

G7 Energy Ministers Meeting



The following remarks were made by the Chairperson of the FORCE Board of Directors, Janet MacMillan at a roundtable discussion on offshore energy development at the G7 Energy Ministers meeting in Halifax, Nova Scotia on Friday, September 21, 2018. In the room, were energy ministers from G7 nations and invited guests, including representatives from the International Energy Agency, the Kingdom of Norway, Equinor Canada, Marine Renewables Canada, and Nova Innovation.

Thank you very much for the opportunity to speak to you today. I am pleased to welcome you to my home, the Province of Nova Scotia. As Canada's ocean playground, it is only fitting to be discussing offshore energy here today.

My name is Janet MacMillan and I am Chair of the Board of Directors at FORCE – the Fundy Ocean Research Center for Energy.

FORCE is a non-profit entity located here in Nova Scotia with the mandate to understand if in-stream tidal energy turbines, which operate like underwater windmills, can be a sustainable solution for our clean energy future and response to climate change. We refer to ourselves as the catalyst for the safe development of clean tidal energy technologies.

As Canada's leading test facility for this sector, FORCE is the forum to ask and answer the questions about the viability of this sector moving forward:

- Is tidal energy an affordable energy solution?
- Can it co-exist with other marine users?
- Is it safe for marine life?

As to the question of affordability, we know there is a capital burden associated with proving the viability of emerging technologies. Part of FORCE's role is to serve as *host* to five project developers. We do this by providing shared infrastructure such as subsea electrical cables and grid connection. These shared resources help to reduce project costs, which are significant at this early stage.

In Nova Scotia, we are presently experiencing the challenges associated with financing these early demonstration devices. This has introduced a degree of uncertainty, and some doubts, about the industry's future. But it also provides us with an opportunity to learn from experience, adapt, and continue to lower risk. Not unlike the challenges and opportunities faced and embraced by other innovations in our history.

Another part of FORCE's mandate is to have conversations with Nova Scotians on tidal power. Personally, I have facilitated meetings with fishers and have engaged with stakeholders regarding their concerns and questions. What I've personally experienced is general support and interest in our work. This is backed up by recent public opinion research indicating 81% support for tidal energy demonstration and annually, our Visitor Centre welcomes approximately 5,000 visitors. In fact, if you have the time during your stay here in Nova Scotia, I encourage to come visit us in Parrsboro.

Lastly, tidal developers must provide clear and convincing evidence that their technology is safe, and that any impacts are acceptable. To-date, findings are encouraging – internationally, findings suggest marine life avoids turbines. However, we know there is more work to be done and that is fundamental to FORCE's role.

Since FORCE's creation in 2009, we have been home to a significant amount of research and monitoring. Our environmental effects monitoring, and research and development initiatives are valuable here in Canada, but are also part of the broader conversation about environmental effects. This includes connections with Annex IV, established in 2010 by the International Energy Agency's Ocean Energy Systems to examine environmental effects of marine renewable energy development amongst its fourteen member nations.

Key to understanding the affordability, acceptability, and sustainability of tidal energy requires getting devices in the water, getting wet, and, as I've said, learning from these experiences. Already we've seen significant learnings from across the globe – projects are underway in the United Kingdom, the United

States, Australia, France, Ireland, China, and South Korea. Others, like Chile, India, and Japan are also taking early steps.

The U.K. leads the sector, with over 1,800 megawatts in development. Recently, a single project in Scotland reached three gigawatt hours of production – a significant milestone at this early stage.

And we continue to make progress here in Nova Scotia. Just [last] week, the Province of Nova Scotia announced the permitting of a new tidal energy project for Black Rock Tidal Power in the Outer Bay of Fundy. This is part of staged approach to testing, consistent with the Province's objectives of learning by doing and incremental development.

As Natural Resources Canada Minister Sohi stated in his announcement [on September 20] of new \$29.8 million in funding for a tidal project led by Halagonia Tidal Energy at our site, public funds are critical in spurring innovation and building new and important industries.

Getting the industry moving takes the considerable political will of both national- and regional-level governments. In Canada, we have been fortunate to have the support of successive federal and provincial governments.

This continued commitment has been instrumental in getting us where we are today in Canada – home to an active test site, leading innovative research and monitoring, and building the skillsets for tomorrow. This is very important and will continue to be as in-stream tidal energy continues to learn and grow.

We at FORCE are committed to this imperative. We feel we have the courage and the patience, and with continued collaboration with government and industry, we will learn from the science and technology, take the right care, and succeed.

In closing, I again want to welcome you to our beautiful province.

Thank you very much.

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