TESTIMONY OF THE PENNSYLVANIA ENVIRONMENTAL COUNCIL

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BEFORE THE SENATE CONSUMER PROTECTION AND PROFESSIONAL LICENSURE COMMITTEE
AND ENVIRONMENTAL PROTECTION AND ENVIRONMENTAL RESOURCES COMMITTEE

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Chairman Tomlinson, Chairman Boscola, Chairman Yaw, Chairman Yudichak, and members of both Committees: I want to thank you for inviting us to comment on alternative and renewable energy policy in Pennsylvania, and further wish to convey the Pennsylvania Environmental Council's (PEC) appreciation for the General Assembly's robust consideration of these issues.

My name is John Walliser and I am a senior vice president with PEC, a statewide nonprofit project and policy organization that, for nearly fifty years, has worked with public and private partners to advance meaningful and collaborative solutions for Pennsylvania. This includes the combined issues of energy policy and climate change where, over the past several years, we have examined decarbonization of electricity production in the Commonwealth.

These efforts included a conference and white paper in 2017,[1] numerous stakeholder discussions on key issues and opportunities, and finally our January 2019 Energy and Climate: A Policy Pathway Forward for Pennsylvania recommendations report ("Energy Pathways report")[2] which is attached to these comments.

The Energy Pathways report contains recommendations that would represent fundamental shifts in state energy policy, much as the Alternative Energy Portfolio Standards (AEPS) did in 2004. Our recommendations are based on mechanisms that are proven, in place in neighboring states, generate economic benefits and job growth, advance new technologies and businesses, and still achieve significant emission reductions. Especially important in Pennsylvania's unique energy landscape, our proposals allow multiple energy resources including natural gas to be part of the solution.

As we near the ceiling of the AEPS and consider the fate of nuclear generation, we believe that this is the moment to undertake the next transformation of state energy policy. I would like to provide an overview of the two primary recommendations in our Energy Pathways report, both of which speak directly to the topic in front of the Committees today.

Immediate Policy Recommendations

1. **Join the Regional Greenhouse Gas Initiative to begin providing a price signal and generating revenues that can reduce emissions in the electric power sector.**

Our first recommendation is for Pennsylvania to join the Regional Greenhouse Gas Initiative (RGGI) – a multi-state, market-driven program to reduce carbon emissions in the electric power sector. RGGI is a cooperative effort among the states of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont to cap and reduce carbon dioxide (CO_2) emissions from electricity generation. In addition, Virginia and New Jersey are currently in the process of joining RGGI. The program works through a regional limit

[1] Pennsylvania Environmental Council, *Achieving Deep Carbon Reductions*, June 2017, https://pecpa.org/deepdecarb2017

[2] https://pecpa.org/wp-content/uploads/PEC-Energy-and-Climate-Pathway.pdf

on carbon emissions determined by negotiation among the participating states, then lowered annually. To achieve that limit, fossil-fuel-fired power generators with a capacity of 25 megawatts or more are required to purchase allowances equal to their CO_2 emissions. Those allowances are priced based on the results of a regional auction of credits to the generators. Regulated power plants can use an allowance issued by any participating RGGI state to show compliance, and they can acquire allowances from regular regional auctions or through secondary markets.

Assisted by low natural gas and renewable energy prices, RGGI has helped spur emission reductions and provided significant economic revenues for participating states. Annual emissions from the electric power sector in RGGI states have dropped by more than half since RGGI launched in 2009 (due both to RGGI and broader economic and energy industry factors), and the RGGI cap will continue declining through 2030. Since RGGI's launch, almost all of the nearly $3 billion in proceeds from allowance auctions has gone back to participating states to be used for energy efficiency programs, renewable energy projects, consumer assistance, job training, and more. From 2015-17, RGGI generated $1.4 billion of net positive economic activity in the participating states, with net benefits for each state's consumers and economy, as well as thousands of new jobs.[3]

Joining RGGI can also provide long-term, market-based support for existing zero-carbon sources like nuclear generation.

That said, careful consideration will be required as to how Pennsylvania would join – given the state's substantial role as an energy producer, adjustments might need to be made to the regional program. In addition, to help address emissions leakage, Pennsylvania should pursue creating a carbon border adjustment – or pushing for a regional one throughout PJM. This kind of regulatory pricing mechanism would ensure that electricity used and/or generated in Pennsylvania and neighboring states is priced equally despite differing (or a lack of) carbon pricing, thereby helping to ensure that reduced fossil generation in Pennsylvania would not simply be offset by associated increases in other states.

2. Reform the AEPS into a Clean Energy Standard to be more technology-inclusive and further drive zero-carbon electricity generation.

Our second major recommendation is that Pennsylvania should pair targeted emission reductions in the electric power sector (i.e., from joining RGGI) with a Clean Energy Standard (CES), replacing and improving the current AEPS to more effectively promote investments in low-carbon energy technologies.

[3] Analysis Group, *The Economic Impacts of the Regional Greenhouse Gas Initiative on Nine Northeast and Mid-Atlantic States*, Apr. 17, 2018, https://www.analysisgroup.com/globalassets/uploadedfiles/content/insights/publishing/analysis_group_rggi_report_april_2018.pdf

A Clean Energy Standard is premised on achieving emission reductions from generation sources. This is fundamentally different from our existing AEPS, which currently provides one allocation for identified renewable energy sources, with an additional allocation for other generation assets that do not guarantee any carbon reduction benefits. The advantages of a CES over the AEPS are that it would set an objective performance-based standard, and it can be more generation and technology inclusive toward those goals.

Other states have begun to utilize this policy approach.

- Massachusetts recently promulgated regulations creating a CES that requires retail sellers to have a specified percentage of clean generation, starting at 16% in 2018 and rising to 80% by 2050. Massachusetts allows the CES to be met by renewables or by any generation unit that has net lifecycle greenhouse gas emissions 50% lower than those of a new combined cycle natural gas plant (as long as that generation unit was put into operation after 2010).[4]

- Ohio's portfolio standards allow for up to half of the overall goal (25% by 2024) to be met with "advanced energy resources".[5]

- New York has a CES of sorts, combining a 50% by 2030 renewables standard with a zero-emissions credit (ZEC) requirement to support existing nuclear plants.[6] Governor Cuomo in New York recently announced his proposal to raise the renewables standard to 70% by 2030 and to require that the state's electricity be 100% zero-carbon by 2040.[7]

- Outside the region, California in 2018 enacted a law raising their renewable target to 60% by 2030 and establishing a state policy goal of getting 100% of the state's electricity from "eligible renewable energy resources and zero-carbon resources" by 2045.[8]

- New Mexico and Washington have also recently enacted similar laws, with Illinois and Maryland potentially soon to follow. Washington's new law is particularly notable because it includes novel incentives for utilities.[9]

This approach makes sense for Pennsylvania because it can accommodate renewables, nuclear, natural gas, and even coal with quantifiable carbon capture.

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[4] Code of Massachusetts Regulations, 310 CMR 7.75, https://www.mass.gov/files/documents/2019/01/02/310cmr07.pdf

[5] Ohio Administrative Code, Chapter 4901:1-40, http://codes.ohio.gov/oac/4901%3A1-40

[6] New York State Energy Research and Development Authority, *Clean Energy Standard* website, https://www.nyserda.ny.gov/All-Programs/Programs/Clean-Energy-Standard

[7] Governor Andrew M. Cuomo, State of New York, *Governor Cuomo Announces Green New Deal Included in 2019 Executive Budget*, Press Release, Jan. 17, 2019, https://www.governor.ny.gov/news/governor-cuomo-announces-green-new-deal-included-2019-executive-budget

[8] California SB100, 2018, https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180SB100

[9] https://www.vox.com/energy-and-environment/2019/4/18/18363292/washington-clean-energy-bill

A Clean Energy Standard should be centered on an overall objective to achieve a 100% zero-carbon electricity supply before 2050. It could be framed as follows:

- An improved Tier I that expands the minimum market requirements for renewables, with greater targets for both in-state solar and PJM-region wind. These requirements should be ambitious, but also based on realistic projections given technology and capacity. The targets should steadily increase over time.

- A revised Tier II requirement that can be met by any zero-carbon sources, including renewables, existing and advanced nuclear, and fossil-fuel-fired plants with 100% carbon capture. These sources could be allowed to help meet Tier I requirements in the event there is insufficient renewable generation capacity available.

- As a transition measure, create a new Tier III that includes any generation sources with emissions per MWh below a regularly tightening maximum rate. The tightening rate means that qualification for Tier III gets increasingly stringent over time, and before 2050, Tier III would be completely eliminated.

With RGGI and a Clean Energy Standard, Pennsylvania can achieve elimination of carbon emissions from the electric power sector through an all-of-the-above strategy that will allow multiple generation sources to remain competitive. It can also generate revenues to offset consumer impacts, invest in clean energy technologies and job training, and enhance energy reduction programs.

Other Recommendations

Beyond the primary recommendations described above, our Energy Pathways report identifies additional opportunities with respect to the transportation sector, carbon capture, distributed renewables and energy storage, community solar, grid modernization, and other options that will further drive emission reductions and energy savings.

PEC also advocates for strong action on reducing methane emissions from natural gas development and delivery, as these emissions potentially offset any climate benefits of fuel switching from coal to natural gas generation.

Conclusion

Any action by the General Assembly with respect to the AEPS, whether to assist nuclear generation or not, will represent a marked shift in state energy policy. PEC encourages you to seize this opportunity to advance a more comprehensive and inclusive approach that goes beyond maintaining the status quo – one that will benefit all Pennsylvanians by committing to a zero-carbon strategy.

Thank you again for the opportunity to present these comments. I would be happy to answer any questions that you might have.

Attachments:
PEC Energy and Climate: A Policy Pathway Forward for Pennsylvania (January 2019)
PEC Testimony before the Bicameral Nuclear Energy Caucus (June 2018)