

Active West Coast Hydrokinetic Projects

Monday, August 23, 2010

Report developed by the Pacific Fishery Management Council

	Project	Date preliminary permit issued	Location and description	Current status	Technology and power output
California					
P-13376	Del Mar Landing Project (Sonoma County Water Agency)	7/9/2009	Study location is 14.3 sq nautical miles. Three miles off the coast of Sonoma County, in state waters. Water depths of 20-50 meters.	Pilot project application targeted for July 2011. Submitted 6-month progress report in June 2010. Project continues to move forward.	Pilot project (5 mW or less). Looking at oscillating water column & buoy-type devices, including Pelamis. Initially, 2-5 MW. Eventually, 40-200 MW.
	Last updated: 8/19/2010				
P-13378	Fort Ross Project North (Sonoma County Water Agency)	7/9/2009	Study area is 10.4 square nm.	Pilot project application targeted for July 2011. Submitted 6-month progress report in June 2010. Project continues to move forward.	
	Last updated: 8/19/2010				
P-13377	Fort Ross South Project South (Sonoma County Water Agency)	7/9/2009	Study area is 15.3 square nm. In state waters off Sonoma County, near Fort Ross, 20-50 m deep.	Pilot project application targeted for July 2011. Submitted 6-month progress report in June 2010. Project continues to move forward.	Pilot project. Initially 2-5 MW; eventually 40-200 MW.
	Last updated: 8/19/2010				

* = FERC-related activity since last report. FERC = Federal Energy Regulatory Commission. MMS = Minerals Management Service. MW = megawatts. nm = nautical miles. NMFS = National Marine Fisheries Service. NOI = Notice of Intent. OCS = Outer Continental Shelf. PAD = Preliminary Application Document. TLP = Traditional Licensing Process. WEC = wave energy conversion device.

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P-13053	Green Wave Mendocino Wave Park*	5/1/09	Mendocino. 2.5 x 6.9 miles (study area), up to 2.6 miles offshore, 120-390 feet deep.	GreenWave submitted progress report 2/4/2010. Being assisted by Ocean Power Technology (OPT). FISH (Fishermen Interested in Safe Hydrokinetics) filed lawsuit against FERC for issuing preliminary permit for this project. Requested extension of time to submit documents. Continuing with development of PAD, NOI. (Plan to file Sept 2010).	10-100 Pelamis or OPT devices, total capacity of 100 MW
	Last updated: 8/19/2010				
P-13052	Green Wave San Luis Obispo Wave Park*	5/7/09	Morro Bay. 3.1 x 7.1 miles. 1-3.5 miles from shore, 90-360 feet deep.	Being assisted by Ocean Power Technology (OPT). Requested extension of time to submit documents. Continuing with development of PAD, NOI. (Plan to file Sept 2010).	10-100 Pelamis or OPT devices with a total capacity of 100 MW.
	Last updated: 8/19/2010				
P-12779	Humboldt WaveConnect Project (PGE)*	3/13/2008	Eureka/Samoa. 10-20 buoys. 60-600 feet in depth. 2-3 miles from shore.	PGE held public meeting in Eureka 6/9; transcripts available on FERC website. PGE asked for 90-Day extension to file revised monitoring and adaptive management plans (8/6/10).	10-20 buoys or other technology, 5 mW
	Last updated: 8/19/2010				

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P-13641	PGE Central Coast WaveConnect Project*	5/14/2010	Study area: 45 square miles off Santa Barbara County, in depths ranging from 36 to 300 feet of water	PGE submitted app for prelim permit October 2009. Morro Bay Commercial Fishermen's Organization, NMFS, others commented/submitted motions to intervene. PGE submitted schedule of activities 6/28/2010. Aim to file PAD in May 2011.	Multiple arrays of wave energy conversion devices. 100 MW
	Last updated: 8/19/2010				
P-12585	San Francisco Bay Tidal Energy Project (Golden Gate Energy)	2/4/2010	San Francisco Bay. Footprint not specified.	The City of San Francisco compiled a notice of intervention and protest, citing environmental and process reasons. (They apparently want to build wave project on same site). FERC granted new (repeat) preliminary permit. Applicant submitted schedule of activities 3/22/2010. No change since June. Plan to file NOI/PAD in March 2011.	60 turbines/square mile, 1000 mW
	Last updated: 8/19/2010				
P-13679	San Onofre OWEC Electricity Farm (NEW)		Adjacent to San Onofre nuclear power plant, less than 3 nm off coast south of San Clemente. Area affected: 1.93 square nm. Less than 25 feet in depth. Plan to use nuclear power infrastructure (plant being decommissioned).	On 2/23/2010, JD Products submitted app for preliminary permit. (Submitted for filling by FERC in June after some changes). Note experimental technology. Waiting for approval of preliminary permit.	OWEG (Ocean Wave Energy Generation) devices. Experimental technology that uses wheels, a conveyor belt, and water buckets. 11,443 units generating 13% of California's 2007 energy generation capacity.
	Last updated: 8/19/2010				

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P-13498	Swave Catalina Green Wave Power Project (SARA, Inc.)*	9/15/2009	3/4 mile off west coast of Santa Catalina Island, Los Angeles County, between China Point and Ben Westin Point. 225-300 feet deep. .875 sq nm footprint. Undersea cable to Avalon. Located in EFH for groundfish, HMS, CPS.	No action by Swave on FERC website since 9/09; NMFS submitted letter to FERC noting that schedule of activities and progress report were delinquent, and that applicant had not contacted NMFS for consultation. Project appears stalled or defunct.	10-40 SWAVE buoys mounted in a staggered array. 1.5 - 6 mW
	<i>Last updated:</i> 8/19/2010				
Oregon					
P-12749	Coos Bay OPT Wave Park*	8/10/2010	Coos Bay, OR. 200 PowerBuoys in rows parallel to the beach, 25-40 fm deep. Currently, 1 mile wide by 5 miles long; eventually smaller. 2.5 miles from shore.	Submitted PAD 3/7/08. Applied for (subsequent) prelim permit 3/1/2010. (Old permit expiring). NMFS submitted comments 6/2010. New prelim permit granted 8/10/2010.	200-400 buoys, 100 mW; annual generation of 276,000 megawatt-hours
	<i>Last updated:</i> 8/19/2010	PAD submitted			
P-12743	Douglas County Project (Douglas County)	4/6/2007	Winchester Bay. Project would be powered by wave-driven air currents created by infrastructure built into existing jetty; installed capacity of 3MW. Applying for 50-year license.	Submitted six-month report 10/19/2009. Conducting wave tank modeling of different sites. Planned to file preliminary permit application (for second permit; first one expires after three years) in April 2010. However, no action on FERC website since October 2009.	One jetty-based structure
	<i>Last updated:</i> 8/19/2010	PAD submitted			

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Needs MMS lease	Principle Power Offshore Wind Project		Off Oceanside & Netarts, OR. Project will begin with a single WindFloat floating turbine (243 feet); eventually plan to expand to "an entire offshore wind farm, covering 12 to 15 square miles and capable of generating 150 to 200 megawatts."	In 2008, Tillamook Intergovernmental Development Agency and Principle Power signed MOU for phased development off offshore wind plant. 11/24/08 - signed MOU with Tillamook PUD. Principle Power acquired WindFloat technology, "a novel floating support structure for large offshore wind turbines." Conducted hazard identification study. Need MMS lease/license. Plan to begin Phase II expansion by 2012. (Little news on this project since fall 2009).	30 wind turbines, 5 MW each (150 MW)
	Last updated: 6/3/2010				
P-12713	Reedsport OPT Wave Park*		Reedsport, 2.5 miles off coast. 204-225' depth. Footprint: 0.25 sq. miles. Sandy bottom. Each PowerBuoy would have diameter of 36 sq feet and extend 30 feet above the water.	Filed "traditional" license application 2/1/2010 because prelim permit expired. FERC posted "Notice of settlement agreement and soliciting comments" August 10 2010. Deadline for comments: August 30. (PFMC has commented twice on this project) Comments on EA due January 14, 2011	10 OPT PowerBuoys (50 mw), in 3-4 rows.
	Last updated: 8/19/2010	PAD submitted			

Washington

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P-12690	Admiralty Inlet (Snohomish PUD)*	7/8/2010	Admiralty Inlet, Puget Sound. Bay/estuary habitat; 60-100 m deep; bottom is scoured pebbles and sand; much shipping & commercial traffic.	Submitted PAD 1/31/08. Second prelim permit issued July 2010. Comments by NMFS, USFWS, WDNR. FERC wants additional information. Letters from agencies reflect general support for the project.	Two 10-meter, 500 kW open-center turbines (OpenHydro Group), mounted on submerged foundations (underwater). Less than 5 MW.
	Last updated: 8/19/2010	PAD submitted		Additional environmental analysis, adaptive management/monitoring protocols need to be done	
P-12687	Deception Pass (Snohomish PUD)*	8/24/2010	Deception Pass, Puget Sound. Bay/estuary habitat; 30 m deep; rocky seafloor; mainly recreational use.	New preliminary permit issued Aug 2010 (old one expired). Plans to move forward with Admiralty Inlet project first. Filed progress report in January 2010.	Four 66-foot turbines, 1.6 megawatts each, 25 feet above sea floor. 6.4 MW; 20.7 gigawatts annually
	Last updated: 8/19/2010	PAD submitted		Snohomish PUD intends to pursue a pilot license for a project in Admiralty Inlet first, and then apply that learning to a project in Deception Pass.	
P-13058	Grays Harbor Ocean Energy and Coastal Protection (Washington Wave Co.)*	7/31/08	Grays Harbor. Up to 28 square miles. 1-3 miles offshore, 10-70 feet in depth. West of Ocean Shores and Westport.	Submitted six-month progress report in January. FERC informed them their draft NOI was overdue 8/4. No correspondence since. Appears stalled; may be defunct.	12 oscillating water column units, 6MW (Eventually, wind turbines & buoys, 168-418 mW)
	Last updated: 8/19/2010			Applicant planned to prepare NOI and PAD in spring/summer 2010.	

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P-12698	Guemes Channel (Snohomish PUD)	2/22/2007	Guemes Channel, Puget Sound. Bay/estuary habitat; 15 m. deep; gravel seafloor; commercial shipping traffic.	Submitted PAD 1/31/08. Filed progress report in January 2010. Conducting meetings and consultations with various communities, tribes, and agencies (including NMFS). No recent new activity.	Turbines (type, number unknown), 3.5 mW
	Last updated: 6/19/2010	PAD submitted			
P-12689	Spieden Channel (Snohomish PUD)	2/22/2007	Spieden Channel, Puget Sound. Bay/estuary habitat; 80 m. deep; gravel seafloor; commercial fishing use (salmon)	Submitted PAD 1/31/08. Filed progress report in January 2010. Conducting meetings and consultations with various communities, tribes, and agencies (including NMFS). No activity since April 2010.	Turbines (type, number unknown), 8.3 mW
	Last updated: 8/19/2010	PAD submitted			