A. INTRODUCTION/OVERVIEW

This Environmental Impact Report (EIR) has been prepared by the California Public Utilities Commission (CPUC) as the lead agency under the California Environmental Quality Act (CEQA) to inform the public and to meet the needs of local, state, and federal permitting agencies to consider the project proposed by San Diego Gas & Electric Company (SDG&E or "the applicant"). This EIR does not make a recommendation regarding the approval or denial of the project; it is purely informational in content, and it will be used by CPUC in considering whether to approve the South Bay Substation Relocation Project (Proposed Project) or an alternative.

On March 16, 2010, SDG&E submitted an application (10-06-007) and a Proponent's Environmental Assessment (PEA) to the CPUC for the Proposed Project (SDG&E 2010). The purpose of this application was to obtain a Permit to Construct (PTC).

The purpose of this EIR is to evaluate the environmental impacts that would be expected to result from the construction and operation of SDG&E's Proposed Project, and to provide recommended mitigation measures that, if adopted, would avoid or minimize the significant environmental impacts identified. In accordance with CEQA requirements, this EIR identifies alternatives to the Proposed Project that could avoid or minimize significant environmental impacts associated with the project as proposed by SDG&E (including the No Project Alternative), and it evaluates the environmental impacts associated with these alternatives. Based on this environmental impact assessment, as well as the relative sensitivities of impacts in the study region, Section E of this EIR determines the Environmentally Superior Alternative as required by CEQA.

The content of this EIR reflects input by government officials, agencies, non-governmental organizations, and concerned members of the public during the EIR scoping period following the CPUC's publication of the Notice of Preparation (NOP) of an EIR (July 13, 2011). During this comment period, several public involvement activities were completed: 1) public distribution of the NOP and a scoping meeting notice, 2) establishment of an Internet web page, and 3) one public scoping meeting (see details in Section H of this EIR).

This section is organized as follows:

- Section A.1 briefly describes the South Bay Substation Relocation Project as proposed by SDG&E.
- Section A.2 presents information related to the Proposed Project's objectives.
- Section A.3 describes agency use of the EIR and includes a brief description of the CPUC process for consideration of project approval.
- Section A.4 presents a Reader's Guide to this EIR, explaining how it is organized.

A.1 Overview of Proposed Project

As proposed by SDG&E, the Proposed Project primarily consists of relocating the existing South Bay Substation to a new site approximately 0.5 mile south. The existing South Bay Substation would be relocated to the proposed Bay Boulevard Substation site, which is situated approximately 2 miles south of the City of National City, approximately 5 miles northeast of the City of Imperial Beach, and approximately 7 miles southeast of downtown San Diego.

The South Bay Substation Relocation Project, as proposed by SDG&E, includes the following major components:

- Construction of a 230/69/12-kilovolt (kV) substation (Bay Boulevard Substation) in the City of Chula Vista (City)
- Construction of a 230 kV loop-in, an approximately 1,000-foot-long underground interconnection, and an approximately 300-foot-long overhead interconnection of the existing 230 kV tie-line, located east of the proposed Bay Boulevard Substation
- Relocation of six 69 kV transmission lines and associated communication cables to the proposed Bay Boulevard Substation, requiring the relocation of approximately 7,500 feet of overhead line and the construction of approximately 4,100 feet of underground line
- A 138 kV extension of an approximately 3,800-foot underground and approximately 200-foot overhead span from one new steel cable pole to an existing steel lattice structure
- Demolition of the existing 138/69 kV South Bay Substation.

A.1.1 Bay Boulevard Substation

The proposed Bay Boulevard Substation site would be located on a on a 12.42-acre parcel, approximately 0.5 mile south of the existing South Bay Power Plant (SBPP) site. The enclosed portion of the proposed Bay Boulevard Substation would occupy approximately 9.7 acres. The project includes two potential arrangements for the Bay Boulevard Substation: the initial and the ultimate arrangement. The initial arrangement does not include 12 kV distribution equipment and would be used to provide 69 kV transmission to the South Bay region. As part of the ultimate arrangement, distribution equipment would be included at the proposed Bay Boulevard Substation as local distribution loads develop in the South Bay region.

A.1.2 South Bay Substation Dismantling

The Proposed Project would include decommissioning and demolition of the existing 7.22-acre South Bay Substation following several conditional requirements such as energization of the Bay Boulevard Substation and cutovers of the existing transmission lines from the South Bay

Substation to the Bay Boulevard Substation. The decommissioning and demolition of the South Bay Substation would include removal of all above-grade components, including both 138 kV and 69 kV transmission equipment.

A.1.3 Transmission Interconnections

A.1.3.1 230 kV Loop-In

The proposed Bay Boulevard Substation eastern limits are located immediately adjacent to the existing 230 kV line (TL23042) constructed as part of the Otay Metro Power Loop (OMPL). The OMPL line spans westerly across Bay Boulevard to a 230 kV angle pole where it changes from an east–west alignment to a north–south alignment. The Proposed Project would include the removal of the 165-foot-high, OMPL steel cable pole riser. With the Proposed Project utility realignment, the OMPL alignment would continue to span northward from the existing 230 kV angle pole to where it would connect to a new 110-foot-tall steel angle pole, which is a type of pole used to allow the circuit alignment to change direction and terminate to a new rack position within the proposed Bay Boulevard Substation. The 230 kV configuration also includes construction of an underground duct bank from the 230 kV bays located along the northern limits of the proposed Bay Boulevard Substation easterly to provide connections to the OMPL alignment. This underground duct bank is approximately 1,000 feet long.

A.1.3.2 138 kV Extension

Currently, three overhead 138 kV lines (TL13815, TL13823, and TL13824) connect to the existing South Bay Substation. The Proposed Project would include removal of the overhead 138 kV conductors that extend northward from the 138 kV lattice angle tower located adjacent to the southeastern perimeter of the proposed Bay Boulevard Substation. Five steel lattice structures that measure 85 to 100 feet tall would be removed along with the associated conductor. A new steel cable pole riser would be constructed adjacent to the eastern limits of the proposed Bay Boulevard Substation, which is a pole used to transition a circuit from overhead to underground. The steel pole riser would be approximately 165 feet tall. The 138 kV circuit north of the steel cable pole riser would be undergrounded within a duct bank. This underground duct bank would be approximately 3,800 feet long.

A.1.3.3 69 kV Relocation

Currently, six 69 kV overhead transmission lines connect to the existing South Bay Substation. Three of these lines (TL645, TL646, and TL647) enter the Proposed Project area from the south. The remaining three overhead transmission lines (TL641, TL642, and TL644) connect to the existing South Bay Substation from the north. The Proposed Project includes rerouting existing 69 kV overhead transmission lines that terminate at the South Bay Substation to the proposed

Bay Boulevard Substation. To relocate these six existing 69 kV overhead transmission lines, approximately 18 new wood transmission poles would be installed, 23 wood transmission poles would be removed, and an additional 22 wood transmission poles would be replaced. The project also includes construction of five 69 kV steel cable pole risers, removal of six stub wood poles, and removal of one 12 kV wood distribution pole.

An existing 12 kV distribution circuit located along Bay Boulevard will be underbuilt onto the 69 kV poles located along Bay Boulevard. The alignment of the 12 kV distribution circuits that will be placed beneath the 69 kV conductor will be along TL644, which runs north–south along the western limits of Bay Boulevard, and TL645, which runs east–west along an easement adjacent to the northern limits of the OMPL.

A.2 Project Objectives

A.2.1 Background

The South Bay Substation is an aging 138/69 kV substation that was originally built to accommodate the adjacent SBPP in the City. The South Bay Substation was originally constructed in 1961 and consists of equipment that was not built to modern seismic standards. The existing 138 kV bus is undersized for current transmission system conditions. The 69 kV bus is also configured in such a way that overloads of the 69 kV transmission lines occur in the South Bay region caused by 69 kV bus outages at the South Bay Substation.

In October 2004, SDG&E and the City entered into a Memorandum of Understanding (MOU) regarding several energy issues (SDG&E 2010a). One of the objectives of the City in the MOU was relocation of the existing South Bay Substation after retirement of the SBPP. SDG&E's projected schedule is to have the Bay Boulevard Substation energized and transmission line connections completed so that decommissioning and demolition of the existing South Bay Substation can occur after retirement of the SBPP.

A.2.2 Statement of Objectives

SDG&E lists the following basic objectives for the Proposed Project (SDG&E 2010a, SDG&E 2011h, and SDG&E 2011i):

Objective 1: Replace aging and obsolete substation equipment

The existing South Bay Substation was built in 1961 to accommodate the adjacent SBPP in the City. The South Bay Substation is a 138/69 kV substation that serves as a hub for 138 and 69 kV infrastructure in the area. The South Bay Substation no longer performs to its originally intended capacity due to aged facility components and associated infrastructure. The substation equipment is

no longer seismically sound and requires replacement or retrofitting, and the existing 138 kV bus cannot maintain necessary loads for current transmission system conditions and is in need of upgrades to support the anticipated load growth in the South Bay region. Additionally, the 69 kV bus is configured in such a manner that overloads of the 69 kV transmission lines in the South Bay region result from outages at the substation.

Objective 2: Accommodate regional energy needs subsequent to the retirement of the SBPP

The California Independent System Operator (CAISO) has made a determination that the SBPP is no longer needed for local reliability beyond 2010 (Berberich, pers. comm. 2010). Subsequent to the SBPP's retirement, a local area base load source of generation feeding into the South Bay Substation would not exist, which facilitates the need for the Proposed Project.

The existing transmission infrastructure within the vicinity of the Proposed Project includes the OMPL 230 kV circuit, which traverses the eastern limits of the SBPP property limits, and 138 and 69 kV circuits that provide connections to the existing South Bay Substation. By utilizing existing circuits in the area, the Proposed Project will facilitate power transfer to the South Bay region without requiring the need for new regional lines. With retirement of the SBPP, there is an immediate need for the proposed Bay Boulevard Substation. The 69/230 kV substation provides a more robust/reliable system to accommodate regional energy subsequent to retirement of the SBPP.

The Proposed Project will also eliminate North American Electricity Reliability Corporation (NERC) and Western Electricity Coordinating Council (WECC) reliability criteria violations that result from retirement of the SBPP. Based on CAISO studies and reports to its Board of Directors, criteria violations consisting of overloading transformers and transmission lines at the following locations result; Miguel 230/138 kV transformer banks, Kettner-Station 69 kV transmission line, Old-Town-Kettner 69 kV transmission line, and Old Town 230/69 kV transformer banks (SDG&E 2011i).

Contingency loadings on the transformers at Old Town and Miguel would experience above normal ratings but in the short term would remain below emergency ratings. The estimated duration and magnitude of the overloads indicate that with reasonable load-growth expectations the contingency loadings on the transformers could exceed reliability criteria by 2015 or shortly thereafter.

Objective 3: Facilitate the City's Bayfront redevelopment goals by relocating the South Bay Substation and furthering the goals of the SDG&E–City of Chula Vista MOU

As previously stated, in October 2004, SDG&E and the City entered into a MOU regarding several energy issues. One of the City's objectives in the MOU was to relocate the existing South Bay Substation following retirement of the SBPP. SDG&E has been coordinating with the City

and the Unified Port District of San Diego (Port District) to obtain the necessary land rights to accomplish this relocation. Subsequent to retirement of the SBPP, decommissioning and demolition of the existing substation would occur once the energization and successful cutover of all necessary transmission lines to the proposed Bay Boulevard Substation are completed.

The Port District and City adopted the Chula Vista Bayfront Master Plan (CVBMP 2010) on May 18, 2010. The CVBMP includes the establishment of three districts (Otay, Harbor, and Sweetwater) within the City, located along the eastern limits of San Diego Bay. The CVBMP identifies lands to be developed with hotels, mixed-use office/commercial, retail, residential uses, and improvement to the Chula Vista Harbor. The Proposed Project includes demolition of the South Bay Substation, which is located along the eastern limits of San Diego Bay, and construction of a new substation to the south that would facilitate development of the CVBMP by relocating the South Bay Substation to an area that is not planned for development envisioned in the CVBMP.

Objective 4: Provide for future transmission and distribution load growth for the South Bay region

The South Bay region and the City are provided energy through 69 and 138 kV substations that receive service from the South Bay and Miguel Substations located within the City. A new 230 kV substation (Bay Boulevard Substation) would ensure that capacity is available to accommodate anticipated growth projections. The proposed Bay Boulevard Substation location creates an opportunity to provide connections to an existing 230 kV line (OMPL) while utilizing existing transmission lines in the area that have been built with the existing South Bay Substation as the hub. The 230 kV transmission system is designed to transfer large amounts of power, and it would directly connect the proposed substation with a bulk power source from the Otay Mesa Energy Center (OMEC). The Proposed Project would provide power from the OMEC to the Bay Boulevard Substation through the proposed 230/69 kV transformers and out to load-serving substations. This design configuration would help to minimize losses by delivering power to the load in an efficient manner.

In summary, the Proposed Project would provide connections to a new bulk power source (OMPL), while utilizing existing infrastructure that is in place in the area, thus providing the ability to accommodate future load growth, which is anticipated according to planning studies and redevelopment plans in the South Bay region.

Having taken into consideration the four project objectives set forth by SDG&E above, the CPUC identified the following three basic project objectives used to screen alternatives:

1. Replace aging and obsolete substation equipment
2. Accommodate regional energy needs subsequent to the retirement of the South Bay Power Plant (SBPP)
3. **Provide for future transmission and distribution load growth for the South Bay region.**

A.3 Agency Use of This Document

A.3.1 CPUC Process

Pursuant to Article XII of the Constitution of the State of California, CPUC oversees the regulation of investor-owned public utilities, including SDG&E. CPUC is also the lead state agency for consideration and analysis of SDG&E's Proposed Project with CEQA. CPUC has directed preparation of this EIR, which will ultimately be used by the CPUC, in conjunction with other information developed in the CPUC's formal record, to act on SDG&E's application for a PTC for construction and operation of the Proposed Project. Under CEQA requirements, CPUC will determine the adequacy of the Final EIR and, if adequate, will certify the document as complying with CEQA. If CPUC approves a project with significant and unmitigable impacts, it must state why in a "Statement of Overriding Considerations," which would be included in the Commission's decision on the application.

CPUC has assigned Administrative Law Judge (ALJ) Angela Minkin to oversee the proceeding on the Proposed Project, and Michel Peter Florio is the assigned commissioner for the PTC application. A decision is expected by the Commission in February 2012. The ALJ's decision and the evidentiary hearings will cover issues specific to the Proposed Project, including project need, project cost, and other considerations.

A.3.2 Other Agencies

Several other state agencies will rely on information in this EIR to inform them in their decisions over issuance of specific permits related to project construction or operation (refer to Table A-1). In addition to the CPUC, state agencies such as the California Coastal Commission (CCC), California State Lands Commission (CSLC), Department of Fish and Game (CDFG), and the Regional Water Quality Control Board (RWQCB) would be involved in reviewing and/or approving the project. On the federal level, agencies with potential reviewing and/or permitting authority include the U.S. Army Corps of Engineers (ACOE), the U.S. Fish and Wildlife Service (USFWS), the Advisory Council on Historic Preservation, and the Occupational Safety and Health Administration. On the local level, a grading permit will need

to be issued by the City. SDG&E will also be required to obtain encroachment permits from local jurisdictions. In addition, the CPUC's General Order 131-D requires SDG&E to comply with local building, design, and safety standards to the greatest degree feasible to minimize project conflicts with local conditions.

Table A-1
Required Permits, Approval, and Consultation Requirements for the South Bay Substation Relocation Project

Permits	Agency	Jurisdiction/Purpose
Federal Agencies		
Section 404 Nationwide Permit Program, Clean Water Act	ACOE	Dredge or fill of waters of the United States, including wetlands
Implementation of SDG&E's Subregional Natural Community Conservation Plan (NCCP)	USFWS	Activities within NCCP coverage areas that impact biological resources (required only for review of the Proposed Project, and no approval or permit is involved)
Helicopter Lift Plan	Federal Avian Administration	Operation of a helicopter within 1,500 feet of residences
State Agencies		
Permit to Construct	CPUC	Overall project approval and CEQA review
National Pollutant Discharge Elimination System (NPDES) –Construction Stormwater Permit	California State Water Control Board (SWRCB)	Stormwater discharges associated with construction activities disturbing more than 1 acre of land
Waiver of Waste Discharge Requirement Permit	RWQCB	Discharge of groundwater from excavations
Section 401 Water Quality Certification (or waiver thereof)	California RWQCB, San Diego Region	Requests RWQCB's certification that the project is consistent with state water quality standards.
Encroachment Permit	California Department of Transportation (Caltrans)	Construction, operation, and maintenance within, under, or over state highway right-of-way (ROW)
Section 1601 Streambed Alteration Agreement	CDFG	Alteration of the natural state of any stream
Implementation of SDG&E's NCCP	CDFG	Activities within the NCCP coverage areas
Coastal Development Permit	California Coastal Commission	New development within the coastal zone. Includes all project components (Construction of Bay Boulevard Substation, Dismantling of South Bay Substation and construction of transmission interconnections)
Land Use Lease	California State Lands Commission (CSLC)	Activities (e.g., electric transmission line construction) that occur on lands under CSLC jurisdiction (Port District, including tidal and submerged lands along the coast

Table A-1
Required Permits, Approval, and Consultation Requirements
for the South Bay Substation Relocation Project

Permits	Agency	Jurisdiction/Purpose
Local Agencies		
Permission to Construct	Port District	Activities that occur on lands under ownership of the Port District
Easement	Railroad	Construction, operation, and maintenance within, under, or over a railroad ROW.
Encroachment Permit	City of Chula Vista	Construction, operation, and maintenance, within, under, or over city or county road ROW
Grading Permit	City of Chula Vista	On-site grading activities

A.4 Reader's Guide to This EIR

A.4.1 Available for Review

SDG&E's PEA and other supporting documentation, submitted as part of its Application No. 10-06-007 for the South Bay Substation Relocation Project (see Section A.5, General References), contains certain information that is incorporated by reference in some sections of this EIR. These documents are available for public review on the CPUC project website (http;//www.cpuc.ca.gov/environment/info/dudek/sbsrp/SouthBaySub.htm) and during normal business hours at the following locations:

Civic Center Branch Library
365 "F" Street
Chula Vista, California 91910

South Chula Vista Branch Library
389 Orange Avenue
Chula Vista, California 91911

A.4.2 EIR Organization

This EIR is organized as follows:

- **Executive Summary.** A summary description of the Proposed Project, the alternatives, their respective environmental impacts, and the Environmentally Superior Alternative

- **Impact Summary Tables.** A tabulation of the impacts and mitigation measures for the Proposed Project and alternatives
- **Section A (Introduction/Overview).** A discussion of the background and project objectives, a brief project description, and a discussion outlining the public agency use of the EIR
- **Section B (Project Description).** Detailed description of the Proposed Project
- **Section C (Alternatives Process and Description).** Description of the alternatives evaluation process, description of alternatives considered but eliminated from further analysis and the rationale thereof, and description of the alternatives analyzed in Section D
- **Section D (Environmental Analysis).** A comprehensive analysis and assessment of impacts and mitigation measures for the Proposed Project and alternatives, including the No Project Alternative (This section is divided into main sections for each environmental issue area (e.g., air quality, biological resources) that contain the environmental settings and impacts of the Proposed Project and each alternative. At the end of each issue area analysis, a mitigation monitoring table is provided.)
- **Section E (Comparison of Alternatives).** Identification of the CEQA Environmentally Superior Alternative and a discussion of the relative advantages and disadvantages of the Proposed Project and alternatives that were evaluated
- **Section F (Additional CEQA Considerations).** A discussion of growth-inducing impacts, irreversible environmental changes, and cumulative impacts
- **Section G (Proposed Mitigation Monitoring, Compliance, and Reporting Plan).** A discussion of CPUC's mitigation monitoring program requirements
- **Section H (Public Participation).** A brief description of the public participation program for this EIR
- **Section I (Report Preparation).** List of preparers of the EIR and contacts with public agencies

A.5 General References

The following list of data requests and responses can be found on the CPUC website (http;//www.cpuc.ca.gov/environment/info/dudek/sbsrp/SouthBaySub.htm) for the South Bay Substation Relocation project:

Insignia Environmental. 2011. *Biological Resources Technical Report for the South Bay Substation Relocation Project*. Prepared for SDG&E by Insignia Environmental May 2011.

SDG&E (San Diego Gas & Electric). 2010a. Proponent's Environmental Assessment (PEA) for the South Bay Substation Relocation Project. Submitted to the CPUC June 2010.

SDG&E. 2010b. Application of San Diego Gas & Electric Company for a Permit to Construct for the South Bay Substation Relocation Project. Submitted to CPUC July 2010.

SDG&E. 2010c. Response to PEA Deficiency Letter (dated July 14, 2010). Submitted to CPUC August 16, 2010 (PEA 1a), August 24, 2010 (PEA 1b), and August 27, 2010 (PEA 1c).

SDG&E. 2010d. Response to CPUC Data Request #1 (dated September 8, 2010). Submitted to CPUC October 1, 2010.

SDG&E. 2010e. Response to CPUC Data Request #2 (dated November 3, 2010). Submitted to CPUC November 12, 2010.

SDG&E. 2010f. Response to CPUC Data Request #3 (dated October 22, 2010). Submitted to CPUC October 29, 2010.

SDG&E. 2011a. Response to CPUC Data Request #4 (dated February 1, 2011). Submitted to CPUC February 1, 2011.

SDG&E. 2011b. Response to CPUC Data Request #5 (dated May 3, 2011). Submitted to CPUC May 24, 2011.

SDG&E. 2011c. Response to CPUC Data Request #6 (dated June 8, 2011). Submitted to CPUC June 22, 2011.

SDG&E. 2011d. Response to Data Request #7 (dated July 5, 2011). Submitted to CPUC July 21, 2011.

SDG&E. 2011e. Response to Data Request #8 (dated September 2, 2011). Submitted to CPUC September 14, 2011.

SDG&E. 2011f Response to Data Request #9 (dated September 20, 2011). Submitted to CPUC September 27, 2011.

SDG&E. 2011g. Response to Data Request #10 (dated October 6, 2011). Submitted to CPUC October 18, 2011.

SDG&E. 2011h. Response to Data Request #11 (dated November 4, 2011). Submitted to CPUC November 15, 2011.

SDG&E. 2011i. Response to Data Request #12 (dated November 16, 2011). Submitted to CPUC December 2, 2011.

SDG&E. 2012. Response to Data Request #13 (dated March 16, 2012).