

Marine Renewables Canada 2016 Annual Conference Marine renewable energy in a new era

November 3-4, 2016
Pier 21 ● 1055 Marginal Road ● Halifax, Nova Scotia

Day One: November 3, 2016

Elisa Obermann, Executive Director, Marine Renewables Canada

9:10 am – 9:30 am Keynote Address

Honourable Michel P. Samson, Minister, Energy & Acadian Affairs, Province of Nova Scotia

9:30 – 10:45 am Session 1: Advancing the strategy in Nova Scotia

Canada's strategy to work with world-leading developers, develop a domestic supply chain, and build knowledge and experience in the tidal energy industry is becoming a reality in Nova Scotia. Leadership in Nova Scotia is driving tidal energy into an era of development, deployment, and innovative solutions. This session will highlight the roles government, industry, and other organizations are playing to help Canada/Nova Scotia achieve critical milestones towards building a sustainable industry and gain a competitive advantage in the growing global industry.

Chair: Elisa Obermann, Executive Director, Marine Renewables Canada

Speakers:

- Rising with the tides: The Development of a new renewable energy sector in Nova Scotia
 Sandra Farwell, Director, Sustainable & Renewable Energy, Nova Scotia Department of Energy
- Sustainable development through research and collaboration
 Stephen Dempsey, Executive Director, Offshore Energy Research Association (OERA)
- Supporting the future of tidal energy development

 Tony Wright, General Manager, Fundy Ocean Research Center for Energy (FORCE)

10:45 am – 11:15 am Networking Refreshment Break

11:15 am - 12:30 pm Session 2: Transitioning to a low-carbon future in Canada

What does the Paris Agreement, pursuit of a pan-Canadian climate plan, and a growing focus on clean innovation mean for the marine renewable energy sector? Perhaps now more than ever, clean electricity is viewed as a comparative advantage for Canada – one that positions us to lead in the global clean energy economy. This session will focus on Canada's transition to a low-carbon economy, providing insight on how clean innovation and technologies will play an increasing role in Canada's future growth – providing food for thought on the role marine renewable energy has to play.

Chair: Chris Campbell, Strategic Advisor, Marine Renewables Canada

Speakers:

- A Canadian Opportunity: Tackling Climate Change by Switching to Clean Power <u>Clare Demerse</u>, Federal Policy Advisor, Clean Energy Canada
- Linking the environment and economy
 James Snider, VP Science, Research & Innovation, World Wildlife Fund
- Cleantech and ocean innovation through COVE (Centre for Ocean Ventures and Entrepreneurship)

 Sheila Paterson, Chief Operating Officer, Institute for Ocean Research Enterprise (IORE)
- Building a low-carbon energy future
 Christian Richard, Vice President, Special Projects, Emera Inc.

12:30 pm – 2:00 pm Networking Buffet Lunch

2:00 – 3:15 pm Session 3: The evolving global marketplace—updates from marine renewable energy markets

The global marine renewable energy industry continues to advance – with tidal energy deployments in France and Scotland, continued interest and supportive policies being established across the EU and the USA, and more countries gaining interest in becoming active in the market. At the same time, changes in government, bilateral agreements on clean energy, and an increasing focus on climate action have implications for the marine renewable energy sector. This session will provide updates on marine renewable energy development around the world and provide insight on opportunities, challenges, and future growth.

Chair: Melissa Oldreive, Director of Operations, Fundy Ocean Research Centre for Energy (FORCE)

Speakers:

- Ocean energy opportunities in Europe 2016, take-off year
 Simon De Pietro, Co-Chair, Ocean Energy Europe
- The Ocean Energy race an update from the UK
 Sue Barr, Chair Marine Energy Policy Forum, RenewableUK
- U.S. MHK activity current status and outlook
 Damian Kunko, Vice President for Business Development, Strategic Marketing Innovations (SMI)
- Chile en route with non-conventional renewable energy, opening now for marine renewable energy
 Luc Martin, Executive Director, MERIC Marine Energy Research and Innovation Center

3:15 – 3:45 pm	Networking Refreshment Break
3:45 – 5:00 pm	Session 4: Progress in innovation—state of technologies

Device developers are continuing to test and refine their technologies to effectively harness power from wave, tidal, and river current resources. This session will feature highlights of developers' experiences including: Progress, challenges, lessons learned, and future outlook/plans.

Chair: Sue Molloy, Principal, Glas Ocean Engineering

Speakers:

- Lynn Blodgett, President & CEO, Bigmoon Power
- Joe Sieber, CEO, GWFT Go with the flow technologies
 & Bill Jones, Seeley's Cove Research
- **Corby Peterson**, *Director of Business Development*, Water Wall Turbine
- Mr. Hans van Breugel, President, Dutch Energy from Water Association & CEO, Tocardo
- Andrew Manley, Executive Director, Tidal Lagoon Power

5:30 - 7:30 pm

Conference Welcome Reception

Day Two: November 4, 2016

9:00 – 10:15 am Session 5: Securing Canada's advantage in river current energy

Canada's Marine Renewable Energy Technology Roadmap highlighted the significant opportunities that could be realized for Canada by developing river current (hydrokinetic) energy. Canada has massive river resources, a number of river energy device developers, a river test centre, and ongoing research to solve technical and environmental questions. This session will examine river current energy activity underway in Canada and how these activities can be built upon to access opportunities beyond our borders.

Chair: **Dean Steinke**, *Director of Operations*, Dynamic Systems Analysis Ltd.

Speakers:

- Furthering the knowledge on river current energy opportunities

 Ghanashyam Ranjitkar, Research Engineer, Natural Resources Canada

 Julien Cousineau, Research Engineer, National Research Council Canada

 Jinxing Huang, Senior Advisor, (CFD), Natural Resources Canada
- Enabling river current energy advancement
 Eric Bibeau, Director, Canadian Hydrokinetic Turbine Test Centre
- Building strategic partnerships—river energy as a solution for remote communities and First Nations
 Clayton Bear, President, CEO, CTO, Founder & Board Director, New Energy Corporation
- Accessing market opportunities
 Voytek Klaptocz, Technical Director, Mavi Innovations

10:15 – 10:45 am Networking Refreshment Break

10:45 am - 12:00 pm Panel: From plan to reality - Fundy's tidal energy future

With many challenges to tackle, tidal energy developers have persevered and continue to look at the Bay of Fundy as one of the best places for development in the world. This session will feature Fundy project developers discussing their short- and long-term vision for these projects: What is their motivation and end goal (here and globally)? What is needed to ensure the first deployments are a jumping-off point for future success in the industry?

Chair: Doug Keefe, President, Doug Keefe Consulting

Speakers:

- Nils Hirsch, General Manager, Black Rock Tidal
- John Woods, Vice President of Energy Development, Minas Tidal
- Simon De Pietro, CEO, DP Energy

12:00 pm - 1:30 pm Networking Buffet Lunch

1:30 – 2:45 pm Session 7: Invigorating wave energy

Canada has tremendous wave energy potential, several device developers with technology development underway, and critical research being carried out to support future development. Yet, progress in wave energy has been slower than tidal, not just in Canada, but also globally. This session will provide an overview of wave activities in Canada that are building a foundation for future growth. It will also explore international strategies for wave energy development that may present new opportunities.

Chair: Mike Graham, Administrator - Applied Research (Burin Campus), College of the North Atlantic - Wave Energy Research Centre (WERC)

Speakers:

- Wave power's global reset button
 Scott Beatty, Director of Research and Development, Cascadia Coast Research
- Wave Energy in BC: Knowledge leading to Action
 <u>Dr. Brad Buckham, Director</u>, West Coast Wave Initiative University of Victoria
- Strategy and progress on wave energy in the US
 Jason Busch, Executive Director, Oregon Wave Energy Trust

2:45 – 4:00 pm Session 8: Growing the *global* industry through knowledge and collaboration

As an emerging industry, marine renewable energy has benefited from the sharing of knowledge and international collaboration. Many initiatives underway are ensuring that the industry is developing in a sustainable manner by building the collective knowledge and partnering on research and innovation. This session will feature some of the research, partnerships, and collaborations that are supporting industry efforts in Canada and contributing to the overall global industry.

Chair: Stephen Dempsey, Executive Director, Offshore Energy Research Association (OERA)

Speakers:

- Growing the knowledge base—state of the science
 Genevra Harker-Klimeš, Marine Sciences Laboratory, Pacific Northwest National Laboratory
- Engaging locally and globally to address research challenges
 Anna Redden, Director of the Acadia Tidal Energy Institute, Acadia University

- Establishing standards through research and collaboration

 Bill Rawlings, Co-Chair, TC114 Canadian Sub-committee & Director of Operations, Mavi Innovations
- Generating knowledge through partnerships Peter Stern, VP Engineering, Rockland Scientific

4:00 pm	Closing Dana Morin, Chair, Marine Renewables Canada
5:30 pm	Post-Conference Mixer