NORTH CAROLINA ENERGY POLICY COUNCIL
MEETING MINUTES
10:00 a.m., Wednesday, May 18, 2022
Virtual Via WebEx

Energy Policy Council Members Present:
Brian LiVecchi Lt. Governor Mark Robinson's designee

Rachel Estes
Gus Simmons
John Hardin
Paul Worley
Scott Tew
Bruce Barkley
Sushma Masemore
Jenny Kelvington

Energy Policy Council Members Not Present:

Herbert Eckerlin
Ryan Gragg
Kendal Bowman
Paolo Carollo

CALL TO ORDER

Mr. Brian LiVecchi, Lt. Governor Mark Robinson's designee, called the Energy Policy Council (EPC) meeting to order at 10:02 a.m. on Wednesday, May 18, 2022. He opened the meeting and welcomed the members and participants. After establishing a quorum for the meeting, he asked for a motion to approve the EPC's February 16, 2022, meeting minutes. Mr. Gus Simmons moved for approval of the minutes and Mr. Scott Tew seconded the motion. The motion was unanimously approved. Mr. Brian LiVecchi then asked the presenters to start with their presentations.

PRESENTATION: Impacts of Offshore Wind on North Carolina

David T. Stevenson, Center for Energy and Environment Director, Caesar Rodney Institute

Mr. David Stevenson shared information about his background in offshore wind, some environmental success stories in NC, summary of economic analysis on offshore wind and some conclusions which show negative impacts of offshore wind. The following was covered during his presentation:

- North Carolina's Clean Air Success Story includes:
  - Electric industry emissions have fallen almost 55% (42 million tons) since 2005 compared to only 39% nationally.
  - About 65% of the emissions reductions can be attributed to switching from coal to natural gas.
  - The other 35% can be attributed to switching from coal to increased generation of hydroelectric, nuclear, and solar generation.

- The state's forests and crop lands cover 83% of the state and absorb up to 54 tons of CO2 every year.
- The EPA declared the entire state in attainment for air quality in 2017.
- Inflation adjusted electric rates fell almost 6%.

- Looking Forward
  - 2021 legislation requires CO2 emissions reductions of 70% by 2030 from 2005 levels, or another 12 million tons.
  - Four Duke Energy coal-fired power plants emitting about 9 million tons/year are scheduled to close by 2029.
  - Market forces are likely to result in the continued historic fuel switching patterns to meet the 70% goal with minimal impact on electric prices and reliability.
  - Governor Cooper has issued an Executive Order requiring the construction of 2,800 MW of offshore wind generation by 2030, and 8,000 MW by 2040.

- Offshore Wind Economic Summary (Mr. Stevenson stated that another independent analysis showed similar results to the following.)
  - Electric rates may rise as offshore wind is an expensive option.
  - Electric premiums of up to $1.9 billion/year by 2030 may cost 23,000 jobs.
  - Project construction may add 2,800 temporary jobs, and a few hundred permanent jobs by 2030.
  - Many temporary jobs to Europe for turbines, transport, and installation.
  - Additional jobs may be lost in the commercial fishing and tourism industries.
  - Costs of $12.6 to $19 billion outweigh benefits of $5.5 to $10.5 billion.

- Negative Environmental Impacts of Offshore Wind
  - NC's $300 million/year commercial fishing industry is threatened.
  - NC's $731 million/year Brunswick County tourism industry threatened.
  - Marine and avian life, including endangered species are threatened.
  - Used turbine blades will likely end up in NC landfills.
  - Turbine collapse may spill thousands of gallons of oil.
  - Actual seasonal Virginia wind generation data shows power produced when it is least needed.

- Conclusions from Mr. Stevenson's Presentation
  - Offshore wind is the highest cost method to generate electricity.
  - High negative impact on the environment including endangered species, commercial fishing, navigation, and tourism.
  - Electric premiums may result in tens of thousands of job losses on top of the direct pain of higher electric rates.
  - Markets, with a modest level of government regulation, have worked well to reduce emissions and can continue to do so in the future.
  - At a minimum, pass legislation prohibiting power to come ashore from any turbine closer than 24 nautical miles from shore, petition BOEM to cancel lease areas closer than that limit.
  - An offshore wind mandate is not the right choice for North Carolina.

Presentation Discussion and Questions

Mr. Scott Tew: These are some scary things based on your view. But would you say that since offshore wind has been developing in past 4-8 years, that there have been significant technology improvements?

Mr. Stevenson: Yes, used latest tech in analysis. DE and MD just ran through Public Service Commission. Avangrid in Kitty Hawk has construction and operations leaving space for next generation. 12-14 MWH current turbines and the next is 20-21 MWH which is 1000' ft. Also switch from gear-driven to direct drive.

Mr. Tew: DE is not purchasing wind?

Mr. Stevenson: Correct, MD will pay premium.

Mr. Tew: Costs for offshore wind are trending downward. I have seen multiple studies that show the costs are going down, they are competitive, better than fossil fuel plants and the payback is better.

Mr. Stevenson: I am aware of those studies, but they are out-of-date. EIA data at 130 MWH versus solar 36 MWH based on 2027 startup. Since then, Dominion has been building offshore wind in coastal VA with an increased cost estimate for project by 25%. Others have seen increased costs including the MD Public Service Commission which just approved an offshore wind project off DE coast. The developer is selling power into the market to recover revenue, and MD created offshore wind renewable energy credit.

Mr. John Hardin: Many people who serve on this Council are trained in cost benefit analysis (CBA), and we would appreciate seeing the details of CBA you calculated. The CBA depends on inputs, and I have some questions on the inputs that were used in your analysis. Looking at US DOE report from 2021, costs of wind energy different at $95/MWH globally and by 2030 down to $56/ MWH. It is very important to have and use the best source of input. Also, you raised the issue that there might be a risk to the tourism industry. Fortunately, offshore wind should not be an issue since the Kitty Hawk site is 24 miles off coast, and the Wilmington East leased by 2 private developers is 20 miles off coast.

Mr. Stevenson: I did submit the full report for public comment and will be happy to send it directly to the Council. There have been reports. But I am careful of analysis done before/after 30% tax credit which may or may continue. My analysis does not include the tax credits which is probably the difference.

Ms. Rachael Estes: I have a couple of questions as well. With Block Island, the first offshore wind project, researchers found that Airbnb rental increased after construction of project as compared to before, so this data shows increased tourism on island. It has been seen as a new attraction, so not sure where your concerns about tourism come from?

Mr. Stevenson: From my review of NCSU's OBX study. Much smaller turbines at 15 miles are a problem, but now turbines are twice the size. I also looked at problems with Rhode Island study. It did not look at Airbnb because they were just starting up. There have been no follow-up surveys to confirm data & was about turbines. Airbnb went up 25-30%, but also went up

internationally as Airbnb increased 8-fold. No question on whether Airbnb went to look at turbines in study, so therefore study has no validity in my view.

Ms. Estes: But if turbines have disastrous impact, we would have seen negative impact from rentals, which is what has not occurred. Offshore wind to our state provides huge economic opportunities. You mentioned manufacturing occurs in Europe and import it. We want to open that market for ourselves, we have manufacturing here and enormous supply chain opportunity for ports and NC companies: from offshore wind, $2B manufacturing, $1B ports and $1B vessels opportunity. Also, we want to think about getting new companies to come to our state. Clean Energy is a must for the majority of Fortune 500 companies and smaller family businesses. They are clamoring for clean energy and want access to it. Like Amazon (chose VA), Intel (choose OH), and now Toyota—which we got, but having access to renewable was why they wanted to come to state. A more holistic perspective is needed. One question since I am not as familiar with your institute. How are you funded?

Mr. Stevenson: This is not a choice between clean energy and not. NC is the leading country in adding solar, which added for 2/3 of clean energy increase in state. So, you have options, continue w/ solar. Advise to look at carbon capture. Advanced nuclear is going to cost less than offshore wind. So, choice between clean energy and reliable and affordable vs raising electric rates. For funding question, we are sister to John Locke Foundation. State Policy Network. Individual funders and a few large foundations like John Locke. Like any nonprofit, we protect donor privacy. No funding from people making solar, natural gas, coal, etc.

Ms. Estes: So, no funding from Claudlam foundation by Koch.

Mr. Stevenson: No

Ms. Estes: Tax returns may be different.

Ms. Sushma Masemore: This week, Duke Energy submitted its Carbon Plan to NCUC under HB951. Have you had a chance to examine the various pathways and costs for wind energy resources onshore/off that are cited in the plan and where they are relevant to historical numbers you cited and projections? Where cost estimates are relevant to the studies you cited?

Mr. Stevenson: Have not looked at it. John Locke has looked at the previous plan and made extensive comments on that.

Mr. Brian LiVecchi: In Carbon Plan, Duke calculated most affordable pathway included no wind and nuclear?

Mr. Stevenson: This would not shock me at all.

PRESENTATION: Costs and Impacts of Offshore Wind Development in NC

Jon Sanders, Research Editor and Senior Fellow, Regulatory Studies, John Locke Foundation

Mr. Jon Sanders shared information about the costs and impacts of offshore wind to electricity consumers, on the climate and economic growth. The following was covered during his presentation:

- 8 GW of Offshore Wind: Costs and Impacts to Electricity Consumers:
  - Estimated cost would be $55.7 billion to $71.5 billion.
  - Electricity rates would increase 28% - 36% over 2020 levels.
  - Average cost increase per consumer: $330 - $425 per year, reaching as high as $641 - $823 in 2040.
  - Residential customers will pay around $400 - $500 extra per year.
  - New offshore wind energy facilities would cost $137.00 - $164.39 per MWh to build.
  - NC's nuclear plants generate electricity at $21.71/MWh; our natural gas plants, $35.83/MWh.

- NC's CO2 Emissions and Climate Impact:
  - BOEM in 2021: "there would be no collective impact on global warming as a result of offshore wind projects."
  - NC occupies only 0.00027 of the surfaces of the Earth – even if we stopped producing everything it could make no measurable impact of the climate.
  - Throughout the 21st century NC's energy-based CO2 emissions have been falling dramatically.
  - Even with the estimated CO2 emissions reductions from 8 GW offshore wind, it would take nearly 27 years to offset the additional CO2 added by China just in 2019.
  - A focus on zero-emissions energy that favored lower costs, higher capacity factors, reliability, and dispatchability would invariably favor more nuclear generation.
  - Focusing on low emissions, low costs, reliability, and dispatchability would favor more natural gas generation.

- NC's Job Creation and Economic Growth:
  - NC regularly ranks at or near the top in economic and business climate rankings.
  - Helped by years of policymakers choosing to cut taxes, cut regulations, keep the budget I line with inflation and population growth, and add to savings.
  - Resulting state revenue growth has seen large budget surpluses annually since 2014-2015.
  - New analysis estimates building and operating 8 GW of wind energy off the NC coast could cost 45,000 – 67,000 jobs from rate hikes and their effects.
  - NC is not at such a lack of job creation and economic growth to make this rushed government intervention seem worth the risks.

- Waste from Retired and Damaged Blades.
- Study Lessons and Questions from Other Offshore Wind Operations.
- Fully Consider the tradeoffs Involved.
- Vigorously Protect Electricity Consumers.

- Otherwise: The Proposition Before NC Policymakers
  - Increase electricity rates for everyone.

- Create subsequent price increases on everything because of pervasive effect of electricity prices.
- Cause people to spend extra money throughout the coming decades paying for facilities.
- Inflict some unknown amount of harm to coastal communities' fishing and tourism.
- Disrupt sensitive underwater habitats and threaten endangered marine animals.
- Kill birds.
- Disrupt vessel navigation and search and rescue operations.
- Introduce more intermittency and unreliability on the grid.

Presentation Discussion and Questions

Mr. Hardin: Presentations present a narrow slice of information on offshore wind. The NC Department of Commerce with Department of Environmental Quality have been focusing on offshore wind for 3-4 years now. The information that we've published is very strikingly different, so it is important for EPC members to have fair accounting of presented information. Make sure sources are verified.

Mr. Tew: Agree with Mr. Hardin. It is only fair that the Council gets another perspective from recent data (2021, 2022) from state agencies, etc. This presentation's concerns from military, tourism, reliability of wind have already been addressed like Military Clearinghouse Siting Wind. I have questions on the reliability of the information presented in these presentations because there are new reports on reliability and cost studies which are different from the material in these presentations. NC has the advantage of not being first mover on this and has therefore learned from other states to reduce downsides that we've heard today.

Mr. Sanders: I can understand the shock of hearing this. I have seen industry and government studies, but none consider the consumer-end of things, rate hikes, supply chain effects, and broken windows theory.

Ms. Estes: John Locke believes in free markets. You said North Carolinians "don't have a choice." Are you not a fan of our monopoly structure in NC?

Mr. Sanders: Should make it more important and imperative for state policy makers to protect consumers.

Ms. Estes: So, if we had an open market with different competing technology, is this something John Locke would support?

Mr. Sanders: Not trying to overthrow entire utilities system provision in NC, trying to deal with question at hand, and the questions we want consumers to have.

Mr. LiVecchi: We have heard desire to hear other perspectives on offshore wind. My response was/is if we have the time in our schedule. It is the EPC's job to advise the Governor and General Assembly on these matters, and these presentations developed outside these frameworks. Other positive information on offshore wind is out there but seemed important to consider these other perspectives. If the Council wants a pro-wind point of view, happy to make that happen.

Mr. Paul Worley: It would be good to get a balanced perspective.

SUB-COMMITTEE REPORTS

Energy Assurance Committee,

Mr. Paul Worley provided the following EA Committee updates.

- The last meeting was held on April 26th. The Committee is looking into doing a TTX on natural gas. We are working with David McGowan and Williams Transco Pipeline staff. Also, heard a presentation on EPC report process and the biennial report. The Committee talked some about offshore wind during the meeting and suggested bringing the topic to the full Council, which is why we heard about it today.

Energy Efficiency Committee

Mr. Scott Tew provided the following EE Committee updates.

- Met almost every month or twice a month. The EE Committee had 37 recommendations, so we are spending time walking through recommendations to determine: What is the progress or status of those recommendations; Whether some of the recommendations have been completed or if actions cannot move forward to consider revisions; and combining recommendations. During the last meeting, several recommendations were consolidated and three were marked as successfully completed.

Energy Infrastructure Committee

Mr. Gus Simmons provided the following EI Committee updates.

- The EI Committee is looking at infrastructure needs in current portfolio, needs we currently provide, and new and renewable energy resources. Progress at state and federal level, some of which is supported by state policy adopted in last few years. On track to have final disposition and edits in next couple of weeks. Will focus on new recommendations during the month of June.

NEW BUSINESS

- *2022 EPC Biennial Report Discussion*
- *Creation of Energy Innovation Committee Discussion*

Ms. Beth Schrader: Staff would like to get directions from the Council on the structure of the report and what areas that you would like covered in 2022 report that were not covered in 2020?

Mr. LiVecchi: Use the same structure of 2020 report, no need to reinvent the wheel. As far as covering any additional topics, hope to rely on committees to propose additional topics that need to be addressed, maybe State of Energy in NC. Include at least some discussion of TTX that the EA Committee is working towards, and this exercise is important because of issues of pipeline capacity. Given what we heard today and from resources already out there, some pros/cons of

various generation sources. Other than that, the report should remain largely the same as it has been.

Ms. Masemore: Our 2020 report had a few indicators of economic activity related to the energy sector. If time permits, use available reports to highlight transition and existing activities in energy as it relates to jobs and economic development in the state.

Mr. Tew: What is the timing of walking through the recommendations?

Ms. Schrader: The three committees will walk through their recommendations to discuss and finalize at the next full EPC meeting.

Mr. LiVecchi: Consider the creation of Energy Innovation Subcommittee.

Ms. Schrader: There are three options: 1) Under existing GS and bylaws, create as Advisory Committee today. The Council is authorized to create that committee with non-voting members appointed by the EPC or Secretary. Expiration dates no later than the earliest date of term expiration of existing member. 2) Address bylaws at next EPC, public notification and put on agenda. 3) Conversation with the Secretary of DEQ and request establishment of standing subcommittee. Need three to five members, so that you have folks available and able to do the work. Could move forward with Advisory Committee today and towards changing bylaws or other options in the future as well.

Mr. LiVecchi: The Advisory Committee would be made up of the people we select, non-voting members. Not necessarily members of EPC. Personally, would favor other two routes, needs to be standing subcommittee. Whether option 2 or 3 is irrelevant to me, but we would need to issue public notice, so wanted to take temperature of EPC on which way to go forward.

Mr. Worley: Based on ways we have voted, make request through channel to Secretary since that's available to us, and then act accordingly. I have no reason to believe that would be rejected until shown differently and given feedback. So, my opinion, to go on and make request.

Ms. Estes: Agree with Mr. Worley. Seems the easiest route. We should explore that first.

Mr. Tew: Also agrees.

Mr. LiVecchi: We can always ask, and if we don't get the answer we like, can consider another route. Consensus on this? Motion to option dialogue w/ DEQ Secretary.

Ms. Masemore: With the subcommittee route, would need 3-5 members of council to participate. Perhaps we could take a few moments to consider who that would be. Right now, we have about 2 members to participate. Want to make sure well supported to make progress like other Committees.

Mr. LiVecchi: If you want to participate, let us know. Mr. Hardin, Ms. Estes, and Ms. Jenny Kelvington volunteered to participate on the Energy Innovation Committee.

Mr. LiVecchi: We have three and I will participate as well. If that's sufficient, happy w/ sending up those three members as our proposed initial membership of that subcommittee. Do need to entertain a motion on that and vote. Mr. Worley made a motion to propose to Sec DEQ that we'll create this committee and note that we have interest in serving and chairing. Mr. Simmons seconded the motion. Motion approved unanimously. Ms. Masemore stated that she would be happy to take this message to the Secretary.

PUBLIC COMMENT

Mr. Brian LiVecchi asked for public comments. Mr. Matthew Davis shared that there were some that wanted to comment.

Mr. Chris Carmody, Carolinas Clean Energy Business Association: Commented that neither of the two presentations heard during the meeting today were objective or market oriented. He stated that research shows that wind energy is the cheapest renewable energy source. He challenged everyone to do the research for themselves.

Ms. Katherine Kollins, Southeast Wind Coalition: Stated that she would be happy to speak to the Council on offshore wind and agreed with Mr. Carmody that offshore wind is clearly competitive in the North and Southeastern States. She also shared that nuclear power was expensive and that offshore wind would not hurt the fishing industry, tourism and that it would not have a negative visual impact on the coast.

CLOSING COMMENTS

Mr. Brian LiVecchi stated the next meeting is scheduled for August 17th.

A motion to adjourn was made by Mr. Scott Tew and seconded by Mr. Paul Worley. The meeting adjourned at 12:10 pm.

Approved by Energy Policy Council Members on **08-31-2022.**