

TESTIMONY OF THE NATURAL RESOURCES DEFENSE COUNCIL

Mark C. Szybist, Senior Attorney

Before the House Environmental Resources and Energy Committee

Concerning “Climate and CO2”



Harrisburg, Pennsylvania

June 22, 2021

Chairman Metcalfe, Chairman Vitali, honorable members of the Committee: good morning and thank you for the invitation to speak to you on the topic of Climate and CO2.

My name is Mark Szybist and I am a senior attorney with the Natural Resources Defense Council, a nationwide non-profit environmental organization with approximately 17,000 members in Pennsylvania. My job is to advocate for equitable clean energy policies in the Commonwealth.

My testimony today has three parts:

- First, I will provide an overview of what Pennsylvania and the world need to do to keep global temperatures from rising more than 1.5 degrees Celsius above pre-industrial levels, which is necessary to avoid the worst effects of climate change;¹
- Second, I will review the General Assembly's approach to energy policy and climate over the last two decades, and its lack of action regarding the ongoing transition from coal to gas in the power sector; and
- Third, I will discuss the General Assembly's options for responding to the policy proposal that I assume is the motivation for today's hearing: the DEP's proposed CO2 Budget Trading Program regulation, which would enable the Commonwealth to participate in the Regional Greenhouse Gas Initiative.

Decarbonizing the Economy

In 2018, the United Nations' Intergovernmental Panel on Climate Change issued a special report titled *Global Warming of 1.5 °C*.² It concluded that to avoid the worst impacts of climate change, we must keep the increase in average global temperatures below 1.5 degrees, and that to do that the world must reduce net greenhouse gas emissions 45 percent by 2030, and attain net zero emissions by 2050.

Since the IPCC report, a number of studies have analyzed different technological pathways for attaining these goals, which are often described as "deep decarbonization." The consensus emerging from those studies³ is that to achieve deep decarbonization, we must:

- Generate our electricity from zero-carbon sources, especially renewables;
- Electrify our buildings and our vehicles;

¹ For a comprehensive overview of the current and projected impacts of climate change in Pennsylvania, see the Department of Environmental Protection's most recent Climate Impacts Assessment, released in May, 2021, at <https://www.dep.pa.gov/Citizens/climate/Pages/impacts.aspx>

² Available at <https://www.ipcc.ch/sr15/>.

³ See NRDC, "The Biden Administration Must Swiftly Commit to Cutting Carbon Pollution at Least 50 Percent by 2030," FN 6. Available at <https://www.nrdc.org/sites/default/files/2030-biden-climate-pollution-ib.pdf>.

- Improve the energy efficiency of our buildings and industrial processes;
- Reduce emissions of greenhouse gases other than CO₂, including methane, nitrous oxides, and fluorinated gases; and
- Increase our capacity to remove CO₂ from the atmosphere through forest protection and reforestation, improved agricultural practices, carbon capture, and other practices.

Reducing our net emissions by 45 percent in the next eight years and achieving net zero emissions by 2050 is a massive undertaking. But the analyses also show that it is both possible and affordable, to a large extent with existing technologies⁴ and established legal and policy pathways.⁵

Crucially, decarbonizing our economy is also a massive opportunity to invest in American workers and families and create a fairer, more sustainable, and less precarious economy than the one we have now. That is why many U.S states are developing ambitious plans to drive renewable energy, limit carbon pollution, and pursue other decarbonization pathways. Since 2008, for example, state and local commitments have led to a near-doubling of renewable energy generation in the U.S. and six states have made legal commitments to 100 percent carbon-free electricity by 2050 or earlier. Another 10 states have longer-term 100 percent goals.⁶ Pennsylvania, though, has fallen behind.

Pennsylvania’s Inaction on Clean Energy and Climate

Between 2004 and 2008, The General Assembly took three important steps toward a clean 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. The Climate Change Act of 2008 charged the DEP with producing reports on the impacts of climate change in Pennsylvania and recommending strategies to mitigate those impacts.

Then the fracking boom started – and the General Assembly’s priority quickly became, and has remained, to accommodate and promote shale gas and petrochemical development. Over the last decade, as the current impacts and long-term threat of climate change have become undeniable, Pennsylvanians’ support for clean energy and climate action has increased. Today, according to research commissioned by the Center for Rural Pennsylvania, majorities of both rural and urban

⁴ See *id.* at 3.

⁵ See Michael B. Gerrard and John C. Dernbach, editors, *Legal Pathways to Deep Decarbonization* (March, 2019). Available at <https://www.eli.org/eli-press-books/legal-pathways-deep-decarbonization-united-states>.

⁶ See NRDC (Sophia Ptacek with support from Amanda Levin), “Race to 100% Clean,” at <https://www.arcgis.com/apps/Cascade/index.html?appid=714cd31f37a64314b8d1e7e502c13c58>

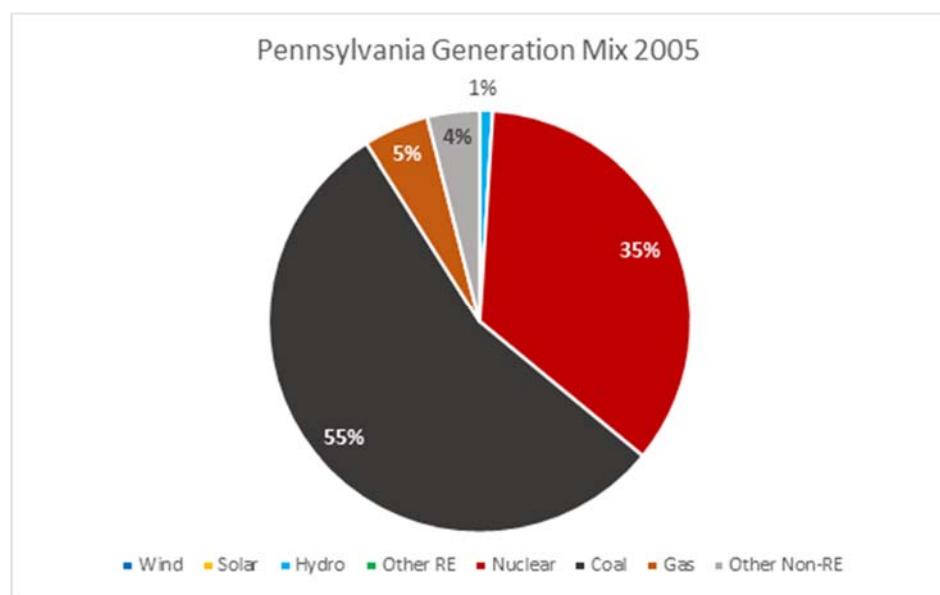
residents believe that renewable energy holds the greatest promise for addressing Pennsylvania's energy needs.⁷

The General Assembly, however, is ignoring those majorities. This May, the AEPS, Pennsylvania's main driver of renewables investments, reached its very modest peak without as much as a hearing on any of several bills to update it. Last year, the two major pieces of energy legislation passed were a massive petrochemical subsidy bill and a bill to require Pennsylvania electricity consumers to pay more money to support waste coal plants.⁸

Pennsylvania's Transition from Coal to Gas

Meanwhile, due largely to the General Assembly's restructuring of Pennsylvania's power sector under the Electricity Choice and Competition Act of 1996,⁹ there has been a massive shift in the sector from coal-fired power to gas-fired power. To put it more bluntly, gas has been out-competing and rapidly displacing coal.

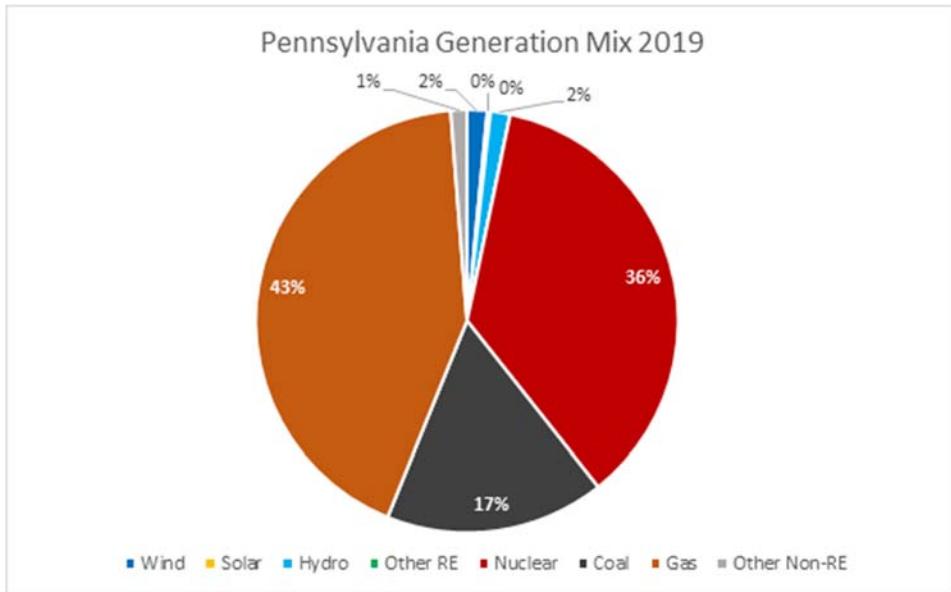
When fracking arrived, 55 percent of the electricity produced in Pennsylvania came from coal. By 2019 coal generation was down to 17 percent, and gas generation was up from 5 percent to 43 percent.



⁷ See Daniel J. Mallinson et al., *Attitudinal Survey of Pennsylvanians, 2019* (May, 20201), available at <https://www.rural.palegislature.us/documents/reports/Attitudinal-Survey-2019.pdf>

⁸ The amendments to Pennsylvania's Fiscal Code in Act 114 of 2020 include 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%20provides%20accountability%20for,%2C%202020%20\(P.L.%20%2C%20No.,](https://www.legis.state.pa.us/cfdocs/legis/li/uconsCheck.cfm?yr=2020&sessInd=0&act=114#:~:text=This%20act%20provides%20accountability%20for,%2C%202020%20(P.L.%20%2C%20No.,)

⁹ For an in-depth discussion of the "Competition Act," see my 2019 blog, "Nuclear Power and Pennsylvania's Competition Act," available at <https://www.nrdc.org/experts/mark-szybist/pennsylvanias-competition-act>



The reason for coal's precipitous decline is simple: it became much cheaper to generate electricity from gas.

Before fracking, coal was generally Pennsylvania's cheapest electricity source—and was *much* cheaper than gas. Then fracking made gas cheap, and private equity funds and other investors saw an opportunity. By building new, highly efficient combined-cycle gas power plants they could out-compete the old coal plants on PJM's gas-friendly markets and make a lot of money. And that's what they've done.¹⁰

The result is that since 2010, 13,678 MW of new gas plants have come online in Pennsylvania, another 3,273 MW are close behind, and 16 coal plants have closed or announced their closure. The most recent is the Cheswick Generating Station north of Pittsburgh, which announced its retirement on June 10.

How has the General Assembly managed this transition, and the impacts it has had on workers and communities? As far as I can tell, it has not. Meanwhile, although coal-to-gas fuel-switching has led to somewhat lower emissions from Pennsylvania's power sector,¹¹ it has also led to much higher emissions of methane from gas production and transmission activities. According to the

¹⁰ Of course, gas is not the only cause of coal's decline in Pennsylvania. Flat electricity demand and the Environmental Protection Agency's 2011 Mercury and Air Toxics Standard (MATS) rule have also contributed. But in Pennsylvania those factors have played relatively minor roles. Gas is the most significant cause, by far..

¹¹ The reduction in CO₂ emissions from Pennsylvania's power sector mirrors a national trend. However, the trend cannot continue because once a coal plant is closed, it cannot be replaced by a gas plant a second time. See United States Energy Information Administration (EIA), "Energy and the Environment Explained: Outlook for Future Emissions," available at <https://www.eia.gov/energyexplained/energy-and-the-environment/outlook-for-future-emissions.php>

most recent data from the U.S. Energy Information Administration, Pennsylvania has the fourth-highest CO₂ emissions among states.¹² This is not a path to decarbonization.

Pennsylvania and RGGI

It is against this policy background – inaction by the General Assembly either to drive decarbonization or to address the impacts of ongoing coal plant closures – that Pennsylvania’s RGGI drama is playing out.

The question now facing the General Assembly is what policy action, if any, to take in response to the DEP’s proposed RGGI regulation. So far, despite Pennsylvanians’ strong support for policy action on climate, as evidenced by polls; despite their overwhelmingly positive support for RGGI with investments targeted to environmental justice communities and coal communities, as evidenced by the DEP’s public comment period last winter; despite RGGI’s clear record of reducing emissions, improving human health, and creating jobs; despite the hundreds of millions of dollars RGGI would enable the Commonwealth to invest in the communities most in need of investment – so far, despite all these things, this Committee’s response has been to advance House Bill 637, a bill that would strip the DEP of its authority to regulate CO₂ and replace it not with a counterproposal to RGGI, but with a hyperbolically onerous new process for other future proposals by the DEP.

I do not presume to change members’ minds about HB 637. My question for those of you who support it, rather than HB 1565, Representative Herrin’s RGGI Investments Act, is what outcome you hope to achieve. HB 1565’s outcome would be to complement the DEP’s CO₂ budget and trading program with an investment program that balances investments in energy efficiency and other forms of clean energy with other critical investments in communities adversely affected by the transition away from coal and in environmental justice communities that have long suffered disinvestment.

What would be the outcome of HB 637? Not investment – HB 637 would not invest a cent. Nor will it stop coal plants from closing, at least not for long; only stopping the flow of shale gas could do that. All HB 637 would do is block policy to address climate change, and perhaps more importantly block Governor Wolf. For some members that may be enough. But Pennsylvanians want and deserve more.

Thank you again for the opportunity to testify today. I look forward to answering any questions you may have and discussing these important issues.

¹² See United States Energy Information Administration, “Energy-Related CO₂ Emission Tables,” available at <https://www.eia.gov/environment/emissions/state/>