RENEWABLE RESOURCE ADVISORY COUNCIL
Notes from meeting on November 27, 2007

Attending from the Council:
Thor Hinckley, PGE
Lori Koho, OPUC
Frank Vingola, UOSRML
Jeff King, NWPCC
Carel DeWinkle, ODOE
Doug Boleyn, Cascade Solar Consulting

Attending from the Board:
John Reynolds, University of Oregon

Others attending:
Cameron Yourkowski, RNP
Jon Miller, OSEIA
Joe Esmonde, IBEW #48

Attending from the Trust:
Lizzie Giles
Peter West
Kacia Brockman
Alan Cowan
Betsy Kauffman
Adam Serchuk
Sue Meyer Sample
Margie Harris
Jan Schaeffer

1. Welcome and Introductions

Peter convened the meeting at 9:40 am. The October notes were adopted without change. Peter reviewed the RAC meeting schedule for 2008, which will be available on the website

2. Marketing Solar to Residential Customers

Betsy presented the results of a residential solar market research effort to better understand why customers choose to install solar, and how to encourage more installations. Energy Trust hired a non-profit marketing group called Smart Power. They have extensive experience working with organizations like Energy Trust, and have a great deal of expertise in marketing renewable energy.

The research began with a quantitative survey of individuals who had attended a solar workshop or requested a solar information packet, and those who had installed solar. Sixty nine participants responded, and one-hundred and sixty non-participants.

From this group of quantitative respondents, we selected individuals to participate in the qualitative focus groups. Of the six groups, two were groups of PV non-participants, one a group of PV participants, two groups of SWH non-participants, and one group of SWH participants.

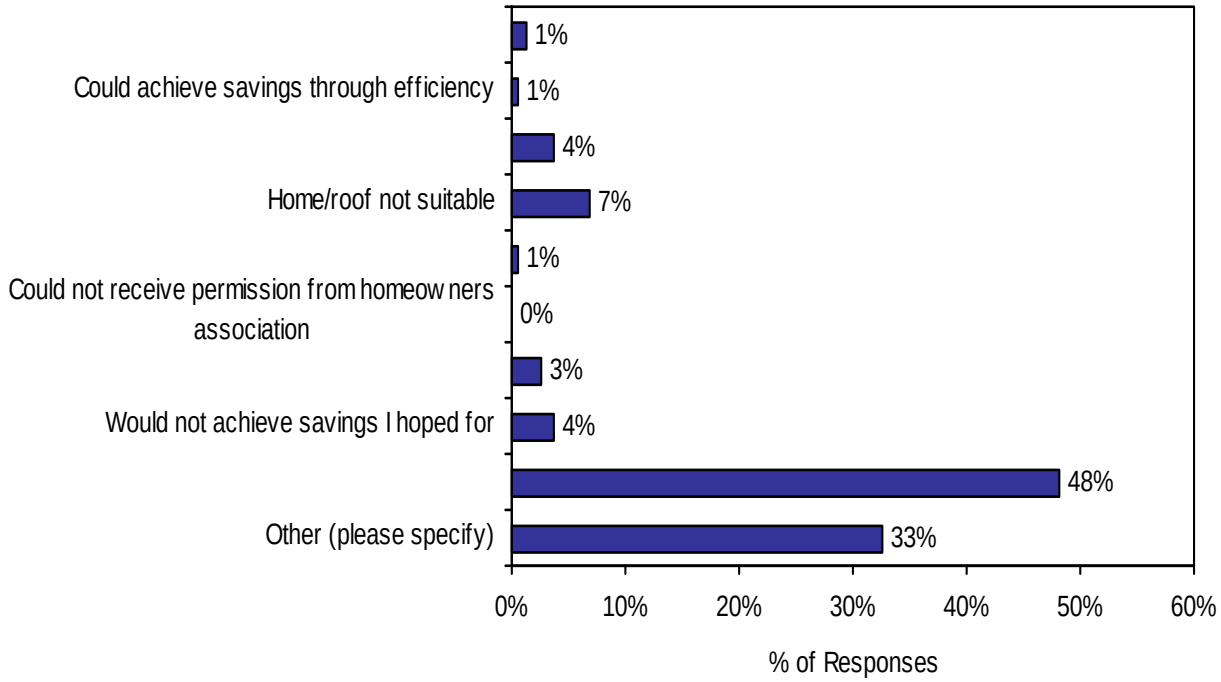
The survey looked at motivations for going solar, barriers, perceptions of cost, perceptions of Energy Trust assistance, their decision timeline, and demographic information. The focus groups included numerous activities designed to uncover underlying assumptions and attitudes, including writing an obituary for the death of fossil fuels, drawing a picture of their idea of solar

world, exploration of evocative imagery around solar and renewables, a variety of positioning statements and the process and role of Energy Trust.

The quantitative and qualitative analyses revealed that non-participants perceived that solar is a challenge that requires a change in lifestyle. Solar requires sacrifice and represented a retreat from the norm. Some participants in the focus groups also felt that thinking about solar, and attending a workshop, was enough action and an end in itself.

The groups also revealed that both participants and non-participants feel that purchasing solar requires a lot of research, which is perceived as "necessary work." The upfront cost remains the primary barrier.

Reasons for not installing solar



Those who have installed solar identified that the decision-making period for choosing to install solar is two or more years. The key demographic was revealed to be:

- 35-64 years old with an income of $75,000+,
- considering home improvements,
- use electric only or electric and gas,
- own a 2500+ square foot home,
- intend to live in their home for a long period, and
- do not require financing to install but see the incentives as a key enabler.

Attitudinally, the ideal solar participant feels established in their life, reached a feeling of some security financially, professionally, and personally, are interested in fulfilling a sense of purpose, and are knowledgeable about solar.

Focus group participants said the emotional benefits of installing solar include the pride and honor of being a pioneer (Blazing a new trail, sense of independent leadership), clearing the conscience (Done your part, alleviation of peer or community pressure), new beginnings (A

sense of optimism and feeling like we could start again), honorable pride (I've done the right thing) and simple self-sufficiency (Leaving no impact, getting by without help).

Lori asked where the focus group participants were from. Betsy explained that they were specifically PGE service-territory, because that is where it is more challenging to get people to install and we felt the need to better understand the motivations.

Several positioning messages were tested with the focus groups for resonance. The most effective of the five tested messages were:

- "Solar makes energy sense." This message embodies the ideas that Oregon should be a leader in solar development,
- "The world doesn't change until mindfulness is turned into action." This message embodies the idea that real action is installation, not just awareness, research and knowledge.
- "Oregon has more sun than people think, solar is more dependable than ever, and solar is more "doable" than ever from a financial perspective."

The participants were then asked to select an image from a selection of twenty that best represented the message Energy Trust should be trying to promote. The top image selected was of the planet earth, which represented a global perspective, harmonious connection to the earth, and a connection between science and nature. The second choice was of a lush forest, which symbolized a clean, green natural Oregon, and the third, fourth, and fifth evoked thoughts of family, new beginnings and new growth. An image of the sun, which was an option, was not selected.

Smart Power made several recommendations based on the work they did. They had a list of nine, and Energy Trust selected the top five we have chosen to implement first:

1. Present solar as affordable ("…as little as $100 per month" and work with lenders on a loan package)
2. Market to 'the interested' for two years after they attend a workshop (E-newsletters, mailings including testimonials, financing options, program updates, information, and invitations to solar events)
3. High tech company effort to target employees who fit the desired demographic (Workshops; corporate incentives; competition)
4. Review and adjust all marketing materials with the new messages in mind
5. Develop a solar ambassador program (Help provide information and support and provide testimonials at workshops, in marketing materials, and through a buddy system)

Lori asked about the balance of the role of the Energy Trust versus the solar industry doing this work. Kacia responded that Energy Trust has delivered the research, but the implementation will primarily fall to our partners in OSEIA, Solar Oregon and City of Portland's Office of Sustainable Development.

Frank commented that three years ago there were only 30 installers in Oregon, now there are 70. However, the majority of the installers focused on the residential market are small businesses and don't have the ability to do market research. They rely on Energy Trust to help develop the market.

3. 2008/2009 RE Budgets

Peter presented the 2008 and 2009 budgets. Themes for the 2008 budget include the maturation of a successful set of base programs; addressing the increase of volume and demand; and finish the transition to a focus on projects 20 MW or smaller (as a result of SB 838). There is a greater customer need for Energy Trust presence before and during project development: more technical assistance, project evaluation and market validation. Serving the role of the neutral party for reviewing is still important.

The goals for 2008 are to bring on line the commitments from 2007, commit to an additional 9 aMW of new projects, to spend down the surplus (for projects to be on line 2009-2010), continue to support a range of resources and technologies, and link with PGE on their 2008 RFP for new resources.

To respond to SB 838, Staff will incorporate the new offerings from 2007, continue to build the pipeline of new projects and expand efforts in OSP for hydro and small geothermal. Programs will strive to meet emerging opportunities for wastewater treatment plants (biogas), dairies, large PV (in PGE only). The programs will develop a proactive approach for new markets and technologies, and add staff to help meet growth.

The total budgets for 2008 will remain essentially the same as proposed earlier. We had received verbal support for the draft from the RAC in October, 2007. There is approximately $240,000 difference from the draft version, which has been adjusted for utility revenue forecasts (up $320,000) and clean up in program and allocated costs (increase of $80,000).

In Pacific Power there will be $4.9 million in new revenues in 2008, and in PGE, $8.1 million. From prior years there will be an additional $5.8 million from Pacific Power and $17.1 million from PGE. This includes $6.1 million in contracted funds for projects to be completed in 2008-2009 and $ 6.1 million in other board-approved projects for 2008. The majority of carry-over funds are from un-utilized utility-scale budgets.

The total budgets for 2008 will be $10.81 million in Pacific Power, and $24.19 million for PGE.

2008 RE Final Budget and Generation

Programs	Total costs		Range in aMW	
	$ million	% Total	Conservative	Best Case
Biopower	10.9	31%	3.78	8.78
Open Solicitation	9.0	25%	2.07	3.18
Solar Electric	9.01	26%	.43	.57
Utility Scale	.2	1%		
Wind	5.9	17%	2.75	3.93
Total	**$35.1**	**100.0%**	**9.03**	**16.46**

The allocations by utility are the same as they were in the draft budget.

2008 RE Final Budget: Pacific Power and PGE

Programs	Pacific Power		PGE	
	$ million	% Total	$ million	Total
Biopower	2.83	26.2%	8.02	33.0%
Open Solicitation	2.80	25.9%	6.18	25.4%
Solar Electric	2.64	24.5%	6.46	26.6%
Utility Scale	.20	1.8%	.04	.2%
Wind	2.33	21.6%	3.60	14.8%
Total	**$10.80**	**100.0%**	**$24.30**	**100.0%**

Challenges for 2008 not addressed by the budget include the possibility of the expiration of the federal tax credits. Managing differences in opportunity for each utility continues to be an issue, and staff will continue to develop broader opportunities for PGE. Realistically, the programs may spend 75% of the 2008 budget.

2009 RE Proposed Budget & Generation

Programs	Total costs		Range in aMW	
	$ million	**% Total**	**Conservative**	**Best Case**
Biopower	3.3	22%	.52	1.53
Open Solicitation	2.9	19%	.57	.88
Solar Electric	5.6	37%	.32	.43
Utility Scale	.0	0%		
Wind	3.4	22%	1.76	2.52
Total	**$15.2**	**100.0%**	**3.17**	**5.36**

Because of the way larger projects tend to come in the door and the pipeline of projects working through their feasibility studies, staff expects there will likely not be any new, larger projects in 2009 unless ones expected in 2008 are delayed to 2009. An extension of federal tax credits beyond 2008 is highly uncertain, driving the need to get projects in 2008 and suggesting a likely fall-off in 2009.

2009 RE Proposed Budget: Pacific Power and PGE

Programs	Pacific Power		PGE	
	$ million	% Total	$ million	Total
Biopower	1.16	17.6%	2.16	25.5%
Open Solicitation	1.77	26.8%	1.07	12.7%
Solar Electric	2.27	34.5%	3.15	37.2%
Utility Scale	.03	.4%	.02	.2%
Wind	1.36	20.7%	2.04	24.1%
Total	**$6.59**	**100.0%**	**$8.45**	**100.0%**

The new revenues for 2008 and 2009 will be $10 million in Pacific Power, and $16.4 million in PGE. The non-contracted funds from prior years will be the same as before, $ 5.8 million Pacific Power and $17.1 million PGE. This includes $ 6.1 million in other board-approved projects for 2008. The total budgets for 2008 and 2009 will be about $17.5 million in Pacific and $32.7 million in PGE.

The expenditures as a share of total budgets for 2008 and 2009 will likely be 83% incentives, 5% delivery & management, 2% planning & evaluation, and 10% other. Other similar renewable programs aim for 70-75% project incentives, so Energy Trust is doing well.

The factors driving the cost and generation for 2008 and 2009 are material costs, the value of renewable energy credits, and volume of big projects.

Lori asked is staff foresees a time when Energy Trust may have to turn projects away due to budget constraints. Peter responded that that may be possible in 2008 for the solar program, and 2009 and beyond for the other programs. It depends on how many of the big projects staff hears about are real. Adam added that for community wind and biopower especially, the programs are lumpy. These forecasts represent one or two projects. If three come to the door, we will defer them until the next year.

Carel added that another uncertainty may come from the BETC. The demand for the BETC may place the tax credit at risk.

2008 - 2009 RE Proposed Budget & Generation

Programs	Total costs		Range in aMW	
	$ million	**% Total**	**Conservative**	**Best Case**
Biopower	14.2	28%	4.30	10.31
Open Solicitation	11.8	24%	2.64	4.06
Solar Electric	14.6	29%	.75	1.00

Utility Scale	.3	1%		
Wind	9.3	19%	4.51	6.45
Total	**50.2**	**100%**	**12.20**	**21.82**

The 2008/9 utility split is more balanced than any one particular year.

2008 - 2009 RE Proposed Budget: Pacific Power and PGE

Programs	**Pacific Power**		**PGE**	
	$ million	% Total	$ million	Total
Biopower	4.0	23%	10.2	31%
Open Solicitation	4.6	26%	7.3	22%
Solar Electric	5.0	29%	9.6	29%
Utility Scale	.2	1%	.1	1%
Wind	3.7	21%	5.6	17%
Total	**17.5**	**100%**	**32.7**	**100%**

The carryover table below illustrates the deficit and surplus for each year. Staff proposes to spend nearly all of the surplus from 2007 in 2008. However, by the end of 2009, there will be a net, overall deficit of $900,000. The gap is most pronounced for Pacific Power and totals $1.6 million at the end of 2009. Staff is proposing dipping into interest income reserves to bridge the gap for Pacific, which comes from the interest gained on the surplus from previous years.

2008 - 2009 RE Proposed Carryover Balance

$ millions / activity basis	**Pacific Power**	**PGE**	**Total**
Carryover at end of 2007	**$ 5.8**	**$ 17.1**	**$ 22.9**
+/- 2008 net income / (expense)	(5.8)	(16.2)	(22.1)
Carryover at end of 2008	**$ .0**	**$ .9**	**$ .8**
+/- 2009 net income / (expense)	(1.6)	(.1)	(1.7)
Carryover at end of 2009	**$ (1.6)**	**$ .7**	**$ (.9)**

If this proposal is not accepted, staff will have to lower expenditures in Pacific Power in 2009. The table below shows how the budgets would be affected. Staff would cut Open Solicitation, likely by eliminating the geothermal projects. In solar, this would halve the commercial incentives available. And in wind, this would eliminate a community wind project. The result

would be a 1.1 to 1.6 aMW reduction, which would cut Pacific Power performance by a third of the 3.6 aMW goal for them in 2009.

2009 Changes to Pacific w/out added interest income (changes in red)

Programs	Pacific Power Proposed		Pacific Power Reduced	
	$ million	% Total	$ million	Total
Biopower	1.16	17.6%	1.16	23.5%
Open Solicitation	1.77	26.8%	**1.12**	22.7%
Solar Electric	2.27	34.5%	**1.67**	33.8%
Utility Scale	.03	.4%	.03	.6%
Wind	1.36	20.7%	**0.96**	19.4%
Total	**$6.59**	**100.0%**	**$4.94**	**100.0%**

John said that in the past, the Board will be interested in how much of the interest income that may be used has come from renewable income, and of that, which utility.

The challenges for 2008 and 2009 will include the possibility of the federal tax credits expiring, and unknown demand on the BETC.

Joe asked if there has been any thought from Energy Trust of sending a delegation to the federal level to request an extension of the credit. Margie responded that Energy Trust is prohibited from lobbying. Frank added that OSEIA is organizing efforts.

The deteriorating housing markets for wood products industry may negatively impact the possibilities for biomass CHP. Managing differences in opportunity for each utility continues to be an issue, as does developing broader opportunities for PGE.

Reallocating community-wind commitments may be necessary. Managing booming expectations for large-scale solar will likely also be an issue. Interconnection requirements and processes continue to present barriers to projects. There is continuing strong resentment of green tag policy by a few, which staff will continue to address. And finally, growth and SB 838 require us to re-focus on smaller projects which will require working with new partners that need more technical assistance, creating new opportunities & digging deeper in existing markets, projects with longer lead times, and a need for different financial offers.

Frank thanked Energy Trust for its work over the past year. Carel added that he is also very appreciative and satisfied with the budget and plans for the coming year, particularly in biopower and community wind. ODOE enjoys the working relationship it has with Energy Trust.

Joe added that he is also very grateful for the work that Energy Trust does.

Comments on this budget are due tomorrow (11/28). If there are comments that should be provided to the board, they should be provided verbally at this meeting or in writing today or tomorrow. The final budget will be brought before the board on December 12.

Peter thanked the RAC for their time over the past year and adjourned the meeting at 11:40 am.