



U.S. Permitting: Pathways and Experience in Tidal and Wave Energy

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U.S. Tidal & Wave Energy Projects: A Quick Snapshot

- **Currently 49 preliminary permits issued by FERC for ocean renewable projects, at least 27 more applications pending**
- **One license issued – Makah Bay**
- **Highly visible projects – national press attention**
 - **Verdant Power RITE Project**
 - **OPT Reedsport, Oregon Wave Park**
 - **Snohomish PUD Tidal Projects**



Challenges on Pioneer Projects

Some of the issues encountered in developing a new ocean or tidal project in the U.S.....

- **Regulatory Framework**
 - the process is evolving
 - still establishing clear regulatory agency authorities

- **Environmental Impacts**
 - uncertainty regarding the full range of the effects of the new technologies
 - limited existing information for some sites

- **Balancing Competing Uses of the Marine Resource**
 - integrating with historical and traditional uses
 - quantifying the effects



Projects in the Western United States

- **Makah Bay Wave Project – Finavera**
 - 1.0 MW off Washington State
 - Used FERC's Alternative Licensing Process
 - Received a 5-year conditional license from FERC

- **Puget Sound Tidal Projects - Snohomish PUD**
 - Pilot Project in Admiralty Inlet, Puget Sound
 - Currently engaged in FERC's Pilot License Process

- **Reedsport Wave Park – Ocean Power Technologies**
 - 2.1 MW Wave Park
 - Used FERC's Traditional Licensing Process

- **Golden Gate Tidal Project**
 - Pilot Tidal Project in San Francisco Bay
 - Submitted a DLA and NOI in October 2008
 - Comment letters were filed to FERC and process is ongoing



Moving A Project Forward in the U.S.

Main Licensing Requirements

– Federal (FERC)

- Preliminary Permit (3 year period)
- Integrated, Traditional, Alternative or Pilot License Application
- Preliminary Application Document (PAD) or Draft Pilot License Application.
- Submit a Final License Application
- Others.....Biological Assessment, Endangered Species Act, Marine Mammal Protection Act, ACOE
- FERC is the primary regulator for non-federal applicants

– State

- JARPA submittal : Sec 401 Certification, Sec 404, land lease, navigation permit, others.
- Coastal Zone Management Act -Consistency
- SEPA – file a checklist



Pilot License - Requirements

What are the criteria to qualify?

- Less than 5MW
- Short license term
- Avoid “sensitive waters”
- Removable and able to be shut down on short notice
- Removed, with site restored, before the end of license term (unless new license is granted)
- Initiated by a draft application in a form sufficient to support environmental analysis



Pilot License - Requirements (cont.)

What is required in the pre-filing procedures?

- Notice of Intent
- Draft application
 - Existing environment
 - Details of the project proposal
 - Potential effects of the proposal
 - Proposed plans for monitoring, safeguarding the public and environmental resources, and assuring financing to remove the project and restore the site
 - Consultation record
- Request for waivers and modifications of the ILP necessary for expedited processing
- Request designation as non-federal representative
 - ESA
 - Section 106 National Historic Preservation Act



Example - Puget Sound Tidal Project

Snohomish PUD pursuing a pilot license from FERC...

- Submitted Preliminary Permit Application in June 2006
- Received Preliminary Permit from FERC in March 2007
- Submitted Preliminary Application Document to FERC in January 2008
- Currently working to prepare Draft Pilot License Application
 - Stakeholder outreach ongoing
 - Draft application to be submitted second half 2009
 - Final Pilot License Application to FERC by January 2010



Responding to the Challenges

We're Finding

- **Early Stakeholder Involvement is Key**
 - Define the project, the issues, and necessary information

- **A Team Effort - Build Trust**
 - Establish resource working groups to address issues
 - Maintain regular contact with regulators- keep them informed

- **Think Creatively**
 - Consider solutions which aren't yet typical



Responding to the Challenges (cont.)

We're Finding

- **Remain Flexible**
 - Consider the trade-offs (e.g., Adaptive Management)

- **Take An Active Policy Role**
 - Become involved with the legislative/regulatory process

- **Sources of Funding**
 - Identify local and federal funding mechanisms to help offset added costs

