Berkeley Lab and the Clean Energy Group

CASE STUDIES OF STATE SUPPORT FOR RENEWABLE ENERGY

Wisconsin's Use of Program Evaluation

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CASE SUMMARY

Case Description

Wisconsin's Department of Administration (DOA) administers a small renewable energy pilot program, and more recently has begun to oversee a $4.5 million per year statewide renewable energy program. Consistent, frequent program evaluation has been a significant component of Wisconsin's renewable energy efforts. This case summarizes those efforts.

Innovative Features

- Program evaluation is often an essential element of successful and responsive energy efficiency programs, but the renewable energy field has historically not emphasized such evaluation studies.
- To date, few of the state clean energy funds have funded comprehensive, independent evaluations or even put into place specific metrics with which to evaluate their programs.
- While some other states (New York, California, etc.) have evaluated their programs, Wisconsin's efforts are among the most significant in this regard.
- Importantly, Wisconsin has also used its evaluations in making real-time changes to its program offerings.

Results

- An independent, third party evaluator was hired to comprehensively assess Wisconsin's pilot and statewide renewable energy programs.
- Four evaluation reports have been prepared for the DOA's pilot renewable energy programs, and an evaluation plan for Wisconsin's statewide renewable energy program has been budgeted ~$400,000 for its first three years.
- The true mark of effective evaluation relates to whether that evaluation is used to tweak, revisit, or eliminate under-performing programs and to create new programs that have greater chances of success. Wisconsin's evaluation efforts have already led to several such changes.

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September 2002

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CASE STUDY DETAILS

Background on the Wisconsin Fund

In 1998 the Wisconsin Public Service Corporation asked the Wisconsin Department of Administration (DOA) to administer its renewable energy programs during a 2-year pilot period. The resulting partnership, called the Demand-Side Applications of Renewable Energy Program (DSARE), was funded at less than $1 million per year, and was subsequently extended through 2002.

The program emphasizes customer-sited renewable energy projects, and incorporates both electricity generation and thermal applications. The DOA initially focused on renewable energy market preparation and infrastructure building activities. Using a "shotgun" approach, the DOA targeted many different facets of the market with small competitive grants for marketing, education, business development, and technical assistance. The program later added a "resource acquisition" component, with targeted financial incentives for renewable energy installations. The DOA felt that the simultaneous support of a wide variety of activities was the most effective way to overcome barriers and create a sustainable network of renewable energy firms.

Subsequently, legislation established a statewide system-benefits charge to be administered by multiple non-profit administrators and overseen by the DOA. Renewable energy funding from the statewide program equals approximately $4.5 million per year and again includes both electricity and thermal applications. This statewide program began in 2002.

Program Evaluation

Consistent, frequent program evaluation has been a significant component of Wisconsin's renewable energy efforts. Though other states (New York, California, etc.) have evaluated their programs as well, Wisconsin's efforts appear to be among the most significant in this regard and have clearly had an impact on program development and led to programmatic refinements.

An independent evaluation firm (Hagler Bailly, later renamed PA Consulting) was hired by the DOA early in its efforts with the DSARE program to assess whether the program was proving effective at preparing and transforming the market. (It deserves note that the same evaluation firm was also involved in the DOA's energy efficiency programs). Evaluation activities were funded separately from the DOA's renewable energy budget, and totaled approximately 10% of overall renewable energy and energy efficiency funds. After preparation of an evaluation plan, four separate evaluation reports were prepared in the first years of the DSARE program. The first two evaluation reports related to the first phase of the DSARE program, and included:

- a baseline, pre-program survey of renewable energy suppliers in Wisconsin (Hagler Bailly Services 2000a), and
- an interim, post-program survey of renewable energy suppliers and building designers (Hagler Bailly Services 2000b).

The second two evaluations were released later, and included:

- a final evaluation of the first phase of DSARE, focusing on the cost-shared grants offered by DOA and renewable energy training workshops (PA Consulting 2001a), and
- an interim evaluation of the second phase of DSARE, focusing in part of DSARE's loan program, daylighting collaborative, project facilitation services, and training and education (PA Consulting 2001b).

In addition to these reports, DOA's evaluator also prepared a detailed survey of homeowners' attitudes towards renewable energy (PA Consulting 2001c).

Important components of the overall evaluation included:

(1) surveys of renewable energy firms,
(2) interviews and surveys of grant recipients, and reviews of grantee reports,
(3) surveys of participants in the training sessions,
(4) interviews with loan recipients,
(5) development and review of project tracking systems, and
(6) interviews with the DOA managers and the implementation team.

Both market impacts and process evaluations were prepared. The evaluation did not compare the DOA program or its effectiveness with similar programs or results in other regions, though this has been identified as a need and will be an element of the statewide evaluation.

Though the state is now phasing out the DSARE pilot program and moving towards statewide implementation of its renewable energy programs, the DOA's programs will maintain a strong evaluation component. The first three years of the statewide renewable energy program will be supported with a renewable energy evaluation budget of ~$400,000. As with the pilot, an independent evaluator, contracted directly by DOA, will carefully evaluate each aspect of the program. The evaluation team will initially compile a complete evaluation plan (see PA Consulting 2002). Because the statewide program will contain many of the same elements as the pilot program, lessons from the earlier DSARE evaluations are also expected to be applicable.

Evaluation Results

The DSARE program was clearly blessed with strong, consistent, and independent evaluation. This is especially apparent when one considers the relative size of the DOA's evaluation budget compared to its overall renewable energy budget. But, the true mark of effective evaluation relates to whether that evaluation is used to tweak, revisit, or eliminate under-performing programs and to create new programs that have greater chances of success.

Based on interviews with the DOA, reviews of the evaluation reports, and changes in the DSARE program over time, it is evident that Wisconsin has taken at least some of the evaluation findings to heart:

- Early baseline surveys of renewable energy firms pointed both to the need for marketing/communications and consumer financing services, and to the fragmented nature of the renewable energy industry in Wisconsin. It is partly a result of these findings that the DOA's initial programs took a flexible, multifaceted approach to supporting the renewable energy market in Wisconsin, and included cost-sharing grants for the development of business and marketing plans, technical assistance, and demonstration projects.
- An interim post-program survey of DSARE's first phase compared results between the October 1999 baseline survey and an August 2000 follow-up survey and revealed disappointment among small business participants over many aspects of the program, and in particular over assistance with general advertising and communications materials. The evaluator concluded that DSARE should emphasize project facilitation assistance, demonstrations, and financing assistance. Each of these programs has been a major component of phase two of the DSARE program.
- The final evaluation report on phase one of DSARE focused on the program's cost-sharing grants and renewable energy workshops. With respect to the cost-sharing grants, findings included the need for (1) more active project management and guidance from business and marketing consultants, (2) more detailed market characterizations, (3) improved and more detailed grant review procedures, and (4) initial, on-site consulting and project evaluation services. Several of these recommendations have been applied in subsequent rounds of DSARE or will be incorporated into the statewide program. The evaluation also emphasized the need to extract value from the demonstration projects funded by the program, and this finding has led to the development of a demonstration booklet and case studies.

- An interim evaluation of Phase 2 of DSARE places particular emphasis on DSARE's project financing programs, especially its low-interest loan program. DSARE's low-interest loan program was found to be successful, but most applicants were using the loans for wood-burning applications. To broaden the applicant base, the evaluation report recommended the use of higher interest rates for wood-based appliances and lower interest rates for other eligible technologies (e.g., solar, wind, etc.). This recommendation was subsequently incorporated into later rounds of DSARE and the statewide program. The evaluation also continued to emphasize the need for the DOA to select and manage a smaller number of overall program efforts, and the Program Administrator for the statewide renewable energy program is apparently experiencing some of these problems.

In discussing the results and importance of their evaluation efforts, the DOA's renewable energy program manager emphasizes the value of having an independent third party review program objectives and status. Not hamstrung by the minutia of program implementation, an independent evaluator can often think more strategically than program administrators.

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Information Sources

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Wisconsin Focus on Energy Web Site: http://www.focusonenergy.com/

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About this Case Study Series

A number of U.S. states have recently established clean energy funds to support renewable and clean forms of electricity production. This represents a new trend towards aggressive state support for clean energy, but few efforts have been made to report and share the early experiences of these funds.

This paper is part of a series of clean energy fund case studies prepared by Lawrence Berkeley National Laboratory and the Clean Energy Group, under the auspices of the Clean Energy Funds Network. The primary purpose of this case study series is to report on the innovative programs and administrative practices of state (and some international) clean energy funds, to highlight additional sources of information, and to identify contacts. Our hope is that these brief case studies will be useful for clean energy funds and other stakeholders that are interested in learning about the pioneering renewable energy efforts of newly established clean energy funds.

Twenty-one total case studies have now been completed. Additional case studies will be distributed in the future. For copies of all of the case studies, see:
http://eetd.lbl.gov/ea/ems/cases/ or http://www.cleanenergyfunds.org/

About the Clean Energy Funds Network

The Clean Energy Funds Network (CEFN) is a foundation-funded, non-profit initiative to support the state clean energy funds. CEFN collects and disseminates information and analysis, conducts original research, and helps to coordinate activities of the state funds. The main purpose of CEFN is to help states increase the quality and quantity of clean energy investments and to expand the clean energy market. The Clean Energy Group manages CEFN, while Berkeley Lab provides CEFN analytic support.

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Funding Acknowledgements

Berkeley Lab's contributions to this case study series are funded by the Assistant Secretary of Energy Efficiency and Renewable Energy of the U.S. Department of Energy under Contract No. DE-AC03-76SF00098. The Clean Energy Group's contributions are funded by the Energy Foundation, the Surdna Foundation, the Rockefeller Brothers Fund, and the Turner Foundation. An earlier version of this case study was prepared for the Energy Trust of Oregon, and we appreciate the vision of the Energy Trust – and Peter West in particular – for initiating this work. We also thank Larry Mansueti and Jack Cadogan of the U.S. Department of Energy for their ongoing support.

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