

# Defunct West Coast Hydrokinetic Projects

State	Project	FERC number	Type	Location	Recent events
California	Humboldt County Wave Project (PGE)	P-12753	Defunct	Trinidad. Research area: 8 square miles; final size between 2-3 square miles. 20-40 fm (120-240 feet). 2-4 miles off shore	Preliminary permit surrendered. (Spring 2009)
	Humboldt WaveConnect Project (PGE)*	P-12779	Defunct	Eureka/Samoa. 10-20 buoys. 60-600 feet in depth. 2-3 miles from shore.	PGE withdrew application due to evolving regulatory process, environmental uncertainties, current state of technology, and financial hurdles.
	Fairhaven OPT Wave Power Project	P-12780	Defunct	Eureka. .5 mile wide by 4 miles long (n/s), 22-26 fm	Competing application in same location chosen over this one. (Spring 2008)
	Mendocino WaveConnect Project (PGE)	P-12781	Defunct	Fort Bragg. Research area: 68 square miles. 60-600 feet in depth. 0.5 to 6 miles from shore.	According to NMFS, PG&E plans to cancel this project because the harbor was determined to be unsuitable (too dangerous) to barge big machinery back and forth. (Spring 2009)
	Mendocino Wave Energy Project (Chevron)	P-12806	Defunct	Fort Bragg	Application withdrawn 8/31/07. Apparently the "lengthy approval process" in California led Chevron to pursue an opportunity in Alaska instead.
	Green Wave San Luis Obispo Wave Park*	P-13052	Defunct	Morro Bay. 3.1 x 7.1 miles. 1-3.5 miles from shore, 90-360 feet deep.	FERC cancelled their permit 9/23/10. Green Wave protested and asked for a rehearing. FERC said no. Green Wave never contacted CDFG or NMFS.
	Green Wave Mendocino Wave Park*	P-13053	Defunct	Mendocino. 2.5 x 6.9 miles (study area), up to 2.6 miles offshore, 120-390 feet deep.	FERC cancelled their permit 9/23/10. Green Wave protested and asked for a rehearing. FERC said no. Green Wave never contacted CDFG or NMFS.
	Centerville OPT Wave Energy Park	P-13075	Defunct	Eureka. 7.025 square miles, 2.5 miles offshore.	Permit surrendered 5/29/09 "to focus on Coos Bay & Reedsport projects."
	Sonoma Coast Hydrokinetic Energy (Sonoma Co.)	P-13076	Defunct	Sonoma Co.	Rejected - area too large, technology not specified.
	San Francisco Ocean Energy Project (Grays Harbor Ocean Energy)	P-13308	Defunct	20-30 miles off the coast, west of San Francisco, on the Outer Continental Shelf, within the boundaries of the Gulf of the Farallones NMS. Not visible from shore. Seafloor is sand, gravel, and mud. Considering using structures as artificial reefs.	Permit dismissed by FERC 4/17/09 because this is on the outer continental shelf and now under the jurisdiction of MMS.

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California	Ventura Ocean Energy Project (Grays Harbor Ocean Energy)	P-13309	Defunct	20-25 miles off the coast, on the Outer Continental Shelf (but elsewhere in the application it says 5-10 miles offshore). Not visible from shore. Seafloor is sand, gravel, and mud. Considering using structures as artificial reefs.	Permit dismissed by FERC 4/17/09 because this is on the outer continental shelf and now under the jurisdiction of MMS.
	Del Mar Landing Project (Sonoma County Water Agency)	P-13376	Defunct	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.	On 3/21/2011, FERC asked applicant why projects should not be suspended. Submitted progress report 7/25/2011. All operations suspended pending funding. FERC rescinded permit in July 2012.
	Fort Ross South Project South (Sonoma County Water Agency)*	P-13377	Defunct	Study area is 15.3 square nm. In state waters off Sonoma County, near Fort Ross, 20-50 m deep.	Progress suspended pending funding. On 3/21/2011, FERC asked applicant why projects should not be suspended. Preliminary permits may be cancelled if NOI and Draft License Applications are not filed by July 8, 2011. FERC rescinded permit in July 2012.
	Fort Ross Project North (Sonoma County Water Agency)*	P-13378	Defunct	Study area is 10.4 square nm.	Progress suspended pending funding. On 3/21/2011, FERC asked applicant why projects should not be suspended. Preliminary permits may be cancelled if NOI and Draft License Applications are not filed by July 8, 2011. Filed progress report 7/25/2011. FERC rescinded permit in July 2012.
	Swave Catalina Green Wave Power Project (SARA, Inc.)*	P-13498	Defunct	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.	Preliminary permit surrendered 11/9/2010.
	PGE Central Coast WaveConnect Project	P-13641	Defunct	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. Submitted 6-month progress report 10/2010. No activity since then. Surrendered permit 5/3/2011.

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California	San Onofre OWEC Electricity Farm*	P-13679	Defunct	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).	Preliminary permit issued 10/10; NMFS commented 12/10; FERC rejected notice of intent and PAD 12/10 because applicant did not conduct consultations and meet other requirements; applicant submitted revised PAD 2/11. Submitted notice of intent to file license application in Dec 2011. In Feb 2012, asked FERC if they could withdraw temporarily from licensing process while pursuing funds. Developer said he was unwilling to expend funds on the licensing process. In Feb 2012, FERC asked why they shouldn't terminate process since developer was unwilling to expend funds. Developer plans to apply to DOE for grant. Developer insisted he wanted to suspend process. FERC terminated process in March 2012.
	San Francisco Oceanside Wave Energy Project (City and County of S.F.)	P-13779	Defunct	Eight miles west of San Francisco in the "exclusion zone" of the Monterey Bay National Marine Sanctuary (the area excluded from the sanctuary), near the outfall of a waste water treatment plant (therefore minimizing project impacts).	FERC dismissed application 4/30/09 because it is on the outer continental shelf and MMS now has jurisdiction. Permit number now applies to hydro project in midwest.
	Green Wave Mendocino (NEW AND DEFUNCT)	P-14291	Defunct		Filed application on 9/23/2011. FERC said application was deficient. Permit denied in July 2012 because too similar to previous permit application filed by same company, which was cancelled by FERC because Green Wave did not provide updates and other documents in a timely manner.
	Killarc Open-Channel Turbines (NEW, INLAND)	P-14433	Defunct	Killarc Canal, CA (near Fall River Mills, Shasta County)	Application for preliminary permit filed 7/13/12. The project is proposed to provide new generation within the boundary of the Killarc Development of the P-606 hydroelectric project, by capturing the energy potential of diverted water before it reaches the existing project forebay. PGE owns or leases all of the P-606 project facilities. Proposal dismissed because PGE proposes to remove the dam that would be the site of the energy project.

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California	Killarc Open-Channel Turbines (NEW, INLAND)	P-14434	Defunct	Killarc Creek, CA, near Whitmore, Shasta County	Application for preliminary permit filed 7/13/12. The project is proposed to provide new generation within the boundary of the Killarc Development of the P-606 hydroelectric project, by capturing the energy potential of diverted water before it reaches the existing project forebay. PGE owns or leases all of the P-606 project facilities. Proposal dismissed because PGE proposes to remove the dam that would be the site of the energy project.
Oregon	Aquamarine Power Offshore Wind Power Project*	None	Defunct	Lincoln County or Tillamook County, Oregon. Device would be deployed in less than 50 feet of water.	Received study grant from Oregon Wave Energy Trust in Nov 2010. Proposing 2000-2500 acres for lease (state waters). Goal was to have three devices in demonstration by 2013. Closed office in November 2011, citing regulatory uncertainty. "We are at present unable to proceed until we are given some certainty over seabed leases pending completion of the Territorial Sea Plan process," said Martin McAdam, Aquamarine's CEO, in a statement.
	Columbia River project (Oregon Tidal Energy Co.)	P-12672	Defunct	Lower Columbia River bottom.	Preliminary permit surrendered - "insufficient development potential exists for either a full development or tidal project." (3/2008)
	Lincoln County Wave Energy Research & Demonstration Center (Lincoln Co.)	P-12727	Defunct	Lincoln County	Dismissed by FERC (5/2008)
	Newport OPT Wave Park	P-12750	Defunct	Newport/ Waldport. 200-400 buoys in 3-6 rows parallel to the beach. 3.5 miles wide (e/w) by 5 miles long (n/s); eventually as little as 0.4 miles by 3.1 miles, 20-35 fm, 3-6 miles off coast of Lincoln County	Preliminary permit surrendered 4/15/2009 in order to focus on Coos Bay and Reedsport projects.
	Coos County Wave Project (Finavera)	P-12752	Defunct	Bandon. 5.5 square mile water footprint, 1.6 miles e/w by 3.4 miles n/s.	Permit cancelled 6/26/08 because no progress report or PAD was filed.
	Florence Wave Park Project (Energetech)	P-12793	Defunct	Florence. Each structure's footprint is 35x15 meters, not counting cables. Structures extend 7 meters above water and 15 below.	Proposal withdrawn - no reason given. (Spring 2008)

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Oregon	Oregon Coastal Wave Energy Project (Green Wave, TIDE)*	P-13047	Defunct	Nehalem, Rockaway, Garibaldi, Netarts, Nestucca, and Neskowin.	TIDE surrendered preliminary permit. (Summer 2010)
Washington	Makah Bay Offshore Wave Energy Pilot Project (Finavera)	DI02-3	Defunct	Makah Bay (Neah Bay). 60x240 feet at ocean surface; 625x450 feet at ocean floor. Sandy bottom with rocky outcroppings.	Five-year license issued December 21, 2007. Finavera withdrew project in order to focus on wind energy.
	Tacoma Narrows (Tacoma Power)	P-12612	Defunct	Tacoma Narrows, Puget Sound. In estuary (HAPC). Footprint unknown.	Found that tidal power in Tacoma Narrows may not be economically or technically feasible at this time. (2/2009)
	Rich Passage (Snohomish PUD)	P-12688	Defunct	Rich Passage, Puget Sound. Bay/estuary habitat; 15-22 m deep; gravel seafloor; commercial & naval traffic.	Surrendered preliminary permit 10/7/08.
	Spieden Channel (Snohomish PUD)	P-12689	Defunct	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. This project appears to be defunct (Snohomish is focusing on Admiralty inlet), but the permit has not been formally revoked.
	Agate Passage (Snohomish PUD)	P-12691	Defunct	Agate Passage, Puget Sound. Bay/estuary habitat; 10 m. deep; sand/gravel floor; used by pleasure craft	Surrendered preliminary permit 10/07/08
	San Juan Channel (Snohomish PUD)	P-12692	Defunct	San Juan Channel, Puget Sound. Bay/estuary habitat; 135+ m. deep; gravel seafloor; commercial fishing use (salmon)	Surrendered permit for this site - not feasible. (10/2009)
	Guemes Channel (Snohomish PUD)	P-12698	Defunct	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). This project appears to be defunct (Snohomish is focusing on Admiralty inlet), but the permit has not been formally revoked.

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Washington	Willapa Bay Tidal Energy Plant Water Power Project (Natural Currents)	P-12729	Defunct	Willapa Bay. 825 meters SSW of State Road 105, 365 m offshore. Footprint unknown. Estuarine habitat. Aiming for installation in 2010.	Permit canceled (8/2009) because applicant did not file NOI and draft permit application.
	Grays Harbor Ocean Energy and Coastal Protection (Washington Wave Co.)*	P-13058	Defunct	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. FERC cancelled preliminary permit 9/21/2010.
	Green Hydropower Grand Coulee Project (inland waters)	P-13522	Defunct	One quarter mile below Grand Coulee dam.	Applicant voluntarily withdrew application 7/2010.
	Green Hydropower Chief Joseph Project (inland waters)	P-13525	Defunct	Just below Chief Joseph dam near Highway 17 bridge (salmon habitat)	Applied for preliminary permit 6/19/09. Application withdrawn January 2010.
	Green Hydropower Rocky Reach Project (inland waters)	P-13534	Defunct	On the Columbia River just below the Rocky Reach dam. (Salmon habitat)	Application for preliminary permit submitted 7/07/09. Revised application submitted 8/17/09. Motion to intervene by WDFW. Application withdrawn Jan 2010.