

Testimony of Ivan J. Fernandez, University of Maine Climate Change Institute,
before the Joint Standing Committee on Energy, Utilities and Technology of the
130th Maine Legislature, in support of LD 336, "An Act To Encourage Research To
Support the Maine Offshore Wind Industry"

Senator Lawrence, Representative Berry, and distinguished members of the Joint Standing Committee on Energy, Utilities and Technology: my name is Ivan Fernandez. I have been Professor at the University of Maine for four decades, with my research focusing on the biogeochemical responses of ecosystems to a changing chemical and physical climate. For the past 20 years I have served on various advisory panels for the U.S. Environmental Protection Agency and its Science Advisory Board. I have been particularly committed to providing the best available science in support of state policy, and most recently have had the privilege of serving on the Maine Climate Council and co-Chairing the Council's Scientific and Technical Subcommittee.

The escalating evidence of a changing climate and its accumulating effects on Maine are clear as chronicled in the University's [Maine Climate Future](#) reports, and the Council's 2020 Scientific and Technical Subcommittee 370 page report "[Scientific Assessment of Climate Change and Its Effects in Maine](#)". That evidence is all around us, with rising sea levels swallowing coastal infrastructure, a warming Gulf of Maine driving dramatic shifts in fisheries like lobster with impending population declines, weather extremes from downpours and drought inflicting dire hardships on Maine farms, insect pests and warming altering the character of Maine's future forests, fading winters challenging a recreation industry, and heat and Lyme disease altering all aspects of the lives of Mainers.

The [six hottest years on the planet](#) were the last six years and most indicators of a changing climate are not only increasing, but the rate of change is accelerating. It is for this reason that the Intergovernmental Panel on Climate Change issued a [report](#) in 2018 detailing the growing costs to humans of accelerating climate change that

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demanding we slash greenhouse gas emissions dominated by burning fossil fuels to avoid the dire consequences of planetary warming greater than 1.5 °C by 2050. Maine’s Climate Action Plan, “[Maine Won’t Wait](#)”, set us on the course to reduce gross greenhouse gas emissions by 45% below 1990 levels by 2030 and 80% below 1990 levels by 2050 to move us towards those goals.

Transitioning to clean renewable energy is critical to achieving the greenhouse gas emission reductions that the climate crisis demands. The challenge to achieve urgent and essential reductions in rising atmospheric greenhouse gases is daunting and we need the best available research done today to support the energy transition that Maine and the world is undergoing. The opportunity to evaluate renewable energy from Gulf of Maine offshore wind must be pursued as soon as possible. Transitioning from fossil fuels will require large scale solutions as well as local distributed systems.

The global pandemic only slowed rising carbon dioxide in 2020 by [7%](#) but concentrations [continued to increase](#), topping [420 ppm](#) in the spring of 2020, and is now higher than at any time in the past [3.6 million years](#).

I do not testify here today as a representative of the Maine Climate Council, but I do testify as a father and grandfather in vigorous support of research on offshore wind that is essential to the success of a thriving renewable energy future for Maine.

Thank you.