Briefing Paper
Defining Options for the Long-Term Design of Energy Trust's Renewable Program Portfolio

October 13, 2010

Summary

The Renewable Energy programs expect to have less funding available in 2012 than in years prior. If 2011 activity meets our current expectations, available funds for 2012 will total $13.5 million. This is $10 million less than 2011 available funds and $21 million less than 2010 budgeted funds. In addition, major market uncertainties are looming which have potential to significantly impact the renewable market by increasing above market costs we support.

We currently are able to meet a range of objectives with our portfolio of programs. Given less available funding and potentially greater demand, we may need to reprioritize and redefine our objectives for 2012 such that we can restructure our programs to be most effective in meeting those objectives and making the best use of available funding.

Background

- Since 2003, the programs have been gaining traction, growing the pipeline, making project commitments and seeing projects complete. As a result, total carryover funds have been decreasing, providing less supplemental funding for annual revenues. At the same time, the pipeline of future projects is larger than ever.
- The performance criteria in our operating agreement with the Oregon Public Utility Commission (OPUC) include a minimum three year rolling average goal of 3 aMW installed generation per year. We plan to exceed this minimum generation goal in 2010 and 2011. This goal was established prior to the Business Energy Tax Credit's (BETC) transition to a competitive program, nearing expiration.
- SB1149 defines our renewable mission broadly as using public purpose funding for above market cost of renewable resources, which SB838 further narrowed to projects 20MW and less.
- The Renewable Energy Sector strategic plan defines the following for the sector. Energy Trust staff crafted these statements with board stakeholder support.

  Renewable Energy Vision Statement – Oregonians invest in clean energy project development because they value the environmental and long term economic benefits derived from small scale renewable power production and energy savings.

  Mission Statement – To catalyze development of small scale renewable energy systems that utilize Oregon's diverse and abundant resources.

Leadership Position - Energy Trust is a trusted and valued partner for Oregonians by providing assistance and funding that helps to build technology markets and install renewable energy projects.

- The strategic plan focuses on four objectives that each program supports to carry out our mission and achieve the generation goal.
  - Support a wide range of technologies across varying stages of market development
  - Provide early development assistance
  - Expand market and new delivery model opportunities
  - Assist projects in leveraging other funds as available
- With a reduced or expired Business Energy Tax Credit, above market costs are expected to increase, increasing the amount of funds projects will need to move forward in development. Table 1 shows the magnitude in increase to above market cost for a range of typical projects we support today.

Table1: Projected above market cost without BETC

Type	Project Size	No BETC AMC (for a single project)	% 2012 Budget
Hydro	1-2aMW	$6-8M	44-60%
Geothermal	0.1 aMW	$1M	7.50%
Biopower	0.7-1.3aMW	$3-4.5M	22-33%
Wind - Mid	0.04 aMW	$0.5M	4%
Wind - Community	3aMW	$6M	44%

- Unfortunately, with projected 2012 funds of $13.5M, it is unlikely that the programs will be able to meet the generation goal and continue to meet the four main objectives in a market with higher above market costs. Allocating 2012 budget across programs by 2011 percentages yields ~2.3aMW, less than 3aMW minimum goal.
- Assuming these market and funding expectations come to fruition, it is now a good opportunity to review our objectives in keeping within statute SB1149 to redefine priorities and redesign programs if needed.

Discussion

- Prorating existing program budgets for five technologies to fit the estimated 2012 available funds budget would render all programs less effective at both developing markets and funding project incentives for installations. No objectives/principles would be fully met.
- We need to prioritize operating principles. Each is not exclusive of the other, but all cannot be fully achieved at once. To help explore how each principle, if held as the number one priority, would impact our operations and resulting portfolio, a series of scenarios follow. Each scenario steps through the actions and impacts that would result including ideas for new tools or policies needed to carry out the plan.
- Base Case (BAU); Support a range of technologies across various levels of market stages, we don't select the winners

  - Maintain full program offerings across technologies with prorated funding levels for development, outreach, project incentives, and feasibility studies to fit within projected budget.
  - Fall short of minimum generation goal with PUC, approximately 2.3aMW could result

- Scenario 1; Maximize generation and REC contribution to utility RPS requirements
  - This operating principle emphasizes the need to get as much generation installed as possible within the projected budget. Staff would encounter little difficulty in meeting the 3 year rolling average existing performance goal.
  - In this scenario we'd shift funding from higher cost technologies and scales to those with least incentive cost per aMW. Support for solar, very small wind and small hydro projects would be limited and in the extreme case, not offered at all. Biopower and mid scale wind and hydro would be targeted.
  - Although medium scale projects may have lower $/kWh above market cost, the sheer magnitude of the dollars needed to cover enough of the total above market cost will challenge the budget. Above market costs for 2-4 medium projects could use up the entire funding budget and increase year to year variability of installed generation, resulting in a sporadic presence, not ongoing market support.
  - New tools such as RFP announcements, incentive caps, revolving loan funds could be added and early assistance would still be offered but with less emphasis.

- Scenario 2; Expand early stage barrier reduction and resource identification across technologies and markets
  - This operating principle is close to the base case scenario but significantly plays to our strengths and unique market role of providing early stage development assistance with less focus on direct project incentives.
  - A greater percentage of program funds would shift towards development support and cross cutting efforts to lessening development barriers most distributed resources face.
  - The success of this principle effectively supporting small RE distributed resources relies on other market forces or policies to move projects to completions. New tools such as a revolving loan fund and teaming with other associations or utility voluntary renewable programs to assist with project funding would be emphasized.
  - Would be a nice warm-up/complement for utilities to then offer a rate that provides enough cash flow to make viable projects with REC value included.
  - The success of this scenario in leading to installed projects depends on the availability of other funding sources besides Energy Trust. The risk is that other funds would be inadequate to get projects to the finish line.

    - Definition of the 3 yr rolling average performance goal would need to be expanded to attribute credit for early support of projects that ultimately complete with limited Energy Trust funding.

- Scenario 3; Narrow technologies and or market segments to those that can be fully supported within projected budget.
    - This operating principle would measure effectiveness by ability to fully support 2-3 technologies compared to the five we can support today. Instead of prorating less funding across 5 technologies, an equivalent or greater amount of funding would be used for fewer technologies.
    - With this operating principle, selecting different technologies within utilities could be most effective. For example, PGE funds may only support a solar program and PAC may only support biopower.
    - Providing support to a narrower range of technologies would make Energy Trust more similar to other similar funding organizations around the country.
    - The success of this scenario depends on our ability to accurately pick “winning” technologies.
    - Depending on which technologies are selected, the minimum performance 3 yr rolling average goal may need to be changed.
- Scenario 4; Limit technology focus to onsite generation
    - By narrowing the scope of project possibilities to onsite usage for public purpose charge contributors, this operating principle would exclude support for projects such as community wind and irrigation hydro with limited site based load which mostly export to the grid. Instead, only projects with on-site load would receive funds.
    - This method would avoid interconnection challenges and create a direct relationship between payment of the public purpose charge and use of funds for projects.
    - This method would significantly reduce the size of projects we work with, making it challenging to meet our yearly 3 aMW goal.
    - Other principles and tools would need to be added to manage to the budget.
- Attachment 1 is a matrix listing the operating principles resulting characteristics with which to compare to each other.
- Attachment 2 provides more detail regarding new tool options and ideas mentioned throughout this document and Attachment 1.

Next Steps

- Talk through the general principles presented within this document at the October 13, 2010 RAC meeting with members and other stakeholders
- Energy Trust staff will take all feedback into consideration and create a draft action plan for renewables for 2012 to be presented to the Energy Trust Board this November and December

Attachment 1: Principle Matrix				
Priority Principle	**Approach**	**Portfolio Impact**	**Possible New Tools**	**Policy Changes Needed**
Base Case: Try to meet all existing operating principles within budget limits	Give all RE programs a budgetary haircut across all cost categories to fit $13.5M – scale back all programs	No impact to number of technologies or markets but depth of coverage suffers, no impact to mix of short/long term opportunities, overall less effective, <3aMW	NA	At least one of the operating principles needs to give or none will be met
Scenario 1: Maximize generation and RECs	Direct funding to support projects with need for least incentive$/kWh to complete	Significantly reduced or eliminated support for higher cost technologies like solar, small wind and small hydro. Biopower, irrigation hydro and community wind receive most funding. >>3aMW	• RFP announcements • Revolving loan fund • Less emphasis on early assistance	No longer support wide range of technologies and markets
Scenario 2: Focus on early stage barrier reduction and resource identification across technologies and markets	Double or triple existing funding for early stage development and cross technology barrier reduction – up to 40% budget vs. current 15%	No impact to number of technologies or mix of markets served but ~$3M less than base case for project incentives ($7 vs. $10M), <3aMW	• RFP announcements • Revolving loan fund • Teaming with co-funders	Performance goal reduction and or allocate credit for early stage assistance without project incentive. AMC determined broadly, not project specific
Scenario 3: Narrow technologies supported, supporting full services for ~2 technologies vs. 5	Focus on a few technologies from early identification to completion, pick winners	Fewer technologies, mix of short/long term opps determined by criteria used to select "winners". Could design to meet or exceed 3aMW	Criteria used to select technologies (balance short/long term opps?, fill greatest demand?, eliminate those with least progress?)	No longer support wide range of technologies and markets May need to revisit performance goal
Scenario 4: Limit support to onsite generation where site load exceeds generation	Offer full RE support only to project owners who directly contribute to the PPC	Excludes support for community wind, most mid scale hydro, developer projects we currently support	• Incentive caps ~ <$500k • Revolving loan fund • Teaming with co-funders	May need to revisit performance goal

Attachment 2: New Tools Description		
New Tool	**Description**	**Applicability**
Criteria for choosing technologies	Key factors each technology individually and as a portfolio satisfies for us in achieving our mission of being a catalyst for small scale RE development. Examples include: - Progress achieved and potential - Ability to leverage co-benefits - Provides mix of short/long term opps - Our ability to impact market is measurable (fits our scale of influence)	• When supporting all technologies is not main priority • When funding limits render existing programs ineffective
Incentive Caps	Set limits on project incentives to a level that allows more than 2-3 custom incentives/yr yet is high enough to provide value to project economics	• When funds for incentives are limited • When target market has projects with AMC no more than 50% cap
Revolving Loan Fund	Provide construction and/or long term project loans in lieu or supplemental to some project incentive funding. - Interest covers administrative costs at a minimum, or is used to grow fund to support other projects. - Could have delayed payback past first few years of project startup - Would need some initial seeding	• When funds for incentives are limited • Projects are sizeable enough where financing assistance is helpful
RFP Model	Formal process of announcing a call for projects in need of project incentives where competition can help lower cost/kWh.	• When funds for incentives are limited • Emphasis on short term, project installations, projects already well along in development • Typically technology specific, looking to move certain markets at specific level of support • Most likely attracting developers, not businesses, homeowners looking to use available resource
Teaming with co-funders	More formal than directing projects to other funding resources or assisting with grant writing. Purposefully collaborating with other organizations with similar yet distinct missions in driving small RE projects forward. Combining capital forces in a streamlined fashion for projects. (e.g. utility voluntary programs, foundations, economic development and climate change mitigation organizations, …)	• When funds for incentives are limited yet potential for pipeline development is large • Multiplies impact at the other end by organizing funding targets