



Energy Programs Office

2023 Potomac River Conference

Session 4: Government Innovation

September 21, 2023

Josh Shapiro, Governor

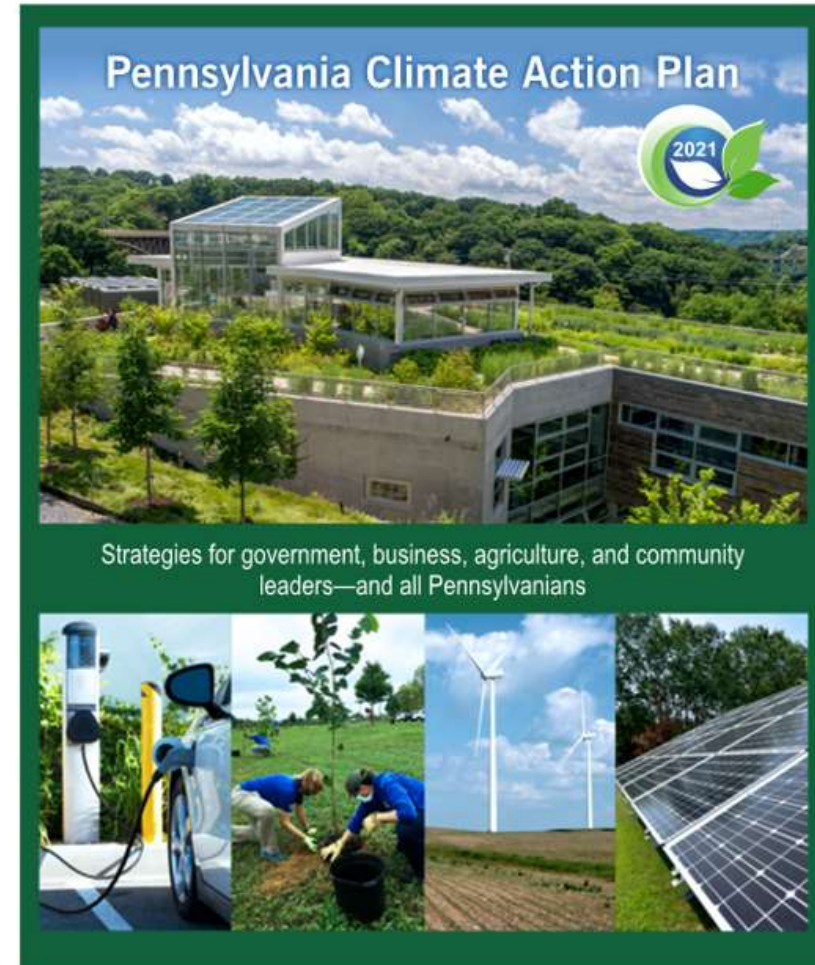
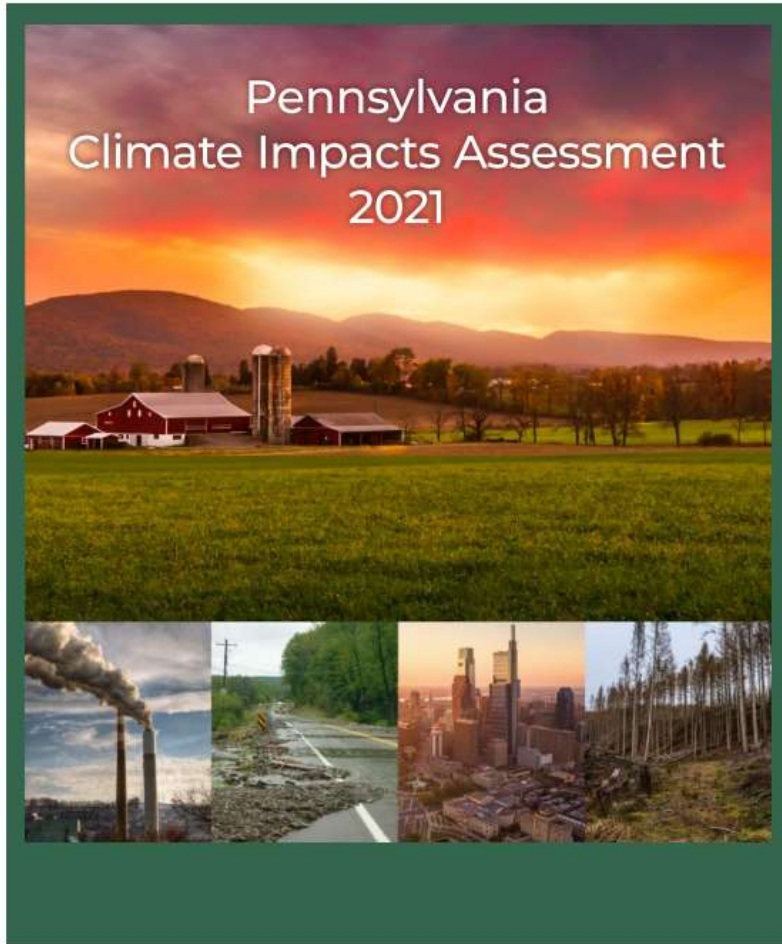
Rich Negrin, Secretary

DEP Climate Program

Pennsylvania Climate Change Act (Act 70 of 2008) Requires DEP to:

- Develop a [climate impacts assessment](#) (3 yrs.)
- Prepare and update a [climate action plan](#) (3 yrs.)
- Develop an [inventory of greenhouse gases](#) (GHGs) (update annually)
- Administer a [climate change advisory committee](#) (CCAC) (bimonthly)
- Set up a voluntary registry of GHG emissions ([TCR](#))

2021 Climate Impacts Assessment and Action Plan



PROTECTION



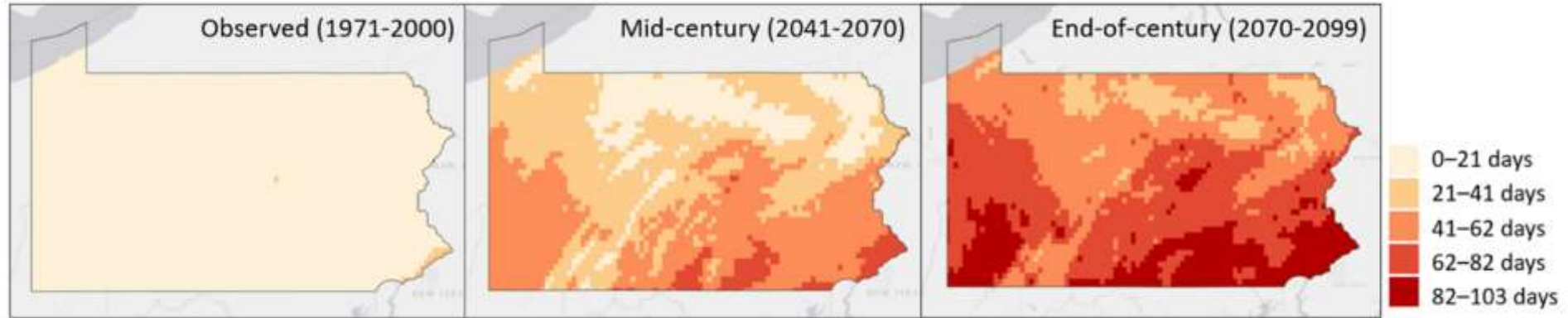
Impacts Assessment – Climate Projections

Climate Projections - PA is getting warmer and wetter.

- Over past 110 years, temperatures in PA increased by more than 1.8°F and are expected to increase by an additional 5.9°F by 2050
- Cities are expected to see increased frequency of 100+ degree days
- Annual precipitation in PA has increased by 10% since early 20th century and is expected to increase by another 8% by 2050, with a winter increase of 14%

Impacts Assessment – Climate Projections

Average Annual Number of Days with Temperatures >90°F

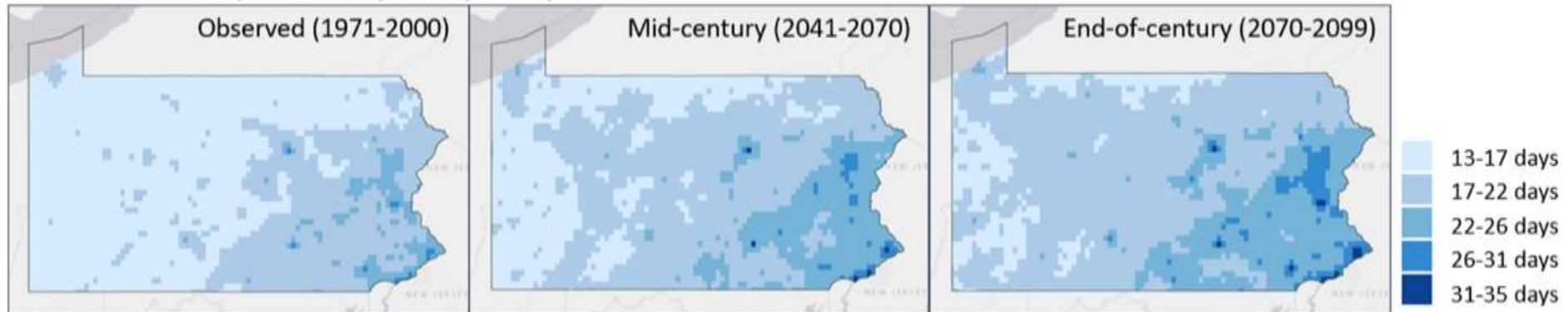


Baseline: 5 days

Mid-century: 37 days

End-of-century: 66 days

Number of Days with Very Heavy Precipitation



Baseline: 12.4 days

Mid-century: 15.4 days

End-of-century: 16.8 days

2050 Risk Assessment Results

Consequence Category → Hazard	Human health	Environmental justice and equity	Agriculture	Recreation and tourism	Energy and other economic activity	Forests, ecosystems, and wildlife	Built infrastructure	Overall Risk Rating
Increasing average temperatures	12	12	8	12	8	16	4	10.7
Heavy precipitation and inland flooding	12	8	12	8	8	8	12	9.9
Heat waves	16	12	8	4	8	4	8	9.3
Landslides	3	6	3	3	6	3	12	5.6
Sea level rise	3	3	3	3	6	6	12	5.6
Severe tropical and extra-tropical cyclones	6	4	6	4	4	4	8	5.3

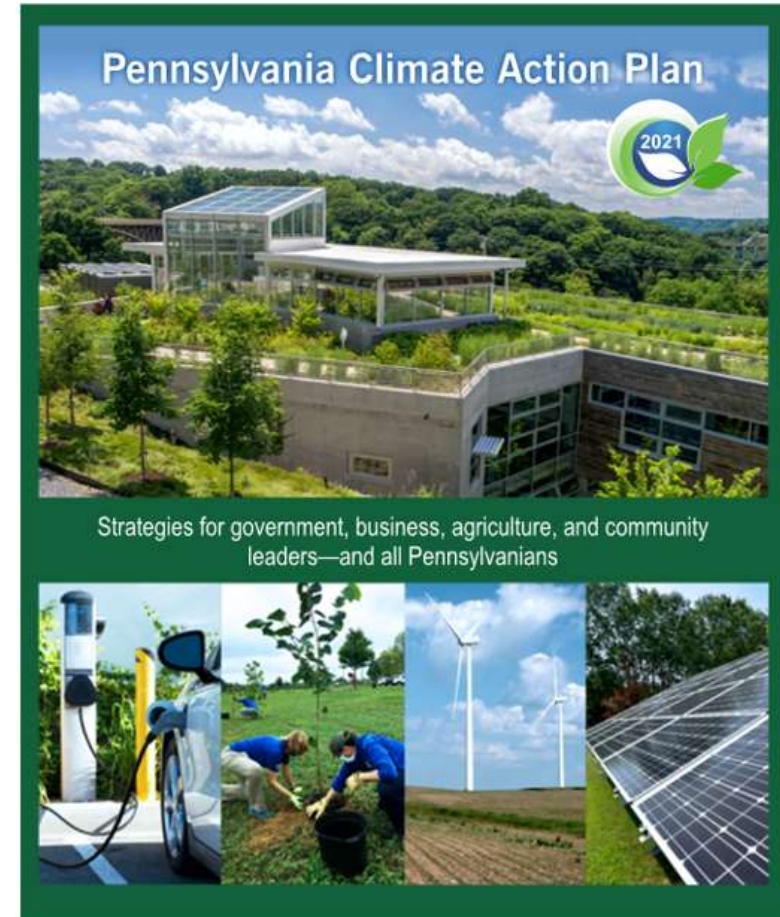
Risk Assessment Key Findings

- **Flooding is currently the highest-risk hazard** facing Pennsylvania, and flood risks are projected to increase; at the same time, risks from **increasing average temperatures and heat waves** could rise to be as high as flooding is today by mid-century
 - Flooding from heavy rain events affects built infrastructure, human health, and agriculture, with ripple effects throughout the economy
 - Increasing average temperatures could affect nearly every aspect of life
- **Heat waves will become increasingly common** and will create particular health and economic risks for vulnerable populations
- **All hazards could affect public health negatively**—especially heat waves, increasing temperatures, and flooding
- **Climate change will not affect all Pennsylvanians equally.** Some may be more at risk because of their location (and inability to relocate), income, housing, health, or other factors

Pennsylvania Climate Action Plan 2021

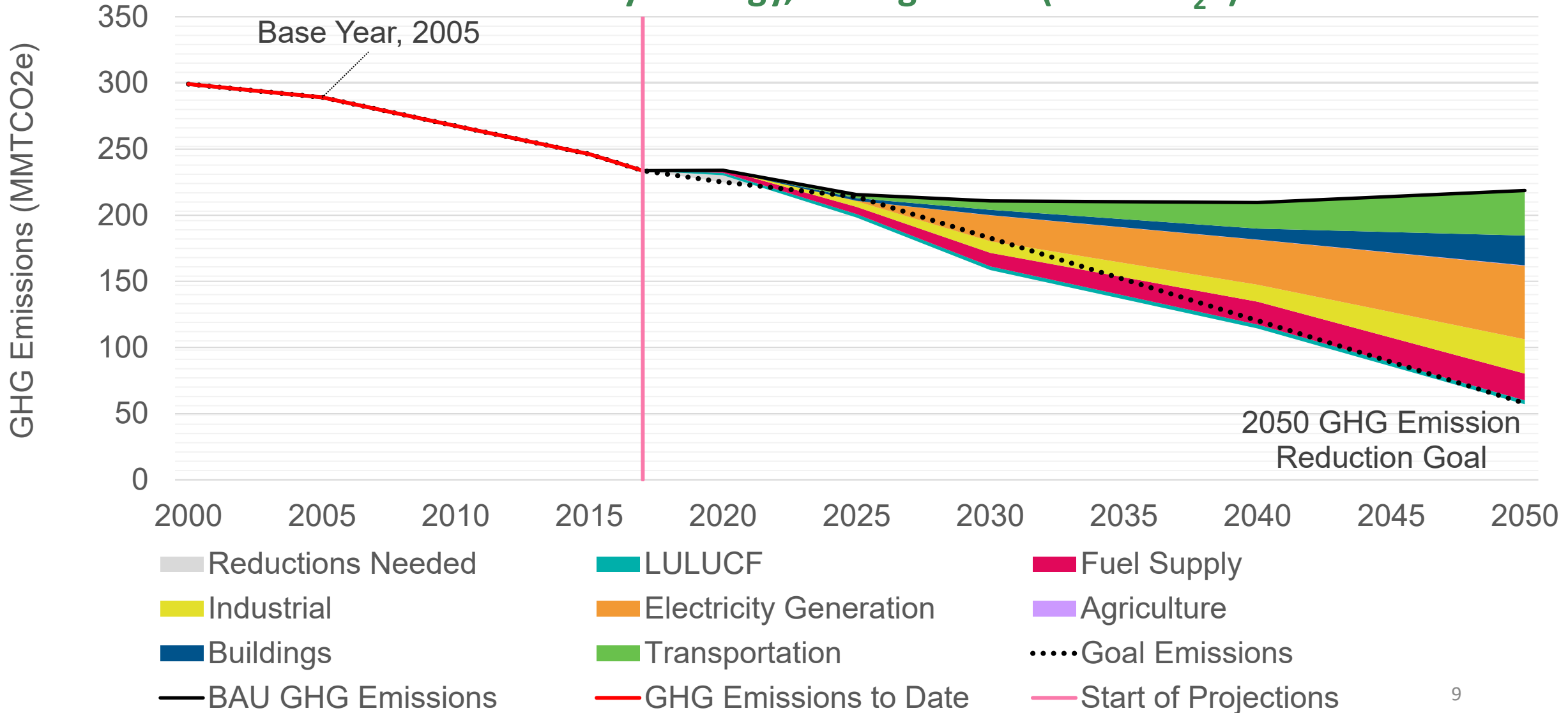
Purpose of this Report:

- Updated Business-As-Usual Emissions Scenario Projections
- Outlines a pathway to reaching PA's GHG reduction goals: 26% by 2025 and 80% by 2050 from 2005 levels
- Quantifies GHG reduction and economic costs/benefits of climate action
- Includes discussion on the role of “enabling technologies” in meeting PA's GHG reduction goals
- Priority adaptation actions directly informed by the Pennsylvania Climate Impacts Assessment 2021
- Focus on equity throughout



2021 Pennsylvania Climate Action Plan – Business As Usual

GHG reductions by strategy, through 2050 (MMTCO₂e)



2021 Adaptation Planning – Climate Action Plan

1. Impacts of Increasing Average Temperatures and Heat Waves on Health

2. Impacts of Flooding and Storms on Health

3. Impacts of Increasing Average Temperatures on Environmental Justice and Equity

4. Impacts of Flooding on Environmental Justice and Equity

5. Impacts of Increasing Average Temperatures on Forests, Ecosystems, and Wildlife

6. Impacts of a Warmer and Wetter Climate on Agriculture

7. Impacts of Increasing Average Temperatures on Recreation and Tourism

8. Impacts of a Changing Climate on Built Infrastructure

9. Impacts of Landslides on Built Infrastructure

2024 Climate Impacts Assessment and Action Plan

Project Approach and Scope

Fundamental Updates

Drawing from new baseline and other information

Expanding and Deepening Selected Elements

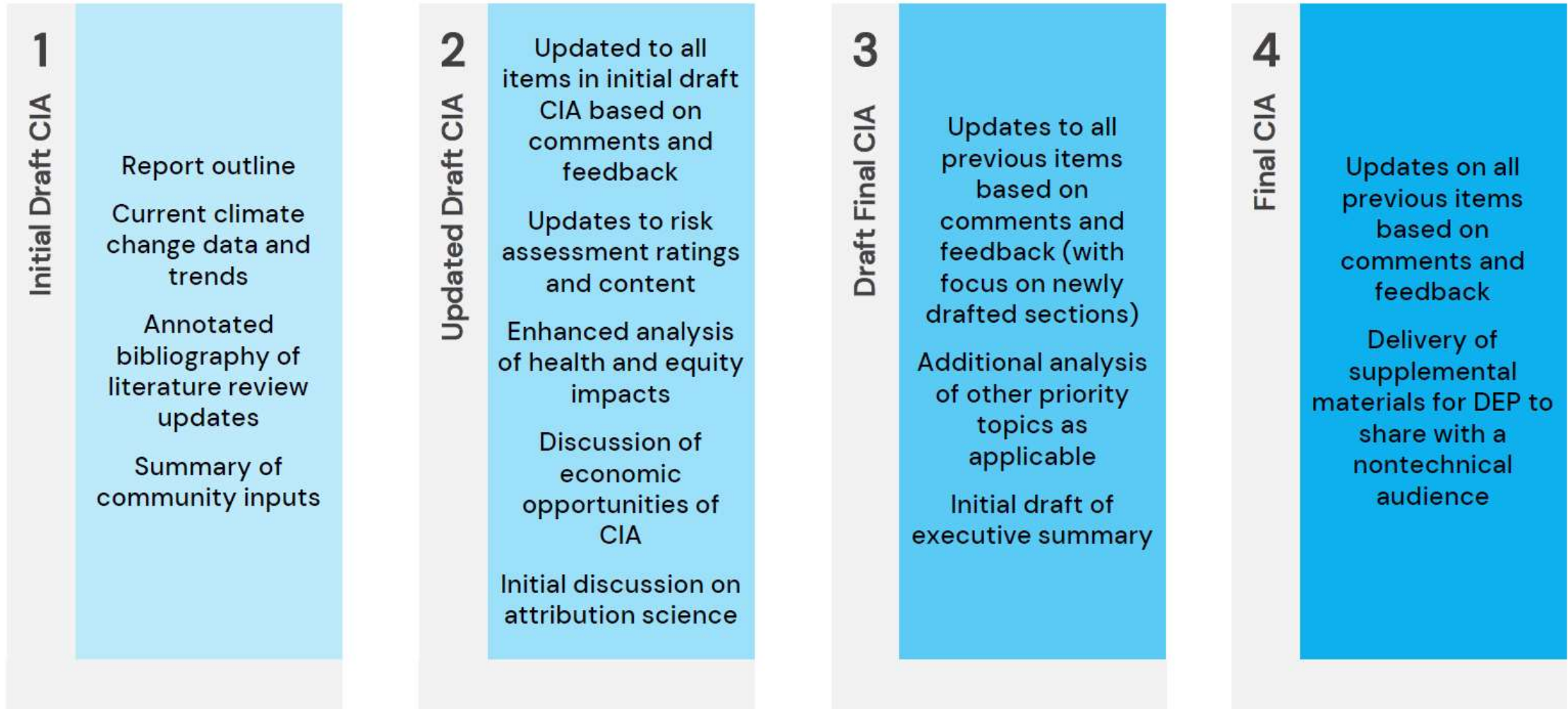
Emerging Policy
Technology
Market Developments
Impacts to Environmental Justice
Communities

Task	2023						2024					
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Kickoff	●											
Climate Impact Assessment (CIA)		Initial Draft CIA ●		Updated Draft CIA ●		Draft Final CIA ●		Final CIA ●				
Climate Action Plan (CAP)			Initial Draft CAP ●			Updated Draft CAP ●		Draft Final CAP ●				Final CAP ●
Climate Change Advisory Committee (CCAC) Coordination		●		●		●		●		●		●

A report that is **shaped**, **populated**, and **refined** throughout the process

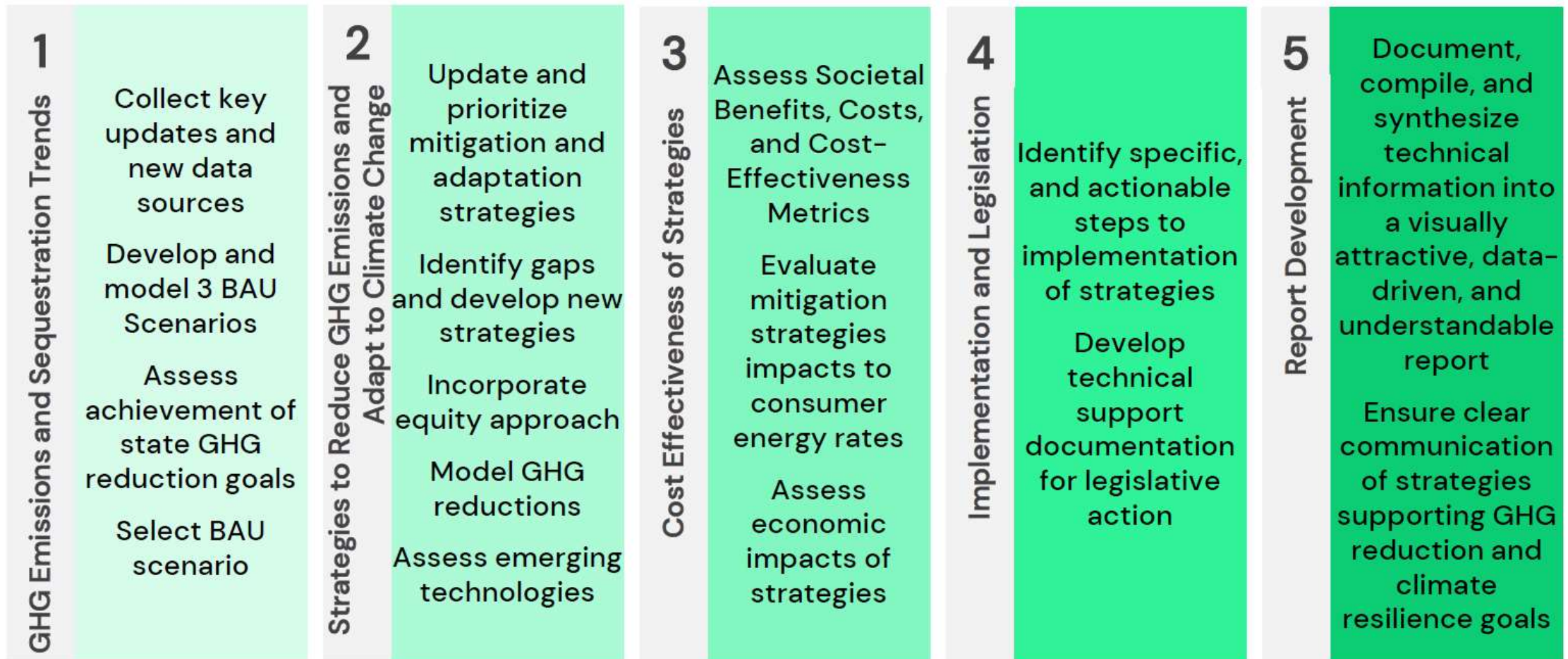
2024 Climate Impacts Assessment and Action Plan

2024 CIA Process



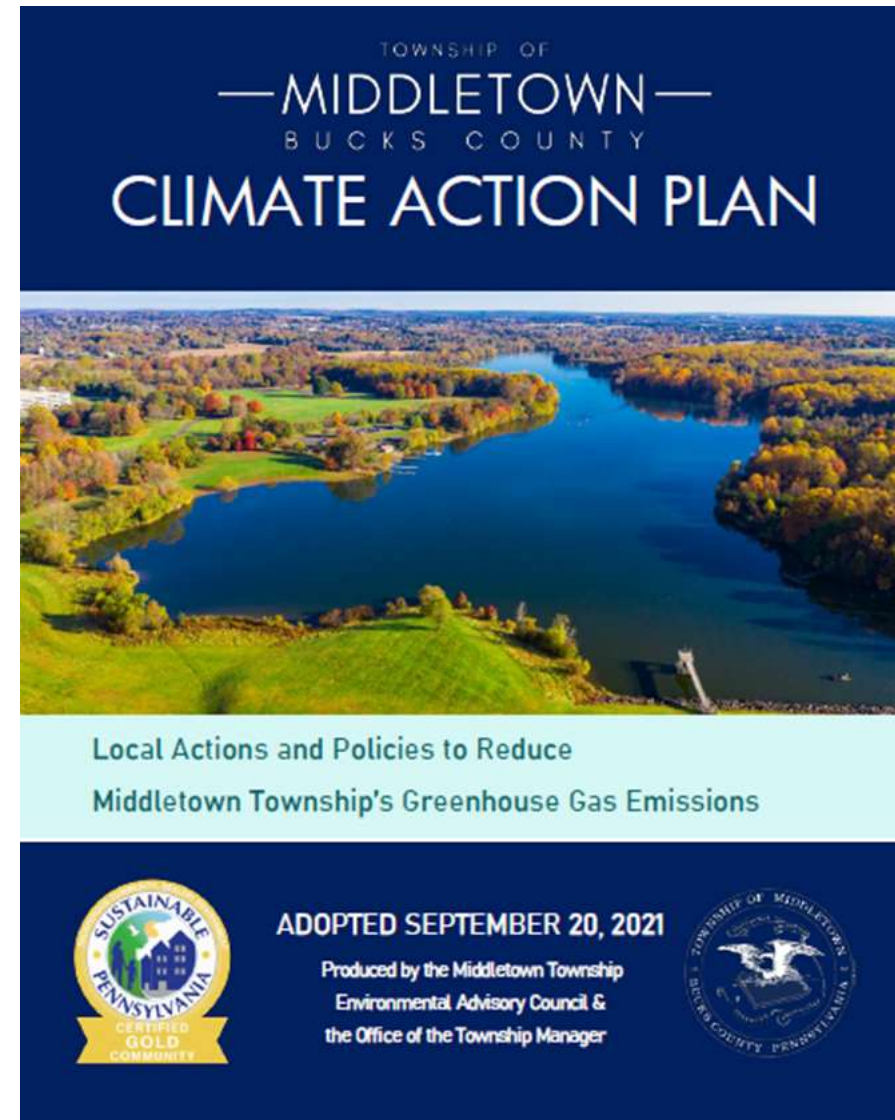
2024 Climate Impacts Assessment and Action Plan

2024 CAP Process



PA's Ongoing Energy and Climate Efforts

- **Local Climate Action Program** – allows local governments and college students to work together to develop GHG inventories and climate action plans.
- **Shared Energy Manager Program** – The SEM supported those local governments in implementing many of the energy-related strategies from their CAPs, such as energy benchmarking, energy audits, solar PV feasibility assessments, development of energy management plans, and alternative fuel evaluations for fleet vehicles.





pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION



Energy Programs Office

Thank you!

Megan Porta

Energy Program Specialist

PA DEP, Energy Programs Office

meporta@pa.gov

RA-EPCLIMATE@pa.gov

DEP Climate Website: www.dep.pa.gov/climate

DEP Website: www.dep.pa.gov