COMMONWEALTH FOUNDATION | BACKGROUNDER

State of RGGI: Past, Present, and Future

An Analysis of the Regional Greenhouse Gas Initiative in Pennsylvania

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KEY POINTS

- The Regional Greenhouse Gas Initiative (RGGI) is a multi-state cap-and-trade program that imposes a carbon tax on power generators, **resulting in a new, economy-wide energy tax.**
- **Pennsylvania entered RGGI through a unilateral executive order** usurping the legislature's sole constitutional authority to levy taxes. The constitutionality of the executive order currently sits before the Pennsylvania Supreme Court after the Commonwealth Court ruled it an unconstitutional tax. Regardless of the policy implications of RGGI, the court should affirm the lower court's decision due to the executive overreach against the legislature's constitutional authority.
- Proponents of RGGI claim this policy is necessary to combat climate change and reduce emissions. **These arguments ignore Pennsylvania's track record of reducing emissions** through market-driven transitions, such as a shift from coal to natural gas, which achieved significant emission reductions without punitive government mandates.
- Pennsylvania is the nation's second-largest natural gas producer and the nation's largest power exporter. **Cap-and-trade schemes like RGGI threaten Pennsylvania's comparative advantage as a major energy-producing state** and have a chilling effect on industries that lower emissions while providing stable jobs, affordable electricity, and energy abundance.
- Lawmakers must avoid RGGI and other carbon tax schemes in Pennsylvania and **promote people-first, market-driven policies** that secure grid reliability, electricity affordability, and responsible environmental stewardship.

BACKGROUND

What is RGGI?

The Regional Greenhouse Gas Initiative (RGGI) is a multistate compact between Northeastern and Mid-Atlantic states that attempts to reduce greenhouse gas emissions from the power sector.[1] Established in 2009, RGGI operates a cap-and-trade program in which participating states set a collective cap on carbon dioxide emissions from power plants. Power generators must purchase allowances for each ton of CO2 they emit, and the cap gradually decreases over time to encourage emission reductions. RGGI allowances are passed down as a burdensome carbon tax—increasing energy costs and threatening grid reliability and energy jobs.[2]

Executive Overreach

RGGI arrived in Pennsylvania through an October 2019 executive order by then-Gov. Tom Wolf wherein he imposed a carbon tax without the legislature's authorization and directed the Pennsylvania Department of Environmental Protection (DEP) to begin procedures to join RGGI.[3] The DEP developed regulations to facilitate Pennsylvania's participation in RGGI, framing it as a measure to combat climate change and reduce emissions. Despite legislation from the General Assembly requiring legislative approval for entering RGGI (which Wolf vetoed) and other stakeholder concerns about its legality and economic impact, the regulations were finalized in 2022. In these actions, Pennsylvania became the first major energy-producing state to enter RGGI and the only state to enter RGGI without direct or indirect legislative approval.[4]

RGGI Litigation

A 2022 injunction by the Commonwealth Court paused moves forward on RGGI, and in November 2023, the court ruled that the state's entry into RGGI under Wolf's executive order effectively imposed an illegal tax,[5] bypassing the legislature's sole constitutional authority to levy taxes. Wolf's successor, Gov. Josh Shapiro, initially expressed skepticism about RGGI during his campaign for governor. Still, Shapiro's administration promptly appealed the decision to the Pennsylvania Supreme Court, seeking to overturn the lower court's ruling and keep Pennsylvania in RGGI.[6]

Regardless of RGGI's positive or negative impacts, under the state constitution, it should have originated as a law passed by the legislature, not an executive order. The General Assembly has the sole constitutional authority to levy or repeal taxes in Pennsylvania. Wolf's executive order bypassing the state legislature usurps the General Assembly's constitutional role in maintaining the power of the purse and shaping policy—sidestepping legislative debate and accountability. As the body closest to the people, the General Assembly should have input in a decision with such significant economic and policy implications.[7]

RGGI also violates constitutional principles by allowing external entities to shape state policy without any explicit limitations. Allowing RGGI to set carbon pricing mechanisms would effectively delegate policymaking authority to a regional private body that is neither accountable to Pennsylvania voters nor subject to the state's constitutional safeguards. This arrangement threatens to erode the state's ability to control its energy policy and tax decisions, placing them in the hands of an unelected conglomerate.[8]

Concerning Precedent

These constitutional violations do more than raise legal questions or debate over energy and environmental policy; they set a concerning precedent for good governance and threaten Pennsylvania's sovereignty to determine its future. Major policy decisions that impact the commonwealth's livelihoods, families, and businesses, such as those involving energy costs, production, generation, and economic growth, must be made transparently and with the direction of the General Assembly. Pennsylvania's participation in RGGI, as entered by Wolf and the Shapiro administration continues to lobby for, violates these principles and the state's constitutional order, warranting the Pennsylvania Supreme Court to restore constitutional balance.

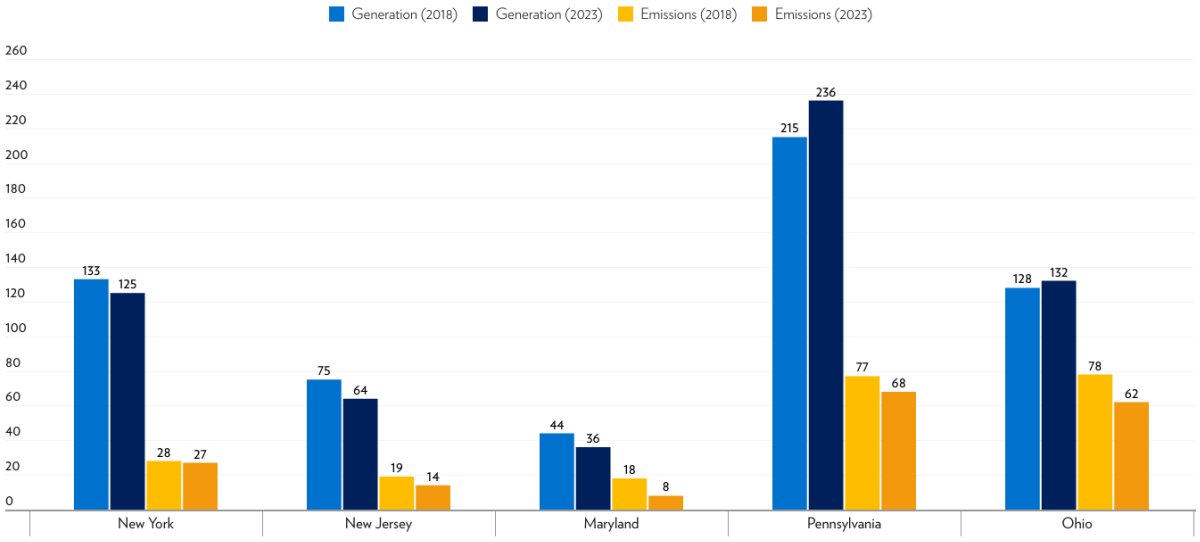
ANALYSIS

Energy and Environmental Impact

RGGI can potentially reverse economic and environmental gains from Pennsylvania's energy industry.

According to the Independent Fiscal Office (IFO), the Pennsylvania power sector has reduced carbon emissions while growing power generation—all without RGGI or other carbon tax initiatives. The IFO's data shows Pennsylvania's CO2 emissions decreased by 10.8 percent from 2022 to 2023—the most significant year-over-year decrease since the 1990s. The report highlights that the reduction in emissions was due to the increased use of natural gas in the state's energy generation mix, supplanting a previously larger percentage of coal power. Between 2018 and 2023, Pennsylvania dropped nine million metric tons in its emissions, while New York only dropped one, and New Jersey dropped five. Maryland had similar results to Pennsylvania. New York, New Jersey, and Maryland are RGGI states. Pennsylvania and Ohio were the only states in the region listed by the IFO that reduced emissions while increasing power generation.[9]

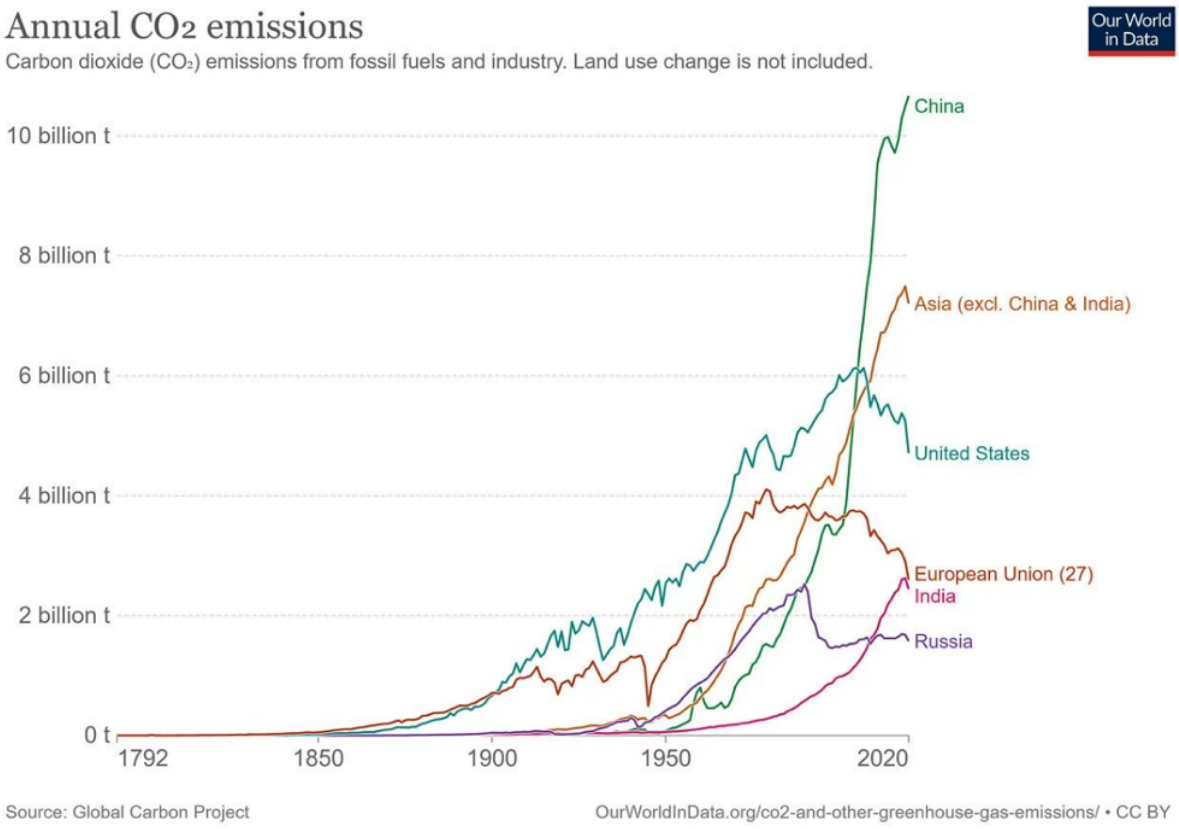
Carbon Emissions from Electricity Generation, 2018-2023



Source: Pennsylvania Independent Fiscal Office, "Pennsylvania Electricity Update," March 7, 2024, http://www.ifo.state.pa.us/releases/755/Pennsylvania-Electricity-Update/

The ability to drive energy abundance while lowering emissions demonstrates the effectiveness of industry-driven innovation over new regulations and carbon taxes. RGGI (and other carbon tax schemes and central planning initiatives in Pennsylvania) is a solution in search of a problem.[10]

Pennsylvania's emissions reductions are part of a national trend. The United States dropped emissions by 38 percent from 2001 to 2022,[11] and data from the International Energy Agency shows that American natural gas power generation more than doubled during that time.[12] Energy abundance and responsible use of our natural resources are possible without climate mandates or cap-and-trade policies. While other nations have increased their emissions output, the United States continues to lower its emissions, thanks mainly to reliable and clean natural gas.



Pennsylvania's primary comparative advantage in energy and lowering emissions is its abundance of natural gas from the shale fracking revolution that transformed the United States from a net importer to a net exporter of oil and gas. With about 264 billion barrels, the United States has more oil reserves than Russia and Saudi Arabia. States such as Texas, Pennsylvania, and North Dakota contain more untapped resources than some mid-sized countries.[13]

Hydraulic fracturing, or fracking, transformed Pennsylvania's energy economy and spearheaded the pathway for American energy dominance. Fracking accounts for nearly all of the state's natural gas production, and Pennsylvania produces about 7.5 trillion cubic feet of natural gas annually—second only to Texas.[14] By effectively raising the cost of producing electricity with natural gas, RGGI will undoubtedly impact natural gas production in Pennsylvania, affecting not only the commonwealth's energy economy and job sector but also threatening American energy independence and security.

Pennsylvania's Grid Reliability

Natural gas is not alone in the commonwealth's powerhouse of energy landscape. The coal industry continues to play a significant role. In 2022, the state produced around 8.2 million tons of anthracite and 40.2 million tons of bituminous coal, transported to 21 states, resulting in 6.8 percent of Pennsylvania's total exports. 58 percent of the bituminous coal was used for electrical power generation.[15]

While the increased deployment of natural gas brings the added benefit of lowering emissions, it also contributes to electric grid reliability and adequacy. Pennsylvania has a reliable and diverse generation mix:

59 percent natural gas, 32 percent nuclear, and 5 percent coal, with the remaining 4 percent coming from different renewable energy sources.

Ninety-six percent of the commonwealth's energy generation comes from baseload or dispatchable energy sources, which is critical to the grid's reliability. Dispatchable means on-demand sources that peak up or turn down to keep the lights on, and baseload means the capability to provide the constant, undisturbed power the grid needs to stay online. Renewables like solar and wind do not have the technological capabilities to provide baseload power and are not dispatchable. They rely on the external forces of the sun and wind to determine their megawatt output and are thus intermittent energy sources. A reliably diverse grid helps ensure an adequate and affordable electrical system.

Pennsylvania Power Generation Resource Mix

Source	
Natural Gas	59%
Nuclear	32%
Coal	5%
Other Renewables	4%

Source: Independent Fiscal Office, http://www.ifo.state.pa.us/download.cfm?file=Resources/Documents/Electricity_Update_2024.pdf

Grid diversification is essential to grid security—relying on only one power source through central planning risks reliability and affordability. Policy trends like RGGI allow lawmakers and regulators to develop subsidies that favor renewables, even when they are less reliable than nuclear, natural gas, oil, and coal. The increased battery storage and grid modifications needed to bring renewables online make them incredibly expensive.[16] Renewables' role in grid diversification is what the grid can tolerate without jeopardizing reliability and adequacy.

Carbon taxes and subsidies that favor renewables disrupt price signals in our energy markets, making reliable power arbitrarily more expensive. They also have a chilling effect on the industry and force the early retirement of power plants without adequate resources to replace them. RGGI would not only have the potential to increase costs from natural gas and coal-fired power (which provide dispatchable and baseload power) but also risk the early retirement of these reliable power plants, threatening grid reliability and increasing the risks of blackouts.

Regional and National Implications

It is also critical to realize that what happens in Pennsylvania's power sector impacts the PJM region. Pennsylvania is among the largest electricity-generating states and the largest power net exporter in the United States, generating over 230 million MWh annually. Without reliable power from Pennsylvania, the entire PJM Interconnection (which includes 13 states and the District of Columbia) is at risk of blackouts and brownouts.

Unlike in other states, RGGI's implementation in Pennsylvania will have a more significant impact beyond the Keystone State's borders. The United States and the world rely on natural gas extracted from the Marcellus Shale Play to provide reliable, affordable, clean, and secure energy. The region around Pennsylvania counts on its energy producers to provide reliable and affordable electricity. While RGGI will certainly have disastrous consequences for Pennsylvanians, its ripple effect will be far-reaching across the nation and global energy markets.

Higher Electricity Rates & Economic Impact

Reliability and affordability are intrinsically tied. Energy fuels every industry and makes modern life possible. Studies indicate that RGGI participation can lead to higher electricity rates. An analysis of RGGI's implementation in New Jersey said: "participating RGGI states already have some of the highest retail electricity rates in the nation, with six of the nine states in the top ten, and increased energy costs should be of major concern." The New Jersey Department of Environmental Protection noted during RGGI's proposal in the Garden State that the program could significantly increase electricity rates. New York and New Jersey experienced electricity rate increases following their participation in RGGI.[17] RGGI states also saw spikes in the "allowance prices" set by RGGI, which adds additional costs that have economy-wide implications.[18]

If Pennsylvania joined RGGI, government revenues and electricity bills would increase. The IFO estimates that RGGI would collect around $800 million in new taxes for the commonwealth, redistributed to government agencies and environmental special interest groups.[19] Some economic models estimate that RGGI would increase Pennsylvanians' electric bills by 30 percent—before increases to the RGGI allowances. New estimates would be higher.[20]

Each participating RGGI state sets a cap on emissions and requires power generators to purchase allowances for every ton of CO2 emitted. The resulting price increases depend on the allowance costs/prices set by RGGI's quarterly auction. In late 2023, the clearing price exceeded $14, with the latest auction in September 2024 exceeding $25.[21] If Pennsylvania joins RGGI, the added cost of emissions allowances would hit consumers through hiked retail electricity rates. Like Pennsylvania, states that rely on hydrocarbon energy sources face higher compliance costs—meaning RGGI's carbon tax punishes reliable energy and would dismantle the commonwealth's primary comparative advantage as a top energy-producing state.

Various industry models show different numbers of Pennsylvania energy sector-related jobs and potential jobs lost from implementing RGGI.[22] Regardless of the totality of energy jobs at risk because of RGGI, these losses would result from government-picked winners and losers rather than market shifts or industry-driven innovation altering the job market. Pennsylvania's energy sector, particularly natural gas and coal, competes with other non-RGGI states. The resulting uneven playing field incentivizes businesses to shift operations or investments to states without energy taxes.

Most of the world—including Pennsylvania—gets almost all its electric power from hydrocarbon sources. Oil and gas-producing states like Pennsylvania also provide the petroleum-based resources that go into countless consumer products and other raw materials needed in practically every industry and every part of society. Pennsylvania stands to lose a critical industry should RGGI be implemented.

CONCLUSION

RGGI operates from a premise of climate idealism that fundamentally promotes degrowth and would cause significant economic damage, threaten jobs, deflate Pennsylvania's role as a top-energy-producing state, and lower the commonwealth's standard of living. The tradeoffs are demonstrably unreasonable.

- Pennsylvania's energy sector is already reducing emissions and producing reliable power without RGGI.
- The energy industry should be permitted to innovate and develop technological innovations to improve or maintain the grid's reliability and lower costs without unnecessary regulations.
- Carbon taxes like RGGI are a tax on modern life; they punish energy consumers, foster degrowth, and arbitrarily shift the market in ways that do more harm to our economic environment with no clear positive impacts on our natural environment.
- At a time of heightened inflation, such arbitrary cost increases make RGGI and carbon taxes an even more irresponsible policy choice.

RGGI's current fate in the Keystone State rests with the Pennsylvania Supreme Court, where we await oral arguments and judgment on the lower court's ruling.

- It is not for the state's top court to determine whether or not RGGI is a good policy. The court should weigh in only on the constitutional merits of how RGGI was implemented and, therefore, uphold the lower court's ruling and strike down the unconstitutional executive order, allowing debate to continue in the General Assembly.

POLICY ALTERNATIVES

The General Assembly should oppose RGGI and other carbon tax initiatives and instead consider policy alternatives to secure Pennsylvania's energy future, including:

- Crafting legislation to create an energy-source-neutral standard of grid reliability and adequacy tied to least-cost generation planning in law.
- Passing legislation to streamline the permitting process for all energy and environmental projects and consider a regulatory reduction program.
- Explore legislative opportunities to promote responsible environmental conservation, focusing on forest management, ecosystem restoration, and agriculture.

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[7] See *Ziadeh* v. *Pennsylvania Legislative Reference Bureau,* 309 A.3d 157 (Pa. Cmwlth. 2023): The power to levy taxes is specifically reserved to the General Assembly. P[a]. C[onst]. Art. II, § 1; *Thompson* v. *City of Altoona Code Appeals Board*, 934 A.2d 130, 133 (Pa. Cmwlth. 2007) ("It is well[ ]settled that '[t]he power of taxation ... lies solely in the General Assembly of the Commonwealth acting under the aegis of the Constitution.'") (quoting *Mastrangelo* v. *Buckley*, 250 A.2d 447, 452-53 (Pa. 1969)). While the General Assembly may delegate the power to tax, such as to a municipality or political subdivision, any such delegation must be "plainly and unmistakably conferred ... and the grant of such right must be strictly construed and not extended by implication." *Mastrangelo*, 250 A.2d at 453 (emphasis in original); *see also* P[a]. C[onst]. Art. III, § 31 (placing restrictions on the General Assembly's right to delegate its taxing authority).
[8] See *Protz v. Workers' Comp. Appeal Bd.*, 161 A.3d 827, 837 (Pa. 2017) ("[T]he General Assembly delegated authority to a private entity, not to a government agency or body. Conceptually, this fact poses unique concerns that are absent when the General Assembly, for instance, vests an executive-branch agency with the discretion to administer the law. One such concern is that private entities are isolated from the political process, and, as a result, are shielded from political accountability.").
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