TESTIMONY BEFORE THE ENERGY, UTILITIES AND TECHNOLOGY COMMITTEE

Testimony of Dr. Habib Dagher, Executive Director, University of Maine Advanced Structures and Composites Center
In Reference to LD 1895 "An Act Regarding the Procurement of Energy from Offshore Wind Resources"

Senator Lawrence, Representative Zeigler, and Members of the Joint Standing Committee on Energy, Utilities and Technology (EUT) My name is Habib Dagher and I am the Executive Director of the University of Maine's Advanced Structures and Composites Center It is the largest university-based research center in Maine, with 350 full and part-time employees Over the 37 years at UMaine, I have been committed to develop technologies that create Maine jobs, protect the environment, and educate leaders

The Center through our research grants and contracts has financially sponsored 2,700 student interns, who got paid to work on research projects which transformed their education For the past 15 years, hundreds of students and partners have worked on offshore wind in our lab and some are now leaders in the industry A procurement bill such as LD 1895 is urgently needed to pass this session to keep Maine relevant in a growing US and global floating offshore wind industry, retain and grow this home-grown talent of highly committed bright young engineers, and grow a whole new clean energy industry for Maine

I am testifying in support of LD 1895, "An Act Regarding the Procurement of Energy from Offshore Wind Resources", assuming that it will incorporate friendly amendments that strengthens Maine technology leadership, incentivizes the use of Maine-developed hull technologies, the use of a Maine-based engineering workforce to design the farms, and the use of local Maine labor to fabricate the floating hulls here in Maine

1. Why now?

In 2010, the legislature voted unanimously for Maine to enter the offshore wind race, and Maine voters approved an $11 million bond for UMaine to develop floating wind technology Over the 15 years, we developed floating turbine technologies that can be made in Maine, that has earned more than 70 patents and have attracted over $150 million in DOE and industry investments A procurement bill now is key to keep Maine in the race, to stay and to finish the job that Mainers have asked us to do

Maine does not have time to blink The world and the rest of the east and west coast states are already running, with procurement bills of their own This year, the US has declared floating wind turbines as a US EarthShot, as a key technology to meet our national climate and clean energy goals, a technology the US wants to lead the world in Our Maine team has been preparing for this floating wind race for 15 years and we are capable of winning, however, without a procurement bill now, we will remain on the sidelines watching other states and countries run by Right in our neighborhood, MA, Connecticut, RI, NY, NJ all already have GW-scale procurement targets In California a few months ago, BOEM leased 5GW of floating wind farms, and investors are lining up, port facilities are being planned in Humboldt Bay

2. A Procurement bill needs to pass this session, but the current version needs friendly amendments.

We would like to suggest friendly amendments to the bill to incentivize the use of floating technology that can be designed and produced in Maine

The plan starting 15 years ago has been to grow the state technology and engineering leadership and jobs We wanted to design and produce the hulls in Maine, rather than import engineering and technology and hulls from overseas The opportunity is big A 1 GW farm will require approximately 60 hulls worth $1 billion dollars European and Asian governments have rightfully already heavily subsidized their developers, engineers and technology leaders to compete in this industry

We would like to suggest friendly amendments to the bill so that Maine does not outsource its engineering and technology and fabrication from overseas This bill has unique opportunity to strengthen Maine's engineering and technology leadership, keep us as leaders in the floating wind space, and we would appreciate the opportunity to work with you to do so

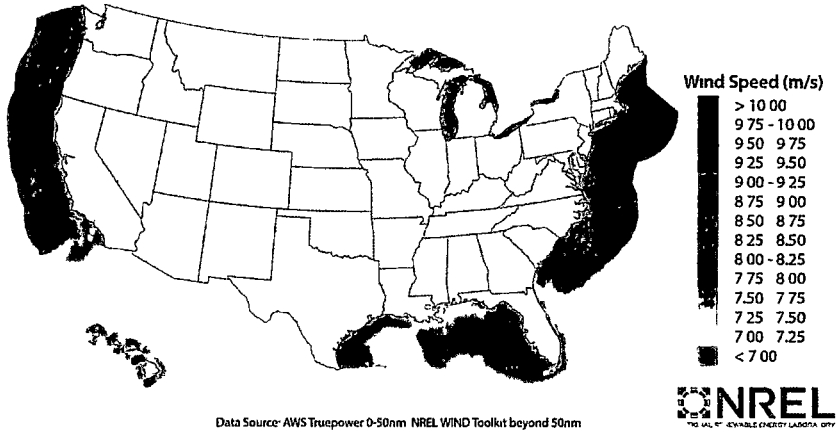
For example, language can be added to the bill so that potential developers can be both incentivized and evaluated on their use of locally developed and produced hull technologies, such as UMaine's VolturnUS hull, their use of local Maine teams to design and fabricate and maintain the hulls, their investment in Maine higher educational institutions to develop the local engineering workforce, and to conduct local Research and Development With these provisions added to the bill, Maine can maintain its technology leadership in floating wind R&D, build on its technical and engineering leadership in this space, and create the engineering and technology jobs that drive our economy

And the prize is big Mainers spend $4-$6 billion per year on fossil fuels, and most of these dollars leave our state[1] Our goal is to design, build, deploy, and maintain hulls using Maine engineers, Maine labors, and Maine technology

[1] Based on Energy Information Administration (EIA) data for Maine https //www eia gov/state/data php?sid=ME

3. A Historic Perspective

The Offshore Wind Resource: Maine has one of the best offshore wind resources in the US The Gulf of Maine (GOM) has nearly 156 GW of offshore wind capacity within 50 miles of the coast If we harnessed just 3% of that resource, that is 3% of the GOM area, we can electrify heating and transportation The only thing is that we have very deep waters off our coast, and we need to float the turbines



Long History of Support and Mainers have Voted: There has been a long history of bipartisan support for offshore wind in Maine, like there has been in other states Back in 2009, the Maine Legislature passed LD 1465 which established the Monhegan Test Site which was assigned to the State to UMaine In 2010, Maine voters passed an $11 million bond to support UMaine offshore wind research and the demonstration project In June 2021, LD336 was passed to create the Maine Research Array This year, Maine completed its offshore wind road map, led by the Governor's Energy Office