



PETER GOLDMARK
Commissioner of Public Lands

January 27, 2009

Mr. Craig W. Collar
Senior Manager, Energy Resource Development
Public Utility District No. 1 of Snohomish County
PO Box 1107
Everett, WA 98206-1107

Subject: Tidal Energy Pilot Project, Admiralty Inlet
Comments on Pre Application Document, Docket P-12690
Information Regarding Application for Use of State-Owned Aquatic Lands

Dear Mr. Collar:

The Washington Department of Natural Resources (DNR), Aquatic Resources Program, manages over 2.6 million acres of state-owned aquatic lands and attached resources, including the bedlands, shorelands, tidelands, and harbor areas upon and within which many wave and tidal projects are proposed to be located. Resources located upon aquatic lands that DNR manages include aquatic plants, aquatic animals; and valuable materials and minerals. DNR supports the concept of pilot hydrokinetic project development as a means to advance this nascent technology and gather information on the potential environmental impacts. Pilot projects can be an effective means for guiding the phased development of future larger scale projects in an environmental sound manner, thus providing a domestic source of clean and renewable energy for Washington State.

DNR has reviewed Snohomish County Public Utility District's Pre-Application Document: Puget Sound In-Stream Tidal Power Project (PAD), and has the following comments; see attachment A. DNR is also providing you with materials and information needs regarding application for the use and authorization of state-owned aquatic lands; see attachment B.

Thank you for the opportunity to review the PAD and to provide you with information about securing an aquatic land use authorization. DNR looks forward to continuing to work with Snohomish County PUD on this project. If you have any questions please contact me at 360-732-0013 or by email at brady.scott@dnr.wa.gov.

Sincerely,

/s/ Brady Scott

Brady Scott, Aquatic District Manager
Aquatic Region, Orca-Straits District

Attachments:

Attachment A: Comments on Pre Application Document
Attachment B: Information Regarding Application

Enclosure:

Application for Authorization to Use State-owned Aquatic Lands

CC: Elizabeth Ellis, Washington Department of Natural Resources*
Sheila Hosner, Governor's Office of Regulatory Assistance*
Rebeka Padgett, Washington Department of Ecology*
Mark Hunter, Washington Department of Fish and Wildlife*
Charlene Andrade, Washington Department of Fish and Wildlife*
Keith Kirkendell, National Marine Fisheries Service*
Alicia Bishop, National Marine Fisheries Service*
Randel Perry, U.S. Army Corps of Engineers*
Tom Ostrom, The Suquamish Tribes*
Daryl Williams, The Tulalip Tribes*
Stan Walsh, Skagit River Cooperative*
Devin Malkin, Devine, Tarbell and Associates*
Gabriel Kopp, Devine, Tarbell and Associates*
Mike McCallister, Sound & Sea Technology*
FERC Service List, Docket P-12690
FERC Mailing List, Docket P-12690

* By e-mail

Attachment A

Comments on Pre Application Document, Dockets P – 12690

In reviewing the PAD, we noted that the original purpose of the document was to characterize multiple sites in a general manner in order to obtain preliminary licenses from the Federal Energy Regulatory Commission. DNR's current effort, however, is to provide more detailed information to support the specific pilot hydrokinetic project at Admiralty Inlet. DNR is therefore focusing its comments on identifying the need for more detailed information related to the Admiralty Inlet Project and will reserve comment on the other sites.

Chapter 3- Location, Facilities and Operations

- General Comments—In addition to the general maps shown in Appendix C, DNR recommends providing a more detailed map emphasizing the pilot location that describes further land ownership within the project area including the boundaries of the state owned aquatic lands, the location of any privately owned tidelands, and the parcels owned by adjacent upland owners. While DNR can provide general ownership information it will be necessary to have a registered land surveyor determine the location of specific ownership boundaries (this information will be needed as part of the application process and is described in more detail in attachment B).
- Section 3.4 .1.2 Bathymetry and Seabed Geology—As part of the final pre-deployment survey, DNR will require a more refined scale that focuses on the specific area being proposed for the pilot. Accurate information to understand presence/absence of bedrock and sediment is important, especially as it relates to securing the tidal generators to the sea floor and installing the cable on the surface or subsurface. A better understanding of soils and marine substrate in area where siting will be done is needed. What is the submerged slope stability? Is there a potential for marine landslides? If so what are the risks to the project?
- Section 3.4.1.4 Maritime use—DNR recommends working with the appropriate entities to ensure that the cable crossing map is accurate. The ferry route information could be updated to better reflect the spatial distribution of use (the ferry uses different routes based on sea state conditions.) Discussion of other uses such as vessel traffic, recreational boating, fishing, etc should be expanded, especially if those uses will be affected by development of a tidal energy facility.
- Sections 3.4.1.5 Electrical Interconnection, Section 3.11 General Project Facilities, Sections 3.11.1 Tidal in Stream Energy Converter Devices, Sections 3.11.2 Potential Foundations, Section 3.11.3 Directional Drilling, Section 3.11.4 Underwater Power Cable, Sections 3.12 Project Facilities for a Pilot Installation, Section 3.12.1 Shore Sttion and Grid Interconnection, Section 3.13 Project Operations—Prior to obtaining a use authorization for aquatic lands, DNR will need information on the specific location of the subsea cable from device to substation. The facilities, energy converter devices, foundations, use of directional drilling all need to be described in detail based on the actual proposed development.

Chapter 4- Existing Environment

- General comments—DNR requests further information to characterize the existing condition of invasive species, if any, within the proposed pilot project area. Any increase or introduction of invasive species as a result of installing devices into the project area, on DNR-managed lands will need to be quantified and monitored. Cada (2008)¹ has described the potential for benthic organism assemblages to change over time with the installation of anthropogenic structures. What changes in benthic communities are foreseen as a result of the project?
- Section 4.2 Geology and Soils— DNR recommends reviewing the data in this section and in the maps provided in Volume 2 with a state geologist. Please contact Dave Norman (360/ 902 – 1439) to help identify geologic hazards and risks associated with the pilot project location.
- Section 4.4.1 Overview off Coastal habitat and Associated Species, Section 4.4.1.1 Littoral habitat, Section 4.4.1.2 sublittoral habitat, Section 4.4.1.4 The coastal habitats associated with the Seven Permit Areas (Admiralty Inlet)— Snohomish PUD shows that eelgrass and Pacific Herring are both present in Admiralty Inlet. DNR will need more details about these resources with respect to the pilot project location (preferred and alternate). DNR will also appreciate information on sediment movement and transport, particularly with respect to drift cells.
- Section 4.4.4- Invertebrates, Section 4.4.4.4 Shellfish—DNR suggests breaking this section into - Benthic Invertebrates, Bivalves² and Malacostracans³ instead of lumping everything under the catch-all term “Invertebrates,” to separate any potential impacts to the crustaceans, which have the potential to support local fisheries. DNR also notes that Admiralty Inlet appears to be the only site containing all of the listed shellfish species, including one of high commercial economic importance, the geoduck. A geoduck survey will be required prior to obtaining a use authorization for state-owned aquatic lands..
- Section 4.5 Wildlife and Botanical Resources, Section 4.5.4 Eelgrass, Section 4.5.5 Macroalgae—DNR will need eelgrass and macroalgae surveys prior to obtaining a use authorization for state-owned aquatic lands.
- Section 4.8.1 Recreational Use—DNR is required to manage public benefits when considering the uses of state-owned aquatic lands. These benefits are varied, but include encouraging public use and access, fostering water dependent uses, ensuring environmental protection and utilizing renewable resources. The Public Trust Doctrine also directs DNR to limit restrictions on public access. These authorities will be in place when considering any limits on fishing, recreational

¹ Cada, G.F. (2008). The Potential Impacts of Marine and Hydrokinetic Renewable Energy Technologies. A report to Congress Pursuant to Section 633(b) of the Energy Independence and Security Act of 2007 (P.L.120-140). Oak Ridge National Laboratory, October, 2008, Page. 28

² **Bivalves** are molluscs belonging to the class **Bivalvia**. They have two-part shells, and typically both valves are symmetrical along the hinge line. The class has 30,000 species, including scallops, clams, oysters and mussels.

³ **Malacostraca** are the largest class of crustaceans and include most of the animals that non-experts recognize as crustaceans, including crabs, lobsters and shrimp, mantis shrimp and krill. They also include the amphipods and the only substantial group of land-based crustaceans, the isopods (woodlice and related species). With more than 22,000 members, this group represents two thirds of all crustacean species and contains all the larger forms.

use, or other public activities in Admiralty Inlet. DNR will work with the affected users and other agencies on this issue.

- Section 4.8.5 Non Recreational Land Use, Section 4.8.5.1 marine land use, Section 4.8.5.2— DNR would appreciate more detail on how the pilot project may affect other uses of aquatic lands, such as aquaculture, installation of other subsea cables (e.g., is it possible to “piggyback” on PUD’s corridor), or other uses and development.

Chapter 5- Resource Impacts

- General Comments— The section on resource impacts opens by stating that the PUD is engaged in local site characterizations and technology assessments and a detailed description of potential resource impacts and studies is premature. Until a site-specific description of the preferred and/or alternative pilot project site is included, DNR is unable to provide any specific comments. Here are few general comments for your consideration:
 - DNR is interested in information on any potential impacts to resources located on or attached to state-owned aquatic lands. DNR will be working with the regulatory agencies to review the information on these impacts. As necessary, DNR will work with the applicant to ensure any use authorization appropriately protects aquatic resources and public access.
 - DNR would also like to better understand the far field affects and cumulative impacts including any potential impacts to shoreline processes (drift cell impacts, sediment transport, tidal changes, etc), especially because impacts may change over time as expansion occurs or if multiple facilities are installed across the Puget Sound basin.
 - The PUD has not provided site-specific information on the impacts to any DNR resources located within the preferred or alternate pilot project area. However, the PUD has stated that within the general vicinity of these sites, geoduck, eelgrass, and Pacific Herring are located. These are three examples of aquatic resources DNR would generally want any applicant to either avoid or mitigate for if impacts cannot be avoided. DNR would work with the applicant and the regulatory agencies to design a practicable solution.
 - Finally, DNR has noted that NOAA Fisheries is considering a sensitive area designation for this location, and believes that it is very important that this matter be resolved. If this were to become a sensitive area, DNR would need to understand the resource impacts and the feasibility of the project in context of that designation.

Attachment B

Information Regarding Application for Use of State-Owned Aquatic Lands

DNR is providing you with an application for the Use and Authorization of State-Owned Aquatic Lands. Please note the following information is needed before the application can be finalized:

Description of Use and Improvements— DNR requires a detailed description of the proposed use and improvements that are proposed for state-owned aquatic lands.

Presence of an Exclusion Zone— If exclusive use is required DNR will need information to substantiate the purpose and need.

Full design and NEPA/SEPA Analysis— DNR requires a full build-out design submitted with the application, and copies of the Record of Decision (NEPA) and SEPA analysis.

Copies of Regulatory Permits— As part of the application we will need copies of all local, state and federal regulatory permits, including, as appropriate, the county shoreline permit, WDFW Hydraulic Project Approval, Ecology's Federal Consistency Determination, the U.S. Corp's 401/404 permit, and any ESA and/or MMPA permits. The use authorization will not be issued until all required local, state, Tribal and Federal permits are obtained and survey is complete. The PUD is encouraged to begin the application process early.

Diagram and Survey Requirements— A survey, completed by a registered land surveyor, will be required prior to obtaining a use authorization for state-owned aquatic lands, showing acreage for proposed use and boundaries surrounding the project site. Ownership of adjacent parcels should be designated on the survey. DNR can provide further guidance when the PUD requires it.

Plan of Operations, Development and Maintenance—Like NOAA, DNR requires a detailed operation and maintenance plan (Dec. 8, 2008 comment letter to FERC on Snohomish County's Puget Sound In-Stream Tidal Power Projects). DNR uses a similar plan of operations as an exhibit to its use authorization.

Monitoring and Adaptive Management Plan—DNR notes from the prior project meetings that there is discussion regarding the value of pre-installation monitoring. With respect to the issue of pre- vs. post-installation monitoring surveys, DNR suggests that the PUD follow the Finavera model, and consider whether such surveys are needed on a "resource-by-resource" basis. DNR will require pre-installation surveys for resources such as geoduck. For a survey such as this, the goal is not to measure impacts from the project over time, but to assess any potential resource damages due to development of the project.

Mitigation Plans— If mitigation on state-owned aquatic lands is required as part of this proposal, and encumbers state-owned aquatic lands, the mitigation must be described in the Plan of Operations. Mitigation efforts can exclude other uses, when this is the case, mitigation sites need to be authorized as a separate activity and use, and require further consideration by DNR.

Document Content(s)

SnoPUD Adm Inlet Tidal Energy Project DNR letter 1 27 09.PDF.....1-6