



# CERTIFICATION AND FINANCING PROPOSAL

## SOL ORCHARD SOLAR PROJECTS IN VALLEY CENTER, CALIFORNIA

*Revised: August 22, 2013*

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## EXECUTIVE SUMMARY

### SOL ORCHARD SOLAR PROJECTS IN VALLEY CENTER, CALIFORNIA

**Projects:** This certification and financing proposal covers two adjacent PV solar projects described as follows:

**Sol Orchard Solar Project 1 in Valley Center, CA:** Construction and operation of a 2.5 MW<sub>AC</sub> photovoltaic solar park located in Valley Center, California (“Valley Center 1”).

**Sol Orchard Solar Project 2 in Valley Center, CA:** Construction and operation of a 5 MW<sub>AC</sub> photovoltaic solar park located in Valley Center, California (“Valley Center 2”).

The electricity generated by Valley Center 1 and Valley Center 2 (jointly the “Projects”) will be purchased by San Diego Gas & Electric (SDG&E or the “Utility”), pursuant to two separate long-term power purchase agreements (the “PPAs”) signed with the project companies.

**Project Objective:** The Projects will increase installed capacity of renewable energy resources, reducing the demand on traditional fossil fuel-based energy production and contributing to the displacement of greenhouse gas emissions and other pollutants from power generation by fossil fuels.

**Expected Project Outcomes:** The anticipated environmental and human health outcomes resulting from the installation of 7.5 MW<sub>AC</sub> of new renewable energy generation capacity are:

- a) Approximately 19,000 MWh during the first year of operation, and
- b) An expected displacement of more than 5,203 metric tons/year of carbon dioxide and 8 metric tons/year of nitrogen oxides.<sup>1</sup>

**Sponsor:** Macquarie Infrastructure Company Solar LLC (“Macquarie” or “MIC Solar”).

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<sup>1</sup> SO<sub>2</sub> emission reductions are not calculated for these Projects due to the minimal SO<sub>2</sub> emission factor based on the California energy generation portfolio. According to the Energy Information Administration, the SO<sub>2</sub> emission factor is less than half of the smallest unit of measure: 0.5.

**Borrowers:** Valley Center 1: Sol Orchard San Diego 22 LLC (“VC1”).  
Valley Center 2: Sol Orchard San Diego 23 LLC (“VC2”).

**Loan Amount:** Valley Center 1: Up to US\$10.1 million.  
Valley Center 2: Up to US\$20.3 million.

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### SOL ORCHARD SOLAR PROJECTS IN VALLEY CENTER, CALIFORNIA

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#### 1. ELIGIBILITY

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##### ***Project Type***

The Projects fall in the category of clean and efficient energy.

##### ***Project Location***

The Projects are located 47 miles from the U.S.-Mexico border in Valley Center, California, in an unincorporated area of San Diego County.

##### ***Project Sponsor and Legal Authority***

The **private-sector project sponsor** is Macquarie Infrastructure Company Solar LLC (the “Sponsor”), which will use the two special purpose companies, VC1 and VC2, for the implementation of the Projects. VC1 and VC2 are Delaware-based, limited-liability companies that were incorporated on February 11, 2011. Their contact representative is William Green.

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#### 2. CERTIFICATION CRITERIA

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##### 2.1 TECHNICAL CRITERIA

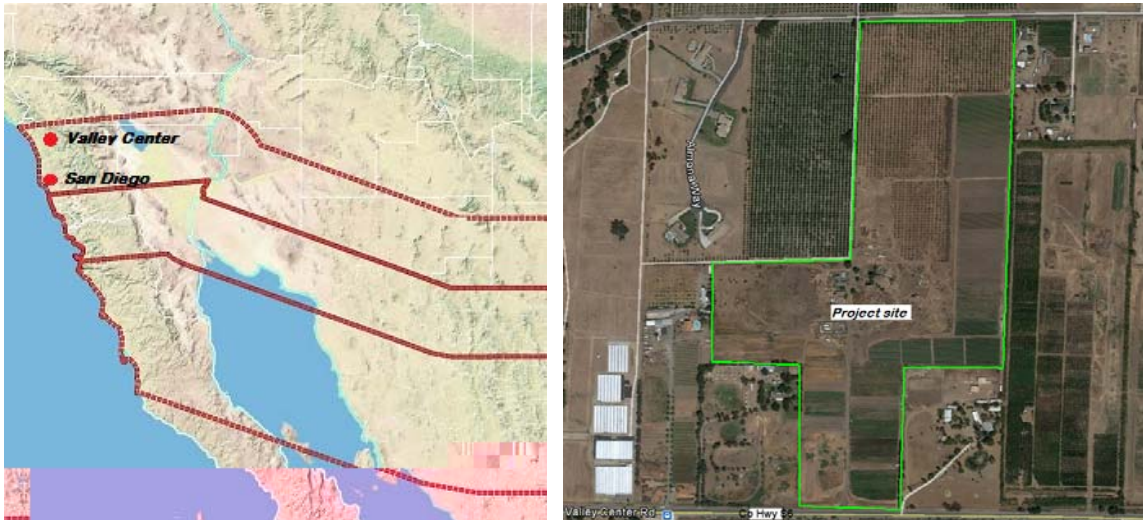
##### 2.1.1. Project Description

##### ***Geographic Location***

The Projects are located in the unincorporated community of Valley Center in San Diego County, California, and will be developed on a 46.1-acre parcel located in the northwestern part of the county. The site is located on Vesper Road and is surrounded by agricultural land.

Figure 1, below, shows the approximate geographical location of the Projects.

**Figure 1**  
**PROJECTS VICINITY MAP**



### **General Community Profile**

The Projects are expected to benefit San Diego County directly by generating electricity equivalent to the annual consumption of approximately 2,900 households and by creating employment opportunities and additional income from taxes during the construction and operation of the Projects.

According to the 2010 U.S. census, the population of San Diego County was 3,095,313, which represents 8.3% of the state's population. The median household income (MHI) reported in 2010 for San Diego County was US\$59,923. The main work force activities are: management, business and arts (39.7%); services (18.5%); sales (25.5%); natural resources and construction (8.2%); and production and transportation (8.0%).

According to the U.S. Department of Labor, in January 2013, the unemployment rate in San Diego County was 8.6%, higher than the national average of 7.9%. The Projects are expected to generate approximately 81 jobs during construction and one part-time job during operation.

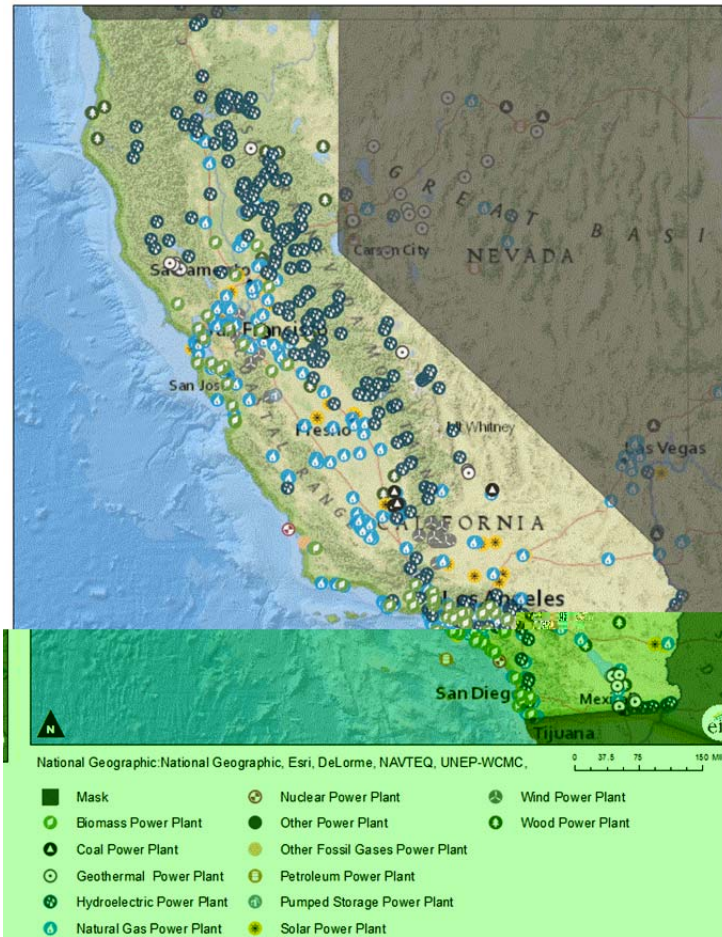
### **Local Energy Profile**

The U.S. Department of Energy (DOE), through the Energy Information Administration (EIA), provides a state-by-state reference for information and data covering energy production and demand. Figure 2 from the EIA website shows the location of California's power plants, its renewable energy potential, and energy sources.<sup>2</sup>

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<sup>2</sup> Source: U.S. Department of Energy, Energy Information Administration, State Energy Profiles – California, 2012.

**Figure 2**  
**CALIFORNIA'S ENERGY SOURCES**



In 2002, California's Renewables Portfolio Standard (RPS) was established in Senate Bill 1078. In November 2008, the California Energy Policy Report's goal of achieving 33% generation from renewable sources by 2020 was confirmed by Governor Arnold Schwarzenegger in Executive Order S-14-08. In 2009, the California Air Resources Board (CARB) under its Assembly Bill 32 authority was directed by Executive Order S-21-09 to enact regulations to achieve the goal of 33% renewables by 2020.

In order to achieve the 33% goal by 2020, Senate Bill X1-2 was signed by Governor Edmund Brown, Jr., in April 2011. Under this new RPS, all electricity retailers in the state, including publicly-owned utilities (POUs), investor-owned utilities (IOUs), electricity service providers, and community aggregators, must adopt the new goals of 20% of retail sales from renewables by the end of 2013, 25% by the end of 2016, and 33% by the end of 2020.

The electricity generated by the Projects will be sold to SDG&E, a wholly-owned subsidiary of Sempra Energy. For more than 125 years, SDG&E has been providing energy services in the San Diego region. With a service area spanning 4,100 square miles and covering most of San Diego

County and part of Orange County, SDG&E currently serves 1.4 million electric customers and 850,000 natural gas customers, representing 3.4 million people.<sup>3</sup> Figure 3 shows SDG&E's service area.

**Figure 3**  
**SDG&E SERVICE AREA**



Over the past 12 years, SDG&E has maintained an active capital investment program aimed at providing sufficient and reliable power to its customers, including investments in renewable and other clean sources of power generation. In 2011, nearly 20.8% of the energy delivered to retail customers was provided by renewable energy resources, such as wind, geothermal, biomass, hydroelectric, and solar facilities. In the same year, SDG&E signed 17 new power contracts, mostly with solar and wind energy projects, which in their aggregate represent 1,482 megawatts of capacity. With these contracts, SDG&E is in a position to reach the 25% renewable power requirement by 2016, and at present rates of procurement, SDG&E is fully on track to meet the California RPS requirement of 33% of retail sales from renewables by 2020.

<sup>3</sup> Source: SDG&E, <http://sdge.com/aboutus>.



Natural gas is the largest single fuel power source for SDG&E, accounting for 42.8% of total installed capacity, followed by nuclear at 20.4%, other renewables at 15.7%, coal at 2.7%, and unspecified sources at 18.4%. Table 1 shows the in-state generation capacity of SDG&E by fuel source compared to California's total installed generation mix.

**Table 1**  
**ENERGY GENERATION CAPACITY PORTFOLIO COMPARISON**

Energy Resources	SDG&E <sup>2</sup> (2011)	CA Mix <sup>3</sup> (2011)
Natural Gas	42.8%	62.4%
Nuclear	20.4%	6.4%
Other Renewables <sup>1</sup>	15.7%	11.7%
Coal	2.7%	0.7%
Hydroelectric	-%	18.8%
Unspecified <sup>4</sup>	18.4%	-%
<b>Total</b>	<b>100%</b>	<b>100.0%</b>

<sup>1</sup> Includes wind, solar, geothermal, landfill gas, and digester gas and biomass resources.

This represents physical power purchased to support SDG&E's system load.

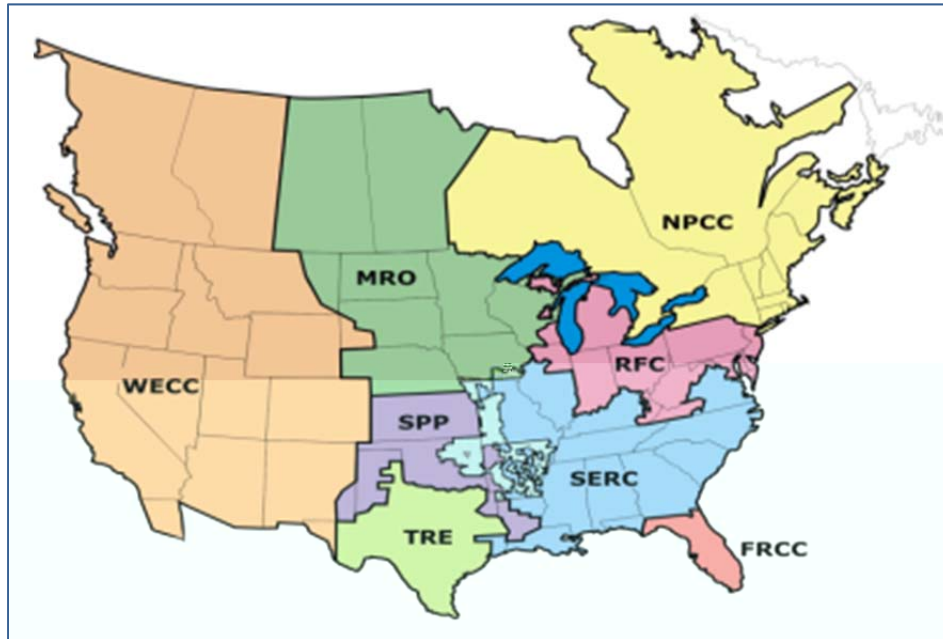
<sup>2</sup> Sand Diego Gas & Electric Generation Fact Sheet, 2013.

<sup>3</sup> Source: California Energy Commission, *Electric Generation Capacity & Energy: 2001 – 2011*.

<sup>4</sup> Electricity from transactions that are not traceable to specific generation sources.

SDG&E is part of the California Independent System Operator (CAISO), which manages the flow of electricity across the high-voltage, long-distance power lines that cover 80% of California's power grid. CAISO is a member of the Western Electricity Coordinating Council (WECC), the regional entity responsible for coordinating and promoting system reliability in the Western Interconnection. Geographically WECC is the largest and most diverse of the eight regional entities that have delegation agreements with the North American Electric Reliability Corporation (NERC) (see Figure 4).

**Figure 4**  
**NERC REGIONS**

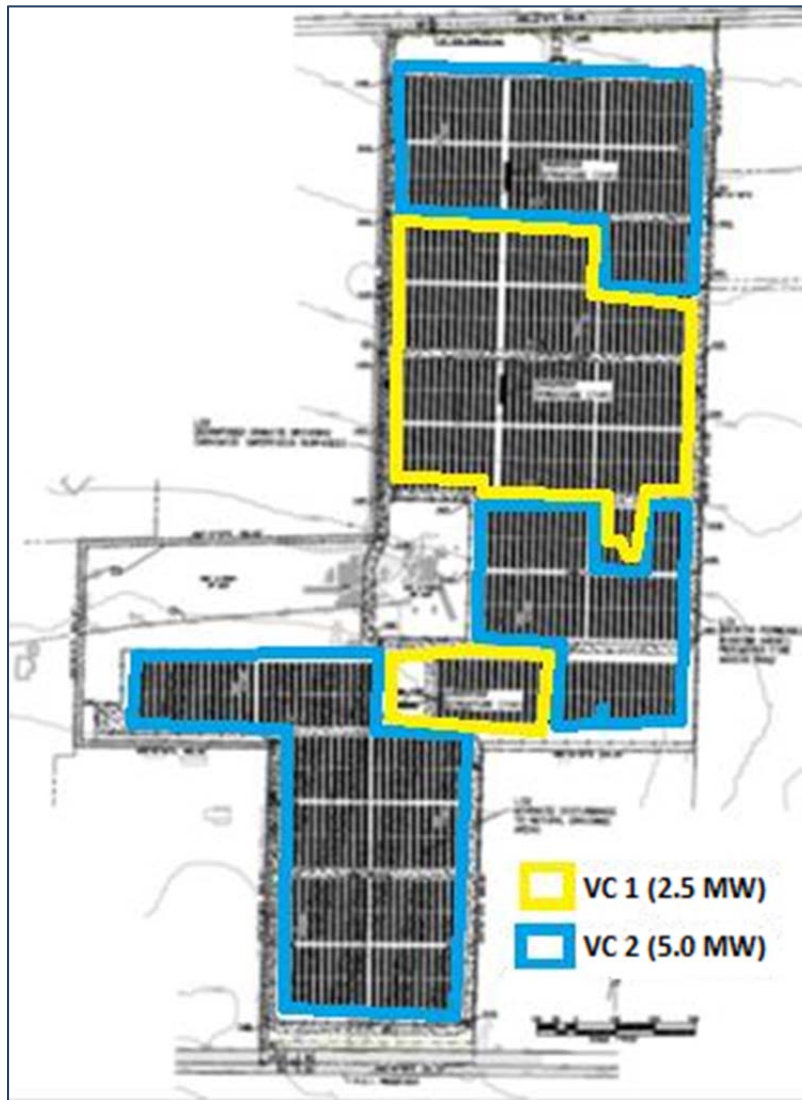


Due to the size and diverse characteristics of the region, WECC and its members face unique challenges in coordinating day-to-day interconnected system operations and the long-range planning needed to provide reliable power service across nearly 1.8 million square miles. CAISO evaluates both off-peak and on-peak deliverability scenarios to determine base cases that consider all the connected facilities. Renewable energy generation facilities have priority over gas turbines or combined-cycle generation facilities. In a typical off-peak scenario, renewable energy generation facilities will be on-line, while the remaining energy generation required will be supplied by the lowest cost generation facilities.

**Project Scope and Design**

The scope of the Projects is to design, build, and operate two photovoltaic solar parks: Valley Center 1 with a 2.5 MW<sub>AC</sub> and Valley Center 2 with a 5 MW<sub>AC</sub>. SDG&E will purchase the electricity produced by each project pursuant to separate 25-year PPAs. The Projects will be constructed on a 46.1-acre parcel (see Figure 5) and will be interconnected through an existing transmission line adjacent to the Projects' site, 1.14 miles east of the Valley Center substation.

**Figure 5**  
**PROJECTS SITE LAYOUT\***



\* The power blocks for each PPA had to be bifurcated in order to achieve the most efficient design. Specific factors that contributed to this include the unique shape of each site, the combination of using two different types of panels and two different size inverters, as well as differences in the size of each Project's PPA.

The Projects are expected to begin construction in August 2013, with commercial operations beginning no later than December 2013. Table 2 presents the status of key tasks.

**Table 2**  
**PROJECTS MILESTONES**

Key Milestones	Status
Projects' site lease agreement	Completed
PPAs with SDG&E	Completed
Interconnection agreement with SDG&E	Completed
Engineering, procurement and construction (EPC) contract	Completed
Independent engineer report	In process
Environmental authorization (Mitigated Negative Declaration)	Completed
Major Use Permit (land use and access)	Completed
Construction permits	Pending
Commercial Operation Date (COD)	December 2013

Construction permits will be obtained prior to the start of construction.

NADB's procurement policies require that private-sector borrowers use appropriate procurement methods to ensure a sound selection of goods, works and services at fair market prices and that their capital investments are made in a cost-effective manner. As part of its due diligence process, NADB will review compliance with this policy.

### **2.1.2. Technical Feasibility**

#### **Selected Technology**

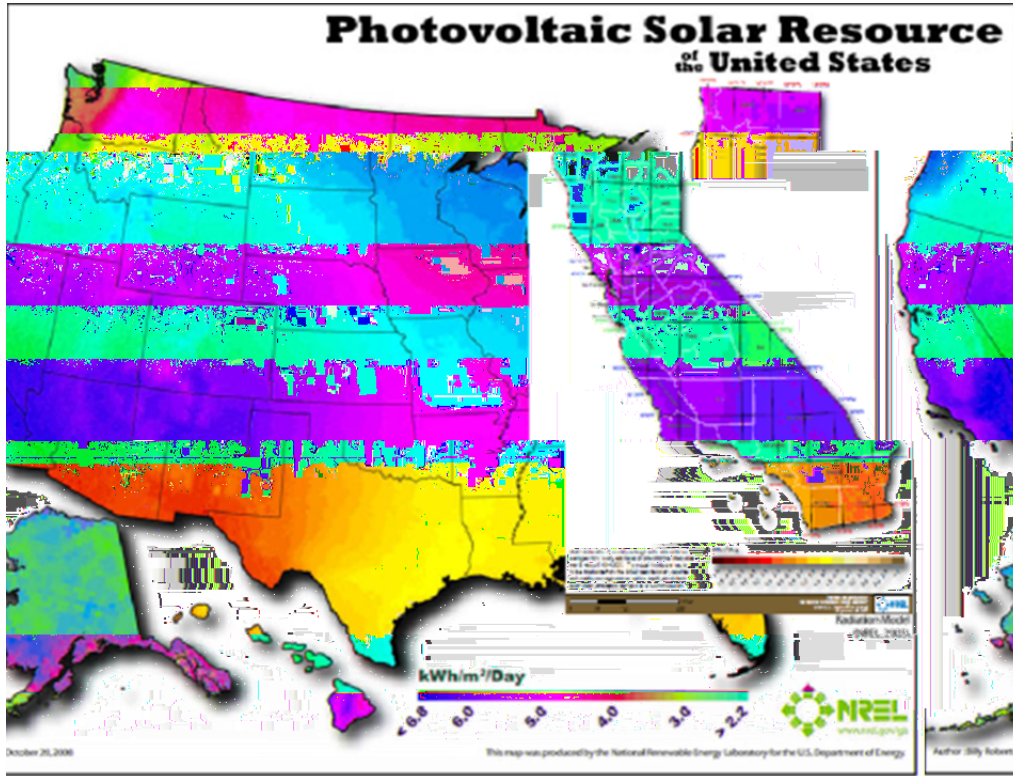
All equipment and suppliers have been selected on the merits of performance and cost. The Projects have been evaluated for viability based on the use of bankable technologies. Below is a description of the main components of the Projects:

- *Modules*: A mixture of 285W and 300W polycrystalline photovoltaic modules will be installed and mounted on a single-axis tracking system.
- *Inverters*: The inverters selected for the Projects will be rated at 500 kW of AC output.
- *Interconnection*: The point of interconnection (POI) is adjacent to the site of the Projects at a 12 kV distribution circuit line. The POI will connect the Projects through an existing SDG&E transmission line to the Valley Center Substation located 1.14 miles west of the site. The two Projects are interconnected and have one common output line to the POI.
- *Monitoring and control system*: A SCADA system will be used to monitor remotely, track, and document the performance of the PV system relative to its predicted output.

#### **Solar Resource Assessment**

The Projects are located in Valley Center, California, which boasts some of the best solar resources in the world. According to the National Renewable Energy Laboratory (NREL), the photovoltaic solar resource in Valley Center ranges from 6 to 6.5 kWh/m<sup>2</sup>/day (see Figure 6).

Figure 6  
PHOTOVOLTAIC SOLAR RESOURCE



The Projects' energy production was calculated using Photovoltaic System (PVsyst) software, published by the University of Geneva, Switzerland. A 7.5-MW<sub>AC</sub> solar plant performance study was developed. Based on the results of this study, it is estimated that the Projects will generate approximately 19,000 MWh of electricity in the first year of operation. Performance losses due to direct current to alternating current conversion, dust, inverter losses and shading were taken into consideration. The energy generation estimate will be vetted by an independent engineer.

### 2.1.3. Land Acquisition and Right-of-way Requirements

The Projects are located in Valley Center in San Diego County and are bordered to the south by Valley Center Road, to the north by Vesper Road and by agricultural lands to the east and west. The land has been secured through a ground lease agreement. The majority of the Projects' site is disturbed and has been used for the storage and dismantling of various types of machinery, vehicles and equipment.

The Projects require a Major Use Permit (MUP) from San Diego County. For MUP approval, San Diego County opens a period for public comments through its Planning Commission, which meets on monthly basis to consider land use projects that affect the unincorporated portion of the county. The MUP was granted on August 17, 2012, allowing for the construction and

operation of the Projects. The County of San Diego Department of Planning and Land Use (SDDPLU) filed a Notice of Determination (NOD) for the Projects. The NOD indicates that, since the Projects will not have a significant effect on the environment, a Mitigated Negative Declaration (MND) was adopted pursuant to the provisions of the California Environmental Quality Act (CEQA). Additionally, mitigation measures were adopted as a condition of the approval of the Projects, as well as the preparation of a Mitigation Reporting or Monitoring Plan.

The Projects' MUP and MND were indirectly challenged in California state court as part of a complaint against the corresponding permits for two projects supported by the same sponsor in Ramona, CA, in San Diego County (the "Ramona Litigation").<sup>4</sup> A Settlement Agreement and Release was reached on July 16, 2013. This agreement released the Petitioner's claims, and the petitioners agree that they shall not take any action against the Projects.

Additional permits will be required for the Projects:

- Construction Permit;
- Excavation Permit;
- Encroachment Permit;
- General Construction Storm Water Permit;
- Fire District Approval;
- Minor Deviation Permit;
- Storm Water Pollution Prevention Plan Notice of Intent Permit;
- Well Deconstruction Permit.

All these permits are part of the Projects' designs and will be obtained prior or during the construction process in accordance with San Diego County's regulations.

#### **2.1.4. Management and Operations**

The Projects will be constructed by Blattner Energy, an experienced contractor with a track record of over 15 GW of installed wind, solar and transmission capacity since it began operations in 1997. Blattner Energy has served as the engineer, procurement and construction (EPC) contractor for a great number of the wind farms constructed in the U.S. and in more than 10 solar and wind projects in California.

Solar photovoltaic systems are highly reliable and require minimal maintenance. The Sponsor will provide a comprehensive O&M program for the Projects through an O&M operator.

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<sup>4</sup> The two Ramona Projects are also being considered for certification and financing.

The O&M contractor will provide services in accordance with an operations and maintenance agreement that shall include, *inter alia*, the following:

- Providing all materials and services necessary for solar facility maintenance;
- Performing routine and non-routine maintenance on the solar facility during and after the EPC warranty period;
- Washing solar panels periodically;
- Managing onsite vegetation by typical landscape maintenance techniques;
- Monitoring the operations of the Projects via the computer monitoring system;
- Complying with all regulatory obligations;
- Developing operation and safety plans; and
- Maintaining all Projects information and facility data, including providing reports to their stakeholders.

The Sponsor is expected to finalize an operation and maintenance agreement in the third quarter of 2013.

## **2.2 ENVIRONMENTAL CRITERIA**

### **2.2.1. Compliance with Applicable Environmental Laws and Regulations**

#### **Applicable Laws and Regulations**

The Projects will be constructed in California and therefore the formal environmental clearance process for the Projects must comply with CEQA.<sup>5</sup> CEQA's purpose is to inform governmental decision makers and the general public about potentially significant environmental effects of proposed activities; require changes in projects through the use of alternatives or mitigation measures, when feasible; and disclose to the public the reasons why a project was approved, if significant environmental effects result from the project's implementation. CEQA is applicable to projects undertaken, funded, or requiring an issuance of a permit by a public agency.

#### **Environmental Studies and Compliance Activities**

The development of any project that is not exempt from the CEQA must include the preparation of an "Initial Study" by a lead agency to determine whether the project may have a significant adverse effect on the environment. If adverse effects are detected, the lead agency must prepare an environmental impact report (EIR). When no substantial evidence is found for such effects or they can be reduced to a level of insignificance through project revisions, a MND can be adopted.

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<sup>5</sup> CEQA was enacted in 1970 and incorporated into Public Resources Code §§21000-21177.

In this case, the lead agency, the SDDPLU, conducted the Initial Study and, based on the provided information, it was determined that a MND would be applicable to the Projects since their potential environmental effects can be reduced to a level of insignificance, including the mitigation measures described in Section 2.2.2. As part of the MND, the following environmental reports were prepared to evaluate the potential impacts and mitigation requirements of the Projects:

- *Air Quality Study*. The purpose of this study was to determine potential air quality impacts that might be created during the construction of the Projects. The study concluded that the expected impacts will be minimal and health risks are not anticipated. The Sponsor has considered mitigation measures to reduce temporary emissions and comply with the San Diego Air Pollution Control District standard.
- *Biological Resources Report*. The purpose of the study was to perform biological surveys in the immediate vicinity of the site of the Projects, and analyze potential impacts to sensitive biological resources. The survey concluded that impacts to potential foraging habitat for special status wildlife species are *less than significant*. No special-status plant or wildlife species are anticipated to be adversely affected. Two mature, isolated, individual coast live oak trees occurred in the northern portions of the survey area. The studies mentioned that the oak trees in the survey area would not be removed and were not likely to be affected by the Projects.
- *Cultural Resources*. A pedestrian field survey was conducted to determine the potential existence of artifacts, features or cultural resources. No cultural resources were identified during the survey. No Sacred Lands were identified by the Native American Heritage Commission (NAHC).
- *Drainage Study*. The purpose of the study was to assess potential impacts or alterations to existing hydrologic and hydraulic properties of the site as compared to existing conditions. The assessment was conducted in accordance with the County of San Diego Hydrology Manual, the San Diego Unit Hydrograph software, and the Natural Resources Conservation Service method. The study concluded that there is no anticipated increase in the peak flow runoff of the project site, and peak flow attenuation is not necessary.
- *Noise Study*. A study was completed to determine the noise impacts associated with the development of the Projects. Construction activities are anticipated to be below County Noise Ordinance Section 36.410 which defines the standard for San Diego County. No impacts are anticipated and no mitigation measures are required.
- *Phase I Environmental Site Assessment*. The purpose of the Phase I ESA was to assess the presence or likely presence of an existing, historical, or threatened release of any hazardous substances or petroleum products into structures, soil, and/or groundwater beneath the Projects' site. The assessment revealed evidence of the likely presence of



*recognized environmental conditions*<sup>6</sup> in connection with the site, as a result a Phase II ESA was required.

- *Phase II Environmental Site Assessment*. The purpose of this study was to evaluate the potential presence of near-surface Total Petroleum Hydrocarbons (TPH) and the presence of restricted agricultural residue contamination at the Projects' site. The study concluded that the reported concentrations of chlordane and dieldrin detected were below the California Human Health Screening Levels' threshold values and did not represent a significant risk to human health. The reported concentrations of TPH were also below the soil screening levels. No adverse environmental impacts to on-site soils were anticipated from residual pesticide, herbicide, or petroleum hydrocarbon product contamination.
- *Visual Resources*. This study was conducted to identify the potential impacts on existing visual resources and character the Projects would have in Valley Center. Since the Projects would not result in the introduction of features that would significantly detract from or contrast with the visual character of the surrounding community, the Projects would not result in significant impacts on visual resources. No mitigation measures are required.

#### **Pending Environmental Tasks and Authorizations**

There are no environmental authorizations pending.

#### **Compliance Documentation**

The following environmental compliance documentation is available for the Projects:

- Mitigated Negative Declaration
- Initial Study
- Ordinance Compliance List
- Air Quality Study
- Biological Resources Report
- Cultural Resources
- Drainage Study
- Noise Study
- Phase I Environmental Site Assessment
- Phase II Environmental Site Assessment
- Visual Resources

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<sup>6</sup> The American Society for Testing and Materials (ASTM) defines *recognized environmental conditions* as the "presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property."

**2.2.2. Environmental Effects/Impacts**

There is a need for affordable and environmentally beneficial alternatives to conventional fossil fuel-derived energy resources. Renewable energy projects create an opportunity to generate electricity without the atmospheric emissions generated by fossil fuel-based plants. Sunlight is a source of renewable energy, which means it can be produced without the depletion of natural resources. It is a clean form of renewable energy and is currently used in many developed and developing nations to meet their demand for electricity. Solar power does not produce waste byproducts that require disposal or gas emissions that contribute to air pollution. It does not pollute or consume water for electricity production. Water may be used in small amounts for the cleaning of panels from time to time. Any water used for cleaning purposes will be disposed of at appropriate facilities and in accordance with environmental regulations. Solar energy projects provide an opportunity to displace greenhouse gases (GHG) and other pollutants produced by traditional fossil fuel-based energy generation, while providing local residents with a safe and reliable energy alternative.

**Existing Conditions and Project Impact – Environment**

Historically, the United States has depended to a great extent on fossil fuels for the generation of energy. These conventional sources of energy adversely affect the environment due to the harmful emissions produced in their generation processes, including GHG and other pollutants, such as sulfur dioxide (SO<sub>2</sub>) and nitrogen oxides (NO<sub>x</sub>).

Current electricity generation in California relies on a mix of energy technologies, including: natural gas (45.3%), hydroelectric (21.3%), nuclear (18.3%), other renewables (13.6%), and coal (1.6%). Based on nearly 200,000 GWh of net power generation in California in 2011, 47.9 million metric tons of CO<sub>2</sub> and 81,366 metric tons of NO<sub>x</sub> were emitted<sup>7</sup>.

**Table 3  
 2011 CALIFORNIA ELECTRIC POWER INDUSTRY GENERATION**

Energy Source	Total Generation 2011 (GWh) <sup>1</sup>
Natural Gas	90,919
Coal	3,120
Nuclear	36,666
Hydroelectric	42,731
Other Renewables <sup>2</sup>	27,200

<sup>1</sup>Source: California Energy Commission, *Electric Generation Capacity & Energy: 2001-2011*.

<sup>2</sup>Other renewables includes biomass, geothermal, photovoltaic energy, and wind.

The Projects will help reduce the demand for fossil fuel-fired electricity, and since solar power generation has zero fuel cost, zero emissions and zero water use, it will displace harmful emissions. Over the next 25 years, the production of approximately 440,917 MWh of zero-carbon generation will help avoid the emission of more than 119,705 metric tons of CO<sub>2</sub> into the

<sup>7</sup> Source: U.S. Energy Information Administration.

atmosphere. The anticipated environmental outcomes include the installation of new renewable energy generation capacity (7.5 MW<sub>AC</sub> or approximately 19,000 MWh of electricity in year 1); and an expected displacement of more than 5,203 metric tons/year of carbon dioxide and approximately 8 metric tons/year of nitrogen oxides.

### Mitigation of Risks

As previously determined by the Planning Commission, the Projects will not have significant effect on the environment. The expected impacts will be managed according to the following mitigation measures considered in the MUP:

- Aesthetics. In order to provide adequate landscaping to screen the proposed solar facility, a landscape plan shall be prepared.
- Agricultural resources. In order to mitigate for agricultural resources, as evaluated in the County Agricultural Resource Guidelines for Determining Significance, mitigation of the impacts to agricultural resources will be required and the soils on-site shall be left in their natural state, and not coated with any materials that would sterilize the soil. The sponsor will implement one of the following mitigation options:
  - A payment to the County's Purchase of Agricultural Conservation Easement (PACE) Program.
  - Off-site preservation at a ratio of 1:1 for all impacted agricultural soils for a total of 6.61 acres.
  - On-site preservation of 6.61 acres of agricultural land. The agricultural mitigation shall be increased at a 1:1 ratio for any additional ballasted footings over 10% of the total solar panel supports.
- Air Quality. In order to mitigate fugitive dust caused by the permanent disturbance of the site from clearing and grading, a permeable soil-binding or permeable rock material shall be used to limit the dust. Additional measures for dust suppression include:
  - The areas located between the arrays and any non-drivable surface may be revegetated with native, noninvasive plant species.
  - A Revegetation Plan shall be prepared that provides sufficient ground cover to mitigate fugitive dust from the ground disturbances. The Revegetation Plan shall conform to the most current version of the County of San Diego Report Format and Content Requirements for Revegetation Plans.
- Anti-reflective surfaces. In order to reduce solar panel glare or any other reflective surface pursuant to §6952.b.3.c.iv of the Zoning Ordinance, the Projects' components shall be designed with anti-reflective surfaces.
- Biological resources. In order to prevent inadvertent disturbance to onsite oak root protection zones, all grading and construction located within or near the 50-foot oak root protection zone shall be monitored by a biologist approved by San Diego County. Monitoring duties shall be performed before, during and after construction pursuant to

the most current version of the County of San Diego Biological Report Format and Requirement Guidelines<sup>8</sup>. A final Biological Monitoring Report shall be prepared.

- *Fauna*. In order to avoid impacts to migratory birds and raptors, which are sensitive biological resources pursuant to the Migratory Bird Treaty Act (MBTA), a Resource Avoidance Area (RAA) shall be implemented on all plans. No brushing, clearing and/or grading will be allowed within the RAA during the breeding season of migratory birds and raptors.
- *Fire protection*. In order to assure fire safety in compliance with the County of San Diego Fire Code, Sections 96.1.4703 and 96.1.4707, signs shall be placed at each disconnecting point and shall indicate what equipment it de-energizes. Additionally, fire apparatus access roads shall be designed and maintained to support the load of fire apparatus.
- *Geotechnical studies*. A Geotechnical Study shall be prepared by a Registered Civil or Geotechnical Engineer, and submitted for approval by the Department of Planning and Land Use, Building Division. The report shall specify foundation designs, which are adequate to preclude substantial damage to the proposed structure due to liquefaction.
- *Traffic*. In order to regulate the traffic patterns on the roads due to amount of exports and/ or imports of soil and materials during construction time, a truck traffic control plan shall be prepared and implemented.
- *Trail/Pathway improvements*. In order to promote orderly development and to comply with the Community Master Trails Plan, the Sponsor shall dedicate fifteen (15) foot wide non-motorized multiuse trail easement along the Projects' western boundary, and designate a ten (10) foot wide pathway within the outside edge of the road right of way for Vesper Road.

#### Natural Resource Conservation

The Projects will support natural resource conservation by reducing the demand on fossil fuels for energy production and associated improvements to air quality. The Projects are anticipated to produce approximately 19,000 MWh of zero-carbon electricity in the first year of operation, equivalent to the annual energy consumption of approximately 2,900 households. In addition, clean technologies such as solar energy require no water for electricity production, whereas fossil fuel-fired generation is typically water intensive.

#### No Action Alternative

The no action alternative to the development of renewable energy sources would result in greater demand for conventional fossil fuel-based energy production, further depleting natural resources for the purposes of meeting an ever-growing demand for energy, as well as a lost opportunity to generate emission-free energy, such as that derived from solar energy.

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<sup>8</sup> Guidelines can be found at <http://www.sdcounty.ca.gov/dplu/procguid.html>

Additionally, the Projects will help meet California's RPS requirements and comply with GHG emission legislation, while satisfying increased demand for electricity. Should the Projects not be implemented, the mix of renewables in SDG&E's portfolio would be delayed and the intent of California's GHG emission reduction goals could be affected.

#### **Existing Conditions and Project Impact – Health**

In general, epidemiological research has shown that both chronic and acute exposure to harmful emissions associated with fossil fuel-based energy production can lead to serious respiratory problems. It is estimated that, at the very least, prolonged exposure to excessive levels of pollutants can deteriorate the respiratory capacity of humans and greatly contribute to the increased incidence of cardiopulmonary diseases, such as asthma, heart ailments, and lung cancer.

By using clean renewable resources instead of conventional fossil fuel sources in power generation, the Projects will positively impact the region by reducing pollutants and thus help to contain the severity of respiratory and other diseases aggravated or caused by air pollution. In addition, the reduction of GHG emissions is expected to mitigate climate effects that create more vulnerable conditions for human health.

#### **Transboundary Effects**

No negative transboundary impacts are anticipated as a result of the implementation of the Projects; on the contrary, a beneficial effect is anticipated on the air quality due to the decreased demand on fossil fuel fired electrical plants in the region. Furthermore, the Projects will aid in addressing the larger environmental concerns related to greenhouse gases and global warming targeted by international agendas.

#### **Other Local Project Benefits**

During construction, the Projects are expected to generate approximately 81 jobs; during operation, one part-time job is expected to be created.

### **2.3. FINANCIAL CRITERIA**

This certification and financing proposal covers two separate PV solar Projects located adjacent to each other on the same site. The projects have the same off-taker, but under separate power purchase agreements. As a result, there will be two different borrowers with separate loan agreements; nevertheless, the projects will share most of the key project documents, most notably the EPC and O&M agreements. The Projects are being contractually structured vis-à-vis the loan documentation as independent from one another in order to ensure tax incentive security for the tax equity investor.

The Sponsor has requested a loan from the North American Development Bank (NADB) to complete the financing of each of the Projects. The proposed payment mechanism is consistent with the project structure normally seen in the U.S. renewable energy industry. The source of

payment will be the revenue generated by the Projects in accordance with the pricing established under the PPAs signed with SDG&E for a term of 25 years. NADB loan will have no recourse beyond the two Project Companies, Sol Orchard San Diego 22 LLC and Sol Orchard San Diego 23 LLC. The Sponsor will become the owner of both Projects at or before NADB debt closing.

NADB performed a financial analysis of the source of payment, SDG&E; the proposed payment structure; and the Projects' cash flow projections over the 25-year term of the PPAs. SDG&E's financial ratios indicate that it has maintained a sound financial position. Currently, SDG&E is rated A/Stable by Fitch, A2/Stable by Moody's, and A/Stable by Standard & Poor's, which indicates a strong credit quality.

The Projects' expected revenue from the sale of electricity is estimated to be sufficient to: a) cover scheduled O&M expenses, b) fund any debt service reserve, c) pay the debt service on the senior loan, and d) comply with debt service coverage requirements.

In addition, NADB's analysis verified that VC1 and VC2 have the legal authority to contract financing and pledge their revenue for the payment of financial obligations. VC1 and VC2 also have the capacity to operate and maintain the Projects based on the experience provided by their development team. VC1 and VC2 will contract the Projects' O&M services with a firm with ample experience and expertise in the industry. NADB will verify that the projected O&M costs and contract warranties are in accordance with industry standards.

Considering the Projects' characteristics and based on the financial and risk analyses performed, the proposed Projects are considered to be financially feasible and presents an acceptable level of risk. Therefore, NADB proposes providing:

- (i) a market-rate loan of up to US\$10.1 million to VC1 for Valley Center 1; and
- (ii) a market-rate loan of up to US\$20.3 million to VC2, for Valley Center 2.

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### **3. PUBLIC ACCESS TO INFORMATION**

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#### **3.1. PUBLIC CONSULTATION**

BECC released the Draft Project Certification and Financing Proposal for a 30-day public comment period beginning July 22, 2013. The following documentation is available upon request for both projects:

- Notice of Intent to Adopt a Mitigated Negative Declaration
- Mitigated Negative Declaration
- Initial Study
- Ordinance Compliance Checklist
- Air Quality Study

- Biological Resources Report
- Cultural Resources
- Drainage Study
- Fire Protection Plan
- Grading Plan
- Noise Study
- Storm Water Management Plan-Minor
- Phase I Environmental Site Assessment
- Phase II Environmental Site Assessment
- Visual Resources

The documents above are also available at the County of San Diego's website:  
<http://www.sdcountry.ca.gov/pds/ceqa/3300-11-027.html>

The public comment period ended on August 21, 2013, with no comments received.

### **3.2. OUTREACH ACTIVITIES**

As part of CEQA, the SDDPLU as the lead agency conducted a public process that included publication of documents for review and comment, as well as direct consultation with relevant federal and state agencies, such as the Native American Heritage Commission (NAHC), for determining the direction of necessary environmental studies.

As part of the consultation with the NAHC, no sacred lands were identified. The Native American groups and individuals provided by the NAHC were also contacted to further investigate whether they have knowledge of sacred lands occurring on the Project site. No response was received.

A notice of intent to adopt a MND for the Valley Center Projects was made available for public review from April 5, 2012 to May 4, 2012. The MND was adopted on August 17, 2012 and is available on the San Diego County website. On the same date, the MUP to allow the construction and operation of the Projects was also granted.

The Board of Supervisors of San Diego County conducted a public hearing on October 31, 2012,<sup>9</sup> related to an appeal of the Planning Commission decision to approve the Valley Center solar energy Major Use Permit. The Board of Supervisors denied the appeal which was recorded in the minute of the hearing. On March 8, 2013, the approved MUP and MND were indirectly challenged in California state court in the Ramona Litigation. A Settlement Agreement and

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<sup>9</sup> Board of Supervisors Agenda: <http://bosagenda.sdcountry.ca.gov/agendadocs/materials.jsp>

Release was reached on July 16, 2013. This agreement released the Petitioner's claims, and the petitioners agree that they shall not take any action against the Projects.

BECC conducted a media search on the Internet to identify public opinions about the Projects. One article mentioned the Valley Center Projects within the context of the concerns related to the MUP issued by the Board of Supervisors to the Sol Orchard Solar Energy projects located in Ramona, CA. There were no specific comments of concerns or support found for the Valley Center Projects.