed Project will fulfill this objective and meet the need.

### 2.3.3 Objective 3: Minimize Adverse Environmental Impacts to the Extent Feasible

The Proposed Project has also been design to fulfill Objective 3, which calls for the reduction of adverse environmental effects. The Proposed Project has been designed to include elements that will minimize or avoid adverse effects to the environment, including the following:

- Adherence to SDG&E environmental standard operating procedures, including Natural Community Conservation Plan Operational Protocols and procedures described in the Best Management Practices Manual for Water Quality Construction;
- Modifications to the Proposed Project design to avoid impacts to sensitive biological and cultural resources;
- Use of existing access roads and disturbed areas during construction, to the extent feasible; and
- Reducing fire risk and the associated environmental harm resulting from fires during construction through the implementation of and compliance with a project-specific fire prevention plan.

Based on the previous information and as described in Chapter 4.0, Environmental Impact Assessment, the Proposed Project has been designed to meet Objective 3, and construction of the Proposed Project will fully meet this objective and meet the need.

## 2.4 CONCLUSION

The NERC Category B violation will be eliminated through the replacement of existing conductor, while fire safety will be improved by the removal of existing wood pole structures and the installation of new steel pole structures. Together, the Proposed Project will improve system reliability. Furthermore, the Proposed Project has been designed to minimize the adverse environmental effects of the proposed improvements to the extent feasible. Therefore, the Proposed Project will meet the objectives outlined above and will fully accomplish the fundamental objective of improving system reliability according to NERC standards, while providing long term electrical needs for customers, including MCB Pendleton.

## 2.5 REFERENCES

San Diego Association of Governments. 2008. Map: 2007 Wildfires: Half a Million People Evacuated. August 2008.