Briefing Paper
Renewable Energy Draft Performance Benchmarks

January 12, 2011

Summary

Energy Trust staff engaged the Renewable Advisory Council in discussions throughout the fall regarding which long term operating principle should guide our 2012 action plan. The decision to focus on early stage project and market development highlighted a mismatch with our current OPUC performance benchmark for installed generation and the need to revisit and realign this benchmark in 2011 for future years.

This paper proposes a methodology to step us through this process. Our overall goal is to define new benchmarks which are reflective of our ability to reduce early stage barriers and catalyze small scale renewable development.

Background

- Through the 2011-2012 budget development process it became apparent that by 2012, meeting current OPUC performance benchmarks plus all strategic goals in a market with higher above market costs and steady funding would be highly unlikely.

- We solicited RAC feedback throughout the fall on which operating principle out of a selection of four they preferred to set as our highest priority. Member feedback helped shape our recommendation; which is to hold early stage project and market development assistance for a wide range of small scale renewable technologies as our main priority.

- We already do a large amount of early stage project and market development work, the success of which is not measured outside of the installed generation goal. Examples from over the past few years include; expansion of our technical assistance to cost share interconnection, permitting, and financing specialists, development of hydro permitting and interconnection guidebooks, and staff assistance with market data needs for municipal RFPs and regional policy development.

- To date, our one benchmark has been tied to installed generation for which we have provided a project incentive for a portion of the above market cost post project commissioning. (Three year rolling average of 3aMW installed)

- Shifting focus more specifically towards expanding this early stage project and market development should lead to shifting our performance benchmarks beyond installed generation to additional metrics to measure progress in this focus area.

- OPUC staff, in comments to Energy Trust regarding our 2011-2012 budget and action plan, recommended that we “continue to work with commission staff and other stakeholders to clearly define the objectives of the renewable programs and develop appropriate performance benchmarks” and report back on our progress.

Over the next several months, Energy Trust staff will work with the RAC, OPUC, and Board to develop new performance benchmarks for 2012 and beyond. The rest of this paper begins the process of describing a proposed methodology to create these benchmarks and offers resulting options for stakeholders to begin to consider.

Proposed Methodology for Benchmark Creation

Since our mission statement is "to catalyze development of small scale renewable energy systems", a good place to start the discussion is by asking "how do we show we are achieving this mission?"

Consider defining measurements of activity we influence at different points along the development timeline; 1) At completion with installed aMW and 2) progressively along various points of the development timeline.

1. Installed generation

Our influence upon annual installed generation can be described in two ways;

- Early stage assistance which enables a project to move forward to completion without an Energy Trust project incentive and
- Provision of a project incentive post completion which helps to lower their initial investment cost

Benchmark development:

I. Set an annual aMW range of installed generation tied to the portion of the budget to be dedicated to project incentives covering a portion of above market costs. This range can be calculated based on historical project data and various assumptions surrounding available tax credits and grants.

II. We have limited data to help us forecast a reasonable metric for installations without project incentives. To better inform what this metric could be, over the first few years of new benchmarks we propose to track small scale installations we have influenced but have not contributed a project incentive towards. Our influence can be tracked through provision of some early stage funding assistance (e.g., feasibility study, grant writing, or interconnection expert cost sharing). In these cases, our help was critical to success, and we will perform post-installation evaluation interviews to verify whether the developer agrees. Generation from projects participating in utility feed in tariffs would not be included in this category.

2. Development progression

Through our own experience in working with project owners and from results of market studies over the past years we can define the major categories of barriers to development, ways in which we can influence the lessening of these barriers, and suggest some ways that our influence can be measured (Table 1 on last page). The list of measurements captures both quantitative assessments we can pull together from our databases and qualitative aspects that would need market evaluation.

This table can serve as an example of a first step towards defining benchmarks for development progression but is limited as well.

- Each technology will have a variation of useful actions to lessen a barrier and some that are more critical than others, etc.
- Although the barriers are thought of as project specific, they are endemic of larger market issues. Therefore, translating success at barrier removal for one project into ripple effect benefits for the larger market needs to be considered.
- Results for some efforts can often be counted as failures when they are actually valuable contributors to informing improvements and targeting resources towards what does work

(e.g. market studies determine that there isn't sufficient feedstock in the region to support large scale community digester effort)

Benchmark development:

I. Starting with attached table, identify which measurements reflect most progress in market development and eliminate others
II. How do our actions and measurements vary when individual technologies are concerned compared to this more general cross cutting version? What's the best mix of technology specific vs. cross cutting measurements?
III. Set an appropriate time span over which progress for each category can be measured. Annually? 3 years? 5 years?
IV. Refine the list into performance measures based on additional considerations
V. Define baseline and performance evaluation plan.

Additional Considerations

Since so many external issues have great influence over these projects, we know we need to remain flexible to maximize our impact. Benchmarks need to recognize this issue and not be too specifically defined. For example, considering meeting 4 out of 7 targets a success may be reasonable versus needing to excel in each category when factors outside of our control are also at play.

Although we inform our program designs with experience and market data, small project development is a complex road with many off ramps. Focusing on trends and case studies to show progress rather than absolute project numbers seems reasonable.

There are often a range of barriers in the way of development for each project. Even if one is lessened, another may be keeping it from moving along. It's this interaction that further complicates measurement of our progress.

Resulting Options for Benchmarks

Two categories of performance benchmarks to be reported to the OPUC would result; installed generation due to our influence and market development progression. The first would be reasonably straight forward to develop but would be different from today. It would be defined as a range depending on external factors and lower than today's metric to start. After a few years of tracking non project incentive projects closely, we can reassess the range.

The second will take more thought and analysis to develop and will likely result in a mix of measurements, some quantitative of improving trends and others that require an element of fast feedback evaluation input.

Next Steps

During the January RAC, staff plans to review the proposal and receive initial input from RAC members. At the March 9th RAC, staff will have our recommendations for benchmarks to present to the board at the March 30, 2011 meeting and will engage with the OPUC closely in the spring.

Table 1: Development Barriers		
General Category of Barrier	**Our Approaches to Lessening Barrier**	**How our influence can be measured**
Lack of Awareness - Resource potential - How to define the business case - Next steps to development - How to operate/maintain a RE system	- Scoping and feasibility studies - Study assistance with Proforma - Cost share development expertise - Include cost of long term O&M contracts in project cost	- Increasingly higher % of studies turn into projects moving to next development phase - New market segment participating with studies(e.g. food processors) - Increased regional familiarity with resources through increased demand for assistance
Cost - Appetite for early stage investment risk - Capital cost – lack of equity, not able to secure loan, need for 3rd party tax equity investor - Ongoing operating and maintenance cost including debt service	- Early stage study cost sharing - Project incentives, pre-completion loan pilot, grant writing, general education on tax credits & grants - Multi-year pay- out of project incentive	- Increasingly higher % of studies turn into projects moving to next development phase - Cost trends moderating - $s leveraged per ETO $s spent - # of successful team-building arrangements demonstrated (financial and/or operating/management)
Delivery Market Health Lack of… - Local examples of commercially viable system applications - Quality installations - Sound technical expertise	- Funding for near demonstration projects - Trade ally/work force training - Program requirements re: installation, site/system conditions - Foster a "pool of experts" and cost share with project	- # of replicable projects installed with outreach/ education component - # certified/trained installers grows per year - Performance exceeds expectations, Good inspection rates high - Developers are finding the process simpler
Regulatory - Permitting (county, state, federal) - Interconnection and PPA technicalities	- Outreach/education to project owners - Cost share technical assistance - Offer market data/expertise to policy makers	- Reduced timeframes for completion of permits/IC agreements, fewer delays - Reported satisfaction w/process - ETO is considered to be resourceful, collaborative energy sector members for policy leaders
Time and Interest - Lack of staff resources and experience - Power generation not high priority	- Team projects with experienced technical resources - Streamline our processes - Lack of interest may be related to lack of awareness. If not, we recognize the risk to us is too great to pursue further	- Increasingly higher % of leads turn into projects moving to next development phase - Reported satisfaction w/process and time commitment reductions