June 23, 2020

Testimony of Thomas D Schuster
Clean Energy Program Director
Sierra Club Pennsylvania Chapter

To the Senate Environmental Resources and Energy Committee

***On Sierra Club's support for regulating carbon dioxide pollution from the electric sector and linking to the Regional Greenhouse Gas Initiative***

The latest scientific reports make clear the urgent need to act on climate change. Last year, the United States Global Change Research Program released the Fourth National Climate Assessment stating that the climate crisis is no longer a just future threat but that its impacts are beginning to be felt today. Several studies show the cost of inaction in Pennsylvania is high. For example, tidal portions of the Delaware River will routinely rise to inundate the Philadelphia Airport and nearby neighborhoods. Corn and dairy, Pennsylvania's most important agricultural products, are expected to see major losses, and the winter recreation industry will likely disappear entirely. Extreme rainstorms will continue to increase losses from landslides and flooding throughout the Commonwealth, and summer heat waves will threaten more lives.[1]

Fortunately, Governor Wolf issued an Executive Order last fall to initiate a regulation that can cut Pennsylvania's carbon pollution in a very cost effective way by joining the Regional Greenhouse Gas Initiative (RGGI). With complementary investments in clean energy, energy efficiency, economic diversification and transition, the Commonwealth has the potential to create hundreds of thousands of jobs, while reducing our greenhouse gases, if we follow through on that commitment.

Our Commonwealth is a globally significant emitter of the carbon dioxide pollution that is the primary driver of our climate crisis. Nationally, we're ranked in the top four states for emissions related to fracked gas and coal use. We emitted more energy-related carbon pollution in 2015 than 172 of the 194 nations that signed on to the Paris Climate Agreement. We can and must do our part to control this pollution before it is too late, and in the process we can grow our clean energy economy.

RGGI currently has ten participating states with Virginia expected to join by 2021. RGGI states set limits on carbon dioxide (CO2) pollution from power plants, and those limits decline over

[1] For more detail on these and other climate impacts on Pennsylvania and supporting documentation, please see our previous testimony before the House ERE committee on October 28, 2019.

time. Generators must purchase an allowance for each ton of CO2 emitted. When allowances are auctioned or sold to generators, the proceeds are reinvested in beneficial ways. Research by the Analysis Group shows that these investments have created over 44,000 job-years in the RGGI region since 2009.

A recent review by the Acadia Center of the program's first 10 years[2] found that:

- CO2 emissions from RGGI-covered power plants have fallen by 47%, outpacing the rest of the country by 90%, while reductions in other air pollutants from these plants have resulted in over $5.7 billion in health and productivity benefits;
- RGGI states have generated $3.2 billion in allowance auction proceeds, the majority of which have been invested in energy efficiency and renewable energy programs;
- Electricity prices in RGGI states have *fallen* by 5.7%, while prices have *increased* in the rest of the country by 8.6%;
- The combined economies of the RGGI states have grown by 47%, outpacing growth in the rest of the country by 31%.

I want to underscore those last two points, because while opponents of RGGI predict economic harm, that has simply not occurred where this system has been in place. In fact, pricing carbon pollution corrects a market failure, and in doing so leads to innovation and prevents significant costs associated with pollution.

The nonpartisan research firm Resources for the Future recently modeled what our energy prices and generation mix would look like if Pennsylvania participated in RGGI.[3] A summary of that research is attached. Some key findings through 2026 include:

- *All scenarios produce significant carbon dioxide pollution reductions relative to business as usual.* Many have noted that Pennsylvania's power sector carbon emissions have declined in recent years as power from fracked gas outcompetes and replaces power from coal. However, this analysis indicates that going forward, gas is projected to replace most of our existing nuclear generation in the absence of any carbon limits. This would lead to significant carbon emissions increases. ***Without a carbon cap, 6 of the 8 remaining nuclear units are projected to retire by 2026, while only one additional unit would retire during that same time with a carbon cap. In essence, this regulation would accomplish the same purpose as HB 11 (which required utilities to purchase nuclear energy) would have, but at a tiny fraction of the cost.***
- *Electricity cost increases are minimal, and in some scenarios costs go down.* The worst case scenario from a cost perspective increases the average residential electric bill by about $0.32 per month, or about $3.80 per year. This is about a tenth of the estimated cost of HB 11, which is intended to prevent nuclear plant retirements. That scenario

[2] Acadia Center, 9/17/19, The Regional Greenhouse Gas Initiative: Ten Years in Review. https://acadiacenter.org/document/the-regional-greenhouse-gas-initiative-ten-years-in-review/

[3] See attachment: Burtraw, D, M Domeshek, Anthony Paul, and Paul Picciano. 2019. Options for Issuing Emissions Allowances in a Pennsylvania Carbon Pricing Policy. Resources for the Future: Issue Brief 19-08.

assumes that allowance proceeds are directed to the general fund, or otherwise spent on projects unrelated to energy. If instead the proceeds are invested in a combination of energy efficiency projects and customer bill rebates, the average residential bill is projected to ***decrease by about $1.45 per month, saving customers over $17 per year***.

- *Pennsylvania remains a major electricity exporter in all scenarios.*

A different model run by ICF International for the DEP analyzes results through 2030, and the results are very consistent despite different methodologies. The ICF analysis concludes what most in the generation business already know: **by the end of this decade we will get virtually none of our electricity from coal, regardless of whether we join RGGI**.[4] Joining RGGI does accelerate this phase-out, and also creates a revenue stream of hundreds of millions of dollars per year, a significant portion of which can and should be invested in ways that help diversify local economies and employ workers in areas where power plants retire. Without such an investment program, these workers and communities would be left to fend for themselves when their plants inevitably close.

And make no mistake: **no matter what policy path we choose, power plants will retire because our regional grid is grossly oversupplied with generating capacity.** But participation in RGGI would ensure that the ones that stay open are the ones that pollute less, making it much easier for us to mitigate the impacts of climate change that we've already started to experience. We can already see this playing out with the announcement of Energy Harbor to keep the Beaver Valley nuclear plant open if carbon dioxide limits go into effect as scheduled. The plant was previously scheduled to retire in 2021, and employs three times the number of workers as a similarly sized coal plant.

In short, regulating electric sector carbon pollution and linking it to RGGI is a very important step that our Commonwealth must take to ***begin addressing the existential threat posed by climate disruption, and to do so in a way that is cost effective and supportive of our diverse energy economy.***

Unfortunately, Senate Bill 950 would not only prevent Pennsylvania from regulating electric sector carbon pollution and linking to RGGI, it would revoke existing authority under the Air Pollution Control Act of the Dept. of Environmental Protection to regulate ***any*** greenhouse gas in any sector. Pennsylvania is too big of a contributor to climate change for us to abdicate responsibility. We can get this right. We can still have a thriving energy economy while acting on climate, and we should start by joining RGGI.

---

[4] DEP presentation to Air Quality Technical Advisory Committee 5/7/20, slide 29, available at: https://www.dep.pa.gov/Business/Air/BAQ/AdvisoryGroups/Air-Quality-Technical-Advisory-Committee/Pages/default.aspx