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MEDIA TIP
April 25, 2017

Engineers map full magnitude of BC wave energy potential for first time

Researchers have mapped the full, fine-grained scale of the potential for wave energy production off the British Columbia coastline. For the first time, the province now has the detailed information it needs to build the foundations of a future wave energy industry.

The findings—together with a comprehensive introduction to the concept of wave power, how wave energy converters work, and the opportunities and challenges of this energy resource—are described in a new full-colour *Wave Energy Primer* produced by the Pacific Institute for Climate Solutions (PICS) at the University of Victoria. The report will be released this Thursday (April 27) at the conference of UVic's Institute for Integrated Energy Systems (IESVic), EnVision 2017.

Apart from tides, waves are the most energy-dense form of all intermittent renewable energy sources. And global wave energy inventories have shown that Canada's Pacific west coast possesses one of the most energetic wave climates in the world.

But while these global inventories convey the magnitude of this untapped carbon neutral resource, up to now they've been very broad-stroke analyses.

Wave energy technology developers, project investors and government policy-makers require detailed spatial and temporal wave resource information to ensure proposed deployment sites are suitably energetic (but not too destructive) to optimize wave energy converter (WEC) performance. That important work has now been performed by the authors of this report.

"The West Coast Wave Initiative (WCWI) within IESVic has built a 12-year database of BC wave conditions that is globally unique in its extent and comprehensiveness," says Bryson Robertson, WCWI program manager and lead author of the *Wave Energy Primer*. "Nowhere else does anyone have this level of fine-grained detail. And what that detail tells us is exciting."

The WCWI team, led by UVic mechanical engineer Brad Buckham, developed a computer model of the BC coastline and combined this with data from wave measurement buoys, revealing several potential locations for wave energy development, in particular a sweet spot just off the coast of Ucluelet.

Media is welcome to attend a special presentation by Robertson on why it's time for BC to take leadership in the global marine energy market. An advance copy of the primer is available on request.

What: Launch of "Wave Energy: A Primer for British Columbia" by Bryson Robertson
When: 11:45 a.m., Thursday, April 27
Where: B150, Bob Wright Centre, University of Victoria

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PICS is hosted and led by the University of Victoria in collaboration with the University of British Columbia, Simon Fraser University and the University of Northern British Columbia.