

Oregon Renewable Energy Working Group

Inaugural Meeting
February 22, 2006
Salem, Oregon

List of Attendees

REWG Members

Chair Mike McArthur, Association of Oregon Counties
Kevin Banister, PNGC Power
Jeremiah Baumann, OSPIRG
Ted Bernhard, Stoel Rives
Jeff Bissonnette, Citizen's Utility Board
Bob Chamberlain, PV Powered
Brian Cole, Oregon Economic Development Association
Angus Duncan, Bonneville Environmental Foundation
Jack Evans, Oregon Rural Electric Cooperative Association
Katie Fast, Oregon Farm Bureau
Troy Gagliano, Renewable Northwest Project
Don Godard, Oregon People's Utility District
Michael Grainey, Oregon Department of Energy
Cylvia Hayes, 3E Strategies
Jim Lobdell, PGE
John Lund, Oregon Institute of Technology
Jim Manion, Warm Springs Power Enterprises
Bob Maynard, Energy Outfitters
Carlos Reichenshammer, Reichenshammer Building & Design
Tucker Ruberti, Idatech
Virinder Singh, PacifiCorp
Chris Taylor, Horizon Wind
David Van't Hof, Governor's Office
Jim Walls, Lake County Resources Initiative
Dick Wanderscheid, City of Ashland Electric Department
Peter West, Energy Trust of Oregon
Jonathan Williams, Intel
Paul Woodin, Western Wind Power Consulting

Legislators

Jonathan Thompson for Senator Ted Ferrioli
Representative Patti Smith

State Agency Liaisons

Bill Drumheller, Department of Energy
Gregg Lande, Department of Environmental Quality
Joe Misek, Department of Forestry
Glenn Montgomery, Economic and Community Development
Brent Searle, Department of Agriculture
Lisa Schwartz, Public Utility Commission

ODOE Staff

Allan Bates
Carel deWinkel
Christopher Dymond
Diana Enright
Mark Kendall
Justin Klure
Kathy Shinn
Jenifer Wetherbee

Others

Jim Burrgs
Peter Cogswell, Governor's Office
Andrea Fogue, League of Oregon Cities
Robert Miglior
Julie Mikalson
John Miller, OSEIA
Douglas Pegan
Doris Penwell, Association of Oregon Counties
Robert Preus
Mark Rappaport
Cliff Shrock
Scott Stewart, Intel

Renewable Energy Working Group

Pringle Community Hall
606 Church St SE
Salem, OR 97302
February 22, 2006
10:00 am

General Members Present

Michael McArthur, Chair

Kevin Banister, Jeremiah Baumann, Ted Bernhard, Jeff Bissonnette, Bob Chamberlain, Angus Duncan, Jack Evans, Katie Fast, Troy Gagliano, Don Godard, Michael Grainey, Cylvia Hayes, Jim Lobdell, John Lund, Jim Manion, Bob Maynard, Carlos Reichenshammer, Tucker Ruberti, Virinder Singh, Chris Taylor, David Van't Hof, Jim Walls, Dick Wanderscheid, Peter West, Jonathan Williams, Paul Woodin,

Legislators Present

Representative Patti Smith, Jonathan Thompson for Senator Ted Ferrioli

ODOE Staff

Allan Bates, Carel deWinkel, Bill Drumheller, Christopher Dymond, Diana Enright, Mark Kendall, Justin Klure, Kathy Shinn, Jenifer Wetherbee

Preliminary Tasks

Chair McArthur called the meeting to order at 10:08 am. Introductions are made around the room. Chair McArthur reviewed the agenda and asked if anyone had anything to add to it; no one did. Chair McArthur went on to discuss the purpose for the Renewable Energy Working Group (REWG) meetings, which is to increase the use of renewable energy and alternative fuels in the state of Oregon. In order to do that we need to prioritize the work before us and look at the cross cutting issues that affect local renewable energy technology. The purpose of the Charter document that was handed out is to guide the implementation of the Renewable Energy Action Plan (REAP). Our role is to be an advocate and advisor for those things that will come to consensus. This will lead us through the end of the year and into the next legislative session, maybe beyond. The biggest job we have is to prioritize the 51 tasks that we should be working on. Our goal is have a renewable energy reduction policy developed and legislative concepts. Chair McArthur talked more in detail of what is expected of the members and asked if anyone had questions about the Charter.

Angus Duncan asked why Bonneville, and perhaps the State of Washington, weren't represented? Michael Grainey stated that they have asked them to participate but not as voting members because they believe Bonneville's best role is to be used as a resource.

Virinder Singh asked if these meeting are going to be consensus based or majority based? Chair McArthur answered that he thinks primarily advisory and major consensus; in other words we move forward unless someone strongly disagrees. He then asked if anyone else had comments on the Charter; no one did. Given no disagreement, the Charter was adopted by the group.

Renewable Energy Action Plan

Mr. Grainey began discussion on the REAP. It was developed over the last two years and targets a number of renewable resources. Legislation has passed things that were part of the plan. After the Governor adopted the REAP we established a Renewable Energy Division within the Department of Energy whose focus is to promote and develop Renewable Energy. Diana Enright is the Assistant Director for that division.

There are many bills that were passed due to REAP:

- Legislation passed a bill for solar photovoltaic tax credits three times more than it was before.
- SB735 made changes to the Small Scale Energy Loan Program (SELP). SELP has financed over \$20 million in renewable energy in almost 20 years.
- Legislation included a number of provisions making it easier to promote renewable energy. An example is that it allows us to work on projects both in and out of state and helps us to work with inter governmental entities that want to develop energy projects.
- SB736, although most biofuels stuff did not pass, this is an important bill that did. It expands an existing exemption on energy facility siting for Ethanol facilities that meet certain environmental conditions. It also expands that to biodiesel production. This will help pave the road for alternative fuel development in Oregon.
- One thing in the plan that was adopted by rule by the Department of Environmental Quality (DEQ) involved adopting noise standards specific to wind energy facilities. By doing so it makes it easier for wind facilities to meet state standards.

Cylvia Hayes requested a summary of all bills that were passed. Bill Drumheller said he would email that to her. That list was later distributed to members at the meeting.

Chair McArthur announced that the rest of the meeting would be to discuss and become informed about what the current issues are and what the status is of some of these items are that were recommended into the plan.

Mr. Drumheller started his power point presentation with an overview of the REAP and it's primary goals. In the REAP there are three different parts:

- Goals (short term before 2006) & (long term 2007-2025)
- Initiatives (legislative & those initiated by the Governors Office)
- Actions (General cross cutting & resource specific for the REWG, state agencies & university system)

The vast majority are actions. The key goal in terms of electricity is the target that 25% of Oregon's load will be met by renewable energy by 2025, with the interim goal of 10% by 2015. This is new renewable generation -- not large hydro. State government has a key role in this in that 25% of electricity will be met by renewable energy by 2010 and 100% by 2025. This is a key goal that frames a lot of the actions and initiatives in the REAP.

On the transportation side the goals in the REAP were to structure the biofuels initiative that went to legislative process. Both biodiesel and ethanol goals are 20% by 2025 and 10% by 2010. 5% of all gasoline sold in Oregon will be a E85 blend of ethanol by 2015 and 15% by 2025.

There are many short term goals for the end of 2006, some of them are:

- 300 MW wind
- 500 Photovoltaic systems, 1 MW total
- 5 MW biogas facilities
- 25 MW biomass fuel electric generation
- 25 MW combined heat and power
- 205 kW fuel cells
- 20 MW geothermal electric generation
- 1-4 MW of new hydro

Back to transportation again the short term goals are:

- 2% biodiesel
- 2% ethanol
- 50 million gallons of biodiesel produced annually from Oregon crops
- 100 million gallons of ethanol produced in Oregon

The Governor's Office was asked to do three things in the REAP:

- To coordinate the REAP with the Global Warming initiative
- Play an active role in recognition of programs, projects and policies including designation of Oregon solutions projects.
- Support a Renewable Energy Working Group (REWG)

The main reason why we are here today are the mandates in the REAP to:

- Support a REWG, to be coordinated through the Governor's Office and the Oregon Department of Energy (ODOE) to guide the implementation of the REAP.
- Support a REWG to oversee reaching the long and short term goals and prepare regular process reports to the Governor's Office and stakeholders.

In the overall structure of the REAP there are general and resource specific actions. There are 15 general action items for the REWG to consider and 33 action items for the state agencies to undertake. For the resource specific action items there are 36 tasks for the REWG and 52 for state agencies and universities. Each member of the group received a list of all the tasks, these were bullet points from the REAP that were assigned to the REWG. The list does not contain all the tasks assigned to state agencies.

There were a number of hydroelectric actions brought out in the REAP, at this time in Oregon we don't have a hydroelectric working group, mostly due to funding. One of the more immediate questions we have to ask ourselves is what role we want hydro to play in this group. That is probably one of the first things this group will be dealing with.

There are no action items specifically listed for this group on solar in the REAP. There are however a number of action items for state agencies on solar. Post-REAP there have been a number of suggestions for solar and Christopher Dymond, ODOE will be presenting some bullet points for this group to consider.

Mr. Drumheller strongly urged all the members to rank what they think the top five tasks should be. That way we can get an idea of what everyone's initial thoughts are and what direction this group should take.

Troy Gagliano expressed concern about the process and goals. In terms of process he thought we need to go through and look at what is being done already and covered by other issues so we don't reinvent the wheel. In addition to things other groups are covering there are some things he thinks are unrealistic, like a national RPS. He has questions about the design and how it would affect the other 20 existing RPS'. Chair McArthur responded that when Bill finishes up he'd like to go through the 51 tasks, to know if anything is missing. We need to discuss these issues and talk about where each one is.

Mr. Drumheller started a new discussion about assessing the feasibility and effectiveness of a production based incentive. Staff at ODOE has been actively researching issues not only specific to RPS but also production based incentives, or so-called feed in laws. We have been very interested in not only the domestic RPS literature but also looking at literature all over the world. The European Union is going through a huge process right now and just released their final report. We have been looking at RPS and production based incentives comparing it to the feasibility of the pros and cons of each and we have been investigating these for months in anticipation of what has been a growing interest in the energy community on these issues. Carel deWinkel, ODOE announced that there is going to be a workshop on April 5, 2006 in Salem on Production Based Incentives. Mr. Drumheller told everyone that he would be attending a conference specifically on RPS in Chicago the 1st week of March. He is hoping to bring back the latest and greatest research in the RPS policy.

A question is asked, "Will there be a number of recommendations coming from staff about possible RPS?" Mr. Grainey answered that it could be a combination of production incentive and or RPS. We are looking at what is working and not working in other states and countries right now.

Chair McArthur talked about specific tasks assigned to the REWG in the REAP. Item 7, work with state's consumer and privately owned utilities, the Northwest Power and Conservation Council and Bonneville Power Administration (BPA) to develop a process and protocols for expediting interconnection requests and developing more distributed generation. The status is that some work has been done by ODOE. Chair

McArthur asked the question, "What work has been done?" Mr. deWinkel answered that he has been talking with the BPA and Jack Evans of the Oregon Rural Electric Coop. PURPA has come up with standards for 20 MW or less, that may be a nice base to start with. We are in the middle of figuring out if we can have some workshops. It's not clear exactly what they should be but it's very important that we come up with some statewide standards. If we can get the utilities both the IOU's and COU's together to subset an interconnection it would be great particularly for the smaller scale community based energy projects.

Lisa Schwartz announced that the Oregon Public Utility Commission (OPUC) will be holding a proceeding to standardize technical standards, procedures and renewables for utilities that they hold jurisdiction over which are the three industrial electrical utilities. The Energy Policy Act of 2005 also requires an investigation to be done by August 2007.

Jim Lobdell asked for clarification as to why this group is meeting and what direction we should be taking. Chair McArthur answered that the charge given to the group by the Governor is that we are looking at policy bills and if we see a technical issue then we refer that to another technical group to work on.

Jeremiah Baumann stated that he thinks our task list is too general and suggested that we define our list to add background on why it is an issue and also what can we do as a group for each issue.

Governor's Office

David Van't Hof began discussion on what the Governor expects from this group. One of the Governor's key points in the state of the state is to have energy independence in the development of renewable energy in the state. Specifically he is likely to be focusing in on some kind of a standard for the state that will move us towards meeting the renewable energy goals in the REAP which is 25% renewable energy by 2025. This is one area that will likely be a primary focus for this group, that is hashing through whether we can come up with a consensus view point on a renewable energy portfolio standard, whether there is feed in law aspects to it and just what that would be. How would it work and how would we get bipartisan support and stakeholder support around that issue? The second issue is the biofuels and biomass package. There was an effort last session to pass biofuels legislation, there is a bipartisan view that we need to get biofuels legislation passed in 2007. There is a lot of opportunity in those two areas of focus and whatever this group feels need to be brought to the top of the prioritization of the measures called for in the REAP. Hopefully you will have a chance to hear the state of the state to hear what the Governor is focused on there. He will be speaking at the base summit in Bend coming up in March. He will be able to speak more in detail about his vision for energy in this upcoming two year cycle. Mr. Van't Hof thinks also that he will focus on the value of the Energy Trust of Oregon (ETO) and how it has increased the overall renewable energy picture for the state. The Governor's view is that it has been a key tool particularly on the conservation side in terms of creating alternatives to grow. We need to continue to work on conservation and continue to work on the ETO's ability to help leverage renewable energy markets. Mr. Van't Hof then asked if anyone had any questions, no one did.

Wind Energy

Mr. deWinkel began his power point presentation on wind energy. Currently we have about 338 MW of wind running in the state of Oregon. About 750 MW have been approved by the state and local government and about 750 MW or so are in the permitting stages. These are mostly large wind farms in the North Central and Northeastern part of the state. If all of these wind farms were to come on line it would result in about 600 aMW of wind energy, which is about 3% more than the REAP's goal of 580 aMW for the year 2015 and slightly less than 40% of the REAP's goal of 1600 aMW for the year 2025. To put this in perspective, Germany with the population of about 18 million people in an area about 30% larger than the state of Oregon installed 14,000 MW in 10 years with mostly smaller machines than what we have in the market right now. When talking about a RPS and the level that we want to introduce it's very important to look at these numbers because if you choose the wrong level it will slow the accomplishment.

Mr. Lobdell pointed out the fact that without the production tax credit being extended it allows the market to continue to grow and not go into the move and bus cycle then this will not happen. Mr. deWinkel agreed and continued his discussion. In terms of the large wind farms one thing to point out is that Klondike II

came into being without any contribution from the ETO, because it basically was at market value. In the meantime the wind turbine prices have gone up dramatically but so have the natural gas prices. There are thousands of MW of gas turbines standing idly in China because they don't have the natural gas to run them. A question was asked, "Was Klondike II at market price because of the tax credit incentives?" Mr. deWinkel answered, "yes, that is correct." He then clarified that it was not at market price without incentives. There are a couple of issues with the smaller scale wind farms (community based or locally owned small wind farms). One is the OPUC is working very hard to finish the first phase of the PURPA rule very soon. The rule would have a standard contract for small projects 10 MW or less with a contract length of 15-20 years. There is most likely a need for extra incentives for the smaller scale farms to make this work in most places. It also needs standard interconnection protocols for distributed energy resources.

We have an Oregon Wind Working Group that consists of quite a variety of organizations and state agencies. The first meeting was in the summer of 2002. We received a small grant from the USDOE, Wind Powering America Program. The focus of this group is small to medium sized wind farms as part of rural economic development efforts. We try to meet all over the state and have had 10 meetings to date. Mr. deWinkel then asked if anyone had any questions, no one did.

Geothermal Energy

Mr. deWinkel then moved onto his power point presentation on geothermal energy. The West has a huge area that has the potential for geothermal development in our state. The USDOE estimates the potential geothermal electricity to be 400 MW of base load in Oregon. None of this has been developed to date.

There is a very active project underway just north of Adel in Lake County, The Crump Geysers. The company is very serious about trying to develop it for electricity generation. There are a few barriers:

- High risk of up front cost to confirm the resource
- Predominantly located on public lands. Things are moving along, BLM is starting to be more flexible. The environmental review is lengthy and costly so that is an issue.
- Relatively high costs relative to fossil fuel plants and large wind farms.

Klamath, Lake, Malheur and Harney counties have a significant resource for geothermal energy. The Oregon Institute of Technology's Geo Heat Center in Klamath Falls is a great knowledge resource. We have a Geothermal Working Group. It started in the fall of 2004, our first meeting was in Bend and our next meeting will be in Burns in May of 2006.

Solar Energy

Christopher Dymond began his power point presentation on solar energy. There are three technologies of solar:

- Passive Solar and daylight
- Solar water heating
- Solar Electric

Passive solar is the least cost technology. We are discussing at ODOE the possibility to have an energy code credit for passive solar. Solar hot water heating, the federal government is offering a 30% tax credit for solar thermal. Combined with our state incentives and ETO's incentives we will see a tremendous growth in solar thermal. Oregon is one of three states in the union that requires national certification of systems. Solar Electric went from 10 systems in 2001 to 100 in 2005. The world market grew 66% in 2005. In the state of Oregon we have solar home tours and two major fairs one in Portland the other in John Day. California is putting out \$3.2 billion of incentives over the next 11 years. The state of Washington is passing legislation right now that is doing a study to evaluate a 300 million MW photovoltaic (PV) purchase. By using the next generation of thin film PV you can produce peak power at \$.07 or \$.08 a kW. That is middle of the day valuable energy. We need to be doing that kind of exploration as well. We need to think about what the opportunities are for us to provide some measure of guarantee of purchase in Oregon. If you want to be a solar technician, currently the only place in the state that offers a two year program is Eugene. We estimate that there should be a 40-60% growth in the next two years.

Global Warming

Mr. Van't Hof spoke briefly regarding the Carbon Allocation Task Force. The Governor addressed global warming as a key priority. The Governor got into a three state dialogue with California and Washington to talk about the way we can regionally address carbon and global warming issues. The Governor created a Global Warming Advisory Group, the group gave a report to the Governor on how to begin to address the issue. The Governor has adopted and endorsed the report. The report has a lot of suggestions about how the state can begin to address the issue. There were three key provisions in that:

- The Clean Cars Opportunity, adopting California tailpipe standards.
- Developing a set of reduction goals in the state, which the Governor adopted. The goals were arresting the increase in emissions until 2010. Reducing emissions to 10% below 1990 levels by 2020 and the long term stabilization goal of 75% reduction by 2050.
- Create an allocation work group to focus on the electricity sector and how they can have reductions on that sort of a pathway of those long term goals. The group has been meeting since September 2005. Several participants from that group are here today. The charge is to try to develop a proposal or a list of alternative proposals on how you can reduce electricity in the state for the electricity sector.

Jim Walls asked about truck idling and carbon allocation. He is disappointed that the task force is only focusing on utilities.

Biomass

Mark Kendall, ODOE began his power point presentation on biomass. Biomass is the organic matter in trees, agricultural crops and other living plant material made up of carbohydrates. Biomass was larger than hydroelectric nationwide in 2003. In 2005 wind has come up half way. 9% of our energy use is from renewable resources, half of which is from biomass resources, primarily paper mills. The Oregon Biomass Group realized there are a lot of moving parts in the biomass marketplace. There are three essential market places:

- Urban Biomass
- Agricultural Biomass
- Forestry Biomass

We developed this coordination group under the direction of David Van't Hof from the Governor's Office so we wouldn't duplicate efforts and so we could communicate with the Governor's Office. We then developed sub working groups around those market places urban, agricultural and forestry.

Mr. Kendall introduced Joe Misak, Oregon Department of Forestry who is Chair of the Forest Biomass Working Group. He stated that at their March 2nd meeting they will be defining what they are doing relating to the six action items that are barriers to forest biomass.

Mr. Kendall continued his discussion, Oregon is a leader nationally in the amount of pounds of waste per person that go into the landfills. We are extremely low, we recover a substantial portion for recycling, more so than any other state in the union. Biomass is 45% of all renewable resources. It's 4% of our sum of energy use and a lot of that is in paper and wood products. There's a substantial portion of the 12.7 million bone dry tons of woody biomass that are produced in Oregon every year left to be utilized, therefore we have a ready made resource.

Biofuels

Justin Klure, ODOE began his power point presentation on biofuels. Mr. Klure stated that transportation fuels account for 1/3 of our energy use. 3-4% of gasoline purchased has ethanol in it. Some of the current projects in Oregon are:

- Sequential Pacific which is the state's first biodiesel production facility. They are producing about 1 million gallons a year. They are using waste grease as their primary feedstock.
- Cascade Grain which is an ethanol producing facility that should be breaking ground this year and is looking at doing 1 million gallons of ethanol.
- Treasure Valley, Port of Morrow and Umatilla projects are looking at cellulosic ethanol.
- Pendleton Wheat Growers is a great example of making sure we are developing the markets strategically for fuel use.

There are policy directives such as the REAP, the Governor's Greenhouse Gas Reduction Strategy, the Governor's executive order and legislative concepts. There are also a few barriers to the market some of which are:

- A lack of fueling stations for E85. There is only one in Oregon, at the state Motor Pool in Salem. We are currently working with them to develop a second station in Portland. Sequential biofuels is also looking at adding E85 to their fuel options.
- Transportation and Production costs are high
- Need better tax structure.

One of the REAP goals for state fleets is:

- Long Term – 100% of the diesel used by state government vehicles will be B-20 by 2025. It is currently 6 or 7% right now.
- Short Term – 10% of the diesel will be B-20 by 2006.

Next Steps

Chair McArthur brought up the fact that we have sign up sheets to pass around for sub-committees; Transmission/Technical work and Economic Development Policy group divided into two groups Incentives and Advocacy. He asked if anyone has any other ideas before we pass around the sign up sheets. Mr. Gagliano suggested having two separate committees one a small technical committee under 10 MW nameplate and a large one for over 10 MW being all utility scale stuff. He also stated that he sees biofuels having a completely separate set of issues all together. Mr. Singh thought that we need to simplify recommendations into a handful of things that legislature can deal with. He added that we need to have a set of principals to help determine what can get done in the next biennium.

Chair McArthur asked everyone to fill out the survey on the top five priorities, so that we can get an initial take on where people are. Then we can come back and have a discussion at the next meeting about what our principals are. We then can put up the prioritization so that the group can review those priorities to see if they meet the principals that we agreed to. He stated that this would be our next step. Mr. Duncan suggests five sub-committees, which are:

- Policy Committee
- Economic Development
- Biofuels/Transportation
- Small Scale Electric
- Large Scale Electric which includes transmission

Another suggestion was made that we wait on the sub-committees until we get the survey's back. People were generally in favor of that suggestion so that was what was agreed on.

Chair McArthur stated that if anyone had any suggestions for what our principals should be to send them to Bill Drumheller. Our real focus here is legislative concepts, if people have them already developed or know of some we want you to send those in so we can start a list of what those are. He asks for objections to having the next meeting in Bend and hearing none he announces that our next meeting will be March 22nd in Bend. There are no comments from the public. The meeting was adjourned at 3:03 p.m.