TESTIMONY OF THE NATURAL RESOURCES DEFENSE COUNCIL

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on House Bill 2277

Before the House Environmental Resources & Energy Committee

Harrisburg, Pennsylvania

June 24, 2024

Chairman Vitali, Chairman Causer, and honorable members of the House Environmental Resources & Energy Committee, thank you for the opportunity to testify in support of Representative Otten's House Bill 2277, P.N. 3081, known as the Pennsylvania Reliable Energy Sustainability Standards Act (PRESS). This bill is one of two key legislative prongs in Governor Shapiro's Energy Plan and represents a tried-and-true power sector policy that would dramatically increase the percentage of Pennsylvania's electricity sourced from clean energy while providing pathways for nascent technologies to compete for "reliable energy credits" (or RECs) in the decade ahead.[1]

My name is Robert Routh, and I am a senior attorney with NRDC (Natural Resources Defense Council), an international non-profit organization with over three million members and online activists. Since 1970, NRDC's lawyers, scientists, and other environmental specialists have worked to protect our natural resources, public health, and climate. As Pennsylvania Policy Director for the Climate & Energy Department, my job is to advocate for laws and policies in the Commonwealth that reduce emissions of greenhouse gasses (GHG) and other air pollutants to create an equitable, sustainable, and prosperous clean energy economy for all.

The energy transition is at an inflection point. Congress has taken enormous steps to move the needle on climate change and decarbonize the power sector by enacting historic investments in clean energy through the Inflation Reduction Act (IRA) and the Bipartisan Infrastructure Law (BIL). While vital, these investments alone will not achieve U.S. climate targets. States need to move swiftly on IRA implementation and state policy measures like PRESS to increase cleaner sources of generation (and overall generating capacity) while growing jobs and lowering costs for consumers. The General Assembly can take steps to ensure federal funds are invested and maximized here with the benefits flowing to our communities rather than see other states continue to outcompete us. Meanwhile, with power demand expected to increase in the U.S. for the first time in two decades, state policymakers can play a role to ensure the electric grid is

[1] The complementary policy to PRESS is known as the Pennsylvania Climate Emissions Reduction Act (PACER), which would establish a Pennsylvania-specific cap-and-invest program. PACER has been introduced as HB2275 (Abney) and SB1191 (Comitta). There is also a companion version of PRESS introduced in the Senate, SB1190 (Santarsiero).

prepared; not by panicking, but by enacting smart reforms to properly incentivize the buildout of clean, reliable generation.

Pennsylvania Efforts on Climate and Energy Policy

Between 2004 and 2008, the General Assembly took three important steps toward a cleaner energy economy. The Alternative Energy Portfolio Standards Act of 2004 (AEPS) set goals for the purchase of renewable energy and other types of "alternative" generation by electric utilities and retail electricity suppliers. Act 129 of 2008 required utilities to establish efficiency and conservation programs to help customers save energy. And the Climate Change Act of 2008 charged the Department of Environmental Protection (DEP) with producing reports on the impacts of climate change in Pennsylvania and recommending strategies to mitigate those impacts.

After 2008 – with the rise of the Marcellus Shale gas boom in Pennsylvania – the legislature's priority quickly became, and has largely remained, to accommodate and promote shale gas and petrochemical development. The AEPS reached its very modest peak targets in May 2021, which have flatlined ever since. The major pieces of energy legislation passed in Harrisburg in recent years have included lucrative tax credits for petrochemical production using Pennsylvania gas as a feedstock, a $1 billion tax credit to incentivize the purchase and use of either hydrogen or shale gas at manufacturing facilities that are part of a federally-funded regional hydrogen hub, and a bill that has required Pennsylvania electricity consumers to pay more money to support waste coal plants.[2]

As a result, the trend in Pennsylvania's power sector since 2008 has been a massive shift from one fossil fuel to another (driven largely by market forces), with gas-fired power replacing increasingly uneconomic, carbon-intensive coal plants. And the few remaining large, conventional coal plants still operating in Pennsylvania have all announced plans to either retire or attempt to fuel-switch to gas by 2028. A balanced, proactive state policy approach like PRESS

[2] The amendments to the Fiscal Code in Act 114 of 2020 included provisions that require electric utilities and retail electricity suppliers to buy all of their "Tier II" AEPS credits from within Pennsylvania. See Act of Nov. 23, 2020, P.L. 1140, No. 114, available at https://www.legis.state.pa.us/cfdocs/legis/li/uconsCheck.cfm?yr=2020&sessInd=0&act=114#:~:text=This%20act%2

has been long overdue. It builds on the existing AEPS framework familiar to all relevant parties, including the PA Public Utility Commission, electric utilities, and retail electricity suppliers.

Following Governor Shapiro's rollout of his PRESS and PACER package in the spring, NRDC decided to invest institutional resources to commission a sophisticated modeling run to understand the projected impacts that his Energy Plan would have on power sector emissions, job creation, consumer savings, and federal investments. We posted a summary of the results online earlier this month and provide here some of those details and analysis to confirm that PRESS would bring significant benefits to Pennsylvania across the board. Specifically, our modeling projects that PRESS would: protect and grow clean energy jobs while accelerating the uptake of IRA clean energy tax credits; result in increased clean electricity generation and capacity; and see Pennsylvania become an even more dominant electricity exporter.

What We Modeled

We have seen results like this before. They reflect clear, persistent trends in past Pennsylvania runs, as well as real-world experience in states that have adopted strong power sector policies. Here, NRDC analyzed a new policy scenario using the Integrated Planning Model (IPM).[3] The fundamental logic behind the model determines the least-cost means of meeting electric generation energy and capacity requirements while complying with specified constraints, including air pollution regulations, transmission constraints, and plant-specific operational constraints.

The new scenario – where Governor Shapiro signs PRESS and PACER into law this year – was compared to a "business-as-usual" reference scenario (or "BAU"), in which Pennsylvania does not increase its clean energy targets. Our BAU scenario did include Pennsylvania implementing its CO2 Budget Trading Program (litigation over this program is currently pending before the Pennsylvania Supreme Court). The BAU case also included all existing state and federal policies as of April 2023, e.g., the historic effects of the federal IRA and BIL. But it did not include the

[3] In the power sector world, computer models are used to help forecast and understand the environmental and economic effects of different energy policies. The modeling in this blog represents assumptions developed by NRDC based on consultation with energy experts, partners, and industry. IPM is a detailed power sector model commonly used by the U.S. Environmental Protection Agency (EPA), utilities, and state regulators.

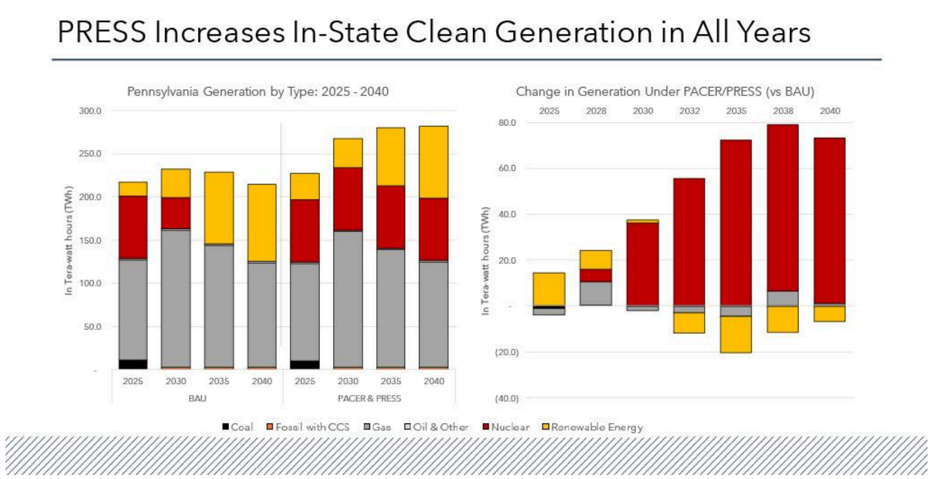
EPA's recently finalized [111 carbon standards](#) for new/modified gas plants and existing coal plants.

We completed the modeling after the release of PRESS and PACER co-sponsor memos but before the introduction of final legislative text. Therefore, our policy scenario run did not incorporate all details of the Zero Emissions Credits (ZEC) program for the existing nuclear fleet, and it did not account for the in-state Tier I generation requirements that take effect and ramp up starting in 2030.

Results and Analysis

- PRESS will accelerate the build out of renewables in-state, resulting in greater near-term deployment of new clean energy.

- PRESS results in significantly higher total PA generation and exports, especially into the 2030s. Net exports grow in the policy case to almost 120 terawatt hours (TWh) annually (whereas they decline under BAU). In the 2030s, Pennsylvania is exporting *twice as much* as the next largest exporter in the country.



- PRESS would result in a cumulative total increase of 278,000 new jobs (full-time equivalent job-years) in Pennsylvania by 2040. That represents an average annual increase of nearly 17,500 new jobs from 2025 to 2040.

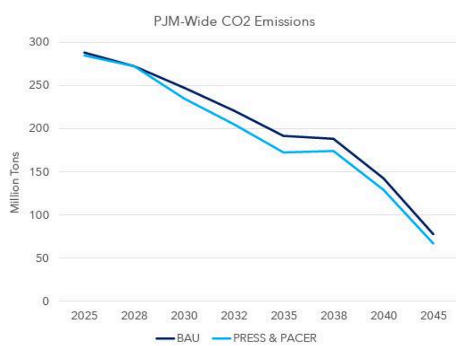
Job Impacts of PACER & PRESS

Economic Indicator	In 2030	In 2035	In 2040	Average Annual (2025 - 2040)	Cumulative (2025 - 2040)
Jobs (FTE Job Years - created or retained)*	15,005	24,720	27,033	17,375	278,001
GDP (2023$)	$2.40 Billion	$4.46 Billion	$4.46 Billion	$2.92 Billion	$46.73 Billion

Job and GDP estimates were derived from the Eco-IDeA tool developed for NRDC by Synapse Economics. The Eco-IDeA tool is grounded in the results of primary analyses conducted with the IMPLAN model.

- Pennsylvania is expected to see $25 billion in federal clean energy tax credits flow into the state over the next two decades, which will minimize costs to ratepayers and local companies. With PRESS, those investments are accelerated. Under BAU, $3.9 billion in credits will have flowed to PA by 2032 (after which there is less certainty about their availability). But under the policy scenario, **that figure is $5.7 billion—nearly a 50% increase**.

PRESS Reduces Emissions Across PJM



Over the next 20 years, PRESS cuts regional emissions by:

- 224 Million Tons of CO_2
- 55,750 Tons of NO_x
- 42,000 Tons of SO_2

This modeling confirms what we know about the impacts of power sector decarbonization policies like scaling up clean electricity targets and cutting pollution from dirty sources of energy through smart cap-and-invest programs.

To be clear, PRESS does not look exactly like legislation that NRDC would have drafted (nor does PACER), but that shouldn't come as any surprise. These bills are the byproducts of compromise and discussion amongst diverse stakeholders with competing interests and different perspectives. Significantly, PRESS would deploy more renewables in the near-term and, as designed, it would keep Pennsylvania's existing nuclear fleet (which currently provides 32% of PA's total generation and over 90% of PA's zero-emission generation) from prematurely retiring in the 2030s (the federal production tax credit for existing nuclear plants enacted in the IRA is scheduled to sunset in 2032). **Enacting PRESS would represent a quantum leap forward from the status quo**.

Conclusion

The overall picture is clear. The governor's Energy Plan would cut climate pollution, lower bills, grow and protect jobs, and accelerate federal clean energy investments in-state. PRESS drives energy production, job creation, and federal funding. PACER reduces carbon pollution from the Commonwealth's fossil fleet, ensures bill savings for consumers, and results in billions of dollars of investments to revitalize communities across Pennsylvania. We look forward to ongoing discussion in Harrisburg in the remaining months of this session, but one thing is certain: if Pennsylvania wants a brighter future, inaction is not an option.

Thank you again for the opportunity to testify.

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