



NRC-CNRC

*Institute for
Ocean Technology*

A National Research Initiative

Research: Who needs it?
Who is doing it?



National Research
Council Canada

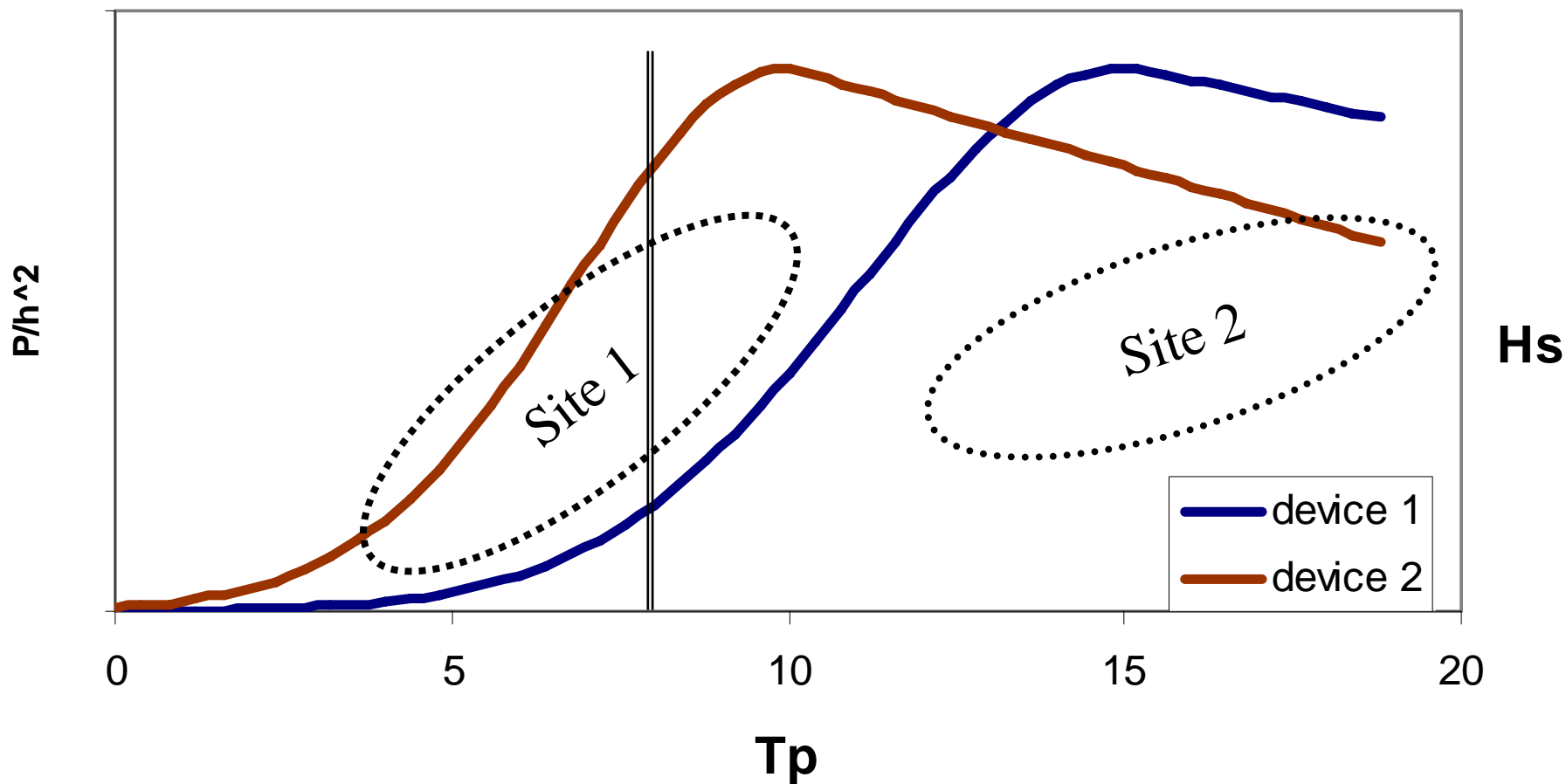
Conseil national
de recherches Canada

Canada

Address the Risks

- Energy conversion potential – risk for investors
- Risks to infrastructure - harsh environment
- Risks to environment - infrastructure flaws

Power output compared to site characteristics



Engineering Predictions of Energy Output



$V(z)$



Z

Performance in Harsh Environment



Cross-over technologies

Risks to the environment

- Cross-over experience
- Numerical modeling and simulation
- Field trials

Aquaculture installations



Mitigate the Risks

- Energy conversion potential
- Risks to infrastructure - harsh environment
- Risks to environment – real or perceived
- Reliable engineering predictions
- Technologies to reduce the risks
- Information for public interest groups and policy makers

Canadian Research Initiative

- A network of Canadian research expertise and facilities
 - for ocean energy technology developers
 - for ocean energy project developers
- A toolbox for ocean energy engineering evaluation
 - Numerical simulation and evaluation
 - Physical model experiments
 - Field trials and monitoring (device and site evaluation)
- Initiation at OREG 2005 Symposium, St. John's

Research Network

- Will connect project developers to expertise
- Will assist in securing support for research
- Will have a page on the OREG website
- Will have a name

Network Members

- University of British Columbia
- University of Victoria
- College of the North Atlantic
- NRC Institute for Ocean Technology
- NRC Canadian Hydraulics Centre
- Marine Institute (Memorial University)

Invited Members

- University of Manitoba
- Dalhousie University
- National Water Research Institute
- University of New Brunswick
- And



Network Members

- Have (at least one) project with another member
- Agree to present at next OREG symposium
- Provide information profile for listing on OREG website

- International members welcome

- Contact: fmary.williams@nrc-cnrc.gc.ca

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Science
— at work for —
Canada



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