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## Top 10 Things You Need to Know About Tidal Energy in Nova Scotia



We are harnessing the power of the sun and moon to create energy from the tides – right here, **right now**, in Nova Scotia.

### 1. Tidal energy offers significant economic opportunities.





By 2040, the tidal energy industry could contribute up to \$1.7 billion to Nova Scotia's gross domestic product (GDP), create up to 22,000 full-time jobs, and generate as much as \$815 million in labour income, according to [a study commissioned by the Offshore Energy Research Association of Nova Scotia](#) (OERA).

Local businesses--large and small--are already getting in on the action. Since its project began, Cape Sharp Tidal has awarded \$33 million in local procurement contacts to companies like Hawboldt Industries, Aecon Group, Lengkeek Vessel Engineering, and Atlantic Towing.

## 2. Tides provide Nova Scotia with a predictable and consistent form of renewable electricity.



Tides are caused by the gravitational pull of the sun and moon, and the rotation of the earth, moving the oceans. This creates force--and energy--that can be transformed into something useful, like electricity.

Tidal energy projects provide long-term price stability because the 'fuel' is free. And since it's produced right here at home, it won't fluctuate with market demands.

## 3. Tidal power uses no fuel and produces zero emissions – entirely green and renewable!



Unlike fossil fuels such as coal, tidal energy will produce clean and renewable energy to power our homes and businesses. Producing power from the natural flow of the tides will reduce our impact on the environment and our contribution to climate change. It will also contribute to a cleaner, healthier environment for Nova Scotians.

#### **4. Three hundred megawatts of tidal energy can power one quarter of Nova Scotia homes.**



Government's [Marine Renewable Energy Strategy](#) committed to approving up to 300 megawatts (MW) of in-stream tidal energy. Deployments getting to this point will be based on adaptive management principles--*learning by doing*--

to ensure industry development occurs safely and responsibly.

## 5. ...And that's only a fraction of the Bay of Fundy's 2,500 megawatt potential.



The Bay of Fundy has the highest tidal range in the world and flows 160 billion tonnes of water in and out of its passage twice a day. That amount of force is more than the combined flow of all the rivers in the world.

At Canada's leading test site for tidal energy, the [Fundy Ocean Research Center for Energy](#) ('FORCE'), the tide flows as fast as five meters per second!

## 6. Nova Scotia is on its way to having one of the first large-scale grid-connected tidal arrays in the world!





In spring 2016, Nova Scotia will be home to one of the first large-scale grid connected arrays in the world. Cape Sharp Tidal has plans to deploy two tidal turbines at its berth in the Minas Passage.

In the coming years, Nova Scotia will see deployments from other companies, including Atlantis Operations, Black Rock Tidal Power, DP Energy, Minas Energy, and Fundy Tidal Inc.

## **7. We are building capacity and expertise in tidal energy that's already in demand around the world.**

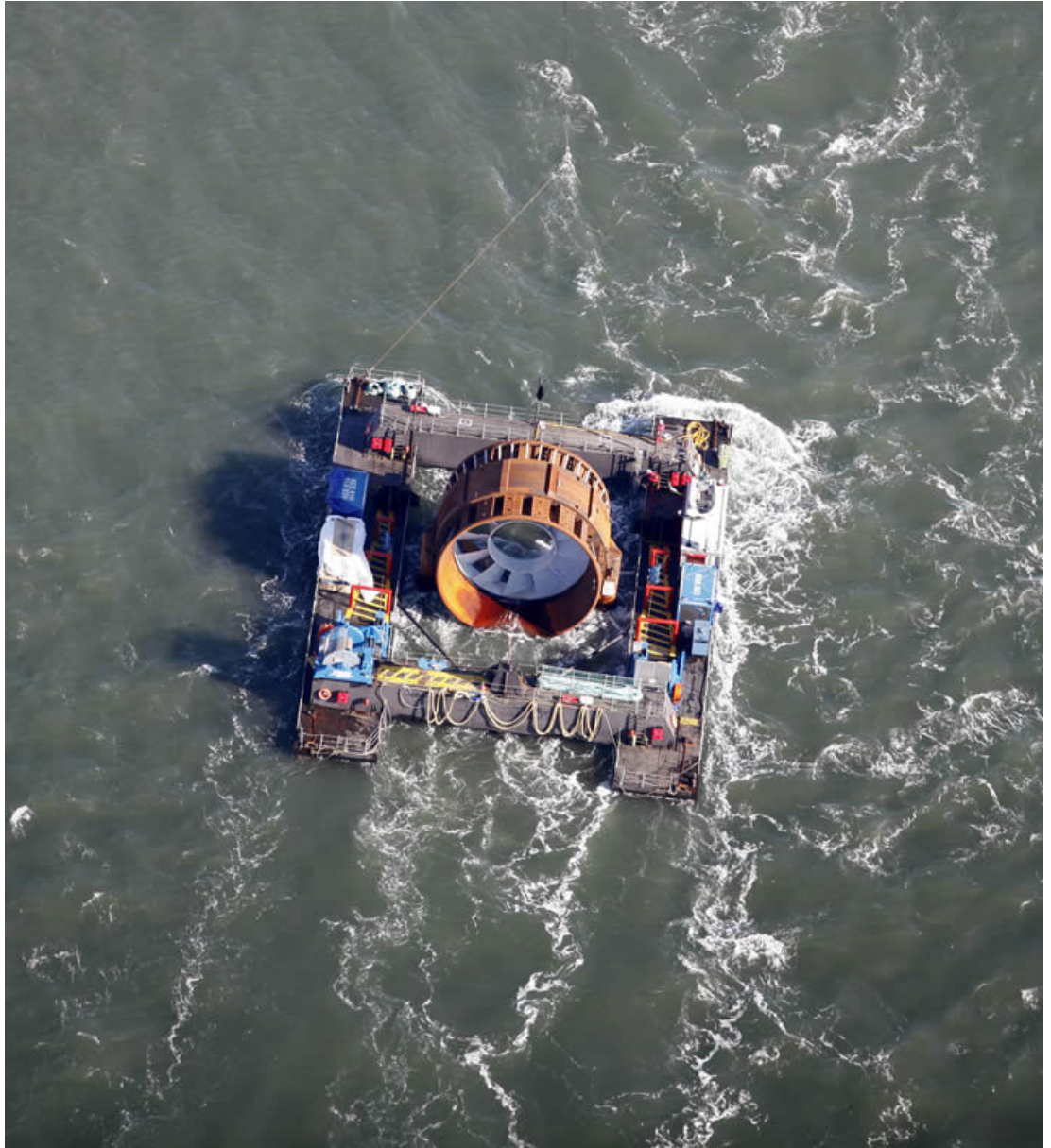


Countries all over the world are looking to the ocean for the next generation of clean, renewable energy projects. Nova Scotia has been a leader in this industry since 1984 and with that leadership, we have a strategic opportunity to develop expertise that can be exported around the world.

In 2015, Nova Scotia and the United Kingdom announced the [results of a research competition](#) to support innovative environmental sensing technologies. This is just one example of how Nova Scotians are exporting their ocean technology and marine expertise around the world.

## **8. Nova Scotia has 450 PhDs in ocean-related disciplines.**





That's the world's highest concentration of researchers in this sector.

**9. In 2015, Nova Scotia passed legislation for the safe and responsible development of our tidal energy sector.**





The [Marine Renewable-energy Act](#) clearly defines the path from demonstration to larger, commercial development. It gives the industry and public more certainty around what is required to ensure development is safe, viable, and sustainable.

## 10. The *Fundy Standard*: if you can do tidal energy here, you can do it anywhere.



The environmental conditions in the Bay of Fundy have been compared to the eye of a hurricane. Because of these unique conditions, Nova Scotia has developed what the industry refers to as "The Fundy Standard"; if a device can work in the harsh climate in the Bay of Fundy it can work anywhere in the world. This makes Nova Scotia a global leader in setting industry standards for tidal energy.

Want to learn more about tidal energy in Nova Scotia? [Here's the very latest.](#)

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