SACRAMENTO COUNTY JUSTIFICATION STATEMENT

Justification Statement and Overview
RE Bruceville Holdings LLC

July 13, 2010

RECURRENT ENERGY

Table of Contents

1.0 Introduction

1.1 Purpose

This application is to obtain a Conditional Use Permit to construct a 15 MWac solar photovoltaic ("PV") power plant of approximately 115 acres with a designation as Open Space Recreation in the 1993 General Plan and a zoning designation as AG-80. The generation of electricity and interconnection to the existing 69 kV distribution system at this location has been vetted by Sacramento Municipal Utilities District and is moving towards an interconnection agreement.

1.2 Project Proposal

Recurrent Energy, through its wholly owned project company RE Bruceville Holdings LLC, is proposing to construct, own, and operate "RE Bruceville", a solar photovoltaic ("PV") power plant on 115 acres of agricultural land located in rural and unincorporated Sacramento County. The power produced by RE Bruceville will be sold to the Sacramento Municipal Utility District (SMUD) under SMUD's Feed in Tariff Program, which has been approved by the SMUD Board of Directors. RE Bruceville will generate renewable energy from the sun for at least twenty years for SMUD and likely beyond. The energy produced from RE Bruceville will help California reach its 33% renewable energy portfolio target while reducing greenhouse gas emissions and the need for fossil fuel-fired power plants. Our fuel supply is based on direct solar irradiation with no ancillary/external fuel delivery. With recent technology advances, PV has become a reliable, efficient and cost effective electricity producer and core generation type of renewable energy portfolios across the world.

2.0 Project Description

2.1 Project Improvement Area

RE Bruceville is located south of the town of Elk Grove within Sacramento County. The project site is a landlocked parcel, south of Eschinger Road and east of Bruceville Road. RE Bruceville would occupy approximately 115 acres of one parcel (APN 132-0240-062). The project would interconnect directly to an existing 69 kV line that runs along the northern edge of the property on Eschinger Road. Interconnection to the existing line would be via a step-up transformer bank which would be located adjacent to the existing SMUD substation on northeast corner of the property. Access to the project would be provided by the existing point of ingress/egress on Bruceville Road. The property is currently used for farming low value row crops. The property owners reside on a portion of the property that is roughly 2.5 acres. The owners currently lease the property for farming and intend to continue living on the 2.5 acre property while leasing the property for solar farming. The property topography is generally flat and the ground has been leveled by continual plowing and irrigation. The elevation of the parcel is 27 feet above sea level on the western portion and increases gradually to approximately 30 feet above sea level on the eastern portion of the parcel.

2.2 Project Environmental Characteristics

Recurrent Energy engaged with the Sacramento County Department of Planning & Community Development as well as with DERA in the Fall of 2009 to better understand zoning and planning goals, sensitivities, and thresholds. Recurrent Energy used that input to guide site selection for the SMUD Feed in Tariff in an attempt to choose sites that would compliment long-term land use, agricultural, and environmental planning goals.

The project location is within the Elk Grove Sphere of Influence (SOI) area. The property is designated in the Elk Grove SOI General Plan map as future Open Space. All of the proposed project land is outside of the 100-year floodplain. An irrigation ditch is present within the northern half of the property and runs north-south from the northern border of the parcel until the parcel's approximate midpoint.

No obvious areas of wetland features were observed in current or historical aerial photographs or on the US Fish & Wildlife GIS database. None of the land is under Williamson Land Act contract. Within the proposed project area, there are 10.3 acres of Prime Agricultural soils and the remainder acreage is Agricultural Land of Statewide Importance, as classified by the Department of Conservation's Farmland Mapping & Monitoring Program (FMMP). The land is zoned as AG 80, and is previously disturbed land that has continually been tilled.

Proposed ground disturbance is generally limited to trenching for electrical conduit, placement of solar panel array posts, small foundation pads for inverters, and placement of posts for project fencing.

2.3 Consistency with the Sacramento County General Plan

Although the proposed project is not an allowable use under the current zoning designation, no major restrictions are present under the Sacramento County General Plan (1993), Draft General Plan Update (2007) designations for this area, nor under on the property's title. The Sacramento County Land Use Diagram for this area shows the project site as Recreational Space with no Resource Conservation or other overlay constrictions.

2.4 Utility Interconnection and Offtake Agreement

On December 9, 2009, SMUD launched a Feed in Tariff Program to procure up to 100 MW AC of renewable power generated within SMUD's territory and connected to SMUD's distribution system. The Program and Feed in Tariff Policy were pre-approved by the SMUD Board of Directors. The Feed in Tariff provides standardized contracts and fixed rates for the purchase of power on a seasonal and hourly schedule. The project has been approved to connect to the SMUD distribution system through an existing 69 kV power line adjacent to the project site.

3.0 Project Benefits

RE Bruceville will help support California in meeting its Renewable Portfolio Standard (RPS) mandate for increased renewable energy production. The project will address the SMUD Feed in Tariff Program's demand for in-territory solar power interconnected to SMUD's distribution system. Additionally, it will help California achieve its RPS by 2020 through distributed solar generation and avoid carbon emissions by building a renewable generation facility instead of a fossil-fuel facility of similar capacity to meet increasing demand for in-state generation. More generally, the project will complement planning goals and environmental stewardship through proper project siting and bring living-wage skilled jobs to Sacramento County and California through development, construction, and operation.

3.1 Help California meet Renewable Portfolio Standard Goals

On November 17, 2008, Governor Arnold Schwarzenegger signed Executive Order # S-14-08 that raised California's renewable energy goals to 33 percent (33%) by 2020 and streamlined processes for licensing renewable projects:[1]

> "The State of California is a world leader in efforts to reduce global warming and greenhouse gas emissions, increase renewable energy production, promote energy efficiency, energy conservation, clean air and emission controls, expand the use of low carbon, alternative fuels and promote and commercialize new technologies and industries. The following Renewable Portfolio Standard target is hereby established for California: All retail sellers of electricity shall serve 33 percent of their load with renewable energy by 2020. State government agencies are hereby directed to take all appropriate actions to implement this target in all regulatory proceedings, including siting, permitting, and procurement for renewable energy power plants and transmission lines."[2]

3.1.1 Avoidance of Carbon Emissions

With an installed capacity of 15 MW AC, RE Bruceville is projected to produce in its first year about thirty thousand (30,000) megawatt hours ("MWh") from clean, renewable solar resource in the Sacramento County. Based on data from the United States Environmental Protection Agency, the projected output from the facility will be equivalent to the removal of four thousand one hundred nineteen (4,119) passenger vehicles from the County's roads per year, and will provide enough carbon-free electricity to power over two thousand six hundred fifteen (2,615) homes. This equates to an approximate yearly savings of twenty one thousand five hundred forty-five (21,545) tons of carbon dioxide in the atmosphere.[3]

[1] California Energy Commission, http://www.energy.ca.gov/33by2020/index.html
[2] Office of the Governor, http://gov.ca.gov/executive-order/11072
[3] Environmental Protection Agency, 2010, http://www.epa.gov/cleanenergy/energy-resources/calculator.html

3.2 Benefits of a Well-sited and Distributed Scale Solar PV Project

RE Bruceville is located close to the Elk Grove urban area, therefore close to existing electricity demand and transmission lines. By siting close to existing infrastructure, many benefits can be achieved.

No new transmission lines will be needed. Typically, many large renewable projects require the construction of new power lines to transport power from an isolated renewable resource to electrical load pockets. RE Bruceville does not require new, lengthy power lines, which minimizes costly upgrades, environmental impacts and public concern. The site would connect to an existing 69 kV power line adjacent to the property. The project will have a shorter development cycle. Smaller, distributed sized (10-30 MW) PV plants bring solar energy to the grid sooner due to more streamlined permitting, interconnection and construction processes.

The project will require minimal water usage. Solar PV power plants require little water during operation; only that used in periodic panel washings rather than that used to produce steam. The project contemplates drawing water from existing on-site wells to wash the PV modules 2-4 times per year, depending on soiling. The project represents a significant reduction from the water consumed by commercial agricultural operations from those same wells~~The project also represents a drastic reduction from the water consumed by commercial agricultural operations~~.

3.3 Job Creation

RE Bruceville will generate "green collar" jobs. Engineers, designers, electricians, civil engineers, environmental specialists, construction workers, facility operators, and maintenance technicians will be working on the project, helping to spur job growth both locally and nationally. For example, Recurrent Energy's 5 MW project in San Francisco will create a total of 71 new green jobs during construction.

RE Bruceville desires to be a long term partner with the community through creation of local jobs, investment in assets in the community, and education of local workers on renewable energy generation. The project team looks forward to developing a positive and long lasting relationship with the community to understand how it can best serve as a contributing member.

3.4 Preserving Farmland for Future Use

Both the finite lease agreement and the minimal impact of the project design allow the land to be returned to agricultural use after the useful life of the panels (approximately 20-35 years). Soil quality will be preserved through limited ground surface disturbance and minimal area coverage with foundations. Studies are currently underway to develop a groundcover solution that is both beneficial to long-term soil fertility and composition as well as economically feasible, given the project's fixed price for power from SMUD. While RE Bruceville will not grow an edible agricultural commodity using photosynthesis and sunlight, it will take that same solar resource and use photovoltaics to farm another commodity that is consumed daily - clean solar electricity.

4.0 Project Operation and Maintenance

Upon commissioning, RE Bruceville would enter the operation phase of the project. Recurrent Energy currently operates and maintains several MW's of in-operation solar projects but may also decide to select a third party operator for the facility. The operator of the facility will be located offsite. The company has developed a comprehensive maintenance program that includes an industry standard Data Acquisition System ("DAS"). The operator is on-call to respond to alerts generated by the monitoring equipment at RE Bruceville and is constantly analyzing collected data in order to schedule maintenance.

4.1 Operations

RE Bruceville will ensure effective facility operations by:

- Responding to automated alarms based on monitored data, including actual versus expected tolerances for system output and other key performance metrics;
- Communicating with customers, transmission system operators and other entities involved in facility operations.

4.2 Monitoring

Recurrent Energy continually monitors facility outputs and performance against forecast production in order to identify equipment failure or abnormalities. Among other attributes, we monitor:

- Energy generated
    - For comparison to expected generation
- Inverter registers
    - For inverter failures
    - For inverter voltage and current flow for comparison to expected flows
- Combiner output current
    - For combiner and re-combiner failures
    - For comparison with expected current
- Weather, including measurement of horizontal and plane-of-array irradiance, ambient air temperature, wind speed and direction, back-of-module temperature
    - For purposes of scheduling output to the transmission system operator
    - For comparison with forecasts
    - For calculation of expected generation and expected currents

4.3 Maintenance

The maintenance program is largely conducted on-site during daytime hours as a safety precaution. Equipment repairs may take place in the early morning or evening when the plant is producing the least amount of energy. Key program elements include:

- Responding to plant failures and emergencies in an expeditious manner

- Maintaining and managing a pre-qualified group of routine maintenance and repair firms who can address the operational and maintenance needs throughout the life of the facility
- Creating an optimized cleaning schedule to be more responsive to location and type of installation
- Maintaining an inventory of spare parts to facilitate timely repairs to maintain plant output
- Using trouble-ticketing to effectively record, track and escalate all maintenance problems
- Conducting onsite maintenance as required to clear weeds for ground-mount systems

4.4 Security

Prudent security measures will be taken to ensure the safety of the public and facility. RE Bruceville will be fenced along all borders with locking gates at the specified points of ingress and egress. The fence is anticipated to be topped with standard three-line barbed wire and would not exceed eight feet in height. Offsite security personnel may be dispatched during nighttime hours or be on-site depending on security risks and operating needs.

4.5 Water Use

As mentioned earlier, solar PV plants require minimal water use (only required for periodic washings). The installation of solar PV plants saves on cooling water and steam losses. The project contemplates drawing water from existing on-site wells to wash the PV modules 2-4 times per year, depending on soiling. The project represents a significant reduction from the water consumed by commercial agricultural operations from those same wells.

4.6 Fire Control

Equipment used in solar photovoltaic generation is generally understood to have very minimal fire risks. However, RE Bruceville can develop a fire prevention plan with Sacramento County officials if requested by the County.

4.7 Solid and Non-Hazardous Waste

RE Bruceville does not anticipate generation of hazardous wastes during operation. Fuels and lubricants used in operations will be subject to our *Spill Prevention, Containment and Countermeasure Plan*. Solid waste generated in operations will be subject to our *Material Disposal and Solid Waste Management Plan*. Shipping materials, construction waste and other general solid wastes will be separated for recycling where available. Equipment rendered damaged or in non-compliance of the warranty will be returned to the manufacturer.

4.8 Hazardous Waste

Fuels and lubricants commonly used both in the construction stage and maintenance stage will be identified and scoped using best practices. Liquids and oils contained in the transformers and other

equipment will be changed at regularly scheduled maintenance milestones. The oils, lubricants and spent filters will be collected and removed for recycling at the time of replacement.

5.0 Decommissioning

All disassembly and removal of equipment as well as restoration activities will adhere to the requirements of the appropriate governing authorities and in accordance with all applicable Federal, State, and County regulations. Following the expiration of a Power Purchase Agreement for the project, RE Bruceville may, at its discretion, choose to enter into subsequent Power Purchase Agreements or decommission and remove the system and its components. The project site could then be converted to other uses in accordance with applicable land use regulations in effect at that time. A collection and recycling program will be executed in the event system components are manufactured with hazardous materials.