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August 27, 2021

Independent Regulatory Review Commission  
333 Market Street, 14th Floor  
Harrisburg, PA 17101

**VIA E-MAIL**

Re: Regulation #7-559: CO2 Budget Trading Program IRRC Number 3274

Dear Commissioners:

Pursuant to the Independent Regulatory Review Commission's (IRRC) process for reviewing final-form regulations, the Pennsylvania Coal Alliance (PCA) submits the below comments regarding Regulation #7-559: CO2 Budget Trading Program IRRC Number 3274. As the IRRC is aware, PCA previously submitted comments to the Pennsylvania Department of Environmental Protection (DEP), the Environmental Quality Board (EQB) and IRRC on the proposed regulations on January 14, 2021. Given the limited changes made by DEP/EQB to the regulation between the proposed stage and final-form, those comments remain applicable and are appended to these comments.

***The EQB and the DEP do not have Statutory Authority to Promulgate the Regulations or Distribute Proceeds from the Action of Allowances.***

As outlined in the Regulatory Review Act (RRA), the IRRC determines whether the regulation conforms to the intention of the General Assembly. The DEP/EQB claim section 5(a)(1) of the Air Pollution Control Act (APCA), 35 P. S. § 4005(a)(1), provides the statutory authority for this regulation and grants the EQB general authority to adopt rules and regulations for the "prevention, reduction, and abatement of air pollution in the Commonwealth." However, this provision of the APCA dates back nearly 50 years to 1972 when the APCA was amended to include section 5(a)(1), a time when climate change was not a mainstream topic and CO<sub>2</sub> was not remotely considered to be air pollution. Contrary to DEP's assertion in the Regulatory Analysis Form (RAF), no court has concluded that CO<sub>2</sub> in the ambient atmosphere constitutes air pollution, nor "inimical . . . or injurious to human, plant or animal life or to property which unreasonably interferes with the comfortable enjoyment of life or property" for purposes of the APCA. CO<sub>2</sub> is more properly considered an essential element of life.

Further, section 5(a)(1) is not a broad grant of legal authority to promulgate regulations to participate in a market-based, interstate carbon tax-and-trade program. The APCA does not mention such programs. The Pennsylvania Supreme Court has made clear that the delegation of administrative rulemaking authority “must be clear and unmistakable as a doubtful power does not exist.” *Eagle Environmental II v. DEP*, 884 A.2d 867 (Pa. 2005).

Members of the 2019-2020 Pennsylvania House of Representatives, and the 2019-2021 and 2021-2022 Pennsylvania Senate, overwhelmingly, and with bipartisan support, passed legislation outlining a process for legislative approval before Pennsylvania imposes a carbon tax on employers engaged in electric generation, manufacturing or other industries operating in the Commonwealth, or enter any multi-state program, such as the Regional Greenhouse Gas Initiative (RGGI), that would impose such a tax. These actions clearly reflect the intent of the General Assembly that the checks and balances outlined in Pennsylvania’s Constitution are designed to ensure that no one branch of government can act unilaterally, no matter the perceived policy justification.

In addition, the DEP/EQB, in both the RAF and the Comment and Response Document, cite the DEP’s authored Climate Action Plan as the justification for the need for the regulation. However, The Pennsylvania Climate Change Act, Act 70 of 2008, which established the Plan, does not set CO<sub>2</sub> emission reduction targets. Pennsylvania’s General Assembly is presumed to know the law when it acts and, clearly, it chose not to impose reduction targets or regulate CO<sub>2</sub>. Rather, the Pennsylvania Climate Change Act directed DEP to provide a cost-effective Climate Action Plan to the Governor to reduce greenhouse gas emissions from various sectors and make recommendations to the General Assembly to implement the Climate Action Plan. The unilateral approach taken by the DEP/EQB with this final-form regulation conflicts with the Act 70 of 2008, which is the most recent legislative statute that even contemplates climate change or CO<sub>2</sub>.

Regarding the disbursement of proceeds generated by the auction of allowances, fees assessed under the APCA are paid into DEP’s Clean Air Fund pursuant to Section 9.2 of the APCA. Money from the Clean Air Fund may only be used for “the elimination of air pollution.” EQB promulgated regulations in 1974 (in 25 Pa. Code Part 143) to define how money may be spent for the “elimination of air pollution.” Permissible purposes include money for lab equipment, air monitoring and monitoring equipment, data collection, employee training, and litigation costs to enforce air pollution laws. However, the DEP/EQB have indicated in the RAF the intention to invest “...31% of revenues in energy efficiency, 32% in renewable energy and 31% in GHG abatement with 6% remaining to cover any costs related to management of the CO<sub>2</sub> Budget Trading Program, 5% for the Department and 1% for RGGI, Inc.” Not only is the description of these categories so broad and undefined as to give DEP unbridled discretion to spend allowances however it seems fit – and therefore violate long-established agency delegation principles – the categories go well beyond the elimination of air pollution. It is an impermissible stretch of legal

authority, for example, to conclude that paying for or subsidizing the weatherization of buildings or updating of HVAC systems (examples DEP cites in the RAF) are for the “elimination of air pollution” within the meaning of Section 9.1 of the APCA and Part 143.

In conclusion, EQB does not have authority to promulgate the regulations and DEP does not have authority to spend auction allowances in the manner it intends. The General Assembly must grant authority for both.

***The Proposed Final Regulation is an Unconstitutional Tax.***

The EQB/DEP’s estimated proceeds from taxing CO<sub>2</sub> have varied by hundreds of millions of dollars over the past year, questioning the legitimacy and accuracy of the DEP’s contracted modeling. Nevertheless, the Emissions Credit Reserve (ECR) in Section 145.382 is intended to ensure that revenue from allowance auctions never falls below a predetermined amount, thus ensuring a minimum revenue stream to the state. Although section 6.3 of the APCA authorizes EQB to establish fees, it limits the amount of the fees that can be assessed to those “sufficient to the indirect and direct cost of administering the air pollution control approval process, operating permit program required by Title V of the Clean Air Act, other requirements of the Clean Air Act and the indirect and direct costs of administering the Small Business Stationary Source Technical and Environmental Compliance Assistance Program, Compliance Advisory Committee and Office of Small Business Ombudsman.” However, as mentioned above, the DEP/EQB intend to invest 31% of revenues in energy efficiency, 32% in renewable energy and 31% in GHG abatement with 6% remaining to cover any costs related to management of the CO<sub>2</sub> Budget Trading Program, 5% for the Department and 1% for RGGI, Inc., as noted above, Thus, the primary purpose of the proposed regulations is to raise revenue for specific Commonwealth spending programs, not to significantly or meaningfully reduce CO<sub>2</sub> concentrations in the ambient atmosphere, or administer a program as required by Section 6.3 of the APCA, meaning the regulations and auction proceeds are functionally a tax because they are an enforced contribution to support general revenue and not tied to administrative costs. It is noteworthy that PCA’s member coal producers pay various permit fees that are set at fixed amounts under regulation and, unlike as proposed with this final-form RGGI regulation, if DEP needs to increase revenues through higher fees, it must always adjust those fees through subsequent regulations promulgated under the RRA.

Lastly, the Pennsylvania Constitution requires all taxes to originate in the House of Representatives. *Mastrangelo v. Buckley*, 250 A.2d 447 (Pa. 1969). Absent express legislative authority to do so, DEP does not have authority to adopt the Chapter 145 regulations – i.e., a tax – to implement RGGI in the Commonwealth.

***The DEP and the EQB did not adequately address the economic and fiscal impacts of the regulation.***

The RRA specifically requires the IRRC Commissioners to consider the economic or fiscal impact of a regulation, including the direct and indirect costs to the Commonwealth; to its political subdivisions; to the private sector; and the adverse effects on the prices of goods, services, productivity, and competition when determining whether the regulation is in the public interest. The PCA previously raised considerable concerns regarding the absence of economic modeling across all impacted industries and the adverse effects on the prices of goods and services, productivity, and the competitiveness of our Commonwealth.

The DEP/EQB, in their Comment and Response Document, ignored the impacts the final-form regulation, if implemented, will have on Pennsylvania's bituminous coal industry.

Pennsylvania's bituminous coal industry, the third largest in the United States, annually contributes billions of dollars to our state's economy and supports tens of thousands of jobs directly and indirectly. The DEP/EQB completely ignore the impact RGGI will have on Pennsylvania's bituminous coal industry, dismissed the PCA's comments regarding the impacts in entirety, and conducted no modeling to reflect the economic impact, impact on productivity or the impact on competition that the final-form regulation will have on industry.

In 2019, twenty-four coal mines from twelve western Pennsylvania counties sent nearly nine million tons of Pennsylvania-mined, high BTU coal, primarily via rail, to the four-remaining coal-fired electric generating units (EGUs) that have not announced retirement or the end of coal use. Should these EGU's cease operation as a result of this final-form regulation, that coal will be displaced, and will likely become uncompetitive to other production operations in Ohio and West Virginia that are geographically located conveniently near EGUs in those states. The DEP's scant economic modeling does not address the potential loss of direct and indirect jobs due to the displacement of nine million tons of coal that will no longer be sent to Pennsylvania's coal-fired EGUs due to their ultimate closure that will result if the final-form regulations are implemented.

***DEP's and EQB Fails to Address Leakage, Joining RGGI Will Not Reduce CO<sub>2</sub>.***

The RRA also requires the Commissioners to consider the reasonableness of a regulation, including the need and timetables for compliance.

Governor's Wolf's Executive Order 2019-07 directed the DEP, in developing this proposed rulemaking, to "...engage with PJM Interconnection to promote the integration of this program in a manner that preserves orderly and competitive economic dispatch within PJM and minimizes emissions leakage." However, the DEP has failed to provide information from PJM that details state-specific impacts to EGU's with or without Pennsylvania's RGGI participation.

As indicated in previous PCA comments, a PJM analysis at minimum should project state-by-state electric generation CO<sub>2</sub> emissions for each modeled scenario, including Ohio and West Virginia, thereby allowing the assessment of overall regional emissions reductions and PJM leakage impacts. DEP/EQB did not complete this during the rulemaking process; however, DEP's contracted modeling points to less than a one percent overall reduction in CO<sub>2</sub> emissions in the PJM Regional Transmission Organization by 2030, and a 0.16% reduction in CO<sub>2</sub> emissions in the Eastern Interconnection during the same time, rendering the final-form regulation ineffective and therefore unreasonable.

Furthermore, the DEP has failed to have any meaningful consultation with PJM on the impacts to capacity prices that would result from Pennsylvania joining RGGI, nor has there been any consultation with the Independent Market Monitor (IMM), which is responsible for promoting a competitive and nondiscriminatory electric power market in PJM. The IMM's latest State of the Market Report recommends "...that PJM provide a full analysis of the impact of carbon pricing on PJM generating units and carbon pricing revenues to the PJM states in order to permit the states to consider a potential agreement on the development of a multistate framework for carbon pricing and the distribution of carbon revenues." This requested analysis has not yet been completed by PJM. The DEP/EQB acknowledged this comment in the Comment and Response Document, claiming it is outside the scope of the regulation, yet it remains very relevant in exhibiting the leakage that will occur.

Repeatedly throughout the Comment and Response Document the DEP/EQB state that the purpose of the regulation is to price or impose a fee (tax) on CO<sub>2</sub> emissions. However, the APCA limits the authorization of the assessment of fees to criteria pollutants. Section 6.3 of the APCA specifically establishes fees for the emission of sulfur dioxide, nitrogen oxide, particulate matter and volatile organic compounds, and gives the EQB the discretion to establish permanent fees as required for regulated pollutants by section 502(b) of the Clean Air Act. Not only is CO<sub>2</sub> not regulated or identified as a criteria pollutant under section 502(b) of the Clean Air Act, thereby not granting the DEP/EQB the authority to promulgate the final-form regulation, the DEP/EQB have confused their authority to promulgate by attempting to tie the rationale for the regulation to limiting criteria pollutants. Confirming this, during the May 17, 2021 meeting of DEP's Air Quality Technical Advisory Committee, DEP staff acknowledged that the contracted modeling indicates CO<sub>2</sub> emission reductions resulting from Pennsylvania joining RGGI are very low, and instead pointed to the co-benefits of reducing of criteria pollutants as the rationale for the regulation. However, the criteria pollutants sulfur dioxide, nitrogen oxide, particulate matter and volatile organic compounds are already regulated under the federal Clean Air Act and Pennsylvania's approved State Implementation Plan. Therefore, the justification for joining RGGI based on programs extensively already regulated by federal and state law is unreasonable. Further, because the final-form regulation fails to address leakage, any actual reductions in criteria pollutants are inconsequential or non-existent. Rather, Pennsylvania joining to RGGI

may lead to an overall increase in criteria pollutants due the resulting increase in power generation from EGUs in other states that are not in the Ozone Transport Region, and henceforth do not comply with the same stringent regulatory standards as EGUs in Pennsylvania. Lastly, even if CO<sub>2</sub> were a criteria pollutant, the final-form regulation does not limit CO<sub>2</sub> because leakage is entirely ignored. This negates the entire basis of the regulation.

***Preventing the potential closure of nuclear power plants is misleading.***

The DEP/EQB's claim that the proposed final regulation, if implemented, will prevent the potential closure of nuclear power plants is misleading. The DEP/EQB specifically point to the rescission of a closure announcement made by the owner of Beaver Valley nuclear power plant, as the owner cited Governor Wolf's intention to join Pennsylvania to RGGI as a reason for the rescission. While the Beaver Valley Power Station may benefit from not being required to pay a tax on emitting CO<sub>2</sub>, the DEP/EQB fail to acknowledge that the owner of the Beaver Valley Power Plant also owns two massive coal plants, W.H. Sammis in Ohio and Pleasants in West Virginia, with a combined 5.5 GW of installed capacity, that will benefit directly from Pennsylvania joining RGGI. Neither plant will be taxed on the CO<sub>2</sub> it emits as neither participates in RGGI, and therefore will be better positioned to serve the PJM RTO with a lower operating cost. Further misrepresenting the claim is the understanding of how nuclear power works, as it cannot ramp up and down and always generates the same amount of power. Therefore, W.H. Sammis and Pleasants EGUs will be incentivized to increase their power production if Pennsylvania joins RGGI and our state's coal-fired EGUs close their doors. Thus, the entire portfolio of the company that owns the Beaver Valley Power Plant will benefit from Pennsylvania joining RGGI.

PCA urges the Commissioners to carefully consider all aspects of the RRA that the DEP/EQB either did not acknowledge or insufficiently addressed in the rulemaking process. DEP/EQB lack the statutory authority to promulgate the final-form rulemaking establishing a CO<sub>2</sub> Budget Trading Program. The rulemaking violates both the Air Pollution Control Act, the Pennsylvania Constitution, and does not reflect the will of the Pennsylvania General Assembly. Further, the rulemaking fails to address leakage, does not account for the negative economic impacts that will occur in many regions of our Commonwealth, and would be the most significant change to Pennsylvania's electric power generation landscape since deregulation in 1996, therefore requiring legislative input, review, and approval.

Sincerely,



Rachel Gleason  
Executive Director  
Pennsylvania Coal Alliance

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January 14, 2021

Environmental Quality Board  
P.O. Box 8477  
Harrisburg, PA 17105-8477

**RE: CO<sub>2</sub> BUDGET TRADING PROGRAM**

On behalf of the members of the Pennsylvania Coal Alliance, please accept the following comments to the Environmental Quality Board and the Independent Regulatory Review Commission regarding the proposed rulemaking amending Chapter 145 to add Subchapter E establishing a CO<sub>2</sub> Budget Trading Program, as published in the Pennsylvania Bulletin on November 7, 2020 (50 Pa.B. 6212).

The Pennsylvania Coal Alliance (PCA) is the principal trade organization representing underground and surface bituminous coal operators in Pennsylvania, as well as other associated companies and businesses that rely on coal mining and a strong coal economy. Nationally, Pennsylvania is the third largest coal producing state, and in 2019 PCA member companies produced nearly 90 percent of the bituminous coal mined in Pennsylvania, which totaled over 48 million tons.<sup>1</sup>

PCA believes that the proposed CO<sub>2</sub> Budget Trading Program regulation will result in dire economic consequences at local and regional levels throughout Pennsylvania. Moreover, PCA contends that the proposed CO<sub>2</sub> Budget Trading Program regulation is based upon flawed power sector and economic modeling, represents a dramatic overstepping of the legal authority granted under the Air Pollution Control Act (ACPA) and the Pennsylvania Constitution, and does not comply with Pennsylvania's Regulatory Review Act.

**PENNSYLVANIA'S BITUMINOUS COAL INDUSTRY**

***Economic Contributions***

Bituminous coal mining helps drive Pennsylvania's economy. A report compiled in April of 2019 by the Allegheny Conference on Community Development highlights that the state's coal industry is responsible for supporting nearly 18,000 jobs. The same report points to the industry being a vital contributor to Pennsylvania's economy, providing \$4.1 billion annually to the state's economy, and \$7 billion in total output. The Pennsylvania coal industry creates this economic value in communities across Pennsylvania, with active mining operations in 15 counties, PCA member company locations in 22 of Pennsylvania's

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<sup>1</sup> <https://www.eia.gov/coal/>



counties, and over \$2.5 billion in annual property tax payments.<sup>2</sup> The industry accounts for 25 percent of the employment in some regions of the state, and for every direct coal job an additional 1.97 jobs are supported in the Commonwealth. Moreover, the industry in some regions supports upwards of 40 percent of the local tax base, and often serves as a community's financial cornerstone for economic development.<sup>3</sup>

## **THE IMPACTS OF PENNSYLVANIA JOINING RGGI**

### ***Impact on Coal-Fired Generation***

Overall, coal accounted for 17 percent of the net electricity generated in the Commonwealth in 2019, which is down significantly from 48 percent just a decade ago.<sup>4</sup> The incessant regulatory pressures experienced by coal-fired generation, coupled with the advent of shale gas over this past decade proved to be a perfect storm that resulted in a transformation of the coal-fired power generation business, and has had profound effects on Pennsylvania coal producers. Over the last decade, Pennsylvania has shuttered more than 50 percent of its bituminous coal mines.<sup>5</sup>

The economic hardships these plant and subsequent mine closures have had on local economies throughout Pennsylvania have been devastating. PCA member companies fully realize the electric power generation market has significantly transformed this past decade and have remained committed to working within this changing market to ensure that coal remains an affordable, reliable, and resilient resource to the grid.

Since Pennsylvania deregulated its electric generation market in 1996, 18 coal-fired electric generating units (EGUs) have deactivated or converted to natural gas, including Bruce Mansfield, a powerhouse at nearly 2,500 MW, which shuttered its doors last November. Since then, Talen Energy Montour has committed to cease coal-fired operations by the end of 2025, and Brunner Island has committed to end its coal use by the end 2028. As a result, nearly 13 GW<sup>6</sup> of coal nameplate capacity has or is scheduled to go offline since deregulation, and only four coal-fired EGUs remain in our state that do not currently have plans to deactivate.

In 2019, twenty-four coal mines from twelve Pennsylvania counties sent nearly nine million tons of high BTU coal, primarily via rail, to the four-remaining coal-fired EGUs.<sup>7</sup> The quality of Pennsylvania's high BTU coal is superior to coal mined in other regions of the United States as the higher the BTU, the lower carbon intensity, leading to fewer CO<sub>2</sub> emissions. If Pennsylvania were to join the Regional Greenhouse Gas Initiative (RGGI), these four EGUs would cease operation, and the production of nine million tons of Pennsylvania-mined coal would be put at risk. As explained below, joining RGGI will not decrease coal-fired generation in PJM, the regional transmission organization (RTO) that manages the competitive wholesale market and electric grid for more than 65 million people in all or part of 13 states plus the District of Columbia. Rather, coal-fired electric generation will shift from Pennsylvania to other PJM

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<sup>2</sup> <https://www.dep.pa.gov/Business/Land/Mining/BureauofMiningPrograms/Reports/Pages/2017-Coal-and-Industrial-Minerals-Mining-Activities.aspx>

<sup>3</sup> [https://docs.wixstatic.com/ugd/203afb\\_fdd3aada0fd94deb80441c19d729196b.pdf](https://docs.wixstatic.com/ugd/203afb_fdd3aada0fd94deb80441c19d729196b.pdf)

<sup>4</sup> <https://www.eia.gov/electricity/data/eia923/>

<sup>5</sup> <https://www.eia.gov/coal/data/browser/>

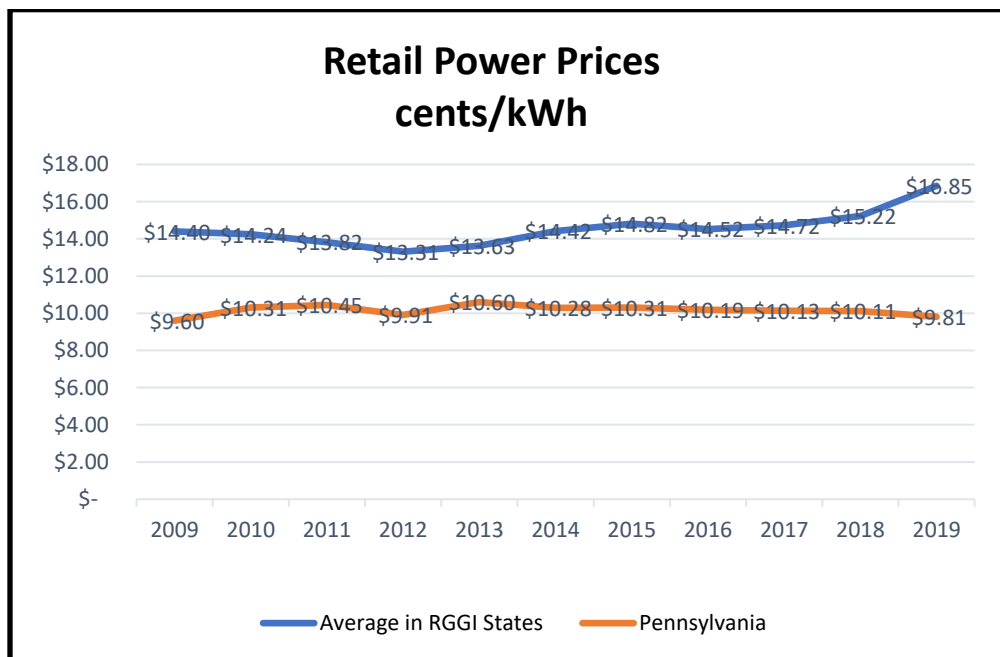
<sup>6</sup> <https://www.eia.gov/electricity/data/eia860/>

<sup>7</sup> <https://www.eia.gov/electricity/data/eia923/>

states that do not participate in RGGI, like West Virginia and Ohio. The coal fueling EGU's in these states is primarily river-served by nearby logistically advantaged bituminous coal mines producing lower BTU coal, as opposed to Pennsylvania's EGU's which are primarily rail-served. Joining RGGI will shutter coal-fired EGUs in Pennsylvania, will have serious economic consequences to Pennsylvania's bituminous coal industry and the nearly 18,000 jobs it supports, and lead to higher CO<sub>2</sub> emissions in our neighboring PJM states.

***RGGI's Impact on Pennsylvania Power Prices***

The United States Energy Information Administration (EIA) recently released its 2019 State Electricity Profiles, detailing the average retail price of electricity, capacity, generation, and retail sales.<sup>8</sup> While Hawaii and Alaska, respectively, rank #1 and #2 for the most expensive retail electricity, RGGI states closely follow. Connecticut ranks at #3 at 18.66 cents a kWh, closely followed by Rhode Island, Massachusetts, New Hampshire, Vermont, New York, Maine, and New Jersey in descending order. Between 2009 and 2019, the average retail price of electricity has increased in RGGI states by 17.02%, yet in Pennsylvania the increase in cost has been a nominal 2.19%, a \$.21 increase from \$9.60 in 2009 to \$9.81 in 2019. This most recent EIA data clearly illustrates that joining RGGI results in an increase in the price of electricity.



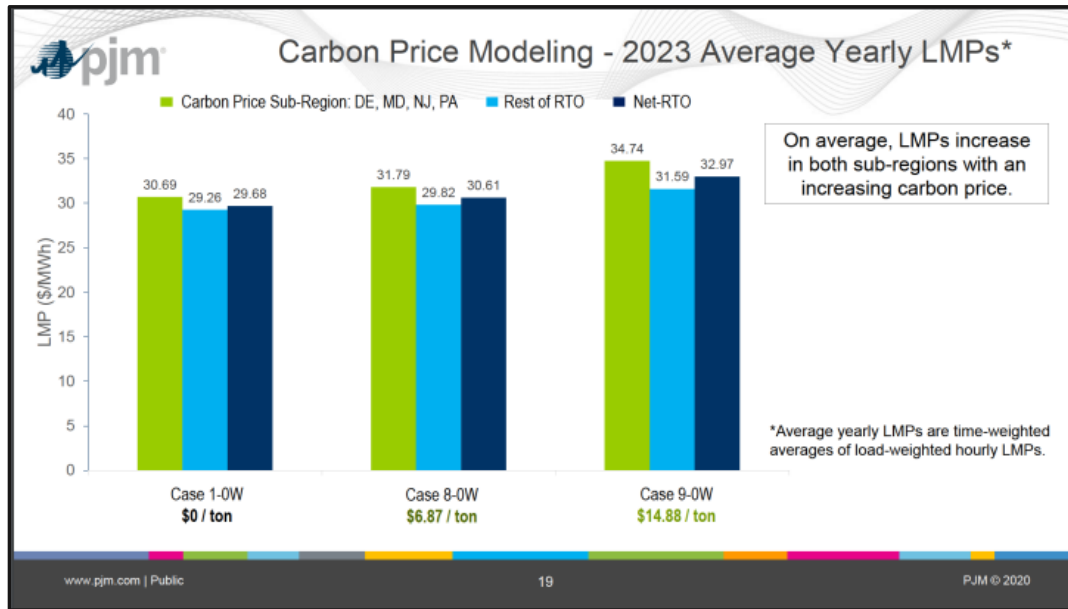
Source:EIA

Confirming the EIA data, a PJM study also found that not only would wholesale electricity prices across the Reginal Transmission Organization (RTO) increase if certain PJM-states implemented a carbon price, but those rate increases would be highest in states imposing a carbon price.<sup>9</sup>

<sup>8</sup> <https://www.eia.gov/electricity/state/>

<sup>9</sup>

<http://files.dep.state.pa.us/Air/AirQuality/AQPortalFiles/Advisory%20Committees/Air%20Quality%20Technical%2>



Source: PJM

Pennsylvania has long ranked among the nation’s top exporters of electricity. Under RGGI, however, the state’s electricity generation will decline, which hampers its competitiveness relative to generators in neighboring states that do not participate in RGGI. Reduced competitiveness means that Pennsylvania’s generators will dispatch less frequently, and the state will rely on imported power more often. Increased reliance on imported power will expose Pennsylvanians to higher power prices.

In addition, as discussed in more detail below, ICF’s power price modeling does not account for the significant build-out in new transmission that will be required for the magnitude of new renewable generation that is assumed in ICF’s modeling. The cost of new transmission will be passed on to the electric ratepayers, resulting in even more economic harm to low-income households, older Pennsylvanians on fixed incomes, and industrial and manufacturing businesses in our Commonwealth.

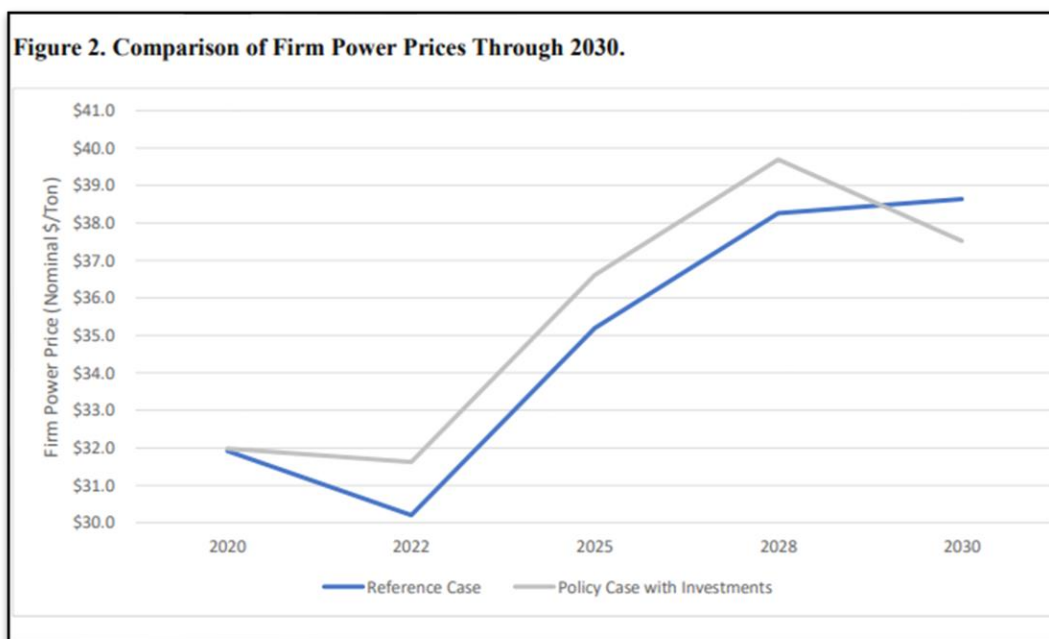
***DEP Has Not Adequately Considered Effects on Small Business***

The Regulatory Review Act requires the Department of Environmental Protection (DEP) to analyze the probable effect of a regulation on small businesses. As currently written, Section 24 of the Regulatory Analysis From (RAF) simply states that ten businesses, most of which are waste coal fired facilities, would be subject to the regulations and that the waste coal CO<sub>2</sub> allowance set aside will minimize the impact on them. This discussion overlooks the fact that many of Pennsylvania’s commercial electricity consumers are small businesses. They are not electric generators covered by the regulations, but they will be faced with higher electricity costs likely to be passed along by the generators who will have to buy CO<sub>2</sub> allowances. The chair of the Public Utility Commission testified before the Senate Environmental Resources and Energy Committee on June 23, 2020 during a hearing concerning Senate Bill 950 and House Bill 2025 that the PUC had not analyzed how much of this cost will be passed on to consumers.

[0Advisory%20Committee/2020/10-15-20/20201015%20PJM%20Presentation%20to%20PA%20DEP%20AQTAC%20on%20Generation%20Dispatch.pdf](https://www.pjm.com/committees/2020/10-15-20/20201015%20PJM%20Presentation%20to%20PA%20DEP%20AQTAC%20on%20Generation%20Dispatch.pdf)

Omitting meaningful analysis of how the regulations will affect electricity costs to small businesses does not meet the requirements of the Regulatory Review Act.

Further, the discussion of electric prices in Section 12 of the RAF focuses entirely on residential electric consumer bills. However, as evident in the graph below, pulled from Section 12 of the RAF, the RGGI regulations will increase power prices each year from 2022 through 2030. Auctioning allowances at the December 2020 quarterly auction price of \$7.41/allowance could add between three to nine dollars per megawatt hour to the current price of electricity depending on whether the fuel source is coal or natural gas. There is little discussion of how the regulations will affect the cost of electricity to commercial and industrial customers, particularly those in the iron and steel, chemicals, agriculture, and basic materials industries. The Regulatory Review Act requires a more thorough analysis of the projected increased cost of electricity to Pennsylvania’s industrial and commercial customers.



### ***Pennsylvania EGU CO<sub>2</sub> Emissions***

Joining RGGI is unnecessary to reduce CO<sub>2</sub> emissions. The negative economic consequences, the lost jobs, the closed businesses, the struggling school districts and impacted communities, combined with the potential for increased power prices that are certain to accompany Pennsylvania joining RGGI are unnecessary consequences as Pennsylvania has already made significant reductions in carbon emissions from EGU’s. In fact, in 2018, carbon dioxide emissions from fossil-fuel fired EGU’s were 33.2% below 2005 emission levels.<sup>10</sup> This reduction is well in advance of Governor Wolf’s stated 2025 goal of 26% below 2005 levels and exceeds those levels that would have been required by the Clean Power Plan and Paris Climate Accord.<sup>11</sup> Moreover, these reductions have been accomplished while Pennsylvania has maintained a stable and reliable supply of electricity at competitively priced rates. This can be attributed

<sup>10</sup> EPA CAMD Data for PA EGU’s, 2018 and 2005

<sup>11</sup> See Executive Order: 2019-01 – Commonwealth Leadership in Addressing Climate Change and Promoting Energy Conservation and Sustainable Governance

to the fact that over 95% of Pennsylvania’s energy generation comes from in-state low-cost generation sources.

## **DEP’S POWER SECTOR MODELING CONTAINS SIGNIFICANT FLAWS**

To meet the statutory requirement to justify its efforts to join RGGI, DEP contracted with ICF International (ICF), an energy consulting firm, to perform power sector and economic modeling in support of the proposed rulemaking. ICF has done similar modeling on behalf of every other RGGI state. This modeling contains serious flaws that undermine the justification for the proposed rulemaking thereby failing to meet the requirements of the Regulatory Review Act.

Power sector modeling that is accurate and timely is needed not only to meet the statutory requirements to justify the proposed regulation, but to provide a clear picture of the impact on specific EGU’s. The Commonwealth has long ranked among the nation’s top producers and exporters of electricity, which has provided Pennsylvanians great economic benefit with family-sustaining employment opportunities and low electricity rates. However, if Pennsylvania joins RGGI, the state’s total electricity generation will decline, due to the reduced competitiveness of Pennsylvania coal and natural gas fired EGUs relative to those similarly fired EGUs in neighboring states that do not participate in RGGI. Reduced competitiveness means that Pennsylvania’s generators will dispatch less frequently, and the state will be forced to rely on imported electric power.

### ***Modeling Fails to Illustrate Impact of Leakage, Joining RGGI Will Not Reduce CO<sub>2</sub>***

Governor’s Wolf’s Executive Order 2019-07 directed DEP , in developing this proposed rulemaking, to “...engage with PJM Interconnection to promote the integration of this program in a manner that preserves orderly and competitive economic dispatch within PJM and minimizes emissions leakage.” However, DEP has failed to provide information from PJM that details state-specific impacts to EGU’s with and without Pennsylvania’s RGGI participation. A PJM analysis at minimum should project state-by-state electric generation CO<sub>2</sub> emissions for each scenario, thereby allowing the assessment of overall regional emissions reductions and PJM leakage impacts. Furthermore, DEP has failed to have any meaningful consultation with PJM on the impacts to capacity prices that would result from Pennsylvania joining RGGI,<sup>12</sup> nor has there been any consultation with the Independent Market Monitor (IMM), which is responsible for promoting a competitive and nondiscriminatory electric power market in PJM. IMM’s latest State of the Market Report recommends “...that PJM provide a full analysis of the impact of carbon pricing on PJM generating units and carbon pricing revenues to the PJM states in order to permit the states to consider a potential agreement on the development of a multistate framework for carbon pricing and the distribution of carbon revenues.”<sup>13</sup> This requested analysis has not yet been completed by PJM.

If this proposed regulation is promulgated and Pennsylvania joins RGGI, some EGU’s will face higher compliance costs than others on a per megawatt-hour (MWh) basis that will result in their immediate closure, while creating long-term unfavorable economic challenges for others. The price adder, or RGGI tax, based on the \$7.41 cost of an allowance from the most recent December 2020 RGGI auction, will

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<sup>12</sup> Section 17 of the RAF merely states DEP will conduct additional modeling with PJM’s Carbon Pricing Senior Task Force to better understand and control leakage. PCA does not believe that satisfies the requirements of the Regulatory Review Act.

<sup>13</sup> [https://www.monitoringanalytics.com/reports/PJM\\_State\\_of\\_the\\_Market/2020/2020q1-som-pjm.pdf](https://www.monitoringanalytics.com/reports/PJM_State_of_the_Market/2020/2020q1-som-pjm.pdf)

likely range from a high of \$8.98/MWh for traditional coal-fired EGUs, to a high of \$6.87/MWh for older natural gas EGUs, with no guarantee that this price adder will not rise. ICF's modeling did not project the price of RGGI allowances to reach above \$7.00 until 2025, yet it did so this past December, rendering their modeling assumptions invalid.

Electric power generators in PJM compete against each other in the wholesale electricity market. If Pennsylvania were to join RGGI, all fossil fuel generation in Pennsylvania would be placed at a competitive disadvantage to similar units in western PJM states that do not participate in RGGI. The shuttering of coal and some natural gas EGUs in Pennsylvania will only lead to encouraging and strengthening fossil fuel electric power generation in non-RGGI PJM states. While joining RGGI will reduce CO<sub>2</sub> emissions from Pennsylvania power generators, the impact of CO<sub>2</sub> is not local. Overall CO<sub>2</sub> emissions in PJM will show little to no decline. This phenomenon is referred to as leakage. Power generation from coal and natural gas and its associated emissions are expected to increase in Ohio and West Virginia, which are not part of RGGI, because of the increase in generation costs that RGGI will place on Pennsylvania EGUs. In fact, ICF's own modeling shows that while Pennsylvania's power sector CO<sub>2</sub> emissions will fall by a cumulative 180 million tons between 2019 and 2030 if the state joins RGGI, overall PJM CO<sub>2</sub> emissions will fall by less than 100 million tons, even if allowance revenue is re-invested in renewable sources generation that, as discussed below, are uncompetitive in the PJM capacity auction under the expanded MOPR and can connect to transmission. In percentage terms, absent modeling, and any consideration of the challenges a massive build of new renewable generation will face, total emissions will fall by roughly 20% in Pennsylvania, but just 2.5% in PJM during an eleven-year period. ICF notes in its report that 54% of the emissions avoided in Pennsylvania are made up for by higher emissions elsewhere in PJM, and Penn State's Center for Energy Law and Policy recently stated "...we estimate that 86% of the CO<sub>2</sub> reductions from Pennsylvania's joining RGGI would be offset by emissions increases in PJM and/or other RGGI states. This leakage rate is consistent with estimates from other states joining RGGI."<sup>14</sup>

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<https://www.ahs.dep.pa.gov/eComment/DocumentServer.ashx?enc=1xIDOiZQfBuB5SsbD9T0MrhM3RzfHWY%2fIakx%2bwNNuk%3d>

**Change in affected carbon emissions relative to the Reference Case**

*mm tons*

<b>Pennsylvania</b>	<b>2020</b>	<b>2022</b>	<b>2025</b>	<b>2028</b>	<b>2030</b>	<b>2019-30</b>
<b>Policy Case</b>	1	(22)	(18)	(19)	(9)	(180)
<b>Policy + Investment Case</b>	1	(21)	(18)	(20)	(12)	(189)

*percent change*

<b>Policy Case</b>	1.4%	-27.6%	-24.1%	-26.9%	-14.6%	-20.7%
<b>Policy + Investment Case</b>	1.1%	-27.1%	-25.1%	-28.8%	-19.3%	-21.7%

*mm tons*

<b>PJM</b>	<b>2020</b>	<b>2022</b>	<b>2025</b>	<b>2028</b>	<b>2030</b>	<b>2019-30</b>
<b>Policy Case</b>	(1)	(9)	(9)	(8)	(4)	(87)
<b>Policy + Investment Case</b>	(1)	(9)	(10)	(10)	(7)	(97)

*percent change*

<b>Policy Case</b>	-0.3%	-2.8%	-3.0%	-2.7%	-1.3%	-2.2%
<b>Policy + Investment Case</b>	-0.2%	-2.6%	-3.3%	-3.3%	-2.4%	-2.5%

Source: ICF

Further, on an annual emission assessment, you can see below in the Reference Case and the Policy Case, the difference in CO<sub>2</sub> emissions in 2030 in PJM and the Eastern Interconnection (EI) is negligible, as in the aggregate they remain nearly unchanged.

**Affected CO<sub>2</sub> Emissions (Million Short Tons)**  
**Reference Case – Business as Usual (No RGGI)**

	<b>2022</b>	<b>2025</b>	<b>2028</b>	<b>2030</b>	<b>2022-2030</b>
MA	9	7	7	6	29
CT	7	6	4	3	20
ME	1	-	0	0	2
NH	1	1	0	0	3
RI	3	2	2	2	10
VT	0	0	0	0	-
NY	32	27	21	20	100
DE	1	1	1	1	4
MD	9	9	10	9	36
VA	24	25	25	24	99
NJ	17	16	14	12	59
PA	78	73	70	60	281
Total 11 state RGGI	104	94	85	79	362
Total CO <sub>2</sub> Emissions PJM	329	315	313	298	1,256
Total CO <sub>2</sub> Emissions SERC	279	287	305	305	1,175
Total CO <sub>2</sub> Emissions EI	1,119	1,114	1,148	1,140	4,522

Source: ICF

**Affected CO<sub>2</sub> Emissions (Million Short Tons)**  
**Policy Case – PA Joins RGGI**

	<b>2022</b>	<b>2025</b>	<b>2028</b>	<b>2030</b>	<b>2022-2030</b>
MA	9	7	6	6	29
CT	7	5	4	3	20
ME	1	-	0	0	1

NH	1	1	0	0	3
RI	3	2	2	2	10
VT	0	0	0	0	0
NY	32	27	21	20	100
DE	2	1	1	1	5
MD	9	9	11	8	38
VA	25	25	25	24	100
NJ	18	17	15	13	63
PA	57	55	51	51	214
Total 12 state RGGI	163	151	138	130	582
Total CO <sub>2</sub> Emissions PJM	320	306	305	295	1,225
Total CO <sub>2</sub> Emissions SERC	283	289	306	307	1,184
Total CO <sub>2</sub> Emissions EI	1,116	1,109	1,143	1,138	4,506

Source: ICF

Data from the EIA shows that states that participate in RGGI decrease in-state generation. According to the EIA, states that participated in RGGI between 2008, the last non RGGI year, and 2019 decreased their cumulative generation by over 46 million MWh annually. During that same time RGGI states imported 447,167,524 MWh of their electricity sales - or over 447 GWh of imported generation over a ten-year period. By contrast, according to the EIA's Detailed State Data, Pennsylvania produced 2,435,486 GW of power during that same time, yet had only 1,608,340 GW of electricity sales, meaning over 827 thousand GWs of electricity was exported from Pennsylvania and imported to other states. EIA's 2019 State Electricity Profiles underscores that Pennsylvania's electricity generation was the third largest in the nation, and in 2019 Pennsylvania's electricity exports were the largest of any state at 70.5 million MWh, or 24% of total supply.<sup>15</sup>

Within the PJM footprint only three states - Delaware, Maryland, and New Jersey - participate in RGGI, with Virginia slated to join January 2021. Further demonstrating RGGI leakage, all four of these states import electricity from Pennsylvania and other non-RGGI PJM states. Maryland and Delaware imported 30 percent and 53 percent, respectively, of their electric retail sales from other PJM states like Pennsylvania and West Virginia.<sup>16 17</sup> In West Virginia, a non-RGGI PJM state where the primary fuel source for generating electricity is coal, coal-fired generation makes up 91% of the state's electricity production and nearly half of the electricity produced is exported to other states. This demonstrates why shuttering Pennsylvania's four remaining coal fired EGUs and making Pennsylvania's natural gas units uncompetitive against those in neighboring non-RGGI states will not reduce CO<sub>2</sub> emissions, it will simply displace those emissions to our neighboring PJM states.

Confirming this, the Pennsylvania Coal Alliance commissioned a study from Energy Ventures Analysis to evaluate the practical impact implementing RGGI in Pennsylvania would have on the remaining in-state coal-fired EGUs. While the study pointed to a certain decline and closure of coal fired EGUs in Pennsylvania over time, the study also determined that "PJM generators in nearby states that do not participate in RGGI will gain an advantage over Pennsylvania generators..." and "...coal plant revenues

<sup>15</sup> <https://www.eia.gov/todayinenergy/detail.php?id=46156&src=email>

<sup>16</sup> EIA Net Generation by State at <https://www.eia.gov/electricity/data/state/>

<sup>17</sup> EIA State Electricity Profiles <https://www.eia.gov/electricity/state/>



in Ohio and West Virginia will increase by an average of \$320 million per year as dispatch shifts from RGGI to its non-RGGI neighbors.”

As evidenced in the table below, there is over thirty-four thousand MW of installed coal capacity, and twenty-eight MW of installed natural gas capacity in PJM states that do not participate in RGGI. This does not account for the six permitted, but not yet operating, natural gas plants in Ohio along the Pennsylvania border. For comparison, Pennsylvania has slightly over 8,000 MW of installed coal capacity and 24,000 MW of installed natural gas capacity. Rendering Pennsylvania’s power generation uncompetitive by joining RGGI will increase electric generation in other states not subject to the RGGI tax, the previously discussed phenomenon known as leakage, resulting in negligible CO<sub>2</sub> reductions over the PJM generation area and beyond.

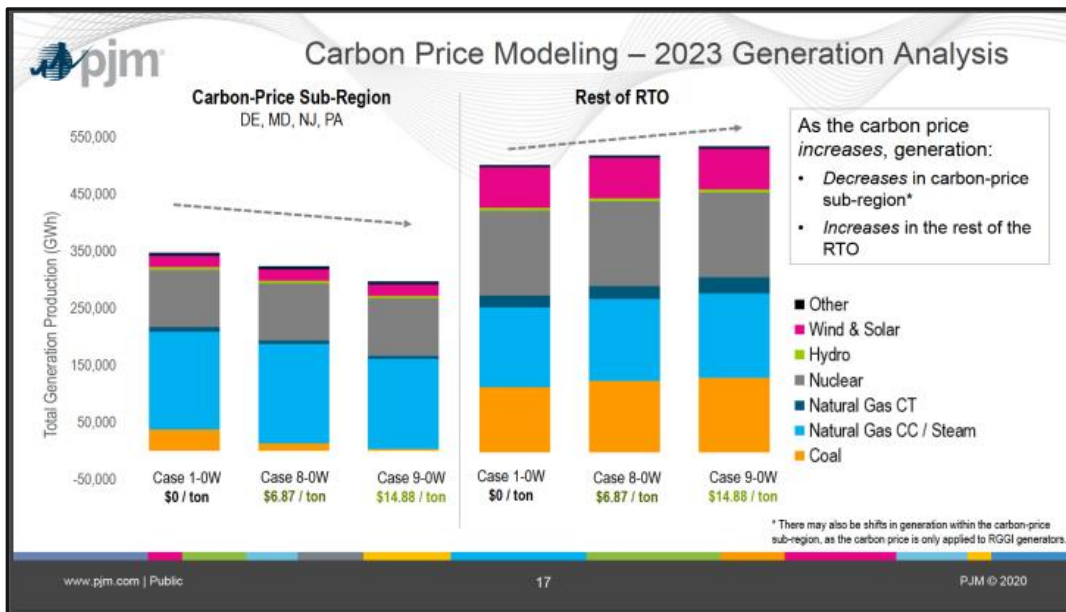
**Installed Nameplate Capacity in non-RGGI PJM States**

<b>By state</b>	<b>OH</b>	<b>IL</b>	<b>IN</b>	<b>KY</b>	<b>WV</b>	<b>TOTAL</b>
	<b>Capacity (MW)</b>	<b>Capacity (MW)</b>	<b>Capacity (MW)</b>	<b>Capacity (MW)</b>	<b>Capacity (MW)</b>	<b>Capacity (MW)</b>
<b>Coal</b>	11,569	3,845	3,873	2,287	12,558	<b>34,132</b>
<b>Gas CC</b>	6,974	2,441	1,879	0	0	<b>11,294</b>
<b>Nuclear</b>	2,134	10,517	0	0	0	<b>12,651</b>
<b>Gas CT</b>	5,250	7,132	444	1,609	1,104	<b>15,539</b>
<b>Gas ST</b>	81	1,064	0	260	0	<b>1405</b>
<b>Peaker</b>	216	77	0	0	0	<b>293</b>
<b>Oil ST</b>	0	0	0	0	0	<b>0</b>
<b>TOTAL</b>	<b>26,224</b>	<b>25,077</b>	<b>6,196</b>	<b>4,156</b>	<b>13,662</b>	<b>75,315</b>

Source: EIA

With regards to a specific analysis of leakage by PJM, PCA recommends DEP review the presentation to the Air Quality Technical Advisory Committee from October 15, 2020. The presentation references the results of a PJM study presented at the meeting of the Carbon Pricing Senior Task Force in January 2020 exploring the potential effects that different carbon-pricing scenarios could have on the region it serves. PJM performed a carbon price modeling study, independent of PA DEP or ICF, that clearly illustrates that leakage would occur if certain states within its footprint implemented a carbon pricing regime.<sup>18</sup> As shown below, total generation and emissions would fall in the sub-region with a carbon price but increase outside the sub-region.

<sup>18</sup><http://files.dep.state.pa.us/Air/AirQuality/AQPortalFiles/Advisory%20Committees/Air%20Quality%20Technical%20Advisory%20Committee/2020/10-15-20/20201015%20PJM%20Presentation%20to%20PA%20DEP%20AQAC%20on%20Generation%20Dispatch.pdf>

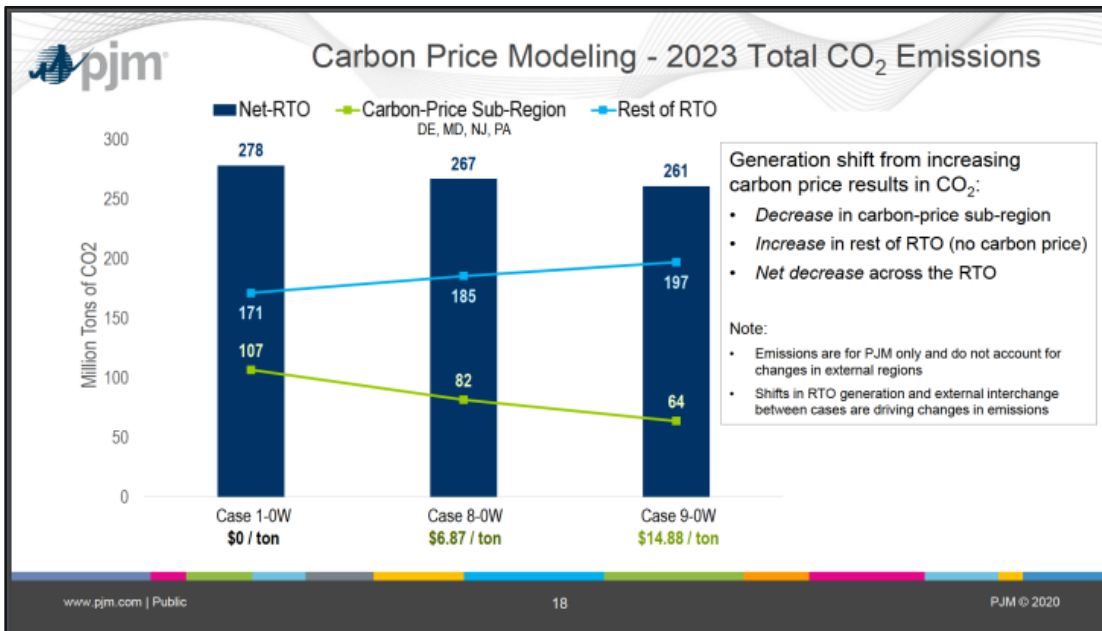


Source: PJM

Unsurprisingly, PJM also found that CO<sub>2</sub> emission declines in the sub-region with carbon prices were largely offset by CO<sub>2</sub> emission increases in the rest of the market. PJM’s analysis supports the notion that leakage significantly diminishes any CO<sub>2</sub> emission reduction benefit of Pennsylvania joining RGGI.

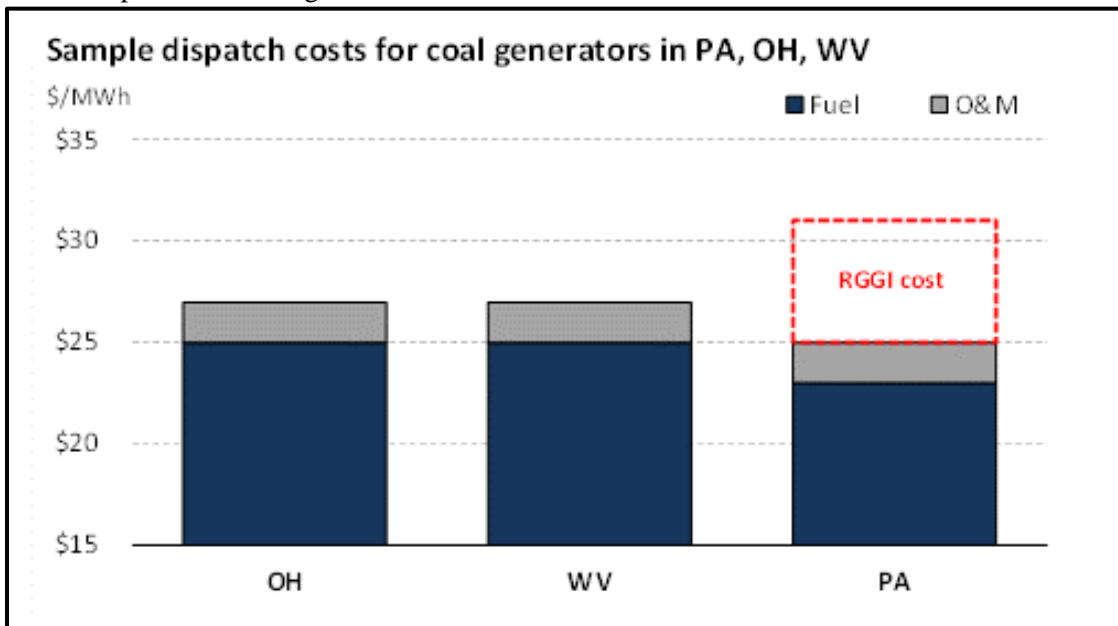
To further supplement this PJM analysis, an October 2020 study released by Energy and Environmental Economics, Inc. (E3) found that the current combination of state renewable portfolio standards and partial carbon pricing within PJM has “significant costs but limited effectiveness in reducing carbon emissions.”<sup>19</sup> E3’s analysis suggested that a continuation of these policies would “add \$3 billion per year to electricity bills in the region by 2030, while reducing CO<sub>2</sub> emissions by only 40 million metric tons” relative to a scenario in which these policies are not in place.

<sup>19</sup> <https://www.ethree.com/wp-content/uploads/2020/10/E3-Least-Cost-Carbon-Reduction-Policies-in-PJM-1.pdf>  
pg. 8



Source: PJM

Finally, as previously stated, leakage is a shift in generation from one set of resources to another based on a change in their relative costs. Displayed in the chart below, this additional cost of the RGGI tax puts Pennsylvania’s generators at a disadvantage compared to competing generators in neighboring states like Ohio and West Virginia. As an example, if Pennsylvania joins RGGI, the Cheswick coal-fired plant outside Pittsburgh will be at a competitive disadvantage to the Cardinal coal-fired plant that sits just 60 miles to its west in Jefferson County, Ohio. The disadvantage will be solely based on the requirement that Cheswick purchase RGGI allowances, the RGGI tax, to offset its CO<sub>2</sub> emissions while Cardinal does not. The Longview coal plant in Monongalia County, West Virginia, which sits less than one mile from the Pennsylvania border, will also be at a competitive advantage to Cheswick and all Pennsylvania’s coal plants because plants West Virginia is not a member of RGGI.



Source: Energy Ventures Analysis

ICF's modeling shows that coal generation in Pennsylvania will be an average of 11,473 GWh (80%) lower between 2022 and 2030 in the Policy + Investment Case than in the Reference Case, while overall PJM coal generation will be just 6,683 GWh (4%) lower. This indicates that nearly half of Pennsylvania's lost coal generation is displaced by coal generation in other PJM states. The same is the case for gas generation.

***Modeling Fails to Account for Natural Gas Price Sensitivity and Volatility***

Natural gas prices are one of the most important drivers of power market outcomes as they tend to set power prices and dictate the dispatch of coal and gas-fired power plants. For Henry Hub prices, ICF used an average of the EIA Annual Energy Outlook (AEO) Reference Case and High Gas Resource Case (a case with low natural gas prices). The resulting Henry Hub price outlook rose in nominal dollars from \$3.07/MMBTU in 2020 to \$3.85/MMBTU in 2030. For the five years for which ICF provided data – 2020, 2022, 2025, 2028, and 2030 – Henry Hub prices averaged \$3.28/MMBTU. Prices for the interceding years were not provided. ICF did not provide an explanation for why it used an average of the AEO's Reference Case and High Gas Resource Case rather than the Reference Case, nor was a sensitivity analysis performed.

PCA believes one possible reason for choosing this pricing assumption is that low natural gas prices reduce the cost of compliance with RGGI. Low natural gas prices produce more coal-to-gas switching and reduce the demand for RGGI allowances, which keeps allowance prices, or tax, low. If natural gas prices are higher, coal-to-gas switching is reversed and the demand for RGGI allowances increases because of coal's higher carbon intensity. This results in higher allowance prices, which flow through to higher wholesale power prices and higher retail electricity rates.

However, PCA believes there are several key reasons natural gas prices likely will rise in the coming years. First, increasing exports of liquefied natural gas (LNG) will increase natural gas demand and drive prices higher. Second, the incoming administration of President-elect Joe Biden has signaled that it will consider banning the practice of hydraulic fracturing on federal lands. Such a ban would reduce the supply of natural gas and result in higher prices. Third, the incoming Biden administration also is likely to implement regulations on CO<sub>2</sub> and/or methane emissions from natural gas production that increase the cost of production and therefore raise prices.

Even if average natural gas prices do not increase appreciably, the ICF modeling still fails to recognize the significant potential for price volatility due to lack of on-site storage capacity and the higher risk to potential cyber and physical disruptions to pipeline delivery.

Given the sensitivity of power markets and RGGI compliance costs to natural gas prices, PCA believes the ICF power sector modeling should have contained a natural gas price sensitivity analysis.

***Modeling Fails to Account for the Expansion of the Minimum Offer Price Rule (MOPR)***

In June 2018 Federal Energy Regulatory Commission (FERC) found PJM's capacity market rules to be unreasonable and unfair, and determined that PJM was artificially suppressing capacity prices. This was because generators could include subsidy revenue - revenue through the sale of renewable energy credits

(REC), zero emission credits (ZEC), or any other state subsidy - when determining capacity market offers, effectively offering a lower price than actual cost.

In December of 2019 FERC ordered PJM to expand its Minimum Offer Price Rule (MOPR) to alleviate the market manipulation and artificially suppressed prices, and further directed PJM to expand its existing MOPR to cover all resources that receive or are entitled to receive state subsidies. The goal of the directive was to prevent state-subsidized resources from suppressing clearing prices in PJM's capacity market by setting a technology-specific price floor intended to reflect the actual costs of new and existing generators.

The ruling is widely expected to inhibit the development of renewable resources in PJM. This is because PJM's proposed minimum offer prices for solar, onshore wind, and offshore wind are significantly higher than the capacity market prices that have cleared over the past several years. Renewables and nuclear generation sources account for most of the state subsidies received in PJM.

The expanded MOPR was not included in ICF's modeling because FERC's ruling came after ICF's results were released. DEP should have directed ICF to update its analysis to determine how the MOPR ruling would affect the deployment of renewables in PJM and, more specifically, the impact of joining RGGI on Pennsylvania.

Further regarding the expanded MOPR, ICF's modeling report notes that renewable generation in its Policy + Investment Case is higher than in the Reference Case because revenue that Pennsylvania earns via the sale of RGGI allowances is invested in new wind, solar, and hydro resources through a process it terms "revenue recycling." This state investment would constitute a state subsidy under the expanded MOPR, meaning these new wind and solar resources would likely be unable to clear in PJM's capacity auction.<sup>20</sup> ICF notes that the incremental generation supported by the RGGI allowance revenue will displace coal and natural gas generation, which reduces the demand for RGGI allowances. However, developers may decide not to build these projects because they are unable to earn revenue in the capacity auction due to the MOPR. This would mean less displacement of coal and gas generation, higher demand for RGGI allowances, and likely higher allowance prices and electricity prices.

Even if developers still opt to build renewable resources and forego capacity market revenue, Pennsylvania ratepayers may be forced to pay twice for capacity – once via the RGGI allowances and again through the capacity auction.

A new analysis that includes the expanded MOPR must be performed to determine its impact on Pennsylvania before any further action is taken on the proposed RGGI regulations.

### ***Modeling Fails to Account for Costs of Renewable Integration & Electric Transmission Build-out***

As of the end of 2020, Pennsylvania ranked 23<sup>rd</sup> in the nation in utility-scale wind and solar capacity with less than 1,600 MW installed. In ICF's Policy + Investment Case, more than 9,300 MW of incremental wind and solar capacity is modeled to be added in the state by 2030, which would represent a dramatic acceleration in renewable development.

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<sup>20</sup> <https://www.pjm.com/-/media/committees-groups/committees/mic/2020/20200528-special-capacity/20200528-item-02a-mopr-rehearing-order-compliance.ashx> pg. 13

The ability to successfully build the 9,300 MW of wind and solar capacity that ICF assumes in its Policy + Investment Case is overstated given that other RGGI member states have added far less than that over the past decade. New York, which has been a member of RGGI since its inception and invests much of its auction proceeds in renewable energy, has added less than 1,200 MW of utility-scale wind and solar capacity since 2010. Massachusetts – the next highest state – has added just 915 MW of utility-scale wind and solar capacity during the same period.

In addition, ICF shows no battery storage installations in Pennsylvania. Battery storage is needed to balance the grid when there is high penetration of intermittent renewables like wind and solar. Without it, reliability issues such as those that occurred in California in August 2020 can emerge. California, which has the highest concentration of solar generation in the U.S. but very little battery storage capacity, faced rolling blackouts on consecutive days during a heat wave as solar output fell in the early evening hours. Wholesale power prices spiked close to \$1,000 per MWh, up more than 4,000% from earlier in the day.

In addition to the need for battery storage deployment, a renewable build-out of the magnitude assumed in ICF's Policy + Investment Case would require a significant investment in transmission within Pennsylvania. ICF did not include the cost of transmission expansion in its analysis. Ratepayers are responsible for the cost of building new transmission, meaning ICF's analysis likely understated the impact on retail rates of Pennsylvania joining RGGI.

The Midcontinent ISO (MISO), which borders PJM to the west, recently performed a Renewable Integration Impact Study<sup>21</sup> (RIIA) to determine how increasing renewable penetration will affect the grid. The study found that power system stability concerns significantly increase beyond 35% renewable integration and that significant and expensive transmission expansion will be required to mitigate reliability issues.

Building new transmission is difficult, costly, and time-consuming. Last month, an Administrative Law Judge from the Pennsylvania Public Utility Commission recommended that an application to construct a large transmission project in Pennsylvania be denied for lack of need and cited the “detrimental economic and environmental impacts on real estate values, farming practices, natural springs, trout fishing, an elementary school, the Tim Cook Memorial Cross Country Course, businesses, the Owl’s Club, local government, and tourism in Franklin County” that the project would have.<sup>22</sup> The owner first submitted its application for the \$273 million project nearly four years ago.

PCA recommends that DEP direct ICF to expand its analysis to include costs associated with renewable integration and energy transmission build-out.

### ***Modeling Fails to Account for the Impact of COVID-19 on Electric Generation***

Because ICF's analysis was released before the COVID-19 pandemic reached the U.S., its assumptions do not reflect the significant impact that the virus and associated economic turmoil have wrought on Pennsylvania. State-ordered lockdowns of businesses have contributed to monthly retail electricity sales declines of up to 13% compared to a year earlier. In March 2020, the Pennsylvania Public Utility

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<sup>21</sup> <https://www.leg.mn/2020/MISO%20for%20MN%20LEC%20Feb%202020%20vf.pdf>

<sup>22</sup> <https://www.puc.pa.gov/pcdocs/1688185.pdf>

Commission prohibited utilities in the state from shutting off customers' service during the pandemic. Since retail electricity rates are based on an assumed level of customer demand, a meaningful decline in that demand will result in utilities earning less revenue than expected. To account for the decline in revenue, utilities may be forced to raise their rates, which would negatively impact all consumers in Pennsylvania.

PCA recommends that the DEP direct ICF to re-examine its analysis to determine how the COVID-19 pandemic will impact Pennsylvania and adjust its assumptions accordingly.

## **REQUIREMENTS OF THE AIR POLLUTION CONTROL ACT**

Pennsylvania's Air Pollution Control Act (APCA) is quite clear in what requirements must be met before any regulations regarding the control, abatement, prevention or reduction of air pollution are adopted. Section 7 of the APCA requires that public hearings be held in any region of the Commonwealth affected the regulation and requires full stenographic transcripts to be taken of all public hearings. Neither of these requirements have occurred.<sup>23</sup>

DEP and the EQB instead opted to ignore the requirements of the APCA hold a series of virtual hearings, which limited testifiers to five minutes and required a complicated two-step online and email registration process to virtually participate. While Governor Wolf recently acknowledged the disparity in broadband access across Pennsylvania, DEP and the EQB ignored these challenges, and disenfranchised the citizens of the Commonwealth that live in the affected communities as many do not have access to reliable broadband internet.<sup>24</sup>

### **EQB LACKS LEGAL AUTHORITY TO PROMULGATE THE PROPOSED REGULATIONS TO PARTICIPATE IN THE RGGI PROGRAM**

#### ***RGGI Would Effectively Be an Unconstitutional Interstate Agreement***

The General Assembly must grant specific legislative authority for Pennsylvania to enter into an interstate agreement. The Governor has no independent authority under the Pennsylvania Constitution to agree to an interstate contract of this type.

RGGI functions effectively as an interstate agreement or compact because it is an initiative among states to implement a regional CO<sub>2</sub> emissions budget and allowance trading program. The RGGI Memorandum of Understanding among the states ties the participating states together by creating and implementing both the Model Rule and the regional organization (RGGI, Inc.) to facilitate the administration of the program. The proposed Chapter 145 regulations adopt the Model Rule essentially as written for all practical purposes. The MOU commits states to propose a CO<sub>2</sub> budget trading program for legislative or regulatory approval and then implement an emissions budget and allowance trading program. Each signatory state agrees to fund and contract with RGGI, Inc. to administer the program, including facilitating quarterly auctions of allowances from any state that can be used in any state for compliance

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<sup>23</sup><https://www.legis.state.pa.us/cfdocs/legis/LI/uconsCheck.cfm?txtType=HTM&yr=1959&sessInd=0&smthLwInd=0&act=787&chpt=0&sctn=7&subsctn=0>

<sup>24</sup> <https://www.governor.pa.gov/newsroom/gov-wolf-announces-327000-pennsylvanians-will-gain-access-to-high-speed-internet-through-federal-auction/>

purposes. Each “Participating State” as defined in the Model Rule and discussed in the RGGI, Inc. bylaws, appoints two directors (the chair of the state’s energy regulatory agency and the head of its environmental regulatory agency or other designee) to the RGGI, Inc. board of directors. RGGI, Inc. then administers the allowance auctions. Pennsylvania will be an active member of the interstate RGGI program regardless whether it signs the MOU or participates as a Participating State.

Therefore, the Chapter 145 regulations and participation in RGGI are effectively an interstate agreement.<sup>25</sup> The Pennsylvania General Assembly must specifically enact legislation to give DEP authority to promulgate the Chapter 145 regulations and participate in RGGI.<sup>26</sup>

### ***RGGI Violates the Compact Clause and the Dormant Commerce Clause of the U.S. Constitution***

The proposed regulations also arguably violate the Compact Clause and the Dormant Commerce Clause of the U.S. Constitution. Interstate agreements that tend to enhance state power at the expense of federal supremacy by affecting interstate commerce violate the Compact Clause. *U.S. Steel Corp. v. Multistate Tax Comm'n*, 434 U.S. 452, 470 (1978). The RGGI program provides the RGGI states more authority to control CO<sub>2</sub> emissions than EPA, which does not regulate CO<sub>2</sub> emissions under the federal Clean Air Act. Likewise, under the Dormant Commerce Clause, state law may not place an undue burden on interstate commerce. By imposing significant additional costs on Pennsylvania power generators, the proposed RGGI regulations would treat in-state and out-of-state fossil-fuel-fired power generators differently. The very significant financial burden imposed on Pennsylvania generators is excessive in relation to the benefits claimed from controlling emissions, as explained elsewhere in these comments. That result violates the Dormant Commerce Clause.

### ***The Air Pollution Control Act Does Not Provide Authority for the Regulations***

DEP claims section 5(a)(1) of the APCA, 35 P. S. § 4005(a)(1), which grants the EQB general authority to adopt rules and regulations for the “prevention, reduction, and abatement of air pollution in the Commonwealth,” is the statutory authority for this regulation. DEP also contends CO<sub>2</sub> constitutes “air pollution” under Section 3 of the statute, 35 P.S. § 4003.

APCA Section 5(a)(1), however, is not a broad grant of legal authority to promulgate regulations to participate in a market-based, interstate carbon tax-and-trade program. The APCA does not mention such programs. The Pennsylvania Supreme Court has made clear that the delegation of administrative rulemaking authority “must be clear and unmistakable as a doubtful power does not exist.” *Eagle Environmental II v. DEP*, 884 A.2d 867 (Pa. 2005). And, contrary to DEP’s assertion in the RAF, no court has concluded that CO<sub>2</sub> in the ambient atmosphere constitutes air pollution or is or may be “inimical . . . or injurious to human, plant or animal life or to property which unreasonably interferes with the

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<sup>25</sup> Each RGGI state recognizes that RGGI functions as an interstate agreement, which is why Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, Rhode Island, and Virginia have all enacted statutes authorizing their participation in RGGI. New York adopted specific legislative authority in 2011 after promulgating RGGI regulations in 2008.

<sup>26</sup> The Pennsylvania Uniform Interstate Air Pollution Agreements Act (35 P.S. § 4101 et seq.), although providing for coordinated administration of air pollution control programs among participating states, does not provide for interstate agreements to create and implement carbon tax and trade regulations. Nor does Section 4(24) of the APCA, under which authority is limited to formulating interstate air pollution control agreements for “submission to the General Assembly.” 35 P.S. § 4004(24). Neither statute authorizes the Governor or DEP to enter an interstate agreement such as RGGI without specific legislative authority.



comfortable enjoyment of life or property” for purposes of the APCA. CO<sub>2</sub> is more properly considered an essential element of life. And even if CO<sub>2</sub> in the atmosphere could be considered to constitute air pollution, the Chapter 145 regulations would not prevent, reduce or abate air pollution, given that CO<sub>2</sub> emissions from Pennsylvania’s Budget Sources (i.e., fossil-fuel-fired power generation) are approximately 1% of total U.S. emissions and less than 0.1% of global emissions.

***RGGI Would Effectively Be an Unconstitutional Tax***

Regulated CO<sub>2</sub> Budget Sources must buy allowances for every CO<sub>2</sub> Budget Unit at a facility. The RAF estimates \$300 million in the first year will be generated through auctioning CO<sub>2</sub> allowances. The Emissions Credit Reserve (ECR) in Section 145.382 is intended to ensure that revenue from allowance auctions never falls below a predetermined amount, thus ensuring revenue to the state. DEP intends to allocate this revenue by “investing” 31% of annual proceeds for energy efficiency, 32% for renewable energy, and 31% for greenhouse gas abatement. Only about 5% or less of the proceeds are projected to be used for administrative purposes. Thus, the primary purpose of the proposed regulations is to raise revenue for the Commonwealth, not to significantly or meaningfully reduce CO<sub>2</sub> concentrations in the ambient atmosphere, and emissions from upwind states will increase because of leakage as described earlier. As further evidence of this, there is no discussion in the preamble or RAF regarding how or whether reducing CO<sub>2</sub> emissions will improve or even affect Pennsylvania climate and precipitation. This means the regulations are functionally a tax because they are an enforced contribution to support general revenue.

The Pennsylvania Constitution requires all taxes to originate in the House of Representatives. *Mastrangelo v. Buckley*, 250 A.2d 447 (Pa. 1969). Absent express legislative authority to do so, DEP does not have authority to adopt the Chapter 145 regulations – i.e., a tax – to implement RGGI in the Commonwealth.

***There is no Authority to Direct Auction Proceeds Widely***

As noted above, DEP modeled an allowance revenue investment scenario with 31% of annual proceeds used for energy efficiency, 32% for renewable energy and 31% for greenhouse gas abatement. Presumably, proceeds from allowance auctions initially would be placed in DEP’s Clean Air Fund. However, Section 9.2(a) of the APCA (35 P.S. § 4009.2(a)) limits disbursements from the Fund only “for use in the elimination of air pollution.” Distributing revenue from the Fund for the wide range of energy efficiency and renewable energy projects discussed in the Preamble (e.g., upgrading appliances and weatherizing buildings) is well beyond the Department’s current authority under the APCA.

**CONCLUSION**

In conclusion, joining RGGI will shutter coal-fired generation in Pennsylvania, resulting in the displacement of nine million tons of high BTU coal and adversely impacting the twenty-four coal mining operations in twelve different counties that provide coal to Pennsylvania’s coal-fired EGUs. These negative impacts expand well beyond the power producers and the coal operations and will lead to the loss of thousands of family-sustaining jobs, will devastate local and regional tax bases, threaten the

financial stability of school districts, and will destroy local economies. Any reductions of CO<sub>2</sub> in Pennsylvania will be replaced in PJM states that do not tax their generation, resulting in no environmental gain and rendering the proposed regulation unnecessary. The regulation is not required by federal law and its economic costs vastly outweigh any marginal benefits.

PA DEP and the EQB lack the statutory authority to promulgate the proposed rulemaking establishing a CO<sub>2</sub> Budget Trading Program. The proposed rulemaking violates both the Air Pollution Control Act and the Pennsylvania Constitution, and does not reflect the will of the Pennsylvania General Assembly. Further, the proposed rulemaking and its associated modeling is based on severely flawed data and assumptions that lack significant market considerations, fails to address leakage, and fails to address the negative economic impacts that will occur in many regions of our Commonwealth. The proposed rulemaking would be the most significant change to Pennsylvania's electric power generation landscape since deregulation in 1996 and is so substantial it requires legislative input, review, and approval. Under any reasonable interpretation of Pennsylvania law, or the Regulatory Review Act, the decision on whether and how to establish CO<sub>2</sub> Budget Trading Program or join RGGI lies squarely with the General Assembly.

Thank you in advance for your thorough consideration of the above comments.

Sincerely,

A handwritten signature in black ink that reads "Rachel Gleason". The signature is written in a cursive, flowing style.

Rachel Gleason  
Executive Director  
Pennsylvania Coal Alliance