

# Carbon Plan and Integrated Resource Plan E-100, Sub 190

## NCSEA Technical Conference Presentation Outline

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### Key Takeaway

OSW is a demonstrably mature technology that's ready to be deployed for the benefit of North Carolina and its economy. If not imminently moving towards securing this asset, North Carolina may instead substantially forego the considerable benefits that will flow to other states and their ratepayers.

### Highlights from Appendix III – the Expert Report

1. ARFI process should be modified, expanded, and expedited. The Commission should consider:
  - a) Providing specific guidance with meaningful instructions to the parties to negotiate with a hard schedule setting roles, tasks, duties, activities, deliverables, and a target date for a required penultimate technical report before the final order in this phase of the proceeding.
  - b) Designating the ultimate goal of the ARFI as development of a detailed procurement schedule, with achievable milestones, to facilitate meaningful bilateral negotiations progressing toward an offtake/procurement plan. The WEA leaseholders have already sorted through and negotiated many similar important issues with other states. The ARFI should be a forum for the Companies and the WEA leaseholders to directly negotiate any outstanding issues and to carefully shape any agreement to specifically serve North Carolina's economic and regulatory interests.
2. Allowing appropriate costs for early OSW development activities, including geologic surveys and other necessary tasks, that are incurred by the Companies and/or the WEA leaseholders enables the Commission to receive accurate and detailed projected cost estimates for the Commission to meaningfully assess. A traditional RFI has already been conducted.
3. The proceeding presently before the Commission is no ordinary IRP exercise. Many new untested technologies are being considered concurrently with an unanticipated and significant increase in generating capacity demand. It is a conservative tenet of generation planning to embrace generation diversity and redundancy to assure adequate resources, particularly in the face of the genuine uncertainties present in this proceeding. In our view, these uncertainties call for early development activities for both OSW and New Nuclear in parallel as a least cost practice that can best assure adequate generation resources going

forward. Avoidance of a capacity shortfall and its potentially significant negative economic impact on North Carolina should be the clear objective of this proceeding.

4. We believe that 2039 is a more likely timeframe for New Nuclear to become operational. Mr. Moor, who served for three years as the Chair of the American Nuclear Society's committee on small modular reactors, was the principal author of the New Nuclear analyses in our report but could not be present today. To summarize his findings, the Companies' preference not to be first in deploying New Nuclear will add approximately two years to the timeline which will allow for an NRC licensing application to be filed in 2027. The timeframe for licensing is projected to be 30 months and construction is projected to be 91 months, which is a 10-year period. In a comprehensive analysis of past experience implementing nuclear technology, he determined that an additional 20% of time should be added to account for anticipated delays which results in the aforementioned earliest date for operation. In a process such as this, events rarely move more quickly than planned, rather most often taking more time than anticipated, not less.
5. The economic impact of OSW and New Nuclear development is particularly meaningful for North Carolina. The state's Advanced Manufacturing and Materials industry now employs 10% of the state's workforce and produces 20% of the state's output. These are the manufacturers that likely could produce the majority of components for OSW facilities, further ramping up economic activity in the state. The NC Department of Commerce (DOC), Duke University, NC State University, and others have specific projects and curricula underway to enhance the state's support of construction and operation of OSW facilities and providing OSW operational jobs. The DOC has a website designed specifically for NC businesses to qualify for and join in the OSW supply chain. Without a clear signal that the state is pursuing OSW these benefits may not materialize and instead accrue to other states and their ratepayers.