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In association with the BlueGreen SeaAhead Challenge, we propose a system of partnership between local Rhode Island mussel harvesters and offshore wind farms, both existing and future. Shellfish longlines anchored on wind farming sites offer a more resilient mussel harvest and impressive yield, and would boost wind farms' public perception and increase long-term ecological health. The possibilities are limitless as wind farms develop up and down the coast; this project would allow local communities to benefit from the growing offshore wind boom, all while helping to preserve biodiversity and sea ecosystems.

This plan involves the development and permitting of offshore aquaculture infrastructure on sites already occupied by wind turbines. Grouping the structures provides security from the high-energy ocean environment and promoting the growth of keystone shellfish species will have far-reaching benefits in offshore ecosystems. The deepwater environment is much more resistant to the accelerating effects of climate change than inshore shellfish farms. As waters become more acidic and sea temperatures rise, colder, deeper waters become more favorable to seafood species. Tapping into offshore resources is both protection from and insurance against climate damage; it will add much-needed stability to the biodiversity of Narragansett bay and surrounding ocean, as well as being longer-lasting, independent of environmental degradation.

Within years of development, we estimate that one of our proposed mussel farms could produce 1,300 pounds of market ready mussels per week during the growing season, translating to about \$2,600 per week on a site with five turbines. As an expansion of existing harvester's crops, this would more than offset future decline in mussel populations inshore. Taking into consideration the long-term reliability of this project, harvesters have a clear incentive to take advantage of offshore aquaculture.

Wind farms also have a lot to gain from this partnership- frequent trips to harvest on site offer options for site surveillance and maintenance, potentially cutting down on costs for both harvesters and wind farming ventures. Turbine operators also stand to gain a lot of cultural capital among fishing and shellfishing communities by working side by side and becoming a valued presence in Rhode Island waters and elsewhere as wind power continues to grow.

This project can bring Rhode Island shellfishermen into the slipstream of the quickly-growing wind power industry. It offers huge ecological benefits, and is easy to adapt to include more aquaculture crops such as scallops and kelp to push even more competitive margins. We hope that this project can happen while we are still in the early days of the offshore wind explosion so that our local harvesters stand the most to gain and, ultimately, the project will serve as a template so that any new wind farm can support aquaculture.