

## Solar Electric Demonstration Contract Issues

June 18, 2003

---

### **Purpose**

Staff is seeking feedback about how best to manage the demonstration project funding streams.

### **Background**

On May 2, 2003, the Energy Trust launched a solar program to support solar electric installation in the service territories of PGE and PacifiCorp. The Trust's program is focused on market transformation. As part of this effort, the Trust will install systems outside of the standard buy down offer - demonstration projects that can tip early adopters to act and expose a deeper market segment to quality installations of solar electricity.

Technology demonstrations provide an opportunity to increase public awareness of renewable resources in general and solar electricity specifically. Innovative, high quality installations can potentially expose large numbers of people to the benefits of clean, quiet, renewable energy and distributed generation more generally.

In other aspects of the program, the Trust is addressing solar market barriers related to quality, standardization, inspection, and system costs. Demonstration projects seek to overcome barriers related to education, marketing and visibility through consumer exposure.

### **Goals**

Demonstration projects represent a unique marketing opportunity, and add value to other program elements by:

- Showing the feasibility of solar technology on both technical and environmental levels
- Increasing community understanding of the technology
- Jump-starting participation in the buy-down program by generating interest, earning media and connecting with potential early adopters
- Activating early adopters and opinion leaders in various segments of the market to become credible ambassadors, capable of serving as change agents in advocating solar power
- Exposing designers, architects, installers and facilities staff to the benefits of solar power
- Demonstrating high quality, innovative, and replicable systems
- Establishing a context for installation and equipment costs
- Reaching out to market segments not typically part of the solar market, including those underserved by renewable resource programs

## Approach

In an earlier memo (May 14, 2003) staff examined the role of demonstrations, their relation to overcoming market barriers, the audiences to target and what others have done. The RAC accepted the analysis in that memo, which concluded that a general framework for demonstrating solar electricity should include two funding streams:

1. fund small, micro-demonstrations (1-3kW) on community buildings like schools, churches, libraries, or nonprofit buildings
2. fund 2-4 larger (>5kW) demonstrations at public buildings like universities, science museums, convention space or another high traffic, visible locations

The two methods for project selection avoid focusing on one specific market segment or project characteristic in selecting demonstration projects. Interviews with others who have funded demonstration programs strongly cautioned against small scale projects that targeted one sector. There are many potential sites for effective demonstrations of solar electricity each of which present specific strengths and weaknesses that must be individually evaluated.

The two funding streams will allow maximum flexibility without forcing competition between organizations with significant differences in capacity and budgets. Especially in the first year of the solar program, the Trust would like a diversity of demonstration projects installed. The ultimate goal of these projects, indeed of the entire solar program, is to most effectively demonstrate solar power to as wide a swath of potential consumers and early adopters as possible.

## Project Management

The next steps are to define implementation details, including how each of the two grant funding streams will be managed. The budget for demonstrations, within the Solar Electric program, is \$250,000. Staff proposes to split this equally among large and small demonstrations.

### Larger solar electric demonstrations

These grants will support the installation of new PV systems greater than 5kW at a single site on a public or nonprofit building in the service territory of PGE or PacifiCorp in Oregon. Grantee will install, operate and maintain a 5 kW or greater solar system and develop a public education and information component to maximize the market exposure of the system.

Proposals will be judged on:

- System size and innovation of design
- Appropriate site characteristics
- Potential public exposure and visibility
- Training and co-benefits
- Experience of project team with capital projects
- Experience with community outreach efforts
- Feasibility and organization of work-plans, including reasonable schedules and timetables
- Clearly defined project implementation roles
- Project control and financial management plans
- Ability to provide significant cost-share, directly and indirectly
- Other environmental benefits

These larger projects will require highly professional and planned implementation and will be targeted towards organizations with significant project management capacity. Staff anticipates no more than four projects from an RFP issued in July with an eight week response time.

Staff proposes to develop and issue the RFP with consultant help and use a selection committee to evaluate award announcements. The selection committee would be composed of one to two staff and two to three outside stakeholders not involved in the projects. Staff's preference is to recruit candidates from the RAC and the architectural community.

### **Smaller micro-demonstrations on community buildings**

These grants are designed specifically for public and nonprofit organizations interested in hosting community education or demonstration projects for utility connected ("grid tied") solar electricity. The average grid tied system in Oregon has historically ranged from .5 to 2.5 kW. Small Scale Solar Grants will allow installation of 1-3 kW systems in multiple locations with little match required. Grant awards will be limited to a maximum of the above-market cost of the power produced.

A separate, targeted approach is warranted for small public and other nonprofit organizations. Potential targets include schools, libraries, churches, post offices, or other public buildings. These organizations are often without the resources to invest in additional technology, yet they can have significant value to the community and highly visible buildings. Potentially, any public or nonprofit building served by Portland General Electric or PacifiCorp is eligible. Geographic and organizational diversity are important criteria.

Managing this funding stream is more problematic than the relatively limited nature of the large demonstration projects. There will be a higher number of total projects (as many as 8 by the end of the year), but each project is likely to require more technical assistance and "handholding" as the organizations involved are less likely to have significant capital project improvement experience. The attached Appendix outlines the possible approaches to funding small-scale demonstration grant for solar electric.

The needs of a dedicated effort for small-scale solar demonstrations require more time and staff than the Energy Trust can take on at this time. There exist other organizations with significant skill and experience in reaching these audiences. It would serve the Energy Trust well to partner with other organizations with shared missions to leverage funds, pursue joint projects and help promote opportunities. Staff members believe the most logical place to start for a small-scale demonstration effort is to issue a Request for Proposals for Programs.

This RFP for Programs would need to be released and implemented as soon as possible to ensure that potential projects don't languish for lack of a process. Appendix II outlines a draft form of an RFP for program design and implementation. The 'RFPP' will need to address key issues related to implementation including:

- Providing outreach and coordination across service territories to connect potential projects with the funding mechanism
- Ensuring project diversity, both geographic and in the types of organizations targeted
- Providing technical assistance, including system selection and site specific issues
- Measuring public impact, information and visibility components
- Strategically implementing program goals with an annual budget of not more than \$125,000
- Determining the best working relationship with and the level of credit given to the Energy Trust, including earned media and public relations efforts, marketing, and coordination

- Creating and supporting internal champions and assuring widespread support within the organization for specific projects
- Sustaining program efforts over a multi-year time horizon
- Cost share and net costs per installed system
- Linkage to other community efforts and leveraging other funding

In the RFP, aside from the factors above, the Energy Trust will expect the selected organization(s) to define how they will screen and select demonstration sites including:

- Appropriate site characteristics for proposed system
- Feasible project and timeline for a typical installation
- Presence of an internal “project champion” and project support throughout the organization
- Organizational screening to identify those qualified and capable of completing the project
- Community outreach/public information plan for demonstrations
- Presence of community involvement, partnerships or other signs of broad support
- Potential in-kind or financial match

The Trust will review program proposals with the outside volunteers as in the case for the large demonstrations. More than one contractor could be selected. If program proposals do not meet the goals of demonstration project funding, the Trust may elect to implement the program another way.

## **Next Steps**

Informed by discussion at the June 18 meeting, staff will finalize the process, inform the Board and release Requests for Proposals and Programs.

## APPENDIX I

Given that there is more coordination and technical assistance required for these smaller community solar demonstrations, and that there are a multitude of ways this program could be structured, in the interest of simplicity four potential strategies are described below. The table below outlines the possible approaches and the pros and cons of each.

### A Request for Programs

Process	Pros	Cons
Contract out the implementation of the small scale demonstrations. Describe program goals, project selection criteria and joint marketing requirements.	Reduces Energy Trust staff time commitments. Taps the strengths of organizations already more experienced in project facilitation and community outreach.	Could result in significant time delay in selecting initial projects. Portion of funds available spent on project management. Less direct relationship building potential for the Trust.

### Implementation Contract/Hybrid (Program Delivery Contract)

Process	Pros	Cons
Release RFP for implementation organization and begin selection process. Simultaneously define criteria and application process. Allow applicants to submit projects for consideration. Work with them as needed on paperwork.	Begin accepting and processing applications from interested organizations during the 2-3 months it could take for a contractor to start working. Trust can be more involved in project selection. Could reduce the total cost of contract.	Trust staff time could be absorbed in technical assistance issues. Implementation confusion for selected projects that get "handed off."

### Program Managed In-House

Process	Pros	Cons
Open first round of selection (July-December), develop grant application, distribute widely and accept project apps. Create a review committee to score and select projects. Subcontract for technical assistance and coordination for projects outside of Portland.	Energy Trust able to develop institutional knowledge regarding actual management and cost requirements for similar projects. Opportunity to develop relationships directly. More control over project selection and marketing.	Significant staff time may be required to shepherd projects through, including technical assistance needs. Not necessarily using existing networks and capacity of others to leverage program goals.

### Standard Program/Increased Incentive

Process	Pros	Cons
Double the incentive to \$5/Watt and manage demonstrations through standard program, adding additional requirements for public involvement and monitoring.	Could stretch funds for demonstrations – funds need only cover the difference between the standard buy down. Easily implemented. Fits with program logic, helps activate existing or new supply and installation chains.	Staff time required to verify public status and review public involvement plans. Could require technical assistance at varying levels to complete paperwork or BETC applications.

## **APPENDIX II**

### **Draft Small-Scale Solar Demonstration Program Proposal**

- I. Describe the organization's mission, including any experience with community outreach and renewable resources.
  - Organization budget
  - Resources available for this program (include potential in-kind or financial match)
  - Program budget
- II. Describe program strategy including:
  - Timelines
  - Roles of project partners, including screening to identify those qualified and capable of completing the project
  - Project control and financial management
  - Outreach and coordination across service territories to connect potential projects with the funding mechanism
  - Stated screening criteria, including appropriate site characteristics for proposed system and feasible project and timeline for a typical installation
  - Expectations of managing technical support requirements, including system selection and site specific issues
  - Target markets and ensuring project diversity
  - How to assure long-term commitment to the project, including ownership and insurance
  - Providing technical assistance, including system selection and site specific issues
  - Measuring public impact, information and visibility components
  - Creating and supporting internal champions and ensuring widespread support within the organization for specific projects
  - Sustaining program efforts over a multi-year time horizon
  - Cost share and net costs per installed system
  - Linkage to other community efforts and leveraging other funding
  - Potential in-kind or financial match
- III. Measuring public impact, information and visibility components:
  - Describe how you will maximize the exposure of these systems through community outreach and public education.
  - Describe how demonstrations will inform and educate consumers about solar energy opportunities, promote installation to the community, involve students, or interact with the broader community about renewable energy.
  - Describe how your program will aid market transformation and help the Energy Trust achieve its goals. Fully document your projections.
- IV. Describe anticipated working relationship with the Energy Trust, including public relations, marketing and coordination.
- V. Describe any additional leverage strategies (i.e. linking with installer training, or potential bulk purchase) the program would employ.