



Industrial Energy Consumers of Pennsylvania
The Voice of Large Energy Consumers



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Independent Regulatory Review Commission
 333 Market Street, 14th Floor
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VIA E-MAIL

**Re: Environmental Quality Board
 Regulation No. 7-559: CO₂ Budget Trading Program
 IRRC Number 3274**

To the Independent Regulatory Review Commission ("IRRC"):

Pursuant to the IRRC's process for reviewing proposed agency regulations, the Industrial Energy Consumers of Pennsylvania¹ ("IECPA") submits this letter regarding the above-referenced proposed regulation before the Pennsylvania Department of Environmental Protection's ("DEP") Environmental Quality Board ("EQB") pertaining to Governor Wolf's determination to commit the Commonwealth of Pennsylvania to the Regional Greenhouse Gas Initiative ("RGGI"). Specifically, with this letter, IECPA, as an association of energy-intensive and trade-exposed² industrial entities taking electric and natural gas service from a variety of regulated utilities in Pennsylvania, provides its perspective regarding the public interest implications of the DEP's proposed new RGGI regulations.

As the IRRC is aware, IECPA previously submitted Comments to the EQB on the proposed regulations on January 12, 2021 and submitted a letter to IRRC on February 10, 2021. As previously stated in those comments, IECPA generally supports efforts within the Commonwealth to responsibly conserve the environment, including reasonable measures to control the emissions of carbon dioxide and other greenhouse gases. However as discussed in the February 10 letter IECPA does not believe that the proposed regulations are in the best interest of the Pennsylvania public. We now submit these comments to address certain issues with the responses by DEP to comments submitted on the proposed regulations.

¹ IECPA's current membership consists of the following industrial and manufacturing entities: Air Products & Chemicals, Inc.; AK Steel Corporation; Arconic, Inc.; Benton Foundry, Inc.; Carpenter Technology Corporation; Cleveland-Cliffs Inc.; Domtar Paper Company, LLC; East Penn Manufacturing Company; Keystone Cement Company; Knouse Foods Cooperative, Inc.; Marathon Petroleum Corporation; Praxair, Inc.; Proctor & Gamble Paper Products Company; and United States Gypsum Company.

² "Energy-intensive" means that because of the large amounts of energy consumed, small changes in energy rates translate into large changes in cost. "Trade-exposed" refers to the inability to pass cost increases on to customers without risking the loss of those customers to global competition.



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Jobs Impact and Potential Overwhelming Cost of Compliance

In response to comment number 5 of the IRRC and Legislative Comments³, DEP states, “The economic modeling conducted shows that this Commonwealth’s participation in RGGI will lead to a net increase of more than 30,000 jobs and add \$1.9 billion to the Gross State Product.” The DEP makes this claim several times within the response document. However upon review of the actual “[Economic Modeling Results](#)” spreadsheet posted by DEP, the “Employment by Sector – Graphs” sheet actually shows that two out of the three modeling scenarios result in a **NET DECREASE in jobs. In fact, two of the three scenarios show a cumulative through 2030 DECREASE in Gross State Product and Disposable Personal Income along with the jobs decrease.** Yet DEP only highlights the most favorable impact modeling results.

Summary REMI Results - Balanced		
		Cumulative through 2030*
Employment	Jobs	30,518
	%	0.042%
Gross State Product (Million 2017\$)	Undiscounted	\$2,342
	%	0.029%
	3% Discounted	\$1,940
Disposable Personal Income (Million 2017\$)	Undiscounted	-\$1,157
	%	-0.017%
	3% Discounted	-\$1,024

*Cumulative results begin in 2022

Summary REMI Results - Ratepayer Assistance		
		Cumulative through 2030*
Employment	Jobs	-8,678
	%	-0.012%
Gross State Product (Million 2017\$)	Undiscounted	-\$2,425
	%	-0.030%
	3% Discounted	-\$2,056
Disposable Personal Income (Million 2017\$)	Undiscounted	-\$3,894
	%	-0.057%
	3% Discounted	-\$3,289

*Cumulative results begin in 2022

Summary REMI Results - General Fund		
		Cumulative through 2030*
Employment	Jobs	-26,889
	%	-0.037%
Gross State Product (Million 2017\$)	Undiscounted	-\$4,524
	%	-0.056%
	3% Discounted	-\$3,843
Disposable Personal Income (Million 2017\$)	Undiscounted	-\$4,775
	%	-0.070%
	3% Discounted	-\$4,028

*Cumulative results begin in 2022

³ Pennsylvania Department of Environmental Protection, Bureau of Air Quality, CO2 Budget Trading Program 25 Pa. Code Chapter 145, Subchapter E 50 Pa.B. 6212 (November 7, 2020) Environmental Quality Board Regulation #7-559 (Independent Regulatory Review Commission #3274) Comment and Response Document



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In the same response to this comment number 5, DEP discusses the Penn State Center for Energy Law and Policy, Prospects for Pennsylvania in the Regional Greenhouse Gas Initiative Working Paper, December 2020, https://sites.psu.edu/celp/files/2021/01/CELP_RGGI.pdf. DEP states, “In particular, the Penn State study indicates that between 2022 and 2030 this Commonwealth’s participation in RGGI will yield \$2.6 billion in net economic benefits to the power sector within this Commonwealth. This study determined that economic benefits to electricity market participants include the higher net profits to the generation sector (additional revenue arising from higher wholesale electricity prices less new costs from the purchase of CO2 allowances) and CO2 allowance proceeds accruing to CO2 allowance holders. Economic costs predominantly reflect the higher costs of purchasing bulk power by load-serving entities and direct access consumers in the PJM regional electricity market.” Again, DEP chose to highlight the potential positive economic benefit to certain electric generators. While they did acknowledge that the report found, “Economic costs predominantly reflect the higher costs of purchasing bulk power by load-serving entities and direct access consumers in the PJM regional electricity market,” they choose to exclude a key finding from the study:

“Pennsylvania ratepayers pay higher prices and lose whereas Pennsylvania generators gain.”⁴

	2022	2026	2030	Cumulative*
<i>Pennsylvania:</i>				
Baseline Average Electricity Price** (\$/MWh)	\$ 32.84	\$ 32.70	\$ 32.76	\$ 32.79
Change from PA Joining RGGI	\$ 2.01	\$ 2.27	\$ 3.61	\$ 2.56

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For an average IECPA member manufacturing facility, the projected \$2.56/MWh increase in electricity price would result in an increased operating cost of approx. 1.2 Million Dollars per year. That’s equivalent to the compensation of 16 well paid manufacturing jobs at one single facility along with an additional 80 indirect supporting jobs!⁶

In response to Comment number 17 addressing IRRC’s request that the Board explain why the benefits of the rulemaking outweigh the costs associated, DEP states, “As CO2 budget sources would need one allowance for each ton of CO2 emitted, the owners or operators would need to acquire 61 million CO2 allowances at the estimated 2022 allowance price of \$3.24 (2017 \$/Ton). If these CO2 allowances were all purchased at quarterly multistate auctions in 2022, the total purchase cost would be \$198 million. The CO2 budget sources would then most likely incorporate this compliance cost into their offer price for electricity. The price of electricity is then passed onto electric consumers.

⁴ Penn State’s Center for Energy Law and Policy Webinar: Joel Landry, John and Willie Leone Family Department of Energy and Mineral Engineering, “What does RGGI mean for energy costs and the power grid in Pennsylvania?”, October 2, 2020

⁵ Prospects for Pennsylvania in the Regional Greenhouse Gas Initiative - Working Paper, Penn State Center for Energy Law and Policy, December 2020

⁶ National Association of Manufacturers *calculations using 2018 IMPLAN data*



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However, that does not mean that \$198 million will be passed onto this Commonwealth's electric consumers as 25 percent of this Commonwealth's electricity is sold out of state." The highlighted portion of this response indicates a clear misunderstanding by DEP of the likely cost increase to Pennsylvania electricity customers associated with this regulation. While the electric generators will see a direct cost increase associated with the purchase of CO2 allowances, **the ultimate cost increase to Pennsylvania electric customers will be a factor of the increase in electricity prices multiplied by the electrical usage of the customers. Therefore, it's not just a simple pass-through of a portion of the carbon allowance cost increase.**

Even according to the updated Power Sector Modeling results released by DEP, and as noted in attached IECPA Exhibit 1,⁷ **the cost to Pennsylvania electric customers through utility compliance with RGGI regulations may increase by over \$1.7 billion during the first 9 years of the RGGI program.** DEP attempts to minimize this electric customer impact in their response to comment 5 by stating "According to the PUC, a large commercial customer using 200,000 kWh per month has a monthly bill ranging from \$11,788.08 to \$21,043.18. These customers could expect to see a 2022 potential price increase of \$141 to \$253 per month, again depending on their electric service territory and associated rates." However, the cost increase to all commercial customers in Pennsylvania is over \$57 million per year!

	Electricity Cost Increase	Associated Gross Receipts Tax Increase	Total Annual Increase
Residential	\$ 72,657,950	\$ 4,555,653	\$ 77,213,604
Commercial	\$ 53,741,919	\$ 3,369,618	\$ 57,111,537
Industrial	\$ 66,780,722	\$ 4,190,490	\$ 70,971,213
Total	\$ 193,180,591	\$ 12,115,762	\$ 205,296,353

It's also important to note that only one other state participating in RGGI has electricity rates comparable to Pennsylvania (New York – most likely due to the use of low-cost hydropower for economic development). All other RGGI states have much higher rates and **many of those rates have been increasing over the past 5 years while PA's rates have decreased.**

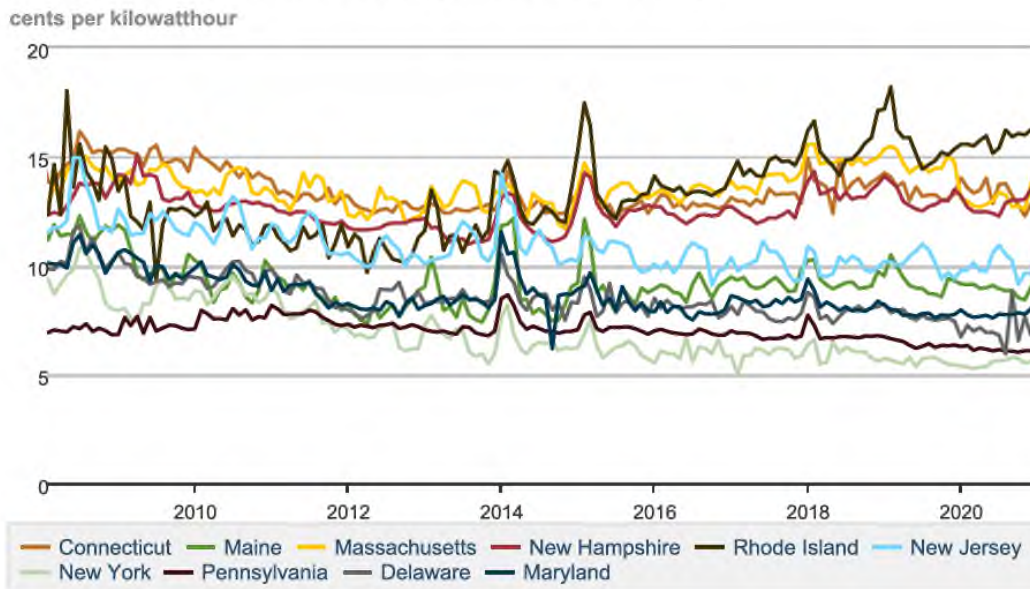
⁷ Total customer impact is based on electrical usage (MWh) information available from the U.S. Energy Information Administration with load data provided by the Pa. Public Utility Commission report, "Electric Power Outlook for Pennsylvania 2018-2023," published August 2019. The cost totals depicted are for the first 11-year period of RGGI compliance; however, since data is not provided for each year, the prior year's data is used for any missing year up to the next year of data that is provided in order to develop the 11-year total.



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Average retail price of electricity, industrial, monthly



Data source: U.S. Energy Information Administration

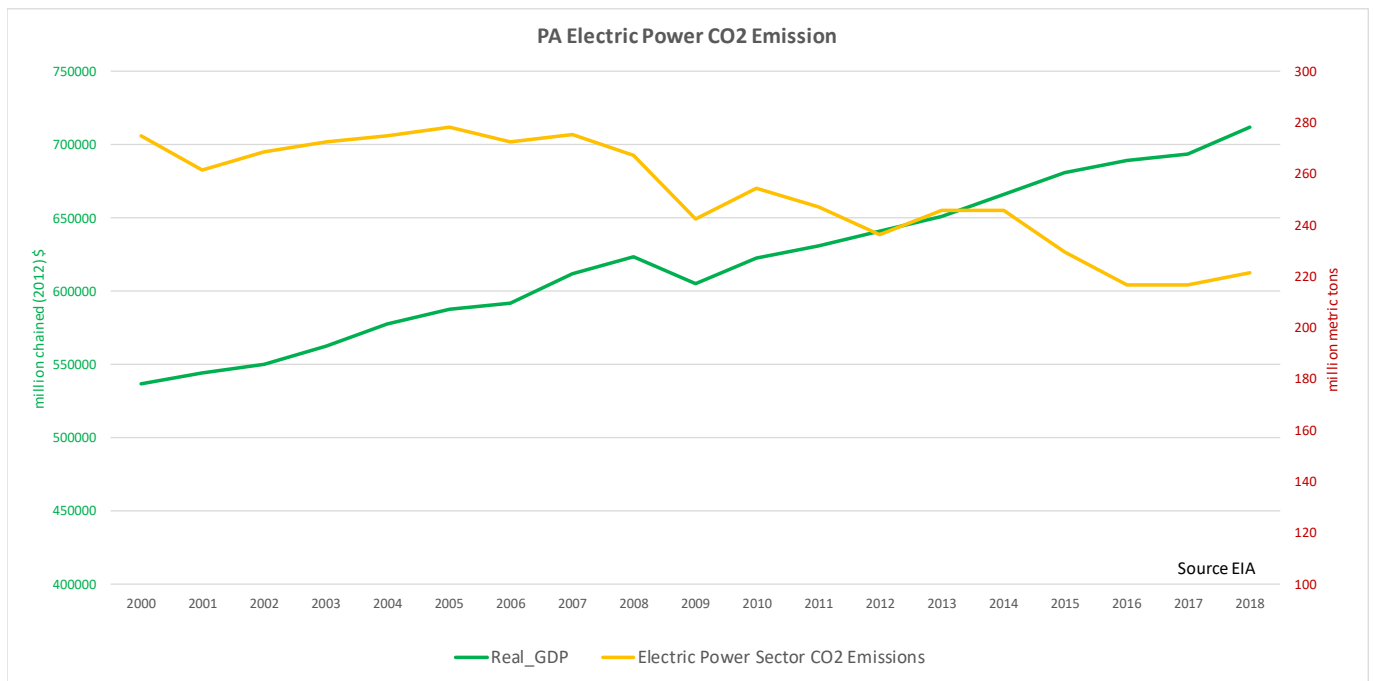
As also referenced in IECPA's Comments before the EQB, these RGGI electricity market cost increases would be layered on top of the massive investment that electricity consumers have already had to contribute toward Pennsylvania electric utilities' compliance with Act 129 energy efficiency and conservation ("EE&C") measures. Since the beginning of the EE&C Program in June 2009, utility customers have paid more than *\$2 billion* into these Act 129 compliance programs through the payment of associated EE&C utility surcharges. Specifically, as it pertains to *just the industrial and manufacturing sector alone*, the cost of these surcharges has equated to approximately *\$1 billion*. That investment by industrial and manufacturing businesses has largely gone without a return to those entities that are unable to participate in utility EE&C offerings due to the fact that they have already invested in their own operational improvements to be as efficient as possible in order to remain competitive. Because these manufacturing businesses are exposed to global trade, they cannot merely pass additional costs on to their customers without risking the loss of those customers to their global competition.

Adding a potential \$1.7 billion of RGGI compliance electricity market costs onto the massive expenses already incurred by Pennsylvanians through existing EE&C obligations is not sustainable for the Pennsylvania public. Especially considering that *Pennsylvania's competitive electricity market continues to add lower carbon dioxide emitting generation while decreasing cost to customers and increasing the state GPD!*



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All while carbon dioxide emissions in Pennsylvania have decreased just as much on a percentage basis as the other states participating in RGGI and have decreased MORE than other RGGI states on an absolute basis without the added cost of the RGGI program!

Table 2. State energy-related carbon dioxide emissions by year, adjusted (2000–2018)

million metric tons of energy-related carbon dioxide

State	Change (2008–2018)	
	Percent	Absolute
Connecticut	-1.1%	-6.9
Delaware	-18.9%	-3.7
Maine	-30.4%	-8.5
Maryland	-22.2%	-22.1
Massachusetts	-19.9%	-20.6
New Hampshire	-32.8%	-7.2
New York	-7.7%	-35.3
Pennsylvania	-23.0%	-61.6
Rhode Island	3.2%	-0.2
Vermont	-2.3%	-1.0

Source: EIA, State Energy Data System, and EIA calculations made for this analysis.

United States total, Monthly Energy Review, September 2020, Section 11.

Note: RGGI's first auction of carbon dioxide emissions allowances in 2008.



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Additionally, the Power Sector Modeling of the RGGI program compares a policy case of Pennsylvania joining RGGI versus a reference case of not doing so. The reference case forecasts total CO2 emissions PJM-wide, through 2030, to be 3,128 million tons; the policy case forecasts 3,100 million tons through 2030. This is only a net reduction of 28 million tons over 10 years = less than 1% difference of the cumulative emissions in PJM projected to occur over the next decade. This is due to CO2 emissions increasing from other generation resources within PJM (leakage) as Pennsylvania electrical generation is shut off and shut down along with the associated jobs. **Thus, the proposed RGGI program in Pennsylvania would result in a cost of over \$69 million per ton of CO2 reduction in PJM over the 10-year period!**

Energy-intensive, trade-exposed businesses cannot afford to pay the cost of multiple energy efficiency and environmental compliance programs and policy initiatives that are passed through to them without recourse. According to a report from the CO2 Coalition, “RGGI states have experienced an 8.6 % drop in goods manufacturing between 2007 and 2019, compared to only a 0.9% loss of such jobs in Pennsylvania. The 7.7% net loss represents a \$6.6 billion a year loss in Real GDP in Pennsylvania, and 46,600 lost jobs should the Commonwealth face the same experience as the RGGI states. Based on the experience of RGGI states, higher electricity prices from Gov. Wolf’s carbon tax could result in a loss of approximately 17,000 jobs in the energy intensive manufacturing sector.”⁸ To that end, IECPA is very concerned that adoption of any proposed regulations to comply with RGGI will jeopardize the survival of manufacturing and industrial concerns in Pennsylvania. This, in turn, will undoubtedly impact job retention throughout the Commonwealth.

IECPA appreciates the burden that the IRRC carries for reaching a determination on DEP's proposed regulations for implementing the RGGI requirements, as well as the opportunity to submit this letter in that process. For all the significant reasons stated above,⁹ IECPA respectfully submits that the proposed regulations under review by the IRRC do not constitute a measure that is in the public interest and should not be approved by IRRC.

Respectfully submitted,

INDUSTRIAL ENERGY CONSUMERS OF
PENNSYLVANIA (IECPA)

By 

Rod Williamson
Executive Director

⁸ [“Pennsylvania’s Regional Greenhouse Gas Initiative Relies on Faulty Data”](#) CO2 Coalition, July 2021

⁹ In addition to these substantial public interest concerns stated herein, IECPA also generally questions the overall legality of the effort to commit Pennsylvania to RGGI, as reflected by DEP's proposed regulations.

IECPA Exhibit 1

Energy Prices (Nominal \$/MWh)	2020	2022	2025	2028	2030	9 Year Total (2022-2030)
PA DEP Reference Case	\$ 23.9	\$ 27.2	\$ 25.5	\$ 28.5	\$ 31.0	
PA DEP Policy Case	\$ 23.8	\$ 28.0	\$ 26.2	\$ 29.5	\$ 31.7	
Policy Case vs Reference	\$ (0.17)	\$ 0.8	\$ 0.7	\$ 0.9	\$ 0.8	
Electric Customer Impact	\$ (24,472,901)	\$ 115,444,305	\$ 98,268,535	\$ 136,861,763	\$ 110,187,440	\$ 1,025,049,486
Percentage Increase	-0.7%	2.9%	2.7%	3.3%	2.5%	

Capacity Prices (Nominal \$/kW-yr)	2020	2022	2025	2028	2030	9 Year Total (2022-2030)
PA DEP Reference Case	\$ 36.5	\$ 51.1	\$ 81.6	\$ 82.3	\$ 81.9	
PA DEP Policy Case	\$ 36.5	\$ 51.1	\$ 86.4	\$ 87.2	\$ 81.7	
Policy Case vs Reference	\$ -	\$ -	\$ 4.7	\$ 4.9	\$ (0.2)	
Electric Customer Impact	\$ -	\$ -	\$ 143,151,282	\$ 149,098,882	\$ (6,622,547)	\$ 721,029,063
Percentage Increase	0%	0%	6%	6%	0%	

Total Customer Impact (Energy + Capacity)	\$ (24,472,901)	\$ 115,444,305	\$ 241,419,817	\$ 285,960,645	\$ 103,564,893	\$ 1,746,078,549
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Average Annual RGGI Cost Increase	\$ 194,008,728
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Notes:

- Energy Prices and Capacity Prices from DEP IPM Modeling Results

[Reference Case Results](#)

[RGGI Case Results](#)

Total Customer Impact based on:

- Electrical usage (MWh) information from U.S. Energy Information Administration

<https://www.eia.gov/electricity/data/browser/#/topic/5?agg>

- Load data (kW) from Pennsylvania Public Utility Commission

"Electric Power Outlook for Pennsylvania 2018-2023", August 2019

http://www.puc.state.pa.us/General/publications_reports/pdf/EPO_2019.pdf

PA Electricity Annual Sales All Sectors	145,014,000	MWh
RGGI Electricity Cost Increase	\$1.34	\$/Mwh
PA Industrial Electricity Sales	49,916,000	34% of Total Sales
PA Commercial Electricity Sales	40,170,000	28% of Total Sales
PA Residential Electricity Sales	54,309,000	37% of Total Sales
RGGI Industrial Avg Annual Electricity Cost Increase	\$ 66,780,722	
Gross Receipts Tax increase	\$ 4,190,490	
RGGI Industrial Avg Annual Cost Increase	\$ 70,971,213	
RGGI Commercial Avg Electricity Annual Cost Increase	\$ 53,741,919	
Gross Receipts Tax increase	\$ 3,369,618	
RGGI Commercial Avg Annual Cost Increase	\$ 57,111,537	
RGGI Residential Avg Electricity Annual Cost Increase	\$ 72,657,950	
Gross Receipts Tax increase	\$ 4,555,653	
RGGI Residential Avg Annual Cost Increase	\$ 77,213,604	

	Electricity Cost Increase	Associated Gross Receipts Tax Increase	Total Annual Increase
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