

WORKSHOP LV ENVIRONMENT

Workshop #1 – January 22, 2025

Introductions – Welcome!

Meeting Agenda

- **Goals for Workshop #1**
- **Postcard from the Future Activity**
- **Climate Pollution Reduction Grant Program Overview**
- **Climate Change Background**
- **Near- and Long-Term Targets**
- **CCAP Draft Measures Activity**
- **Rank Criteria Activity**
- **Discussion/Questions**
- **Upcoming Meetings and Next Steps**

Ground Rules

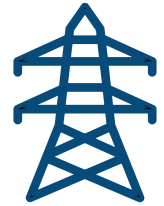
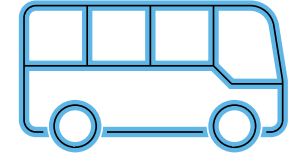
1. **All people are welcome here:** We continue to build a bigger table to bring more people into this work.
2. **This is a safe space:** We are all coming into this workshop with different backgrounds and knowledge bases. All questions are good questions, as long as they are based in respect.
3. **Questions are encouraged:** There will be opportunities for questions and comments throughout the presentation portion of the agenda.
4. **Participation is key:** There will be opportunities for verbal and non-verbal participation – both are important. Please be conscientious of your participation in both sections.

Workshop #1 Goals

- Provide context for climate action work.
- Understand how community envisions climate action and its corresponding benefits.
- Obtain input on potential Greenhouse Gas reduction measures across all sectors.
- Obtain input on evaluation criteria.
- Provide opportunity for questions.

Postcard from the Future

- What does a future free from climate change look like to you?
- Use provided scratch paper
- Can draw, write, or list to express your vision
- Feel free to work during presentation portion of meeting
- Responses can be anonymously featured in CAP publication



Climate Pollution Reduction Grant (CPRG)

Inflation Reduction Act authorized the United States Environmental Protection Agency (EPA) to provide funding for CPRG program



CPRG provides funding for large US metro areas to create climate action plans

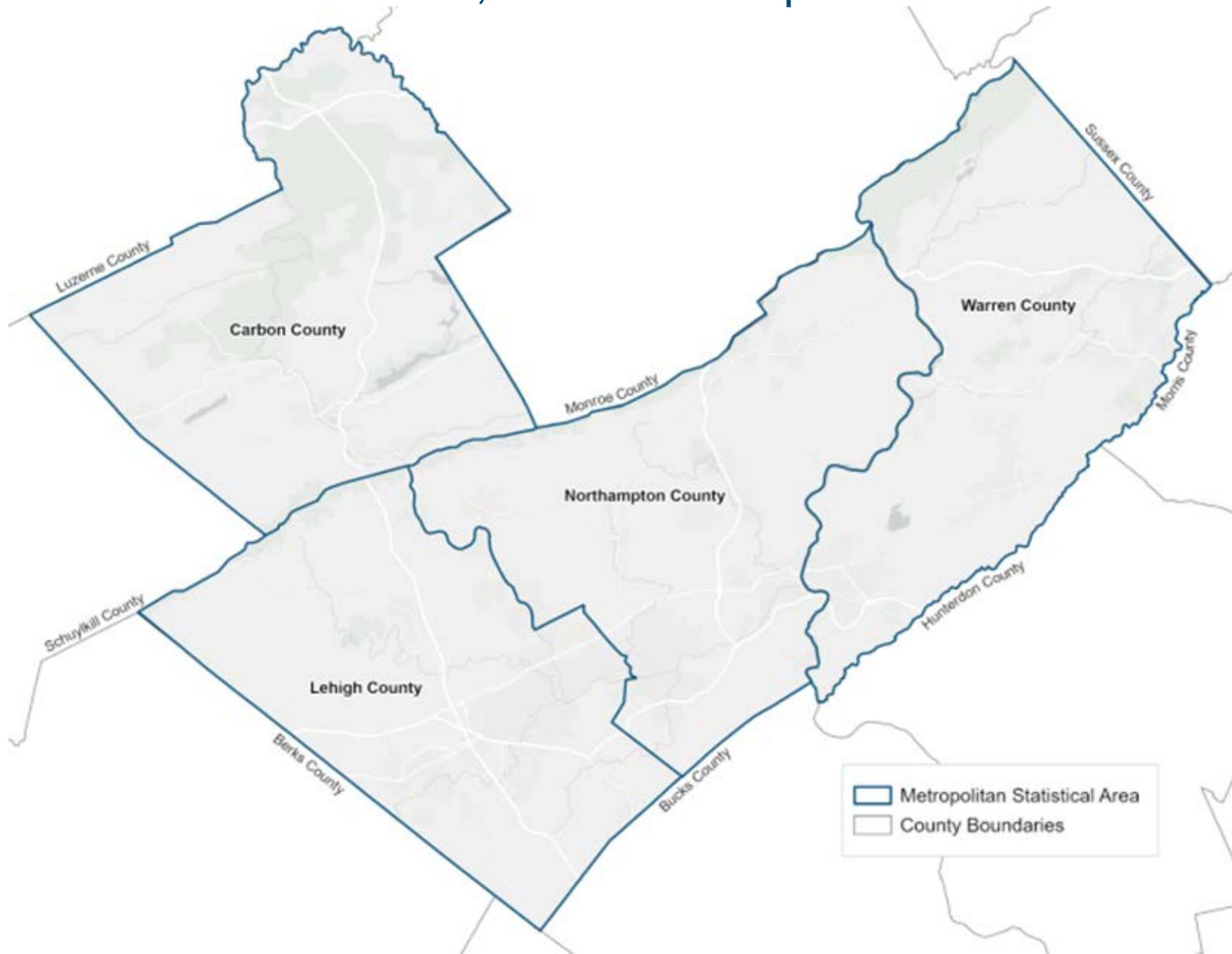


Over 70 metro areas each received \$1 million in planning grant funds

Program Goal:
Develop and implement ambitious plans for reducing greenhouse gas emissions and other harmful air pollution.



Greater Lehigh Valley: Allentown-Bethlehem-Easton, PA-NJ Metropolitan Statistical Area (MSA)

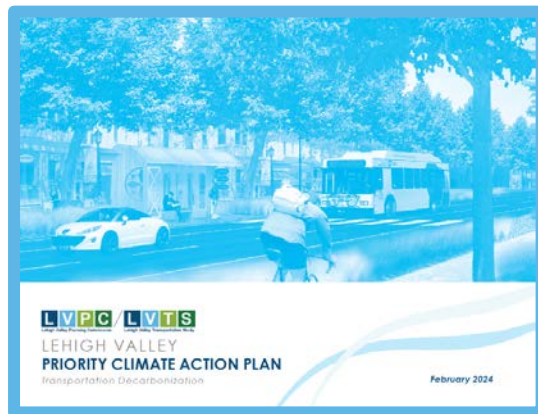


The Climate Pollution Reduction Grant Four Main Components:



Priority
Climate
Action Plan

Spring 2024



Regional
Climate
Action
Plan

Summer 2025

Regional
Greenhouse
Gas
Inventory

Fall 2024



Plan
Progress and
Monitoring
2025 & Beyond

Purpose and Elements of the Regional Climate Action Plan

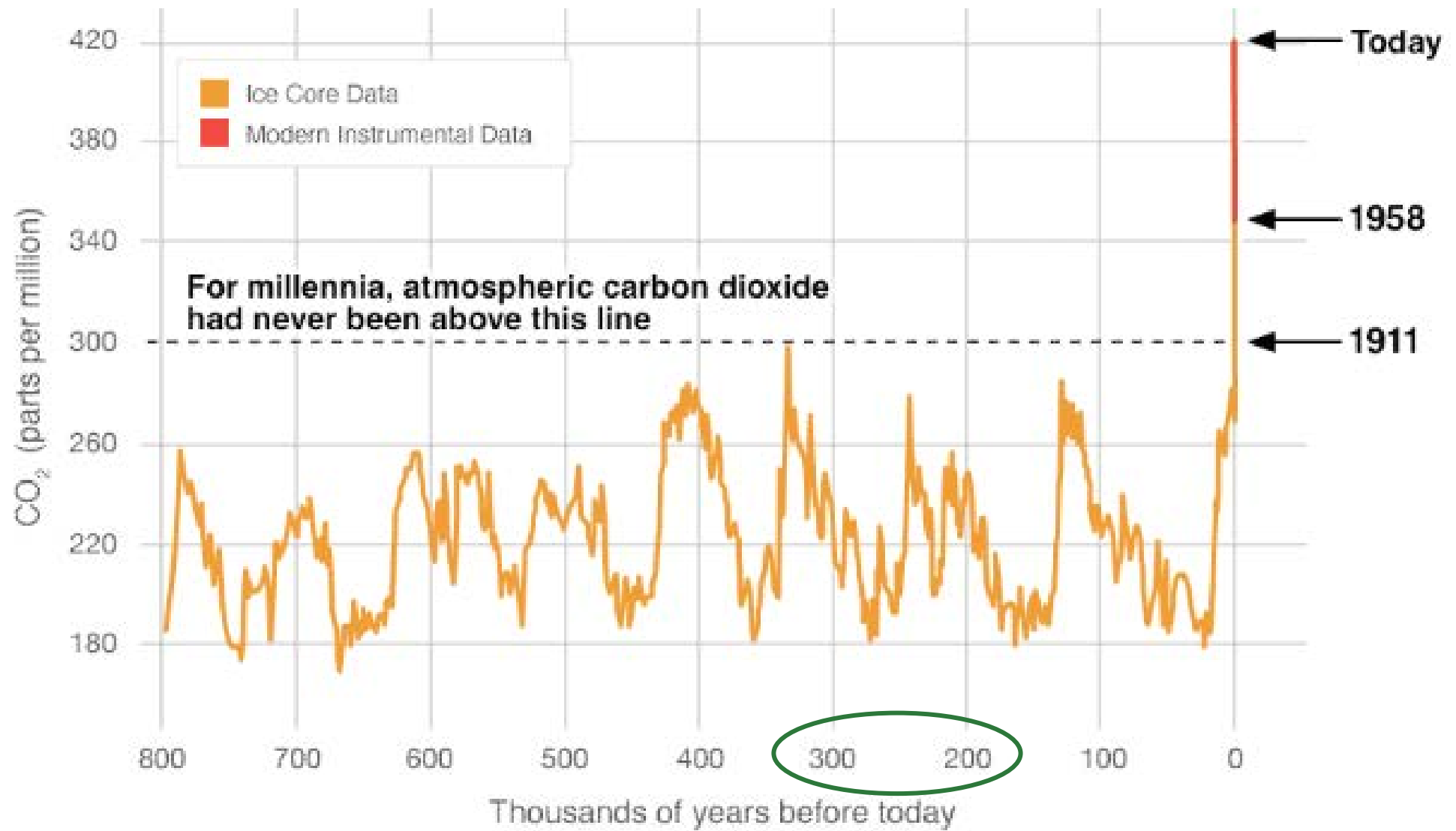
To provide an overview of all GHG sources/sinks and sectors, establish near and long-term GHG reduction targets, and identify GHG reduction measures to achieve those goals.

- **GHG Inventory**
- **GHG Reduction Targets**
- **GHG Emission Projections**
- **Quantified GHG Reduction Measures**
- **Benefits Analysis**
- **LIDAC Analysis**
- **Key Plan Implementation Milestones and Metrics**
- **Workforce Planning Analysis**

Greenhouse Gases (GHGs)

- Naturally occur in our atmosphere and help regulate temperature
 - Trap heat and prevent it from escaping Earth into space
- Are emitted by both natural processes and human activity
 - Carbon Dioxide (CO₂) is the most prevalent GHG

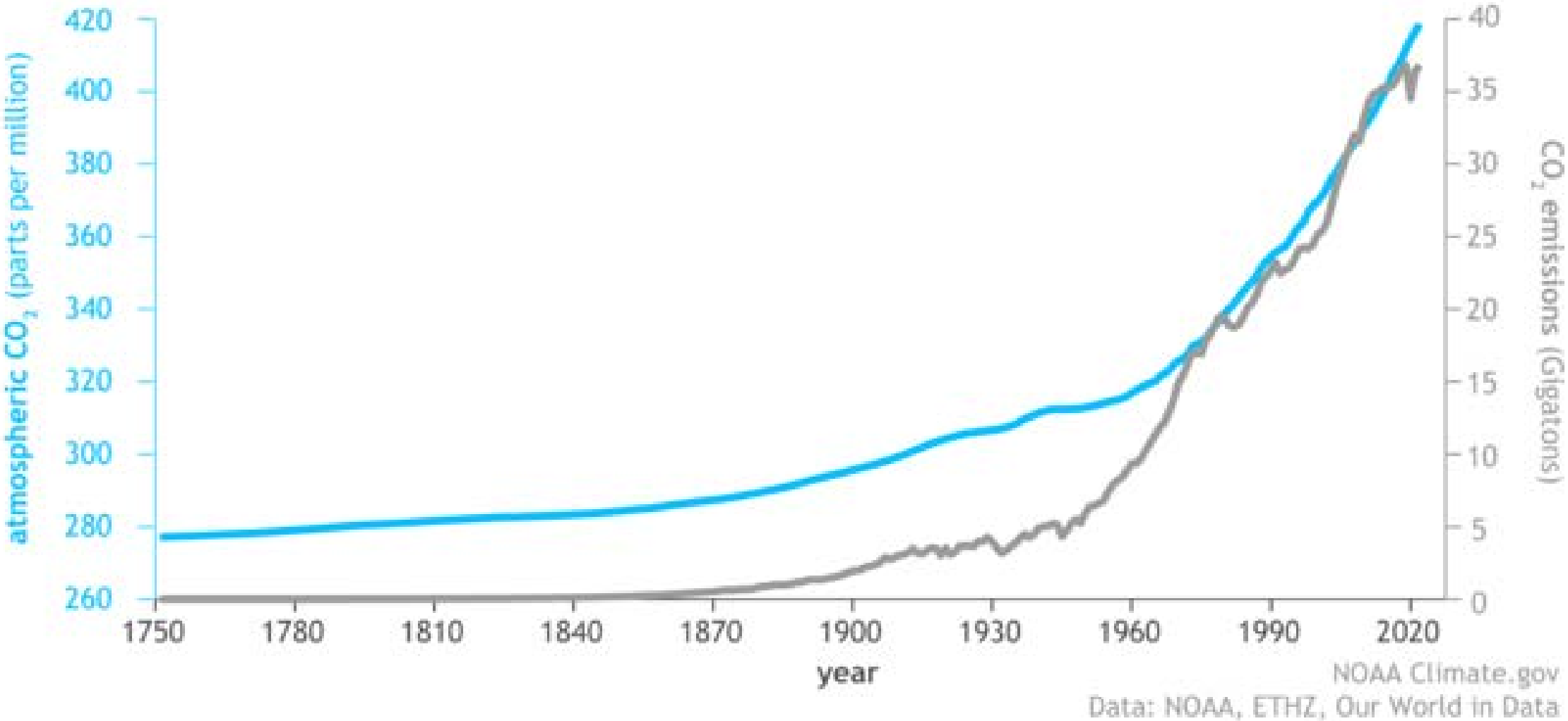
GREENHOUSE GAS	GLOBAL WARMING POTENTIAL
Carbon Dioxide (CO ₂)	1
Methane (CH ₄)	28
Nitrous Oxide (N ₂ O)	265



Data source: Reconstruction from ice cores.
Credit: NOAA

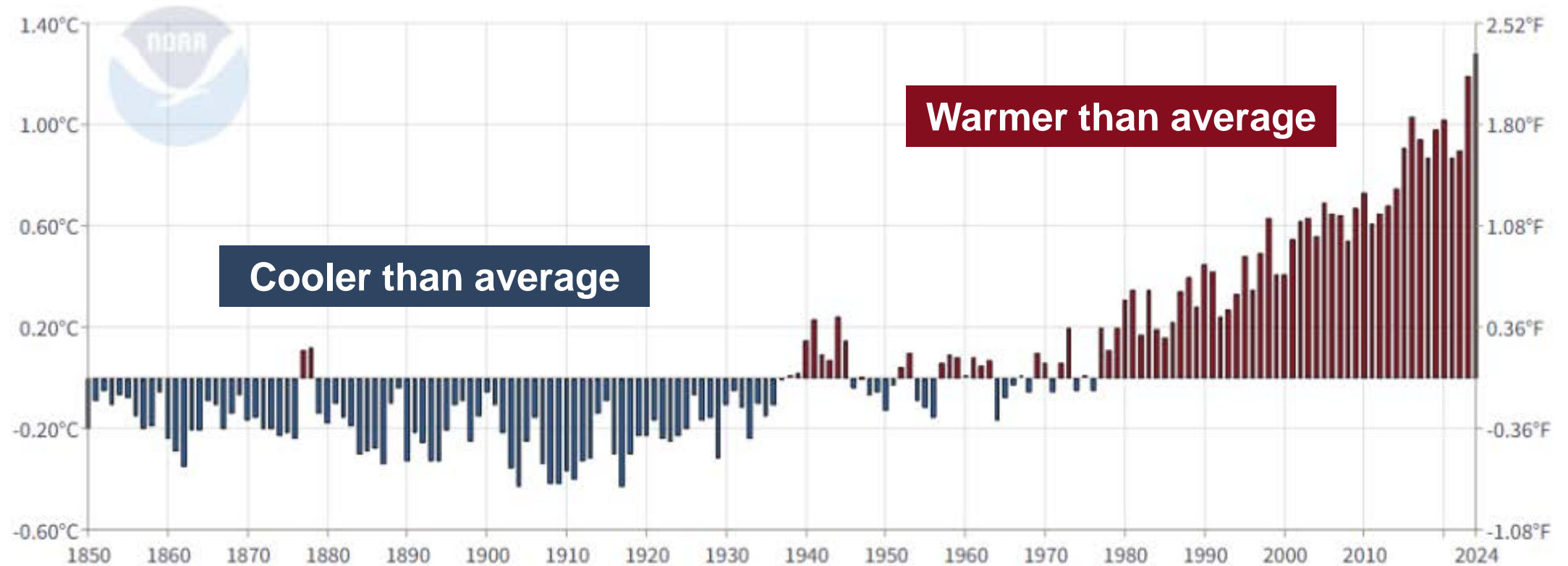
**Modern humans first
appear**

Global atmospheric carbon dioxide compared to annual emissions (1751-2022)



Global Land and Ocean Average Temperature Anomalies

January-December



- Global temperature has increased in correlation with CO₂ emissions
- The 10 warmest years on record have all occurred in the last decade
 - 2024 was the warmest recorded year in history

Change in Avg. Temperature (°F) in Allentown from 1951-2023

Winter average temperature	+3.9
Spring average temperature	+2.6
Summer average temperature	+1.9
Fall average temperature	+1.7
Annual average temperature	+2.5

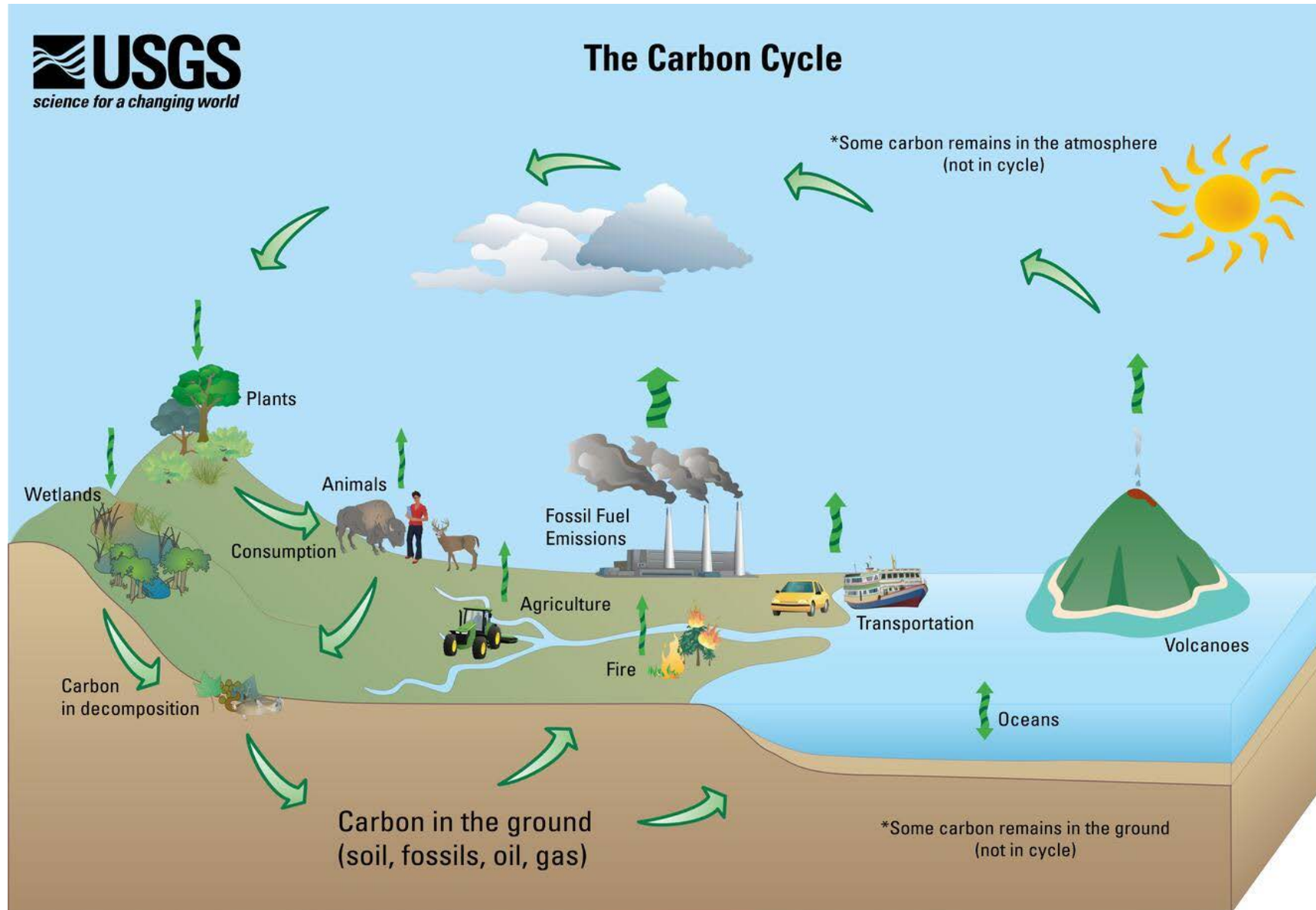
Data from NOAA GLISA

Climate Change Hazards

- Extreme heat
- Air pollution
- Increased precipitation and flooding risk
- Loss of native plants and animals
- Milder winters with less snow
- Diseases spread by insects (e.g. Lyme disease, West Nile virus)
- Wildfires
- Reduced crop yields



Our Connection to Climate Change





Questions?



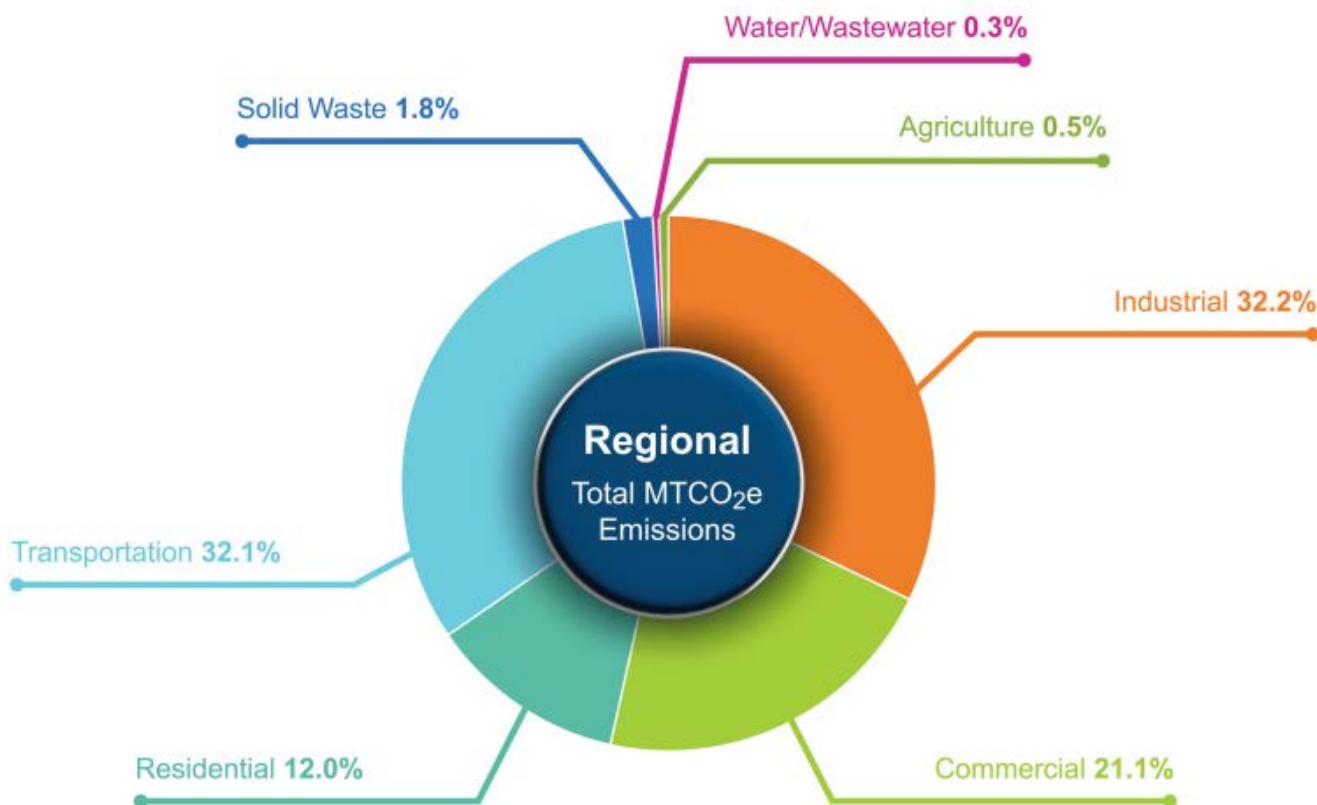
Greater
**LEHIGH
VALLEY**

Greenhouse Gas
INVENTORY | 2024

Allentown-Bethlehem-Easton PA-NJ
Metropolitan Statistical Area

Sector	Description	Examples
Industrial	Unique processes at factories and energy usage	General manufacturing, cement production, food/beverage processing
Transportation	Fuel combustion from vehicle travel	Cars, trucks, buses
Commercial	Energy usage in businesses, schools, and hospitals	Heating and cooling, lighting
Residential	Energy usage in homes	Heating and cooling, lighting, appliances
Solid Waste	Emissions from landfills	Waste decay, gas flaring
Agriculture	Emissions from agricultural activities	Fertilizer, machinery
Water & Wastewater	Treatment of potable water and wastewater	Treatment plant operations

GREENHOUSE GAS EMISSIONS BY SECTOR



ESTIMATED TOTAL GREENHOUSE GAS EMISSIONS

Lehigh & Northampton Counties, PA

9,803,367
MTCO₂e

Carbon County, PA

1,318,252
MTCO₂e

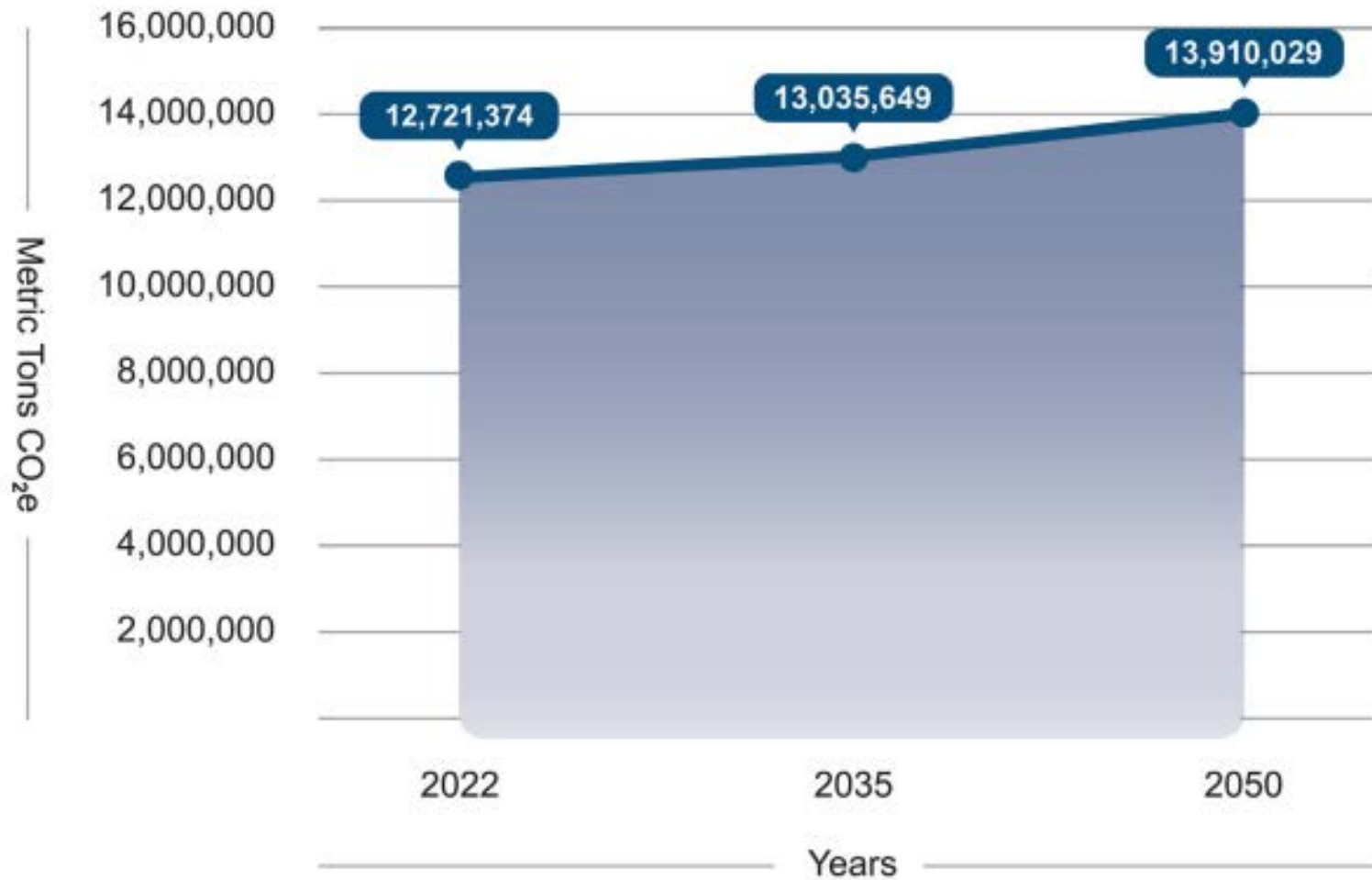
Warren County, NJ

1,599,755
MTCO₂e

Greater Lehigh Valley MSA

12,721,374
MTCO₂e

Business-as-Usual Emissions Projection



If we do not take further
action, emissions may
increase by

9.3%
by 2050.

Big Impact = Big Opportunity

If **Pennsylvania** was its own country, it would produce the **36th most** GHG emissions in the world

The **Greater Lehigh Valley** produces more GHG emissions than El Salvador

Pennsylvania's emissions have **decreased by 19%** since 2005

A photograph of a white AntaBus, number 1083, stopped at a modern bus station. The destination sign above the windshield displays '101 WESTBOUND' in orange. The bus is positioned on the right side of the frame. To the left, a bus stop shelter with a green roof and grey pillars is visible. Several people are waiting at the stop; one person is sitting on a bench, and others are standing. The background shows a concrete building and a clear sky. The word 'Questions?' is overlaid in the center of the image.

Questions?

Near-Term and Long-Term GHG Reduction Targets

USA: 50-52% reduction relative to 2005 levels by 2030, net zero by 2050 – economy wide.

Pennsylvania: 25% reduction from 2005 levels by 2030, 80% reduction from 2005 levels by 2050.

New Jersey: 50% reduction from 2021 levels by 2030 and 80% reduction from 2021 levels by 2050.



Greater LV Regional
Climate Action Plan - Base
Year 2022

Measure Development Process

- Review current plans, policies and programs from already published CAPs from our municipalities, surrounding states and comparable metro areas
- Compare with GHG Inventory
- Review with Community and Stakeholders
- Develop a draft list, organized by sector
- Screen and Refine
- Finalize

Measures Activity Instructions

- Each table is a station that represents a sector, with a list of potential measures.
- Take some time to review the example measures at your station and place the dot stickers located at your seat on **3 measures** that you like best or that you would like to see for your community.
- If you have any ideas of measures that are not represented on these lists, please feel free to write ideas down on the index cards at your table OR let us know your ideas on the portal available on the LVPC website (lvpc.org).

Regional CAP Draft Measures

Industrial

- Support the use of green technologies where feasible (e.g. green roofs to minimize heat island effects and solar arrays as an alternative energy source).
- Encourage energy efficiency of all industrial projects through building codes, zoning and site planning design that incorporate other accepted standards.
- Improve operational efficiency and reduce energy waste through targeted retrofitting of older buildings.
- Reduce embodied carbon from building construction by promoting localized construction materials, deconstruction, reuse of materials and recycling and minimizing construction waste.
- Promote evaluation of renewable energy feasibility for existing large industrial and commercial properties.
- Promote evaluation of fuel switching options for any on-site energy plant system that is fossil fuel-based.
- Streamline permitting and zoning considerations for installation of on-site renewable energy systems.
- Reuse abandoned mine lands for small to medium scale solar energy generation.

Regional CAP Draft Measures

Transportation

- Implement Walk/Roll Active Transportation Plan.
- Increase transit ridership.
- Support deployment of AFVs of all types.
- Increase alternative fueling infrastructure.
- Reimagine and retrofit major transportation corridors with green infrastructure.
- Plan and implement Intelligent Transportation Systems technology.
- Encourage municipalities and public fleets to complete fleet inventories, adopt fleet efficiency policies, and invest in zero-emissions light, medium, and heavy-duty fleets when technology is available.

Regional CAP Draft Measures

Commercial + Institutional

- Support the use of green technologies where feasible (e.g. green roofs to minimize heat island effects and solar arrays as an alternative energy source).
- Encourage energy efficiency of commercial projects through building codes, zoning and site planning design that incorporate other accepted standards.
- Install zero-carbon emission space heating and cooling and water heating systems in commercial properties
- Encourage onsite solar generation at public school locations.
- Energy efficiency upgrades at local hospitals, including an LED lighting retrofit and additional energy conservation measures discovered through retro commissioning and energy auditing.
- Purchase 100% renewable energy for all municipal operations. Review energy sources for environmental justice concerns and whether they use high impact energy projects.
- Changing old refrigerants (using 404R22) to new low-emissions refrigerants in supermarkets and convenience stores.
- Partner with utilities to increase awareness of opportunities for energy audits, incentives for energy efficiency improvements, and other energy-saving measures.
- Publicize and expand incentives for installation of rooftop solar on commercial properties. Revise building codes and ordinances that may act as obstacles.
- Encourage intermunicipal cooperation for renewable energy projects at regional scale.

Regional CAP Draft Measures

Residential

- Support the use of green technologies where feasible (e.g. green roofs to minimize heat island effects and solar arrays as an alternative energy source).
- Encourage energy efficiency of all residential subdivisions and multifamily projects through building codes, zoning and site planning design that incorporate other accepted standards.
- Improve operational efficiency and reduce energy waste through targeted retrofitting of older buildings.
- Install zero-carbon emission space heating and cooling and water heating systems in residential properties and commercial properties.
- Make at least 10% of all low-to moderate income properties electrification-ready by the year 2030.
- Decarbonize households with approximately an 80% focus on households in equity and environment justice areas.
- Reduce embodied carbon from building construction by promoting localized construction materials, deconstruction, reuse of materials and recycling and minimizing construction waste.
- Establish a building retrofit program to replace fossil fuel appliances and systems with high efficiency electric options such as Energy Star.

Regional CAP Draft Measures

Solid Waste

- Achieve a 50% reduction in food waste by 2030.
- Significantly increase or improve compost collection.
- Encourage and prioritize preservation, reuse, repurpose, and retrofit of existing structures.
- Support a curbside textile recycling program.
- Convert waste-hauling fleets from diesel-powered vehicles to low- or no-emission vehicles.
- Consider incentive programs for residents who reduce the quantity of waste they send to landfills (increase charges for curbside waste pickup and reduce or eliminate charges for recycling/compost.)
- Add recycling containers to public parks.
- Support an expanded compost program, with a curbside pickup option. Program should include residential and restaurants and businesses.

Regional CAP Draft Measures

Agriculture/Land Use

- Increase land and forest management for natural sequestration.
- Provide for preservation of agricultural land use and environmental protection in non-urban areas.
- Promote green infrastructure that relies on native plants and natural processes for stormwater management, irrigation, groundwater recharge and flood prevention.
- Increase the coverage and health of trees and other native vegetation.
- Conserve and expand wetlands.
- Review and update land use ordinance and zoning to encourage land-use patterns that mitigate climate change impacts.
- Update tree ordinances and other applicable regulations/zoning ordinances to prioritize and preserve native species of plants and trees, as well as climate-resistant species.

Regional CAP Draft Measures

Water/Wastewater

- Eliminate emissions from wastewater processing through aerobic and anaerobic digestion.
- Reduce GHG emission of water and sewer system and building infrastructure through efficiency upgrades and leakage emission initiatives.

DRAFT

Rank Criteria Activity Instructions

With you remaining stickers, please indicate your top 3 screening criteria to consider for the measures you just prioritized

Measure Prioritization Draft Criteria

- Scale of Greenhouse Gas Reductions
- Scale of Hazardous Air Pollutant Reductions
- Ease of Implementation by 2030
- Ease of Implementation by 2050
- Leads with Equity
- Cost
- Scale of Co-Benefits (reduced cost of living, environmental burdens, creating jobs, improving resilience)

Activity Discussion

Next WorkshopLV Environment Meetings

**March 26th: 8:30AM (in-person) at the LVPC office,
615 Waterfront Drive, Suite 201, Allentown, 18102**

**April 23rd: 8:30AM (in-person) at the LVPC office,
615 Waterfront Drive, Suite 201, Allentown, 18102**