



Policy Office

Pennsylvania Climate Action Plan & Climate Initiatives

November 1st, 2019

Tom Wolf, Governor

Patrick McDonnell, Secretary

DEP's Climate Program

DEP's Act 70, Climate Change Act Requirements:

- Develop a climate impacts assessment
- Prepare and update a climate action plan
- Develop an inventory of greenhouse gases (GHGs) (updated annually)
- Set up a voluntary registry of GHG emissions
- Administer a climate change advisory committee

Pennsylvania Climate Impacts

Climate Impacts Assessment:

- As part of the Climate Change Act, DEP works with PSU to complete an Impacts Assessment every three years.
- The last report was published in 2015 and found significant impacts across many sectors in Pennsylvania such as energy, outdoor recreation, agriculture, forests, water, and human health.

Pennsylvania Climate Impacts – Human Health

- Persons with low resources and/or poor access to health care are particularly vulnerable to the health impacts of climate change.
- The overall warming trend will increase heat-related deaths but will decrease cold-related deaths in Pennsylvania.
- Climate change could impact air quality, by increasing ground-level ozone, small airborne particulates, and pollen and mold concentrations.
- Higher plant growth, more pollen produced by each plant, increased allergenicity of the pollen grains, and a longer pollen season can also be expected.
- Water quality will also pose threats to human health, through increased water-borne pathogens and increased occurrence of harmful algal blooms.
- Flooding from tropical storms and hurricanes also pose a threat to human health.

Climate Action Plan

DEP recently published a Plan to help combat climate change and adapt to its impacts.

Goals of the Action Plan:

- Minimize disruptions to Pennsylvania's citizens, economy, and environment from climate-related hazards.
- Increase Pennsylvania's ability to prepare for and adapt to changing conditions and respond to and recover from climate-related disruptions.
- Maintain cost-effectiveness.

2018 Climate Action Plan

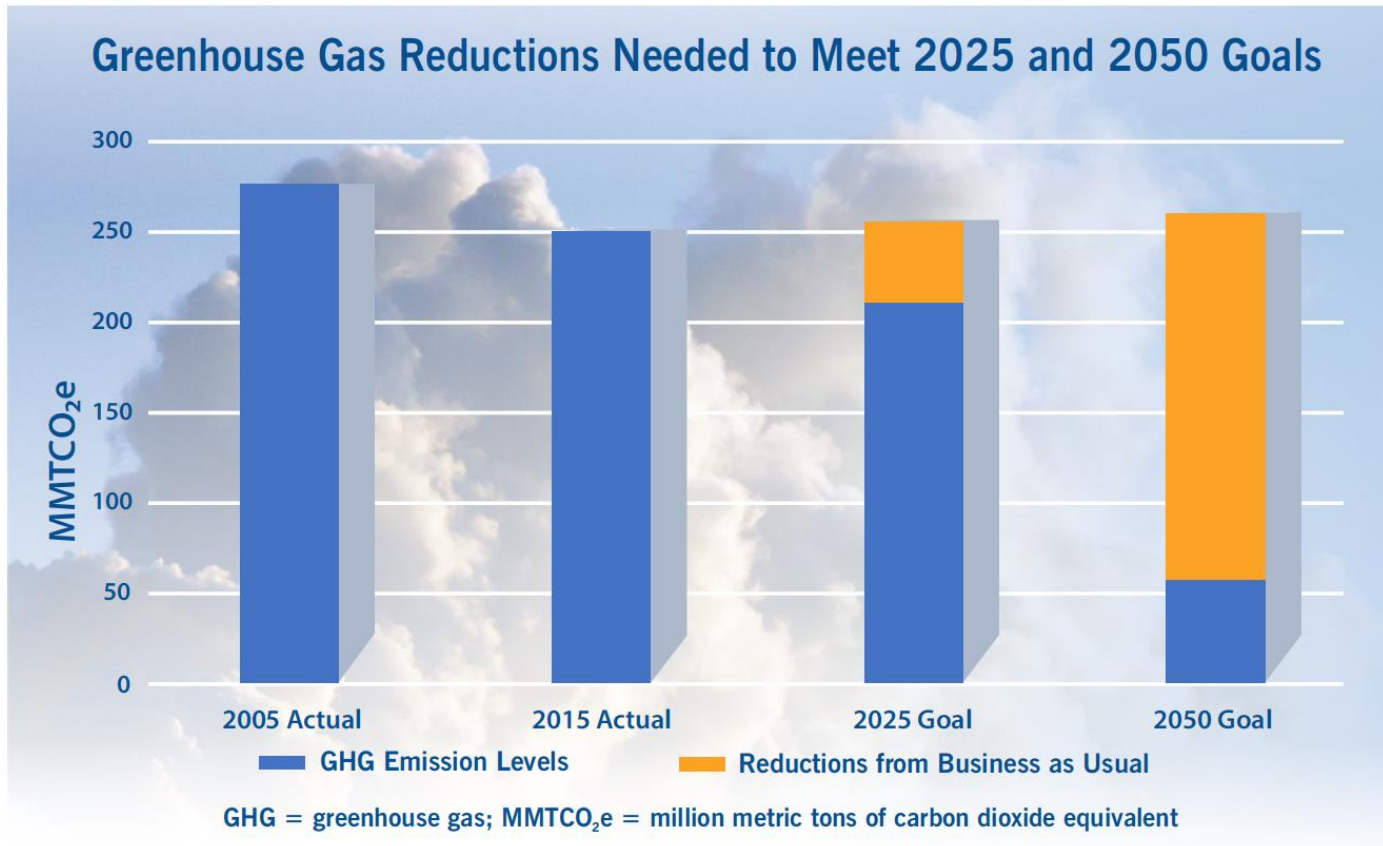
PA Leaders, Citizens, & Businesses Should:

- Consider how PA's climate may change in the future.
- Understand the impacts from those changes.
- Take action to adapt to those changes & reduce GHG emissions.

Plan Includes Mitigation Targets:

- 26 percent reduction of net GHG emissions by 2025, from 2005 levels
- 80 percent reduction of net GHG emissions by 2050, from 2005 levels

Plan Targets



Mitigation Targets:

- 26 percent reduction of net GHG emissions by 2025, from 2005 levels
- 80 percent reduction of net GHG emissions by 2050, from 2005 levels

Strategies and Actions

Summary of Strategies:

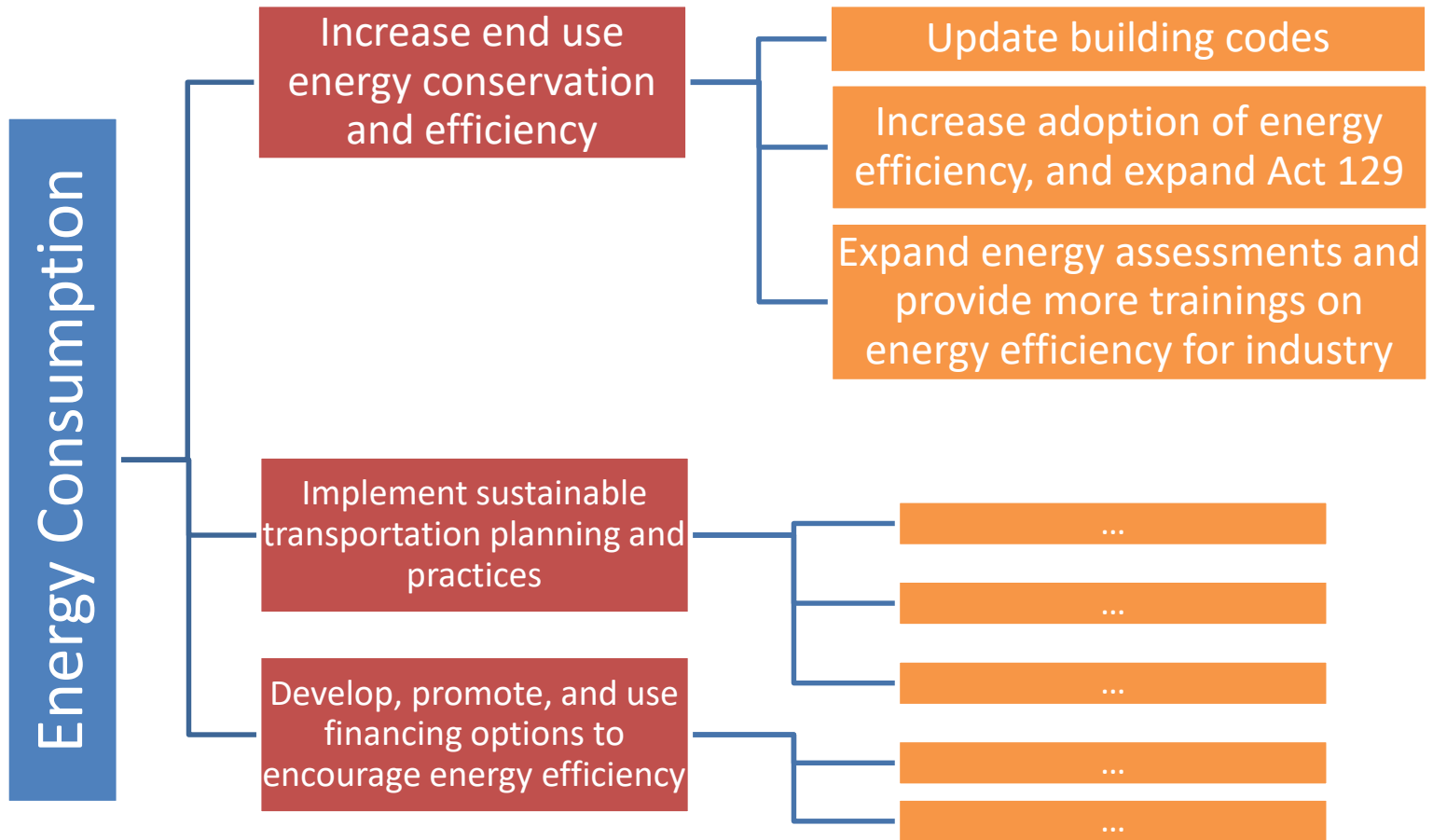
- 8 Sectors
- 19 Strategies
- Over 100 Leadership Actions
- 15 Quantitatively Analyzed Actions
- Additional Actions for Citizens and Businesses

Climate Action Plan Breakdown

8 Sectors

19 Strategies

> 100 Actions



Sectors

Energy
Consumption

Energy
Production

Agriculture

Ecosystems
& Forestry

Outdoor Rec.
& Tourism

Waste
Management

Water
Resources

Human
Health



pennsylvania

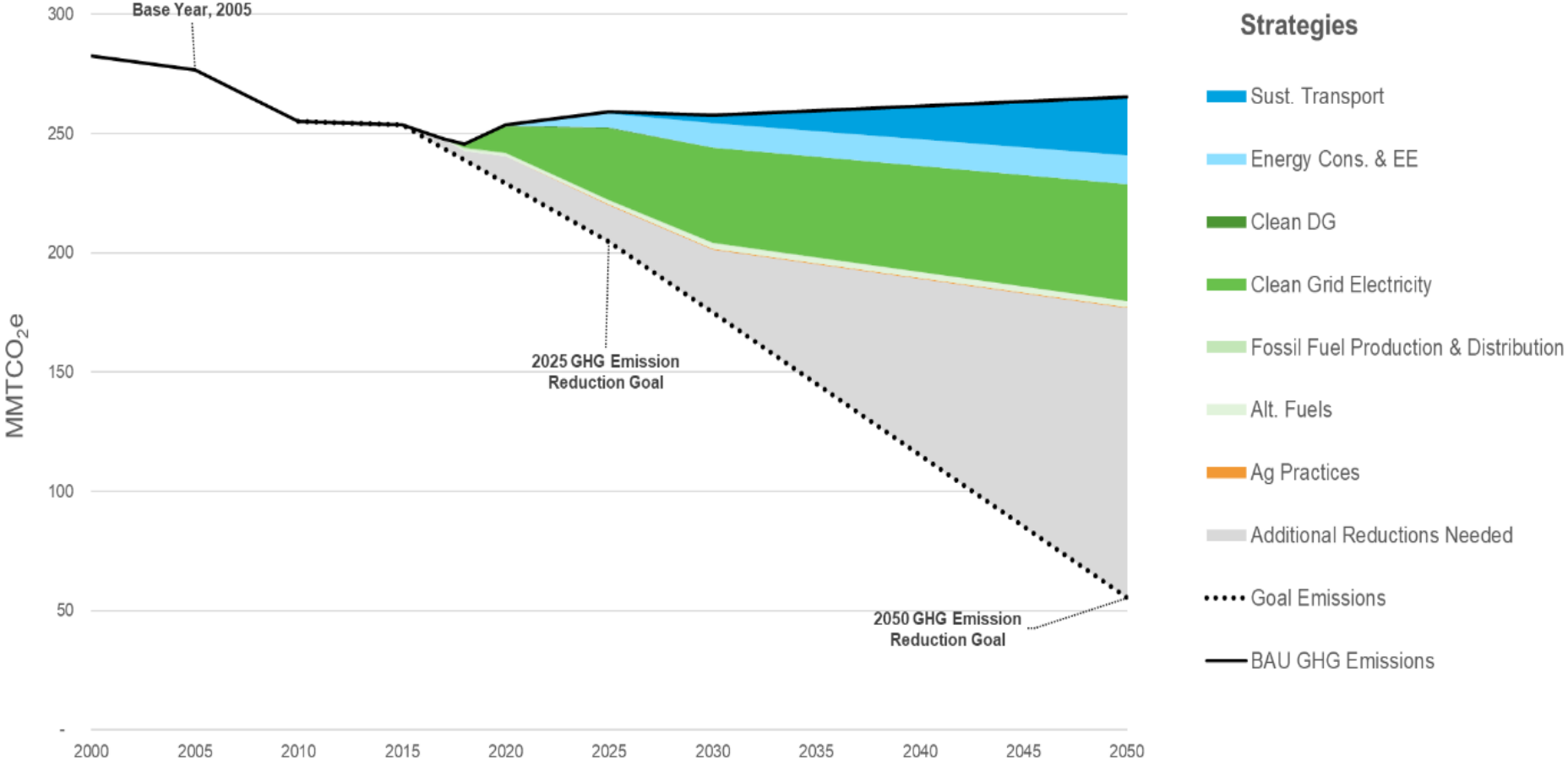
DEPARTMENT OF ENVIRONMENTAL
PROTECTION

19 Strategies – Many Relate to Equity

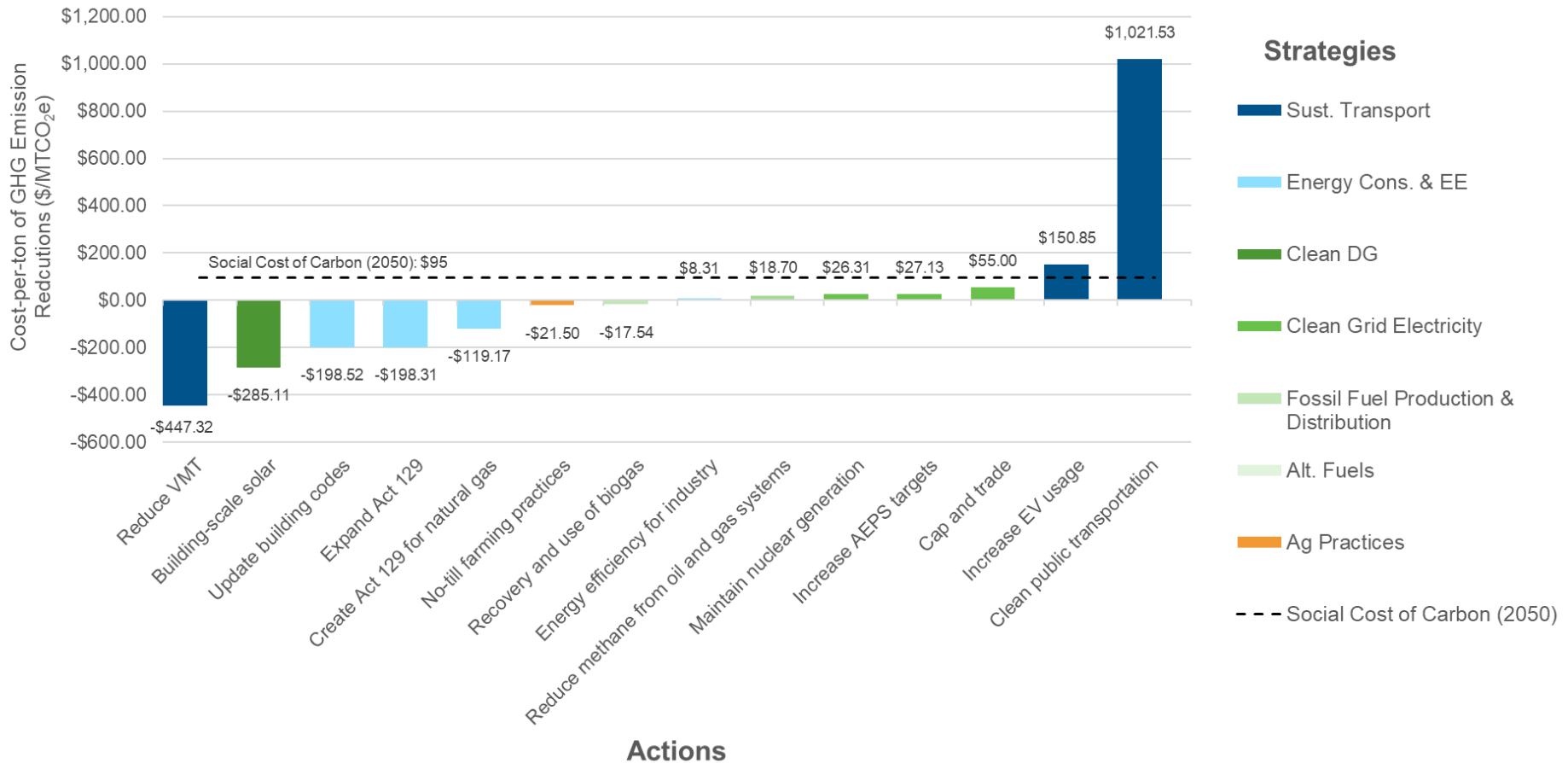
- 1. Increase end use energy conservation & efficiency**
- 2. Implement sustainable transportation planning & practices**
- 3. Develop, promote, & use financing options to encourage energy efficiency**
- 4. Increase use of clean, distributed electricity generation resources**
- Create a diverse portfolio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

15 Modeled Actions

The Team modeled just 15 actions, out of 100, and found that GHG emissions would be reduced 21% by 2025, and 36% by 2050. Additional strategies and actions qualitatively addressed in this report would likely result in additional GHG reductions.

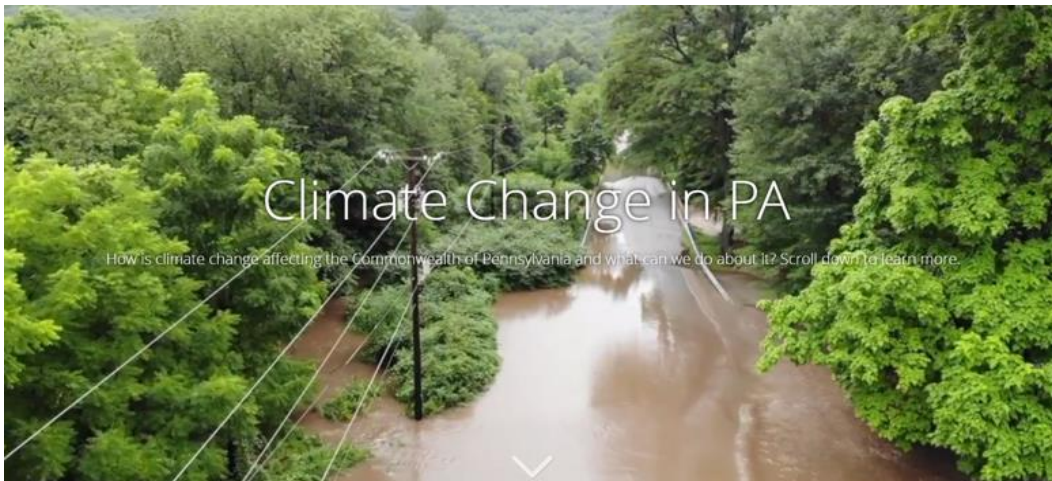


Cost Effectiveness



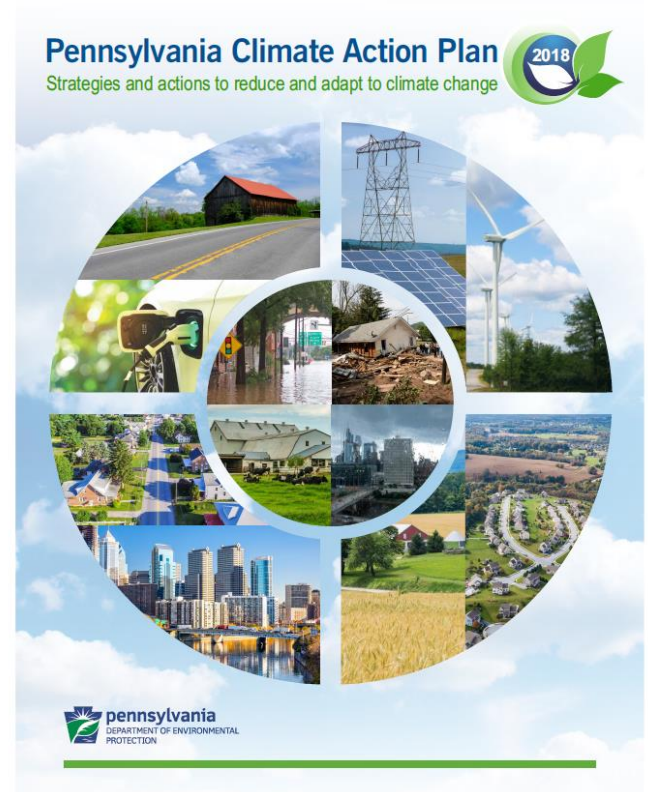
A social cost of carbon (the cost of damages of one ton of carbon emissions) of \$95 is used as the benchmark for cost-effectiveness. Anything below the benchmark (dotted line) is cost-effective, based on this perspective.

Communicating Climate change



Climate Change Story Map

www.dep.pa.gov/climate



Climate Action Plan
Booklet

Expanding Local Climate Action

DEP is supporting local climate action by partnering local governments with college students to produce a GHG inventory and Climate Action Plan for each municipality.

How it works:

- DEP hired ICLEI Local Governments for Sustainability as contractor to assist with inventory and plans
- College student matched with local government
- ICLEI trains student on inventory tool (fall semester) and climate action planning (spring semester)
- Final product: 20 GHG inventories & 20 local climate action plans
- First training webinar in early September & final work completed by June 30, 2020

Participating Local Governments

- Caln Township
- Narberth Borough
- Jermyn Borough
- Carlisle Borough
- Derry Township
- Armstrong Township
- Bellefonte Borough
- Indiana Borough
- Millvale Borough
- Etna Borough
- Sharpsburg Borough
- West Homestead Borough
- Borough of Munhall
- Elizabeth Township
- Borough of Forest Hills
- City of Reading
- City of York
- Chester County
- Erie County
- Centre Region Council of Governments

Participating Universities:

Drexel University
Temple University
Wilkes University
Millersville University
Lebanon Valley College
Dickinson College
Shippensburg University
Penn State (mult. Campuses)
Susquehanna University
University of Pittsburgh
Allegheny College

Public Engagement – Next Steps

Looking forward, DEP is working within its Environmental Justice Office and along with the Department of Education to strategically engage with the public, businesses, universities, and local governments about the 2018 Climate Action Plan and how to best get input on the next climate action plan.

Regional Greenhouse Gas Initiative

On October 3, Governor Wolf Announced Pennsylvania would join RGGI, a multi-state cap-and-invest program that has shown to be good for businesses, good for consumers, and good for the environment.



MARC LEVY / AP

Regional Greenhouse Gas Initiative

RGGI is an efficient way to make companies accountable for their pollution instead putting the burden on taxpayers and Pennsylvanian residents.

DEP's initial research suggests that the cost to Pennsylvania consumers will be very small, roughly 1% for a typical residential customer.

Climate change is increasing ground-level ozone, small airborne particulates, and pollen and mold concentrations – causing respiratory issues and aggravating asthma – and lengthening allergy season which increases healthcare costs for all.

RGGI-driven reductions in pollutant emissions have resulted in over \$5.7 billion in health and productivity benefits.

Regional Greenhouse Gas Initiative

- DEP was directed to draft and present a regulation to the Environmental Quality Board by July 31, 2020. This rulemaking will follow the process set out in the Regulatory Review Act.
- It will include an opportunity for the public to weigh in.
- Pennsylvania's Air Pollution Control Act gives the Environmental Quality Board (EQB) broad authority to promulgate regulations to address air pollution including greenhouse gasses which are found to be "inimical to the public health, safety, or welfare."



Policy Office

Thank you!

Jessica Shirley

Policy Director

Policy Office

DEP Website: www.dep.pa.gov