



Palmetto Air Quality Collaborative (PAQC)

Overview of the Planning Process



Last updated: December 21, 2023



Climate Pollution Reduction Grant (CPRG)

- Established by the Inflation Reduction Act on August 16, 2022
- Administered by the U.S. Environmental Protection Agency
- Focuses on developing state, tribal, and metropolitan climate plans that include GHG reduction measures

Phase I: Planning Grants

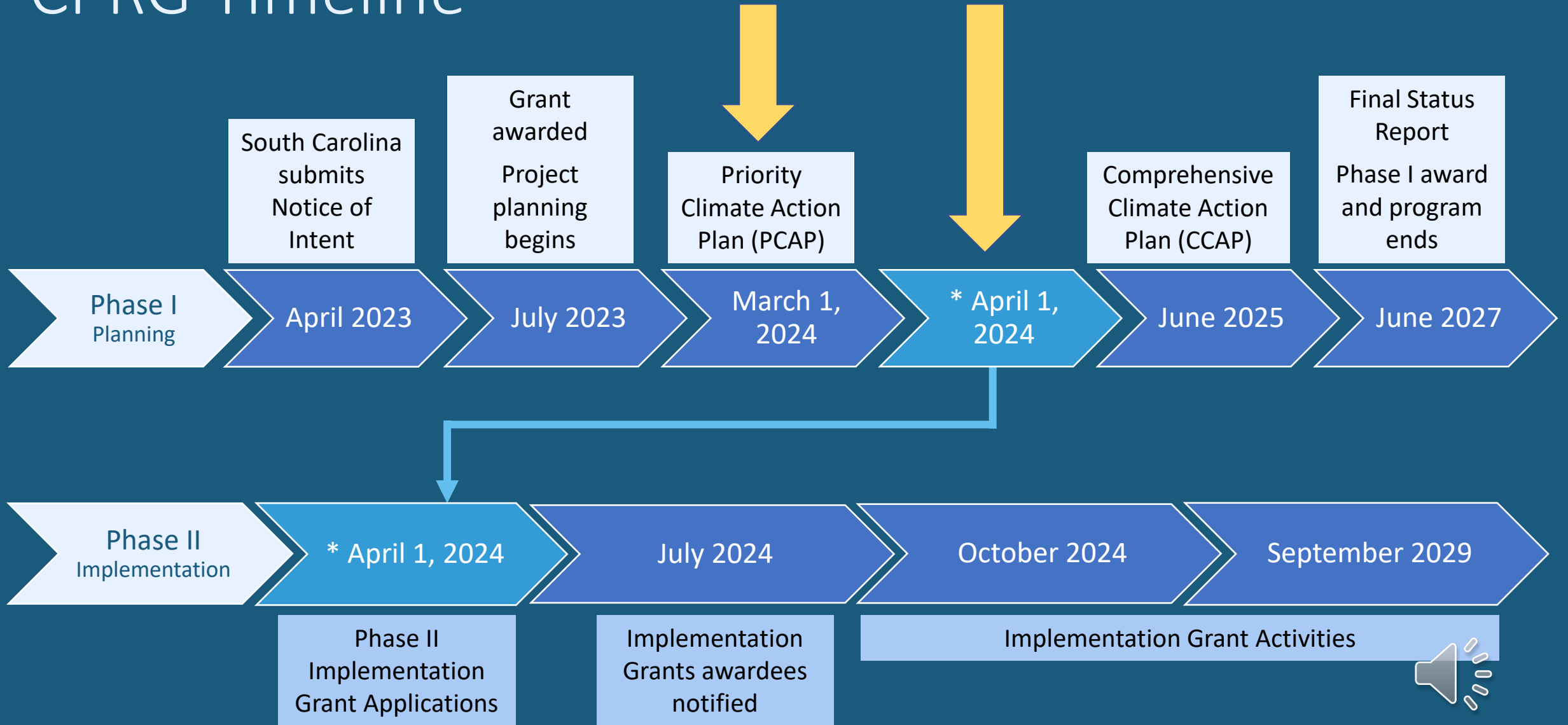
- \$3 million for the statewide effort
 - Co-leads: SC DHEC and SC Office of Resilience
 - Sub-awardee: SC Ports Authority
- \$1 million for Columbia and Greenville-Spartanburg MSAs
- PCAP due March 1, 2024

Phase II: Implementation Grants

- Competitive; \$4.6 billion available
- Due: April 1, 2024
- 30 to 115 expected awards, ranging from \$2 million to \$500 million



CPRG Timeline





The Palmetto Air Quality Collaborative (PAQC)



- Innovation
 - Innovate strategies to reduce greenhouse gases and other air pollutants in South Carolina



- Multiple Benefits
 - Engage communities, capitalize on workforce and economic development opportunities, and advance resilience initiatives



- Coordination and Collaboration
 - Develop actionable pollution reduction measures through interagency and intergovernmental collaboration, public and stakeholder engagement, and action team input



Palmetto Air Quality Collaborative

Process

Interagency Coordination

State agencies, Catawba Nation
COGs, MASC, SCAC

Public & Stakeholder Engagement

SCOR, DHEC, Energy Office

Transportation and Mobile Sources

Waste and Materials Management Recycling

Agriculture/ Natural and Working Lands

Climate / GHG Inventories and Analyses

Residential and Commercial Buildings / Energy Efficiency

Industry, Commerce, and Sustainability

Deliverables

PCAP:
March 1, 2024

Implementation Grant
April 1, 2024

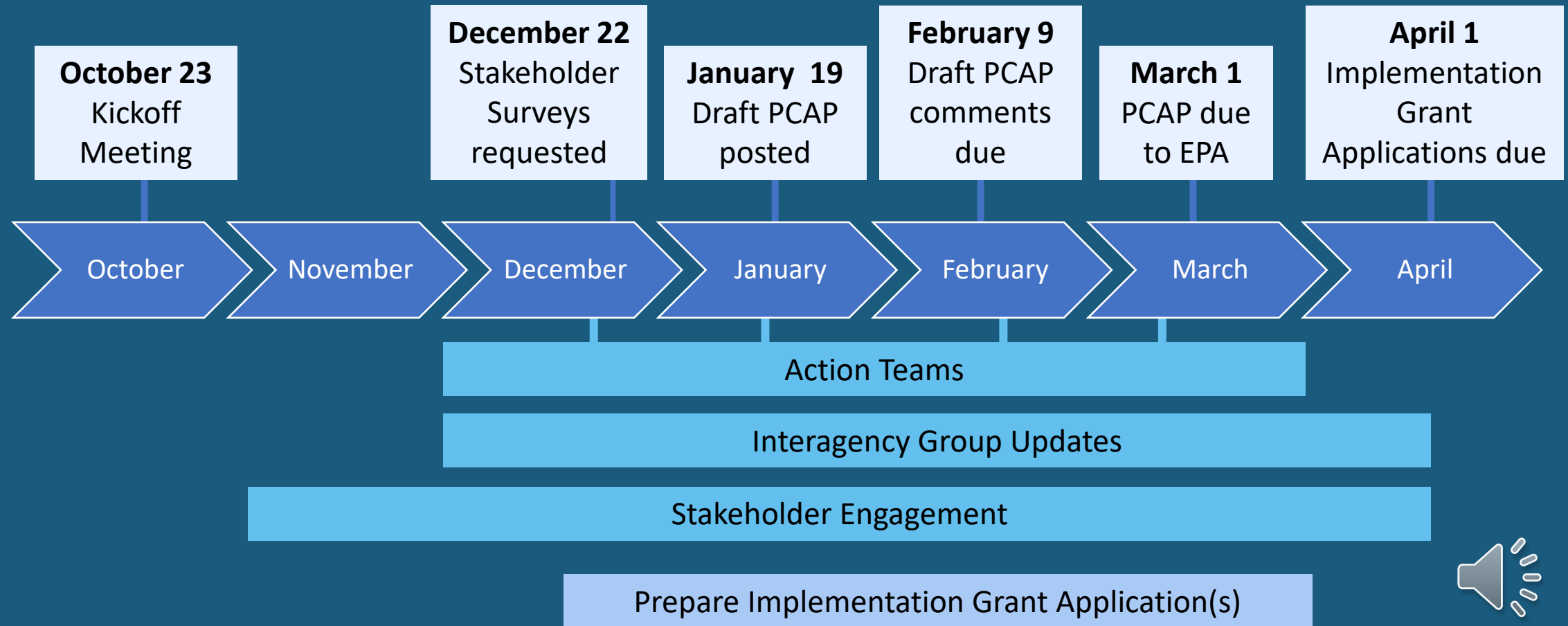
CCAP:
June 2025

Status Report:
June 2027

Coordination Teams

Action Teams

PCAP Timeline and Targets





Implementation Grants

Applications due April 1, 2024

- Measures **MUST** be included in a PCAP
- Eligible applicants: state and local government agencies, regional Councils of Government, federally recognized tribes
- Coalitions, sub-awardees, and sub-contracts allowed

EPA Priorities

- Actionable, quantifiable emissions reduction measures
- Community benefits
- Complement other funding sources



CPRG Requirements

| Priority Climate Action Plan (PCAP): March 1, 2024 | Comprehensive Climate Action Plan (CCAP): June 2025 | Status Report: June 2027 |
|--|---|--|
| GHG Inventory | GHG Inventory | Update encouraged |
| | GHG Emissions Projections | Update encouraged |
| | GHG Reduction Targets | |
| Quantified GHG Reduction Measures | Quantified GHG Reduction Measures | Status and updates required |
| Benefits Analysis | Benefits Analysis | Benefits Analysis |
| Review of Authority to Implement | Review of Authority to Implement | Update required |
| | Intersection with Other Funding Availability | Intersection with Other Funding Availability |
| | Workforce Planning Analysis | Workforce Planning Analysis |
| | | Next Steps Future Budget and Staffing Needs |

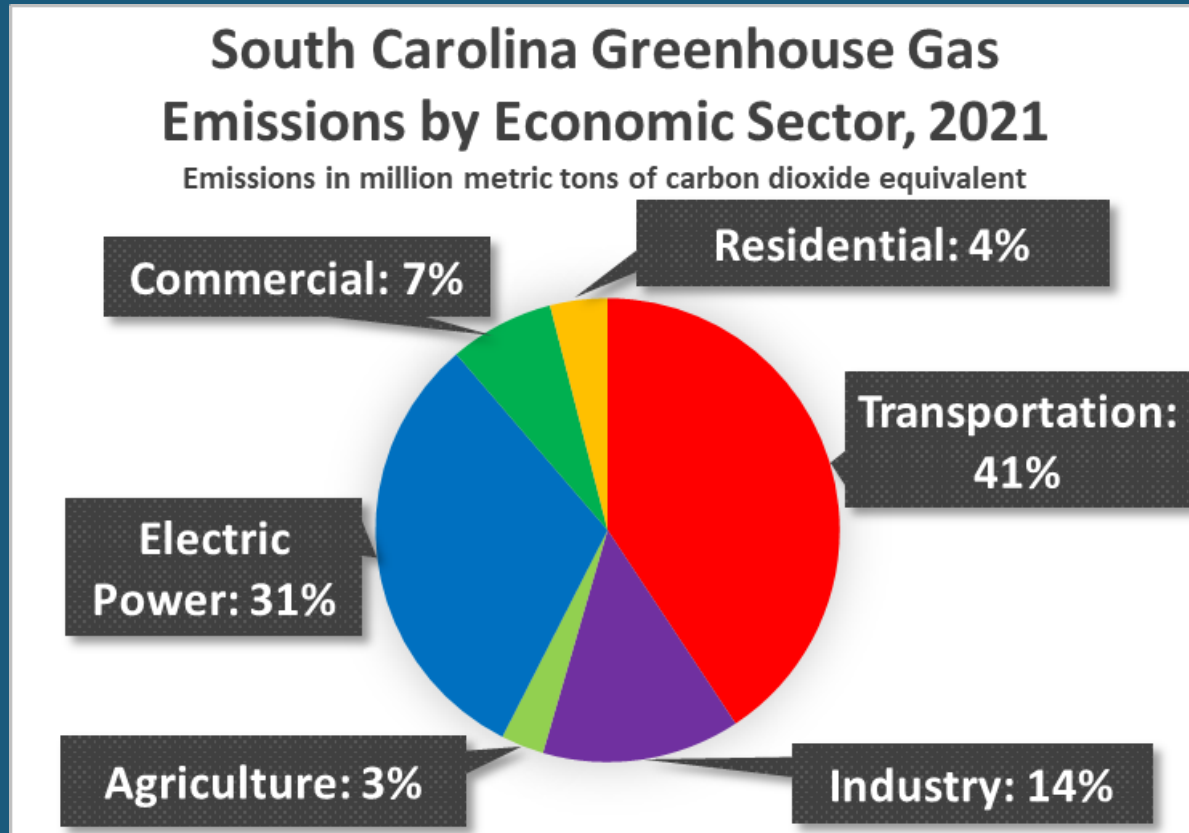


Monitor and Measure Program Performance: Outputs and Outcomes

Greenhouse Gases

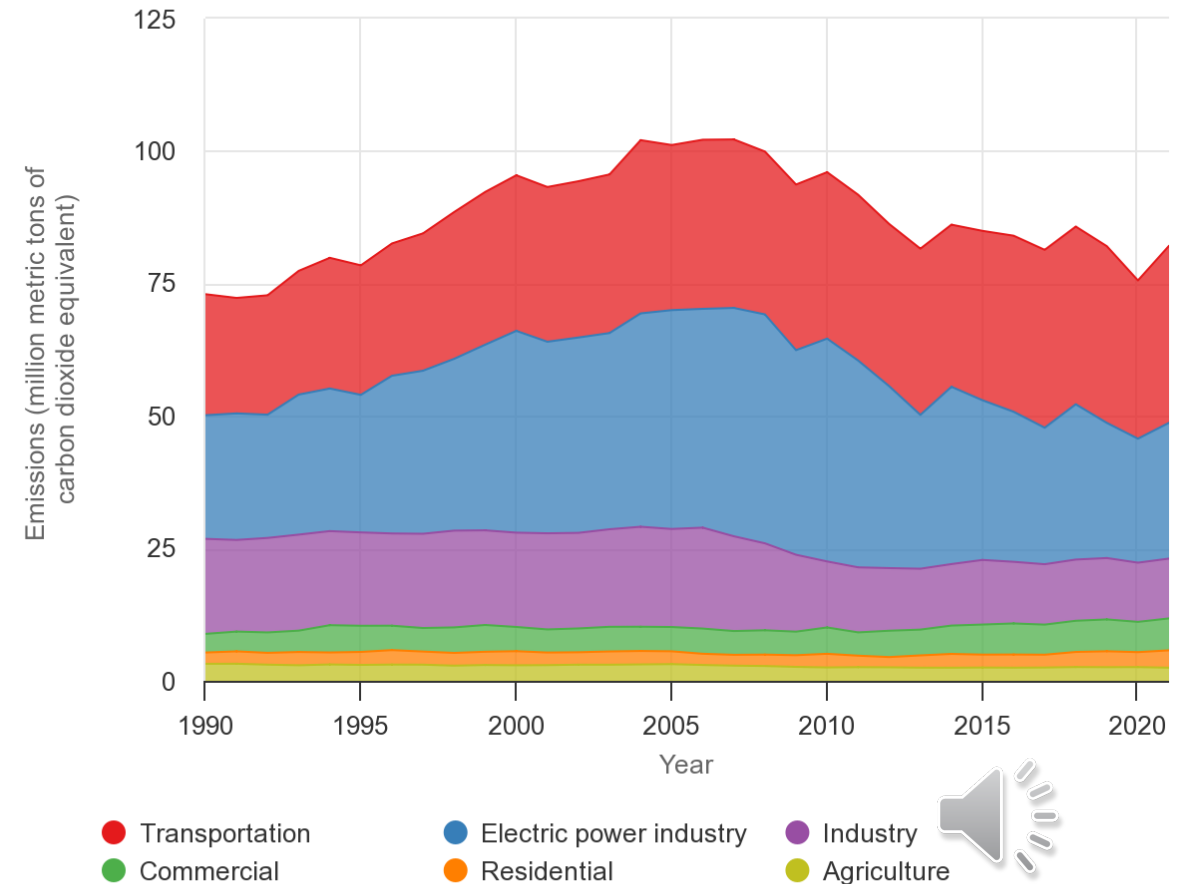
| Common Name | Chemical Formula | Common Sources and Uses |
|----------------------|------------------|---|
| Carbon Dioxide | CO ₂ | Combustion (burning fossil fuels) Land cover change |
| Methane | CH ₄ | Combustion Agriculture (livestock, rice) Waste and Landfill Decomposition |
| Nitrous Oxide | N ₂ O | Combustion (burning fossil fuels) |
| Sulphur Hexafluoride | SF ₆ | Electrical Insulator (gas used to fill spaces to insulate) |
| Hydrofluorocarbons | HFCs | Refrigerants (coolant) |
| Perfluorocarbons | PFCs | Aluminum production Industrial processes |

South Carolina GHG Emissions



Source: U.S. EPA's Inventory of U.S. Greenhouse Gas Emissions and Sinks by State: 1990-2021. GHG Inventory Data Explorer.
<https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks>

South Carolina Greenhouse Gas Emissions by Economic Sector, 1990–2021



Source: U.S. EPA's Inventory of U.S. Greenhouse Gas Emissions and Sinks by State: 1990–2021.
<https://www.epa.gov/ghgemissions/state-ghg-emissions-and-removals>

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Greenhouse gas inventory

Energy Resources for State and Local Governments

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[State Topics](#)

[Local Topics](#)













[Tribal Topics](#)

[Resources](#)

Download the State Inventory and Projection Tool

Welcome to the download page for EPA's State Greenhouse Gas Inventory and Projection Tools. The page includes zip files containing the tools and corresponding guidance documents. Note that the user's guides are companion documents to the tools, and EPA encourages users to consult them. This version of the State Inventory Tool (updated June 2023) has data updated through 2020. Please use the latest version of each State Inventory Tool module with the latest version of the Projection Tool so data can be imported correctly.

 [Download All State Inventory Tool Modules \(zip\)](#)

-  [Ag Module \(xls\)](#)
-  [CO2FFC Module \(xls\)](#)
-  [Coal Module \(xls\)](#)
-  [Electricity Consumption Module \(xls\)](#)
-  [IP Module \(xls\)](#)
-  [Land Use, Land-Use Change, and Forestry Module \(xls\)](#)
-  [Mobile Combustion Module \(xls\)](#)
-  [Natural Gas and Oil Module \(xls\)](#)
-  [Solid Waste Module \(xls\)](#)
-  [Stationary Combustion Module \(xls\)](#)
-  [Synthesis Tool \(xls\)](#)
-  [Wastewater Module \(xls\)](#)

 [Projection Tool \(zip\)](#)



<https://www.epa.gov/statelocalenergy/state-inventory-and-projection-tool>

EPA State Inventory Tool (SIT)

Provides a standard methodology to calculate emissions using national datasets; provides the opportunity to supplement with local data.

- The Inventory of U.S. Greenhouse Gas Emissions and Sinks (EPA, 2022) is the basis for default national datasets
 - Data gathered by federal agencies
 - Top-down approach
- All modules examine direct GHG emissions
 - Exception: electricity consumption module estimates indirect emissions



PAQC Use of the SIT Tool



- South Carolina will use EPA default values
 - Exception: EPA does not provide hectares burned; this will be provided by SC Forestry Commission
- Emission units are in Million Metric Tons of Carbon Dioxide Equivalent (MMTCO₂e)
 - SIT may report in Metric Tons of Carbon Dioxide Equivalent (MTCO₂e)





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Quantifiable GHG reduction measures

Programs, policies, and projects that will directly or indirectly reduce greenhouse gas air pollution.

- Voluntary
- Incentive-based
- Complementary
- Ability to scale to a statewide effort



EPA Requirements

PCAP

GHG Inventory

Priority Measures

- Implementation ready; can be completed in a 5-year Implementation Grant
- Align with and advance state priorities

For each measure, include at a minimum:

- GHG reduction estimates (2025-2035, 2025-2050)
- Implementing agencies; statutory or regulatory authority
- Discussion of community benefits
- Cost estimates

Implementation Grant Application

(for each proposed program or project)

- Description of the GHG reduction measure(s); must be in PCAP
- Magnitude of GHG reductions for 2025-2030 and 2025-2050
- Transformative impacts
- Intersection with other funding; demonstrate funding need
- Cost effectiveness of GHG reductions
- Co-benefits: co-pollutant emission changes, workforce opportunities
- Community engagement



Reduction Measures by Action Team



- 1 Residential and Commercial Buildings
- 2 Agriculture / Natural & Working Lands
- 3 Greenhouse Gas Inventory
- 4 Waste and Materials Management
- 5 Industry
- 6 Transportation



GHG Inventories: Implementable Programs – All Sectors

| Sector | Measure Examples |
|--------------------------------------|---|
| Agriculture | <ul style="list-style-type: none">• Expand existing, successful programs and incentives such as Climate Smart Commodities for producers to implement carbon-reducing practices.• Deploy sustainable forest management for optimal sequestration and preservation of carbon.• Expand urban tree planting and greenspace programs.• Expand programs to preserve and restore ecosystems with carbon sequestration benefits. |
| Residential and Commercial Buildings | <ul style="list-style-type: none">• Improve energy efficiency in existing housing inventory through retrofits, weatherization, energy management, and rebate initiatives.• Provide incentives and rebates for new residential, commercial, and public construction to include carbon-storing and energy efficient construction.• Install microgrids.• Update building codes. |
| Transportation | <ul style="list-style-type: none">• Install EV infrastructure at certain locations around the state (e.g., city halls, schools) to create Resilience Hubs.• Expand public transportation and other transportation options (walking, biking). |
| Industry | <ul style="list-style-type: none">• Provide incentives to use biochar in cement production.• Provide incentives to businesses to reduce power consumption during the production process. |
| Waste | <ul style="list-style-type: none">• Establish new programs and incentives for reducing and reusing waste, for example through community composting programs, on-farm anaerobic digester systems, or biogas production. |





Thank you for your interest in the PAQC!

Contact us: PAQC@scor.sc.gov

Visit our website: <https://scor.sc.gov/PAQC>

