

Market Baseline Evaluation Report Executive Summary

EZ Sim: Billing Simulation for Small Commercial Facilities

prepared by

Pacific Consulting Services

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EXECUTIVE SUMMARY

Program Overview

The Northwest Energy Efficiency Alliance (Alliance) has implemented the Billing Simulation for Small Commercial Facilities Venture (Venture) with the primary goal of increasing the viability of privately funded energy efficiency projects by reducing the costs and uncertainties associated with delivering energy efficiency services and verifying their impacts. This increase in efficiency projects is anticipated through the promotion and use of EZ Sim, a building analysis software tool developed by Stellar Processes.

As noted in the Venture Statement of Work, performance-based efficiency improvement projects face the following market barriers:

- Inability to economically measure and track energy performance over time in small commercial facilities
- General lack of confidence among building owners in the performance of energy efficiency measures and reluctance to use performance-based contracting
- Difficulty of cost-effectively delivering performance-based services

In an effort to reduce these barriers and accomplish the Venture's goal, Stellar Processes is refining and creating acceptance of a billing-based simulation software package that can be used to:

- Diagnose energy patterns and consumption
- Calibrate savings estimates to agree with actual energy usage
- Estimate energy end uses within a facility
- Verify vendor claims for energy products and services
- Generate performance targets and compare against actual energy bills
- Provide a picture of current operations

The Venture's goal translates into an exit strategy of developing a stand-alone, for-profit savings validation service.

The target audience for EZ Sim software is primarily existing small commercial buildings, local governments, and the utilities and energy service companies that serve them. A significant emphasis of the Venture is to target businesses and utilities in rural, dispersed locations that are overlooked by the mainstream energy services industry.

Evaluation Overview

As part of program implementation, the Alliance contracted with Pacific Consulting Services (PCS) to perform an evaluation of the Venture. The evaluation objectives are three-fold:

- Measure progress toward overcoming identified product and market barriers
- Measure progress toward the Venture's exit strategy
- Provide periodic and timely feedback to refine the Venture

As part of the evaluation, PCS has committed to performing a number of tasks over the course of the Venture, including:

- Perform a baseline assessment of the software's market potential
- Assess program research and verification activities, focusing on EZ Sim case studies and interviews with case study participants
- Assess training and technical assistance, focusing on participant feedback from user training sessions
- Perform a follow-up assessment of Venture marketing and promotion

This initial Market Progress Evaluation Report (MPER) focuses on the first item; that is, performing a baseline assessment of the software's market potential. This baseline assessment builds on the market assessment conducted as part of the Venture. Our research focused on refining the estimate of baseline market potential for the software, establishing measures of potential viability of the software, and evaluating how well the objectives

of the original baseline survey were met. Information on the following have been identified as particularly useful for refining the Venture:

- Potential conflicts between the exit strategy of developing a sustainable business and the Venture's focus on servicing small, rural customers
- Viable market segments that may have been overlooked
- Potential market barriers that may have been overlooked
- Refined estimates of near-term market potential

For this review, we interviewed 13 industry experts and potential product users. Interviewees represented utilities, ESCOs, and government agencies (primarily resource conservation managers for county and state agencies). These segments were selected as being the most likely users of the software, based on the market assessment. In determining who to interview, we aimed for a mix of people with actual experience using the software and people from the software's target audience with no specific experience using EZ Sim.

Evaluation Conclusions

Conflicts between the Venture's exit strategy and its focus on small, rural customers

Baseline results suggest a potentially significant conflict between the exit strategy of developing a sustainable business and the focus on servicing small, rural customers. This potential conflict arises because, on the one hand, the prospect for a self-sustaining business enterprise centered on the EZ Sim software appear reasonably bright while, on the other hand, prospects look dimmer for EZ Sim's widespread adoption leading to expanded private sector energy efficiency initiatives aimed at small, rural customers. Our pessimism relating to benefits accruing to small, rural customers stems from survey respondents' reports that the factors that lead them to favor large projects over small projects are things like overall earnings potential—that is, factors that are, for the most part, unaffected by adoption of EZ Sim.

It must be emphasized that any conclusion regarding the degree of any future conflict between program goals is necessarily somewhat speculative. Concern that a conflict may be brewing between the exit strategy and the focus on small, rural customers could prove misplaced as more information becomes

available over time. In particular, the above conclusion may be based on respondents' underestimation of the software's added value due to new capabilities such as savings prospecting. Initial findings suggest that respondents, particularly non-users, underestimate the software's value added to some degree but it is unknown whether the true value added will prove sufficient to make energy efficiency projects at small, rural facilities lucrative once the industry recognizes the software's true potential.

Viable market segments that may have been overlooked

Organizations with multiple facilities, franchises, or branch locations could make effective use of EZ Sim. Particular opportunities seem apparent in large property management firms, such as Cushman Wakefield. These types of organizations are large enough to have well-trained facility managers and resource conservation managers on staff. They deal with large numbers of facilities, some of which are not large or complex enough to warrant the hourly load modeling capabilities of DOE2 and similar software packages.

Potential market barriers that may have been overlooked

Market barriers identified in the Venture Scope of Work may not be the key factors limiting performance-based or user-funded energy efficiency projects. In particular, we found that:

- While EZ Sim may make it more economical to measure and track energy performance over time in small commercial facilities, this added economy appears unlikely to give projects in small commercial facilities that earnings potential needed to be attractive to ESCOs.
- Building owners are generally confident in energy savings estimates. Any lack of confidence among building owners in the performance of energy efficiency measures is apparently unrelated to the modeling algorithm for estimating savings.
- Modeling costs apparently represent a small fraction of the overall cost of delivering performance-based energy efficiency services, therefore any reduction in the modeling costs will have little effect on the overall cost-effectiveness of potential projects.

Access to financing is unanimously seen as the biggest barrier to getting efficiency projects underway. Addressing this barrier falls outside the Venture's scope of activities, leading us to question whether widespread adoption of EZ Sim will translate into significant expansion in private-sector energy efficiency projects.

While EZ Sim may not provide the magic bullet for overcoming barriers to performance-based contracting, we view the prospects of market success for the software with guarded optimism. The tool is viewed with enthusiasm by those familiar with its use and with interest by those who just learned of its capabilities. EZ Sim seems to be on target in a number of areas. However, EZ Sim is likely to face a certain amount of inertia among potential users. Experienced software users have generally figured out how to accomplish tasks using their existing software that they would otherwise use EZ Sim to accomplish. While EZ Sim is generally recognized as being simpler and more elegant, potential users may need to be convinced that the gains in performance and efficiency justify switching software. Our basis for guarded optimism stems from the fact that potential users do not appear to fully appreciate the value that EZ Sim offers. Thus EZ Sim could achieve widespread use if and when a critical mass of influential software users fully realize its potential.

Refined estimates of near-term market potential

Our review of the likely number of ESCOs and government agencies in the Alliance service territory gave us no reason to question the validity of the market potential estimates included in the May 1998 Venture market assessment. Our confidence in those results is further enhanced by the overall consistency we observed between the qualitative results reported in the market assessment and our own findings in this study.