



pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION



Energy Programs Office

Climate Change Advisory Committee Meeting

February 20, 2024

Josh Shapiro, Governor

Jessica Shirley, Interim Acting Secretary

Agenda

- **Introduction**
- Approval of December Minutes
- Presentation/Discussion – 2024 Climate Impacts Assessment and Climate Action Plan
- Public Comment
- Break
- Presentation/Discussion – 2023 GHG Inventory Report Update
- Presentation/Discussion – PA Climate Network
- DEP Updates
- Next Meeting
- New Business

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2024 Climate Impacts Assessment and Climate Action Plan

Public Comment (15 min)

Break

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Final 2023 Pennsylvania Greenhouse Gas Inventory Report (2020 Data Year)

GHG Emissions Inventory

We recently completed a project with ICF to identify ways to improve our inventory methodology and incorporate new data sources

Key Updates:

- Transition from AR4 Global Warming Potential (GWPs) to AR5 GWPs
- New data sources from U.S. Inventory of Greenhouse Gas Emissions and Sinks
- Updates to SIT Modules from EPA June 2023 release

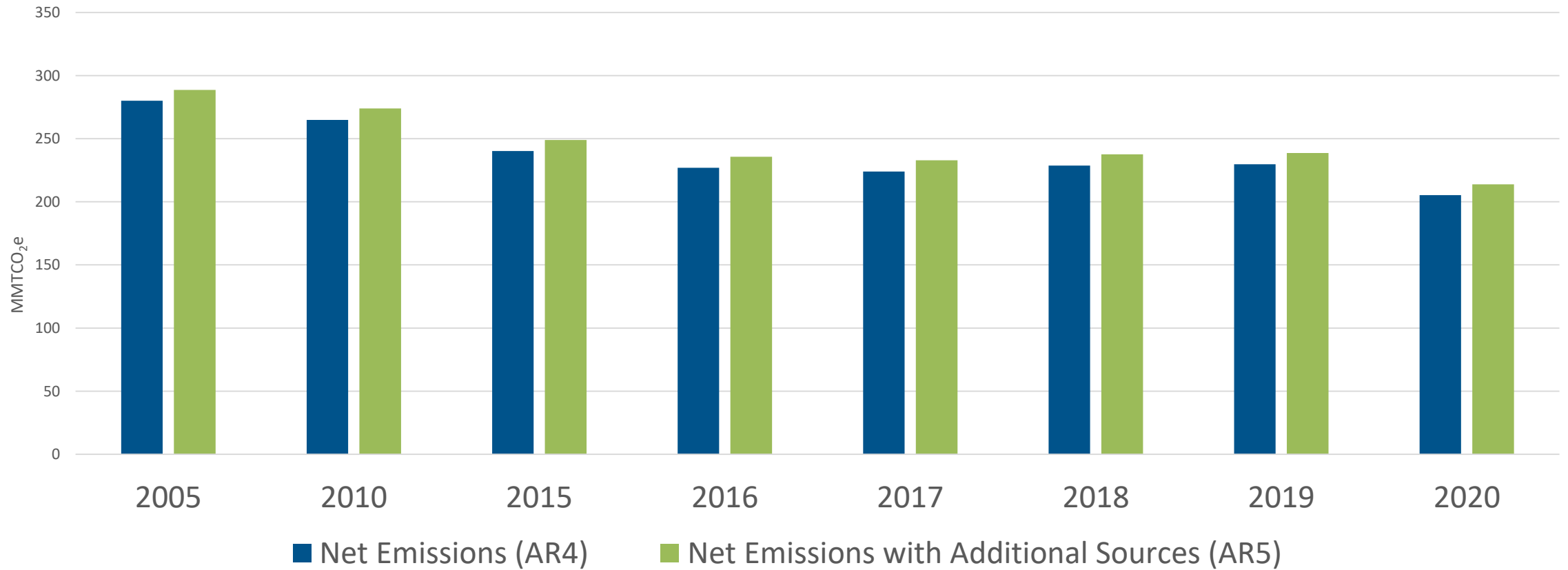
GHG Emissions Inventory

New Data Sources:

- *Natural Gas and Oil Sector:* abandoned oil and gas wells
- *Forestry and Land Uses:* carbon stocks from Land Converted to Settlements, Wetlands Remaining Wetlands, Land Converted to Wetlands
- *Industrial Processes:* ferroalloy production, zinc production, carbon dioxide consumption, N₂O from product uses, glass production, lead production, carbide production and consumption
- *Solid Waste:* composting and anaerobic digestion at biogas facilities
- *Agriculture:* histosols

GHG Emissions Inventory

Net Emissions Comparison Between Original Report and Updated Report



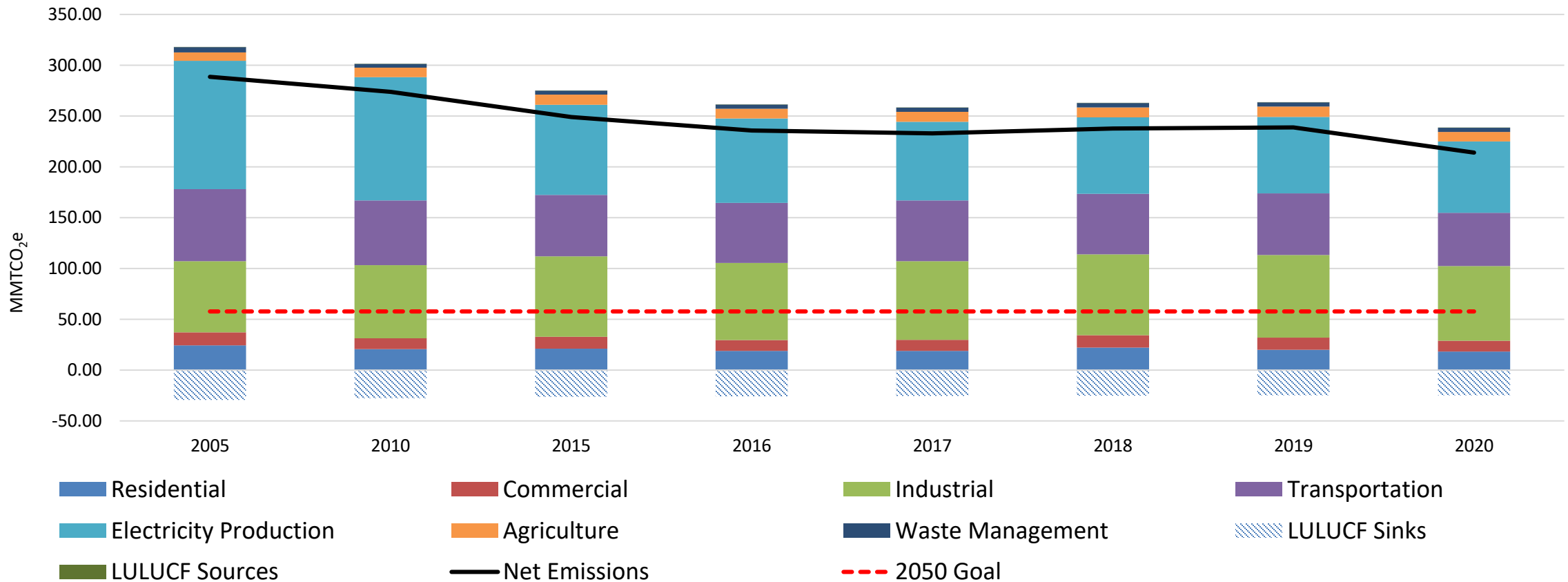
GHG Emissions Inventory

Overall Key Findings:

- In 2020, net emissions decreased by **10.4% from 2019 levels**. Gross GHG emissions were **238.74 million metric tons of carbon dioxide equivalent (MMTCO₂e)** and net GHG emissions in **2020 were 213.94 MMTCO₂e**.
- Statewide net emissions **decreased 25.9% from 2005 baseline**. While Pennsylvania is on track to achieve the 26% by 2025 GHG emissions reduction goal, this achievement is likely fleeting and not durable, as the temporary impacts from the COVID-19 pandemic on the economy appear to be a main driver of the decrease.
- The sectors with the **largest contribution** to the Commonwealth's GHG emissions are **the industrial, electricity production, and transportation sectors accounting for 82%** of all gross GHG emissions in 2020.

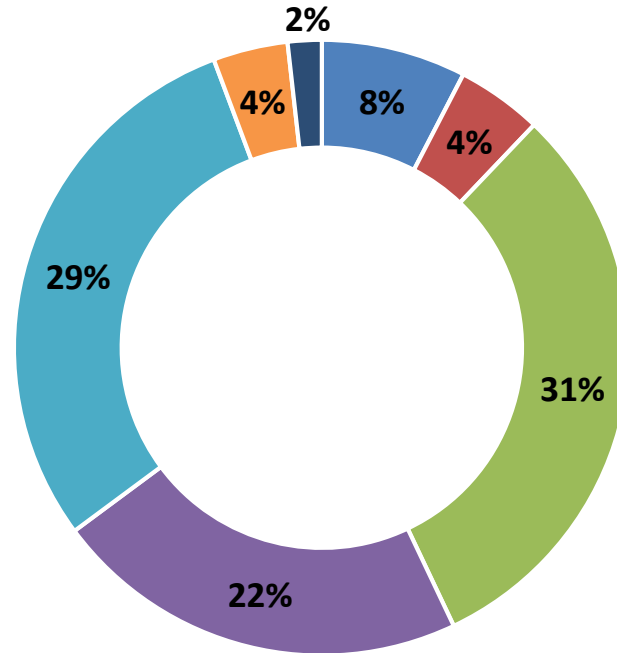
GHG Emissions Inventory

GHG Emissions by Sector (MMTCO₂e)



GHG Emissions Inventory

% of GHG Emissions by Sector (MMTCO₂e)



■ Residential ■ Commercial ■ Industrial ■ Transportation ■ Electricity Production ■ Agriculture ■ Waste Management

GHG Emissions Inventory

Summary of Key Emissions Trends

	2020 Emissions	% Change from 2019		% Change from 2005	
Residential	18.14	↓	-8.9%	↓	-25.2%
Commercial	10.76	↓	-10.1%	↓	-17.1%
Industrial	73.56	↓	-9.7%	↑	5.1%
Transportation	52.25	↓	-13.7%	↓	-26.2%
Electricity Production	70.22	↓	-6.8%	↓	-44.4%
Agricultural	9.37	↓	-6.9%	↑	13.8%
Waste Management	4.25	↑	0.6%	↓	-20.5%
Forestry and Land Use Non-CO ₂ Emissions	0.19	↓	-0.1%	↓	110.6%
Total Gross Emissions	238.74	↓	-9.5%	↓	-24.9%
Forestry and Land Use Net Carbon Flux	-24.79	↓	-0.5%	↓	-15.6%
Total Net Emissions	213.94	↓	-10.4%	↓	-25.9%

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Pennsylvania Climate Change Mitigation and Resiliency Network



Pennsylvania Climate Leadership Academy

PA State Agency Programs & Resources

The screenshot displays the website <https://www.paclimateacademy.org/resources> with a grid of video presentations from various Pennsylvania state agencies. Each video includes a 'Download the [Agency Name] Video Transcript' button.

- Environmental Protection:** Climate Initiatives at the Pennsylvania Department of Environmental Protection (January 8, 2020)
- Transportation:** PennDOT's Resiliency Initiative (December 7, 2020)
- Community & Economic Development:** Financial Tools (Alternative and Clean Energy (ACE), High Performance Building, Renewable Energy Program, Solar Energy, Act 13, Orphaned or Abandoned Well Plugging, Flood Mitigation Program, Multimodal Transportation Fund)
- Agriculture:** PDA Climate Change Initiatives (William Penn Taylor, PA Department of Agriculture)
- Emergency Management:** PEMA Climate Change Initiatives (December 2020)
- GreenGov Council:** Pennsylvania GreenGov Council (Mark Hand, Director; Matt Wach, Assistant Director)
- Conservation & Natural Resources:** DCNR (December 2020)

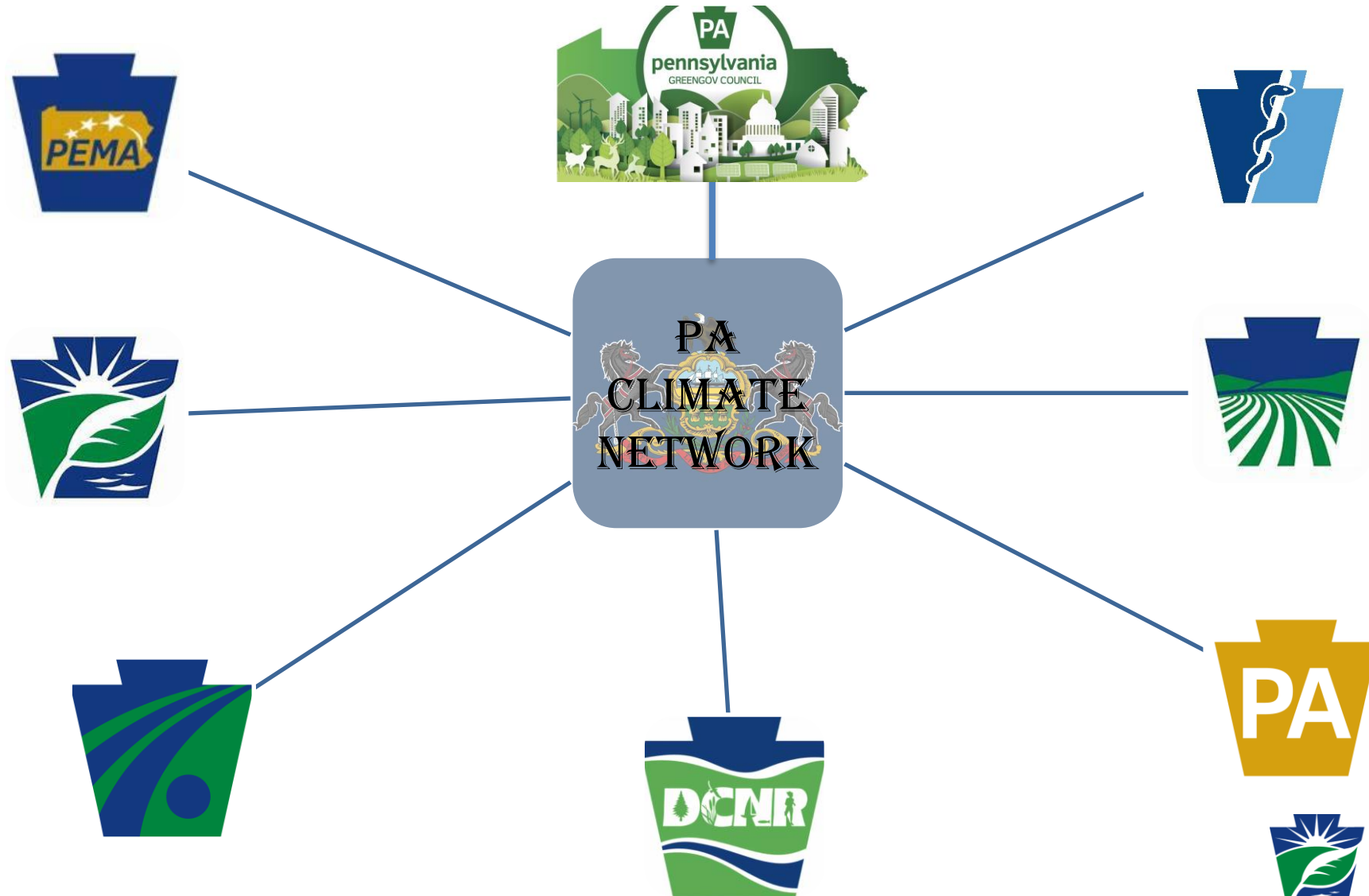
Pennsylvania Climate Leadership Academy

Administered by:  **Powered by:**  **ASSOCIATION OF CLIMATE CHANGE OFFICERS**

Certified Climate Change Professional (CC-P)
Live Online Prep Program:
4 New Cohorts Announced for Winter/Spring 2022

Climate Leadership Activator Series:
Next series begins January 28, 2022

Multi-Agency Collaboration



Executive Committee



Dave Althoff
Director
Energy Programs Office
Dept. Of Environment
Protection



Mark Hand
Director
GreenGov Council
Dept. Of General Services



Matt Reis
Deputy Director
GreenGov Council
Dept. Of General Services



Christopher Nafe
Energy Programs Specialist
Dept. Of Environmental
Protection



Greg Czarnecki Director
Applied Climate Science
Dept. Of Conservation
and Natural Resources

Advisory Board

- PA Climate Network Advisory Board:
 - 42 Participants – State Agency Staff, Executive Committee, former Climate Leadership Advisory Board Members, other interested parties
 - Quarterly Meetings on were held throughout 2023
 - March 29th
 - May 24th
 - August 2nd
 - November 30th

April Workshop

Workshop held in Harrisburg, PA on April 18th for ICF, State Agencies, Executive Committee, and Advisory Board

- Reveal potential goals, visions, and activities for Network
- Understand and discuss the ideal attributes and the potential future scenarios for Network
- Short (1 year) and long term (5 year) strategy for the network
- Membership structure, value of membership, training
- What type of organization?

PA Climate Network Mission and Vision

Mission Statement:

The Pennsylvania Climate Change Mitigation and Resilience Network will be a self-sustaining, member-driven organization focused on connecting diverse stakeholders across Pennsylvania and ensuring they have the expertise, knowledge, and collaborative partnerships to advance data-driven climate solutions. The Network will serve as a hub for sharing best practices and will advance climate education and literacy throughout the Commonwealth, for Network members and the public alike.

Vision Statement:

A connected Commonwealth working to advance Pennsylvania's preparedness, economic vitality, public health, and social equity while reducing harmful greenhouse gas emissions and building resilience to climate-related hazards.

Goals and Membership Structure


Goal: Self-Sustaining

Consideration of Multiple Membership Models

- Professional Recyclers of Pennsylvania
 - Paid memberships and trainings for professional certification
 - Member discounts for training and conferences
- University Affiliated: San Diego Regional Climate Collaborative
 - SDRCC model focused on education, research, knowledge sharing, etc.
- NGO – Green Building United
 - Networking and education focus
 - Participation in community-focused programming

PA Climate Network Training Modules

1.1 What is Climate and What is it Important?


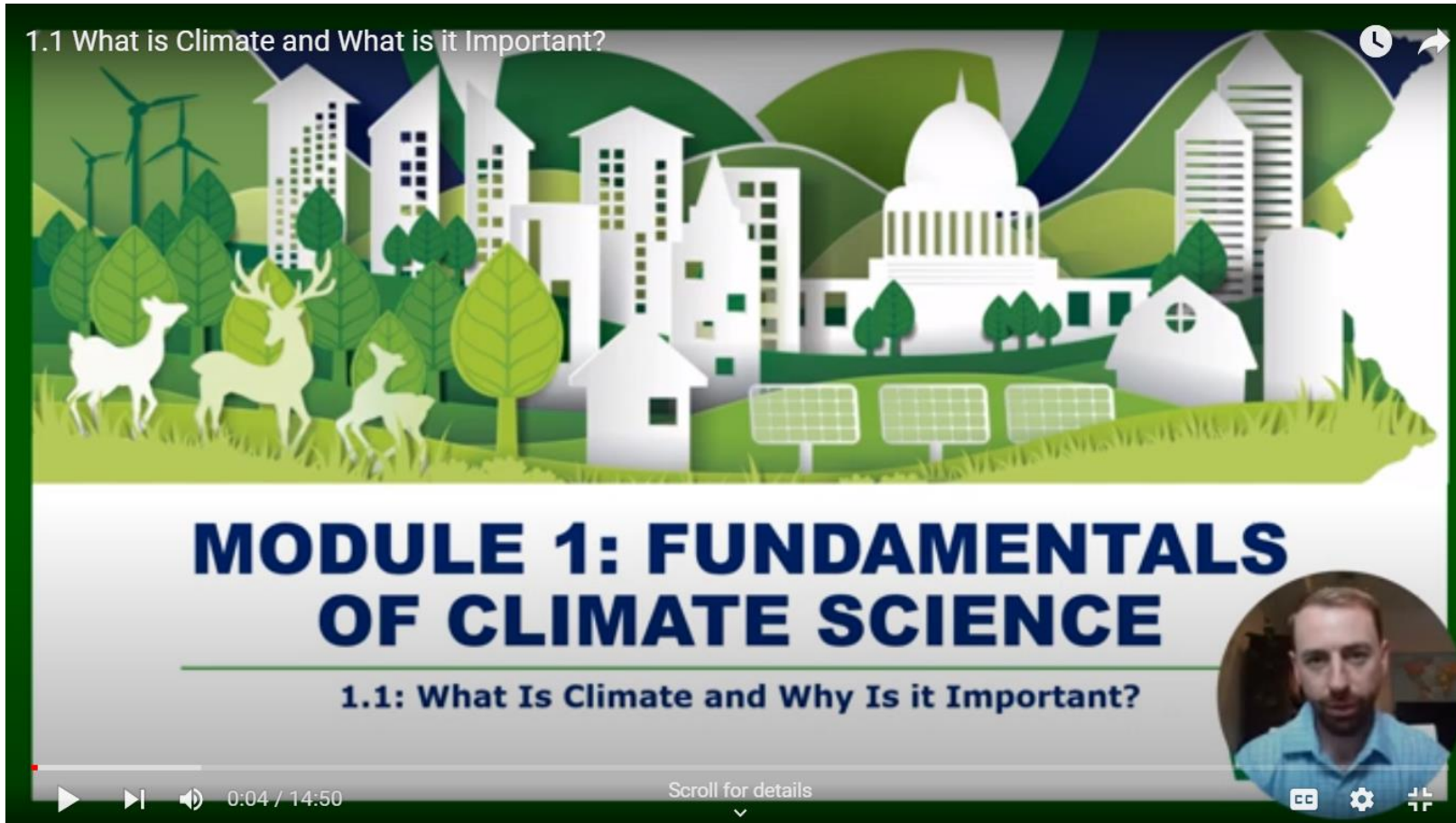


**MODULE 1: FUNDAMENTALS
OF CLIMATE SCIENCE**

1.1: What Is Climate and Why Is it Important?

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Scroll for details



Potential Activities and Schedule

Current Proposed Planning: Monthly Meetings & Quarterly Workshops

Potential Ideas for Workshops:

- Phoenixville Hydrothermal Carbonization Plant Tour
- Regenerative Agriculture Farm Trip
- Hempcrete/Sustainable Building Tour
- LEED Certified Building Tours
- Informational Webinars for Developing Technologies, etc.

Request for Information

PA Climate Change Mitigation and Resilience Network RFI

- Request for Information
 - Issued 12/13/2023
 - Soliciting information from organizations and the public that will aid in the development of governance and long-term management plan for Network
 - Specifically seeking feedback on organizational and membership structure as well as level of interest to manage or participate network.
 - Solicitation open until 02/29/2024

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Updates

- Shared Energy Manager (SEM)
- Climate Pollution Reduction Grants (CPRG)
- Other IIJA/IRA funded programs

Updates

Past Climate Outreach Efforts and Notable Events:

- Feb. 15: CPRG Local Government Workgroup

Upcoming Climate Outreach Efforts and Notable Events:

- Feb. 22: The Pennsylvania Energy Development Authority (PEDA) Board of Directors quarterly meeting
- Feb. 24: Presentation on the Local Climate Action Plan, Shared Energy Manager, and CAPstone programs at the Environmental Advisory Council (EAC) Network virtual conference held by WeConservePA

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Next Meeting – Proposed Agenda

April 23, 2024:

- Introduction
- Approval of December Minutes
- **Presentation/Discussion – 2024 CIA & CAP Progress and Feedback Session**
- **Presentation/Discussion – Building Codes: Update Process and Status**
- Public Comment
- Break
- **DEP Updates**
- **Review June meeting agenda**
- New Business

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