

tion for tidal turbines. In this talk we examine the potential power that could be extracted from Minas Passage and the effect that extracting the power would have on the surrounding tides. Mathematical and numerical models suggest that a maximum of 7 GW of power can be extracted by turbines. The simulations also show that any power extraction in Minas Passage pushes the Gulf of Maine-Bay of Fundy system closer to resonance with the forcing tides resulting in increased tidal amplitudes throughout the Gulf of Maine. While extraction of the maximum power will result in significant changes, over 2.5 GW of power can be extracted with less than a 5% change in the tidal amplitude at any location. Finally, we examine how isolated turbines and turbine fences might be best located in the Minas Passage by examining the fluid dynamics of flow past a turbine.

Assessment of tidal current energy in the Bay of Fundy

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The Bay of Fundy has the world's highest tides. In particular, the Minas Basin has tides with a range of over 12 m. The Minas Passage, which connects Minas Basin to the Bay of Fundy, has mean tidal currents of over 3 m/s making it a promising loca-