

Humboldt Working Group
Best Western Bayshore Inn
Eureka, CA

December 2, 2009

Meeting Summary

Introductions

Roundtable introductions were led by Anna West, Kearns & West (K&W) Facilitator.

Updates

Led by Anna West, K&W Facilitator

The following updates were reviewed by the group.

- The Permitting Authority Subcommittee met on November 9th to begin conversations regarding environmental baseline information, project effects and monitoring and adaptive management. The Subcommittee began to define species to be addressed in the environmental document.
- PG&E met with the members of the fishing community to discuss physical and electronic options to minimize safety concerns. Potential crabbing gear entanglement and ideas to address this potential concern were also discussed. The topics discussed are part of an ongoing conversation between PG&E and the Humboldt fishing community.
- ACTION: Dr. James Howard was accepted as a new member of the Humboldt Working Group (HWG), replacing Greg Crawford, with no objections from the HWG.
- Since the last HWG meeting, the first commercial, full scale Oyster wave energy converter (WEC) was installed at the European Marine Energy Centre (EMEC) offshore of Scotland. Aquamarine Power, manufacturer of the Oyster, did respond to the Request for Information (RFI) for the Humboldt WaveConnect pilot project; however this device is not suited for the Humboldt site because it requires shallower water.
- Bill Toman, PG&E, announced that PG&E is pursuing a second wave energy site. PG&E will soon file a preliminary permit application for a second facility in addition to the Humboldt WaveConnect pilot project. The specific size has not been finalized, but this new project will likely be larger than a pilot project. The HWG will receive a copy of the FERC preliminary permit application the day it is filed. PG&E plans to convene a working group, similar to the HWG, for this new project. There is some sensitivity to information sharing because the first to file an application with FERC is the most likely to be granted the preliminary permit. PG&E is fully committed to sharing more information as soon as it is possible.

Patterns of Use: Whales, Green Sturgeon and Juvenile Salmon

Presented by Sharon Kramer and Jeff Jacobsen, H.T. Harvey

Sharon and Jeff presented information about the fish and marine mammal species likely to exist in the area of the pilot project, either using the area directly or migrating through

the vicinity. The presentation focused on threatened or endangered species that are protected by the Federal and State Endangered Species Acts (ESA) and by the Marine Mammal Protection Act. The complete presentation is available on the WaveConnect website at <http://www.pge.com/waveconnect/projects.shtml>

The Permitting Authority Subcommittee has begun and will continue to review baseline information about these species in order to build the monitoring and adaptive management plan. This plan will track the project's effects on these species throughout the project's duration.

The HWG was asked to consider potential effects the pilot project could have on the species presented and to share thoughts/concerns. HWG members suggested the following topics to be considered in PG&E's analysis.

1. Temporal and spatial impacts to migration routes
2. Changes in fish concentrations
3. Long term effects (e.g.: if fishermen avoid the project area, will fish populations/predator populations around the area increase/decrease)
4. Physical entanglement or contact with the devices
5. Acoustic effects and noise from the devices
6. In water transmission line/cable effects on species behavior
7. Electromagnetic field (EMF) effects on species behavior

Following the presentation, a discussion about the potential project effects took place. The following points were clarified.

- PG&E will solicit information on noise levels of devices from the WEC manufacturers.
- The WaveConnect project facilities will have instrumentation to monitor the project. A regional cable observatory may be established to further study EMF effects.
- Upwelling is a large scale phenomenon. The scale of this project will not have an effect on upwelling patterns.
- It does not appear that the WaveConnect project area is a desirable location for a Marine Protected Area (MPA) since the Humboldt WaveConnect pilot is on sandy/muddy bottom and protected areas sought after tend to be rocky or areas that offer habitat for fisheries resources. Wave Energy is considered a compatible use in MPAs if it is designated as a conservation area, if it is a reserve area then no activities can occur. PG&E is following this process closely. The MLPA folks have the current site proposal and maps.
- The Marine Life Protection Act (MLPA) process and the Humboldt WaveConnect pilot project have different timeframes: MPAs are permanent and the Humboldt WaveConnect pilot project will be decommissioned after five years. Also, MPAs are within state waters only, where if PG&E desired to build a larger project after the pilot project, the desired location would be further offshore, in federal waters.
- PG&E is currently designing the project so that it can be completely removed. PG&E will consider requests to leave components of the project in place beyond the FERC pilot license permit for scientific purposes or to mitigate environmental effects. If it is decided that it is beneficial to leave project components in place, an entirely separate permitting and environmental review process would be required.

Lessons Learned from Other Wave Energy Experiences

Presented by Rick Williams, SAIC

Rick gave an overview of lessons learned from other WEC manufacturers and device installations, including: Osprey, Wave Dragon, Finavera and Trident Energy. The complete presentation is available on the WaveConnect website at <http://www.pge.com/waveconnect/projects.shtml>. Rick noted that none of the manufacturers presented responded to PG&E's Request for Information (RFI).

The following points were clarified regarding mitigating project risks.

- PG&E will require the WEC device to be in the scale testing phase, with at least a 1/8 scale model.
- PG&E's desired port depth is 42 feet. The WECs require 30-40 feet of depth. With this information a discussion ensued around dredging of the Humboldt Bay and associated economic considerations. PG&E will assume that the depth of 38 feet will be maintained for planning purposes for this project.
- Each WEC manufacturer is responsible for transferring and installing its own device. PG&E has also contracted with Winzler & Kelly and Pacific Affiliates to conduct a port analysis to see what existing infrastructure/capabilities can be utilized.
- PG&E is the responsible entity for the WaveConnect facility and associated permitting and licensing.
- PG&E will submit the FERC draft license application by March 1, 2010; additional information may be added up to the filing of the FERC final license application, to be filed in August or the fall of 2010. In March, the FERC draft license application will be open to the public for comments.
- The Request for Proposals (RFP) for WEC manufacturers, or a refined second Request for Information (RFI), will be released in early 2010.

Wave Energy 101 – Part Two

The HWG agreed to hold this topic until the next meeting: January 6, 2010.

Next Steps

Presented by Anna West, K&W Facilitator

- PG&E will host a public WaveConnect update meeting in February, before the filing of the FERC Draft Pilot Project License Application.
- A subset of HWG members would like to continue discussions around the public outreach process; K&W will coordinate discussions with the following interested members:
 - Dave Meserve, Former City of Arcata Councilmember
 - Jeff Leonard, City of Eureka
 - Julie Fulkerson, City of Trinidad
 - Maggy Herbelin, Humboldt Bay Stewards
 - Pete Nichols, Humboldt Baykeeper
 - Travis Schneider, Pacific Affiliates
 - Ian Caliendo, PG&E
 - David Boyd, Redwood Coast Energy Authority

- Rob Cozens, Resighini Rancheria
- Jim Zoellick, Schatz Energy Research Center
- Bill Lydgate, Surfrider Foundation, Humboldt Chapter
- It was suggested that a local publication feature the Humboldt WaveConnect pilot project near the filing of the FERC Draft Pilot Project License Application.
 Possible publications include:
 - Times Standard
 - North Coast Journal

Action Items

Action Item	Who	When
1. Distribute second WaveConnect Project FERC preliminary permit application.	1. Briana Moseley, K&W	1. Date of filing
2. Ask FERC whether community interests can be reflected in the FERC Draft Pilot Project License Application (i.e., if stakeholders would prefer for some components of the project to remain beyond the 5 years, would FERC consider this, and should it be reflected in the license application?)	2. PG&E/Ken Hogan, FERC	2. ASAP
3. Present update on process, including plans for 2010 meetings.	3. Kearns & West	3. January 6, 2010 HWG meeting
4. Gather feedback from the communications subcommittee to discuss the public process in the community.	4. Kearns & West	4. ASAP

Attendees

Primary:

- Paul Hagen, Arcata Planning Commission
- Bob Borck, Building and Construction Trades
- Vicki Frey, California Department of Fish & Game
- John Dye, California State Lands Commission (by phone)
- Dave Meserve, Former City of Arcata Councilmember
- Jeff Leonard, City of Eureka
- Julie Fulkerson, City of Trinidad
- Jacqueline Debets, County of Humboldt
- Larry DeRidder, Humboldt Area Saltwater Anglers
- Pat Higgins, Humboldt Bay Harbor District
- Pete Nichols, Humboldt Baykeeper
- Maggy Herbelin, Humboldt Bay Stewards
- Mark Lovelace, Humboldt County
- Greg Crawford, Humboldt State University

- Diane Ashton, National Marine Fisheries Service
- Monica Deangelis, National Marine Fisheries Service (by phone)
- Dave White, National Marine Fisheries Service
- David Boyd, Redwood Coast Energy Authority
- Rob Cozens, Resighini Rancheria
- Jim Zoellick, Schatz Energy Research Center
- Bill Lydgate, Surfrider Foundation, Humboldt Chapter
- David Ammerman, U.S. Army Corps of Engineers
- Bill McIver, U.S. Fish and Wildlife Service

Alternates:

- Erin Iya Mahan, Community-at-Large
- Milton Boyd, Humboldt State University
- Dana Boudreau, Redwood Coast Energy Authority
- Colin Sheppard, Schatz Energy Research Center

PG&E:

- Bill Toman, PG&E (by phone)
- Ian Caliendo, PG&E

PG&E WaveConnect Consultants:

- Doug Davy, CH2M HILL
- Rick Williams, SAIC
- Sharon Kramer, H.T. Harvey
- Jeff Jacobsen, H.T. Harvey
- Travis Schneider, Pacific Affiliates

Facilitators:

- Anna West, Kearns & West
- Briana Moseley, Kearns & West
- Christine Lim, Kearns & West (by phone)