Oregon Parks and Recreation Commission

February 11, 2010

Agenda Item: 1 Action

Topic: State Fairgrounds Solar Energy Project

Presented by: John Potter, Brian Silcott

Background:

In January 2009, staff reported to the Commission that they were exploring development of a solar power facility on the state fairgrounds (Attachment 1) and that a contractor was being engaged to determine the feasibility of the project. The objectives of the project as originally envisioned were to:

1. Develop a renewable energy facility that is self-financing, without the need for large financial investment by OPRD
2. Provide a nominal capacity of 4 MW (approximate) through two separate 2 MW facilities highlighting Oregon based companies as much as possible
3. Provide administrative credit to OPRD toward the achievement of Oregon Renewable Energy Action Plan requirements
4. Provide third-party facility operation and maintenance
5. Begin delivery of electric power to the utility grid in September 2009, and
6. Provide onsite interpretive opportunities for citizens of Oregon.

In April 2009, staff reported that the feasibility study of the concept had been completed and that proposals would be solicited from potential vendors (Attachment 2). Following receipt and evaluation of proposals, staff would return to the Commission soliciting approval to enter into a contract with the most qualified proposer. It was anticipated that a contract would be awarded in time for installation by September 2009. Due to economic conditions and lengthy review of the proposal and contract language by Department of Justice, proposals were not solicited until October 2009. Three proposals were received as noted below.

- Solar City Foster City, CA
- REC Solar/Sun Edison San Luis Obispo, CA
- Granite Bay Energy Roseville, CA

On January 28, 2010, staff requested Commission approval to award the contract for the Oregon Exposition Center Solar Power Project to Solar City. Prior to acting on the staff request, the Commission sought further information on the project.

Summary of Solar City proposal

- The vendor will install approximately 5,400 solar panels, inverters, and other equipment necessary to generate electricity as shown on the site map (Attachment 3). Major project components are manufactured in Oregon. Production will meet approximately 50% of the average annual consumption at OEC.
- The vendor will own, operate, maintain, and insure the system for the term of the agreement (20 years) and sell electricity to OPRD at predetermined rates over the life of the project.
- Estimated savings to OPRD over the life of the project are $200,000 to $400,000. The wide range of estimated savings reflects a conservative and liberal estimate of rate increases that might otherwise be charged by PGE during the period.
- At the end of the project period (20 years), the following options exist;
    - OPRD acquire the system at depreciated cost and generate low cost power for its use for the life of the equipment with responsibility for operation and maintenance costs. Equipment life is estimated at 25-40 years.
    - Extend, or renegotiate, the agreement with the vendor as owner of the equipment.
    - Require the vendor to remove the equipment.
- Project value: approximately $8 million.

The following information responds to specific questions raised during discussion of the project:

Change of Ownership. A clause that allows the transfer or assignment of the agreement to any possible future owner of the Oregon Exposition Center (OEC) will be incorporated into the contract with the vendor. The terms of the agreement would transfer to any new owner of the property.

Relocation of Panels. The contract will include a clause that will permit OPRD at its cost to relocate panels if necessary to meet undetermined future development needs at the OEC.

Cost of Relocating Panels. It is difficult to estimate the cost of relocating panels since actual costs are subject to the scope of the undertaking and future labor rates. The greatest cost associated with the project is the hardware which will have been purchased at installation. In comparison to an overall initial project investment of $8M, any relocation costs will be much smaller.

Options for Locating Ground Array Panels. The vendor has proposed a location for installing the ground array. An internal staff review team will consider options for an optimum location. The team will consider: the interim site development plan, anticipation of future development, security, opportunity to showcase the technology, traffic and walkway patterns, short and long term site access and parking needs, community concerns, landscaping needs, operational requirements, and other considerations. The final location decision will be recommended to the Director for decision jointly by the OEC Manager and the Assistant Director for Operations. Contract terms will be negotiated with the vendor to achieve the desired location.

Roof Maintenance and Repair. Roofs on the Pavilion, 4H/FFA Barn and Horse Warm-up Arena are in very good condition. They are, respectively, 6, 2 and 9 years old. Each has an expected life of 40 years. Normal roof replacement, wear and tear, and storm damage are the responsibility of OPRD. Storm damage repair costs will be covered by the state's self-insurance fund. Damages

caused by installation or through use and maintenance of the solar equipment owned by the vendor will be the responsibility of the vendor.

Insuring the Investment. The installation and all hardware are the responsibility of the vendor and as such will be required to provide insurance coverage in accordance with State of Oregon standards. If, at the end of the project, the equipment becomes property of OPRD, it will be covered by the state's self-insurance fund.

Sponsorships. In order to preserve potential future investments in the OEC through sponsorship of events or activities, naming of facilities or buildings, or advertising, the contract with the solar project vendor will not reserve any exclusive interests nor preclude OPRD from entering into sponsorship arrangements with any other entity. With Solar City and other solar providers working to increase home applications and capture their share of this market we believe significant sponsorship opportunities are created through this project. The OEC will be in a unique position to:

- Host a large-scale solar installation
- Provide interpretive signage that highlights the benefits of solar power
- Provide separate kiosks for detailed information and contact capture
- Create a simulated home solar installment
- Help guarantee over 500,000 visitors to the location each year

Vendor Benefits. The recommended vendor, Solar City, will receive a cash incentive of approximately $600,000 from Energy Trust of Oregon and tax credits through Oregon's Business Energy Tax Credit (BETC) and federal energy tax credit programs. BETC tax credits include 50% percent of eligible project cost at 10% per year for the first five years and federal tax credits equal to 30% of eligible project cost plus 5 year accelerated depreciation. These incentives make this project attractive to vendors. The Oregon Legislature may consider changes to the BETC in the 2010 Special Legislative Session (HB 3680). As introduced, the bill will reduce tax incentives for new commercial wind power installations. It is yet to be determined whether this bill will be expanded to affect solar power as well. If enacted, the bill would go into effect on the 91st day after adjournment of the Special Session. If negotiations with the vendor cannot be completed in this time or if changes to the BETC are no longer favorable for the vendor, negotiations with the vendor will cease and the project will not go forward.

Risk. An OPRD goal is to move the OEC towards profitability. In pursuing this goal OPRD has made a conscious decision to hold off on major permanent changes to the facility until there is a business and site plan in place. However, because this may take some time, OPRD is not in a position to shut down the operation until plans are complete. There will be opportunities that present themselves and each one must be evaluated with one eye on the bottom line and one eye on the future.

OPRD believes this solar power project will reduce costs, attract visitors, generate revenue, and provide increased positive publicity for both the State Fair and the OEC as a whole. All of these objectives are important as the OEC strives for profitability. With a business and site plan still in the works, concerns about this installation hindering future projects are natural. If there was no flexibility around placement and future movement of project installations, this concern might have outweighed the advantages. However, since OPRD will have the ability to work with the engineers at Solar City on both placement and configuration, flexibility is built in to the project.

Further, if at some point in the future the space occupied by the panels is needed for another project, OPRD would be able to relocate or reconfigure the array to fit within that need.

The BETC program has received criticism in statewide media over recent months. A project of this size and visibility will certainly attract the attention of the public and the media. Criticism can be expected to center around the large tax credit and cash contribution of taxpayer funds to a private company in cooperation with a state agency. However, this does not negate the benefits of reducing dependence on fossil fuels, promotion of Oregon's green industries, and reduced utility costs.

Vendor Background. Solar City was founded in 2006 and is based in Foster City, California. It immediately acquired two other solar installers and has emerged as one of the fastest growing businesses in its market. The company is making a major expansion into the Oregon solar power market. Their 2008 total revenues increased to $55 million from $29 million in 2007. Recently, the company secured financing from US Bancorp for $100 million worth of projects. Some analysts predict the company's growth surge will give way to more sedate, sustainable pace by mid-2010. Solar City has constructed large facilities for federal, state, and local governments in California and Arizona and has partnered with companies such as Intel and Ebay to install large solar power systems in several states. Their "Pure Power" program currently being marketed in Oregon is a residential scale power purchase agreement, allowing home owners to buy solar power without incurring construction costs.

Action Requested: Staff requests Commission approval to enter into a contract with Solar City to provide power at the OEC and meet the objectives outlined for the project.

Prior Action by the Commission: Information briefing, January 29, 2009; information briefing, April 2, 2009; request to award contract, January 28, 2010.

Attachments:
1. January 29, 2009 Agenda Brief
2. April 2, 2009 Agenda Brief
3. Site Map
4. Comparison of Proposal to Project Objectives

Attachment 1

Oregon Parks and Recreation Commission

January 29, 2009

Agenda Item: 6c Information

Topic: State Fairgrounds Solar Energy Project

Presented by: Bob Reitmajer

Background:

The State of Oregon is leading the fight against climate change with strong renewable energy mandates, energy efficiency standards and greenhouse gas emission reductions. Governor Kulongoski signed a bill into law that establishes one of the most aggressive greenhouse gas reduction goals in the nation. House Bill 3543 aims to stop the increase of emissions by 2010, reduce emissions to 10% below 1990 levels by 2020, and ultimately reduce emissions to 75% below 1990 levels by 2050. In addition, the governor's Oregon Renewable Action Plan requires all state agencies to meet 25% of their total electricity demand using renewable energy sources by 2010 and 100% by 2025.

Towards that goal the staff has begun exploration of a solar power facility development at State Fairgrounds. The facility would allow OPRD to make a significant step toward achieving the goals of the Oregon Renewable Action Plan and may be expected to provide a stable source of renewable energy for 20-years or more. The facility would help offset the annual cost of electricity consumed by the Oregon State Fairgrounds. The intent is to place photovoltaic panels on as many roofs as feasible and have at least first phase generating power by the time of 2009 State Fair.

Ultimately this project is targeted to:

(1) Develop a renewable energy facility that is self-financing, without the need for a large financial investment by OPRD,
(2) Provide a nominal capacity of 4MW (approximate) through two separate 2MW facilities highlighting Oregon based companies as much as possible,
(3) Provide administrative credit to OPRD toward the achievement of Oregon Renewable Action Plan requirements,
(4) Provide third-party facility operation and maintenance,
(5) Begin delivery of electric power to the utility grid by September 2009, and
(6) Provide onsite interpretive opportunities for citizens of Oregon.

Attachment 1

Exploring Feasibility

The development of the new solar power program will be achieved in three primary Phases; (1) Feasibility, (2) Contract Development, and (3) Implementation. Phase I requires an initial evaluation of seven key development areas to assess overall project feasibility. These key development areas are: (a) Net Metering analysis, (b) existing facilities, infrastructure and site conditions; (c) available technologies; (d) Site License Agreement(s) (SLA); (e) Solar Power Purchase Agreement(s) (SPPA); (f) solicitation and contracting method, and; (g) preliminary financial analysis. In general, multiple options exist for siting, developing, operating and financing a new solar power facility. Project feasibility will be maximized by selecting an optimal combination of delivery options in the seven key development areas. A positive determination of feasibility in all seven areas may be considered a confirmation of overall project feasibility.

OPRD has contracted with Moyano Leadership Group, Inc. (MLG) to assess overall project feasibility (Phase 1). If warranted, staff will return to the Commission in March 2009 to request approval to move to phases 2 and 3.

MLG with their sub-consultant Five Stars International, Ltd. were instrumental in success of recent ODOT solar power project just completed at interchange of I-5 and I-205.

Action Requested: none

Prior Action by Commission: none

Prepared by: Bob Reitmajer

Attachment 2
Oregon Parks and Recreation Commission

April 2, 2009

Agenda Item: 15 Information

Topic: State Fairgrounds Solar Energy Project Report

Presented by: John Potter

Background:
As reported at the last Commission meeting, staff has been exploring the feasibility of a solar power facility development at State Fairgrounds. The facility would allow OPRD to make a significant step toward achieving the goals of the Oregon Renewable Action Plan.

OPRD contracted with Moyano Leadership Group, Inc. (MLG) to assess overall project feasibility. Solar feasibility study has been completed now. There are two installations identified one on the east and one on the west side of the site to tie into existing feeders. Solar panels would be installed on several roof tops and possibly also at two ground installations. Both project estimated to cost in the range of $7 million appear to be economically feasible.

Together the project would provide approximately 1MW of solar power. The installation would be funded by third party developer that would be able to use various federal, state and utility incentives. Developer would own the installation and sell OPRD power at the same cost we now pay to PGE. The system would be tied into utility grid through net metering agreement with utility, using the grid as a "battery". The solar arrays would generate approximately half of State Fairgrounds annual need. After some time, typically 20 years subject to agreement with the developer, the ownership would come to OPRD generating nearly free power for another 10 to 20 years.

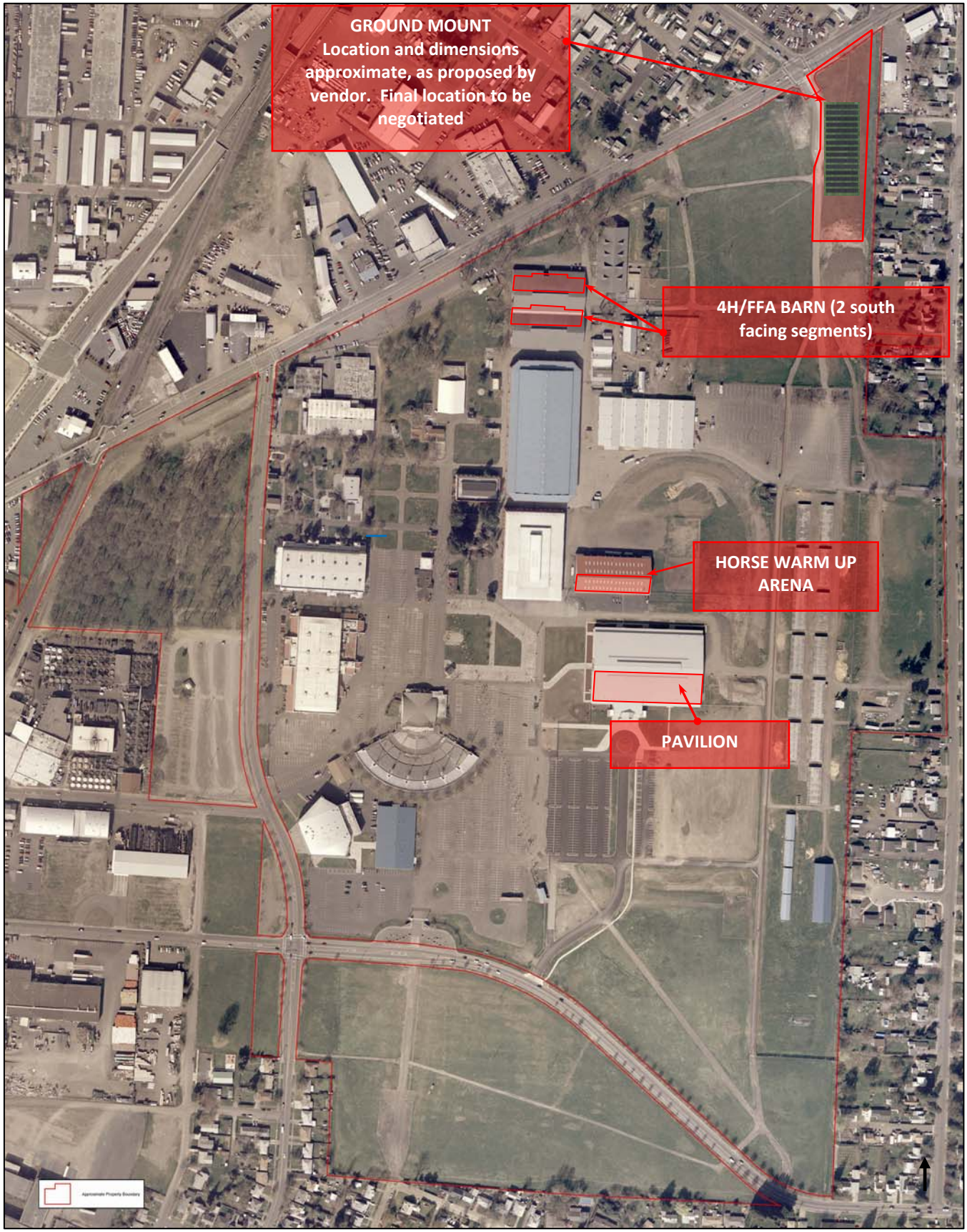
Staff has begun to prepare an RFP for a third party developer to design/construct/own/operate solar power generation plant at State Fair. In today's financially constraint capital markets it may take longer than initially expected to select and award a contract to a developer. The intent is to encourage Oregon companies to compete for this project and showcase the installation at the Fairgrounds. There are solar panel and inverter manufactures and solar power equipment installers available in Oregon. The largest Photovoltaic Cells manufacturing plant in US is located in Hillsboro, OR. Large manufacturer of inverters (equipment that converts the DC power generated by solar panels to AC power required for the power grid) is located in Bend, OR.

If RFP is successful staff will return requesting approval to award contract. The contract would be in a Site License and Power Purchase Agreement.

Action Requested: none
Prior Action by Commission: none
Prepared by: Bob Reitmajer

Attachment 3

SOLAR CITY'S PANEL LOCATIONS



Attachment 4

Comparison of Proposal to Project Objectives

The following analysis displays how the original project objectives are met by this proposal:

1. Develop a renewable energy facility that is self-financing, without the need for large financial investment by OPRD.	Solar City will assume all costs associated with purchase, installation, operation and maintenance of the project.
2. Provide a nominal capacity of 4 MW (approximate) through two separate 2 MW facilities highlighting Oregon based companies as much as possible.	After feasibility analysis, this objective was over-stated and determined to be impractical. The Solar City proposal provides the best alternative in terms of production and feasibility. Panels will be manufactured in Hillsboro, Oregon by Solar World. Inverters will be manufactured in Bend by PV Powered.
3. Provide administrative credit to OPRD toward the achievement of Oregon Renewable Energy Action Plan requirements.	This project moves OPRD toward leadership in large-scale efforts to increase use of renewable energy by state agencies and reduction of carbon footprint.
4. Provide third-party facility operation and maintenance.	Solar City will install, operate and maintain the project.
5. Begin delivery of electric power to the utility grid in September 2009.	This objective will not be met; however, production could begin by September 2010.
6. Provide onsite interpretive opportunities for citizens of Oregon.	The project meets this objective.