

Pennsylvania's Climate Policy Roadmap

A look at the groups and strategies that are helping shape Pennsylvania's climate future.

Pennsylvania ranks as one of the top five energy-producing states in the nation, and yet is simultaneously proactive when it comes to promoting clean energy generation, reducing energy consumption, achieving phased greenhouse gas (GHG) reduction goals, and encouraging the adoption of climate change adaptation and reduction strategies across multiple sectors. In this article, we will discuss the various factors at the state level that are shaping Pennsylvania's climate future and the formal actions that have been taken to date by those parties; the Pennsylvania Climate Action Plan and the state's GHG emissions reduction goals; the eight sectors within Pennsylvania that are currently targeted within the Climate Action Plan as contributing to the state's GHG emissions profile, and the various strategies and actions (both sector-specific and cross-cutting) those sectors are encouraged to take to reduce the state's overall GHG emissions; and the role of the regulated and voluntary carbon markets with respect to Pennsylvania facilities.

Legislative History

Pennsylvania Alternative Energy Portfolio Standards Act (Act 213)

In 2004, the state's first clean energy target was established when the Pennsylvania Alternative Energy Portfolio Standards Act (Act 213; www.legis.state.pa.us/cfdocs/legis/li/uconsCheck.cfm?yr=2004&sessInd=0&act=213) was signed into law. Act 213 requires that 18% percent of the electricity supplied by Pennsylvania's electric distribution companies (EDCs) and electric generation suppliers (EGSs) come from alternative energy resources by 2021. Although innovative at its inception, Act 213 has proved to be achievable over time by the state's EDCs and EGSs, and state lawmakers are looking for more aggressive clean energy targets moving forward—as evidenced by PA Senator Jay Costa's September 2019 proposed "Climate Change Mitigation and Energy Transition Act" (Senate Bill 15).

Pennsylvania's Energy Efficiency Law (Act 129)

In 2008, the state's first energy consumption reduction targets were established when Act 129 (www.legis.state.pa.us/cfdocs/legis/li/uconsCheck.cfm?yr=2008&sessInd=0&act=129) was signed into law. Act 129 requires that the Pennsylvania Public Utility Commission (PUC) reduce energy consumption and peak electric demand through a three-phase process implemented during the period June 1, 2009 through May 31, 2021. To fulfill Act 129, the PUC has required the state's seven largest EDCs to develop, adopt, and implement energy efficiency and conservation (EE&C) plans and to reduce the amount of electricity consumed by customers in their service areas. All seven EDCs have met their mandated energy consumption reduction and demand reduction targets during Phase I and Phase II of Act 129. Phase III of Act 129 began on June 1, 2016 and will end on May 31, 2021.

Pennsylvania Climate Change Act (Act 70)

Also in 2008, the Pennsylvania Climate Change Act (Act 70; www.legis.state.pa.us/cfdocs/legis/li/uconsCheck.cfm?yr=2008&sessInd=0&act=70) was also signed into law. Act 70

requires the PA Department of Environmental Protection (PADEP) to prepare a Climate Action Plan and update it every three years, establish a council that advises PADEP on implementing Act 70, develop an annual state-wide inventory of GHG emissions, and establish a voluntary registry of GHG emissions for the state. The Pennsylvania Climate Change Advisory Council (CCAC) was established pursuant to Section 5 of Act 70. The CCAC consists of 21 members and reflects a diversity of viewpoints on climate change issues from the scientific, business and industry, transportation, environmental, social, outdoor, and sporting, labor and other affected communities. Eighteen of the CCAC members are appointed by either the Governor, Senate, or House. Additionally, the Secretary of the Department of Conservation and Natural Resources, the Secretary of Community and Economic Development, and the Chair of the Pennsylvania Public Utility Commission (or their designees) serve as ex officio members to the CCAC.

Act 70 required PADEP to establish a voluntary registry of GHG emissions for the state. The Climate Registry (TCR; www.theclimateregistry.org)—a non-profit organization governed by multiple U.S. states and Canadian provinces and territories—plays a role in this process by serving as the registry where Pennsylvania facilities voluntarily measure, report, and verify their carbon dioxide equivalent (CO₂e) emissions and reductions. PADEP Secretary Patrick McDonnell currently serves on the TCR Board of Directors.

Executive Order 2019-01

On January 8, 2019, Pennsylvania Governor Tom Wolf signed Executive Order 2019-01, Commonwealth Leadership in Addressing Climate Change and Promoting Energy Conservation and Sustainable Governance (www.governor.pa.gov/newsroom/executive-order-2019-01-commonwealth-leadership-in-addressing-climate-change-and-promoting-energy-conservation-and-sustainable-governance/), committing Pennsylvania to reducing its net GHG emissions by 26% by 2025 from 2005 levels and to further reduce the state's net GHG emissions by 80% by 2050. Executive Order 2019-01 also established energy consumption performance goals for Pennsylvania state's agencies, required the replacement of a subset of the state's passenger car fleet with battery electric and plug-in electric hybrid cars by 2025, and required the procurement of renewable energy to offset at least 40% of the state's annual electricity use. Executive Order 2019-01 also established the Green Government (GreenGov) Council, which consists of the Secretaries of the Departments of General Services, Environmental Protection, and Conservation and Natural Resources and others appointed by these members, to serve as a central coordinating body in implementing Executive Order 2019-01.

Pennsylvania Climate Action Plan

The fourth iteration of the Pennsylvania Climate Action Plan (www.depgreenport.state.pa.us/elibrary/GetDocument?docId=1454161&DocName=2018%20PA%20CLIMATE)

The Pennsylvania Climate Action Plan (PA Climate Action Plan) was published by PADEP in April 2019, with input and feedback from the CCAC and other stakeholders. At the same time, Governor Wolf announced Pennsylvania's membership in the U.S. Climate Alliance, which serves to implement strategies that advance the goals of the Paris Agreement, by reducing GHG emissions by at least 26–28% below 2005 levels by 2025. Accordingly, the state's net GHG emissions reduction goals from Executive Order 2019-01 are documented within the plan.

The following eight sectors are identified within the plan as being most impactful from a GHG emissions reduction perspective in Pennsylvania:

1. Energy Consumption
2. Energy Production
3. Agriculture
4. Ecosystems and Forestry
5. Outdoor Recreation and Tourism
6. Waste Management
7. Water Resources
8. Human Health

Each sector is expanded upon within the plan in terms of its relevance within Pennsylvania, its vulnerabilities with respect to climate change, and the opportunities the sector must adapt and reduce emissions by adopting one or more of the stated strategies (see "PA Climate Strategies" below).

The PA climate plan expands upon the sector-specific actions that citizens and businesses can take, respectively, to support each of the listed strategies, discusses the associated benefits

and costs of doing so, and makes distinctions between industry-specific recommended actions when applicable. The cost-effectiveness of each strategy is categorized in terms of net present value, cost per ton of CO₂e, and relevant macroeconomic factors (i.e., the impacts on employment, gross state product, and personal disposable income for commonwealth residents). The published proportions of GHG emissions contributed per sector were determined by PADEP according to the U.S. Environmental Protection Agency's Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2017 (www.epa.gov/sites/production/files/2020-04/documents/us-ghg-inventory-2020-main-text.pdf) (published 2019), which is in turn informed by data reported by individual facilities under 40 CFR Part 98 (the Mandatory GHG Reporting Rule).

Leadership opportunities exist for all businesses within the state to support PA's emissions reduction goals and adopt strategies and actions recommended for their sector within the Pennsylvania Climate Action Plan. The projects that achieve GHG emissions reduction goals often have the added benefit of positive financial return through the generation of CO₂e offsets.

Executive Order 2019-07

On October 3, 2019, Governor Tom Wolf continued to build upon Pennsylvania's evolving climate goals by signing Executive Order 2019-07- Commonwealth Leadership in Addressing Climate Change through Electric Sector Emissions Reductions (www.governor.pa.gov/newsroom/executive-order-2019-07-commonwealth-leadership-in-addressing-climate-change-through-electric-sector-emissions-reductions/). Executive Order 2019-07 requires that by no later July 31, 2020, a rulemaking package be presented to

PA Climate Strategies

- Increase end use energy conservation and efficiency.
- Implement sustainable transportation planning and practices.
- Develop, promote, and use financing options to encourage energy efficiency.
- Increase use of clean, distributed electricity generation resources.
- Create a diverse portfolio of clean, utility-scale electricity generation.
- Reduce impacts of fossil fuel energy production and distribution.
- Increase production and use of alternative fuel.
- Use agricultural best practices.
- Provide resources and technical assistance to farmers to adapt.
- Protect ecosystem resilience, including forest systems where species will shift.
- Monitor, identify, and address ecosystem vulnerabilities.
- Help the outdoor tourism industry manage shifting climate patterns.
- Reduce and use waste sent to landfills.
- Use stormwater best management practices.
- Promote integrated water resources management and water conservation.
- Improve reliability and accessibility of public information about climate-related health risks.
- Bolster emergency preparedness and response.
- Lead by example in commonwealth and local government practices and assets.
- Incorporate historical and projected climate conditions into siting and design decisions for long-term infrastructure.

the Pennsylvania Environmental Quality Board (EQB) that establishes a CO₂ budget for Pennsylvania fossil-fuel-fired electric power generators, that is at least as stringent as the budget established in other states participating in the Regional Greenhouse Gas Initiative (RGGI), and requires the PADEP and PUC to engage with PJM Interconnection (a regional transmission organization) to promote integration of the program in a manner that preserves orderly and competitive economic dispatch within PJM, while minimizing emissions leakage.

A preliminary draft ([http://files.dep.state.pa.us/Air/AirQuality/AQPortalFiles/Advisory Committees/Air Quality Technical Advisory Committee/2020/2-13-20/Draft PRN CO₂ Budget Trading Annex A 1-30-20.pdf](http://files.dep.state.pa.us/Air/AirQuality/AQPortalFiles/Advisory%20Committees/Air%20Quality%20Technical%20Advisory%20Committee/2020/2-13-20/Draft%20PRN%20CO2%20Budget%20Trading%20Annex%20A%201-30-20.pdf)) of the proposed CO₂ Budget Trading Program became initially available for review on February 13, 2020. The preliminary draft rule (if finalized as proposed) would apply to 49 fossil-fuel power plants, 10 waste coal plants in Pennsylvania, and could also apply to any facility (including, but not limited to, an EGU) that is fossil fuel-fired, has a minimum nameplate capacity of 25 megawatt (MW), and transmits power to the grid. Included in the draft are proposed waste coal set asides unique to Pennsylvania and intended to protect the state's unique waste coal industry. However, the draft provisions relating to waste coal set asides are already undergoing scrutiny due to questions over the environmental benefits of waste coal fuel, and the concern that the allowance market could eventually be flooded—and allowances devalued—should waste coal emission rates decrease.

The state's emissions budget was not included in the February 13 draft, but instead presented by PADEP during a special April 23, 2020 meeting with the Air Quality Technical Advisory Committee and the Citizen's Advisory Council. On May 7, 2020, neither the Air Quality Technical Advisory Committee or the Citizen's Advisory Council voted in favor of PADEP taking the rule to the EQB for formal rulemaking, with concern expressed that projected modeling shows future leakage despite Pennsylvania's history of proactively preventing leakage for other states, no change in the proportion of renewables within Pennsylvania's future generation portfolio, with minimal decreases in GHG emissions that some speculate would happen with or without the proposed rule in place. Despite the May 7, 2020, voting results, it is still anticipated that the formal proposed draft will be presented by PADEP to EQB by July 31, 2020. If the proposed rule is finalized as proposed, the fossil fuel-fired power sector would be the first sector within Pennsylvania to be subject to a regulated carbon market.

Conclusion

Pennsylvania serves as an important example to those energy producing states that may be less proactive in promoting clean energy generation, reducing energy consumption, and defining phased GHG reduction goals. Pennsylvania has demonstrated over time that it can implement innovative climate policy that does not strictly regulate but also empowers the private sector to in turn demonstrate climate leadership, while still retaining its position as a powerful energy producing state. **em**

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