

Wave Energy Work Group Meeting

August 8, 2006

Lincoln County Courthouse
Newport, OR

Participants: 12 people: 5 voting OPAC members; 3 non-voting OPAC members; 1 federal liaison; 3 additional (OSU, commercial wave energy company, ODOE)

David Allen (via phone), Jonathan Allen, Jack Brown, Robin Hartmann, Justin Klure, Steve Kopf, Jeff Kroft, Scott McMullen, Fred Sickler, Terry Thompson, Cathy Tortorici, Amy Windrope

Agenda

- 10:30 Review Agenda, Order Lunch
 - Introductions - Describe your interest in/knowledge of wave energy
 - Work Group structure, process
- 11:00 Overview of wave energy projects in Oregon – our collective knowledge
- 11:30 Role of agencies
- 12:00 Role of the OPAC
- 12:45 Discuss Issues: social, economic, environmental; preliminary permits/siting, management issues – role of county, federal, state
- 1:15 Elements of OPAC work plan: timeline, budget, public process, add work group members? Scope – tidal?

The meeting opened at 10:30 with participants introducing themselves and indicating why they are interested in participating in the wave energy work group.

Introductions

Robin Hartmann, of Oregon Shores, said that conservationist groups have urged support for renewable energy. Now, as new technologies come to Oregon, research with adequate funding should be in place for the experimental stages of projects to understand environmental and social impacts so “reference sites” can be studied to make improvements before additional sites are located. Robin has been involved with the FERC relicensing process and new license implementation for the North Umpqua Hydropower Project.

Terry Thompson, Lincoln County Commissioner, said he has been involved in ocean and fisheries issues for a long time, including the state’s salmon plan. He wants to make sure issues are addressed up front. He indicated that local coastal citizens may not feel like the wave energy project relates to them – that the projects are being promoted by outside the area and we need to overcome that, especially following community response to a recent ship-breaking proposal.

Justin Klure, with Oregon Dept. of Energy, has been working on wave energy for about 1.5 years. He has focused on transmission, research & development, permitting, and other details. He has been working with a stakeholder group of 30 to 40 people called POWER as well as with OSU. He is interested in how to engage other stakeholders and local communities. He described the challenge in identifying who all the players are.

Jack Brown, City Councilor of Depoe Bay, said he is concerned about new uses and ecological impacts and also the possible opportunities. He has concerns when advocacy and science are

mixed. He is particularly interested in how an electrical/mechanical system will be introduced into a biological system.

Scott McMullen, represents North Coast fishing interests. Scott indicated that Annette von Juonne has involved the fishing industry in the wave energy process. He is also interested in cabling of the wave energy project to shore.

Steve Kopf is with Ocean Power Technologies, or OPT, the company involved with the wave energy park proposed for Gardiner. Steve indicated the preliminary permit was filed on July 14 with FERC for the Gardiner project. Steve's background is in emerging technologies, and he has experience working on public/private projects.

Fred Sickler, with Surf rider, wants to be engaged with changes that are coming to the ocean and involved with hashing out problems before decisions are made. His background is in both aerospace engineering and teaching.

Cathy Tortorici works for NOAA covering lower Washington and the Oregon Coast. She has been tracking the project since its inception in her work and is involved on the regulatory side with fish and non-fish issues. She is particularly interested in FERC's role and the filing of permits.

Jeff Kroft is with Oregon Dept of State Lands and has also been involved since the project's inception. The State Land Board administers the ocean bottom and is involved with permitting, in particular on removal/fill. Jeff has worked with McMullen on cable placement. Jeff is a senior policy analyst with department, and his past experience working for a mining company provides him with both a technical as well as an agency interest in the wave energy project.

Greg McMurray, staff to the OPAC, is participating in the wave energy work group meeting to provide support to the chair. He has not been cleared to provide staff support between meetings, but wanted to participate in this meeting as it starts off to consider how it will serve as a model for the other OPAC work groups. Greg has experience and education in marine ecology and has worked on ocean issues from Monterey Bay to the Bering Sea. He is interested in the integration of biological, pelagic and benthic elements. He has experience with mining and dredging, as well as working with FERC.

Jonathan Allen, with DOGAMI is interested in coastal geology. He is interested in how climate will affect wave conditions and the project, how the buoys will be moored and where they will be located, and how they may impact the shoreline.

David Allen joined the group over the phone from 12:00 to 1:30.

Amy Windrope joined the group over the lunch hour as well.

Work Group Structure/Process

The Work group approved Robin Hartmann as chair.

Robin distributed a memo from OPAC counsel Steve Shipsey that was written for the Big Look Task Force liaisons. This provided a helpful description of the role of work groups, where there is less than a quorum of OPAC members, in relationship to the whole Council. The Work Group role

would include discussion, analysis, reporting back with options, but not recommending and not deciding.

Greg indicated that the website will have a meetings page soon. When OPAC work groups meet, the groups should be prepared for the possible arrival of additional voting members of the OPAC, making a quorum which would move the meeting into the realm of public meetings requirements. To anticipate that possibility, meetings could be set up under public meetings requirements and logistics.

Greg also reminded us of the resource that the OPAC now has with Ann Miles as our federal liaison to FERC.

Overview of Wave Energy Projects in Oregon

The work group discussed broadly the two project areas: the OSU research project at Newport (which also may have a commercial component), and the commercial project at Gardiner, but focused on the Gardiner project since Steve Kopf was present and could provide additional details on the Gardiner project.

The Gardiner project will start as an experimental facility, with 150 kW buoys going into the water initially during summer 2007.

Oregon sites for wave energy projects were identified as part of a study that looked mostly at transmission hubs and port capacity along Oregon's coast, as well as consideration of water depth (need about 50 meters).

The work group discussed the tidal energy project that has sought a permit within the Columbia River estuary. DSL has asked to intervene on that project which is mostly conceptual. Presently, tidal energy projects are in place in the Tacoma Narrows and at Deception Pass. Greg informed us that "OPAC I" had drawn a hard line for OPAC's involvement at end of estuaries, but that may be up for reconsideration by the new OPAC.

Justin said the Governor may have some legislative initiatives this coming session resulting from the work so far on wave energy.

The work group members collectively provided an overall description of work on wave energy projects in Oregon. Justin has been involved, on behalf of the state, assisting with permitting, supporting R&D at OSU's wave energy facility, considering a production incentive for wave energy, and formation of a non-profit for wave energy.

Scott indicated that the coastal caucus had sent a letter to the OPAC requesting assistance in reviewing wave energy projects for Oregon and providing a recommendation for legislative changes that might be needed.

Terry indicated that policy related to asserting the counties' ocean jurisdiction and ability to assess taxes on wave energy projects should be part of what this work group considers. He said that 27 percent of the revenue from wave energy generation would go to the state (in the energy package) with none to return to the local governments.

Steve and Justin indicated that the ocean north of Newport really doesn't have enough water depth within the territorial sea to accommodate wave energy projects, and that Reedsport south provided good water depth.

Oregon's wave energy system would be different than the rigid design of the system installed in Hawaii.

Steve described the problem, from an investment perspective, of having to start at an experimental level and reimburse the utility for the cost of any displaced energy production (based on the Verdant ruling). The initial buoy would not put energy onto the grid, because before that can happen the experimental study needs to be completed. The issue is about paying to take 150 kW of power to 2 MW of power. The 150 kW buoy will go in place next summer, with a total of up to 2MW (with 13 buoys) the following summer. The license will be in place by 2010.

There was much discussion about the US Army Corp of Engineers Clean Water Act Section 404 jurisdiction on wave energy projects in Oregon waters and DSL's permitting process for removal/fill (necessary because of the anchor volumes). Issues around this are complex and are receiving further consideration by DSL, OPT and consultants.

As part of the initial project at Gardiner, OPT will develop 12 resource reports to be contained in a study plan for NOAA.

Steve said his company will have full-time staff in Oregon even at the one buoy stage, from Oregon Ironworks, which will serve to fabricate and maintain the buoy.

Defining OPAC's Role

- OPAC's role could consider wave energy projects in terms of Goal #19 and how a series of wave energy parks along the coast may affect the coast, cumulatively.
- OPAC's role also could be to recommend changes to the legislature or the TSP.
- Since the OPAC is a stakeholder group, an appropriate role would be to provide a forum for stakeholder viewpoints as well as a venue for stakeholder and community input on wave energy projects along the coast, using the OPAC as a "venting agency" to allow discussion by agencies and stakeholders. On a similar note, the OPAC could play an educational role by providing an open forum for discussion and presentations by renewable energy companies, agencies, scientists and members of the Council.
- OPAC's role could involve considering the "machinery of the agencies" on wave energy and what is affective. Which agency is the organizer for the state? How do the state agencies coordinate?
- OPAC's role could include how federal consistency is addressed under the CZMA.
- OPAC could consider the need for production incentives and understand the federal incentives for renewables. (e.g., wind is 1.8 cents/kWh – \$20 million/year).

It was suggested that an ODFW person be assigned to the wave energy projects so that ODFW is up to speed on the process (also for the OPAC work group). Patty Burke will be contacted.

The OPAC could convene the STAC around wave energy.

Greg indicated that the Territorial Sea Plan has a process built into it for joint review panels, and suggested the work group study up on that and apply it.

One thing to consider is how involved the OPAC wants or needs to be with FERC and the FERC process. Does the OPAC want to “float above it” and collect stakeholder input or participate in it? One suggestion involved having OPAC’s voice heard in the programmatic EIS.

Possible Issues

It was pointed out that the EPRI Studies and the EA for the Hawaii wave energy project offer a good review of social and environmental issues, and the work group should get review those documents. Hawaii has been monitoring its site for 12 months.

Some issues were broadly identified by the work group including:

- Gray whale (missed by the EPRI study)
- Avoid increasing the number of seals and sea lions by design of buoys
- Electromagnetic field sensitivity
- Impact of wave energy parks on shoreline when located 50 meters off shore.
- Site banking of specific dimensional areas of the ocean. Use of preliminary permits to tie up areas
- Removal fill permitting is straight forward, but the proprietary site permits may be of concern.
- Positive effects: Sport fish, small rock fish, habitat formed in the wave parks.
- The permitting process itself
- The wave parks “locking up” areas
- How do wave parks fit into the NMS designation? Would that impact the authority to lease the seabed?
- Discussion occurred regarding design of a dummy buoy for studying the buoy itself – which could be a project of the OSU proposal for Newport.
- Decommissioning – what if the company goes bankrupt and leaves the project. Who removes this? Is there insurance and a bond?
- Will there be an EIS on the impact of the first Buoy?
- What do we know, and what are the scoping questions prior to placement of the first buoy? What baseline information is known; what is needed? What about salmon monitoring?
- Terry suggested getting data from the Coast Guard buoy tender. They also have good knowledge of animal usage of the buoys. The National Data Buoy Center is a source of information.

Elements of a Wave Energy Work Group Work Plan

The OPAC wave energy work group will develop a work plan to include a timeline, budget and tasks.

The timeline will be based on FERC timelines, and, in terms of the Gardiner project, on the three phases of development of the project. That includes next summer when one buoy is scheduled to go in the water, then the following summer when 13 buoys will go in, and then by 2010 when the full 50 MW wave park, which will cover approximately a 3 miles x 0.5 miles area, is anticipated to be in the water.

The wave energy work group's work plan will be drafted by Robin, with help from Justin and others familiar with the projects, permitting processes and timeline – and circulated to the work group to be finalized by the OPAC's October 2006 meeting.

The work plan should include consideration of the available public processes within the wave energy permitting steps (required under NEPA and by the state's Energy Facility Siting Council) and also how the OPAC could involve the public and enhance public input.

Amy Windrope indicated she is working with others to organize a science workshop to identify issues and make recommendations for study. Greg suggested that MMS might be approached regarding funding for the workshop.

Others who could help the work group? Anne Miles of FERC; MMS – Maurice Hill; Annette von Jouanne.