Palmetto Air Quality Collaborative (PAQC)

Overview of the PAQC Planning Process

SOUTH CAROLINA OFFICE OF RESILIENCE

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

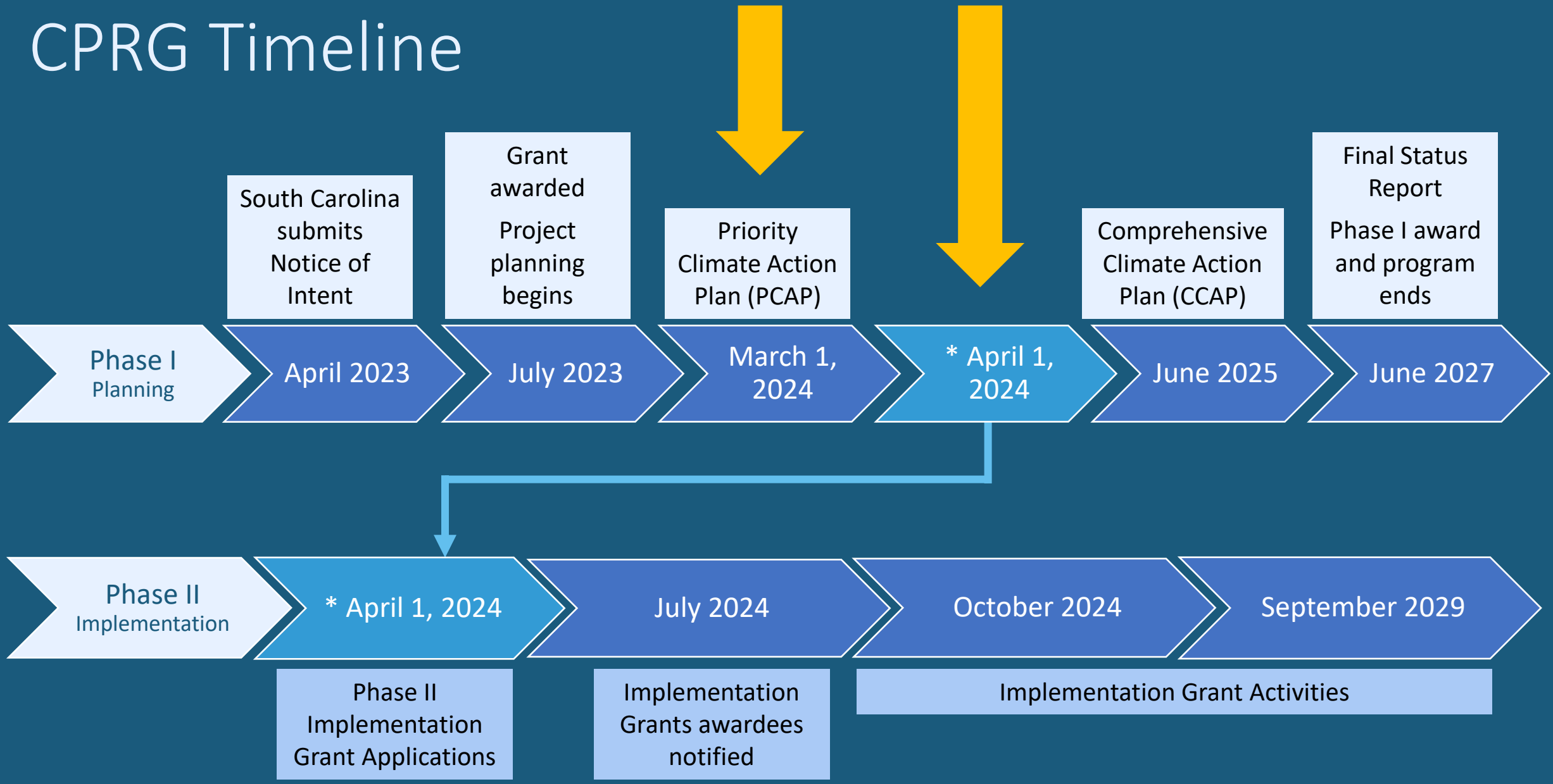
Phase I: Planning Grants

- $3 million for the statewide effort
  - Lead recipient: SC Office of Resilience (SCOR)
  - 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

Coordination Teams

Interagency Coordination

State agencies, Catawba Indian Nation, COGs, municipalities

Public & Stakeholder Engagement

SCOR, Energy Office

Action Teams

- 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

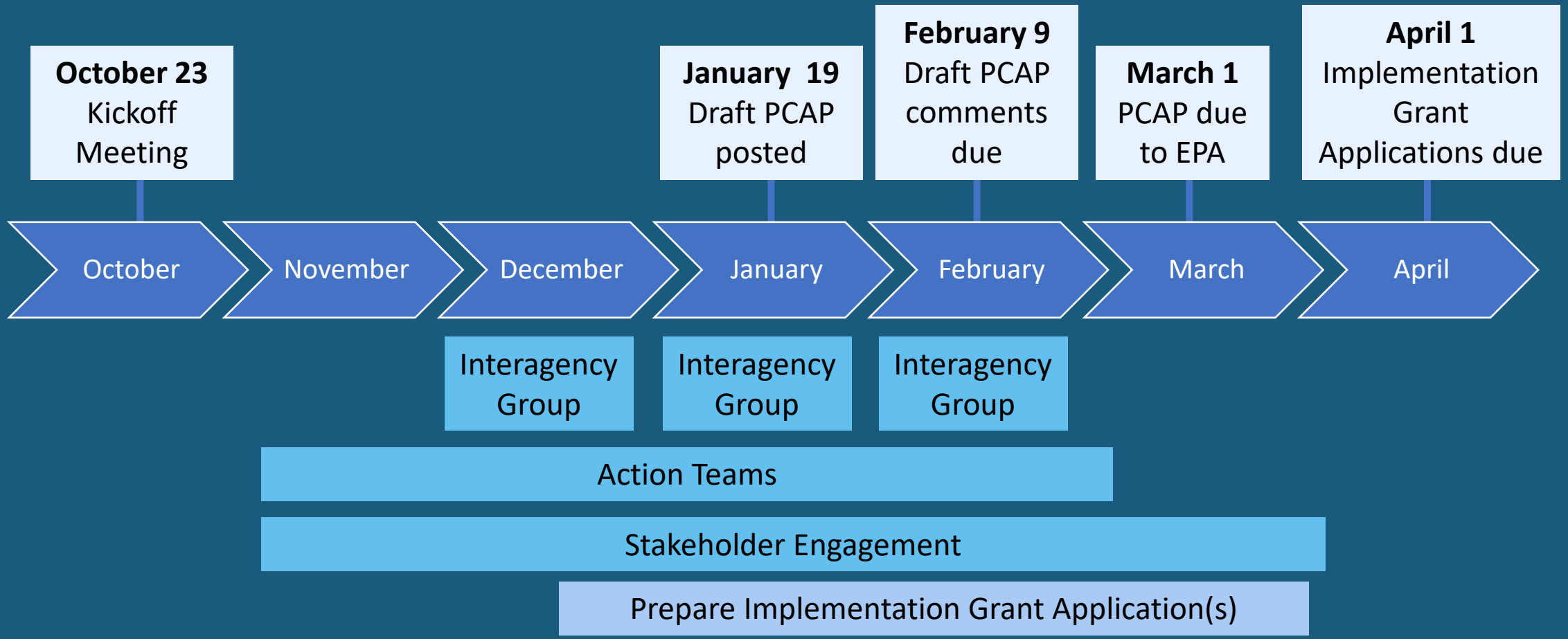
PCAP:
March 1, 2024

Implementation Grant
April 1, 2024

CCAP:
June 2025

Status Report:
June 2027

PCAP Timeline and Targets



Phase II: 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

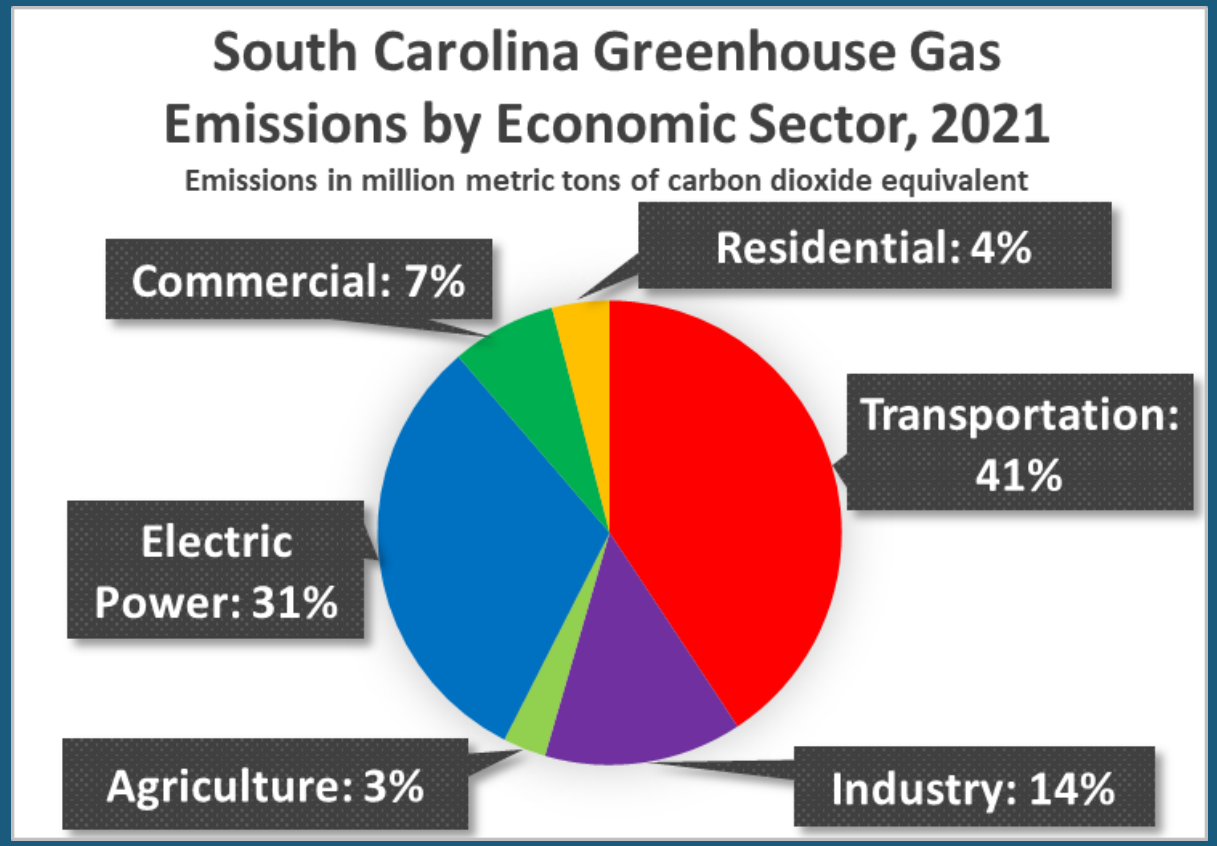
Priority Climate Action Plan (PCAP): March 1, 2024	Comprehensive Climate Action Plan (CCAP): June 2025	Status Report: June 2027
GHG Inventory	GHG Inventory	Update encouraged
	GHG Emissions Projections	Update encouraged
	GHG Reduction Targets	
Quantified GHG Reduction Measures	Quantified GHG Reduction 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

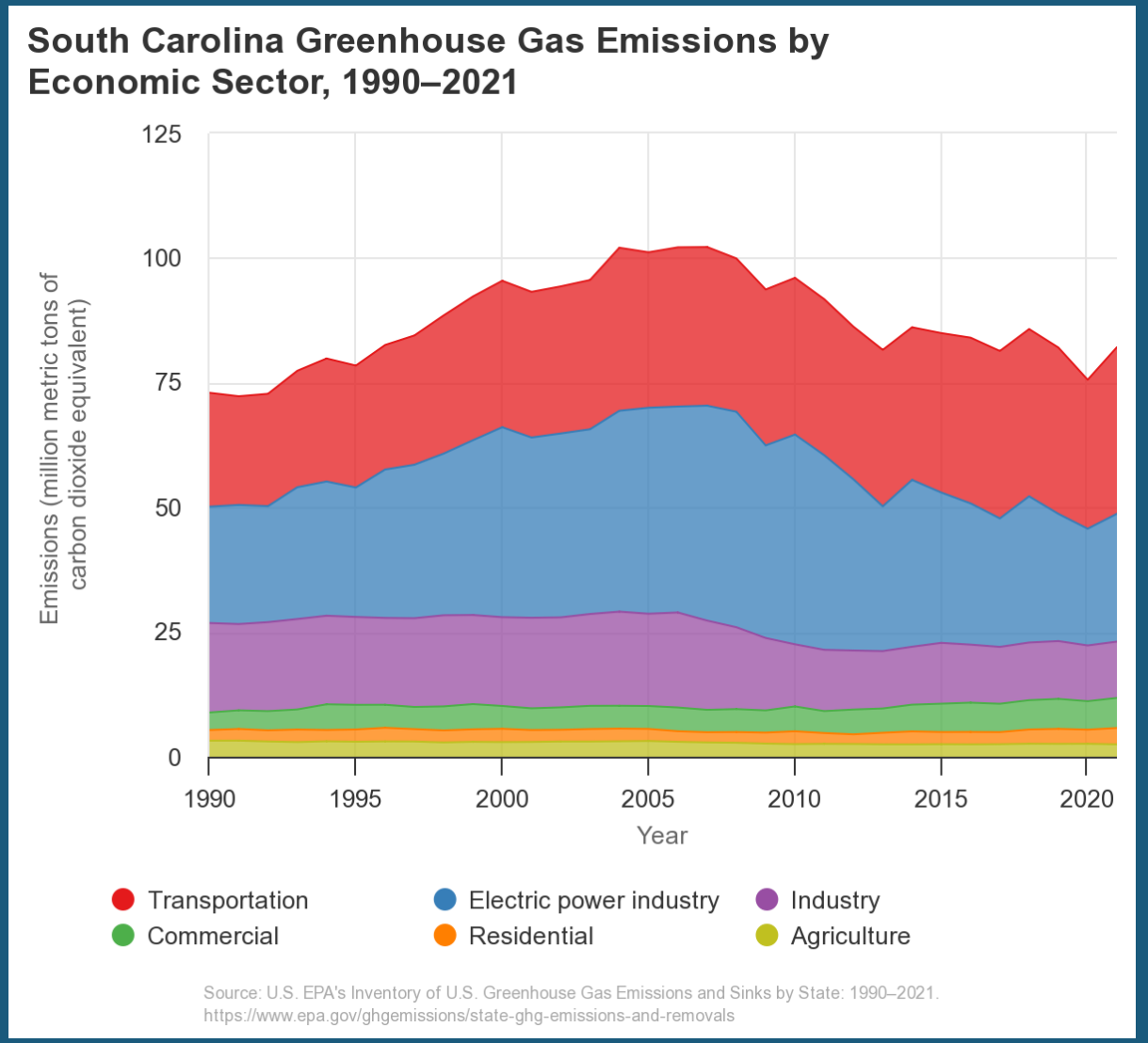
Common Name	Chemical Formula	Common Sources and Uses
Carbon Dioxide	CO_2	Combustion (burning fossil fuels) Land cover change
Methane	CH_4	Combustion Agriculture (livestock and rice) Waste and landfill decomposition
Nitrous Oxide	N_2O	Combustion (burning fossil fuels)
Sulfur Hexafluoride	SF_6	Electrical Insulator (gas used to fill spaces to insulate)
Hydrofluorocarbons	HFCs	Refrigerants (coolant)
Perfluorocarbons	PFCs	Aluminum production Industrial processes

EPA Overview of Greenhouse Gases: https://www.epa.gov/ghgemissions/overview-greenhouse-gases

South Carolina GHG Emissions

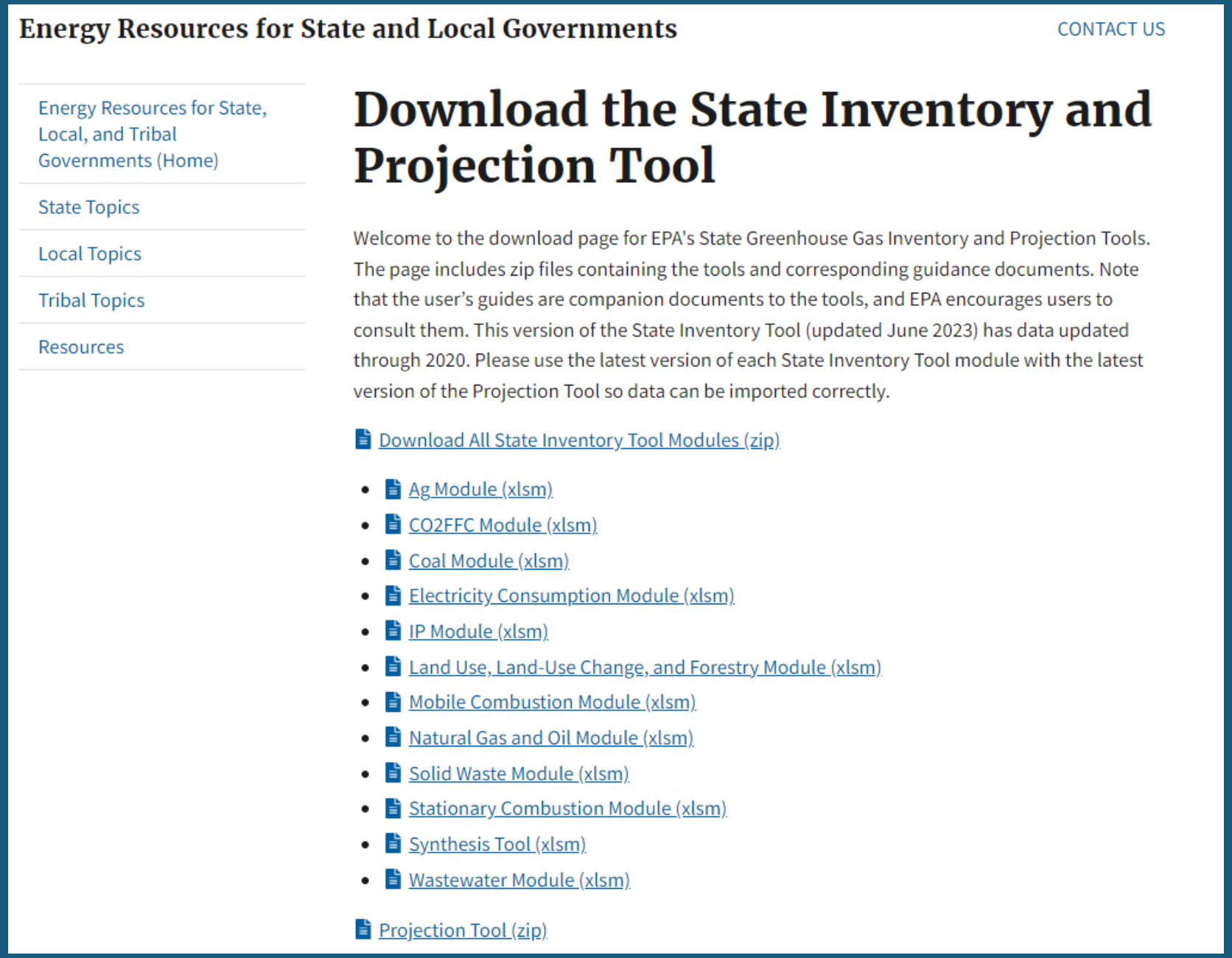


Source: U.S. EPA's Inventory of U.S. Greenhouse Gas Emissions and Sinks by State: 1990-2021. GHG Inventory Data Explorer. https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks



1 Greenhouse gas inventory

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



Energy Resources for State and Local Governments

CONTACT US

- Energy Resources for State, Local, and Tribal Governments (Home)
- 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 (xlsm)
- CO2FFC Module (xlsm)
- Coal Module (xlsm)
- Electricity Consumption Module (xlsm)
- IP Module (xlsm)
- Land Use, Land-Use Change, and Forestry Module (xlsm)
- Mobile Combustion Module (xlsm)
- Natural Gas and Oil Module (xlsm)
- Solid Waste Module (xlsm)
- Stationary Combustion Module (xlsm)
- Synthesis Tool (xlsm)
- Wastewater Module (xlsm)

Projection Tool (zip)

EPA State Inventory Tool (SIT)

- Provides a standard methodology to calculate emissions using national datasets and the opportunity to supplement with local data
- *The Inventory of U.S. Greenhouse Gas Emissions and Sinks* (U.S. EPA, 2022) is the basis for default national datasets
  - Data are gathered by federal agencies
  - Top-down approach
- All modules examine direct GHG emissions
  - Exception: electricity consumption module estimates indirect GHG emissions

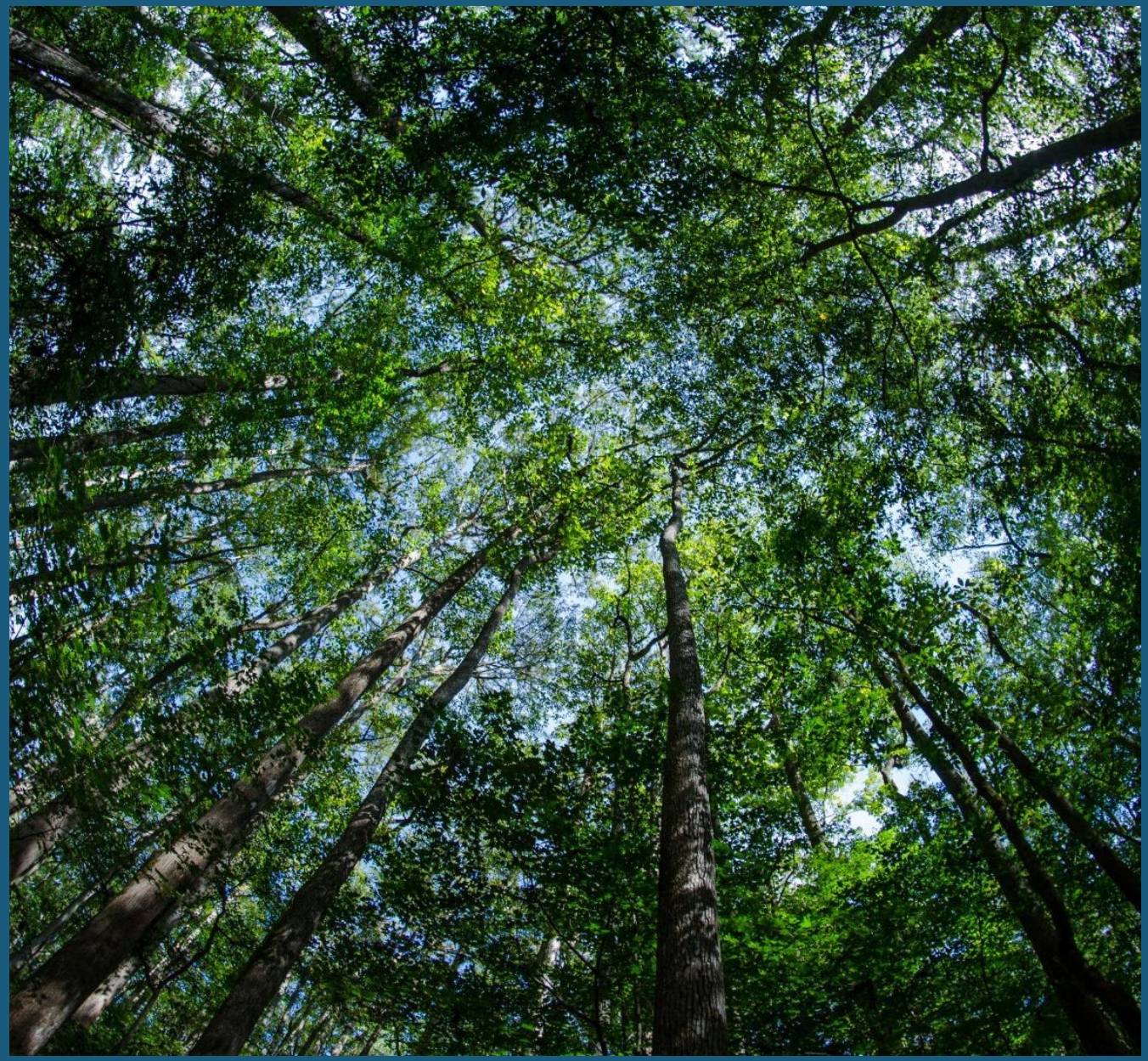
PAQC Use of the SIT

- South Carolina will use EPA default values
  - Exception: EPA does not provide hectares burned; this data will be provided by SC Forestry Commission
- Emission units are in million metric tons of carbon dioxide equivalent ($MMTCO_2e$)
  - SIT may report in metric tons CO_2e, which will be converted to $MMTCO_2e$

2 Quantifiable GHG reduction measures

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

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



EPA Requirements

PCAP

- GHG Inventory
- Priority GHG Reduction Measures
  - Implementation ready; can be completed in a 5-year period
  - Align with and advance state priorities
  - For each measure, 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 measures; 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 emissions changes
- Workforce opportunities
- Community engagement

Reduction Measures by Action Team

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

Implementable Programs – All Sectors

Agriculture / Natural and Working Lands

- Soil health
- Climate-smart agricultural, forestry, and livestock practices
- Ecosystem restoration, conservation
- Carbon storage measuring and monitoring
- Urban forests, green spaces
- On-farm renewable energy and energy efficiency
- Wildfire risk management

Residential & Commercial Buildings

- Energy efficiency incentives
- Weatherization retrofits
- Building energy codes
- Building performance

Industry

- CO2 capture, transportation, storage; related technologies
- CO2 monitoring, reporting, verification; markets
- Clean hydrogen
- Low carbon materials and procurement
- Energy and material efficiency in industrial processes
- Clean industrial hubs or clusters

Transportation

- Zero Emission Vehicles: Incentives for light, medium and heavy-duty electric vehicles; state fleets
- Ports, Airports, Freight, Rail: Increase of electrified or less carbon intense transportation, including vessels, truck transport, port equipment, etc.
- Charging infrastructure deployment
- Clean infrastructure investments; reduce vehicle miles traveled
- Planning and zoning: transit, land use, and housing

Waste and Materials Management

- Increase recycling, composting, waste diversion
  - Community composting programs
  - On-farm anaerobic digester systems
- Optimize energy recovery from landfills
  - Biogas production
- Product stewardship

Thank you for your interest in the PAQC!

Contact us at PAQC@scor.sc.gov
Visit our website at https://scor.sc.gov/PAQC