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NC TASKFORCE FOR OFFSHORE WIND ECONOMIC RESOURCE STRATEGIES (NC TOWERS)

THURSDAY, MAY 5, 2022

Economic Opportunity & Business Development Subcommittee

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NC TOWERS

Charge from Executive Order 218

(Info most relevant to this subcommittee underlined)

The Secretary shall establish NC TOWERS“ to provide expert advice for advancing NC OSW energy projects, economic development, and job creation.

The Taskforce may:

1. advise on programs and policies for developing OSW energy projects, enhancing NC's supply chain and economic benefits, creating workforce solutions and establishing strategic partnerships;
2. foster industry relationships throughout the OSW supply chain;
3. advance opportunities for equitable access, particularly in underserved communities, to the economic benefits created by the OSW industry;
4. connect OSW-related economic and technology research capacity at NC institutions of higher learning with the needs of the OSW industry and policy makers, and
5. undertake other OSW-related activities at the Secretary's discretion.

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Charge from Task Force

Research, evaluate, and recommend policies and programs to help grow NC's OSW industry supply chain and build strategic economic partnerships

- Identify, articulate, map & publicize strategic advantages/priorities
- Educate, assist & train existing NC industries/companies about OSW opportunities
- Recruit new industries/companies to NC to serve OSW opportunities
- Develop new industries/companies/technologies in NC to serve OSW opportunities
- Identify organizations and entities with which to partner and champion outcomes
- Increase OSW industry research, development, and innovation

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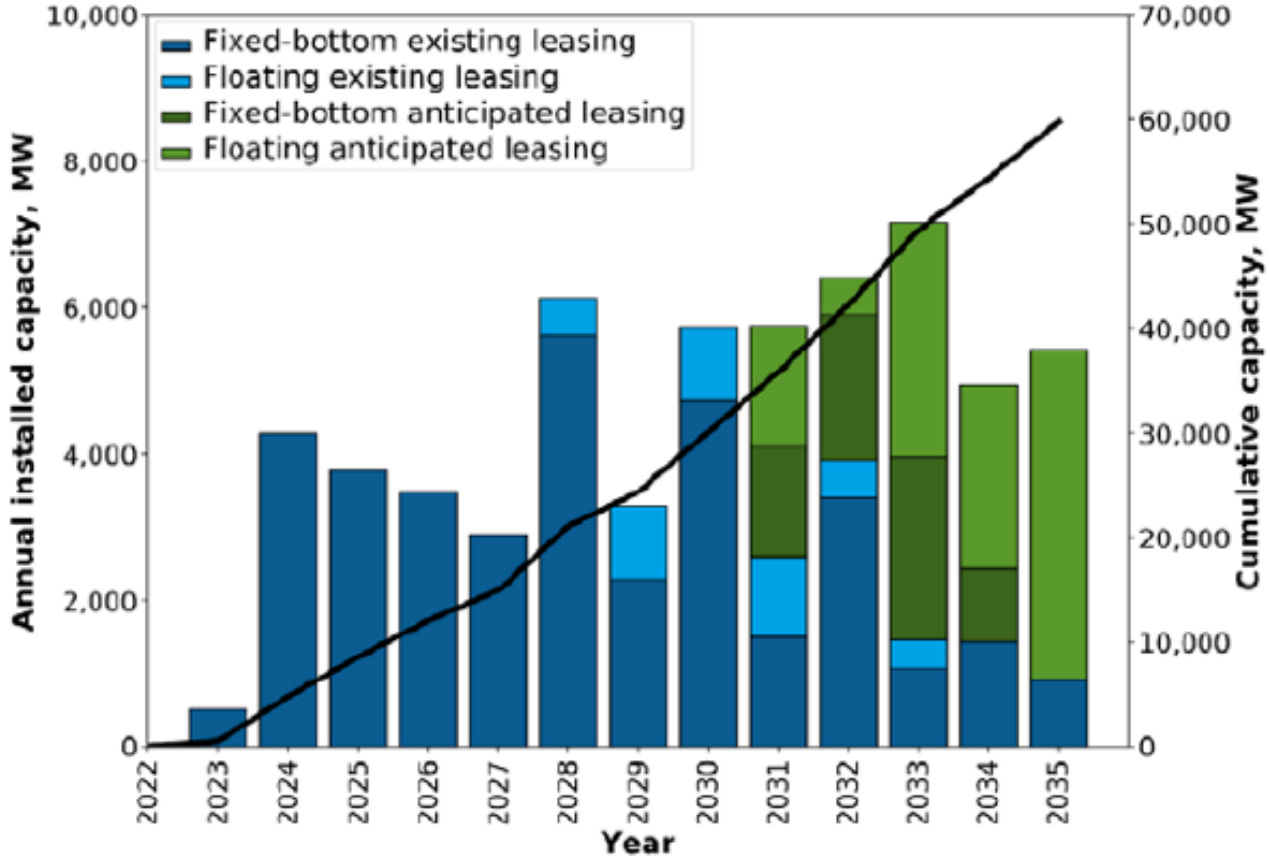
Discovery Process Methodology

***Step 1:* Review of Key Reports:**

- ***The Demand for a Domestic Offshore Wind Energy Supply Chain***. 2022. National Renewable Energy Laboratory. NREL/TP-5000-81602. https://www.nrel.gov/docs/fy22osti/81602.pdf
- ***Achieving American Leadership in the Wind Supply Chain*.** 2022. U.S. Department of Energy. https://www.energy.gov/sites/default/files/2022-02/Wind%20Supply%20Chain%20Fact%20Sheet%20Final.pdf
- ***Wind Energy: Supply Chain Deep Dive Assessment****. 2022.* U.S Department of Energy. *https://www.energy.gov/sites/default/files/2022-02/Wind%20Energy%20Supply%20Chain%20Report%20-%20Final.pdf*
- ***U.S. Offshore Wind Market Report & Insights.*** *2022.* Business Network for Offshore Wind. Available only to Business Network members (NC Commerce is a member)
- ***Building North Carolina's Offshore Wind Supply Chain: The roadmap for leveraging manufacturing and infrastructure advantages.*** *2021.* BVG Associates, on behalf of the NC Department of Commerce. *https://www.nccommerce.com/business/key-industries-north-carolina/energy/offshore-wind-industry*

The Demand for a Domestic Offshore Wind Energy Supply Chain

Strong Demand Predicted for the Foreseeable Future



The awarded and soon-to-be-awarded U.S. lease areas have sufficient capacity to deploy 30.1 GW by the end of 2030, if no major supply chain or permitting delays develop.

Requirements for Deploying 30 Gigawatts of Offshore Wind Energy by 2030

- **2,100** Wind turbines
- **2,100** Foundations
- **6,800** Miles of cable
- **58** Crew transfer vessels
- **5–6** Wind turbine installation vessels
- **11** Service operation vessels
- **4** Cable lay vessels
- **2** Scour protection installation vessels
- **10** Transport vessels
- **12,300–49,000** Full-time equivalents average annual workforce

10 Takeaways from the Readings

1. The U.S. is still years away from having a mature domestic offshore wind supply chain.

2. Most components in the early 2020s will be sourced from European suppliers.

3. Many U.S. companies seeking manufacturing opportunities will likely need to establish relationships with foreign manufacturers.

4. Most of the manufacturing jobs will be concentrated in the *supporting* supply chains instead of in fabrication of the final products.

5. Key industries include port development & operations, steel fabrication, break-bulk logistics and cargo handling, maritime/shipbuilding, electrical and turbine component mfg. & assembly, and subsea cable mfg.

10 Takeaways from the Readings

6. The wide range of Tier 2 and Tier 3 components required for OSW projects represents an opportunity for existing businesses.

7. Efforts centered around knowledge sharing (e.g., mentoring and educational programs) and industry networking would ease the transition into the offshore wind industry for many companies.

8. Few U.S. ports have sufficient capabilities to fully support OSW activities, although several ports are actively investing in infrastructure upgrades.

9. New vessels are required to alleviate risks of missing the national offshore wind energy target.

10. Expansion in wind technology R&D could increase the competitiveness of the U.S. supply chain for offshore wind and allow U.S. suppliers to scale up.

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Discovery Process Methodology

***Step 2:* Survey of Subcommittee Members & Staff Liaisons:**

- Subcommittee Co-chairs and staff reviewed the 48 recommendations in the March ***Building North Carolina's Offshore Wind Supply Chain*** report and:
    - omitted ones that have already been implemented or that are clearly within the jurisdictions of other subcommittees;
    - combined/merged recommendations that were very similar in nature or that were redundant.
- This reduced the total number of recommendations for the survey to 18.
- Each member or staff liaison then independently ranked the recommendations.

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Preliminary (pre-discussion) Ranking of Recommendations

1 Attract, with speed, determination and tenacity, the short list of high-tier anchor tenants to NC before they finalize their location plans elsewhere, where these play to NC strengths

4.82

2 Actively support existing NC-based companies to pivot to the domestic OSW market, especially where they already have relevant skills and experience, or supply to the domestic onshore wind market

5.09

3 Create an OSW economic development team

5.18

4 Assist existing and new anchor companies with access to market, including securing appropriate sites, transport and port access

5.45

5 Further explore using the Port of Wilmington and Port of Morehead City (including Radio Island) facilities, allowing NC earlier access to supply OSW projects

5.91

6 Evaluate developing Southport/NC International Terminal Property: a 600-acre, NC State Ports Authority (NCSPA) owned property that is one of the only potential "mega-port" facility locations on the US East Coast

7.55

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Preliminary (pre-discussion) Ranking of Recommendations

7 Promote regional collaboration in policy development and supply chain development, working with counterparts in Virginia and Maryland to align OSW needs with regional business capacity, to help secure business opportunities for regional state partners

9.09

8 Continue to promote and develop the NC OSW Supply Chain Registry, and integrate it with other OSW databases -- national, state, and regional

9.18

9 Provide targeted incentive support to OSW-related firms

9.73

10 Actively support connectivity and industry information sharing across the whole OSW supply chain

9.82

11 Further explore using manufacturing sites next to CSX Carolina Connector at Rocky Mount for the manufacture of smaller components

10.91

12 Reinstate and expand the Renewable Energy Equipment Manufacturer Tax Credit

11.27

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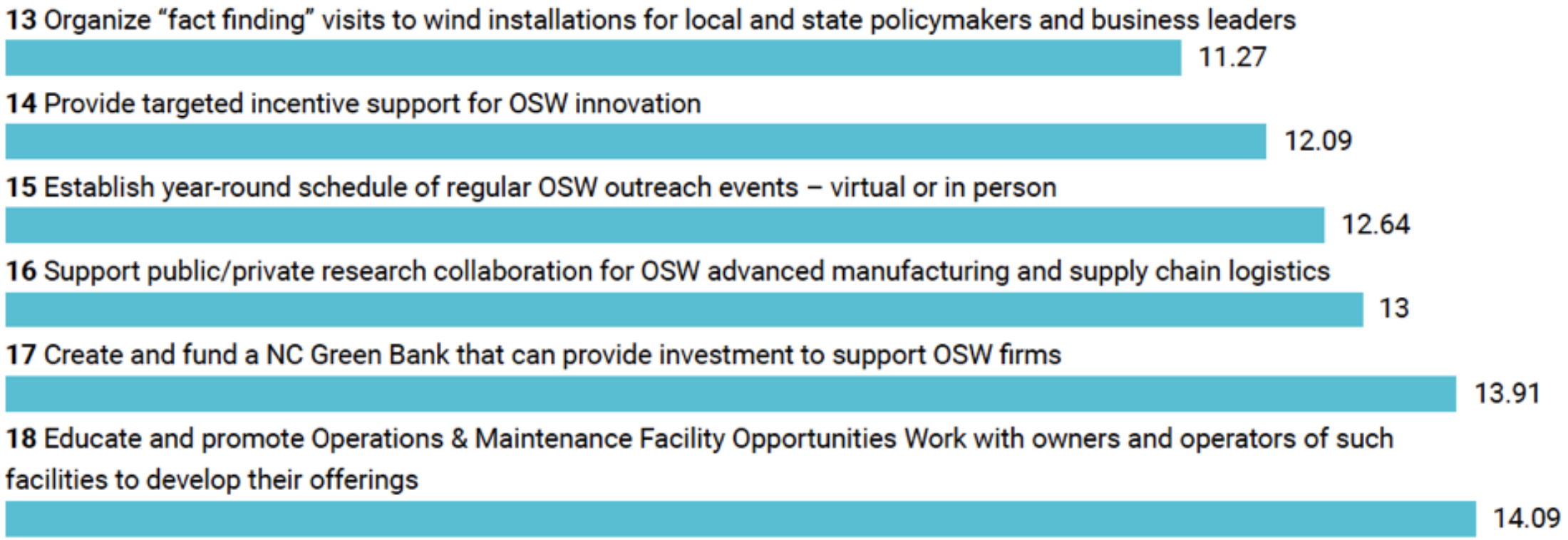
Preliminary (pre-discussion) Ranking of Recommendations



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Open-Ended Comments

- Identify and/or develop additional economic incentives and policies to spur the build out of OSW projects
- Cultivate and develop sources of funding to support the infrastructure upgrades needed at the NC ports to enable them to support OSW-related supply chain activities.
- Develop and implement Northeast NC marketing strategy to attract supply chain companies who desire to be located near the Port of Virginia.
- Document and advertise NC's assets related to OSW.
- Assist Northeast NC counties in developing strong partnership with Hampton Roads OSW initiatives to facilitate OSW supply chain development in these counties.
- Include “local benefit” considerations in future windfarm procurement mechanism, as some other States have done, to ensure that work will be delivered from NC. But don't go overboard in a way that overly distorts the market.
- Assist Perquimans County and the NC Marine Industrial Park Authority (Dare County) in attracting OSW marine-related supply chain (especially boat manufacturing) companies.
- To the extent the subcommittee develops recommendations, it should strive to assign a temporal priority to them -- e.g., short term, medium term, long term -- and define those terms in years.

Proposed Next Steps

- Based on feedback from full task force, refine rankings
- Select a “short list” of priority recommendations to explore further
- Begin developing action plans for selected recommendations
- Present and review actions plans at Q3 Task Force meeting