PRIORITY CLIMATE ACTION PLAN

Alabama Department of Environmental Management

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Introduction

The Alabama Department of Environmental Management (ADEM) has partnered with members of our stakeholder group (Appendix A) and potential implementation grant applicants to produce this priority climate action plan (PCAP) to support investment in policies, practices, and technologies that reduce pollutant emissions, create high-quality jobs, spur economic growth, and enhance the quality of life for all Alabamians. This project has been funded wholly or in part by the United States Environmental Protection Agency (EPA) under assistance agreement 02D51623 to the Alabama Department of Environmental Management. The contents of this document do not necessarily reflect the views and policies of the EPA, nor does the EPA endorse trade names or recommend the use of commercial products mentioned in this document.

The measures contained herein should be construed as broadly available to any entity in the state eligible for receiving funding under the EPA's Climate Pollution Reduction Implementation Grants and other funding streams, as applicable.

This PCAP is organized into six sections:

1. Introduction
2. Greenhouse Gas (GHG) Emissions Inventory
3. Priority Measures
4. Low-Income/Disadvantaged Community Benefits Analysis
5. Review of Authority to Implement
6. Conclusion

Greenhouse Gas Emissions Inventory

The Alabama Department of Environmental Management has developed a statewide inventory of major sources of GHG emissions within Alabama. This inventory was prepared using the following data resource(s):

- State-level GHG inventories prepared by the EPA[1]

Detailed methodology and quality assurance procedures for preparation of this inventory are contained in our Quality Assurance Project Plan (QAPP). Our QAPP was submitted to EPA October 3, 2023, and it was approved on October 19, 2023.

The Alabama inventory includes the following sectors and gases:

Sectors	***Greenhouse Gases (across all sectors)***
1. Transportation 2. Electricity generation and/or use 3. Natural and working lands 4. Industry 5. Agriculture 6. Commercial and residential buildings 7. Waste and materials management 8. Wastewater	carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), fluorinated gases (F-gases) including hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3)

Table 1 details GHG emissions in million metric tons (MMT) of carbon dioxide equivalents (CO_2e) for all economic sectors. Table 2 details emissions of specific GHGs across all sectors.

[1] https://www.epa.gov/ghgemissions/state-ghg-emissions-and-removals

Table 1. Alabama GHG emissions in MMT CO_2e by Sector[2]

Sector/Source	2005	2021
Transportation	**34.9**	**38.3**
CO_2 from Fossil Fuel Combustion	32.8	37.2
Substitution of Ozone Depleting Substances	1.3	0.6
Mobile Combustion	0.6	0.3
Non-Energy Use of Fuels	0.2	0.2
Electric Power Industry	**83.6**	**47.9**
CO_2 from Fossil Fuel Combustion	82.3	47.2
Stationary Combustion	1.0	0.6
Incineration of Waste	0.1	0.1
Electrical Equipment	0.3	0.1
Other Process Uses of Carbonates	0.0	0.0
Industry	**40.3**	**32.6**
CO_2 from Fossil Fuel Combustion	16.0	16.3
Natural Gas Systems	3.4	3.1
Non-Energy Use of Fuels	0.9	0.8
Petroleum Systems	0.1	0.1
Coal Mining	8.7	4.5
Iron and Steel Production	5.7	0.8
Cement Production	2.5	2.1
Substitution of Ozone Depleting Substances	0.1	0.6
Petrochemical Production	0.2	0.2
Lime Production	0.8	1.8
Ammonia Production	0.1	0.1
Nitric Acid Production	NO	0.2
Abandoned Oil and Gas Wells	0.0	0.0
Wastewater Treatment	0.3	0.3
Urea Consumption for Non-Agricultural Purposes	0.1	0.1
Mobile Combustion	0.1	0.1
Abandoned Underground Coal Mines	0.0	0.0
Adipic Acid Production	NO	NO
Carbon Dioxide Consumption	0.0	0.1
Electronics Industry	NO	NO
N_2O from Product Uses	0.1	0.1
Stationary Combustion	0.3	0.3

[2] Data were obtained from EPA's State-level GHG inventories file State-GHG_Trends_Emissions__Sinks_Economic_Sector_08312023.xlsx, which was accessed on February 1, 2024. This data set is available at <https://www.epa.gov/ghgemissions/state-ghg-emissions-and-removals>.

NO = Not occurring

Symbols:

"-" indicates that the value has not be estimated at this time or is not applicable to the State

"+" indicates that the value does not exceed 0.005 MMT CO_2E

Sector/Source	2005	2021
Other Process Uses of Carbonates	0.0	0.0
Fluorochemical Production	0.0	+
Aluminum Production	NO	NO
Soda Ash Production	NO	NO
Ferroalloy Production	0.1	0.2
Titanium Dioxide Production	NO	NO
Caprolactam, Glyoxal, and Glyoxylic Acid Production	NO	NO
Glass Production	0.0	0.0
Magnesium Production and Processing	NO	NO
Zinc Production	NO	0.3
Phosphoric Acid Production	NO	NO
Lead Production	0.0	0.1
Landfills (Industrial)	0.6	0.5
Carbide Production and Consumption	+	+
Agriculture	**6.1**	**5.5**
N_2O from Agricultural Soil Management[1,2]	2.4	2.2
Enteric Fermentation	2.5	2.4
Manure Management	0.6	0.6
CO_2 from Fossil Fuel Combustion	0.7	0.3
Rice Cultivation	NO	NO
Urea Fertilization	0.0	0.0
Liming	NO	NO
Mobile Combustion	0.0	0.0
Field Burning of Agricultural Residues[1,2]	0.0	0.0
Stationary Combustion	+	+
Commercial	**5.1**	**7.9**
CO_2 from Fossil Fuel Combustion	1.8	2.1
Landfills (Municipal)	2.3	3.9
Substitution of Ozone Depleting Substances	0.4	1.3
Wastewater Treatment	0.5	0.5
Composting	0.0	+
Stationary Combustion	0.0	0.0
Anaerobic Digestion at Biogas Facilities	NO	NO
Residential	**2.9**	**3.1**
CO_2 from Fossil Fuel Combustion	2.7	2.0
Substitution of Ozone Depleting Substances	0.1	1.0
Stationary Combustion	0.1	0.0
Total Emissions (Sources)	**172.9**	**135.3**
Land-Use, Land-Use Change, and Forestry (LULUCF) Sector Net Total	**(48.1)**	**(52.7)**
Net Emissions (Sources and Sinks)	**124.8**	**82.6**

Table 2. Alabama GHG emissions in MMT CO_2e by Gas[3]

Gas/Source	2005	2021
CO_2	**44.9**	**35.4**
Fossil Fuel Combustion	42.4	34.6
Electric Power Sector	3.2	2.8
Transportation	14.6	9.5
Industrial	20.7	18.8
Residential	1.7	1.5
Commercial	2.1	2.1
Non-Energy Use of Fuels	0.1	0.1
Natural Gas Systems	0.5	0.3
Cement Production	NO	NO
Lime Production	NO	NO
Other Process Uses of Carbonates	0.1	0.1
Glass Production	NO	NO
Soda Ash Production	NO	NO
Carbon Dioxide Consumption	+	0.0
Incineration of Waste	0.0	+
Titanium Dioxide Production	NO	NO
Aluminum Production	NO	NO
Iron and Steel Production & Metallurgical Coke Production	NO	NO
Ferroalloy Production	NO	NO
Ammonia Production	1.0	NO
Urea Consumption for Non-Agricultural Purposes	0.0	0.0
Phosphoric Acid Production	NO	NO
Petrochemical Production	NO	NO
Carbide Production and Consumption	+	+
Lead Production	NO	NO
Zinc Production	NO	NO
Petroleum Systems	0.8	0.3
Abandoned Oil and Gas Wells	+	+
Magnesium Production and Processing	NO	NO
Coal Mining	+	+

[3] Data were obtained from EPA's State-level GHG inventories file State-GHG_Trends_Emissions__Sinks_By_Gas_08312023.xlsx, which was accessed on February 1, 2024. This data set is available at <https://www.epa.gov/ghgemissions/state-ghg-emissions-and-removals>.

NO = Not occurring
Symbols:
"-" indicates that the value has not be estimated at this time or is not applicable to the State
"+" indicates that the value does not exceed 0.005 MMT CO_2E

Gas/Source	2005	2021
Liming	NO	NO
Urea Fertilization	+	+
Substitution of Ozone Depleting Substances	+	+
International Bunker Fuels[4]	3.7	2.9
Wood Biomass, Ethanol, and Biodiesel Consumption[5]	0.2	1.0
CH_4	**3.4**	**1.9**
Stationary Combustion	0.0	0.1
Mobile Combustion	0.0	+
Coal Mining	0.0	+
Abandoned Underground Coal Mines	NO	NO
Natural Gas Systems	1.4	0.5
Petroleum Systems	1.5	0.6
Abandoned Oil and Gas Wells	+	+
Petrochemical Production	NO	NO
Carbide Production and Consumption	NO	NO
Iron and Steel Production & Metallurgical Coke Production	NO	NO
Ferroalloy Production	NO	NO
Enteric Fermentation	0.0	+
Manure Management	+	+
Rice Cultivation	NO	NO
Field Burning of Agricultural Residues	NO	NO
Landfills	0.3	0.5
Wastewater Treatment	0.0	0.0
Composting	NO	NO
Anaerobic Digestion at Biogas Facilities	NO	NO
Incineration of Waste	+	+
International Bunker Fuels[6]	+	+
N_2O	**0.3**	**0.2**
Stationary Combustion	0.0	0.1
Mobile Combustion	0.2	0.1
Adipic Acid Production	NO	NO
Nitric Acid Production	NO	NO
Manure Management	+	+
Agricultural Soil Management	0.0	0.0
Field Burning of Agricultural Residues	NO	NO
Wastewater Treatment	0.0	0.1

[4] Emissions from international bunker fuels are not included in totals.
[5] Wood biomass, ethanol, and biodiesel consumption emissions are not included in the sum of Energy sector totals. Net carbon fluxes from changes in biogenic carbon reservoirs are accounted for in LULUCF estimates.
[6] Emissions from international bunker fuels are not included in totals.

Gas/Source	2005	2021
N_2O from Product Uses	0.0	0.0
Caprolactam, Glyoxal, and Glyoxylic Acid Production	NO	NO
Incineration of Waste	+	+
Composting	NO	NO
Electronics Industry	NO	NO
Natural Gas Systems	+	+
Petroleum Systems	+	+
International Bunker Fuels[7]	0.0	0.0
HFCs, PFCs, SF_6 and NF_3	**0.3**	**0.408**
HFCs	**0.2**	**0.4**
Substitution of Ozone Depleting Substances	0.2	0.4
Fluorochemical Production	NO	NO
Electronics Industry	NO	NO
Magnesium Production	NO	NO
PFCs	**+**	**+**
Aluminum Production	NO	NO
Electronics Industry	NO	NO
Electrical Equipment	NO	NO
Substitution of Ozone Depleting Substances[8]	+	+
SF_6	**0.1**	**0.0**
Electrical Equipment	0.1	0.0
Electronics Industry	NO	NO
Magnesium Production	NO	NO
NF_3	**NO**	**NO**
Electronics Industry	NO	NO
Total (Sources) Emissions[9]	**48.9**	**37.9**
LULUCF Emissions[10]	**14.9**	**0.7**
LULUCF CH_4 Emissions	8.9	0.4
LULUCF N_2O Emissions	6.1	0.3
LULUCF Carbon Stock Change[11]	19.1	(15.341)
LULUCF Sector Net Total[12]	34.0	(14.6)
Net Emissions (Sources and Sinks)[13]	**82.9**	**23.3**

[7] Emissions from international bunker fuels are not included in totals.
[8] Small amounts of PFC emissions also result from this source.
[9] Total emissions presented without LULUCF.
[10] LULUCF emissions of CH_4 and N_2O are reported separately from gross emissions totals.
[11] LULUCF Carbon Stock Change is the net C stock change from the following categories: Forest Land Remaining Forest Land, Land Converted to Forest Land, Cropland Remaining Cropland, Land Converted to Cropland, Grassland Remaining Grassland, Land Converted to Grassland, Wetlands Remaining Wetlands, Land Converted to Wetlands, Settlements Remaining Settlements, and Land Converted to Settlements.
[12] The LULUCF Sector Net Total is the net sum of all CH_4 and N_2O emissions to the atmosphere plus net carbon stock changes.

[13] Net emissions include LULUCF.

Priority Measures

The measures in this section have been identified as "priority measures" for the purposes of pursuing funding through CPRG implementation grants. This list is not exhaustive of Alabama's priorities. Instead, the selected priority measures included in this PCAP meet the following criteria:

- The measure is implementation ready, meaning that the design work for the policy, program, or project is complete enough that a full scope of work and budget can be included in a CPRG implementation grant application.
- The measure can be completed in the near term, meaning that all funds will be expended, and the project completed, within the five-year performance period for the CPRG implementation grants.
- The measure advances the following state priorities:
    1. Significant and sustained emissions reductions
    2. Rural development
    3. Quality jobs
    4. Public Health
    5. Support Economic Development

For each priority measure, the PCAP provides the following information:

- An estimate of the cumulative GHG emission reductions from 2025 through 2030/2035;
- An estimate of the cumulative GHG emission reductions from 2025 through 2050;
- Key Implementing agency or agencies;
- Implementation schedule and milestones
- Geographic scope;
- Metrics for tracking progress;
- Cost estimates for implementation;
- Impacts on low-income and disadvantaged communities;
- Authority to implement

The PCAP priority measures along with the information for the nine bullet points above will follow. The first section will organize measures by project, and the second section will organize the remaining measures by sector.

Projects:

Project 1: Recycling

The City of Montgomery owns a materials recovery facility in Montgomery, AL, that was developed in 2014. The 85,000 square foot facility is located at 1551 Louisville Street Montgomery, AL, which is an EPA designated disadvantaged zone. The facility is operated by RePower South Montgomery, LLC. The facility accepts MSW and source segregated recycling material from residential, commercial, and industrial customers in the City of Montgomery and surrounding communities including Prattville, Dothan, Millbrook, Maxwell Airforce Base, Fort Walton, Vestavia Hills, Hoover, Pelham, Mountain Brook, and Trussville. The facility is a critical regional recycling processing center as there are no other mechanized recycling processing centers operating in the State of Alabama. The incoming material is processed by the facility equipment systems to first separate traditional recyclable commodities that are sold into the mechanical recycling commodity markets including cardboard, mixed paper, #1 PET plastic bottles, #2 HDPE plastic bottles, #5 PP plastic containers, aluminum cans, metal cans, and scrap metals. The facility further separates what has historically been non-recyclable papers and other plastics (#4, #6, #7) to manufacture a proprietary clean, low carbon EPA designated "non-waste" solid fuel used in local industry (traditionally cement manufacturing) to replace coal. The facility has the opportunity to improve and expand the services provided.

The project will fund three specific initiatives or measures:

1. The first initiative will be to upgrade/augment existing operating equipment systems to increase recovery and landfill diversion.
2. The second initiative will be to enable the targeted recovery of specific polyolefin plastics for advanced, circular recycling of plastics.
3. The third initiative will be to enable the recovery of organics from landfill bound waste to anaerobically digested to produce renewable natural gas (RNG) and soil amendments.

More sustainable materials resource management, job creation, community investment, carbon footprint reduction and less GHG and particulate emissions enhance the regions disadvantaged, mostly minority population's economy, quality of life, air quality and climate consciousness. Further information related to the project is listed below.

1. **Estimate of cumulative GHG emission reductions from 2025-2030:** Approximately 600,000 $MTCO_2E$

   240,000 $MTCO_2E$ reduction Anaerobic Digestion of Organics
   150,000 $MTCO_2E$ reduction advanced plastics recycling*
   210,000 $MTCO_2E$ reduction mechanical recycling and solid low carbon fuels

   * Estimated from WARM model, additional analysis specific to advanced plastics recycling and the ultimate use of the RNG (electricity generation or transportation) are expected to increase reductions

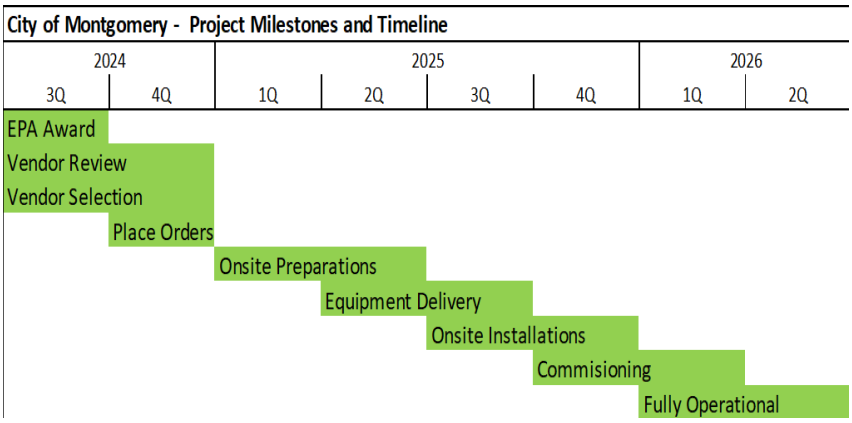
2. **Estimate of cumulative GHG emission reductions from 2025-2050:** Approximately 3,700,000 $MTCO_2E$

   1,500,000 $MTC0_2E$ reduction Anaerobic Digestion of Organics
   850,000 $MTC0_2E$ reduction advanced plastics recycling*
   1,350,000 $MTC0_2E$ reduction mechanical recycling and solid low carbon fuels

   * Estimated from WARM model, additional analysis specific to advanced plastics recycling and the ultimate use of the RNG (electricity generation or transportation) are expected to increase reductions

3. **Implementing Agency or Agencies:** City of Montgomery and the Solid Waste Authority of the City of Montgomery (a public authority)

4. **Implementation Schedule and Milestones:** Depending on the time of the EPA award, the project and all measures would be fully operational by 2026.



5. **Geographic Scope:** The geographic scope of the project would be the city of Montgomery and the surrounding central Alabama region as far south as Dothan, Alabama and as far north as the Birmingham MSA. Each measure is served across all regions.

6. **Metrics for tracking progress**

The project and measure key tracking metrics include:

- Tons of material processed and diverted from landfill
- Tons of recycled material recovered and sold to commodity markets
- Gallons of naptha oil sold to petro chemical companies
- Tons of clean, low carbon renewable solid fuel production volumes
- Cubic feet of renewable natural gas delivered to pipeline
- Tons of soil amendments delivered

7. **Cost estimates for implementation**

Total project cost is estimated at $110 million (whereby a grant could fund the entirety of the cost or the grant combined with private capital could fund the project)

$50 million anaerobic digestion
$50 million advanced plastics
$10 million recycling facility modifications

8. **Impacts on Low Income and Disadvantaged Communities:**

The City of Montgomery is, and many surrounding rural communities generally are, disadvantaged communities with a mostly minority population. Access to recycling services and clean energy are generally limited or simply not available to most residents in the region served. MRF facilities cost tens of millions of dollars to construct and millions of dollars annually to operate. Because of these prohibitive costs, there are no automated MRF's in the region, let alone the State of Alabama, except for the City of Montgomery facility. The City facility is a critical piece of sustainable infrastructure, and with the expansion funded by this grant, it will be able to serve in a hub-and-spoke model for the disadvantaged communities in the region.

The Project and all measures will support and enhance extensive and innovative climate positive greenhouse gas reductions through sustainable waste and materials management for all residents in local, historically underserved communities. The City of Montgomery facility would serve not only the disadvantaged areas in the City of Montgomery in which it is located, but also, in a hub-and-spoke model, for other disadvantaged communities in the region such as Clanton, parts of Hoover and Dothan, Alabama. In addition to traditional recycling, the City facility recovers non-recyclable MSW material to manufacture a clean, low carbon, EPA determined non-waste fuel to replace coal in local industry. Reduction in local coal consumption will improve air quality in and around the local industrial boilers which are generally located in the disadvantaged communities. The Project would further enhance the circular recycling of

plastics, which would reduce plastic litter in our communities and waterways. The project also diverts organic waste away from landfills, capturing greenhouse gas methane emissions to create renewable natural gas and a soil amendment to support local agriculture.

The Project serves to promote sustainable living, reduce landfilling, create clean, low carbon renewable energy, improve local air quality, decrease local litter, and deliver environmental justice in the disadvantaged communities of central Alabama.

9. **Authority to Implement:**

The City of Montgomery and the Solid Waste Authority of the City of Montgomery (a public authority) qualify as an eligible entity under Section 137(c)(1) of the CAA as defined in the NOFO pronouncements.

Project 2: Establishment of Solar/Charging Infrastructure Supporting Irrigation in Rural Alabama

The goal of this project is to implement a sustainable solar solution to on-farm energy needs in Alabama, with particular focus on historically excluded communities in the Blackbelt region. Irrigation is required in Alabama to be fully competitive with western cotton growers and Midwest grain farmers; however, the expansion has not always been equitable for areas where a lack of resources or insufficient electrical grid and infrastructure exist. Irrigation, while a sustainable climate adaptation in the Southeast, can add significant power usage to the farm operation. We propose to implement solar arrays to offset GHG emissions from on farm energy consumption and enable climate resilience agricultural practices. As part of this program, we expect a reduction of GHGs from both on farm savings and external benefits such as reduced transportation. This project will complement an existing USDA funded program that provides cost share support to eligible farms for irrigation. We will pursue programs with the energy sector providers and will provide a framework whereas these measures can be scaled up across Alabama and the Southeast US.

GHG Reduction Strategies
The following describes the different components of GHG reductions and their benefits. We note that while the program discusses irrigation expansion as an economic benefit that it will be a GHG reduction. This is because new pivots funded under the USDA program (with funds already in place) will be built, but they will not go into the poorest areas where the electrical grid is lacking or use solar.

Use of Solar Arrays for Powering Center Pivot Irrigation Infrastructure: In many parts of rural Alabama the electrical grid does not have the three-phase power needed to run

pumps and center pivots for row crop production. It is too expensive to run the three-phase power lines in the sparsely populated rural area. Even if two to three phase power converters are used the power grid often cannot support the load, especially in peak power times. In this implementation plan, solar arrays will be built to power pivots and pumps. The GHG reduction will then be the amount of the grid power needed to drive the irrigation systems versus solar. We will also explore blended systems of solar power and grid power using off peak grid power to reduce the needed size of the solar arrays.

Use of Solar Arrays for Powering Pumps for Drip Irrigation Vegetable/Orchard Production: In the poor underserved rural populations there has recently been a revival in vegetable and orchard (pecan/peaches) production to serve urban areas such as Montgomery and Birmingham. However, most of these small production areas don't have access to pumps and irrigation systems that will improve the quality and yields. Part of the lack of irrigation is the problem of running power out to the fields where the production is carried out. Under this implementation plan small solar arrays will be used to power small pumps to drive drip irrigation systems.

Reduction in Transportation Costs for Added Irrigated Grain Production: It is ironic that after Alabama corn production collapsed in the last century (due to Alabama 's rain-fed production not being competitive with Midwest corn), its poultry industry grew to be number two in the country. This was supported by imports of corn and grains from the Midwest. Today over 90% of the grain supporting the poultry industry is imported. However, this import of grain comes with a transportation price cost which falls at least partly on Midwest farmers. They accept a price which is about 20% lower than Southeast produced grains. This difference in market economic terms is the basis difference in Midwest corn price versus Southeast prices. The transportation costs is partly due to the diesel fuel consumed in barging grain from the Midwest to Alabama. We will make estimates of GHG reductions based on diesel not consumed if grains can be produced competitively locally.

Reduction in Transportation Costs for Vegetable and Orchard Production: California accounts for most of the imported vegetable production in the U.S. California produces 94% of broccoli, 90% of leaf lettuce and even 84% of peaches in the U.S. There have been numerous studies of food transportation in food miles or food gallons. We will use these to estimate the energy savings of locally grown vegetables.

Reduction of Nitrous Emissions from Fertilizer Application: N_2O can be a highly effective greenhouse gas. Emissions of N_2O from fertilizer can be reduced through application times and through modification of moisture and temperature environments. Fertigation through the pivot can delay application until the plant is ready to use nitrogen avoiding atmospheric emissions and potentially run-off. Under this activity we will use irrigation and possibly fertigation to reduce nitrous emissions (note this was a CPRG activity under the Agricultural sector). We will use models and techniques to quantify the reduction in emissions from application strategies.

Further information related to the project is below.

1. **An estimate of the cumulative GHG emission reductions from 2025 through 2030/2035:**

4,095 (See Table Below)

2. **An estimate of the cumulative GHG emission reductions from 2025 through 2050:**

61,668 (See Table Below)

Estimated GHG reductions in CO2 eq for the Project

Project Total in Metric Tons (CO2 Eq)		Cumulative 2025-2030	Cumulative Through 2050
Barge		220	3,319
Solar Power	Blended excess power to grid and on-farm use	3,694	55,623
N2O CO eq		181	2,726
Total		**4,095**	**61,668**

The calculations in the table are based on the following.

The barge transport category estimates the savings by eliminating transport costs of grain from Midwest to Alabama to support Alabama's poultry industry.

The solar category estimates the total GHG reductions by using the annual solar produced by the arrays sized to support the irrigation pivots. The estimate gives the solar savings assuming a 1.5-acre array is needed to support pivots.

The N_2O category is based on USDA estimates that irrigation reduces N_2O emissions (in CO_2 equivalents) for row crops in Alabama by 16%.

The 2025-2030 numbers are based on having the equivalent of two years of the infrastructure in place in years 2026-2030. The 2030 through 2050 numbers are based on having all solar and irrigation infrastructure in place by 2031.

3. **Key Implementing Agency or Agencies:**

The key implementing agency will be the State of Alabama Soil and Water Conservation Committee (ALSWCC). The Alabama Soil and Water Conservation Committee

(ALSWCC) is an executive department of the State of Alabama created by statute in 1939. The mission of ALSWCC is to encourage conservation on private lands by:

- Supporting Soil and Water Conservation Districts in local conservation efforts
- Coordinating programs to conserve Alabama's natural resources
- Securing the cooperation and assistance of Federal Partners on matters of conservation
- Educating about conservation throughout the state of Alabama

In this CPRG activity, the ALSWCC will partner with a coalition of research universities in Alabama that has pushed for expanded irrigation in the State for over 15 years as both an economic and conservation initiative. For this particular project it will include Auburn University, Tuskegee University and the University of Alabama in Huntsville. These institutions have expertise in irrigation economics, weather and climate and solar infrastructure.

This CPRG activity will also include collaboration with the USDA Natural Resources Conservation Service (NRCS). They will be providing resources to implement the irrigation infrastructure. The CPRG funds will be used to examine and implement the solar energy systems that will support the energy needs of the irrigation systems. Note, in many of the poorest areas in Alabama, the electrical grid cannot support the energy needs of irrigation so solar power is necessary.

4. **Implementation Schedule and Milestones:**

The key milestones are listed below. See the table below the milestones for schedule.

Develop List of Potential Farms/Awardees: The first step is to identify farmers and farms that can successfully implement the solar and irrigation infrastructure. This will be done in conjunction with the Alabama Irrigation Initiative which is also reaching out to farmers in three current watersheds in Alabama. That program will eventually cover most of rural Alabama.

Develop Information from Potential Contractors: A key part of the program is identifying potential solar and irrigation equipment contractors which can provide and install the equipment. This is a critical element in that Alabama, with very few acres under irrigation, has a smaller number of irrigation equipment suppliers than other states. Similar limitations may be found for solar array equipment and installation. Thus, a key step is identifying potential contractors. Note that under the CPRG rules, a bid process will be used to select the contractor.

Develop Relationship with Awardees: In selecting and awarding the infrastructure grants, it is important that the recipient has the capability, knowledge and support infrastructure to manage and operate the system towards the goals of the program. An objective system will be put in place to help select potential awardees and a system to

educate and assess the awardees capabilities. This is very similar to the current selection process being used in the USDA Alabama Irrigation Initiative.

Make Farm Selection: After evaluating the objective selection criteria, including the capability the farm has to implement the irrigation/solar systems, the selection will be made.

Put Equipment out for Bid: After selection of the farm a bid process will be carried out to select the contractor(s).

Install Irrigation/Solar Equipment: The contractor working with the farm will install the equipment and train the farmer on its operation and care.

Begin Equipment Operation: After installation the system will start operation for a crop.

Calculate/refine GHG Reductions: Throughout the project as more information is found the GHG calculations will be updated and refined.

Refine Equipment Type: As interaction occurs with farmers, vendors etc. refinements will be made to equipment needs and specifications.

The table below provides a schedule from assessment through implementation of the key milestones.

Schedule and Milestones

5. **Geographic Scope:**

The project will be statewide in rural areas. Specific attention will be given to three watersheds that were covered under the Alabama Irrigation Initiative– Northwest Alabama, Southeast Alabama and the Blackbelt in Southcentral Alabama.

6. **Metrics for Tracking Progress:**

The total number of irrigated acres under solar power will be the main metric since this gives the largest GHG reduction. The second and third metric will be the number of minority/underserved farmers and the number of acres impacted.

7. **Cost Estimates for Implementation:**

Estimated equipment costs are based on solar power for the number of solar systems to serve the 140-acre pivot systems. See the table below. The administrative costs are for staff working with farmers and vendors, carrying out cost and GHG analyses and general overhead. For initial costs, it is estimated the equivalent of twelve 140-acre systems will be installed. In actuality, it may be fewer 140-acre systems made up for by a larger number of smaller systems, e.g. ten 10-50 acres systems. This may be especially true for vegetable farmers in central Alabama. But the number of 140-acre system makes for a more convenient metric to estimate costs.

Cost Estimates for Project*

Estimated Costs						
			Number	Size	cost /acre	Total Costs
Solar Arrays for Pivots			12	1.5	300000	$ 5,400,000
					Total Battery	
Battery System			12		20,000	$ 240,000.0
On-farm Electric Equioment				Each		
	10	Pickup trucks		$ 50,000		$ 500,000
	10	Tractors		$ 25,000		$ 250,000
					Total	**$ 6,390,000**
					Administarive Costs	**$ 1,740,000**
					Total Project Costs	**$ 8,130,000**

***Cost estimates include equipment and administrative costs.**

8. **Impacts on low-income and disadvantaged communities:**

Most parts of rural Alabama are some of the poorest in the nation based on the census tracts

identified as disadvantaged in the Climate and Economic Justice Screening Tool (CEJST). Also, many census block groups are at or above the 90th percentile for some of EJScreen Supplemental Indexes when compared to the nation. This indicates severe disadvantage. The project will use both of these tools to identify where the solar irrigation projects are most needed and may have the greatest impacts.

9. **Authority to Implement:**

The Alabama Soil and Water Conservation Committee (ALSWCC)is an executive department of the State of Alabama created by statute in 1939. The mission of ALSWCC is to encourage conservation on private lands. The ALSWCC has a presence in all 67 counties in the State. Locally led, nonregulatory entities authorized under state law known as soil and water conservation districts are managed by district administrative coordinators and a voluntary Board of Supervisors. The ALSWCC has implemented many federal programs in the State. One of the most recent federal programs that was implemented was the PL566 irrigation projects in conjunction with the federal Natural Resources and Conservation Service (NRCS). Here the ALSWCC establishes the framework for selecting and providing the federal funds to farmers. This is the type of framework to be used under this EPA grant.

Project 3: Industrial Decarbonization

Heidelberg Materials plans to coordinate an EPA grant application through the City of Leeds, Alabama. Heidelberg Materials is a part of a global organization headquartered in Heidelberg, Germany, spanning operations in 50 countries and employing over 50,000 worldwide. Heidelberg Materials has globally aligned all business practices with the UN Sustainable Development Goals and commitments to 2030 and has also formalized its commitment to and is working diligently toward, achieving net zero concrete by 2050 at the latest.

Heidelberg Materials has begun to transform a substantial quantity of its cement production across North America, producing EcoCem PLC™, which is a Portland limestone cement (PLC) rather than ordinary Portland cement (OPC). PLC directly lowers the carbon intensity of our cement product, which in turn, translates to carbon intensity reductions across the cement and concrete value chain. This change reduces the amount of clinker, the energy-and CO2-intensive intermediate product in cement manufacturing, by 5% to 15%. This near-term advance is also supplemented by a longer-term perspective. Heidelberg Materials' environmental leadership is also exemplified by the development of the world's first full-scale carbon capture, utilization, and storage (CCUS) solution of the cement industry at its Edmonton, Alberta, plant in Canada. Captured cement production emissions of approximately 780,000 tons of CO2 annually are planned, and the project could be in service as early as 2026.

Heidelberg Materials is also a committed and active member of the US Portland Cement Association (PCA), playing an active and key role in its Roadmap to carbon neutrality. The Roadmap was released in October 2021 and lays out the industry plans to accomplish carbon neutrality through the value chain by 2050 at the latest.

Heidelberg Materials in Alabama
Heidelberg Materials is a leading supplier of construction materials in North America. Our core activities include the production of cement and construction aggregates, as well as producing ready-mixed concrete, asphalt, and other downstream cement products. One of Heidelberg Materials' cement plants is located just east of Birmingham in Leeds, Alabama. It serves the growing Southeast market, including Alabama, Georgia, South Carolina, Tennessee, and Mississippi. This market in this region is conservatively forecast to grow 30% in the next 25 years. The Leeds plant has been producing Portland cement since the early 1900's, starting operations in 1905 as Standard Portland Cement. The plant's rated clinker capacity is 772,000 tons per year, which requires the mining and processing of 1.05 million tons of limestone annually.

One of Heidelberg Materials' environmental and sustainability goals includes replacement of fossil fuel with low-carbon alternative fuels and reducing clinker substitution rates in the cement to lower carbon intensity of its products. In relation to this, Heidelberg Materials aims to advance environmental sustainability at its Leeds plant through implementation of two projects:
1. Alternative Fuels receiving, handling and dosing;
2. Feasibility study for Carbon Storage System.

These projects, if funded by the Environmental Protection Agency's (EPA) CPRG, align with Heidelberg Materials' commitment to reducing the carbon intensity of its cement production process.

An estimate of the cumulative GHG emission reductions from 2025 through 2030/2035
This project is expected to yield a reduction in greenhouse gas (GHG) emissions by an estimated 780,000 tons of CO2 per year. By projecting forward, we anticipate a cumulative reduction of approximately 3,900,000 tons by 2030, and a further reduction of approximately 7,020,000 tons by 2035.

An estimate of the cumulative GHG emission reductions from 2025 through 2050
This project is expected to achieve an annual reduction in greenhouse gas (GHG) emissions of approximately 780,000 tons of CO2. Over a 24-year period leading up to 2050, we anticipate a cumulative reduction totaling approximately 18,720,000 tons.

As stated above Heidelberg Materials is working on plans to achieve net zero carbon emission in concrete by 2050 by utilizing levers such as:
1. Maximizing use of low carbon or zero carbon fuel
2. Maximizing use of alternate low carbon Cementous Materials

3. Lowering the clinker factor in cement and concrete
4. Implementation of post-combustion carbon capture and or oxy-fuel type technologies
5. Focusing on technologies that promote or enhances CO2 utilization

Key implementing agency or agencies

Heidelberg Materials plans to coordinate an EPA grant application through the City of Leeds. Heidelberg Materials has a dedicated Grants Management Office that will assist with coordinating the scope of work, filing forms and creating a budget.

Implementation schedule and milestones

Each project is divided into five phases to systematically create a structured approach. This ensures comprehensive and efficient implementation minimizing disruptions, optimizing functionality, and facilitating long-term environmental sustainability goals.

Phase 1: Project Initiation and Planning
Phase 2: Design and Engineering
Phase 3: Construction and Installation
Phase 4: Testing and Commissioning
Phase 5: Project Monitoring and Reporting

Project Activities	Jul - Sep 24	Oct - Dec 24	Jan - Mar 25	Apr – Jun 25	Jul - Sep 25	Oct - Dec 25	Jan - Mar 26	Apr – Jun 26	Jul - Sep 26	Oct - Dec 26	Jan - Mar 27	Apr – Jun 27	Jul – Aug 27
Overall Feasibility Study and Conceptual Engineering of Alternative Fuels	Phase 1 - 2												
Engineering and Project Implementation of Alternative Fuels					Phase 2-5								
Pilot Injection Testing					Phase 2								
Feasibility Study for Carbon Capture and Handling System	Phase 1												
Detailed Study and Plan for Carbon Storage System					Phase 2								
Community Engagement, Educational Initiatives, and Grant Administration	Phase 1-5												

Geographic scope
8401 2nd Avenue SE. Leeds, Alabama

Metrics for tracking progress

1. Install an Alternative Fuels Receiving, Handling and Dosing System for low-carbon alternative fuels:
   a. Explore viable alternative fuel materials for the cement production process.
   b. Evaluate the max alternate fuel substitution rates in existing kiln.
   c. Assess the feasibility and compatibility of integrating these alternative fuels into the existing kiln operations.
   d. Conduct pilot injection testing by drilling 3 wells.

2. Reduce carbon intensity in the cement production process (< 400 kg CO2/mt clinker by 2030):
   a. Feasibility study will be conducted to gather information about sequestering CO2 in coal seams.
   b. If found feasible, Heidelberg Materials will move to the next phase for a detailed study and development plan to implement a state-of-the-art "modular" Carbon Capture and Handling System.

Cost estimates for Implementation

Budget Line Item	Federal Share	Heidelberg Share
Alternative Fuels Integration – Feasibility Study	$600,000	$150,000
Alternate Fuels Integration – Project Implementation**	$5,000,000	$1,000,000
Feasibility Study for Carbon Capture and Handling System	$500,000	$100,000
Pilot Injection Testing	$5,000,000	$500,000
Detailed Study and Development Plan for Carbon Storage System**	$9,000,000	$500,000
Community Engagement and Educational Initiatives	$500,000	$150,000
Pass-through Grant Administration Cost*	$1,000,000	$0
Totals	**$21,600,000**	**$2,400,000**

Budget Assumptions
As a subrecipient, Heidelberg Materials commits to a 10% of in-kind to the cost share of the $24M project total.
*As a pass-through, City of Leeds would implement the administrative grant regulations.
**Cost for project implementation is based on estimates until after feasibility studies are completed.

Impacts on low-income and disadvantaged communities
Job Creation: The project will create new employment opportunities during the construction phase and ongoing maintenance, contributing to economic growth in Leeds. The project will stimulate economic growth through job creation and increased sustainability, making Alabama an attractive location for environmentally conscious industries.

Environmental Improvement: The alternative fuels project will help divert materials otherwise destined to landfills, reducing long-term storage/management impacts to surrounding communities, while also reducing potential generation of methane from long-term decomposition if biodegradable fuels are sourced, directly benefiting the health and well-being of the local community in Shelby and Jefferson County. Leeds will serve as a model for Alabama's sustainable practices in cement production, contributing to the city's reputation as an environmentally responsible community.

Community Engagement: Heidelberg Materials will engage with local residents to provide information on the project, fostering transparency and community support. Heidelberg Materials commits to collaborating with local educational institutions to provide learning opportunities related to sustainable practices and alternative fuels.

Authority to implement
The City of Leeds will submit a CPRG implementation grant application to EPA as the prime applicant, under which Heidelberg Materials will become a sub-applicant. If awarded, the City of Leeds will act as prime recipient and pass-through organization with grant and program management responsibility. The City possesses a broad statutory authority in relation to the application and implementation of grant projects. While the list provided herein is not exhaustive, it highlights key points of consideration:

1. Public Purpose Doctrine in Alabama (and Across States): Generally, the public purpose doctrine prohibits the use of public funds for private projects. However, exceptions are made when it can be determined that the expenditure of public funds serves a public good or purpose, even if a private entity or individual benefits. This determination was made by the City Council on February 19, 2024by resolution affirming that a public purpose would indeed be served by the project under consideration. A copy of this resolution will be made available upon its endorsement by the Mayor or City Administrator.

2. Statutory Authority Under Alabama Code: Section 11-81A-2 of the Code of Alabama 1975 provides another framework for the City's participation in grant programs. This provision facilitates collaboration with federal, state, local, or private entities in various capacities. For your reference, the complete code section is attached, with sections 1 and 2 being particularly relevant to our discussion.

Please see Appendix B for supporting documentation.

Project 4: Trial and Implementation of Reduced Temperature Asphalt Mixtures

To reduce Green House Gas Emissions (GHG) during pavement construction, ALDOT will implement two separate temperature reduction technologies Cold Central Plant Recycling (CCPR), and Warm Mix Technology (WMT) with Reduced Temperature Requirement. CCPR is a method of incorporating very high amounts of Recycled Asphalt Pavement (RAP) into a structural asphalt layer without operating the asphalt plant's burner. Due to the high recycled materials content and lower energy production method GHG savings can be significant with no detriment to performance or constructability. ALDOT will perform CCPR trial projects in order to refine our specifications and approval processes for this innovative material with the goal of implementing a specification so that CCPR can be used on appropriate projects statewide in the near future.

WMT is a family of technologies that allow asphalt to be produced at reduced temperatures which will reduce GHG emission by reducing fuel consumption. WMT is used regularly in Alabama for its other benefits but is rarely used to reduced temperatures. ALDOT will publish a specification that will call for reduced production temperatures on projects where the temperature reduction can be applied without degrading performance, such as projects that are near asphalt plants or constructed during hot weather.

Section1
An Estimate of Cumulative GHG Emission reductions from 2025 – 2035

See Appendix C: **Reducing GHG Emissions Using Two Separate Temperature Reduction Technologies** on pages 5 through 8

Section 2
An Estimate of Cumulative GHG emission reductions from 2025 – 2050

See Appendix C: **Reducing GHG Emissions Using Two Separate Temperature Reduction Technologies** on pages 5 through 8

Section 3
Implementing Agency or Agencies

Alabama Department of Transportation

Section 4
Implementation Schedule and Milestones

CCPR project timeline:

2024 Q4 – Hold meetings with government, industry, and academic partners to refine a draft CCPR specification.

2025 Q1 – Scope and let a CCPR trial project with significant scale.
Q2 or Q3 – Construction of CCPR trial project
Q4 – Hold meetings with academic and industry partners to refine specifications and processes.

2026 Q1 – Scope and let a second CCPR trial project with improved specifications and processes.
Q2 or Q3 – Construction of second trial project using improved specifications and processes.
Q4 – Hold meetings with academic and industry partners to further refine specifications and processes.

2027 Q1 – Scope and let third and fourth CCPR trial project with improved specifications and processes.
Q2 – Publish a standard specification for CCPR to be used on State and Local Government projects where it will present advantages over traditional methods.
Q2 or Q3 – Construction of third and fourth trial projects.

2028 Q1 – Scope and let fifth and sixth CCPR trial projects.
Q2 or Q3 – Construction of fifth and sixth trial projects.

2029 and beyond – Construct projects using CCPR to reduce construction phase GHG.

WMT project timeline:

2024 Q4 – Hold meetings with academic and industry partners to write and refine a specification for Warm Mix Technology with a Reduced Temperature Requirement.

2025 Q1 – Scope and let a WMT trial project with significant scale using the specification.
Q2 or Q3 – Construct the project using the trial specification
Q4 – Hold meetings with academic and industry partners to refine specifications and processes.

2026 Q1 – Scope and let a second WMT trial project with improved specifications and processes.
Q2 or Q3 – Construct of second trial project using improved specifications and processes.

Q4 – Hold meetings with academic and industry partners to further refine specifications and processes.

2027 Q1 – Scope and let third and fourth WMT trial projects with improved specifications and processes.
Q2 – Publish a standard specification for Warm Mix Technology with Reduced Temperature Requirement to be used on state and local government projects where it will present advantages over traditional methods.
Q2 or Q3 – Construction of third and fourth trial projects.

2028 Q1 – Scope and let fifth and sixth WMT trial projects.
Q2 or Q3 – Construction of fifth and sixth trial projects.

2029 and beyond – Construct projects using Warm Mix Technology with Reduced Temperature Requirement to reduce GHG in the construction phase.

Section 5
Geographic Scope

The geographic scope of this project could be anywhere within the State of Alabama. Specific project selection will be performed through our existing project allocation process. A suitable project for CCPR will be in a location in need of full depth pavement repair or full depth pavement construction. It will be beneficial if the project is near an urban area since urban areas tend to have greater availability of milled asphalt pavement ready to be recycled. For WMT the project will likely be near an existing asphalt plant. For example, of the asphalt plants located in Alabama, about 60% are located in low-income and disadvantaged communities as defined by the Climate and Economic Justice Screening Tool (CEJST).

Section 6
Metrics for Tracking Progress

Progress will be tracked against the timeline given in section 4. The amount of GHG emissions can be estimated using the actual project tonnage and temperature reductions of the aforementioned methodologies.

Section 7
Cost Estimates for Implementation

CCPR Trial Project 1: $3 million
CCPR Trial Project 2: $3.2 million
Additional CCPR Trial Projects using new standard specification: $13.3 Million to be allocated for 4 additional projects.
Warm Mix Trial Project 1: $6.8 million
Warm Mix Trial Project 2: $7 million
Additional Warm Mix projects using new standard specification: $30 Million to be allocated for 4 additional projects.
Technical Assistance from The National Center for Asphalt Technology: $500,000
Project total: $ 63.8 Million

Section 8
Impacts on Low-income and Disadvantaged Communities

Hot mix asphalt production facilities are often in low-income urban areas or rural areas. Reduced emissions from these low GHG methods will reduce air pollution in these disadvantaged areas while also improving the road system for users. As mentioned previously, about 60% of the asphalt plants in Alabama are located in low-income and disadvantaged communities as defined by the Climate and Economic Justice Screening Tool (CEJST). Lower temperatures will also reduce the risk of heat related injuries and Volatile Organic Compounds (VOC) inhalation for workers on these projects who tend to be from those same disadvantaged areas.

Section 9
ALDOT's Authority to Implement

According to Alabama Code 39-2-1 and 39-2-2, Alabama Department of Transportation has authority to specify, advertise, and let and award highway projects for construction in the State of Alabama.

Project 5: Fleet Electrification and Microgrid with Battery Storage

Measure 1: Huntsville Utilities Fleet Electrification

The Huntsville Utilities Fleet Electrification project seeks to replace 14 gas-powered fleet vehicles with 14 Electric fleet vehicles, as well as to install the necessary EV chargers. In order to maximize grid resiliency and emissions reduction, solar panels and battery storage will be added to each EV charger installation. The chargers will be located on Huntsville Utilities property throughout its service area to maximize the use of the vehicles and reduce any range anxiety for its employees.

The replacement of gas-powered fleet vehicles with electric fleet vehicles will reduce emissions in the area, thus creating a cleaner environment for our customers. EVs also have lower maintenance and operating costs, which will reduce the costs of fleet maintenance thus rendering a savings to our customers via the ability to defer rate increases. The addition of solar panels and battery storage to the EV chargers will increase the projects total emissions reductions, thereby creating an even cleaner environment for our customers. All of these benefits will be realized by the Lower-Middle Income (LMI) and Disadvantaged Communities (DAC). residents in our service area, especially since one of the project site locations for the chargers and base for some of these vehicles is in the downtown Huntsville area where there is a concentration of DAC and LMI communities.

Installation and site prep for the EV chargers, solar panels, and batteries will be contracted out to qualifying vendors, and administration of the project will be done by Huntsville Utilities employees. Procurement of the necessary equipment and supplies will also be secured through qualifying vendors.

- **An Estimate of The Cumulative GHG Emission Reductions From 2025 Through 2030/2035**

According to the EPA Greenhouse Gas Equivalencies Calculator,[14] Huntsville Utilities would reduce carbon emissions by 64.8 metric tons annually through the replacement of 14 gas-powered fleet vehicles with 14 EV fleet vehicles. This amounts to 324 metric tons over 5 years, and 648 metric tons over 10 years.

Couple the above with the installation of solar panels and battery storage with the planned EV chargers and the reduction of GHG emissions increases even more. Using, again, EPA's Greenhouse Gas Equivalencies Calculator,[15] for the charging of 14 EV vehicles, 44.5 metric tons of GHG emissions would be released. However, we estimate cutting those emissions by a quarter or even half with the use of solar panels and battery storage. The exact amount of emissions reduction would be calculated during the design phase of the plan, as this is when the size of the solar panels and batteries would be determined. With these estimates in mind, we anticipated reducing emissions from EV charging up to 111.25 metric tons over the next 5 years and up to 222.5 over the next 10 years.

- **An Estimate of The Cumulative GHG Emission Reductions From 2025 Through 2050**

While the vehicles purchased via this project may not have a lifespan of 25 years, this project will enable Huntsville Utilities to cement slots for EV vehicles in its fleet. Thus, we anticipate the continual reduction of GHG emissions through the utilization of EV vehicles in our fleet

[14] EPA Greenhouse Gas Equivalencies Calculator. March 2020. https://19january2021snapshot.epa.gov/sites/static/files/widgets/ghg-calc/calculator.html#results.
[15] Ibid.

using the same metrics as above. Over the next 25 years, the reduction of GHG emissions via the utilization of 14 EV fleet vehicles would be 1,620 metric tons.

We also anticipate the continued use of this model where solar panels and battery storage are coupled with our fleet EV chargers to ensure maximum amount of emissions reduction and increased grid resiliency. The emissions reduction from this model over the next 25 years is estimated to reach up to 556.25 metric tons.

- **Key Implementing Agency or Agencies**

Huntsville Utilities is the sole agency responsible for the implementation of this project. Installation and construction work will be completed through contracted entities with oversight administered by Huntsville Utilities. All necessary procurement of supplies and equipment will be purchased through qualifying vendors.

- **Implementation Schedule and Milestones**

Huntsville Utilities operates on a fiscal year from October through September. Planning for the FY25 budget will begin in March 2024 with the budget effective in October 2024. Design and construction of the EV charging stations can be included in the FY25 budget. Due to lingering supply chain issues, the electric vehicles could also be ordered in FY25, but it is unlikely that they will be delivered for at least 12 months, if not longer. The training for the Fleet technicians will be coordinated with the manufacturer and will be scheduled so that a large gap does not exist between the training and delivery of the EVs.

Huntsville Utilities has previously been a partner in a project of a similar scope for the installation of EV charging equipment. Thus, our projected timelines and milestones for the procurement and installation of the EV chargers are based upon previous, similar experience and are as follows:

Procurement (Purchasing and Delivery): Approximately 2 – 3 months;
Installation: Approximately 1.5 – 2 months; and
Testing & QA: Approximately 0.5 – 1 month.

- **Geographic Scope**

All of the purchases, construction, and benefits associated with this project would be in the Huntsville Utilities service area which is in Madison County and portions of Limestone and Marshall Counties in northern Alabama. The actual sites for the installation of the EV charging equipment will be located on Huntsville Utilities property throughout its service area.

- **Metrics For Tracking Progress**

Progress for construction of the Type 2 EV/battery storage/solar facilities will be tracked similar to other construction projects and will have a Gantt chart prepared for tracking time associated with any necessary permitting, procurement of materials, site work and mechanical construction, electrical installation, and testing and commissioning.

Previous modelling for a similar facility called for a 3-month timeline for completion from procurement to completion of testing/commissioning. External factors such as material availability and delivery and coordination with outside agencies may cause some impacts on the project timeline.

The project would be assessed based on adherence to the planned timeline and budgetary restrictions. DC fast charger installation would follow a similar path but would have a shorter timeline. Procurement of vehicle purchases would be tracked from purchase requisition to delivery according to timeliness and staying within budget. Delivery will be dependent on supplier availability. Training for Fleet technicians would be documented (including certifications where applicable) and scheduled for timeliness based on expected vehicle delivery.

- **Cost Estimates for Implementation**

Huntsville Utilities' approach to reducing emissions by expanding the use of electric vehicles would include the construction of multiple charging facilities, the purchase of 14 vehicles, and training and equipment upgrades to insure that HU fleet technicians can safely and proficiently perform repairs and maintenance.

A Type 2 EV charger that includes supplemental solar charging and battery storage would be constructed at each of the utility's three primary facilities. Similarly, DC fast charging stations would be added at the Electric Operations Center, Downtown Administrative building, and the Huntsville Utilities garage.

The purchase of EV vehicles would include 4WD trucks to be used by Operations and Engineering personnel and 2 passenger vehicles to be deployed by the External Affairs group for marketing and public relations purposes.

Instructor-led onsite training for the current fleet technicians on EV repairs and maintenance would be required and can be obtained from the manufacturer. Some provisions for tools and equipment, including safety PPE unique to working on EVs and diagnostic software, have also been included. The chart below provides initial cost estimates for each segment of the project which, when combined, total $2,366,000.

Description	Cost	Quantity	Total	Comments
Type 2 EV charger, battery storage and solar. Similar to the installation at the Space and Rocket Center. Install at Spragins, Chase and Triana.	$ 300,000.00	3	$ 900,000.00	Verify costs including utility connection.
DC fast charger for Chase and Downtown locations due to emergency response time.	$ 100,000.00	3	$ 300,000.00	Two chargers at Electric Operations center (one at the Garage) and one at Downtown Administrative office
Ford F-150 Lightning 4WD pick-up	$ 75,000.00	12	$ 900,000.00	Retail price is $75k +/- at Woody Anderson Ford (local dealership)
- HU lights, logo, toolbox	$ 7,000.00	12	$ 84,000.00	Standard utility after-market accessories
Hyundai Kona Electric (SUV) or similar	$ 40,000.00	2	$ 80,000.00	Vehicles for External Affairs group
- vehicle wrap, logo ... etc.	$ 4,000.00	2	$ 8,000.00	Recent wrap of a similar vehicle was $4k
Fleet employees training	$ 12,000.00	2	$ 24,000.00	Two 2-day classes @ $6,000 each (will cover up to 30 technicians)
- tools and equipment	$ 50,000.00	1	$ 50,000.00	Tool expense would include Personal Protective Equipment for safety
- software	$ 20,000.00	1	$ 20,000.00	Current diagnostic software will work, but may need to be upgraded
Total			**$ 2,366,000.00**	

- **Impacts On Low-Income and Disadvantaged Communities**

The value to low-income and disadvantaged communities from this program will come via diminished public health hazards as a result of lower greenhouse gas emissions and lower operating and maintenance vehicle costs for the utility, which will translate into deferred rate increases for the ratepayers. The table below, included in the Clean Energy Group's blog *Electric Vehicles in the Community: Benefits and Challenges (February 24, 2023)* indicates a significantly lower operating cost per vehicle. The vehicles mentioned in the table are equivalent to what HU would look to deploy.

Vehicle	Annual Fuel Use (gallons)	Annual Electricity Use (kWh)	Annual Fuel /Electricity Cost	Annual Operating Cost	Cost Per Mile	Annual Emissions (lbs CO2)
2022 Ford F-150 Lightning 4WD EV	0	6,069	$1,182	$3,290	$0.27	3,276
2022 Ford F-150 Pickup 4WD Gasoline	586	0	$2,262	$4,523	$0.38	14,062
2022 Hyundai Kona Electric EV	0	3,452	$672	$2,780	$0.23	1,864
2022 Hyundai Kona AWD Gasoline	392	0	$1,515	$3,776	$0.31	9,418

Table 1. Comparison of fuel and operating costs of EV and gasoline versions of two leading vehicle models. Source: US DOE Alternative Fuels Data Center calculator (https://afdc.energy.gov/calc/, accessed February 10, 2023). Assumptions: Gasoline $3.86/gallon (national average price for mid-grade gasoline as of February 10, 2023, according to the American Automobile Association). Electricity $0.195/kWh (based on New York State prices). Annual miles driven: 12,000 (5316 city, 6684 highway).

- **Authority To Implement**

Per the Code of Alabama, Section 11-50-490, municipalities of the State of Alabama are authorized to establish a municipal electric utility board with the powers established in Section 11-50-497 as having "complete control of the municipal distribution system of such municipality." The City of Huntsville, Alabama, a municipal entity, established the Huntsville Utilities Electric Board in 1982 via Huntsville Municipal Code Section 2-1501. Therefore, per the State Code of Alabama, upon the establishment of the Huntsville Utilities Electric Board, Huntsville Utilities was granted the authority to have complete control of the municipal distribution system, which grants Huntsville Utilities the authority to implement the measure submitted for inclusion within the Alabama Department of Environmental Management's Priority Climate Action Plan.

Measure 2: Huntsville Utilities Microgrid with Battery Storage

The Huntsville Utilities Microgrid with Battery Storage project seeks to utilize grid scale batteries of up to 10 MW in nameplate capacity at strategic locations on the Utilities' distribution grid. While these strategic locations will be officially determined in the design phase of the implementation of the project, several Lower-Middle Income (LMI) and Disadvantaged Communities (DAC) areas have been highlighted as priority areas for the location of the batteries. The installation of these grid scale batteries would increase the resiliency of the Huntsville Utilities distribution grid by their use during peak load demand. The use of these batteries during periods of peak demand would also reduce emissions, as it would enable the avoidance of utilizing last dispatched fossil fuel powered energy from TVA. This reduction in emission would also benefit our residents by creating a cleaner environment for them to live, work, and play.
The addition of batteries to the Huntsville Utilities grid will require the installation of smart switches isolate the microgrid to control and communication systems to control and monitor the microgrid. Installation and site prep for the batteries will be contracted out to qualifying vendors, and administration of the project will be done by Huntsville Utilities employees. Procurement of the necessary equipment and supplies will also be secured through qualifying vendors.

- **An Estimate of The Cumulative GHG Emission Reductions From 2025 Through 2030/2035**

Via the EPA Greenhouse Gas Equivalencies Calculator,[16] this project will utilize battery storage to form a microgrid to achieve peak reduction and resiliency to key locations in LMI and DAC areas, which will result in an average reduction of 35,350 metric tons of carbon dioxide over the next 10-year period. These batteries will be charged at off peak times when TVA's base load is nearly carbon free with primarily nuclear and hydro generation. In

[16] EPA Greenhouse Gas Equivalencies Calculator. March 2020. https://19january2021snapshot.epa.gov/sites/static/files/widgets/ghg-calc/calculator.html#results.

addition, these batteries will be discharged during times of peak demand on the Huntsville Utilities distribution grid, which will avoid last dispatched and highest cost fossil fuel energy. This strategy will help reduce this peak demand, reduce carbon emissions, and provide resiliency to LMI and DAC residents in Huntsville, Alabama.

- **An Estimate of The Cumulative GHG Emission Reductions From 2025 Through 2050**

Depending on the battery life of the system, we expect to continue to see significant reduction of greenhouse gases over the next 25-year period. During the first 10 years, we expect a reduction of 35,350 metric tons. Over the next 10 years, we expect the life of the battery to degrade to 75% of nameplate, thus reducing energy provided and emissions savings. Therefore, during the second 10-year period we expect a reduction of 26,512 metric tons. In the final 5-year period we also expect further degradation of the life of the batteries by another 25% to 50% percent of nameplate capacity. This leads to a projection of 8,837 metric tons of reduction in the final 5-year period. The total reduction for 2025 – 2050 is, therefore, estimated at 70,699 metric tons.

- **Key Implementing Agency or Agencies**

Huntsville Utilities, a component of the City of Huntsville, will be the primary and sole implementing agency. Huntsville Utilities operates the local distribution company within the City of Huntsville and greater Madison County in Alabama. Huntsville Utilities currently serves 215,000 customers with a peak electric demand of 1,545 MW.

Installation and construction work will be completed through contracted entities with oversight administered by Huntsville Utilities. All necessary procurement of supplies and equipment will be purchased through qualifying vendors.

- **Implementation Schedule and Milestones**

Implementation of the microgrid will include the procurement of the battery systems (battery, inverter, software), smart switches for isolating the microgrid, communication systems for control/monitoring of devices and software to optimize the charging/discharging of the battery system as well as controlling the switches during emergency situations. Below are estimated schedules and milestones for each portion of the project.

  - 2024:
    - Engineering design.
    - Vendor selection.
  - 2025 (Q2):
    - Bid out materials.
    - Award the purchase order.

- 2025 (Q4):
    - Anticipate receiving switches, communication equipment, and software.
    - Construct sites for battery storage, install switches, and begin configuring micro grid.
- 2026 (Q2):
    - Anticipate receiving and installing battery storage system.
- 2026 (Q3):
    - Fully test and commission microgrid.
    - Place microgrid into commercial operation.
- 2026 (Q4):
    - Begin operating battery system for peak reduction and resiliency.

- **Geographic Scope**

This microgrid will be located within Madison County, Alabama. Final location will be determined in the implementation grant application. However, there are many LMI and DAC areas which HU has already identified as potential project sites.

- **Metrics For Tracking Progress**

    - Engineering completion percentage
    - Material received percentage
    - Materials installed percentage
    - Commercial operations date
    - Peak load reduction on connected circuit
    - Avoided outage minutes for microgrid area

- **Cost Estimates for Implementation**

The estimate to build and operate 2 microgrids with 5 MW of battery storage each, including the required distribution switching equipment, communication equipment, controllers, and software to optimize the microgrid operation, is $17.1 million. Below is the breakdown of the cost estimates for the various portions of the project.

EPA Climate Pollution Reduction Grant			
Huntsville Utilities MircoGrid			
Description	**Cost**	**Quantity**	**Total**
Battery storarge systems at 5 MW/ 20 MWh battery systems	$ 8,000,000.00	2	$ 16,000,000.00
Switches / reclosers to establish microgrid	$ 50,000.00	10	$ 500,000.00
Radio / fiber communications	$ 10,000.00	10	$ 100,000.00
Software and training	$ 250,000.00	1	$ 250,000.00
Consulting Engineering services	$ 250,000.00	1	$ 250,000.00
Total			$ 17,100,000.00

- **Impacts On Low-Income and Disadvantaged Communities**

The resulting impacts of this project are improvement of the reliability of the Huntsville Utilities electric distribution grid and reduction of emissions. Both impacts will directly benefit LMI and DAC residents, as they will enjoy the results of a more resilient grid and a cleaner environment. In addition, to ensure direct benefits of the grid resiliency impact, Huntsville Utilities will target circuits specifically in disadvantaged communities for the placement of the battery storage.

- **Authority To Implement**

Per the Code of Alabama, Section 11-50-490, municipalities of the State of Alabama are authorized to establish a municipal electric utility board with the powers established in Section 11-50-497 as having "complete control of the municipal distribution system of such municipality." The City of Huntsville, Alabama, a municipal entity, established the Huntsville Utilities Electric Board in 1982 via Huntsville Municipal Code Section 2-1501. Therefore, per the State Code of Alabama, upon the establishment of the Huntsville Utilities Electric Board, Huntsville Utilities was granted the authority to have complete control of the municipal distribution system, which grants Huntsville Utilities the authority to implement the measure submitted for inclusion within the Alabama Department of Environmental Management's Priority Climate Action Plan.

Project 6: Bus and Fleet Electrification and Solar Powered Parking Structure

Measure 1: Electrify UAB's bus fleet and begin transitioning fleet vehicles to electric vehicles.

An estimate of the cumulative GHG emission reductions from 2025 through 2030/2035
Electrifying the bus fleet (22 buses during peak operations) would save 340 metric tons of greenhouse gas emissions per year beginning in 2025. The cumulative impact would be 3,400 metric tons of GHG reduction by 2035.

Implementing a fleet electrification plan by electrifying 30 vehicles within five years would have a cumulative GHG emission reduction of 1,513 metric tons by 2035, accounting for nearly 50% of all current fleet emissions.

Total GHG emissions reduction impact by 2035 of bus and fleet electrification is 4,913 metric tons.

An estimate of the cumulative GHG emission reductions from 2025 through 2050
The cumulative GHG emission reduction impact of electrifying our bus fleet through 2050 would be approximately 8,500 metric tons.
Implementing a fleet electrification plan would have a cumulative GHG emissions reduction impact of 4,126 metric tons, accounting for nearly 60% of anticipated fleet emissions. Total GHG emissions reduction impact by 2050 of bus and fleet electrification is 12,626 metric tons.

Key Implementing Agency
University of Alabama at Birmingham

Implementation Schedule and Milestones
December 1, 2024, a bid package for the project announced

January 1 – January 15, 2025, bids are reviewed. 10 electric vehicles are purchased for departmental distribution. *Vehicle purchases would be recurring on an annual basis each January for five years*.

February 1 – February 15, 2025, contract is reviewed and awarded

March 15 – March 30, 2025 – Buses are ordered

May 1, 2025 – Buses begin servicing campus

June 1, 2025 – monitoring and assessment of emissions reductions

Geographic Scope
Bus fleet electrification and general vehicle electrification will solely take place on the campus of the University of Alabama at Birmingham and UAB Hospital. However, the emission reduction associated with this electrification plan will impact adjacent communities throughout Birmingham (direct census tracts are listed below).

- Census Tract Number: 01073004500
- Census Tract Number: 01073004701
- Census Tract Number: 01073004901
- Census Tract Number: 01073004902
- Census Tract Number: 01073004200
- Census Tract Number: 01073002700
- Census Tract Number: 01073002400

Metrics for Tracking Progress
Emissions will be tracked on an annual basis by using the University of New Hampshire's Sustainability Indicator Management and Analysis Program (SIMAP). Emissions will be calculated based on the mileage of all bus and university vehicles and on energy consumption (kWh). Vehicle replacements will be tracked using procurement receipts to ensure 10 vehicles are being purchased annually.

Cost estimates for Implementation
The anticipated cost for electrifying our bus fleet will be approximately $1,732,000 inclusive of maintenance and charging infrastructure distributed across a service contract. The annual cost of purchasing 10 vehicles per year is approximately $400,000 per year until 2030.

Impacts on Low-Income and Disadvantaged Communities
Of the seven communities that will be directly impacted by emissions associated with UAB bus and fleet operations, three are designated as disadvantaged communities and have a population of 9,254 and account for nearly half of all impacted individuals. The three communities that are designated as disadvantaged (Census Tract Numbers: 01073004200, 01073002700, and 01073002400) and are respectively in the 94th, 96th, and 91st percentile for diesel particulate matter exposure. These census tracts are also respectively in the 96th, 87th, and 91st percentile for low income.

Authority to Implement

The University of Alabama at Birmingham (UAB) is a Tier-1 research institution that receives and implements numerous grants on an annual basis. UAB is also a designated 501C-3 non-profit entity as designated by the Internal Revenue Service (IRS) and meets the definition of an agent of the state. Under federal regulatory guidance, UAB is an authorized recipient of grant funds and is authorized to implement grant projects with these funds.

Measure 2: Construction of a 94kW Solar Array for a Newly Constructed Parking Deck on UAB's Campus

An estimate of the cumulative GHG emission reductions from 2025 through 2030/2035
At approximately 174,511 kWh of energy per year, the project would result in an estimated GHG reduction of 1,220 metric tons of CO_2e by 2035.

An estimate of the cumulative GHG emission reductions from 2025 through 2050
There would be an estimated GHG reduction of 3,050 metric tons of CO_2e by 2050

Key implementing agency
University of Alabama at Birmingham

Implementation schedule and milestones

- December 1, 2024, a bid package for the project announced
- January 1 – February 28, 2025, bids are reviewed
- February 29 – May 31, 2025, contract review
- July 1 – August 30, 2025 – construction and interconnection
- September 1, 2025 - construction, implementation, and interconnection completed
- October 1, 2025 – September 30, 2035 – monitoring and assessment of emissions reductions

Geographic scope
The project is located in CEJST Census tract-
Number: 01073004500
County: Jefferson County
State: Alabama
Population: 5,177

The tract itself is not considered disadvantaged by CEJST, but the overall geographic scope of 50 miles surrounding the tract is populated by multiple communities that are considered disadvantaged because they meet more than 1 burden threshold **AND** the associated socioeconomic threshold.

Metrics for tracking progress
UAB will track greenhouse gas emission reductions through the University's energy management system. This system tracks energy use and billing. UAB Sustainability also deploys SIMAP, the Sustainability Indicator Management and Analysis Platform a carbon and nitrogen-accounting platform for tracking emissions.

Cost estimates for implementation
$554,691

Impacts on low-income and disadvantaged communities
The geographic region (within a 50-mile radius of the solar installation) includes areas that are census tracts with coal closure, coal closure energy communities, and MSAs/non-MSAs that meet both the Fossil Fuel Employment (FFE) threshold and the unemployment rate requirement. Other CEJST indicators for communities surrounding the project location include:

Energy cost

Average annual energy costs divided by household income

above 90th percentile

Asthma
Share of people who have been told they have asthma

above 90th percentile

Heart disease
Share of people ages 18 years and older who have been told they have heart disease

above 90th percentile

Proximity to Superfund sites
Count of proposed or listed Superfund (or National Priorities List (NPL)) sites within 5 kilometers

above 90th percentile

PM2.5 in the air
Level of inhalable particles, 2.5 micrometers or smaller

not above 90th percentile

Authority to Implement
The University of Alabama at Birmingham (UAB) is a Tier-1 research institution that receives and implements numerous grants on an annual basis. UAB is also a designated 501C-3 non-profit entity as designated by the Internal Revenue Service (IRS) and meets the definition of an agent of the state. Under federal regulatory guidance, UAB is an authorized recipient of grant funds and is authorized to implement grant projects with these funds.

Project 7: Electric Vehicles, Renewable Energy Production and Energy Efficiency

Project Overview

The Alabama Community College System (ACCS) is proposing an EPA Climate Pollution Reduction Grant (CPRG) project that will implement greenhouse gas (GHG) reduction measures in three sectors: Transportation, Electric Power, and Buildings.

Transportation: The proposed project will increase the number of electric vehicles (EVs) in service at all 24 community and technical colleges across the State and at the Alabama Community College System's central office and will increase the share of the collective fleet that is all-electric. The project will fund the purchase of 200 electric vehicles to replace aging and inefficient gasoline- or diesel-powered vehicles of various types. 200 vehicles are targeted for replacement; they are over 10 years old, have more than 100,000 miles, consume the greatest number of gallons of fuel each year, and will be removed from service. ACCS and member colleges will also purchase and install 50 new EV Level 3 charging stations across the state (at least 2 per college) to support the operation of the new EVs and increase the capacity for further transition to an electrified fleet.

Electric Power: The proposed project will pioneer renewable energy production on an Alabama community college campus. ACCS will purchase and install a solar microgrid on the campus of Bevill State Community College at the new Energy Infrastructure Training Center. The Training Center is a joint effort of ACCS, Bevill State, and the Alabama Power Company with a mission to educate and train students for jobs in emerging technologies of the energy sector, including HVAC, solar, wind, and electric vehicles. The Center also serves as the hub for Alabama's federally-funded Weatherization Assistance Program training. The microgrid will not only reduce the College's consumption of commercially-generated power, but will return power to the grid, reducing the cost of electricity for the College and other consumers and will enhance the College's energy resilience. The microgrid will also serve as a vital resource to train students of the Energy Infrastructure Training Center in microgrid operation and maintenance, increasing the number of workers in Alabama with skills in renewable energy.

Buildings: This project will fund multiple energy-efficiency building renovation projects at all of ACCS's historically black and predominantly black colleges. These colleges serve some of the lowest-income, most disadvantaged students and communities in Alabama. A total of 9 colleges and 15 buildings will be affected. Renovations will involve implementation of the most up-to-date building energy codes and include the purchase and installation of certified energy-efficient heating and cooling equipment, windows, doors, lighting, and other building products to replace inefficient products. Each building renovation will include the implementation of a building energy performance management system, allowing each college to implement new benchmarking and building performance standards. Each renovated building will be individually metered, if not already so, enabling effective tracking of energy consumption. The individual metering of multiple buildings at

specific colleges will serve to highlight the energy savings of renovated buildings versus unrenovated buildings and encourage the adoption and implementation of similar building renovations and metering projects on other campuses statewide.

1. 5-Year GHG Emission Reduction Estimates

The ACCS project will reduce GHG emissions by an estimated total of 7,661 metric tons CO_2e over the 5-year period from 2025 to 2030. The total GHG emissions by GHG reduction measures are as follows:

A. Transportation Sector (Implementation of Electric Vehicles and Charging Stations): ~3,979 metric tons CO_2e
B. Electric Power Sector (Implementation of Solar Microgrid): ~686 metric tons CO_2e
C. Buildings Sector (Renovations to Improve Energy Efficiency): ~2,996 metric tons CO_2e

The table following item #2 provides additional detail on the calculations of GHG reductions by sector and sub-project, including estimates for the final, continuing annual GHG reductions by sector and sub-project.

2. 25-Year GHG Emission Reduction Estimates

The ACCS project will reduce GHG emissions by an estimated total of 46,143 metric tons CO_2e over the 25-year period from 2025 to 2050. The total GHG emissions by GHG reduction measures are as follows:

A. Transportation Sector (Implementation of Electric Vehicles and Charging Stations): ~22,360 metric tons CO_2e
B. Electric Power Sector (Implementation of Solar Microgrid): ~6,787 metric tons CO_2e
C. Buildings Sector (Renovations to Improve Energy Efficiency): ~16,996 metric tons CO_2e

The table below provides additional detail on the calculations of GHG reductions by sector and sub-project, including estimates for the final, continuing annual GHG reductions by sector and sub-project.

GREENHOUSE GAS EMISSIONS REDUCTIONS

College/Dept	Building	Project	Annual Target energy reduction (kWh)
Bishop State	Delchamps - Student Life Complex	Mechanical, lighting, windows	188,802
Drake State	Bldg 300	Mechanical, lighting, windows	20,774
Drake State	Bldg 100 (existing Nursing Bldg)	Mechanical, lighting, windows	35,360
Gadsden State	Prater Hall	Mechanical, lighting, windows	110,224
Gadsden State	LRC	Mechanical, lighting, windows	17,973
Lawson State	Bldg F - Kennedy Student Ctr	Mechanical, lighting, windows	93,925
Lawson State	Building D - Library	Mechanical, lighting, windows	70,389
Wallace Selma	Byrd Arts & Sciences Bldg	Mechanical, lighting, windows	83,062
Wallace Selma	Classroom Bldg	Mechanical, lighting, windows	84,494
Chattahoochee Valley	Wallace Hall	Mechanical, lighting, windows	82,539
Reid State	900 Admin Bldg	Mechanical, lighting, windows	49,933
Trenholm State	Bldg E	Mechanical, lighting, windows	114,750
Shelton State	Bldg 300	Lighting, windows	18,750
Shelton State	Bldg 500	Lighting, windows	15,150
Shelton State	Bldg 700	Lighting, windows	15,875
	Annual TOTAL(kWh) Reduction for Mech Bldg Renovations		**1,002,000**
	Annual TOTAL (MT of CO2e) GHG Reduction for Mech Bldg Renovations		**700**
Bevill State	Energy Training Center	Install renewable microgrid system	436,956
	Annual TOTAL(kWh) Reduction for Microgrid System		**436,956**
	Annual TOTAL (MT of CO2e) GHG Reduction for Microgrid System		**305**
ACCS	Campus	Replace vehicles with Electric Vehicles	1,315,000
	Annual TOTAL(kWh) Reduction for Electric Vehicles		**1,315,000**
	Annual TOTAL (MT of CO2e) GHG Reduction for Electric Vehicles		**919**
	Average Annual GRAND TOTAL (kWh) Reduction		**2,753,956**
Average Annual GHG emissions reductions (MT of CO2e)			**1,924**
Cumulative GHG emissions reductions from 2025-2030 (MT of CO2e)			**7,661**
Cumulative GHG emissions reductions from 2025-2050 (MT of CO2e)			**46,143**

3. Implementing Agencies

The **Alabama Community College System** (ACCS) is the eligible applicant requesting funding from an EPA Climate Pollution Reduction Grant which will be implemented cooperatively by the ACCS System Office (Office of the Chancellor) and the network of 24 community and technical colleges that comprise ACCS. The following is contact information for ACCS for the proposed implementation grant:

Alabama Community College System
Post Office Box 302130
Montgomery, Alabama 36130-2130
Lisa Rollan, Grants Coordinator
Phone: 334-293-4538
Email: lisa.rollan@accs.edu

4. Implementation Schedule and Milestones

ACCS has developed a preliminary project workplan that includes a schedule for implementation and specific greenhouse gas reduction milestones. Details are provided in the following tables.

IMPLEMENTATION SCHEDULE

College/Dept - Bldg - Project	2024				2025				2026				2027				2028				2029			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Bishop State - Delchamps - Mech Renovation				Design			Construction																	
Drake State - Bldg 300 - Mech Renovation				Design			Construction																	
Drake State - Bldg 100 (Nursing) - Mech Renovation										Design			Construction											
Gadsden State - Prater Hall - Mech Renovation				Design			Construction																	
Gadsden State - LRC - Mech Renovation										Design			Construction											
Lawson State - Bldg F (Kennedy) - Mech Renovation				Design			Construction																	
Lawson State - Bldg D (Library) - Mech Renovation				Design			Construction																	
Wallace Selma - Bryd Arts & Sciences - Mech Renovation				Design			Construction																	
Wallace Selma - Classroom Bldg - Mech Renovation										Design			Construction											
Chattahoochee Valley - Wallace Hall - Mech Renovation				Design			Construction																	
Reid State - 900 Admin Bldg - Mech Renovation				Design			Construction																	
Trenholm State - Bldg E - Mech Renovation				Design			Construction																	
Shelton State - Bldg 300 - Windows and Lighting				Design			Construction																	
Shelton State - Bldg 500 - Windows and Lighting								Design			Construction													
Shelton State - Bldg 700 - Windows and Lighting												Design			Construction									
Bishop State - Main Campus - Individual Meters				Order			Install																	
Bishop State - Carver Campus - Individual Meters				Order			Install																	
Bishop State - Southwest Campus - Individual Meters				Order			Install																	
Drake State - Main Campus - Individual Meters				Order			Install																	
Gadsden State - Valley St Campus - Individual Meters				Order			Install																	
Lawson State - Birmingham Campus - Individual Meters				Order			Install																	
Lawson State - Bessemer Campus - Individual Meters				Order			Install																	
Shelton State - Fredd Campus - Individual Meters				Order			Install																	
Trenholm State - Patterson Campus - Individual Meters				Order			Install																	
Trenholm State - Trenholm Campus - Individual Meters				Order			Install																	
Bevill State - Energy Training Center				Design			Construction																	
ACCS - Campus - Replace Vehicles with EV					Order		Roll Out																	
ACCS - Campus - Install EV Charging Stations				Design			Const.																	
ACCS - System Office - Project Personnel				Hire			Project Management																	

IMPLEMENTATION MILESTONES							
			Milestone Year 1	**Milestone Year 2**	**Milestone Year 3**	**Milestone Year 4**	**Milestone Years 5 - 25**
College/Dept	Building	Project	Annual Target energy reduction (kWh) Year 1	Annual Target energy reduction (kWh) Year 2	Annual Target energy reduction (kWh) Year 3	Annual Target energy reduction (kWh) Year 4	Annual Target energy reduction (kWh) Year 5
Bishop State	Delchamps - Student Life Complex	Mechanical, lighting, windows	113,281	151,042	173,698	181,250	188,802
Drake State	Bldg 300	Mechanical, lighting, windows	12,464	16,619	19,112	19,943	20,774
Drake State	Bldg 100 (existing Nursing Bldg)	Mechanical, lighting, windows	21,216	28,288	32,531	33,946	35,360
Gadsden State	Prater Hall	Mechanical, lighting, windows	66,134	88,179	101,406	105,815	110,224
Gadsden State	LRC	Mechanical, lighting, windows	10,784	14,379	16,535	17,254	17,973
Lawson State	Bldg F - Kennedy Student Ctr	Mechanical, lighting, windows	56,355	75,140	86,411	90,168	93,925
Lawson State	Building D - Library	Mechanical, lighting, windows	42,233	56,311	64,757	67,573	70,389
Wallace Selma	Byrd Arts & Sciences Bldg	Mechanical, lighting, windows	49,837	66,450	76,417	79,740	83,062
Wallace Selma	Classroom Bldg	Mechanical, lighting, windows	50,697	67,595	77,735	81,114	84,494
Chattahoochee Valley	Wallace Hall	Mechanical, lighting, windows	49,524	66,031	75,936	79,238	82,539
Reid State	900 Admin Bldg	Mechanical, lighting, windows	29,960	39,947	45,939	47,936	49,933
Trenholm State	Bldg E	Mechanical, lighting, windows	68,850	91,800	105,570	110,160	114,750
Shelton State	Bldg 300	Lighting, windows	11,250	15,000	17,250	18,000	18,750
Shelton State	Bldg 500	Lighting, windows	9,090	12,120	13,938	14,544	15,150
Shelton State	Bldg 700	Lighting, windows	9,525	12,700	14,605	15,240	15,875
Bevill State	Energy Training Center	Install renewable microgrid system	-	-	109,245	436,956	436,956
ACCS	Campus	Replace vehicles with Electric Vehicles	433,950	1,315,000	1,315,000	1,315,000	1,315,000
			1,035,150	**2,116,600**	**2,346,085**	**2,713,876**	**2,753,956**

5. Geographic Scope

The geographic scope of the proposed ACCS project is statewide. All 24 ACCS community and technical colleges will participate in project implementation and the service areas of these colleges collectively encompass all 67 Alabama counties.

6. Metrics for Tracking Progress

ACCS has identified the following expected outputs and outcomes for the proposed project:

Outputs

1. 200 Gasoline and Diesel-Powered Vehicles Replaced with Electric Vehicles
2. 50 Electric Vehicle Charging Stations Added Across the State on College Campuses and System Office
3. 1 Renewable Energy Grid Installed at the Energy Infrastructure Training Center at Bevill State Community College
4. 15 College Buildings at 6 HBCU and 3 PBI Colleges Renovated and Retrofitted to meet Up-to-Date Energy Codes and Equipped with Individual Building Electric Utility Meters
5. 4 New High-Quality Jobs Created for Staff Hired to Administer the Project and Advance Energy-Efficiency Policies and Practices
6. Students Trained in Renewable Energy Operations and Maintenance

7. 9 Community Service Workshops Conducted on Home Energy Efficiency and Community Energy Resilience

Outcomes

1. 7,661 Metric Tons Reduction in GHG (CO2e) Emissions - 2025 through 2030
2. 46,143 Metric Tons Reduction in GHG (CO2e) Emissions - 2025 through 2050
3. 2,753,956 kWh Average Annual Reduction in Energy Usage Due to Renovated Buildings on College Campuses
4. 103,600 Gallon Reduction in Average Annual Gasoline/Diesel Fuel Consumption and 20% Reduction in Average Annual Gas/Diesel Fuel Costs Across ACCS
5. Reduction in Hazardous Air Pollution/Improvement in Air Quality Across State of Alabama
6. Reduction in Incidence and Mortality Asthma Rates Across State of Alabama
7. 4 High-Quality Jobs Created
8. 4 High-Quality Jobs Created in Low-Income/Disadvantaged Communities
9. 28-Person Increase in Staff Trained to Implement, Monitor, and Assess GHG Reduction Measures Across ACCS
10. Increase in State's Skilled Renewable Energy Workforce
11. Increased Energy Resilience to Climate Change Impacts at Bevill State Community College
13. 50-Unit Expanded EV Charging Station Infrastructure Across State of Alabama
14. Increased Levels of Community Engagement and Public Understanding of the Benefits of Energy Efficiency/Resilience and Climate Protection Strategies

Additional specific performance measures have been developed to track, measure, and report progress toward achieving the expected outputs and outcomes for each GHG reduction measure. The performance measures for outputs and outcomes relevant to the Transportation Sector portion of the project are given as a sample below. The complete table of performance measures is given in a separate attachment.

Performance Measures Related to Electric Vehicle Implementation (Transportation Sector)

Description	Related Outputs and Outcomes	Goal	Unit of Measurement	Target Date for Goal Achievement	Tracking Method	Assessment Methods
Electric Vehicles Purchased and Placed in Service	A1, B1, B2, B4, B5, B6	200	Each	June 30, 2025	Purchases via subgrants to colleges tracked using grant-management software at ACCS System Office and vehicle inventory tracked using financial management module of the Systemwide ERP system (Banner)	Purchases and vehicle inventory reports pulled from grants management software and Banner and compared to project workplan and timeline

Gasoline/Diesel Vehicles Removed from Service	A1, B1, B2, B4, B5, B6	200	Each	June 30, 2025	Disposal of vehicles tracked using grant management software in use at System Office and financial management module of the Systemwide ERP system (Banner)	Vehicle dispositions and vehicle inventory reports pulled from grants management software and Banner and compared to project workplan and timeline
EV Charging Stations Purchased and Installed on College Campuses	A2, B13	50	Each	June 30, 2025	Subgrants to colleges tracked using grant-management software at ACCS System Office and charging station inventory tracked using financial management module of the Systemwide ERP system (Banner)	Purchases and charging station inventory reports pulled from grants management software and Banner and compared to project workplan and timeline
Average Annual Gasoline and Diesel Fuel Consumption Reduction	A1, B1, B2, B4, B5, B6	103600	Gallons	September 30, 2026	Vehicle fuel purchases recorded by Colleges and System Office in Banner	Vehicle fuel purchase reports pulled from Banner for all colleges and System Office and compared to benchmark reports pulled at project onset
Average Annual Gasoline and Diesel Fuel Costs Reduction	A1, B1, B2, B4, B5, B6	20	Percent	September 30, 2026	Vehicle fuel purchases recorded by Colleges and System Office in Banner	Vehicle fuel purchase reports pulled from Banner for all colleges and System Office and compared to benchmark reports pulled at project onset
Average Annual GHG Emissions Reduction Due to Replacement of Gas/Diesel-Powered Vehicles with EVs	A1, B1, B2	919	Metric Tons	September 30, 2026	Spreadsheet will be created to track annual differences between emissions of implemented Evs and the emissions of the corresponding replaced gasoline/diesel-powered vehicles had those replaced vehicles driven the same number of miles actually driven by the EVs.	Spreadsheet will automatically sum the emission reductions and project staff will compare the total reductions for the year with the goal for annual reductions.

7. Cost Estimates for Implementation

The total cost for the proposed project is $90,527,551 and includes costs for the following budget categories: Personnel, Fringe Benefits, Travel, Equipment, Supplies, Contractual, and Indirect (Administrative) Costs. A preliminary cost analysis by sub-project is shown in the table below.

COST ESTIMATES				
College/Dept	Campus	Building	Project	**TOTAL**
Bishop State	Main	Delchamps - Student Life Cc	Mechanical, lighting, windows	$ 10,883,880
Drake State	Main	Bldg 300	Mechanical, lighting, windows	$ 1,197,560
Drake State	Main	Bldg 100 (existing Nursing B	Mechanical, lighting, windows	$ 2,038,400
Gadsden State	Valley St	Prater Hall	Mechanical, lighting, windows	$ 6,354,075
Gadsden State	Valley St	LRC	Mechanical, lighting, windows	$ 1,036,105
Lawson State	Birmingham	Bldg F - Kennedy Student Ctr	Mechanical, lighting, windows	$ 5,414,500
Lawson State	Birmingham	Building D - Library	Mechanical, lighting, windows	$ 4,057,690
Wallace Selma	Selma	Byrd Arts & Sciences Bldg	Mechanical, lighting, windows	$ 4,788,280
Wallace Selma	Selma	Classroom Bldg	Mechanical, lighting, windows	$ 4,870,845
CVCC	Main	Wallace Hall	Mechanical, lighting, windows	$ 3,592,885
Reid State	Evergreen	900 Admin Bldg	Mechanical, lighting, windows	$ 2,173,565
Trenholm State	Executive Park	Bldg E	Mechanical, lighting, windows	$ 4,995,000
Shelton State	Fredd	Bldg 300	Lighting, windows	$ 824,257
Shelton State	Fredd	Bldg 500	Lighting, windows	$ 634,286
Shelton State	Fredd	Bldg 700	Lighting, windows	$ 666,537
Bishop State	Main	Campus	Install of individual building meters	$ 90,000
Bishop State	Carver	Campus	Install of individual building meters	$ 70,000
Bishop State	Southwest	Campus	Install of individual building meters	$ 80,000
Drake State	Main	Campus	Install of individual building meters	$ 90,000
Gadsden State	Valley St	Campus	Install of individual building meters	$ 80,000
Lawson State	Birmingham	Campus	Install of individual building meters	$ 200,000
Lawson State	Bessemer	Campus	Install of individual building meters	$ 100,000
Shelton State	Fredd	Campus	Install of individual building meters	$ 70,000
Trenholm State	Patterson	Campus	Install of individual building meters	$ 150,000
Trenholm State	Trenholm	Campus	Install of individual building meters	$ 120,000
Bevill State	Jasper	Energy Training Center	Install renewable microgrid system	$ 13,255,000
ACCS	All	Campus	Replace 200 vehicles with Electric Vehicles	$ 13,000,000
ACCS	All	Campus	Installation of 50 EV Charging Stations	$ 2,000,000
ACCS	System Office	System Office	Salaries and Benefits for Project Personnel (4 F/T staff, 5 yr term)	$ 3,120,000
ACCS	System Office	System Office	Equipment and Supplies (3 EVs, laptops, misc. office supplies)	$ 195,000
ACCS	System Office	System Office	Travel	$ 68,850
			Indirect (Administrative) Costs	$ 4,310,836
			TOTAL	**$ 90,527,551**

8. Impacts on Low Income and Disadvantaged Communities

The project proposed by the Alabama Community College System (ACCS) will impact the entire state of Alabama. Alabama is composed of 1,181 Census tracts, and 655 (or 55%) of them are designated as disadvantaged according to the Climate and Economic Justice Screening Tool (CEJST). The Alabama Community College System, a network of 24 public community and technical colleges, spans the entire state geographically. The service areas of its member institutions collectively cover all 67 Alabama counties and every county contains at least one disadvantaged Census tracts. **The list of CEJST Census tract IDs with the relevant jurisdiction [county] is attached**.

Alabama is one of the states with the greatest share of low-income and disadvantaged populations. According to the most recent U.S. Census, 16.2 % of Alabama residents are below the federal poverty line as compared to 11.5% for the nation. Alabama's poverty rate is the 7th highest among all 50 states. Alabama also has a disproportionately high rate of disability; 11.6% of the state's population below the age of 65 are counted as disabled. This is 30% higher than the national rate of 8.9%. In addition, Alabama has one of the lowest rates of educational attainment in the U.S., with only 26.2% of the adult population having earned a bachelor's degree or higher, the 8th lowest rate among all 50 states. Furthermore, Alabama is one of 4 states in the East South Central Region that has the highest percentage of households with high energy burdens (38%) as compared to other regions.

ACCS colleges have a significant impact on the low-income and disadvantaged populations in Alabama. Ninety-six (96) percent of Alabama Community College System students are from Alabama and ACCS enrolls 55% of all first-time college students in Alabama. Sixty-five (65) percent of all college freshmen and sophomores in Alabama are enrolled in Alabama Community College System institutions. Six (6) of the 24 ACCS institutions are HBCUs (Historically Black Colleges and Universities) and 3 other ACCS colleges have a predominantly Black student population. More than 40% of students system-wide identify racially as non-white and more than 60% identify as female. Moreover, ACCS colleges enroll a disproportionately high percent of low-income students, with an average of 62% of students[17] receiving some type of financial aid and an average of 48% receiving some form of federal financial aid each year over the last three academic years. When focusing on first-time, full-time Freshmen, the rates rise to 87% and 69% respectively for the year reported in the most recent published IPEDS data.

[17] Excludes dually enrolled high school students who are ineligible for federal financial aid. Data reflects aid disbursed over the 2020-2021 through 2022-2023 academic years. Source: ACCS Data and Exchange (DAX) system report pulled 02/23/2024 by the ACCS Office of Research and Organizational Effectiveness.

The expected direct and indirect benefits of the ACCS proposed project to the low income and disadvantaged communities of Alabama are numerous and are discussed relative to each GHG reduction measure in the numbered paragraphs that follow.

1. **Increasing the Share of Electric Vehicles and Expanding Electric Vehicle Charging Infrastructure Across the Alabama Community College System**. The replacement of 200 gasoline-powered and diesel-powered vehicles with electric vehicles at ACCS institutions across the state will **reduce greenhouse gas emissions and positively impact public air quality** in the disadvantaged communities served locally by each college and in all communities through which those vehicles travel when transporting students, faculty, and staff away from campus. The improvement of air quality will help **reduce the incidence of asthma** throughout Alabama where 10.1% of the population suffers from the disease. (Alabama ranks 22 out of 54 U.S. states/territories for rates of asthma and only 4 other states/territories have greater asthma mortality rates.) **Noise pollution will also be reduced** and the **costs for fuel will be lowered**, freeing up financial resources that can be better used to **increase academic, social, and financial support for disadvantaged and low-income students**.
2. **Implementation of Up-to-Date Building Energy Codes with Purchase and Installation of Energy-Efficient Heating and Cooling Equipment, Lighting, and Other Building Products.** Building renovations to improve energy efficiency on 6 separate historically Black colleges (HBCUs) and 3 separate predominantly Black institutions (PBIs) will particularly benefit low-income and disadvantaged students attending those colleges and will benefit others in the disadvantaged communities surrounding those campuses. Facility renovations at 9 colleges (some with renovations on multiple campuses) will include replacement of windows, doors, ceilings, floors, insulation, lighting, heating and air conditioning, and other mechanical systems with modern, energy-efficient alternatives. These building renovations and lighting upgrades will result in **significant energy savings and GHG reductions** at colleges that have some of the least financial resources and greatest student needs. They will also **improve the comfort and safety of the predominantly low-income, disadvantaged students** who attend classes and study in the buildings daily. Residents in the surrounding community at large will enjoy **increased beautification** of the public spaces on their local community college campus due to the structural and aesthetic improvement of buildings and grounds.
3. **Implementation of Building Energy Performance Management Systems in Government-Owned Buildings**. Each building renovation completed on one of the 6 HBCU campuses and 3 PBI campuses will include implementation of a building energy performance management system to monitor, regulate, and automate the electrical and mechanical equipment serving the building. These systems will not only reduce the energy consumed by the equipment but ensure that their usage is timed properly to align with schedules of classes and other events. Students using the renovated buildings at these HBCU campuses will experience **increased**

comfort and a healthier environment with the reliability that comes from fully automated systems.

4. **Implementation of New Benchmarking and Building Performance Standards Program**. The implementation of individual-building utility metering with building energy performance management systems will decrease the electricity consumed by these buildings and result in reduced greenhouse gas emissions. More than that, it will provide the mechanism for establishing benchmarks for existing energy usage and monitoring progress toward goals for greater energy efficiency. The capability of comparing energy usage among individual buildings (renovated versus non-renovated) will enable colleges to see the success of energy makeovers and encourage additional renovations in the future. These successes will provide excellent examples for presentation to the community at large and will be highlighted in workshops designed to educate residents and community leaders on the benefits of implementing similar GHG reduction measures, **elevating levels of community engagement and public awareness.**
5. **Installation of Renewable Energy and Energy Storage Systems in Publicly Owned Facilities**. The construction and implementation of a solar microgrid on the Bevill State Community College campus will provide multiple benefits to low-income and disadvantaged communities in the immediate vicinity and across the state. The microgrid will be the newest addition to the Energy Infrastructure Training Center, a collaboration between ACCS, Bevill State Community College and the Alabama Power Company. The Energy Infrastructure Training Center is already engaged in training individuals from across the State for occupations in the energy services fields and is the hub for the State's official Weatherization Assistance Program training. The Infrastructure Energy Training Center is **creating many high-quality jobs in the evolving energy sector and is delivering new workforce training opportunities targeted specifically to serve the State's lowest-income and disadvantaged populations**. The addition of the microgrid will add the **capacity for training technicians for work with renewable (solar) electricity generation**. In addition, **energy costs to the College will be reduced** and a return to the electrical grid of excess energy produced by the microgrid **will reduce costs for local consumers and result in improved energy resilience**.

9. Eligibility to Apply and Authority to Implement

Eligibility to Apply: The Alabama Community College System (ACCS) is an eligible applicant for an EPA Climate Pollution Reduction Grant by virtue of its status as a State entity. The Alabama Community College System is the publicly supported organization authorized by the Alabama Legislature to supervise and manage the State's system of public two-year community and technical colleges. On May 15, 2015, Alabama's governor signed into law Act 2015-125 establishing the Alabama Community College System (ACCS) as a department of state government to replace the former Department of Postsecondary Education and to assume its duties. A copy of Alabama Act 2015-125 is attached to verify ACCS's status as a state entity and to confirm the eligibility of ACCS to apply for an EPA

Climate Pollution Reduction Grant (CPRG). Alabama Act 2015-125 may also be accessed online at https://arc-sos.state.al.us/ucp/B15126AA.ASD.pdf. Act 2015-125 has subsequently been incorporated into the Code of Alabama 1975 and its provisions can be found in various sections of Title 16, Chapter 60 which can be accessed online at Code Of Alabama (state.al.us).

Authority to Implement: ACCS also possesses the authority to implement the various greenhouse gas reduction measures that constitute the project for which it seeks CPRG funding. In addition to establishing ACCS as a state entity, Act 2015-125 also established a new Board of Trustees to govern ACCS and delegated to the Board "all authority, powers, and duties" formerly given to the State Board of Education "with respect to the supervision, administration, naming, financing, construction, and equipping of institutions of postsecondary education, including community and technical colleges, junior colleges, and trade schools". The ACCS Board of Trustees answers to the State of Alabama by virtue of its composition. Alabama's Governor is the ex officio president of the Board and is granted authority by the Legislature to appoint the nine other Board members. Such appointments are subject to confirmation by the Alabama Senate.
Act 2015-125 also established the Chancellor as the Chief Executive Officer of the Alabama Community College System and delegated to the Chancellor, under the direction of the Board of Trustees, the "responsibility for the operation, management, control, supervision, maintenance, regulation, improvement, and enlargement of community colleges and technical colleges". Various Board of Trustees policies expound on the authority of the Chancellor to act on behalf of the Board to fulfill these responsibilities.

ACCS, through the office of the Chancellor (the System Office), will be responsible for administering the CPRG grant and implementing a small portion of the funded project (procurement and implementation of approximately 8 electric vehicles and 2 EV charging stations). However, the great majority of the funding from the grant will be distributed via subawards to the 24 ACCS institutions, which will in turn be responsible for the implementation of the great majority of the project (procurement and implementation of approximately 192 electric vehicles and 48 EV charging stations, multiple energy-efficiency building renovations, and procurement and installation of a solar microgrid). By Act 2015-125, presidents of the colleges are "responsible to the Chancellor for the day-to-day operations of the colleges". They are granted authority to act on behalf of their respective institutions to engage in contracts and agreements, such as will be required for CPRG subawards, to engage in capital projects, and to procure capitalized equipment through various Board of Trustees policies and according to corresponding procedures established by the Chancellor. The complete set of Board of Trustees Policies and Chancellor's Procedures can be viewed at the ACCS website: https://www.accs.edu/about-accs/board-of-trustees/policies-and-procedures/.

Please see Appendix D for supporting documentation.

Project 8: Sustainability Activation Project

In an effort to mitigate climate emissions in Parrish, Alabama, a comprehensive plan is proposed, centered around the establishment of electricity generation, storage and charging infrastructure and energy-efficient upgrades to town-owned buildings. Firstly, the town will invest in the development of electric vehicle charging stations strategically located throughout Parrish to encourage the adoption of electric vehicles and reduce reliance on fossil fuels. Additionally, a concerted effort will be made to transition municipal vehicles to electric alternatives where feasible. Simultaneously, existing town-owned buildings will undergo energy-efficiency renovations, beginning with retro-commissioning and building evaluations to establish baseline conditions followed by upgrades such as LED lighting systems and improved insulation to minimize energy consumption, then installation of solar energy generation and electricity storage systems to reduce reliance on non-renewable energy sources. Through this multifaceted approach, Parrish aims to significantly decrease its carbon footprint while fostering a more sustainable, resilient and environmentally conscious community for generations to come. The reduction in the Town of Parrish's maintenance costs will give Parrish financial room to act on future opportunities for improvement.

1. **Estimated Cumulative GHG Emission Reductions:**

The Parrish Sustainability Activation Project (PSAP)'s primary goal is to decrease the Town of Parrish's ongoing non-emergency services CO_2 emissions by at least 74% by 2027. The PSAP will also assess the feasibility of net zero renovations or replacement of the current Community center and old Town Hall with the Government and Community Center (GCC) and the Justice Center (JC). This would reduce emissions by 90.30% over the same time frame. The PSAP will simultaneously improve community amenities and increase disaster resilience in an isolated rural location.

The direct cumulative emissions reductions relative to the comparison year of 2023 for the government of the Town of Parrish under PSAP are as follows:

(All Emissions in Metric Tons)			
Counterfactual (business as usual)	0.08	0.50	65.41
PSAP Efficiency Option	878.68	1,823.26	4,332.40
PSAP Net Zero Option	1,050.68	2,197.59	4,979.90

The efficiency option estimates reducing GCC emissions to 30% and JC emissions to 50% of their 2023 levels after renovation. The PASP Net Zero option results in reducing CO_2

emissions from both to 0% of their 2023 levels. Both options assume the replacement of the town's non-emergency vehicle fleet with electric vehicles, and 7-year vehicle lifespans before replacement by incrementally more efficient electric vehicles. The Counterfactual scenario assumes no replacement of town structures and a gradual replacement of town vehicles with electrics in line with Alabama trends. This is in fact a significant overestimate of emissions reductions. All town buildings are near or past their design lifespans and will decay rapidly over the 2025-2050 period.

(All Emissions in Metric Tons)			
Town of Parrish Total Emissions			
Cumulative Emissions Decrease Compared to target year (2023)	2025-2030	2025-2035	2035-2050
Counterfactual (business as usual)	96.27	421.04	39,091.65
PSAP (minimal activation)	1,852.63	4,056.59	45,009.05
PSAP (moderate activation)	2,137.63	5,285.75	57,907.42
PSAP (maximum activation)	2,527.25	7,125.32	70,296.97
PSAP Net Zero (minimal activation)	2,196.62	4,805.26	46,304.05
PSAP Net Zero (moderate activation)	2,481.61	6,034.42	59,202.42
PSAP Net Zero (maximum activation)	2,871.24	7,873.99	71,591.96

For the Town of Parrish as a whole, the counterfactual assumes trends in electric vehicle adoption and rooftop solar penetration follow Alabama trends until 2050. The minimal activation scenario assumes that community engagement and governmental example increases EV purchase trends to the EPA region 4 average by 2025 and encourages 5% of households to adopt rooftop solar by 2035. The moderate activation scenario assumes an increase in EV purchasing trends to the national average by 2025 and that 10% of households will have rooftop solar by 2035. The moderate activation scenario assumes an increase in EV purchasing trends to the Nevada average by 2025 and that 25% of households will have rooftop solar by 2035. All scenarios assume current EV sales growth trends continue, that vehicles are used to their full 17-year lifespan, and that after 2035 all new build or replacement roofs will have solar installed.

2. **Implementing Agency or Agencies:**

The Town of Parrish will implement the Parrish Sustainability Activation Project with administrative support from the Alabama Center for Rural Organizing and Systemic Solutions (ACROSS), forming a public-private partnership for the benefit of the community. ACROSS is a disaster relief and community development non-profit with deep ties in the community and will provide access to a network of expertise across the United States.

3. **Implementation Schedule and Milestones:**

	EV	EV Chargers	Government and Community Center (GCC) and Justice Center (JC)	Major Reports & Community
Q1-Q3 2024	Determining requirements, initial community engagement	Determining requirements, initial community engagement	Determining requirements, Energy audit of all town buildings, determine necessity of retro-conditioning, initial community engagement, assessment of Net-Zero renovations/new builds, determine if costs of renovation surpass replacement costs	Initial community engagement in the project as a whole
Q4 2024	Request for Proposals, Initial Selection, Final Selection	Request for Proposals, initial selection, final selection	Request for proposals	Compile Ongoing community engagement, at least quarterly public

				discussions followed by community gatherings
Q1 2025	Purchase, Delivery	Town Hall EV Charger installation construction begins	Initial selection of designs	Ongoing community engagement, Contribution to ADEM Climate Action Plan
Q2 2025	Employee Familiarization	Town Hall EV charger installation complete and operational	Final selection of designs	Community celebration showcasing final design for GCC and community EV vehicle familiarization
Q3 2025	Six month review, solicitation of employee feedback	GCC chargers constructed as part of renovation	Renovations begin	
Q4 2025		Six month review of Town Hall EV Chargers, solicitation of employee feedback		
Q1 2026	First yearly review of employee satisfaction, EV market penetration, total/resident/non-resident charges at public charging stations			
Q2 2026				First annual community gathering celebrating progress towards

				sustainability in the previous year
Q3 2026		GCC Chargers Operational. First year review of Town Hall EV chargers, solicitation of community feedback and feasibility study on leaving chargers in place	Renovations Complete, facilities operational	Sustainability and efficiency trainings by guest speakers held at minimum monthly from here on
Q4 2026			Move in of all town operations, restart of community events	
Q1 2027	Second yearly review	Six month review of GCC chargers, solicitation of community and employee feedback		Contribution to 4-year Status Report. Parrish Sustainability Activation Project Report covering impact assessment, program review, potential opportunities for further sustainability measures by the Town of Parrish,
Q1 2028	Third yearly review		Six month review of GCC and JC renovations, solicitation of employee and community feedback	
Q2 2028-Q1	Yearly reviews will continue until Q1		Q3 2028: First year review of GCC	

2030	2030	and JC renovations, solicitation of community feedback Yearly reviews will be conducted on Q1 2029 and Q1 2030
Q1 2030-Q1 2050	Impact assessment, program review, and feasibility study on further sustainability measures by the Town of Parrish will be conducted at 5-year increments from Q1 2027	

4. **Geographic Scope:** Parrish, Alabama

5. **Metrics for Tracking Progress:**

The Parrish Sustainability Activation Project has two overarching goals:

1. The immediate material goal is to reduce the emissions directly associated with operations of the municipal government of the Town of Parrish.
2. The second more widespread goal is to demonstrate to the people of Parrish and surrounding communities the possibilities of transitioning to renewable energy systems that reduce reliance on fossil fuels. The opportunity to undertake this work in an "energy community" with origins in coal mining and which has lost jobs at nearby coal-fired power plants (including one of the highest GHG emitters in the country) will be an important demonstration of fulfilling the commitment to prioritize energy transition funding in communities which are most vulnerable.

Key metrics are:

- Net reduction in emissions by the Town of Parrish government
- Rate of EV ownership among residents of the Town of Parrish
- Resident charges at the Town of Parrish chargers
- Non-resident charges at the Town of Parrish chargers
- Attendance at community events, non-project usage of Project-developed community space
- Proportion of households with solar rooftops within the Town of Parrish
- Installed renewable energy capacity within the Town of Parrish

6. **Cost Estimates for Implementation:**

Total estimated cost for the 5-year project is $14,039,300.00, including program development, implementation, monitoring, and evaluation. The non-fuel cost of ownership of 8 sedans and 2 tight utility trucks is covered for the first 5 years to ensure the town can operate them for the near future. Since their principle effect is intended to be indirect, it is important that they be fully operable for a sustained period. All other costs are purely acquisitional. The Town of Parrish's functions are currently spread over five buildings. The

renovation of the high school and old town hall into the GCC and JC will allow the town to consolidate into two with room for expansion while divesting outdated assets.

Estimate for Renovation to Justice Center	$2,900,000.00
Estimate for Energy Audit of all existing town buildings	$25,000.00
Estimate for 90 KwH Rooftop Solar system + battery for GCC	$500,000.00
Estimate for Renovation of GCC	$8,500,000.00
Total Vehicle Cost	$501,000.00
Total EV Charger Cost	$337,000.00
Administrative Costs	$1,276,300.00
Total Cost	**$14,039,300.00**

7. **Impacts on Low-Income and Disadvantaged Communities:**

Parrish is a disadvantaged, economically under-served former coal mining community with an unemployment rate of 19.3% and a median household income of just $30,588. Alabama as a whole has a 4.3% unemployment rate and a median household income of $59,674. The Parrish Sustainability Activation Project will create a roadmap to prosperity and economic relevance for Parrish specifically and disadvantaged rural extraction-focused communities broadly.

8. **Authority to Implement:**

All assets are directly owned by the Town of Parrish without any contracts or other legal agreements which would preclude their renovation, construction, or disposal. Specific authority over all uses and dispositions considered is granted by the following sections of the state code of Alabama: AL Code § 11-96A-3 (2022), AL Code § 11-47-19 (2022), AL Code § 11-47-20 (2022), AL Code § 11-47-16 (2022), AL Code § 11-47-7 (2022), AL Code § 11-80-5 (2022), AL Code § 11-56-8 (2022), and Title 11 of the Alabama Code generally.

Project 9: Carbon Capture and Sequestration

Given the abundance of its timberland and favorable geology, Alabama has the potential to be a national technology hub in carbon capture and sequestration (CCS) for the forest products industry. When it comes to carbon capture and sequestration (CCS), Alabama already has a built-in advantage relative to other states, such as:

- an attractive combination of forest biomass and unique geology suitable for carbon sequestration
- a knowledgeable forest products industry that is already exploring opportunities to capture and permanently sequester biogenic (biomass based) carbon dioxide

- world class academic institutions; and
- the National Carbon Capture Center comprising 30 government, university, and research organizations from seven countries.

Alabama has nearly 23 million acres of timberland, the third largest in the United States. The forest products industry is the state's largest manufacturing industry and produces an estimated $4 billion of gross domestic product (GDP) for the state. The forest products industry in Alabama employs more than 34,000 people across forestry and logging, wood product manufacturing, and paper manufacturing (Economic Development Partnership of Alabama website, 2024).

The Alabama forest products industry emits carbon dioxide (CO_2) as a byproduct of some of its production processes. However, much of those emissions is biogenic, coming from the processing and combustion of wood products that remove CO_2 from the atmosphere during their life cycles. Opportunities exist to capture these CO_2 emissions and sequester them permanently underground.

An example project that can provide a significant reduction in CO_2 emissions is the Timberlands Sequestration Project associated with International Paper's (IP's) Pine Hill Mill in Wilcox County, Alabama. IP is working with Timberlands Sequestration, LLC to study and implement CO_2 capture of flue gas at the mill, which is mainly biogenic CO_2, along Awith pipeline transport and permanent underground sequestration at a nearby site in Monroe County, Alabama. The CO_2 reduction potential of the project between 2025 and 2035 is approximately 12.3 million tons. From 2025 to 2050, the CO_2 reduction potential is approximately 43.8 million tons. The Timberlands Sequestration Project could be operational by 2028.

Further information regarding the project is listed below:

1. **An estimate of the cumulative GHG emission reductions from 2025-2035:**
   12.3 million tons

2. **An estimate of the cumulative GHG emission reductions from 2025-2050:**
   43.8 million tons

3. **Implementing agency or agencies:**
   Alabama Forestry Commission

4. **Implementation schedule and milestones:**

   Key milestones along the implementation timeline include:

   - 2024: Life Cycle Analysis
   - 2025: Receipt of key pipeline permits

- 2026: Class VI Authorization to construct and air permit for capture plant
- 2026-2028: Construction
- 2029: Commencement of operations

5. **Geographic scope:**
   Rural area in the southwestern portion of Alabama

6. **Metrics for tracking progress:**
   Progress during development can be assessed based on receipt of key project permits and percent of construction completion relative to the baseline schedule. The project's progress toward GHG reduction targets will be measured and reported annually.

7. **Cost estimates for implementation:**
   The estimated total capital cost to implement the flagship Timberland Sequestration Project, including all CO_2 capture, transportation, and sequestration facilities, is estimated to be approximately $1 billion. A grant application would not exceed $500 million.

8. **Impacts on low-income and disadvantaged communities:**
   The Timberlands Sequestration Project is located in a rural area in the southwestern portion of Alabama. The project, which includes the mill, pipeline, and sequestration location, runs across portions of five census tracts, three of which are considered to be "disadvantaged" according to the U.S. Department of Energy's Disadvantaged Communities Report. Timberlands Sequestration, LLC has developed a robust Community Benefits Plan to engage and educate the local communities on carbon capture and sequestration.

9. **Authority to implement:**
   Alabama Code § 9-3-4 provides the Alabama Forestry Commission with the powers to protect, conserve and increase the timber and forest resources of the state and to administer all laws relating to timber and forestry and the protection, conservation, and increase of such resources. Alabama Code § 22-22A-5 provides the Alabama Department of Environmental Management with the powers to serve as the state agency responsible for administering federally approved or federally delegated environmental programs.

Coalition: Alabama, Mississippi and Tennessee

The State of Tennessee has partnered with the Tennessee Valley Authority (TVA) to implement priority measures that center around building energy efficiency enhancements and electricity distribution upgrades. Since the geographical boundaries for TVA reach into the state of Alabama, we have joined with Tennessee so that Alabamians that are TVA

customers have the opportunity to benefit from these measures. Tennessee will serve as the lead agency in the coalition.

Building Energy Efficiency Enhancements

This collection of measures anticipates the implementation of various incentive programs to promote energy efficiency enhancements to buildings across the residential, commercial, and industrial sectors. Four separate measures have been evaluated for this PCAP. Emission reduction estimates for each measure have been provided and all estimates reflect reductions across a portion of the state of Alabama. The geographical boundary includes the portion of Alabama that is included in the service territory of the Tennessee Valley Authority (TVA) which generally include the counties of Calhoun, Cherokee, Colbert, Cullman, DeKalb, Etowah, Franklin, Jackson, Lauderdale, Lawrence, Limestone, Marshall, Morgan, Winston, Jefferson (cities of Bessemer and Tarrant only), and Madison. This area accounts for 13% of the overall energy consumption in the territory.

Priority Measures for Alabama:

Incentive programs for implementation of end-use energy efficiency measures in existing commercial and industrial buildings.
This measure addresses the commercial and industrial building sector from the perspective of energy efficiency improvements that can be made to existing buildings. Examples include but are not limited to the replacement of existing products (e.g., space heating, ventilation, air-cooling systems, cooking appliances) with certified energy-efficient products.

Incentive programs for the purchase of certified energy-efficient lighting in commercial and industrial buildings, as well as streetlights.
This measure aims to reduce emissions by improving lighting efficiency through conversion to light-emitting diode bulbs. The transition will save energy and associated emissions that would otherwise be generated. The ultimate emission sources are the existing and future fleet of electricity generating units serving the defined geographic areas, which are necessary to power lights. However, this measure focuses on the end-use of lighting specifically. Emission reductions are translated from energy saved (e.g., kWh) to emissions reduced in the production of the electricity.

Incentive programs for the purchase of certified energy-efficient building products to replace inefficient products in residential buildings.
This measure addresses the residential building sector from the perspective of energy efficiency improvements that can be made to existing buildings. Examples include but are not limited to the replacement of existing products (e.g., space heating, ventilation, air-cooling systems, cooking appliances) with certified energy-efficient products.

Weatherization programs for residential buildings.
This measure focuses on residential actions to improve energy efficiency. Specifically, this includes building envelope weatherization and insulation improvements. Such measures can reduce homeowner energy consumption for heating as well as reduce the demand for electricity associated with space heating and cooling. These weatherization programs may result from home energy audit programs and do-it yourself energy workshops (e.g., window and door seals and improved insulation, and more efficient water heating systems).

Electricity Distribution Upgrades

Upgrading electricity distribution.

The U.S. Energy Information Administration (EIA) estimates that from 2018 through 2022, annual electricity transmission and distribution (T&D) losses averaged about 5% of the electricity transmitted and distributed.[5] Transmission losses are a function of the distance between the generator and the consumer (i.e., the farther it has to travel, the more is lost), the voltage and resistance of the transmission lines (i.e., the "quality" of the lines), and the amount of energy flowing through the line (i.e., higher loads generally mean more heat and more loss).

The sub geographical boundary is the portion of Alabama that is included in the service territory of the TVA, approximately 13% of the overall energy consumption in the territory. This priority measure aims to reduce transmission loss and thereby reduce overall power consumption through increased efficiency. There are other related measures that focus on upgrading the electricity distribution system and position the state for increased load growth in response to vehicle electrification and industrial electrification. These measures could provide further improvements to the electric grid. Such additional measures will be considered later.

See Appendix E for emissions reductions and the remaining elements required by the PCAP.

Individual Priority Measures:

In addition to the above-mentioned projects, the following priority measures, along with supporting documentation, will be included in Alabama's PCAP.

Buildings Sector

Measure 1– Energy Efficiency Upgrades & Electrification

A. Measure Description

This measure will establish a grant program that will provide funding for electrical upgrades to allow for building electrification and to help install energy efficiency upgrades at churches,

schools, and community buildings in low-income and disadvantaged communities. The upgrades could include:

- LED lighting upgrades;
- Replacement of commercial appliances;
- Facility retrofit programs;
- Energy management control systems upgrades, including installation of variable speed drives;
- Installation of electrically commutated motors on refrigeration unit evaporator coils;
- Energy audits; and
- Recommissioning/retro-commissioning.

B. Estimate of Near-term and Long-term GHG and Criteria Pollutant Emission Reductions

	CO_2 Emission Reduction (metric tons)	**CAP Emission Reduction (metric tons)**
2025-2030	34,400	40
2030-2050	137,600	160

C. Implementing Agency or Agencies

1. Alabama Department of Economic and Community Affairs; OR

2. Rural counties.

D. Implementation Schedule and Milestones

Year 1	Year 2	Year 3	Year 4	Year 5
Planning phase: Complete facility selection and identify energy efficiency upgrades.	Begin building upgrades.	Building upgrades continue.	Building upgrades continue.	Building upgrades finalized and 100% implementation.

*E. **Geographic Location*:** Statewide

F. Metrics for Tracking Progress

Tracking metrics are:

- Electricity use reductions (kWh); and
- Natural gas use reductions (therms).

G. Cost estimates for implementation: $8-$80 million

H. LIDAC Benefits

- Improved air quality and improved public health due to reduced air pollution.
  - CEJST Health Burden: Asthma, Diabetes, Heart Disease, Low Life Expectancy Low Income.
  - Justice40 Climate Change: Reductions of local air pollutants.
- Deployment of clean energy: Justice40
- Creation of high-quality jobs and workforce development opportunities through upgrades performed in affected areas.
  - CEJST Workforce Development Burden
  - Justice40 Training and Workforce Development

I. Authority to Implement:

Pursuant to Alabama statutes, ADECA, as the successor to the former Alabama Office of State Planning and Federal Programs, is afforded authority over the disbursement of grants and other forms of federal-government assistance intended for the promotion of the health, safety, and general welfare of citizens of the state, and it is empowered to exercise all powers necessary and proper for the discharge of its duties, including promulgating reasonable rules and regulations. See Ala. Code 1975, §§ 41-9-207, 41-9-211, and 41-23-1. Alabama law and related advisory guidance have long held that municipalities and counties are authorized to accept monetary donations and grants, especially in situations that would provide a benefit of the general public.

Transportation Sector

Measure 2 – Electric Vehicle Charging Stations for Employers

A. Measure Description

This measure will fund a grant program that will facilitate the deployment of electric vehicle charging infrastructure at various employers across the state. In order for electric vehicles to be widely adopted, charging stations need to be conveniently located and readily available. Vehicles are routinely parked all day at one's employer, so installing electric vehicle charging stations at major employers across the state would offer easily accessible workplace charging opportunities to a large number of Alabamians.

*B. **Estimate of Near-term and Long-term GHG and Criteria Pollutant Emission Reductions***

	CO_2 Emission Reduction (metric tons)	**CAP Emission Reduction (metric tons)**
2025-2030	68,407	TBD
2030-2050	273,628	TBD

*C. **Implementing Agency or Agencies***

1. Alabama Department of Economic and Community Affairs; OR

2. Group of state or local jurisdictions or counties partnered with a statewide non-profit as implementation partner.

*D. **Implementation Schedule and Milestones***

Year 1	Year 2	Year 3	Year 4	Year 5
Planning phase: Develop grant program and criteria	Accept applications and issue grants	Install EV charging infrastructure	Install EV charging infrastructure	Complete and 100% implementation

Each charging station will be operational for a term of 5 years and meet all requirements of the federal charging rule.

*E. **Geographic Location*****:** Statewide

*F. **Metrics for Tracking Progress** (will be consistent with EV-Chart)*

Tracking metrics are:

- Electricity used for charging stations (kWh);
- Number of electric vehicles and equipment converted from fossil fuel-powered vehicles to electric vehicles;
- Vehicle miles traveled by electric vehicles; and
- Number of charging stations installed.

*G. **Cost estimates for implementation*****:** $8-$20 million (specific amount to be determined by implementation partners)

H. ***LIDAC Benefits***

- Improved air quality and improved public health due to reduced air pollution.
  - CEJST Health Burden: Asthma, Diabetes, Heart Disease, Low Life Expectancy Low Income.
  - Justice40 Climate Change: Reductions of local air pollutants.
- Decreased vehicle tailpipe emissions.
  - CEJST Transportation Burden: Diesel Particulate Matter Exposure, Traffic Proximity.
  - Justice40 Clean Transportation: Reduction of exposure to harmful transportation-related emissions.
- Helps bridge the technology divide by bringing emerging technologies to underrepresented communities.
- The manufacturing and supply chains for electric vehicles, their components, and charging equipment present an opportunity to expend investment in local communities.

I. ***Authority to Implement*:**

Pursuant to Alabama statutes, ADECA, as the successor to the former Alabama Office of State Planning and Federal Programs, is afforded authority over the disbursement of grants and other forms of federal-government assistance intended for the promotion of the health, safety, and general welfare of citizens of the state, and it is empowered to exercise all powers necessary and proper for the discharge of its duties, including promulgating reasonable rules and regulations. See Ala. Code 1975, §§ 41-9-207, 41-9-211, and 41-23-1. Alabama law and related advisory guidance have long held that municipalities and counties are authorized to accept monetary donations and grants, especially in situations that would provide a benefit of the general public.

Measure 3 - Shore Power for Container and Cruise Ships

A. Measure Description

This measure will fund the deployment of port electrification systems, including shore power for berthed ships and electric charging stations for cruise ships, at the Port of Mobile, the Mobile Cruise Terminal, and inland port facilities across Alabama to improve terminal efficiency and encourage the use of electric powered vessels. Rebates, grants, or other incentives will be offered to commercial entities to purchase zero emission equipment, charging stations, and vehicles to be used exclusively at ports and cruise terminals in Alabama. Projects may include electrifying cruise ship charging stations, rubber tire gantry cranes, forklifts, container cranes, and other machinery used to move cargo; electrifying GSVs (ground support vehicles); electrifying trucks and other cargo handling equipment; installing shore to ship power connection; and installing shore power. These incentives may include providing funding for electrical infrastructure assessments and infrastructure installation.

B. Estimate of Near-term and Long-term GHG and Criteria Pollutant Emission Reductions

	NOx Emission Reduction (metric tons)	**SO_2 Emission Reduction (metric tons)**	**$PM_{2.5}$ Emission Reduction (metric tons)**	**CO_2 Emission Reduction (metric tons)**
2025-2030	694.49[18]	641.91	75.62	15,920
2030-2050	2,769.94	2,567.64	302.48	63,680

C. Implementing Agency or Agencies

1. Alabama Department of Economic and Community Affairs, OR

2. Local jurisdictions or counties.

D. Implementation Schedule and Milestones

Year 1	Year 2	Year 3	Year 4	Year 5
Planning phase: complete site selection and design phase; grant application process and selection.	Construction phase begins: construction and installation of shore power systems begins.	Construction phase continues. Begin to see some systems come online	Construction phase continues.	Construction phase complete and 100% implementation

*E. **Geographic Location*:** Statewide

F. Metrics for Tracking Progress

Tracking metrics are:

- Increased access for electric cruise ships;
- Electricity consumed by berthed ships (kWh);
- Electricity used for charging stations (kWh);
- Number of electric ships, vehicles, and equipment converted from fossil fuel-powered vehicles to electric vehicles;
- Number of charging stations installed; and

[18] Based on the EPA's Shore Power Technology Assessment 2022 excel calculator with 312 annual vessel calls, which was the 2022 container ships served by the Port of Mobile. Average stay of a container ship is 34.6 hours.

- Number of employees trained.

G. ***Cost estimates for implementation*****:** $60 million.[19]

H. ***LIDAC Benefits***

- Improved air quality and improved public health due to reduced air pollution.
  - CEJST Health Burden: Asthma, Diabetes, Heart Disease, Low Life Expectancy Low Income.
  - Justice40 Climate Change: Reductions of local air pollutants.
- Decreased vehicle tailpipe emissions and cruise ship exhaust.
  - CEJST Transportation Burden: Diesel Particulate Matter Exposure, Traffic Proximity.
  - Justice40 Clean Transportation: Reduction of exposure to harmful transportation-related emissions.
- Increased regional resiliency to extreme weather events and reduced municipal energy costs.
  - CEJST Energy Burden: Energy Cost.
  - Justice40 Affordable and Sustainable Housing: Reduced housing cost burden.
- Creation of high-quality jobs and workforce development opportunities.
  - CEJST Workforce Development Burden.
  - Justice40 Training and Workforce Development.

I. ***Authority to Implement*****:**

Pursuant to Alabama statutes, ADECA, as the successor to the former Alabama Office of State Planning and Federal Programs, is afforded authority over the disbursement of grants and other forms of federal-government assistance intended for the promotion of the health, safety, and general welfare of citizens of the state, and it is empowered to exercise all powers necessary and proper for the discharge of its duties, including promulgating reasonable rules and regulations. See Ala. Code 1975, §§ 41-9-207, 41-9-211, and 41-23-1. Alabama law and related advisory guidance have long held that municipalities and counties are authorized to accept monetary donations and grants, especially in situations that would provide a benefit of the general public.

Measure 4 - Public Fleet Electrification and Publicly Available Charging Infrastructure Development

A. Measure Description

This measure incentivizes the installation of electric vehicle (EV) charging infrastructure for publicly available charging and funds the transition of public fleets from fossil fuel-powered

[19] Latest estimate for shore power are between $8-$15 million per berth.

vehicles to EVs. Projects include the procurement of light-, medium-, and heavy-duty service municipal and other public entity vehicles along with public transit vehicles, like the bus fleet. Workforce development will be included in this measure with the development of programs to address EV maintenance and charging station installation, beginning with current employees. For 2021, the mobile combustion source category generated 38,317,000 $MTCO_2e$ or 28.3% of total statewide GHG emissions.[20]

B. Estimate of Near-term and Long-term GHG and Criteria Pollutant Emission Reductions

	CO_2 Emission Reduction (metric tons)	**CAP Emission Reduction (metric tons)**
2025-2030	68,388	TBD
2030-2050	273,552	TBD

C. Implementing Agency or Agencies

1. Alabama Department of Economic and Community Affairs, OR

2. Local jurisdictions or counties.

D. Implementation Schedule and Milestones

Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**
Planning phase: finalize fleet electrification plans for each government agency that identifies appropriate vehicles, fleet and/or publicly accessible charging locations, infrastructure requirements, workforce training requirements, and	Continue vehicle procurement, charging infrastructure construction, and workforce development.	Continue vehicle procurement, charging infrastructure construction, and workforce development.	Continue vehicle procurement, charging infrastructure construction, and workforce development.	Procurement, construction, and workforce development phase complete and 100% implementation.

[20] https://cfpub.epa.gov/ghgdata/inventoryexplorer/#allsectors/allsectors/allgas/econsect/current

implementation schedules. Procurement strategy: begin to procure vehicles based on availability, bulk procurement strategies, and infrastructure construction schedule. Charging infrastructure construction phase begins: installation of charging stations and associated electrical infrastructure. Workforce development begins: training and certification of workforce to operate and maintain electric vehicles and associated charging infrastructure begins.				

E. ***Geographic Location:*** Statewide

F. ***Metrics for Tracking Progress***

Tracking metrics are:

- Electricity used for charging stations (kWh);

- Number of electric vehicles converted from fossil fuel-powered vehicles to electric vehicles;
- Vehicle miles traveled by electric vehicles;
- Number of charging stations installed; and
- Number of employees trained.

G. Cost estimates for implementation: $20 million.

H. ***LIDAC Benefits***

- Improved air quality and improved public health due to reduced air pollution.
  - CEJST Health Burden: Asthma, Diabetes, Heart Disease, Low Life Expectancy Low Income.
  - Justice40 Climate Change: Reductions of local air pollutants.
- Decreased vehicle tailpipe emissions.
  - CEJST Transportation Burden: Diesel Particulate Matter Exposure, Traffic Proximity.
  - Justice40 Clean Transportation: Reduction of exposure to harmful transportation-related emissions..
- Increased public access to electric vehicle chargers.
  - Justice40 Clean Transportation: Access to affordable electric vehicles, charging stations, and purchase programs
- Reduced noise pollution.
  - CPRG LIDAC Technical Guidance – Reduced noise pollution.
- Creation of high-quality jobs and workforce development opportunities.
  - CEJST Workforce Development Burden.
  - Justice40 Training and Workforce Development.

I. ***Authority to Implement*****:**

Pursuant to Alabama statutes, ADECA, as the successor to the former Alabama Office of State Planning and Federal Programs, is afforded authority over the disbursement of grants and other forms of federal-government assistance intended for the promotion of the health, safety, and general welfare of citizens of the state, and it is empowered to exercise all powers necessary and proper for the discharge of its duties, including promulgating reasonable rules and regulations. See Ala. Code 1975, §§ 41-9-207, 41-9-211, and 41-23-1. Alabama law and related advisory guidance have long held that municipalities and counties are authorized to accept monetary donations and grants, especially in situations that would provide a benefit of the general public.

Low Income/Disadvantaged Community Benefits Analysis

The implementation of the measures included in this PCAP are anticipated to provide significant benefits to low-income and disadvantaged communities (LIDACs). The Alabama Department of Environmental Management identified LIDAC areas in the state of Alabama using the Climate and Economic Justice Screening Tool (CEJST). This tool identifies disadvantaged census tracts across all 50 states, the District of Columbia and the U.S. territories. Communities are considered disadvantaged if they are in census tracts that meet the thresholds for at least one of the tool's categories of burden, or if they are in the boundaries of federally recognized tribes. In addition, if an area is surrounded by disadvantaged communities and it is at or above the 50th percentile for low income it is also considered disadvantaged.

There are eight categories of burden. These include climate change, energy, health, housing, legacy pollution, transportation, water/wastewater and workforce development. The thresholds for each category are presented in the table below.

Category	Thresholds For Census Tracts
Climate Change	At or above the 90th percentile for expected agriculture loss rate or expected building loss rate or expected population loss rate or projected flood risk or projected wildfire risk and are at or above the 65th percentile for low income
Energy	At or above the 90th percentile for energy cost or $PM_{2.5}$ in the air and are at or above the 65th percentile for low income
Health	At or above the 90th percentile for asthma or diabetes or heart disease or low life expectancy and are at or above the 65th percentile for low income
Housing	Experienced historic underinvestment or are at or above the 90th percentile for housing cost or lack of green space or lack of indoor plumbing or lead paint and are at or above the 65th percentile for low income

Category	Thresholds For Census Tracts
Legacy Pollution	Have at least one abandoned mine land or formerly used defense sites or are at or above the 90th percentile for proximity to hazardous waste facilities or proximity to Superfund sites (National Priorities List or proximity to Risk Management Plan facilities and are at or above the 65th percentile for low income
Transportation	At or above the 90th percentile for diesel particulate matter exposure or transportation barriers or traffic proximity and volume and are at or above the 65th percentile for low income
Water and Wastewater	At or above the 90th percentile for underground storage tanks and releases or wastewater discharge and at or above the 65th percentile for low income
Workforce Development	At or above the 90th percentile for linguistic isolation or low median income or poverty or unemployment and more than 10% of people ages 25 years or older whose high school education is less than a high school diploma

An Excel spreadsheet that contains CEJST data for census tracts in Alabama and a CEJST map for Alabama can be found in Appendix F. Information related to the Climate and Economic Justice Screening Tool was obtained from the CEJST website.[21]

There are multiple risks, impacts and vulnerabilities among LIDACs. The *Climate Change and Social Vulnerability in the United States Report*[22] addressed four vulnerable populations which were defined based on income, educational attainment, race and ethnicity and age. The table below defines each of the socially vulnerable groups addressed in this report.

[21] https://screeningtool.geoplatform.gov/en/#3/33.47/-97.5

[22] Climate Change and Social Vulnerability in the United States: A Focus on Six Impacts (epa.gov)

Vulnerable Groups	
Category	**Definition**
Low Income	Individuals that live in households with income that is at or below 200% of the poverty level.
Minority	Individuals identifying as Black or African American; American Indian or Alaska Native; Asian; Native Hawaiian or Other Pacific Islander; and/or Hispanic or Latino
No High School Diploma	Individuals ages 25 and older with no high school diploma or equivalent.
65 or Older	Individuals ages 65 and older

The report outlines how these individuals may be more exposed to the impacts of different environmental changes in six categories: Air Quality and Health; Extreme Temperature and Health; Extreme Temperature and Labor; Coastal Flooding and Traffic; Coastal Flooding and Property; and Inland Flooding and Property. Each of the six impact categories was analyzed. The results, which include risks and impacts, of each category are described below.

Air Quality and Health: The average concentrations of $PM_{2.5}$ have fallen over time; however, minorities, individuals with lower income, and individuals with lower educational attainment can be at increased risk of ambient air pollution exposure and health effects related to that exposure. This analysis estimates changes in the numbers of premature deaths for individuals ages 65 and older and new childhood asthma diagnoses associated with changes in $PM_{2.5}$.

Extreme Temperature and Health: Exposure to extreme heat or extreme cold may result in more severe health responses or death, and those individuals in vulnerable populations may experience higher impacts from exposure to extreme temperatures. Minority populations, as well as low-income neighborhoods have been found to experience elevated temperature mortality impacts. There is also a relationship between one's education and impacts from exposure to extreme temperatures. Many outdoor occupations may be more likely to employ individuals that lack a high school diploma. In addition, older individuals have higher baseline mortality rates and are more susceptible to the negative consequences of heat exposure.

Extreme Temperature and Labor: Extreme temperatures can result in disruptions in labor sectors where people work outdoors or indoors without air conditioning. With extreme temperatures, people are at risk of experiencing health and cognitive effects that prevent them from working at optimal levels. Consequently, there could be a shift in the allocation of time to labor, with potential economic implications. Low-income individuals are more likely to live in areas with the highest projected losses of labor hours, and they are more

vulnerable to the potential health effects of heat exposure due to the lack of insurance or healthcare.

Coastal Flooding and Traffic: This analysis estimates traffic delays in coastal areas resulting from increases in high-tide flooding. Individuals with low income are more likely to work jobs with fixed hours, and they may be more vulnerable to the consequences of unexpected delays. Minorities are 32% more likely to live in areas with traffic delays due to flooding. These increased travel times can reduce the accessibility of employment or social engagement. For the elderly, limited access to transportation can cause missed or delayed medical appointments and health care.

Coastal Flooding and Property: Coastal counties in the U.S. house nearly 40% of the nation's total population. It also estimates risks to socially vulnerable populations currently living in areas where damages are projected to be highest. Individuals living in low-lying affordable housing in the coastal zone tend to be low income, and they tend to be living in older and poorer-quality structures. Low-income individuals tend to have fewer resources to protect against and recover from flooding damage or loss of property. Minorities are more vulnerable based on economic factors, and in the Southeast Gulf, individuals without a high school diploma are 31% more likely to live in areas with the highest projected percentage of land lost due to flooding. The elderly may not be able to prepare, cope with or recover from hazardous events.

Inland Flooding and Property: Inland flooding occurs when excessive rainfall collects across a watershed and causes a river to overflow. This can affect human health and safety, property, infrastructure and natural resources. The analysis estimates property damage resulting from changes in heavy precipitation and associated flooding. Minorities, those with low income, people with limited English proficiency, certain immigrant communities and those with no high school diploma are at increased risk of exposure to flooding given their higher likelihood of living in risk-prone areas and areas with poorly maintained infrastructure.

Measures to reduce GHG emissions can provide multiple types of benefits to low-income and disadvantaged communities. These can include direct and indirect benefits as well as public health benefits. Potential community benefits include:

- Improved public health resulting from reductions in co-pollutants (ozone, PM2.5 and hazardous air pollutants) such as reductions in new asthma cases and reductions in hospital admissions and emergency department visits;
- Increased resilience to environmental change from GHG reduction measures that have both GHG benefits and environmental adaptation benefits;
- Creation of high-quality jobs and workforce development opportunities in disadvantaged communities with an emphasis on expanding opportunity for workers from disadvantaged populations and under-represented small businesses/contractors;

- Enhanced community engagement, increased public awareness of projects and results and community capacity building;
- Improved access to services and amenities;
- Decreased energy costs and improved energy security from energy efficiency improvements and more resilient energy sources.
- Reduced noise pollution;
- New greenspace and/or community beautification;
- Increased access to transportation alternatives;
- Improved housing quality, comfort, and safety; and/or,
- Other benefits identified during consultation

For any potential projects or reduction measures, the geographic scope and additional information related to LIDAC benefits is in the Priority Measures section.

During the development of this plan, ADEM has enacted the following methods of communication to foster open conversation between stakeholders, potential applicants and the communities of the state of Alabama.

1. ADEM advertised the CPRG program through the Association of County Commissioners and the Leage of Municipalities for the state of Alabama. Each organization included a summary of the CPRG program and the CPRG contact information for Alabama in their newsletter or posted the information on their website.

2. ADEM hosted two virtual stakeholder meetings which were held on January 31, 2024, and February 20, 2024. See Appendix G for a list of attendees and minutes for each meeting.

3. ADEM encouraged open communication with potential implementation grant applicants. Through this communication, ADEM was able to ensure that appropriate priority measures were included in Alabama's PCAP.

Moving forward, ADEM and its partners plan to continue engagement and action to reduce emissions; build our economy; and enhance the quality of life for all Alabamians.

Review of Authority

In a letter dated March 13, 1991, Governor Guy Hunt designated the Alabama Department of Environmental Management as the lead state agency for the purposes of Alabama's responsibilities under the Federal Clean Air Act. The Department is authorized to take all actions necessary and appropriate to secure to the state the benefits of said federal act under the Alabama Environmental Management Act, Code of Alabama 1975, Section 22-22A-4(n), and by implication through the Alabama Air Pollution Control Act, Code of Alabama 1975, Section 22-28-11(13) and (14). Please see Appendix H.

The review of authority to implement for priority measures included in this PCAP are in the Priority Measures section. For any priority measure where authority must still be obtained, the Priority Measures section also contains a schedule of milestones for actions needed by key entities for obtaining any authority needed to implement such measure(s).

Appendix A Stakeholders

First Name	Last Name	Title	Organization	Email Address
Clark	Denson	Policy Advisor	Alabama Governor's Office	denson.clark@governor.alabama.gov
Stacy	Boshell	Division Director Weights and Measures	Alabama Department of Agriculture and Industries	stacy.boshell@agi.alabama.gov
Karl	Rayborn	President & CEO	Alabama Rural Electric Association of Cilioeratuves	krayborn@areapower.com
Mel	Monk	Executive Director	Alabama Asphalt Pavement Association	melmonk@bellsouth.net
Dr. Heather	Dylla	VP Sustainability and Innovation	Construction Partners, Inc.	hdylla@constructionpartners.net
Scott	Tillman	Director of Planning and Operations	Regional Planning Commission of Greater Birmingham	stillman@rpcgb.org
Baker	Allen	Director of Policy and Research	Alabama League of Municipalities	ballen@almonline.org
Mark	Bentley	Executive Director	Alabama Clean Fuels Coalition	mark@alabamacleanfuels.org
Christina	Tidwell	Senior Attorney	Southern Environmental Law Center	ctidwell@selcal.org
Hasin	Gandhakwala	Electric Transportation Manager	Alabama Power	hgandhak@southernco.com
Ed /Kevin Taylor	Castile		Alabama Industrial Development Training	ecastile@aidt.edu
Chris	Blankenship	Commissioner	Alabama Department of Conservation and Natural Resources	chris.blankenship@dcnr.alabama.gov
Arthur	Bishop	Manager of Transmission and Distribution Technology Support	Alabama Municipal Electric Authority	art@amea.com
Jennifer	Lee	Division Chief	Alabama Department of Economic and Community Affairs	jennifer.lee@adeca.alabama.gov
Kelley	Gillikin	Director, Investing In Alabama Counties/Kate Jessip??	Associaton of County Commissions of Alabama	kgillikin@alabamacounties.org
Cedric	Roberts	Director	Department of Equipment Management	cedric.roberts@birminghamal.gov
Thomas	Yuill	Deputy Director of	City of Birminham	thomas.yuill@birminghamal.gov
Dave	Stewart	Attorney	Bradley Arant Boult Cummings LLP	dave.stewart@bradley.com
Sonny	Brasfield	Executive Director	Association of County Commissions of Alabama	sbrasfield@alabamacounties.org
Schuyler	Espy	Executive Director APPCO	Manufacture Alabama	schuyler@manufacturealabama.org
Kristi	Barnett	Grant Writer	Wallace State Community College-Hanceville	kristi.barnett@wallacestate.edu
Carolyn	Williams	Talent Manager	Economic Development Partnership of Alabama	cwilliams@edpa.org
Emily	Ham	Global Government Relations	International Paper	emily.ham@ipaper.com
Michael	Staley	President & CEO	Alabama Clean Fuels Coalition	michael@alabamacleanfuels.org
Michael	Malley	Manager of Strategic Partnerships	Alabama Transportation Institute	msmalley@ua.edu
Daniel	Tait		Energy Alabama	dtait@energyalabama.org
Al	Jones		Alabama Forestry Commission	al.jones@forestry.alabama.gov

Appendix B

Supporting Documentation: City of Leeds

§ 11-81A-1. Definitions

As used in this chapter, the following words and terms shall have the following respective meanings:

(1) CONDITIONS OF A GRANT. The terms and conditions upon which a grant is made by a donor.

(2) COUNTY. Any county in the State of Alabama.

(3) DONOR. The United States of America, or the state, or any county in the state or any municipality or any department, division, board, bureau, institution, or agency of any of the foregoing, or any person, firm or corporation, institution, foundation, or other agency or any combination of any two or more such donors.

(4) GOVERNING BODY. The council, commission, board of directors, or other group or body which governs, controls, or makes decisions for a grantee.

(5) GRANT. Any gift, grant, appropriation, donation, or advance by any donor, whether absolute or conditional, for any purpose.

(6) GRANTEE. Any municipality, or any department, board, bureau, commissioner, or agency of any municipality, whether incorporated or not, acting on behalf of the municipality, or any public corporation, to which a grant is to be made.

(7) MUNICIPALITY. Any city or town incorporated under the laws of the state.

(8) PUBLIC CORPORATION. Any board, authority, or other municipal public corporation incorporated with the approval of, or the directors of which are elected or appointed by, the governing body of a municipality. A city board of education shall be considered a public corporation within the meaning of this chapter.

(9) SECURITIES. One or more bonds, notes, warrants, or certificates of indebtedness of a municipality or public corporation.

(10) STATE. The State of Alabama.

History:

Acts 1980, No. 80-697, p. 1400, §1.

§ 11-81A-2. Power and authority of grantees

Each grantee shall have the power, and, when approved by its governing body, the authority, to do or perform any one or more of the following:

(1) To apply to any donor for a grant and to pay the expenses involved in making such application;

(2) To accept and receive grants from any donor;

(3) To expend or apply the proceeds of any grant for the purpose or purposes for which the same is made;

(4) To agree to comply with the conditions of the grant;

(5) To pay over or donate or loan to any board, authority, or agency of the grantee, or to any municipality, or to any public corporation, or to any county or counties in the state or to the state, or to any board, bureau, authority, institution, or agency of the grantee, or of such public corporation, or of such county or counties, or of the state or to any person, firm or corporation, any grant proceeds authorized or permitted to be so paid over, donated or loaned by the conditions of the grant.

History:

Acts 1980, No. 80-697, p. 1400, §2.

§ 11-81A-3. Power and authority of municipalities, counties, and public corporations

Each municipality or county and each public corporation shall have the power and, when approved by its governing body, the authority, to do or perform any one or more of the following:

(1) To anticipate the receipt of any grant either by loan or by assignment or both; to issue securities to evidence such loan or assignment; to make such securities the general obligation indebtedness of the issuer or the obligation of the issuer limited or restricted as to source of payment and security to all or a portion of the proceeds of the grant or to any revenue, receipts, or income or any special tax or license of the issuer, or any one or more thereof.

(2) To pledge to the holders of any securities issued pursuant to this chapter the full faith and credit of the issuer and in addition to, or instead of such pledge, to pledge and grant a security interest in all or a portion of the proceeds of the grant or any revenue, receipts or income or any special tax or license of the issuer, or any one or more thereof; or to mortgage or grant a security interest in any property of the issuer as security for any such securities, as the governing body of the issuer may determine.

(3) To pledge, assign, and grant a security interest in all or any part of the proceeds of any grant to the holders of any securities issued by the municipality, county or the public corporation for any lawful purpose under the authority of any law other than this chapter.

History:

Acts 1980, No. 80-697, p. 1400, §3.

§ 11-81A-4. Limitations and amplification of securities authorization

Securities issued under the authority of this chapter shall mature at such time or times as the governing body of the issuer shall determine, not later than the date on which the last installment of the grant is reasonably expected to be received. The total principal amount of securities which may be issued in respect of a grant shall not exceed the reasonably estimated proceeds of the grant. The determination of the governing body of the issuer of the date on which the last installment of the grant will be received and the amounts of the proceeds of any grant to be received shall be conclusive. Securities issued under the authority of this chapter shall be of such denomination and tenor, shall contain such covenants and restrictions and provisions and shall be payable at such place or places, within or without the state, as the governing body of the issuer shall determine. Such securities shall be executed in the name of the issuer by the mayor or other chief executive officer and attested by the clerk or secretary thereof, with the seal of the issuer impressed thereon, but coupons for interest, if interest is evidenced by coupons, need be signed only by the mayor or other chief executive officer. Execution by facsimile signature and seal in the manner authorized by law for bonds of a municipality or county may be authorized by the governing body.

History:

Acts 1980, No. 80-697, p. 1400, §4.

§ 11-81A-5. Exemption of securities from taxation

All securities issued by authority of this chapter and the interest thereon shall be exempt from all taxation in the state.

History:

Acts 1980, No. 80-697, p. 1400, §5.

§ 11-81A-6. Legal investment status of securities

Securities issued under the authority of this chapter shall be securities in which the state, the grantee, all counties, and political subdivisions of this state, their officers, boards, departments or agencies, and all banks, bankers, trust companies, savings and loan associations, investment companies, and other persons carrying on a banking business, all insurance companies and insurance associations and other persons carrying on an insurance business, all administrators, executors, guardians, trustees, and other fiduciaries, and all other persons who now are or may hereafter be authorized to invest in securities issued by a municipality or county, may properly and legally invest any funds, including capital belonging to them or within their control.

History:

Acts 1980, No. 80-697, p. 1400, §6.

§ 11-81A-7. Effect of chapter

This chapter is intended to grant additional authority to grantees, municipalities, counties, and public corporations and shall not be considered to repeal, restrict, or modify any law now in effect or hereafter enacted.

History:

Acts 1980, No. 80-697, p. 1400, §7.

Appendix C

Supporting Documentation: Alabama Department of Transportation

ALDOT Application for ADEM PCAP

Trial and Implementation of Reduced Temperature Asphalt Mixtures

February 26, 2024

Executive Summary:

To reduce Green House Gas Emissions (GHG) during pavement construction, ALDOT will implement two separate temperature reduction technologies Cold Central Plant Recycling (CCPR), and Warm Mix Technology (WMT) with Reduced Temperature Requirement.

CCPR is a method of incorporating very high amounts of Recycled Asphalt Pavement (RAP) into a structural asphalt layer without operating the asphalt plant's burner. Due to the high recycled materials content and lower energy production method GHG savings can be significant with no detriment to performance or constructability. ALDOT will perform CCPR trial projects in order to refine our specifications and approval processes for this innovative material with the goal of implementing a specification so that CCPR can be used on appropriate projects statewide in the near future.

WMT is a family of technologies that allow asphalt to be produced at reduced temperatures which will reduce GHG emission by reducing fuel consumption. WMT is used regularly in Alabama for its other benefits but is rarely used to reduced temperatures. ALDOT will publish a specification that will call for reduced production temperatures on projects where the temperature reduction can be applied without degrading performance, such as projects that are near asphalt plants or constructed during hot weather.

Section1
An Estimate of Cumulative GHG Emission reductions from 2025 – 2035
(See **Reducing GHG Emissions Using Two Separate Temperature Reduction Technologies** on pages 5 through 8)

Section 2
An Estimate of Cumulative GHG emission reductions from 2025 – 2050
(See **Reducing GHG Emissions Using Two Separate Temperature Reduction Technologies** on pages 5 through 8)

Section 3
Implementing Agency or Agencies
Alabama Department of Transportation

Section 4
Implementation Schedule and Milestones
CCPR project timeline:

2024 Q4 – Hold meetings with government, industry, and academic partners to refine a draft CCPR specification.

2025 Q1 – Scope and let a CCPR trial project with significant scale.
Q2 or Q3 – Construction of CCPR trial project
Q4 – Hold meetings with academic and industry partners to refine specifications and processes.

2026 Q1 – Scope and let a second CCPR trial project with improved specifications and processes.
Q2 or Q3 – Construction of second trial project using improved specifications and processes.
Q4 – Hold meetings with academic and industry partners to further refine specifications and processes.

2027 Q1 – Scope and let third and fourth CCPR trial project with improved specifications and processes.
Q2 – Publish a standard specification for CCPR to be used on State and Local Government projects where it will present advantages over traditional methods.
Q2 or Q3 – Construction of third and fourth trial projects.

2028 Q1 – Scope and let fifth and sixth CCPR trial projects.
Q2 or Q3 – Construction of fifth and sixth trial projects.

2029 and beyond – Construct projects using CCPR to reduce construction phase GHG.

WMT project timeline:

2024 Q4 – Hold meetings with academic and industry partners to write and refine a specification for Warm Mix Technology with a Reduced Temperature Requirement.

2025 Q1 – Scope and let a WMT trial project with significant scale using the specification.

Q2 or Q3 – Construct the project using the trial specification
Q4 – Hold meetings with academic and industry partners to refine specifications and processes.

2026 Q1 – Scope and let a second WMT trial project with improved specifications and processes.
Q2 or Q3 – Construct of second trial project using improved specifications and processes.
Q4 – Hold meetings with academic and industry partners to further refine specifications and processes.

2027 Q1 – Scope and let third and fourth WMT trial projects with improved specifications and processes.
Q2 – Publish a standard specification for Warm Mix Technology with Reduced Temperature Requirement to be used on state and local government projects where it will present advantages over traditional methods.
Q2 or Q3 – Construction of third and fourth trial projects.

2028 Q1 – Scope and let fifth and sixth WMT trial projects.
Q2 or Q3 – Construction of fifth and sixth trial projects.

2029 and beyond – Construct projects using Warm Mix Technology with Reduced Temperature Requirement to reduce GHG in the construction phase.

Section 5
Geographic Scope
The geographic scope of this project could be anywhere withing the State of Alabama. Specific project selection will be performed through our existing project allocation process. A suitable project for CCPR will be in a location in need of full depth pavement repair or full depth pavement construction. It will be beneficial if the project in near an urban area since urban areas tend to have greater availability of milled asphalt pavement ready to be recycled. For WMT the project will likely be near an existing asphalt plant. For example of the asphalt plants located in Alabama, about 60% are located in low-income and disadvantaged communities as defined by the Climate and Economic Justice Screening Tool (CEJST).

Section 6
Metrics for Tracking Progress
Progress will be tracked against the timeline given in section 4. The amount of GHG emissions can be estimated using the actual project tonnage and temperature reductions of the aforementioned methodologies.

Section 7
Cost Estimates for Implementation

CCPR Trial Project 1: $3 million
CCPR Trial Project 2: $3.2 million
Additional CCPR Trial Projects using new standard specification: $13.3 Million to be allocated for 4 additional projects.

Warm Mix Trial Project 1: $6.8 million
Warm Mix Trial Project 2: $7 million
Additional Warm Mix projects using new standard specification: $30 Million to be allocated for 4 additional projects.

Technical Assistance from The National Center for Asphalt Technology: $500,000

Project total: $ 63.8 Million

Section 8
Impacts on Low-income and Disadvantaged Communities
Hot mix asphalt production facilities are often in low-income urban areas or rural areas. Reduced emissions from these low GHG methods will reduce air pollution in these disadvantaged areas while also improving the road system for users. As mentioned previously, about 60% of the asphalt plants in Alabama are located in low-income and disadvantaged communities as defined by the Climate and Economic Justice Screening Tool (CEJST). Lower temperatures will also reduce the risk of heat related injuries and Volatile Organic Compounds (VOC) inhalation for workers on these projects who tend to be from those same disadvantaged areas.

Section 9
ALDOT's Authority to Implement
According to Alabama Code 39-2-1 and 39-2-2, Alabama Department of Transportation has authority to specify, advertise, and let and award highway projects for construction in the State of Alabama.

Reducing GHG Emissions Using Two Separate Temperature Reduction Technologies

Baseline Hot Mix Asphalt Calculations

According to an industry life cycle assessment, 300,320 BTUs per ton of energy is needed for traditional hot mix asphalt (HMA), with electricity equating to 11,320 BTUs per ton and the burner energy equating to 289,000 BTUs per ton (Mukherjee 2021). Using the 2021 National Asphalt Pavement Association survey, approximately 4.4 million tons of HMA were produced in Alabama for Alabama Department of Transportation projects (Shacat et al 2021). If asphalt mix tonnage remains consistent over the years, the total energy required is calculated as follows:

$$Energy\ BTUs\ per\ Ton = 289{,}000$$

$$BTUs = 4{,}400{,}000 * 298{,}000 = 1{,}271{,}600{,}000{,}000\ BTUs = 1{,}271{,}600\ mmBTUs$$

Asphalt plants typically use natural gas or recycled fuel oil (RFO). Based on a sample of plants in Alabama, 88% of fuel consumption for the burner is natural gas and the remaining 12% of recycled fuel oil (RFO). Emission factors were gathered from the EPA GHG Emission Factors Hub (EPA 2023).

$$Natural\ Gas\ CO2 = 53.06 * 1{,}271{,}600 = 67{,}471{,}096\ kgCO2$$

$$Natural\ Gas\ CH4 = 1.0 * 1{,}271{,}600 = 1{,}271{,}600\ kgCH4$$

$$Natural\ Gas\ N2O = 0.10 * 1{,}271{,}600 = 127{,}160\ kgN2O$$

$$Natural\ Gas\ kgCO2eq = 88\% * [67{,}471{,}096 + (0.025 * 1{,}271{,}600) + (0.298 * 127{,}160)] = \mathbf{59{,}435{,}886\ kgCO2eq}$$

$$RFO\ CO2 = 73.96 * 1{,}271{,}600 = 94{,}047{,}536\ kgCO2$$

$$RFO\ \ CH4 = 3.0 * 1{,}271{,}600 = 3{,}814{,}800\ kgCH4$$

$$RFO\ N2O = 0.60 * 1{,}271{,}600 = 762{,}960\ kgN2O$$

$$RFO\ kgCO2eq = 12\% * [94{,}047{,}536 + (0.025 * 3{,}814{,}800) + (0.298 * 762{,}960\ )] = \mathbf{11{,}324{,}432\ kgCO2eq}$$

$$Electricity\ BTUs\ per\ Ton = 11{,}320$$

$$BTUs = 4{,}400{,}000 * 11{,}320 = 49{,}808{,}000{,}000\ BTUs = 49{,}808\ mmBTUs$$

$$Electricity\ CO2 = \frac{49{,}808 * 891.9}{3.412 * 2.2046} = 5{,}905{,}769\ kgCO2$$

$$Electricity\ \ CH4 = \frac{49{,}808 * 0.067}{3.412 * 2.2046} = 444\ kgCH4$$

$$Electricity\ \ N2O = \frac{49{,}808 * 0.01}{3.412 * 2.2046} = 66\ kgN2O$$

$$Electricity\ kgCO2eq = 50{,}352 + (0.025 * 4) + (0.298 * 1) = \mathbf{708{,}696\ kgCO2eq}$$

Therefore, the total estimated GHG emissions for baseline ALDOT asphalt tonnage is 71,469,014 kgCO2eq.

CCPR Calculations

The following calculations were used to determine GHG emission reductions during the CCPR trials outlined in the proposal. To calculate the GHG emissions reduced as a result of using CCPR opposed to the traditional

HMA, the GHG emissions of CCPR were estimated and subtracted from the baseline emissions calculation assuming the same tonnage. Using the CCPR trail as a demonstration of the calculations, the estimate tonnage is 37,514 tons of asphalt mixture. If traditional HMA was used, the associated GHG emissions would be approximately 609,338 kgCO2eq.

CCPR reduces the need for heating at the burner, thus only electricity is needed. Assuming that the electricity consumption remains the same, the GHG emissions for CCPR would be calculated as follows:

$$Electricity\ BTUs\ per\ Ton = 11{,}320$$

$$BTUs = 37{,}514 * 11{,}320 = 424{,}658{,}48\ BTUs = 425\ mmBTUs$$

$$Electricity\ CO2\ = \frac{425 * 891.9}{3.412 * 2.2046} = 50{,}352\ kgCO2$$

$$Electricity\ \ CH4\ = \frac{425 * 0.067}{3.412 * 2.2046} = 4\ kgCH4$$

$$Electricity\ \ N2O\ = \frac{425 * 0.01}{3.412 * 2.2046} = 1\ kgN2O$$

$$Electricity\ kgCO2eq\ = 50{,}352 + (0.025 * 4) + (0.298 * 1) = 6{,}042\ kgCO2eq$$

Therefore, our total kgCO2eq savings with CCPR technology compared to traditional HMA is **603,296 kgCO2eq** (99.0% of the production emissions of asphalt mixtures).

WMA Calculations

The following calculations were used to determine GHG emission reductions during the WMA trials outlined in this proposal. Using the trail for WMA to demonstrate the calculations used to estimate the GHG reductions, the estimated project tonnage is 62,530 tons of asphalt mixture produced at a temperature reduction of 80 degrees Fahrenheit. If traditional HMA was used the associated GHG emissions would be approximately 1,015,672 kgCO2eq using the calculations outlined previously.

$$Starting\ Temperature = 340\ °F$$

$$Temperature\ with\ Warm - Mix\ Additive = 260°F$$

$$Temperature\ Reduction = 310 - 260 = 80°F\ (23\%\ Decrease)$$

The NCHRP Report 779 found an estimated energy savings of 1,100 Btu/°F per ton of WMA produced (NCAT 2014).

$$Estimated\ Savings\ per\ Ton\ of\ WMA = 1{,}100 * 80 = 88{,}000\ BTUs\ per\ Ton$$

$$Estimated\ Savings = 88{,}000 * 62{,}530 = 5{,}502{,}640{,}000\ BTUs\ or\ 5{,}503\ mmBTUs$$

Asphalt plants typically use natural gas or recycled fuel oil (RFO). Based on a sample of plants in Alabama, 88% of fuel consumption for the burner is natural gas and the remaining 12% of recycled fuel oil (RFO). Emission factors were gathered from the EPA GHG Emission Factors Hub (EPA 2023).

$$Natural\ Gas\ CO2\ Reduction = 53.06 * 5{,}503 = 291{,}970\ kgCO2$$

$$Natural\ Gas\ CH4\ Reduction = 1.0 * 5{,}503 = 5{,}503\ kgCH4$$

$$Natural\ Gas\ N2O\ Reduction = 0.10 * 5{,}503 = 550\ kgN2O$$

$$Natural\ Gas\ kgCO2eq\ Reduction = 88\% * [291{,}970 + (0.025 * 5{,}503) + (0.298 * 550)] = 257{,}199\ kgCO2eq$$

$$RFO\ CO2\ Reduction = 73.96 * 5{,}503 = 406{,}975\ kgCO2$$

$$RFO\ \ CH4\ Reduction = 3.0 * 5{,}503 = 16{,}805\ kgCH4$$

$$RFO\ N2O\ Reduction = 0.60 * 5{,}503 = 3{,}302\ kgN2O$$

$$RFO\ kgCO2eq\ Reduction = 12\% * [406{,}975 + (0.025 * 16{,}805) + (0.298 * 3{,}302)] = 49{,}005\ kgCO2eq$$

$$\boldsymbol{Total\ kgCO2eq\ Reduction = 257{,}199 + 49{,}005 = 306{,}204\ kgCO2eq}$$

$$\%\ kgCO2eq\ Reduction = \frac{306{,}204}{1{,}015{,}672} = 30.1\%$$

$$\boldsymbol{Total\ kgCO2eq/Ton\ Reduction = \frac{306{,}204}{62{,}530} = 4.9\ kgCO2eq/Ton}$$

In summary, calculations show that using warm-mix additives to decrease production temperatures by 80 degrees Fahrenheit can lead to a decrease in emissions of **306,204 kgCO2eq** (30.1% of the production emission of asphalt mixtures).

GHG Emission Reduction Estimates for 2025-2035

The table below shows the estimated emissions reduced between the years 2025-2035. This includes one pilot project for WMA with temperature reductions and one project for CCPR in the years 2025 and 2026. After pilot projects, specifications will be developed with incentives to scale the use of these technologies. It is anticipated that 30%, 40%, and 60% of ALDOT's tonnage is produced using WMA technology with temperature reductions from 2027 through 2035, respectively. Since CCPR may have limited application, it is anticipated that 2 CCPR projects will be let per year during 2027 and 2028.

Year	Alabama Tonnage (Short Ton)	AL Total GHG Emissions (kgCO2eq)	Trial Tonnage (Short Ton)	Total GHG Emissions (kgCO2eq)	Trial GHG Reductions (kgCo2eq)	% Reductions (kgCO2eq)
2025	4,400,000	71,469,014	100,044	1,625,010	909,500	1%
2026	4,400,000	71,469,014	100,044	1,625,010	909,500	1%
2027	4,400,000	71,469,014	1,395,029	21,452,789	7,670,523	11%
2028	4,400,000	71,469,014	1,835,029	28,599,690	9,825,163	14%
2029	4,400,000	71,469,014	2,640,000	42,881,409	12,927,837	18%
2030	4,400,000	71,469,014	2,640,000	42,881,409	12,927,837	18%
2031	4,400,000	71,469,014	2,640,000	42,881,409	12,927,837	18%
2032	4,400,000	71,469,014	2,640,000	42,881,409	12,927,837	18%
2033	4,400,000	71,469,014	2,640,000	42,881,409	12,927,837	18%
2034	4,400,000	71,469,014	2,640,000	42,881,409	12,927,837	18%
2035	4,400,000	71,469,014	2,640,000	42,881,409	12,927,837	18%
Total	**48,400,000**	**786,159,157**	**21,910,146**	**353,472,360**	**109,809,543**	**14%**

GHG Emission Reduction Estimates for 2025-2050

Assuming that the technology and transition is successful, the percentage of reductions would remain consistent over the years. As a result, it is estimated that the 2025-2050 reductions of GHG emissions would be 303,727,093 kgCO2eq as compared to if traditional HMA was used, which is approximately a 16% reduction.

Co-pollutant Benefits

Asphalt plants burn fuels such as natural gas and recycled fuel oil which represent about 80% of the energy used. Thus, reduction in fuel consumption can also reduce sulfur dioxide, nitrogen oxides, and formaldehyde which are emissions from fuel combustion depending upon the fuel type used. Plants that use WMA technology have an additional benefit of significantly reducing the fine particulates, PM-10. (Prowell, Brian, et. al. 2014). In addition, use of CCPR may reduce the emissions associated with raw material extraction and production of virgin asphalt and aggregate (FHWA 2020).

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Appendix D

Supporting Documentation
Alabama Community College System

Alabama Community College System

IMPLEMENTATION GRANT PROPOSAL

EPA Climate Pollution Reduction Grant

Request for Inclusion in State's Priority Climate Action Plan (PCAP)
Submitted to the Alabama Department of Environment Management (ADEM)
February 28, 2024

Point of Contact: Lisa Rollan, Grants Coordinator
Lisa.Rollan@accs.edu

0. Project Overview

The Alabama Community College System (ACCS) is proposing an EPA Climate Pollution Reduction Grant (CPRG) project that will implement greenhouse gas (GHG) reduction measures in three sectors: Transportation, Electric Power, and Buildings.

Transportation: The proposed project will increase the number of electric vehicles (EVs) in service at all 24 community and technical colleges across the State and at the Alabama Community College System's central office and will increase the share of the collective fleet that is all-electric. The project will fund the purchase of 200 electric vehicles to replace aging and inefficient gasoline- or diesel-powered vehicles of various types. 200 vehicles are targeted for replacement; they are over 10 years old, have more than 100,000 miles, consume the greatest number of gallons of fuel each year, and will be removed from service. ACCS and member colleges will also purchase and install 50 new EV Level 3 charging stations across the state (at least 2 per college) to support the operation of the new EVs and increase the capacity for further transition to an electrified fleet.

Electric Power: The proposed project will pioneer renewable energy production on an Alabama community college campus. ACCS will purchase and install a solar microgrid on the campus of Bevill State Community College at the new Energy Infrastructure Training Center. The Training Center is a joint effort of ACCS, Bevill State, and the Alabama Power Company with a mission to educate and train students for jobs in emerging technologies of the energy sector, including HVAC, solar, wind, and electric vehicles. The Center also serves as the hub for Alabama's federally-funded Weatherization Assistance Program training. The microgrid will not only reduce the College's consumption of commercially-generated power, but will return power to the grid, reducing the cost of electricity for the College and other consumers and will enhance the College's energy resilience. The microgrid will also serve as a vital resource to train students of the Energy Infrastructure Training Center in microgrid operation and maintenance, increasing the number of workers in Alabama with skills in renewable energy.

Buildings: This project will fund multiple energy-efficiency building renovation projects at all of ACCS's historically black and predominantly black colleges. These colleges serve some of the lowest-income, most disadvantaged students and communities in Alabama. A total of 9 colleges and 15 buildings will be affected. Renovations will involve implementation of the most up-to-date building energy codes and include the purchase and installation of certified energy-efficient heating and cooling equipment, windows, doors, lighting, and other building products to replace inefficient products. Each building renovation will include the implementation of a building energy performance management system, allowing each college to implement new benchmarking and building performance standards. Each renovated building will be individually metered, if not already so, enabling effective tracking of energy consumption. The individual metering of multiple buildings at specific colleges will serve to highlight the energy savings of renovated buildings versus unrenovated buildings and encourage the adoption and implementation of similar building renovations and metering projects on other campuses statewide.

1. 5-Year GHG Emission Reduction Estimates

The ACCS project will reduce GHG emissions by an estimated total of 7,661 metric tons CO_2e over the 5-year period from 2025 to 2030. The total GHG emissions by GHG reduction measures are as follows:

A. Transportation Sector (Implementation of Electric Vehicles and Charging Stations): ~3,979 metric tons CO_2e
B. Electric Power Sector (Implementation of Solar Microgrid): ~686 metric tons CO_2e
C. Buildings Sector (Renovations to Improve Energy Efficiency): ~2,996 metric tons CO_2e

The table following item #2 provides additional detail on the calculations of GHG reductions by sector and sub-project, including estimates for the final, continuing annual GHG reductions by sector and sub-project.

2. 25-Year GHG Emission Reduction Estimates

The ACCS project will reduce GHG emissions by an estimated total of 46,143 metric tons CO_2e over the 25-year period from 2025 to 2050. The total GHG emissions by GHG reduction measures are as follows:

A. Transportation Sector (Implementation of Electric Vehicles and Charging Stations): ~22,360 metric tons CO_2e
B. Electric Power Sector (Implementation of Solar Microgrid): ~6,787 metric tons CO_2e
C. Buildings Sector (Renovations to Improve Energy Efficiency): ~16,996 metric tons CO_2e

The table below provides additional detail on the calculations of GHG reductions by sector and sub-project, including estimates for the final, continuing annual GHG reductions by sector and sub-project.

GREENHOUSE GAS EMISSIONS REDUCTIONS

College/Dept	Building	Project	Annual Target energy reduction (kWh)
Bishop State	Delchamps - Student Life Complex	Mechanical, lighting, windows	188,802
Drake State	Bldg 300	Mechanical, lighting, windows	20,774
Drake State	Bldg 100 (existing Nursing Bldg)	Mechanical, lighting, windows	35,360
Gadsden State	Prater Hall	Mechanical, lighting, windows	110,224
Gadsden State	LRC	Mechanical, lighting, windows	17,973
Lawson State	Bldg F - Kennedy Student Ctr	Mechanical, lighting, windows	93,925
Lawson State	Building D - Library	Mechanical, lighting, windows	70,389
Wallace Selma	Byrd Arts & Sciences Bldg	Mechanical, lighting, windows	83,062
Wallace Selma	Classroom Bldg	Mechanical, lighting, windows	84,494
Chattahoochee Valley	Wallace Hall	Mechanical, lighting, windows	82,539
Reid State	900 Admin Bldg	Mechanical, lighting, windows	49,933
Trenholm State	Bldg E	Mechanical, lighting, windows	114,750
Shelton State	Bldg 300	Lighting, windows	18,750
Shelton State	Bldg 500	Lighting, windows	15,150
Shelton State	Bldg 700	Lighting, windows	15,875
	Annual TOTAL(kWh) Reduction for Mech Bldg Renovations		**1,002,000**
	Annual TOTAL (MT of CO2e) GHG Reduction for Mech Bldg Renovations		**700**
Bevill State	Energy Training Center	Install renewable microgrid system	436,956
	Annual TOTAL(kWh) Reduction for Microgrid System		**436,956**
	Annual TOTAL (MT of CO2e) GHG Reduction for Microgrid System		**305**
ACCS	Campus	Replace vehicles with Electric Vehicles	1,315,000
	Annual TOTAL(kWh) Reduction for Electric Vehicles		**1,315,000**
	Annual TOTAL (MT of CO2e) GHG Reduction for Electric Vehicles		**919**
	Average Annual GRAND TOTAL (kWh) Reduction		**2,753,956**
Average Annual GHG emissions reductions (MT of CO2e)			**1,924**
Cumulative GHG emissions reductions from 2025-2030 (MT of CO2e)			**7,661**
Cumulative GHG emissions reductions from 2025-2050 (MT of CO2e)			**46,143**

3. Implementing Agencies

The **Alabama Community College System** (ACCS) is the eligible applicant requesting funding from an EPA Climate Pollution Reduction Grant which will be implemented cooperatively by the ACCS System Office (Office of the Chancellor) and the network of 24 community and technical colleges that comprise ACCS. The following is contact information for ACCS for the proposed implementation grant:

Alabama Community College System
Post Office Box 302130
Montgomery, Alabama 36130-2130
Lisa Rollan, Grants Coordinator
Phone: 334-293-4538
Email: lisa.rollan@accs.edu

4. Implementation Schedule and Milestones

ACCS has developed a preliminary project workplan that includes a schedule for implementation and specific greenhouse gas reduction milestones. Details are provided in the following tables.

IMPLEMENTATION SCHEDULE

College/Dept - Bldg - Project	2024				2025				2026				2027				2028				2029			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Bishop State - Delchamps - Mech Renovation				Design				Construction																
Drake State - Bldg 300 - Mech Renovation				Design				Construction																
Drake State - Bldg 100 (Nursing) - Mech Renovation										Design			Construction											
Gadsden State - Prater Hall - Mech Renovation				Design				Construction																
Gadsden State - LRC - Mech Renovation										Design			Construction											
Lawson State - Bldg F (Kennedy) - Mech Renovation				Design				Construction																
Lawson State - Bldg D (Library) - Mech Renovation				Design				Construction																
Wallace Selma - Bryd Arts & Sciences - Mech Renovation				Design				Construction																
Wallace Selma - Classroom Bldg - Mech Renovation										Design			Construction											
Chattahoochee Valley - Wallace Hall - Mech Renovation				Design				Construction																
Reid State - 900 Admin Bldg - Mech Renovation				Design				Construction																
Trenholm State - Bldg E - Mech Renovation				Design				Construction																
Shelton State - Bldg 300 - Windows and Lighting				Design		Construction																		
Shelton State - Bldg 500 - Windows and Lighting								Design		Construction														
Shelton State - Bldg 700 - Windows and Lighting												Design		Construction										
Bishop State - Main Campus - Individual Meters				Order		Install																		
Bishop State - Carver Campus - Individual Meters				Order		Install																		
Bishop State - Southwest Campus - Individual Meters				Order		Install																		
Drake State - Main Campus - Individual Meters				Order		Install																		
Gadsden State - Valley St Campus - Individual Meters				Order		Install																		
Lawson State - Birmingham Campus - Individual Meters				Order		Install																		
Lawson State - Bessemer Campus - Individual Meters				Order		Install																		
Shelton State - Fredd Campus - Individual Meters				Order		Install																		
Trenholm State - Patterson Campus - Individual Meters				Order		Install																		
Trenholm State - Trenholm Campus - Individual Meters				Order		Install																		
Bevill State - Energy Training Center				Design				Construction																
ACCS - Campus - Replace Vehicles with EV					Order		Roll Out																	
ACCS - Campus - Install EV Charging Stations				Design		Const.																		
ACCS - System Office - Project Personnel				Hire		Project Management																		

IMPLEMENTATION MILESTONES							
			Milestone Year 1	**Milestone Year 2**	**Milestone Year 3**	**Milestone Year 4**	**Milestone Years 5 - 25**
College/Dept	Building	Project	Annual Target energy reduction (kWh) Year 1	Annual Target energy reduction (kWh) Year 2	Annual Target energy reduction (kWh) Year 3	Annual Target energy reduction (kWh) Year 4	Annual Target energy reduction (kWh) Year 5
Bishop State	Delchamps - Student Life Complex	Mechanical, lighting, windows	113,281	151,042	173,698	181,250	188,802
Drake State	Bldg 300	Mechanical, lighting, windows	12,464	16,619	19,112	19,943	20,774
Drake State	Bldg 100 (existing Nursing Bldg)	Mechanical, lighting, windows	21,216	28,288	32,531	33,946	35,360
Gadsden State	Prater Hall	Mechanical, lighting, windows	66,134	88,179	101,406	105,815	110,224
Gadsden State	LRC	Mechanical, lighting, windows	10,784	14,379	16,535	17,254	17,973
Lawson State	Bldg F - Kennedy Student Ctr	Mechanical, lighting, windows	56,355	75,140	86,411	90,168	93,925
Lawson State	Building D - Library	Mechanical, lighting, windows	42,233	56,311	64,757	67,573	70,389
Wallace Selma	Byrd Arts & Sciences Bldg	Mechanical, lighting, windows	49,837	66,450	76,417	79,740	83,062
Wallace Selma	Classroom Bldg	Mechanical, lighting, windows	50,697	67,595	77,735	81,114	84,494
Chattahoochee Valley	Wallace Hall	Mechanical, lighting, windows	49,524	66,031	75,936	79,238	82,539
Reid State	900 Admin Bldg	Mechanical, lighting, windows	29,960	39,947	45,939	47,936	49,933
Trenholm State	Bldg E	Mechanical, lighting, windows	68,850	91,800	105,570	110,160	114,750
Shelton State	Bldg 300	Lighting, windows	11,250	15,000	17,250	18,000	18,750
Shelton State	Bldg 500	Lighting, windows	9,090	12,120	13,938	14,544	15,150
Shelton State	Bldg 700	Lighting, windows	9,525	12,700	14,605	15,240	15,875
Bevill State	Energy Training Center	Install renewable microgrid system	-	-	109,245	436,956	436,956
ACCS	Campus	Replace vehicles with Electric Vehicles	433,950	1,315,000	1,315,000	1,315,000	1,315,000
			1,035,150	**2,116,600**	**2,346,085**	**2,713,876**	**2,753,956**

5. Geographic Scope

The geographic scope of the proposed ACCS project is statewide. All 24 ACCS community and technical colleges will participate in project implementation and the service areas of these colleges collectively encompass all 67 Alabama counties.

6. Metrics for Tracking Progress

ACCS has identified the following expected outputs and outcomes for the proposed project:

Outputs

1. 200 Gasoline and Diesel-Powered Vehicles Replaced with Electric Vehicles
2. 50 Electric Vehicle Charging Stations Added Across the State on College Campuses and System Office
3. 1 Renewable Energy Grid Installed at the Energy Infrastructure Training Center at Bevill State Community College
4. 15 College Buildings at 6 HBCU and 3 PBI Colleges Renovated and Retrofitted to meet Up-to-Date Energy Codes and Equipped with Individual Building Electric Utility Meters
5. 4 New High-Quality Jobs Created for Staff Hired to Administer the Project and Advance Energy-Efficiency Policies and Practices
6. Students Trained in Renewable Energy Operations and Maintenance
7. 9 Community Service Workshops Conducted on Home Energy Efficiency and Community Energy Resilience

Outcomes

1. 7,661 Metric Tons Reduction in GHG (CO_2e) Emissions - 2025 through 2030
2. 46,143 Metric Tons Reduction in GHG (CO_2e) Emissions - 2025 through 2050
3. 2,753,956 kWh Average Annual Reduction in Energy Usage Due to Renovated Buildings on College Campuses
4. 103,600 Gallon Reduction in Average Annual Gasoline/Diesel Fuel Consumption and 20% Reduction in Average Annual Gas/Diesel Fuel Costs Across ACCS
5. Reduction in Hazardous Air Pollution/Improvement in Air Quality Across State of Alabama
6. Reduction in Incidence and Mortality Asthma Rates Across State of Alabama
7. 4 High-Quality Jobs Created
8. 4 High-Quality Jobs Created in Low-Income/Disadvantaged Communities
9. 28-Person Increase in Staff Trained to Implement, Monitor, and Assess GHG Reduction Measures Across ACCS
10. Increase in State's Skilled Renewable Energy Workforce
11. Increased Energy Resilience to Climate Change Impacts at Bevill State Community College
13. 50-Unit Expanded EV Charging Station Infrastructure Across State of Alabama
14. Increased Levels of Community Engagement and Public Understanding of the Benefits of Energy Efficiency/Resilience and Climate Protection Strategies

Additional specific performance measures have been developed to track, measure, and report progress toward achieving the expected outputs and outcomes for each GHG reduction measure. The performance measures for outputs and outcomes relevant to the Transportation Sector portion of the project are given as a sample below. The complete table of performance measures is given in a separate attachment.

Performance Measures Related to Electric Vehicle Implementation (Transportation Sector)

Description	Related Outputs and Outcomes	Goal	Unit of Measurement	Target Date for Goal Achievement	Tracking Method	Assessment Methods
Electric Vehicles Purchased and Placed in Service	A1, B1, B2, B4, B5, B6	200	Each	June 30, 2025	Purchases via subgrants to colleges tracked using grant-management software at ACCS System Office and vehicle inventory tracked using financial management module of the Systemwide ERP system (Banner)	Purchases and vehicle inventory reports pulled from grants management software and Banner and compared to project workplan and timeline
Gasoline/Diesel Vehicles Removed from Service	A1, B1, B2, B4, B5, B6	200	Each	June 30, 2025	Disposal of vehicles tracked using grant management software in use at System Office and financial management module of the Systemwide ERP system (Banner)	Vehicle dispositions and vehicle inventory reports pulled from grants management software and Banner and compared to project workplan and timeline

EV Charging Stations Purchased and Installed on College Campuses	A2, B13	50	Each	June 30, 2025	Subgrants to colleges tracked using grant-management software at ACCS System Office and charging station inventory tracked using financial management module of the Systemwide ERP system (Banner)	Purchases and charging station inventory reports pulled from grants management software and Banner and compared to project workplan and timeline
Average Annual Gasoline and Diesel Fuel Consumption Reduction	A1, B1, B2, B4, B5, B6	103600	Gallons	September 30, 2026	Vehicle fuel purchases recorded by Colleges and System Office in Banner	Vehicle fuel purchase reports pulled from Banner for all colleges and System Office and compared to benchmark reports pulled at project onset
Average Annual Gasoline and Diesel Fuel Costs Reduction	A1, B1, B2, B4, B5, B6	20	Percent	September 30, 2026	Vehicle fuel purchases recorded by Colleges and System Office in Banner	Vehicle fuel purchase reports pulled from Banner for all colleges and System Office and compared to benchmark reports pulled at project onset
Average Annual GHG Emissions Reduction Due to Replacement of Gas/Diesel-Powered Vehicles with EVs	A1, B1, B2	919	Metric Tons	September 30, 2026	Spreadsheet will be created to track annual differences between emissions of implemented Evs and the emissions of the corresponding replaced gasoline/diesel-powered vehicles had those replaced vehicles driven the same number of miles actually driven by the EVs.	Spreadsheet will automatically sum the emission reductions and project staff will compare the total reductions for the year with the goal for annual reductions.

7. Cost Estimates for Implementation

The total cost for the proposed project is $90,527,551 and includes costs for the following budget categories: Personnel, Fringe Benefits, Travel, Equipment, Supplies, Contractual, and Indirect (Administrative) Costs. A preliminary cost analysis by sub-project is shown in the table below.

COST ESTIMATES				
College/Dept	Campus	Building	Project	**TOTAL**
Bishop State	Main	Delchamps - Student Life Cc	Mechanical, lighting, windows	$ 10,883,880
Drake State	Main	Bldg 300	Mechanical, lighting, windows	$ 1,197,560
Drake State	Main	Bldg 100 (existing Nursing B	Mechanical, lighting, windows	$ 2,038,400
Gadsden State	Valley St	Prater Hall	Mechanical, lighting, windows	$ 6,354,075
Gadsden State	Valley St	LRC	Mechanical, lighting, windows	$ 1,036,105
Lawson State	Birmingham	Bldg F - Kennedy Student Ct	Mechanical, lighting, windows	$ 5,414,500
Lawson State	Birmingham	Building D - Library	Mechanical, lighting, windows	$ 4,057,690
Wallace Selma	Selma	Byrd Arts & Sciences Bldg	Mechanical, lighting, windows	$ 4,788,280
Wallace Selma	Selma	Classroom Bldg	Mechanical, lighting, windows	$ 4,870,845
CVCC	Main	Wallace Hall	Mechanical, lighting, windows	$ 3,592,885
Reid State	Evergreen	900 Admin Bldg	Mechanical, lighting, windows	$ 2,173,565
Trenholm State	Executive Park	Bldg E	Mechanical, lighting, windows	$ 4,995,000
Shelton State	Fredd	Bldg 300	Lighting, windows	$ 824,257
Shelton State	Fredd	Bldg 500	Lighting, windows	$ 634,286
Shelton State	Fredd	Bldg 700	Lighting, windows	$ 666,537
Bishop State	Main	Campus	Install of individual building meters	$ 90,000
Bishop State	Carver	Campus	Install of individual building meters	$ 70,000
Bishop State	Southwest	Campus	Install of individual building meters	$ 80,000
Drake State	Main	Campus	Install of individual building meters	$ 90,000
Gadsden State	Valley St	Campus	Install of individual building meters	$ 80,000
Lawson State	Birmingham	Campus	Install of individual building meters	$ 200,000
Lawson State	Bessemer	Campus	Install of individual building meters	$ 100,000
Shelton State	Fredd	Campus	Install of individual building meters	$ 70,000
Trenholm State	Patterson	Campus	Install of individual building meters	$ 150,000
Trenholm State	Trenholm	Campus	Install of individual building meters	$ 120,000
Bevill State	Jasper	Energy Training Center	Install renewable microgrid system	$ 13,255,000
ACCS	All	Campus	Replace 200 vehicles with Electric Vehicles	$ 13,000,000
ACCS	All	Campus	Installation of 50 EV Charging Stations	$ 2,000,000
ACCS	System Office	System Office	Salaries and Benefits for Project Personnel (4 F/T staff, 5 yr term)	$ 3,120,000
ACCS	System Office	System Office	Equipment and Supplies (3 EVs, laptops, misc. office supplies)	$ 195,000
ACCS	System Office	System Office	Travel	$ 68,850
			Indirect (Administrative) Costs	$ 4,310,836
			TOTAL	**$ 90,527,551**

8. Impacts on Low Income and Disadvantaged Communities

The project proposed by the Alabama Community College System (ACCS) will impact the entire state of Alabama. Alabama is composed of 1,181 Census tracts, and 655 (or 55%) of them are designated as disadvantaged according to the Climate and Economic Justice Screening Tool (CEJST). The Alabama Community College System, a network of 24 public community and technical colleges, spans the entire state geographically. The service areas of its member

institutions collectively cover all 67 Alabama counties and every county contains at least one disadvantaged Census tracts. **The list of CEJST Census tract IDs with the relevant jurisdiction [county] is attached**.

Alabama is one of the states with the greatest share of low-income and disadvantaged populations. According to the most recent U.S. Census, 16.2 % of Alabama residents are below the federal poverty line as compared to 11.5% for the nation. Alabama's poverty rate is the 7th highest among all 50 states. Alabama also has a disproportionately high rate of disability; 11.6% of the state's population below the age of 65 are counted as disabled. This is 30% higher than the national rate of 8.9%. In addition, Alabama has one of the lowest rates of educational attainment in the U.S., with only 26.2% of the adult population having earned a bachelor's degree or higher, the 8th lowest rate among all 50 states. Furthermore, Alabama is one of 4 states in the East South Central Region that has the highest percentage of households with high energy burdens (38%) as compared to other regions.

ACCS colleges have a significant impact on the low-income and disadvantaged populations in Alabama. Ninety-six (96) percent of Alabama Community College System students are from Alabama and ACCS enrolls 55% of all first-time college students in Alabama. Sixty-five (65) percent of all college freshmen and sophomores in Alabama are enrolled in Alabama Community College System institutions. Six (6) of the 24 ACCS institutions are HBCUs (Historically Black Colleges and Universities) and 3 other ACCS colleges have a predominantly Black student population. More than 40% of students system-wide identify racially as non-white and more than 60% identify as female. Moreover, ACCS colleges enroll a disproportionately high percent of low-income students, with an average of 62% of students[1] receiving some type of financial aid and an average of 48% receiving some form of federal financial aid each year over the last three academic years. When focusing on first-time, full-time Freshmen, the rates rise to 87% and 69% respectively for the year reported in the most recent published IPEDS data.

The expected direct and indirect benefits of the ACCS proposed project to the low income and disadvantaged communities of Alabama are numerous and are discussed relative to each GHG reduction measure in the numbered paragraphs that follow.

1. **Increasing the Share of Electric Vehicles and Expanding Electric Vehicle Charging Infrastructure Across the Alabama Community College System**. The replacement of 200 gasoline-powered and diesel-powered vehicles with electric vehicles at ACCS institutions across the state will **reduce greenhouse gas emissions and positively impact public air quality** in the disadvantaged communities served locally by each college and in all communities through which those vehicles travel when transporting students, faculty, and staff away from campus. The improvement of air quality will help **reduce the incidence of asthma** throughout Alabama where 10.1% of the population suffers from the disease. (Alabama ranks 22 out of 54 U.S. states/territories for rates of asthma and only 4 other states/territories have greater asthma mortality rates.) **Noise pollution will also be reduced** and the **costs for fuel will be lowered**, freeing up financial resources that can be

[1] Excludes dually enrolled high school students who are ineligible for federal financial aid. Data reflects aid disbursed over the 2020-2021 through 2022-2023 academic years. Source: ACCS Data and Exchange (DAX) system report pulled 02/23/2024 by the ACCS Office of Research and Organizational Effectiveness.

better used to **increase academic, social, and financial support for disadvantaged and low-income students**.

2. **Implementation of Up-to-Date Building Energy Codes with Purchase and Installation of Energy-Efficient Heating and Cooling Equipment, Lighting, and Other Building Products.** Building renovations to improve energy efficiency on 6 separate historically Black colleges (HBCUs) and 3 separate predominantly Black institutions (PBIs) will particularly benefit low-income and disadvantaged students attending those colleges and will benefit others in the disadvantaged communities surrounding those campuses. Facility renovations at 9 colleges (some with renovations on multiple campuses) will include replacement of windows, doors, ceilings, floors, insulation, lighting, heating and air conditioning, and other mechanical systems with modern, energy-efficient alternatives. These building renovations and lighting upgrades will result in **significant energy savings and GHG reductions** at colleges that have some of the least financial resources and greatest student needs. They will also **improve the comfort and safety of the predominantly low-income, disadvantaged students** who attend classes and study in the buildings daily. Residents in the surrounding community at large will enjoy **increased beautification** of the public spaces on their local community college campus due to the structural and aesthetic improvement of buildings and grounds.
3. **Implementation of Building Energy Performance Management Systems in Government-Owned Buildings**. Each building renovation completed on one of the 6 HBCU campuses and 3 PBI campuses will include implementation of a building energy performance management system to monitor, regulate, and automate the electrical and mechanical equipment serving the building. These systems will not only reduce the energy consumed by the equipment but ensure that their usage is timed properly to align with schedules of classes and other events. Students using the renovated buildings at these HBCU campuses will experience **increased comfort and a healthier environment** with the reliability that comes from fully automated systems.
4. **Implementation of New Benchmarking and Building Performance Standards Program**. The implementation of individual-building utility metering with building energy performance management systems will decrease the electricity consumed by these buildings and result in reduced greenhouse gas emissions. More than that, it will provide the mechanism for establishing benchmarks for existing energy usage and monitoring progress toward goals for greater energy efficiency. The capability of comparing energy usage among individual buildings (renovated versus non-renovated) will enable colleges to see the success of energy makeovers and encourage additional renovations in the future. These successes will provide excellent examples for presentation to the community at large and will be highlighted in workshops designed to educate residents and community leaders on the benefits of implementing similar GHG reduction measures, **elevating levels of community engagement and public awareness.**
5. **Installation of Renewable Energy and Energy Storage Systems in Publicly Owned Facilities**. The construction and implementation of a solar microgrid on the Bevill State Community College campus will provide multiple benefits to low-income and disadvantaged communities in the immediate vicinity and across the state. The microgrid will be the newest addition to the Energy Infrastructure Training Center, a collaboration

between ACCS, Bevill State Community College and the Alabama Power Company. The Energy Infrastructure Training Center is already engaged in training individuals from across the State for occupations in the energy services fields and is the hub for the State's official Weatherization Assistance Program training. The Infrastructure Energy Training Center is **creating many high-quality jobs in the evolving energy sector and is delivering new workforce training opportunities targeted specifically to serve the State's lowest-income and disadvantaged populations**. The addition of the microgrid will add the **capacity for training technicians for work with renewable (solar) electricity generation**. In addition, **energy costs to the College will be reduced** and a return to the electrical grid of excess energy produced by the microgrid **will reduce costs for local consumers and result in improved energy resilience**.

9. Eligibility to Apply and Authority to Implement

Eligibility to Apply: The Alabama Community College System (ACCS) is an eligible applicant for an EPA Climate Pollution Reduction Grant by virtue of its status as a State entity. The Alabama Community College System is the publicly supported organization authorized by the Alabama Legislature to supervise and manage the State's system of public two-year community and technical colleges. On May 15, 2015, Alabama's governor signed into law Act 2015-125 establishing the Alabama Community College System (ACCS) as a department of state government to replace the former Department of Postsecondary Education and to assume its duties. A copy of Alabama Act 2015-125 is attached to verify ACCS's status as a state entity and to confirm the eligibility of ACCS to apply for an EPA Climate Pollution Reduction Grant (CPRG). Alabama Act 2015-125 may also be accessed online at https://arc-sos.state.al.us/ucp/B15126AA.ASD.pdf. Act 2015-125 has subsequently been incorporated into the Code of Alabama 1975 and its provisions can be found in various sections of Title 16, Chapter 60 which can be accessed online at Code Of Alabama (state.al.us).

Authority to Implement: ACCS also possesses the authority to implement the various greenhouse gas reduction measures that constitute the project for which it seeks CPRG funding. In addition to establishing ACCS as a state entity, Act 2015-125 also established a new Board of Trustees to govern ACCS and delegated to the Board "all authority, powers, and duties" formerly given to the State Board of Education "with respect to the supervision, administration, naming, financing, construction, and equipping of institutions of postsecondary education, including community and technical colleges, junior colleges, and trade schools". The ACCS Board of Trustees answers to the State of Alabama by virtue of its composition. Alabama's Governor is the ex officio president of the Board and is granted authority by the Legislature to appoint the nine other Board members. Such appointments are subject to confirmation by the Alabama Senate.

Act 2015-125 also established the Chancellor as the Chief Executive Officer of the Alabama Community College System and delegated to the Chancellor, under the direction of the Board of Trustees, the "responsibility for the operation, management, control, supervision, maintenance, regulation, improvement, and enlargement of community colleges and technical colleges". Various Board of Trustees policies expound on the authority of the Chancellor to act on behalf of the Board to fulfill these responsibilities.

ACCS, through the office of the Chancellor (the System Office), will be responsible for administering the CPRG grant and implementing a small portion of the funded project (procurement and implementation of approximately 8 electric vehicles and 2 EV charging stations). However, the great majority of the funding from the grant will be distributed via subawards to the 24 ACCS institutions, which will in turn be responsible for the implementation of the great majority of the project (procurement and implementation of approximately 192 electric vehicles and 48 EV charging stations, multiple energy-efficiency building renovations, and procurement and installation of a solar microgrid). By Act 2015-125, presidents of the colleges are "responsible to the Chancellor for the day-to-day operations of the colleges". They are granted authority to act on behalf of their respective institutions to engage in contracts and agreements, such as will be required for CPRG subawards, to engage in capital projects, and to procure capitalized equipment through various Board of Trustees policies and according to corresponding procedures established by the Chancellor. The complete set of Board of Trustees Policies and Chancellor's Procedures can be viewed at the ACCS website: https://www.accs.edu/about-accs/board-of-trustees/policies-and-procedures/.

ACT No. 2015-125

SB191

167066-7

By Senators Pittman, Orr, Hightower, Sanford, Dial, Holley, Ward, Melson, Glover, Albritton, Whatley, Shelnutt, Allen, Marsh, Blackwell, McClendon, Williams, Waggoner, Smith, Scofield, Brewbaker and Stutts

RFD: Finance and Taxation Education

First Read: 10-MAR-15

SB191

ENROLLED, An Act,

To establish an independent Alabama Community College System in lieu of the Department of Postsecondary Education and provide for the assumption by the Chancellor of the system and the Board of Trustees of the Alabama Community College System of all duties and responsibilities for community and technical colleges in the state; to provide legislative intent; to amend Sections 16-60-110, 16-60-111.1, 16-60-111.2, 16-60-111.3, 16-60-111.4, 16-60-111.5, 16-60-111.6, 16-60-111.7, 16-60-111.8, and 16-60-111.9, as amended by Act 2014-448, 2014 Regular Session (Acts 2014), 16-60-112, 16-60-113, 16-60-114, and 16-60-115, Code of Alabama 1975; to add Sections 16-60-110.1, 16-60-111, 16-60-111.10, 16-60-111.11, 16-60-111.12, 16-60-111.13, 16-60-111.14, 16-60-111.15, 16-60-111.16, 16-60-116, and 16-60-117 to the Code of Alabama 1975.

BE IT ENACTED BY THE LEGISLATURE OF ALABAMA:

Section 1. The Legislature finds and determines all of the following:

(1) That it is necessary to the welfare of the state that it provide workforce development initiatives that are responsive to industry needs from highly specialized training

programs that help prepare entry level employees to meet growing demands.

(2) That the needs of the citizens, businesses, and industries of the state are best served by a unified system of institutions and programs delivering excellence in academic education, adult education, and workforce development.

(3) That a unified system is best supported and supervised by a board of trustees devoted solely to providing the best possible facilities, teaching, and instruction through the Alabama Community College System.

(4) That high quality, affordable, local educational opportunities for students to obtain associate's degrees and to prepare for continuing their education at four-year institutions have been a hallmark of Alabama's two-year college system since its inception, that the board of trustees created by this act is charged with maintaining and building upon those options to ensure that a college education remains affordable for all Alabama families.

Section 2. Section 16-60-110 of the Code of Alabama 1975, is amended to read as follows:

"§16-60-110.

"For purposes of this article, the following words and phrases shall have the respective meaning ascribed to them by this section:

"(1) ALABAMA COMMUNITY COLLEGE SYSTEM. The state-supported system of community and technical colleges formerly operating under the supervision of the State Board of Education, including individual institutions, system-wide programs, other related organizations, and central operations.

"~~(1)~~ (2) BOARD. The ~~State~~ Board of ~~Education~~ Trustees of the Alabama Community College System.

~~"(2) JUNIOR COLLEGE. An educational institution offering instruction in the arts and sciences on the level of difficulty of the first two years above high school level.~~

~~"(3) STATE. The State of Alabama.~~

~~"(4) TRADE SCHOOL. An educational institution offering instruction primarily in useful trades, occupations or vocational skills.~~

~~"(5) POSTSECONDARY EDUCATION DEPARTMENT. A parallel organization to the State Department of Education directly responsible to the State Board of Education for the direction and supervision of junior colleges and trade schools and community colleges with a chief executive officer entitled Chancellor.~~

"(3) CHANCELLOR. The chief executive officer of the Alabama Community College System.

"(4) COMMUNITY AND TECHNICAL COLLEGES. The publicly supported two-year schools established as community colleges, junior colleges, technical colleges, and trade schools

previously under the authority of the State Board of Education."

Section 3. Sections 16-60-110.1 and 16-60-111 are added to Article 5, commencing with Section 16-60-110, of Chapter 60, Title 16 of the Code of Alabama 1975, to read as follows:

§16-60-110.1.

(a) There is created the Alabama Community College System as a department of state government, which shall replace and succeed to the duties of the Department of Postsecondary Education. All references in state law to the Department of Postsecondary Education, Postsecondary Education Department, and Alabama College System, or terms of like import, shall be deemed to refer to the Alabama Community College System.

(b) The Alabama Community College System shall be governed by the Board of Trustees of the Alabama Community College System, as created in this article for the purpose of governing the community and technical colleges of the state.

(c) Any other law to the contrary notwithstanding, the authority, powers, and duties assigned to the State Board of Education with respect to the supervision, administration, naming, financing, construction, and equipping of institutions of postsecondary education, including community and technical colleges, junior colleges, and trade schools, however

described, are removed from the State Board of Education and delegated to the board, and all actions of such institutions of postsecondary education requiring the approval of the State Board of Education, commencing on the effective date of the act adding this section, shall require only approval of the board. Without limiting the generality of the foregoing, all references to the State Board of Education in Sections 16-3-37, 16-5-8.3, 16-5-13, 16-60-88, 16-60-330, 16-60-332, 16-60-335, and 16-60-338, shall be deemed to refer to the board.

§16-60-111.

(a) There is established a Board of Trustees of the Alabama Community College System. The board shall be composed of the following members:

(1) The Governor, who shall be ex officio president of the board.

(2) Seven members appointed by the Governor so that one member of the board is a resident of each of the seven congressional districts in the state as the districts are constituted on the effective date of this article. The member appointed by the Governor pursuant to this subdivision, representing the congressional district in which the main campus of Athens State University is located, shall serve as the member of the Board of Trustees of Athens State University

pursuant to subdivision (3) of subsection (a) of Section 16-47A-4.

(3) One ex officio, nonvoting member appointed by the Governor who is actively serving on the State Board of Education.

(4) One member appointed by the Governor from the state at large.

(b) All members appointed by the Governor shall be free from any contractual, employment, personal, or familial financial interest in the Alabama Community College System.

(c) If a member appointed from a congressional district ceases to be a resident of the district from which appointed, the member shall vacate his or her office. Members appointed by the Governor from Districts 1, 3, 5, and 7 shall be appointed for an initial term of two years, and every four years thereafter. Members appointed by the Governor from Districts 2, 4, and 6, and from the state at large, shall be appointed for an initial term of four years, and every four years thereafter.

(d) ~~Initial appointees to the board may serve up to one year without confirmation by the Senate. The initial board members shall have immediate, interim authority to conduct the business of the board as necessary to fulfill the intent of this article. Thereafter, appointments made when the Legislature is not in session shall be effective ad interim. As vacancies occur on the board for any cause, they shall be~~

~~filled by the original appointing authority for the unexpired term, subject to confirmation by the Senate at the next succeeding regular session of the Legislature.~~ All appointees to the board shall be subject to confirmation by the Senate and shall be confirmed before beginning a term of office. As vacancies occur on the board for any cause, they shall be filled by the Governor for the unexpired term, subject to confirmation by the Senate before beginning service. An appointment made when the Legislature is in regular session shall be submitted to the Senate not later than the third legislative day following the date of appointment. An appointment made when the Legislature is not in regular session shall be submitted to the Senate not later than the third legislative day following the reconvening of the Legislature after the appointment.

(e) The members of the board shall be qualified electors of the State of Alabama, and the membership of the board shall be inclusive and reflect the racial, gender, geographic, urban/rural, and economic diversity of the state. In making appointments to the board, the Governor shall give special consideration to those persons who have attended a community or technical college and who are familiar with the two-year college system, or who have business leadership experience. No employee of the state may serve as an appointed member of the board. No appointed member of the board may

serve more than two consecutive terms of office. Other than the ex officio members of the board, no person currently serving in any elected office may concurrently serve as a member of the board.

(f) Upon appointment, and after confirmation, of the initial members of the board, the board shall meet to organize itself, to elect officers, other than the president, as the board deems appropriate, and to transact any necessary business. The board may adopt bylaws to govern operations and create committees as deemed necessary. This organizational meeting of the board is not considered a regular meeting of the board.

(g) The board shall meet not less than quarterly on dates to be set by the board in official session, by the president or by the Chancellor on written request of a majority of the board members. One meeting of the board each year shall be held with the members of the State Board of Education. The rules generally adopted by deliberative bodies for their government shall be observed and a quorum of five shall be present. Members of the board or any committee of the board may participate in meetings of the board or committees by telephone conference or similar communications equipment through which all persons participating in the meeting can hear each other at the same time, and participation by the members shall constitute presence at a meeting for all

purposes. The Chancellor shall give notice of any meeting as required by law.

(h) The members of the board shall receive no compensation for service on the board. Members shall be reimbursed for actual traveling and other necessary expenses incurred in attending meetings and transacting the business of the board. Reimbursement shall be paid out of the Education Trust Fund in the same manner as other expenses of the board are paid.

(i) If not otherwise required by law, each member of the board shall file a completed statement of economic interests, pursuant to Section 36-25-24, for the previous calendar year with the State Ethics Commission no later than April 30th of each year, and shall be covered by all aspects and requirements of the State Ethics Law, Chapter 25 of Title 36. Members of the board shall be indemnified for any loss incurred as a result of damage done in the performance of their duties as a member of the board and for which the member is personally liable. Members shall be covered under the General Liability Trust Fund in accordance with Section 36-1-6.1.

(j) Before exercising any authority or performing any duty, each member of the board shall qualify as such by taking and subscribing to the oath of office prescribed by the state constitution, the certificate of which shall be filed

with the records of the board. The Governor may remove any appointed member of the board for immorality, misconduct in office, incompetency, or willful neglect of duty, giving the member a copy of the charges against him or her and, upon not less than 10 days' notice, an opportunity of being heard publicly in person or by counsel in his or her own defense. If any member shall be removed, the Governor shall file in the office of the Secretary of State a complete statement of all charges against the member, any findings, and a complete record of the proceedings.

Section 4. Sections 16-60-111.1, 16-60-111.2, 16-60-111.3, 16-60-111.4, 16-60-111.5, 16-60-111.6, 16-60-111.7, 16-60-111.8, and 16-60-111.9, as amended by Act 2014-448, 2014 Regular Session (Acts 2014), of the Code of Alabama 1975, are amended to read as follows:

"§16-60-111.1.

"(a) For the ~~sole~~ purpose of assisting the board in carrying out its authority and responsibility for ~~each of~~ the ~~junior~~ community and technical colleges ~~and trade schools~~, the board shall ~~have the authority to~~ appoint a Chancellor who will also be Chief Executive Officer of the ~~Postsecondary Education Department~~ Alabama Community College System. The Chancellor shall serve at the pleasure of the board and perform such duties as are provided in this article and otherwise as are assigned by the board. The Chancellor serving

on the effective date of the act amending this subsection shall continue to serve until his or her then current contract expires. The board may enter into a contract with the Chancellor for his or her services for a period not to exceed four years. The Chancellor shall be a person of good moral character with academic and professional education equivalent to graduation from a ~~recognized~~ regionally accredited university or college, who is knowledgeable in postsecondary institution administration and has training and experience sufficient to qualify him or her to perform the duties of the office.

"(b) Notice of a vacancy in the position of Chancellor shall be posted by the ~~State Board of Education~~ board. The notice shall be posted on the Internet and in a conspicuous place at each postsecondary school campus and worksite, including all state and local board of education offices, at least 30 calendar days before the position is to be filled. The notice shall remain posted until the position is filled and shall include, but not necessarily be limited to, all of the following:

"(1) Job description and title.

"(2) Required qualifications.

"(3) Salary range.

"(4) Information on where to submit an application.

"(5) Information on any deadlines for applying.

"(6) Any other relevant information.

"(c) The board may adopt or continue ~~policies~~ procedures with respect to the appointment of the Chancellor which are not inconsistent with this section. The position shall not be filled during the required posting period, except as herein provided. The posting of a vacancy notice as required in this section shall not be abridged or delayed except in emergency circumstances and then delayed only temporarily in order to reasonably meet the conditions of the emergency. A violation of the notice requirements of this section by the board shall void any related employment action taken by the board.

"(d) A vacancy in the position of Chancellor shall be filled by the ~~state~~ board within 180 days after such a vacancy occurs. The board may temporarily fill the position on an interim basis for not more than two six-month periods.

"§16-60-111.2.

"The authority and responsibility for the operation, management, control, supervision, maintenance, regulation, improvement, and enlargement of ~~each of the junior~~ community colleges and technical colleges ~~and trade schools~~ shall be vested in the Chancellor, subject to the approval of the board.

"§16-60-111.3.

"Notwithstanding any provision of law to the contrary, the board shall have the authority to establish the salary of the ~~State Superintendent of Education and the~~ Chancellor. The board may also provide for expense allowances to be paid to the ~~State Superintendent of Education and the~~ Chancellor in whatever amounts and for whatever purposes deemed necessary and appropriate by the board, and directly correlated to the operation and best interests of the Alabama Community College System. Such salary and expense allowances shall be paid in installments from the annual appropriation made to the board or the ~~State Department of Education~~ Alabama Community College System as appropriate.

"§16-60-111.4.

"The ~~State Board of Education, upon recommendation of the Chancellor,~~ board shall be authorized to:

"(1) Make rules and regulations for the government of ~~each junior college and trade school~~ community and technical colleges.

"(2) Prescribe for the ~~junior~~ community and technical colleges ~~and trade schools~~ the courses of study to be offered and the conditions for granting certificates, diplomas and/or degrees.

"(3) Appoint or terminate the employment of the ~~president of each junior college and trade school, each~~

~~president to serve at the pleasure of the board~~ presidents of the community and technical colleges.

"(4) Direct ~~and supervise~~ the expenditure of legislative appropriations of ~~each junior college and trade school~~ community and technical colleges.

"(5) Prescribe qualifications for faculty and establish ~~a~~ an annual salary schedule and tenure requirements for faculty at ~~each junior college and trade school~~ community and technical colleges.

"(6) Accept gifts, donations, and devises and bequests of money and real and personal property for the benefit of ~~junior~~ community and technical colleges ~~and trade schools~~ or any one of them.

"(7) ~~Disseminate information concerning and promote interest in junior colleges and trade schools among the citizens of Alabama~~ Establish a performance-based allocation process that is equitable and compatible with the services and programs offered by each individual campus.

"§16-60-111.5.

"The Chancellor shall act as Chief Executive Officer of the ~~Postsecondary Education Department of the State Board of Education~~ Alabama Community College System and ~~will~~ shall direct all matters involving the ~~junior~~ community and technical colleges ~~and trade schools~~ within the policies of the ~~State Board of Education~~ board. The Chancellor shall:

"(1) Execute and enforce the rules and regulations of the ~~State Board of Education~~ board governing the ~~junior~~ community and technical colleges ~~and trade schools~~.

"(2) Interpret the rules and regulations of the board concerning the ~~junior~~ community and technical colleges ~~and trade schools~~.

"(3) Administer the office of the Chancellor and appoint to positions of employment such professional, clerical, and other assistants, including specialists and consultants, on a full- or part-time basis as may be needed to assist the Chancellor in performing the duties of the office of the Chancellor. The number of employees, their compensation and all other expenditures of the office of the Chancellor shall be within the limits of a budget for the office of the Chancellor which shall be approved by the board. The Chancellor and all employees of the office of the Chancellor shall not be subject to or governed by the provisions of the state Merit System law but shall be entitled to all benefits accruing to Merit System employees including the right to accumulate leave and participate in the Teachers' Retirement System ~~under the same terms and conditions as employees of the State Department of Education~~.

"(4) Have the authority to take any and all actions necessary and proper to administer policies, rules, and regulations of the board in carrying out its responsibility

for the management and operation of the ~~junior~~ community and technical colleges ~~and trade schools~~.

"(5) Prepare, or cause to be prepared, an annual report of the ~~State Board of Education~~ board on the activities of the ~~Postsecondary Education Department~~ Alabama Community College System and shall submit on the first day of December, or as early thereafter as practicable, the same to the board for its approval and adoption. He or she shall also prepare, or cause to be prepared, all other reports which are or may be required of the board.

"(6) Prepare, or cause to be prepared, and submit for approval by the ~~State Board of Education~~ board such budget for each quadrennium, or for such other period as may be fixed by the Department of Finance or other duly authorized body.

"(7) Prepare, or cause to be prepared, and submit for approval and adoption by the ~~State Board of Education~~ board such legislative measures as are in his or her opinion needed for the further development and improvement of the ~~junior~~ community and technical colleges ~~and trade schools~~.

"§16-60-111.6.

"Except where otherwise clearly indicated herein the board ~~will~~ shall delegate to the Chancellor, authority for the Chancellor to act and make decisions concerning the management and operation of the ~~junior~~ community and technical colleges ~~and trade schools~~. The ~~president of each junior college and~~

~~trade school~~ presidents of the community and technical colleges shall be responsible to the Chancellor for the day-to-day operation of ~~each school~~ the colleges.

"§16-60-111.7.

"The ~~president of each junior college and trade school~~ presidents of the community and technical colleges shall appoint the faculty and staff of ~~each junior college and trade school~~ the community and technical colleges according to qualifications prescribed by the board and such other regulations which may be adopted by the board ~~in accordance with Section 16-60-111.4~~.

"§16-60-111.8.

"~~Upon this section becoming law, the~~ The board and the ~~State Superintendent of Education~~ Chancellor shall be authorized to take all administrative action, including transfer to the board of funds appropriated to the ~~State Board of Education~~ board for administration of the ~~junior college and trade school program~~ Alabama Community College System, necessary to carry out the intent and purpose of this article.

"§16-60-111.9.

"(a) For the purposes of this section, the following terms shall have the following meanings:

"(1) BOARD. The Board of Trustees of the Alabama Institute for Deaf and Blind; the Alabama Youth Services Department School Board in its capacity as the Board of

Education for the Youth Services School District; the Board of Directors of the Alabama School of Fine Arts; the Board of Trustees of the Alabama High School of Mathematics and Science; and the ~~State~~ Board of ~~Education~~ Trustees of the Alabama Community College System as applied to two-year postsecondary education institutions.

"(2) EXECUTIVE OFFICER. The President of the Alabama Institute for Deaf and Blind; the president of any ~~two-year school or~~ community or technical college under the auspices of the ~~State~~ Board of ~~Education~~ Trustees of the Alabama Community College System; the Executive Director of the Alabama School of Fine Arts; the Superintendent of the Department of Youth Services School District; and the Executive Director of the Alabama High School of Mathematics and Science.

"(b) Notice of a vacancy in the position of executive officer shall be posted by the applicable board. The notice shall be posted on the Internet and in a conspicuous place at each school campus and worksite at least 30 calendar days before the position is to be filled. The notice shall remain posted until the position is filled and shall include, but not necessarily be limited to, all of the following:

"(1) Job description and title.

"(2) Required qualifications.

"(3) Salary range.

"(4) Information on where to submit an application.

"(5) Information on any deadlines for applying.

"(6) Any other relevant information.

"(c) The board may adopt or continue policies which are not inconsistent with this section. The position shall not be filled during the required posting period, except as herein provided. The posting of a vacancy notice as required in this section shall not be abridged or delayed except in emergency circumstances and then delayed only temporarily in order to reasonably meet the conditions of the emergency. The adoption of additional policies shall comply with the requirements and procedures of Section 16-1-30.

"(d)(1) Except as otherwise provided in subdivision (2), a vacancy in the position of executive officer shall be filled by the board within 120 days after such vacancy occurs, except in the case of a financial emergency. The board may temporarily fill the position on an interim basis for not more than two six-month periods.

"(2) The Chancellor of ~~Postsecondary Education~~ the Alabama Community College System, subject to the rules and procedures of the ~~State Board of Education~~ board, may appoint an interim executive officer to serve as the president of any two-year school or college under the auspices of the ~~State Board of Education~~ board for such terms as the Chancellor determines to be in the best interests of the ~~two-year school or~~ community or technical college.

"(3) ~~Experience gained by employment on a temporary interim or emergency basis may not be applied toward job experience requirements. Subject to the provisions of this section, a~~ A duly appointed interim or emergency executive officer shall not be prohibited from consideration for selection to fill an executive officer vacancy.

"(e) Violation of the notice requirements of this section by the board shall void any related employment action taken by the board."

Section 5. Sections 16-60-111.10, 16-60-111.11, 16-60-111.12, 16-60-111.13, 16-60-111.14, 16-60-111.15, and 16-60-111.16 are added to Article 5, commencing with Section 16-60-110, of Chapter 60, Title 16 of the Code of Alabama 1975, to read as follows:

§16-60-111.10.

The board may hold, lease, and rent real and personal property and may make such repairs and improvements on all property under its control as may be for the best interests of the community and technical colleges and, subject to the approval of the Governor, may acquire, sell, and convey title to real estate.

§16-60-111.11.

(a) The board may exercise all of the following powers:

(1) To borrow money from the United States of America or any department or agency thereof, or from any person, firm, corporation, or other lending agency for the purchase, construction, enlargement, or alteration of any buildings or other improvements, including dormitories, dining halls, classrooms, laboratories, libraries, stadiums, administration buildings, and any other buildings and appurtenances thereto suitable for use by the institution or institutions with respect to which the borrowing is made, or for the benefit of the Alabama Community College System or one or more of its programs, the acquisition of furniture and equipment for any thereof, the purchase of land, the beautification of grounds, and the construction of swimming pools, tennis courts, athletic fields, and other facilities for physical education, all for use by such institution or institutions, and for the acquisition, installation, and implementation of technology systems and improvements, including hardware and operating software, for the use by or benefit of one or more such institutions or the Alabama Community College System.

(2) To sell and issue interest-bearing securities, whether in the form of bonds, notes, or other securities, in evidence of the monies so borrowed.

(3) To pledge to the payment of the principal of and interest on such securities the fees from students levied and

to be levied by or for an institution or institutions, the revenues from any facility or facilities and any other monies and revenues not appropriated by the state to such institution or institutions.

(4) To establish parietal rules respecting the use or occupancy of any facilities the revenues of which are pledged to such securities.

(5) To agree to maintain the charges for the use or occupancy of, for services rendered by or from, and for admission to, any facilities the revenues of which are so pledged, and the fees from students so pledged, at such rates and in such amounts as shall produce monies sufficient to pay at their respective maturities the principal of and interest on the securities with respect to which such pledges and agreements are made and to create and maintain any required reserves therefor.

(6) To agree to insure, maintain, repair, and replace any such facilities, systems, and improvements with respect to which any such pledge is made.

(7) To make such other agreements with respect to the facilities, systems, and improvements and such securities as the governing body providing for the issuance thereof shall deem necessary or desirable.

(b) The securities issued under this section may from time to time be refunded by the issuance, by sale or

exchange, of refunding bonds, notes, or other securities payable from the same or different sources for the purpose of paying all or any part of the principal of the securities to be refunded, any redemption premium required to be paid as a condition to the redemption prior to maturity of any such securities that are to be so redeemed in connection with such refunding, any accrued and unpaid interest on the securities to be refunded, any interest to accrue on each security to be refunded to the date on which it is to be paid, whether at maturity or by redemption prior to maturity, and the expenses incurred in connection with such refunding. Unless duly called for redemption pursuant to their provisions, the holders of any such securities then outstanding and proposed to be refunded shall not be compelled without their consent to surrender their outstanding securities for such refunding.

(c) Any such securities may be issued from time to time, may be executed in such manner, shall bear interest at such rate or rates, shall be payable as to both principal and interest, at such time or times, may be made redeemable before maturity at the option of the board at such redemption price or prices and on such terms, and may be sold in such manner and at such price or prices, all as may be provided in the proceedings under which they are issued. The board shall have power to prescribe all details thereof, subject only to this section. Bonds, notes, and other securities issued under this

section shall be eligible for the investment of trust or other fiduciary funds in the exercise of prudent judgment by those making such investment. Neither the securities issued under, nor any pledge or agreement that may be made pursuant to, this section shall be or constitute an obligation of any nature whatsoever of the state, and neither the securities nor any obligation arising from any such pledge or agreement shall be payable out of any monies appropriated by the state to the Alabama Community College System or to the institution or institutions with respect to which such securities are issued or such pledge or agreement is made.

§16-60-111.12.

The board shall submit each year on or before the first day of December, or as early thereafter as practicable, to the Governor an annual report covering all operations of the Alabama Community College System and the support, conditions, progress, and needs of education throughout the state. The annual report shall be printed in sufficient quantities for general distribution throughout the state and for the usual exchange courtesies between state educational authorities.

§16-60-111.13.

The board shall consider the educational needs of the state and on and with the advice of the Chancellor shall recommend to the Governor and to the Legislature such

additional legislation or changes in the existing legislation as may be deemed desirable. Recommendations may be in the form of prepared bills and shall be submitted to the Governor and the Legislature.

§16-60-111.14.

The board may adopt an official seal for the authorization of its acts.

§16-60-111.15.

The board by its presiding officer, or its subcommittees by their chairs, the Chancellor and any of his or her duly appointed agents shall have authority to administer oaths and to examine under oath, in any part of the state, witnesses in any matter pertaining to community and technical colleges, and to cause the examination to be reduced to writing.

§16-60-111.16.

(a) Property, money, or other thing of value may be donated for the benefit of the community and technical colleges to be held in trust and administered for the use of such colleges.

(b) Whenever any property, money, or thing of value is donated to be used for the benefit of the community or technical colleges of this state, the board may administer such trusts as it deems to be in the best interests of the community or technical college or colleges for the benefit of

which the donation or gift is made. The board is given complete control of such property and may sell, lease, or otherwise dispose of the property as it deems to be in the best interests of the community or technical college or colleges for the benefit of which such property is donated; or the board may convert the same into securities for handling the property or proceeds therefrom as in its discretion will best promote the purpose of the trust.

(c) The board may accept the administration of property, money, or other thing of value donated in trust for the benefit of any community or technical college or colleges of the state upon such conditions as may be acceptable to the donor and the board, but no undertaking entered into by the board with such donor shall bind the state to pay any public monies to anyone. Nothing in this section shall prevent the board from undertaking payments to persons out of the proceeds derived from such trust funds as a condition of the acceptance of a donation for the benefit of such community or technical college or colleges. All trust funds administered under this article may be required by the board to pay the expenses of administering the same.

(d) The board shall assume all obligations of the State Board of Education with respect to bonds issued by the State Board of Education for the benefit of any community or technical college prior to the effective date of the act

adding this subsection, which bonds and related obligations are and shall continue to be payable solely from certain revenues from tuition and fees charged against students at the respective community or technical colleges. No such assumption, however, shall create an obligation or indebtedness of the state or be payable out of funds appropriated by the state to the board or to the community or technical colleges. The board may also enter into an agreement with the State Board of Education to further provide for the respective rights and obligations of the board and the State Board of Education with respect to any such obligations, including, without limitation, compliance by the board with the authorizing resolutions adopted by the State Board of Education with respect to such obligations, compliance by the board with covenants and agreements of the State Board of Education with respect to such obligations, reimbursement of any payments required to be made by the State Board of Education, and the issuance of obligations by the board on parity of pledge of revenues with the pledges made by the State Board of Education. In no event shall the adoption of the act pursuant to which this section is added result in the impairment of any rights of the holders of any bonds or other obligations issued by the State Board of Education for the benefit of the community and technical colleges.

Section 6. Sections 16-60-112, 16-60-113, 16-60-114, and 16-60-115 of the Code of Alabama 1975, are amended to read as follows:

"§16-60-112.

"Nothing contained in ~~Section 16-60-110 or any provision of~~ this article shall be construed as repealing any provision of the Alabama Trade School and Junior College Authority Act, Sections 16-60-80 ~~through~~ to 16-60-96, inclusive, or ~~the provisions of~~ Sections 16-5-1 ~~through~~ to 16-5-14, inclusive, relating to the Alabama Commission on Higher Education.

"§16-60-113.

"Any ~~junior~~ community or technical college ~~or trade school shall have authority,~~ during any fiscal year upon the approval of the Chancellor ~~to~~, may borrow money in anticipation of the current revenues for that fiscal year and to pledge the current revenues for ~~said~~ that fiscal year for payment of such loan or loans if funds on hand are not sufficient to pay the salaries of teachers for any given month~~; provided, that any~~. Any amount borrowed ~~shall~~ may not exceed one month's allotment and ~~shall~~ may not exceed the amount of the state appropriation minus the amount disbursed from ~~said school's~~ the annual allotment to the college.

"§16-60-114.

Any other law to the contrary notwithstanding, the authority, powers, and duties prescribed in Sections 16-60-80 ~~through~~ to 16-60-96, inclusive, relating to the Alabama Trade School and Junior College Authority Act, are hereby transferred to the Chancellor and expressly removed from the State Superintendent of Education~~; provided further, any~~. Any other law to the contrary notwithstanding, this article shall be construed to require that all actions of the State Board of Education concerning the ~~junior~~ community and technical colleges ~~and trade schools~~ which previously have required the recommendation of the State Superintendent of Education shall now require only the recommendation of the Chancellor~~; provided, however, that this~~. This article ~~shall~~ may not be construed as removing the State Superintendent of Education from membership on any board, commission, authority or other agency on which the State Superintendent of Education now serves except as otherwise provided herein.

"§16-60-115.

"(a) All powers, duties, responsibilities, and functions of, and all related records, property, equipment of, and all rights, obligations of, and unexpended balances of appropriations including federal and other funds or allocations for the fiscal year ending September 30, 2002, of the Adult Education program, the State Approving Agency program, and the Private School Licensure program for

postsecondary proprietary schools of the State Department of Education shall be transferred by the State Board of Education to the Postsecondary Education Department. Commencing on the effective date of the act amending this subsection, all authority vested in the Postsecondary Education Department pursuant to this subsection shall be transferred from the Postsecondary Education Department to the Alabama Community College System pursuant to Section 16-60-111.

"(b) All funds appropriated to the State Department of Education for the fiscal year ending September 30, 2003, for the Adult Education program and the components of that program, the State Approving Agency program and the components of that program, and the Private School Licensure program and the components of that program for postsecondary proprietary schools, shall be transferred to the Postsecondary Education Department for its use during that fiscal year under the same terms and conditions as specified for those funds in any appropriation bill, or as otherwise specified by law. Commencing on the effective date of the act amending this subsection, all authority vested in the Postsecondary Education Department pursuant to this subsection shall be transferred from the Postsecondary Education Department to the Alabama Community College System pursuant to Section 16-60-111.

"(c) All full-time nonprobationary employees of the Adult Education program and the components of that program, the State Approving Agency program and the components of that program, and the Private School Licensure program and the components of that program for postsecondary proprietary schools, shall be transferred to the Postsecondary Education Department on the effective date of this section to a full-time nonprobationary employee classification commensurate with the level of each respective employee classification at the Postsecondary Education Department on the date prior to the transfer. Commencing on the effective date of the act amending this subsection, all employees and programs transferred to the Postsecondary Education Department pursuant to this subsection shall be transferred from the Postsecondary Education Department to the Alabama Community College System pursuant to Section 16-60-111.

"(d) Any full-time nonprobationary employee transferred under this section from the Postsecondary Education Department to the Alabama Community College System shall be entitled to the due process rights provided ~~under the Fair Dismissal Act as provided in Sections 36-26-100, et seq.~~ by the State Personnel Board on the effective date of the act amending this subsection, and also to all other rights, benefits, and due process to which they were entitled before the ~~passage of this section~~ effective date of the act amending

this subsection, and pursuant to Section 16-60-111, including, but not limited to, the right to accumulate leave, participate in the Teachers' Retirement System, and consideration for annual salary increases. No employee shall be demoted or have his or her salary, position, or status adversely affected due to his or her transfer or any other provision of this section.

"(e) Upon the vacating of any of the employee classifications designated under subsection (c), by any such incumbents, such classifications shall cease to be automatically considered full-time nonprobationary positions and persons to fill such positions thereafter shall serve at the pleasure of the Chancellor of the ~~Postsecondary Education Department~~ Alabama Community College System, having the same rights, benefits, terms, conditions, and due process to which other employees of the ~~Postsecondary Education Department~~ Alabama Community College System are entitled.

"(f) An employee of the community and technical colleges shall be as defined in subdivision (1) of Section 16-25A-1.

"(g) An employee of the Alabama Community College System shall be as defined in subdivision (3) of Section 16-25-1.

"~~(f)~~ (h) The State Board of Education shall coordinate the transfer. The State Superintendent of Education ~~and~~, the State Department of Education, and the Postsecondary

Education Department shall assist the Chancellor and the ~~Postsecondary Education Department~~ Board of Trustees of the Alabama Community College System with the highest degree of cooperation to carry out the intent and purpose of this section and to achieve an orderly transition.

"~~(g)~~ (i) The Chancellor of the ~~Postsecondary Education Department~~ Alabama Community College System shall direct all matters involving the Adult Education program, the State Approving Agency program, and the Private School Licensure program for postsecondary proprietary schools in conformance with state and federal law and the policies of the ~~State Board of Education~~ Alabama Community College System. All responsibilities related to the Adult Education program, the State Approving Agency program, and the Private School Licensure program for postsecondary proprietary schools previously vested with the ~~State Superintendent of Education shall be vested with the~~ Chancellor of the Postsecondary Education Department shall be vested with the Chancellor of the Alabama Community College System.

"~~(h)~~ (j) The State Approving Agency program shall be transferred from the ~~State Department of Education to the~~ Postsecondary Education Department to the Alabama Community College System pursuant to this section.

"~~(i)~~ (k) The Private School Licensure program for postsecondary proprietary schools shall be transferred from

the ~~State Department of Education to the~~ Postsecondary Education Department to the Alabama Community College System pursuant to this section.

"~~(j)~~(1) The State Board of Education and the State Superintendent of Education shall take all administrative action, including the transfer of funds, appropriate and necessary to carry out the intent and purpose of this section."

Section 7. Sections 16-60-116 and 16-60-117 are added to Article 5, commencing with Section 16-60-110, of Chapter 60, Title 16 of the Code of Alabama 1975, to read as follows:

§16-60-116.

(a) The Alabama Aviation College, formerly known as the Alabama Institution of Aviation Technology, is established as an independent institution within the Alabama Community College System responsible for providing aviation education and training statewide. The Alabama Aviation College shall be responsible directly to the Chancellor, who shall provide an annual budget that adequately funds the statewide mission of the college. The mission of the college shall include preparing and training maintenance, service, and new build assembly technicians for the aviation industry.

(b) To ensure that programs and curriculum provided by the college are aligned with the needs of the aviation

industry, the Chancellor shall appoint an Aviation Commission to advise and make recommendations to the Chancellor to ensure that curriculum content is appropriate, aviation programs offered are marketed to the fullest extent, and partnerships with business and industry are established, and other duties as designated by the Chancellor. In no event shall the college be combined or consolidated with another community or technical college within the Alabama Community College System to form a regional institution. Nothing in this act shall preclude the Chancellor from establishing a site or branch, whether permanent or temporary, to fulfill the statewide aviation education mission of the Alabama Community College System.

§16-60-117.

The board may operate technical and workforce development programs as are necessary and appropriate to provide a skilled workforce within the state. Such technical and workforce development programs may be provided through the facilities and faculties of the community and technical colleges or may be provided at other sites and utilizing such other faculty and staff as are required to satisfy the needs of business and industry. The board, upon recommendation of the Chancellor, shall appoint such program directors as needed with respect to such programs, using the same procedures as

are from time to time applicable to the appointment of the presidents of the community and technical colleges.

Section 8. The provisions of this act are severable. If any part of this act is declared invalid or unconstitutional, that declaration shall not affect the part which remains.

Section 9. This act shall become effective when a quorum of the board of trustees is confirmed by the Senate or 30 days following its passage, whichever comes first.

Kay Ivey

President and Presiding Officer of the Senate

Speaker of the House of Representatives

Senate 19-MAR-15.
I hereby certify that the within Act originated in and passed the Senate, as amended.

Senate 05-MAY-15
I hereby certify that the within Act originated in and passed the Senate, as amended by Executive Amendment.

Patrick Harris
Secretary

House of Representatives
Amended and Passed: 23-APR-15

House of Representatives
Passed: 05-MAY-15, as amended by Executive Amendment.

APPROVED May 5, 2015

TIME 8:10 p.m.

Robert Bentley
GOVERNOR

Alabama Secretary Of State

Act Num....: 2015-125
Bill Num...: S-191

Recv'd 05/06/15 10:15amSLF

SPONSOR

1 Pittman

CO-SPONSORS

2 Orr	19 Smith
3 Hightower	20 Scofield
4 Sanford	21 Brewbaker
5 Dial	22 Stutts
6 Holley	23
7 Ward	24
8 Nelson	25
9 Glover	26
10 Allbritton	27
11 Whatley	28
12 Shelnutt	29
13 Allen	30
14 Marsh	31
15 Blackwell	32
16 McClendon	33
17 Williams	34
18 Waggoner	35

SENATE ACTION

I hereby certify that the Resolution as required in Section C of Act No. 81-889 was adopted and is attached to the Bill, SB 191.

yeas 29 nays 3 abstain 0

PATRICK HARRIS, Secretary

I hereby certify that the notice & proof is attached to the Bill, SB ________ as required in the General Acts of Alabama, 1975 Act No. 919.

PATRICK HARRIS, Secretary

CONFERENCE COMMITTEE

Senate Conferees

HOUSE ACTION

FURTHER HOUSE ACTION (OVER)

DATE: 3-31

RD 1 RFD EP

REPORT OF STANDING COMMITTE

This bill having been referred by th House to its standing committee o Education Policy wa acted upon by such committee session, and returned therefrom to th House with the recommendation that it b (Passed) w/amend(s) ___ w/sub 1
This 15 day of April 2015

[signature], Chairperso

DATE: 4-16

RF w/sub **RD**

DATE:

RE-REFERRED RE-COMMITTED

Committee

I hereby certify that the Resolution as required in Section C of Act No. 81-889 was adopted and is attached to the Bill, SB 191

YEAS 84 **NAYS** 7

JEFF WOODARD, Clerk

Alabama Community College System

List of Disadvantaged Communities Served by Proposed EPA CPRG Project

Census Tract ID	County Name	State/Territory
01001021100	Autauga County	Alabama
01003010100	Baldwin County	Alabama
01003010200	Baldwin County	Alabama
01003010600	Baldwin County	Alabama
01003011000	Baldwin County	Alabama
01003011202	Baldwin County	Alabama
01003011502	Baldwin County	Alabama
01005950100	Barbour County	Alabama
01005950200	Barbour County	Alabama
01005950300	Barbour County	Alabama
01005950400	Barbour County	Alabama
01005950500	Barbour County	Alabama
01005950600	Barbour County	Alabama
01005950700	Barbour County	Alabama
01005950800	Barbour County	Alabama
01005950900	Barbour County	Alabama
01007010001	Bibb County	Alabama
01007010002	Bibb County	Alabama
01007010004	Bibb County	Alabama
01009050102	Blount County	Alabama
01009050200	Blount County	Alabama
01009050300	Blount County	Alabama
01009050400	Blount County	Alabama
01009050500	Blount County	Alabama
01009050700	Blount County	Alabama
01011952100	Bullock County	Alabama
01011952200	Bullock County	Alabama
01011952500	Bullock County	Alabama
01013952700	Butler County	Alabama
01013952800	Butler County	Alabama
01013952900	Butler County	Alabama
01013953000	Butler County	Alabama
01013953100	Butler County	Alabama
01013953200	Butler County	Alabama
01013953300	Butler County	Alabama
01013953400	Butler County	Alabama
01013953500	Butler County	Alabama
01015000200	Calhoun County	Alabama
01015000300	Calhoun County	Alabama
01015000400	Calhoun County	Alabama
01015000500	Calhoun County	Alabama
01015000600	Calhoun County	Alabama

01015000700	Calhoun County	Alabama
01015000800	Calhoun County	Alabama
01015000900	Calhoun County	Alabama
01015001201	Calhoun County	Alabama
01015001202	Calhoun County	Alabama
01015001300	Calhoun County	Alabama
01015001400	Calhoun County	Alabama
01015001500	Calhoun County	Alabama
01015001600	Calhoun County	Alabama
01015001700	Calhoun County	Alabama
01015001800	Calhoun County	Alabama
01015002101	Calhoun County	Alabama
01015002103	Calhoun County	Alabama
01015002200	Calhoun County	Alabama
01015002300	Calhoun County	Alabama
01017953800	Chambers County	Alabama
01017953900	Chambers County	Alabama
01017954000	Chambers County	Alabama
01017954200	Chambers County	Alabama
01017954400	Chambers County	Alabama
01017954500	Chambers County	Alabama
01017954600	Chambers County	Alabama
01019955701	Cherokee County	Alabama
01019955702	Cherokee County	Alabama
01019955800	Cherokee County	Alabama
01019955900	Cherokee County	Alabama
01021060101	Chilton County	Alabama
01021060102	Chilton County	Alabama
01021060300	Chilton County	Alabama
01021060401	Chilton County	Alabama
01021060402	Chilton County	Alabama
01021060500	Chilton County	Alabama
01023956700	Choctaw County	Alabama
01023956800	Choctaw County	Alabama
01023956900	Choctaw County	Alabama
01023957000	Choctaw County	Alabama
01025957500	Clarke County	Alabama
01025957601	Clarke County	Alabama
01025957602	Clarke County	Alabama
01025957700	Clarke County	Alabama
01025957800	Clarke County	Alabama
01025957901	Clarke County	Alabama
01025957902	Clarke County	Alabama
01025958001	Clarke County	Alabama
01025958002	Clarke County	Alabama
01027958900	Clay County	Alabama
01027959000	Clay County	Alabama

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01131035200	Wilcox County	Alabama
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01133965502	Winston County	Alabama
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01133965700	Winston County	Alabama

01133965800	Winston County	Alabama
01133965900	Winston County	Alabama

Outputs, Outcomes, and Performance Measures

A.	**Outputs**
1.	200 Gasoline and Diesel-Powered Vehicles Replaced with Electric Vehicles
2.	50 Electric Vehicle Charging Stations Added Across the State on College Campuses and System Office
3.	1 Renewable Energy Grid Installed at the Alabama Energy Training Center at Bevill State Community College
4.	17 College Buildings at 6 HBCU and 3 PBI Colleges Renovated and Retrofitted to meet Up-to-Date Energy Codes and Equipped with Individual Building Electric Utility Meters
5.	4 New High-Quality Jobs Created for Staff Hired to Administer the Project and Advance Energy-Efficiency Policies and Practices
6.	Students Trained in Renewable Energy Operations and Maintenance
7.	9 Community Service Workshops Conducted on Home Energy Efficiency and Community Energy Resilience

B.	**Outcomes**
1.	7,661 Metric Tons Reduction in GHG (CO_2e) Emissions - 2025 through 2030
2.	46,143 Metric Tons Reduction in GHG (CO_2e) Emissions - 2025 through 2050
3.	2,753,956 kWh Average Annual Reduction in Energy Usage Due to Renovated Buildings on College Campuses
4.	103,600 Gallon Reduction in Average Annual Gasoline/Diesel Fuel Consumption and 20% Reduction in Average Annual Gas/Diesel Fuel Costs Across ACCS
5.	Reduction in Hazardous Air Pollution/Improvement in Air Quality Across State of Alabama
6.	Reduction in Incidence and Mortality Asthma Rates Across State of Alabama
7.	4 High-Quality Jobs Created
8.	4 High-Quality Jobs Created in Low-Income/Disadvantaged Communities
9.	28-Person Increase in Staff Trained to Implement, Monitor, and Assess GHG Reduction Measures Across ACCS
10.	Increase in State's Skilled Renewable Energy Workforce
11.	Increased Energy Resiliance to Climate Change Impacts at Bevill State Community College
13.	50-Unit Expanded EV Charging Station Infrastructure Across State of Alabama
14.	Increased Levels of Community Engagement and Public Understanding of the Benefits of Energy Efficiency/Resilience and Climate Protection Strategies

	Description	**Related Output/Outcome**	**Numerical Goal**	**Unit of Measurement**	**Target Date for Goal Achievement**	**Tracking Method**	**Assessment Methods**
	Electric Vehicles Purchased and Placed In Service	A1, B1, B2, B4, B5, B6	200	Each	31-Mar-25	Purchases via subgrants to colleges tracked using grant-management software at ACCS System Office and vehicle inventory tracked using financial management module of the Systemwide ERP system (Banner)	Purchases and vehicle inventory reports pulled from grants management software and Banner and compared to project workplan and timeline
	Gasoline/Diesel Vehicles Removed from Service	A1, B1, B2, B4, B5, B6	200	Each	31-Mar-25	Disposal of vehicles tracked using grant management software in use at System Office and financial management module of the Systemwide ERP system (Banner)	Vehicle dispositions and vehicle inventory reports pulled from grants management software and Banner and compared to project workplan and timeline

	EV Charging Stations Purchased and Installed on College Campuses	A2, B13	50	Each	31-Mar-25	Subgrants to colleges tracked using grant-management software at ACCS System Office and charging station inventory tracked using financial management module of the Systemwide ERP system (Banner)	Purchases and charging station inventory reports pulled from grants management software and Banner and compared to project workplan and timeline
	Average Annual Gasoline and Diesel Fuel Consumption Reduction	A1, B1, B2, B4, B5, B6	103600	Gallons	31-Mar-26	Vehicle fuel purchases recorded by Colleges and System Office in Banner	Vehicle fuel purchase reports pulled from Banner for all colleges and System Office and compared to benchmark reports pulled at project onset
	Average Annual Gasoline and Diesel Fuel Costs Reduction	A1, B1, B2, B4, B5, B6	20	Percent	31-Mar-26	Vehicle fuel purchases recorded by Colleges and System Office in Banner	Vehicle fuel purchase reports pulled from Banner for all colleges and System Office and compared to benchmark reports pulled at project onset
	Average Annual GHG Emissions Reduction Due to Replacement of Gas/Diesel-Powered Vehicles with EVs	A1, B1, B2	919	Metric Tons	31-Mar-26	Spreadsheet will be created to track annual differences between emissions of implemented Evs and the emissions of the corresponding replaced gasoline/diesel-powered vehicles had those replaced vehicles driven the same number of miles actually driven by the EVs.	Spreadsheet will automatically sum the emission reductions and project staff will compare the total reductions for the year with the goal for annual reductions.
	Average Annual Building Mechanical Renovation Energy Usage Reduction	A4, B1, B2, B3, B9	1,081,726	kWh	30-Jun-28	Consumption data from individual meters	Review of annual reports of monthly utility bills and comparison to benchmarks set at project onset
	Average Annual GHG Emissions Reduction Due to Building Renovations	A4, B1, B2	755	Metric Tons	30-Jun-28	Consumption data from individual meters	Review of annual reports of monthly utility bills and comparison to benchmarks set at project onset
	Average Annual Renewable Microgrid System Installation Reduction in Energy	A3, B11	436,956	kWh	30-Jun-27	Consumption data from individual meters	Review of annual reports of monthly utility bills and comparison to benchmarks set at project onset
	Average Annual GHG Emissions Reduction Due to Microgrid Installation	A3, B1, B2	305	Metric Tons	30-Jun-27	Consumption data from individual meters	Review of annual reports of monthly utility bills and comparison to benchmarks set at project onset
	Staff Hired to Manage Project	A5, A8, B7, B8, B9,	4	People	1-Dec-24	HR Records of Employment	Annual Employee Performance Reviews and Project Performance Reviews

	Energy Efficiency/Resilience Community Workshops Delivered	A7, B14	9	Each	30-Sep-30	Copies of Presentation Materials, Registration and Attendance Records, Satisfaction Surveys	Analysis and Review of Satisfaction Surveys

Appendix E

Supporting Documentation
Coalition: Alabama, Mississippi and Tennessee

Alabama Priority Measures

Building Energy Efficiency Enhancements

This collection of measures anticipates the implementation of various incentive programs to promote energy efficiency enhancements to buildings across the residential, commercial, and industrial sectors. Four separate measures have been evaluated for this PCAP. Emission reduction estimates for each measure have been provided and all estimates reflect reductions across a portion of the state of Alabama. The geographical boundary includes the portion of Alabama that is included in the service territory of the Tennessee Valley Authority (TVA) which generally include the counties of Calhoun, Cherokee, Colbert, Cullman, DeKalb, Etowah, Franklin, Jackson, Lauderdale, Lawrence, Limestone, Marshall, Morgan, Winston, Jefferson (cities of Bessemer and Tarrant only), and Madison. This area accounts for 13% of the overall energy consumption in the territory.

Incentive programs for implementation of end-use energy efficiency measures in existing commercial and industrial buildings.

This measure addresses the commercial and industrial building sector from the perspective of energy efficiency improvements that can be made to existing buildings. Examples include but are not limited to the replacement of existing products (e.g., space heating, ventilation, air-cooling systems, cooking appliances) with certified energy-efficient products.

Incentive programs for the purchase of certified energy-efficient lighting in commercial and industrial buildings, as well as streetlights.

This measure aims to reduce emissions by improving lighting efficiency through conversion to light-emitting diode bulbs. The transition will save energy and associated emissions that would otherwise be generated. The ultimate emission sources are the existing and future fleet of electricity generating units serving the defined geographic areas, which are necessary to power lights. However, this measure focuses on the end-use of lighting specifically. Emission reductions are translated from energy saved (e.g., kWh) to emissions reduced in the production of the electricity.

Incentive programs for the purchase of certified energy-efficient building products to replace inefficient products in residential buildings.

This measure addresses the residential building sector from the perspective of energy efficiency improvements that can be made to existing buildings. Examples include but are not limited to the replacement of existing products (e.g., space heating, ventilation, air-cooling systems, cooking appliances) with certified energy-efficient products.

Weatherization programs for residential buildings.

This measure focuses on residential actions to improve energy efficiency. Specifically, this includes building envelope weatherization and insulation improvements. Such measures can reduce homeowner energy consumption for heating as well as reduce the demand for electricity associated with space heating and cooling. These weatherization programs may result from home energy audit programs and do-it yourself energy workshops (e.g., window and door seals and improved insulation, and more efficient water heating systems).

Electricity Distribution Upgrades

Upgrading electricity distribution.

The U.S. Energy Information Administration (EIA) estimates that from 2018 through 2022, annual electricity transmission and distribution (T&D) losses averaged about 5% of the electricity transmitted and distributed.[5] Transmission losses are a function of the distance between the generator and the consumer (i.e., the farther it has to travel, the more is lost), the voltage and resistance of the transmission lines (i.e., the "quality" of the lines), and the amount of energy flowing through the line (i.e., higher loads generally mean more heat and more loss).

The sub geographical boundary is the portion of Alabama that is included in the service territory of the TVA, approximately 13% of the overall energy consumption in the territory. This priority measure aims to reduce transmission loss and thereby reduce overall power consumption through increased efficiency. There are other related measures that focus on upgrading the electricity distribution system and position the state for increased load growth in response to vehicle electrification and industrial electrification. These measures could provide further improvements to the electric grid. Such additional measures will be considered later.

Table 1 below describes the potential cumulative GHG emission reductions for implementing the five measures described above. The values in the table reflect the high end of the reduction potential range.

Table 1. GHG Reduction Potential for Priority Measures

	Cumulative GHG emission reductions (MMT CO_2e)	
Priority Measure	**2025 to 2030**	**2025 to 2050**
1. **Building Energy Efficiency Enhancement**		
Incentive programs for implementation of end-use energy efficiency measures in existing commercial and industrial buildings.	-1.2	-12.5

Incentive programs for the purchase of certified energy-efficient lighting in commercial and industrial buildings, as well as streetlights.	-0.2	-4.6
Incentive programs for the purchase of certified energy-efficient building products to replace inefficient products in residential buildings.	-1.2	-11.8
Weatherization programs for residential buildings.	-0.4	-4.3
2. **Electricity Distribution Upgrades**		
Upgrading electricity distribution.	-0.1	-0.4
Total Reduction Estimates	-3.1	-33.6

Benefits Analysis

The priority measures in this plan will not only reduce GHG emissions, but also criteria air pollutant (CAPs),[1] hazardous air pollutant (HAPs),[2] and volatile organic compound (VOC) emissions.[3] All of these pollutants have been linked to adverse health effects, including respiratory and cardiovascular health effects[4]. Therefore, by implementing these measures, Alabama may also realize improvements in air quality and public health.

Table 2 lists expected CAPs and HAPs emissions reductions resulting from implementing each priority measure over a period from 2025 to 2050. Alabama coordinated with Tennessee to determine co-pollutant reduction potentials across

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[1] CAPs include particulate matter (PM), ozone, sulfur dioxide (SO_2), nitrogen dioxide (NO_2), carbon monoxide (CO), and lead. Exposure to these pollutants can cause respiratory difficulties, cardiac issues, and other health problems. EPA. Criteria Air Pollutants. *EPA.* November 2023.

[2] The EPA has listed 188 substances as HAPs, including substances like benzene, found in gasoline; and methylene chloride, which is used as a paint stripper by numerous industries. Exposure to HAPs can cause cancer or other serious health effects, such as reproductive effects or birth defects. EPA. Hazardous Air Pollutants. *EPA.* November 2023.

[3] VOCs are organic chemicals that have a high vapor pressure at ordinary room temperature, meaning they easily become gases or vapors. VOCs are found in many products, including paints, cleaning supplies, pesticides, building materials, and furnishings, and are emitted from burning fuel. High levels of VOCs contribute to respiratory illnesses and other health issues.

[4]https://www.epa.gov/criteria-air-pollutants

the TVA service territory. GHG and co-pollutant reduction estimates for the building energy efficiency enhancement measures were derived from a combination of computer modeling simulations using the U.S. EPA Global Change Analysis Model Long-term Interactive Multi-Pollutant Scenario Evaluator (GLIMPSE) program and manual calculations. The GLIMPSE model was used to estimate the annual electricity savings that would result from each incentive if implemented in Tennessee. Knowing that Tennessee represents 66% of TVA's service territory (based on the magnitude and location of energy savings data from actual TVA incentive programs), we were able to estimate what the total TVA-wide savings could be from these measures. Finally, based on knowledge that Alabama represents 13% of TVA's service area, we were able to derive the relative portion of savings that could be achieved in Alabama. Once we had estimates of the electricity saved annually (e.g., MWh), we converted the saved electricity to avoided emissions using emission factors from EPA's Emissions and Generation Resource Integrated Database (eGRID) Power Profiler for SRTV (SERC Tennessee Valley).

For example, GLIMPSE predicted that Tennessee could avoid nearly 13,000 GWh of electricity consumption for the period 2025 to 2030 with the proposed commercial building reduction measures. To extend this measure to industrial buildings, a scaling factor was necessary due to GLIMPSE modeling constraints associated with industrial energy efficiency products. As such, Tennessee's modeled energy savings (i.e., GWh) for commercial upgrades was scaled using the state's GHG electricity end-use information. Assuming that energy savings in commercial and industrial buildings are proportional, GWh reductions for commercial buildings upgrades were adjusted to include industrial savings using this relationship. This adjustment resulted in a total energy savings of 14,552 GWh for both commercial and industrial buildings in Tennessee from 2025 to 2030. Knowing that Tennessee's 14,552 GWh savings represent 66% of the total TVA generation, we divided 14,552 GWh by 0.66 to estimate the total TVA generation for the corresponding period, resulting in 22,049 GWh. Because Alabama consumed 13% of the TVA generation (as we assume that will remain constant into the future) the corresponding savings attributable to Alabama would be 13% of 22,049 GWh or about 2,866 GWh for the period 2025 to 2030. Once we had estimates of the electricity saved annually, we converted the saved electricity to avoided emissions using emission factors from EPA's Emissions and Generation Resource Integrated Database (eGRID) Power Profiler for SRTV (SERC Tennessee Valley). For the example above, we multiply 2,866 GWh x 4.22E-04 MMT CO2e/GWh to get about 1.2 MMT CO2e avoided. A similar approach was used to scale Alabama's NOx and SO2 benefits from Tennessee's modeled estimates associated with this measure.

For the electricity distribution upgrade measure, the scaling approach described above to convert results from Tennessee to Alabama was the same. However, GLIMPSE was not used to derive the original MWh savings from this measure. Instead, savings were calculated using EPA's State Inventory Tool (SIT). SIT estimated transmission and distribution losses are based on an assumed 5.1% loss (for our baseline year of 2019). We then altered that loss percentage using a range of improvements from 0.5% to 4.0% to estimate how much electricity could be conserved.

From 2025 to 2050, the CAPs and HAPs reduction potential is significant and varies by pollutant. The largest emissions benefits are estimated for NOx and SO_2 based on total tons avoided during this time period. Such reductions align with priority measures that reduce electricity and expand building energy efficiency.

Table 2. Air pollution abatement potential of priority GHG reduction measures.

	Air pollution reduction potential 2025 to 2050 (tons)			
Priority measure	**NO_x**	**$PM_{2.5}$**	**SO_2**	**VOC**
1. **Building Energy Efficiency Enhancement**				
Incentive programs for implementation of end-use energy efficiency measures in existing commercial buildings.	-5,951	—	-8,771	—
Incentive programs for the purchase of certified energy-efficient lighting in commercial and industrial buildings, as well as streetlights.	-2,206	—	-3,252	—
Incentive programs for the purchase of certified energy-efficient building products to replace inefficient products in residential buildings.	-5,645	—	-8,320	—
Weatherization programs for residential buildings.	-2,060	—	-3,036	—
2. **Electricity Distribution Upgrades**				
Upgrading electricity distribution.	–224	—	–330	—
Total Reduction Estimates	16,086	—	23,709	—

"—"Co-pollutant benefit has not been evaluated for the PCAP.

* Assume $PM=PM_{2.5}$

The priority measures in the PCAP are voluntary activities that will improve building efficiency and upgrade electricity distribution. These activities are expected to have positive effects on electricity, which in turn will result in a net reduction of GHG emissions as well as changes in CAPs and HAPs.

Low Income and Disadvantaged Community Benefits Analysis

The risks of air pollution, extreme temperatures, and extreme precipitation are not evenly shared. Low Income and Disadvantaged Communities (LIDACs) already burdened by lack of access to healthcare, chronic exposure to environmental hazards, and other factors are often more susceptible to the negative impacts of these extreme events. EPA has identified several types of extreme events that pose risk to Americans. Those that are applicable include:

- Air Quality: Although air quality, including concentrations of PM2.5, has improved overall in recent years, the distribution of pollutants persists, and children and elderly people are especially vulnerable.
- Extreme Temperature: LIDACs are less prepared to adapt to extreme temperatures. In addition, extreme temperatures are likely to lead to unsafe working conditions and productivity losses for outdoor laborers like agricultural and construction workers. These laborers tend to be low-income and reliant on hourly wages to meet their basic needs, as well as the needs of their families.
- Inland Flooding: Flooding events cost billions in property damage and result in the loss of lives. In the case of flooding for low-income individuals, the road to recovery is relatively more difficult and expensive, due to restricted access to capital, potential lack of flood insurance, and hurdles to access federal assistance programs to support recovery.

While the PCAP is focused on GHG emission reductions, there are important co-benefits that may be realized through implementing the priority measures identified. These co-benefits may have particular benefit to LIDACs, as outlined in this section.

The priority measures to reduce GHG emissions can provide both direct and indirect benefits to LIDACs. Appendix D includes the LIDACs identified for Alabama's portion of the TVA service territory. To determine potential benefits of GHG reduction measures for LIDACs, each measure was reviewed against the following emission reduction benefits:

- Improved air quality and public health resulting from decreased air pollution,
- Transportation improvements, such as bike, walk, and transit options and electric vehicle infrastructure,
- Housing and housing affordability, including reduced utility costs,
- Community beautification, such as new or improved green spaces, bike paths, or walking trails,
- Community resilience, or the ability to withstand extreme weather events,
- Reduced noise pollution, including traffic and construction noise, and
- Workforce development and the creation of new jobs.

In Table 3, measures that have the potential to provide a direct benefit are indicated with a closed circle (●), measures that have the potential to provide an indirect benefit are indicated with an open circle (○), and measures that are not applicable to a specific benefit are indicated with a dash (—). Measures were also reviewed for potential disbenefits, including increased cost of living, inequity between communities, and regulatory burden. While LIDAC benefits from the priority measures are expected to outweigh disbenefits, negative impacts may be realized in communities based on how a given measure is implemented, among many other variables.

Table 3. Qualitative assessment of potential LIDAC benefits resulting from GHG reduction measure implementation.

	Potential benefit						
Priority measure	Improved air quality and health	Transportation improvements	Housing affordability	Community beautification	Community resilience	Reduced noise pollution	Workforce development
1. Building Energy Efficiency Enhancement							
Incentive programs for implementation of end-use energy efficiency measures in existing commercial buildings.	○	—	—	—	—	—	—
Incentive programs for the purchase of certified energy-efficient lighting in commercial and industrial buildings, as well as streetlights.	○	—	—	●	—	—	—

Incentive programs for the purchase of certified energy-efficient building products to replace inefficient products in residential buildings.	○	–	●	–	–	–	–
Weatherization programs for residential buildings.	○	–	●	–	–	–	●
2. Electricity Distribution Upgrades							
Upgrading electricity distribution.	○	–	●	–	●	–	●

○ Measures that have the potential to provide an *indirect* benefit

● Measures that have the potential to provide a *direct* benefit

– Measures that are not applicable to a specific benefit

Potential Benefits of Building Energy Efficiency Enhancement

Promoting the use of certified energy-efficient equipment and lighting in commercial, industrial, and residential buildings and weatherizing homes has the potential to reduce excess energy use and associated electricity generation emissions. Additionally, co-benefits that could be realized from these measures include community beautification through upgraded streetlights and workforce development opportunities.

Benefits to LIDACs
Improved air quality and public health: All measures in this category have the potential to indirectly improve air quality by reducing the amount of energy consumed for heating, cooling, and operating buildings. Improving outdoor and indoor air quality can provide public health benefits to LIDACs. A large portion of outdoor air quality benefits may be near energy generation sources (power plants), where a decreased energy demand from buildings corresponds to lower power plant emissions. However, these reduced power plant emissions can also decrease secondary pollution, such as ozone and PM, which is more geographically widespread. Reducing power plant and secondary ozone and PM emissions will have a positive impact on air quality as well as respiratory and cardiovascular public health in Alabama.
Housing affordability: The measures that address residential buildings both support reduced energy demand and thereby lower utility costs, supporting housing affordability.
Community beautification: Incentives to purchase energy efficient lighting, including for streetlights, support better lit sidewalks and streets, enhancing community beautification and safety.
Workforce development: Measures to replace inefficient appliances and lighting support short-term work opportunities and weatherization requires a sustained, skilled workforce.

Potential Benefits of Electricity Distribution Upgrades

Upgrading electricity distribution has the potential to reduce emissions by reducing power losses during distribution. Modernizing electrical infrastructure enhances the overall system efficiency and may reduce outage occurrences, supporting cost savings, increased housing affordability, and improved quality of life.

Benefits to LIDACs
Improved air quality: Greater efficiencies in electricity distribution would reduce energy losses in transmission, and consequently, reduce total energy demand from fossil fuel-powered plants, such as coal or natural gas, that contribute to poor air quality near power plants and from secondary air pollution, such as ozone and PM.
Housing affordability: More advanced distribution systems can reduce electricity losses, translating to utility cost savings for rate payers.
Community resilience: Upgrading distribution can help improve load management and isolate faults, reducing the strain on the power grid during extreme weather events.
Workforce development: Skilled labor is required to implement electricity distribution upgrades, resulting in an increased demand for trained professionals to build, upgrade, and install the required infrastructure.

Appendix X

LIDACs in Alabama
Summary of LIDACs in Alabama by Census Tract and County

Census tract 2010 ID	County Name	Identified as disadvantaged	Total threshold criteria exceeded	Total categories exceeded	Identified as disadvantaged without considering neighbors	Total population
01015000200	Calhoun County	TRUE	5	4	TRUE	2324
01015000300	Calhoun County	TRUE	10	4	TRUE	2377
01015000400	Calhoun County	TRUE	12	6	TRUE	3143
01015000500	Calhoun County	TRUE	11	6	TRUE	1031
01015000600	Calhoun County	TRUE	11	6	TRUE	1893
01015000700	Calhoun County	TRUE	3	3	TRUE	2918
01015000800	Calhoun County	TRUE	10	5	TRUE	981
01015000900	Calhoun County	TRUE	4	3	TRUE	3617
01015001201	Calhoun County	TRUE	6	3	TRUE	2830
01015001202	Calhoun County	TRUE	2	1	TRUE	4260
01015001300	Calhoun County	TRUE	6	3	TRUE	2009
01015001400	Calhoun County	TRUE	3	3	TRUE	3105
01015001500	Calhoun County	TRUE	2	2	TRUE	5076
01015001600	Calhoun County	TRUE	4	3	TRUE	3621
01015001700	Calhoun County	TRUE	3	2	TRUE	6858
01015001800	Calhoun County	TRUE	1	1	TRUE	7051
01015002101	Calhoun County	TRUE	2	1	TRUE	3327
01015002103	Calhoun County	TRUE	3	2	TRUE	6784
01015002200	Calhoun County	TRUE	2	2	TRUE	3391
01015002300	Calhoun County	TRUE	6	5	TRUE	3454
01019955701	Cherokee County	TRUE	4	3	TRUE	3236
01019955702	Cherokee County	TRUE	4	4	TRUE	3549
01019955800	Cherokee County	TRUE	4	4	TRUE	5571
01019955900	Cherokee County	TRUE	4	3	TRUE	3912
01033020100	Colbert County	TRUE	1	1	TRUE	3175
01033020200	Colbert County	TRUE	3	2	TRUE	1895
01033020300	Colbert County	TRUE	7	3	TRUE	2081
01033020901	Colbert County	TRUE	3	3	TRUE	4463
01033020902	Colbert County	TRUE	1	1	TRUE	3567
01033021000	Colbert County	TRUE	3	2	TRUE	3804
01043964100	Cullman County	TRUE	3	2	TRUE	6624
01043964300	Cullman County	TRUE	1	1	TRUE	4924
01043965200	Cullman County	TRUE	1	1	TRUE	2618
01043965300	Cullman County	TRUE	1	1	TRUE	4589
01043965401	Cullman County	TRUE	3	2	TRUE	3280
01043965402	Cullman County	TRUE	3	3	TRUE	4282
01043965500	Cullman County	TRUE	3	3	TRUE	5315
01043965600	Cullman County	TRUE	3	2	TRUE	2397
01043965700	Cullman County	TRUE	4	4	TRUE	2803
01049960200	DeKalb County	TRUE	1	1	TRUE	3172
01049960300	DeKalb County	TRUE	1	1	TRUE	7454
01049960500	DeKalb County	TRUE	1	1	TRUE	5782
01049960600	DeKalb County	TRUE	1	1	TRUE	5839
01049960700	DeKalb County	TRUE	0	0	FALSE	8082

01049960800	DeKalb County	TRUE	1	1	TRUE	5064
01049960900	DeKalb County	TRUE	1	1	TRUE	3913
01049961000	DeKalb County	TRUE	0	0	FALSE	4425
01049961100	DeKalb County	TRUE	1	1	TRUE	3306
01049961300	DeKalb County	TRUE	5	3	TRUE	6002
01049961400	DeKalb County	TRUE	4	4	TRUE	4128
01055000200	Etowah County	TRUE	5	3	TRUE	3508
01055000300	Etowah County	TRUE	9	4	TRUE	2838
01055000500	Etowah County	TRUE	8	5	TRUE	1762
01055000600	Etowah County	TRUE	8	5	TRUE	2172
01055000700	Etowah County	TRUE	7	4	TRUE	1136
01055000800	Etowah County	TRUE	10	6	TRUE	1209
01055000900	Etowah County	TRUE	5	4	TRUE	2213
01055001000	Etowah County	TRUE	7	5	TRUE	1421
01055001200	Etowah County	TRUE	3	2	TRUE	2812
01055001300	Etowah County	TRUE	9	5	TRUE	2927
01055001600	Etowah County	TRUE	4	4	TRUE	3242
01055001700	Etowah County	TRUE	6	3	TRUE	1682
01055010200	Etowah County	TRUE	4	3	TRUE	5027
01055010300	Etowah County	TRUE	4	4	TRUE	2560
01055010401	Etowah County	TRUE	2	2	TRUE	4100
01055010602	Etowah County	TRUE	3	3	TRUE	3596
01055010700	Etowah County	TRUE	1	1	TRUE	3459
01055010800	Etowah County	TRUE	5	5	TRUE	2891
01055010900	Etowah County	TRUE	3	3	TRUE	1693
01055011001	Etowah County	TRUE	1	1	TRUE	5186
01055011002	Etowah County	TRUE	1	1	TRUE	4594
01055011100	Etowah County	TRUE	3	3	TRUE	5135
01055011200	Etowah County	TRUE	5	3	TRUE	2591
01059972900	Franklin County	TRUE	3	3	TRUE	4005
01059973000	Franklin County	TRUE	1	1	TRUE	4773
01059973100	Franklin County	TRUE	0	0	FALSE	2394
01059973200	Franklin County	TRUE	3	3	TRUE	3912
01059973300	Franklin County	TRUE	5	5	TRUE	3145
01059973400	Franklin County	TRUE	4	3	TRUE	2650
01059973500	Franklin County	TRUE	2	2	TRUE	2546
01059973600	Franklin County	TRUE	3	3	TRUE	1441
01059973700	Franklin County	TRUE	2	2	TRUE	6600
01071950100	Jackson County	TRUE	3	3	TRUE	6326
01071950200	Jackson County	TRUE	2	1	TRUE	3056
01071950300	Jackson County	TRUE	1	1	TRUE	5877
01071950400	Jackson County	TRUE	2	2	TRUE	1986
01071950500	Jackson County	TRUE	2	2	TRUE	3316
01071950600	Jackson County	TRUE	3	3	TRUE	6978
01071950700	Jackson County	TRUE	2	1	TRUE	4416
01071950800	Jackson County	TRUE	3	2	TRUE	3603
01071950900	Jackson County	TRUE	0	0	FALSE	5370
01071951000	Jackson County	TRUE	3	3	TRUE	4262
01071951100	Jackson County	TRUE	1	1	TRUE	6662
01073000100	Jefferson County	TRUE	8	5	TRUE	3127
01073000300	Jefferson County	TRUE	11	6	TRUE	1819
01073000400	Jefferson County	TRUE	11	6	TRUE	3347
01073000500	Jefferson County	TRUE	12	7	TRUE	3022

01073000700	Jefferson County	TRUE	14	7	TRUE	2542
01073000800	Jefferson County	TRUE	14	8	TRUE	3217
01073001200	Jefferson County	TRUE	8	7	TRUE	2464
01073001400	Jefferson County	TRUE	9	6	TRUE	1946
01073001500	Jefferson County	TRUE	14	6	TRUE	2555
01073001600	Jefferson County	TRUE	7	4	TRUE	3011
01073001902	Jefferson County	TRUE	14	7	TRUE	1878
01073002000	Jefferson County	TRUE	8	3	TRUE	4080
01073002100	Jefferson County	TRUE	7	5	TRUE	2677
01073002200	Jefferson County	TRUE	6	4	TRUE	2601
01073002303	Jefferson County	TRUE	10	5	TRUE	3086
01073002400	Jefferson County	TRUE	8	6	TRUE	3886
01073002700	Jefferson County	TRUE	10	5	TRUE	3630
01073002900	Jefferson County	TRUE	11	5	TRUE	1968
01073003001	Jefferson County	TRUE	3	1	TRUE	3481
01073003002	Jefferson County	TRUE	10	5	TRUE	2439
01073003100	Jefferson County	TRUE	7	4	TRUE	3469
01073003200	Jefferson County	TRUE	13	7	TRUE	1187
01073003300	Jefferson County	TRUE	12	6	TRUE	1172
01073003400	Jefferson County	TRUE	6	4	TRUE	2168
01073003500	Jefferson County	TRUE	6	3	TRUE	2425
01073003600	Jefferson County	TRUE	5	4	TRUE	4396
01073003700	Jefferson County	TRUE	6	4	TRUE	4502
01073003802	Jefferson County	TRUE	6	4	TRUE	5291
01073003803	Jefferson County	TRUE	6	4	TRUE	4002
01073003900	Jefferson County	TRUE	9	5	TRUE	1271
01073004000	Jefferson County	TRUE	11	5	TRUE	2533
01073004200	Jefferson County	TRUE	8	6	TRUE	1738
01073005101	Jefferson County	TRUE	12	6	TRUE	1467
01073005103	Jefferson County	TRUE	5	3	TRUE	2689
01073005104	Jefferson County	TRUE	2	2	TRUE	3132
01073005200	Jefferson County	TRUE	10	5	TRUE	3915
01073005500	Jefferson County	TRUE	11	6	TRUE	1746
01073005701	Jefferson County	TRUE	7	5	TRUE	2369
01073005702	Jefferson County	TRUE	10	6	TRUE	2473
01073005903	Jefferson County	TRUE	1	1	TRUE	6118
01073005905	Jefferson County	TRUE	4	4	TRUE	6287
01073005908	Jefferson County	TRUE	3	3	TRUE	3702
01073010001	Jefferson County	TRUE	1	1	TRUE	4940
01073010002	Jefferson County	TRUE	3	3	TRUE	4406
01073010100	Jefferson County	TRUE	10	5	TRUE	1349
01073010200	Jefferson County	TRUE	6	4	TRUE	2813
01073010301	Jefferson County	TRUE	5	4	TRUE	2856
01073010302	Jefferson County	TRUE	7	3	TRUE	3819
01073010401	Jefferson County	TRUE	7	3	TRUE	3842
01073010500	Jefferson County	TRUE	5	3	TRUE	1218
01073010602	Jefferson County	TRUE	1	1	TRUE	6026
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01073011209	Jefferson County	TRUE	2	2	TRUE	3563
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01073011901	Jefferson County	TRUE	8	4	TRUE	2556
01073011904	Jefferson County	TRUE	3	3	TRUE	2326
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01073012103	Jefferson County	TRUE	1	1	TRUE	4147
01073012302	Jefferson County	TRUE	1	1	TRUE	4026
01073012402	Jefferson County	TRUE	3	3	TRUE	2597
01073012500	Jefferson County	TRUE	6	4	TRUE	3908
01073012602	Jefferson County	TRUE	1	1	TRUE	2894
01073012701	Jefferson County	TRUE	1	1	TRUE	3727
01073012908	Jefferson County	TRUE	2	2	TRUE	5516
01073012912	Jefferson County	TRUE	1	1	TRUE	4663
01073013002	Jefferson County	TRUE	9	5	TRUE	1759
01073013100	Jefferson County	TRUE	9	6	TRUE	3837
01073013200	Jefferson County	TRUE	5	4	TRUE	2238
01073013300	Jefferson County	TRUE	9	5	TRUE	3173
01073013400	Jefferson County	TRUE	0	0	FALSE	4696
01073013601	Jefferson County	TRUE	7	4	TRUE	3459
01073013801	Jefferson County	TRUE	10	5	TRUE	2096
01073013901	Jefferson County	TRUE	3	2	TRUE	1525
01073014301	Jefferson County	TRUE	3	3	TRUE	2510
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01077010600	Lauderdale County	TRUE	3	3	TRUE	3150
01077010700	Lauderdale County	TRUE	6	4	TRUE	1534
01077010800	Lauderdale County	TRUE	4	2	TRUE	3660
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01077011603	Lauderdale County	TRUE	1	1	TRUE	4628
01079979200	Lawrence County	TRUE	5	4	TRUE	4020
01079979400	Lawrence County	TRUE	4	3	TRUE	4203
01079979500	Lawrence County	TRUE	3	3	TRUE	6251
01079979700	Lawrence County	TRUE	3	3	TRUE	2132
01079979900	Lawrence County	TRUE	2	2	TRUE	1939
01083020401	Limestone County	TRUE	2	2	TRUE	6626
01083020500	Limestone County	TRUE	6	3	TRUE	2727
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01083020700	Limestone County	TRUE	5	3	TRUE	2416
01083020801	Limestone County	TRUE	1	1	TRUE	8494
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01089000202	Madison County	TRUE	3	1	TRUE	3712
01089000301	Madison County	TRUE	6	2	TRUE	3849
01089000302	Madison County	TRUE	6	3	TRUE	3737
01089000501	Madison County	TRUE	4	2	TRUE	2031
01089000502	Madison County	TRUE	2	1	TRUE	2438
01089000602	Madison County	TRUE	5	2	TRUE	2062
01089000701	Madison County	TRUE	6	2	TRUE	2478
01089000702	Madison County	TRUE	5	3	TRUE	2441
01089001200	Madison County	TRUE	11	6	TRUE	2698
01089001301	Madison County	TRUE	5	3	TRUE	3335
01089001302	Madison County	TRUE	1	1	TRUE	1955

01089002100	Madison County	TRUE	7	4	TRUE	3139
01089002200	Madison County	TRUE	5	3	TRUE	1787
01089002300	Madison County	TRUE	3	2	TRUE	4657
01089002400	Madison County	TRUE	4	2	TRUE	4273
01089002501	Madison County	TRUE	6	4	TRUE	3313
01089002502	Madison County	TRUE	3	3	TRUE	3336
01089003000	Madison County	TRUE	11	6	TRUE	2638
01089010902	Madison County	TRUE	1	1	TRUE	3100
01095030100	Marshall County	TRUE	6	4	TRUE	3093
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01095030202	Marshall County	TRUE	2	2	TRUE	5354
01095030401	Marshall County	TRUE	1	1	TRUE	4496
01095030500	Marshall County	TRUE	2	2	TRUE	7767
01095030600	Marshall County	TRUE	1	1	TRUE	6481
01095030701	Marshall County	TRUE	1	1	TRUE	3646
01095030702	Marshall County	TRUE	1	1	TRUE	3832
01095030801	Marshall County	TRUE	2	2	TRUE	5167
01095030802	Marshall County	TRUE	4	3	TRUE	8277
01095030903	Marshall County	TRUE	4	4	TRUE	4867
01095030904	Marshall County	TRUE	1	1	TRUE	5475
01095031000	Marshall County	TRUE	3	3	TRUE	6052
01095031100	Marshall County	TRUE	2	2	TRUE	5305
01095031200	Marshall County	TRUE	2	2	TRUE	5820
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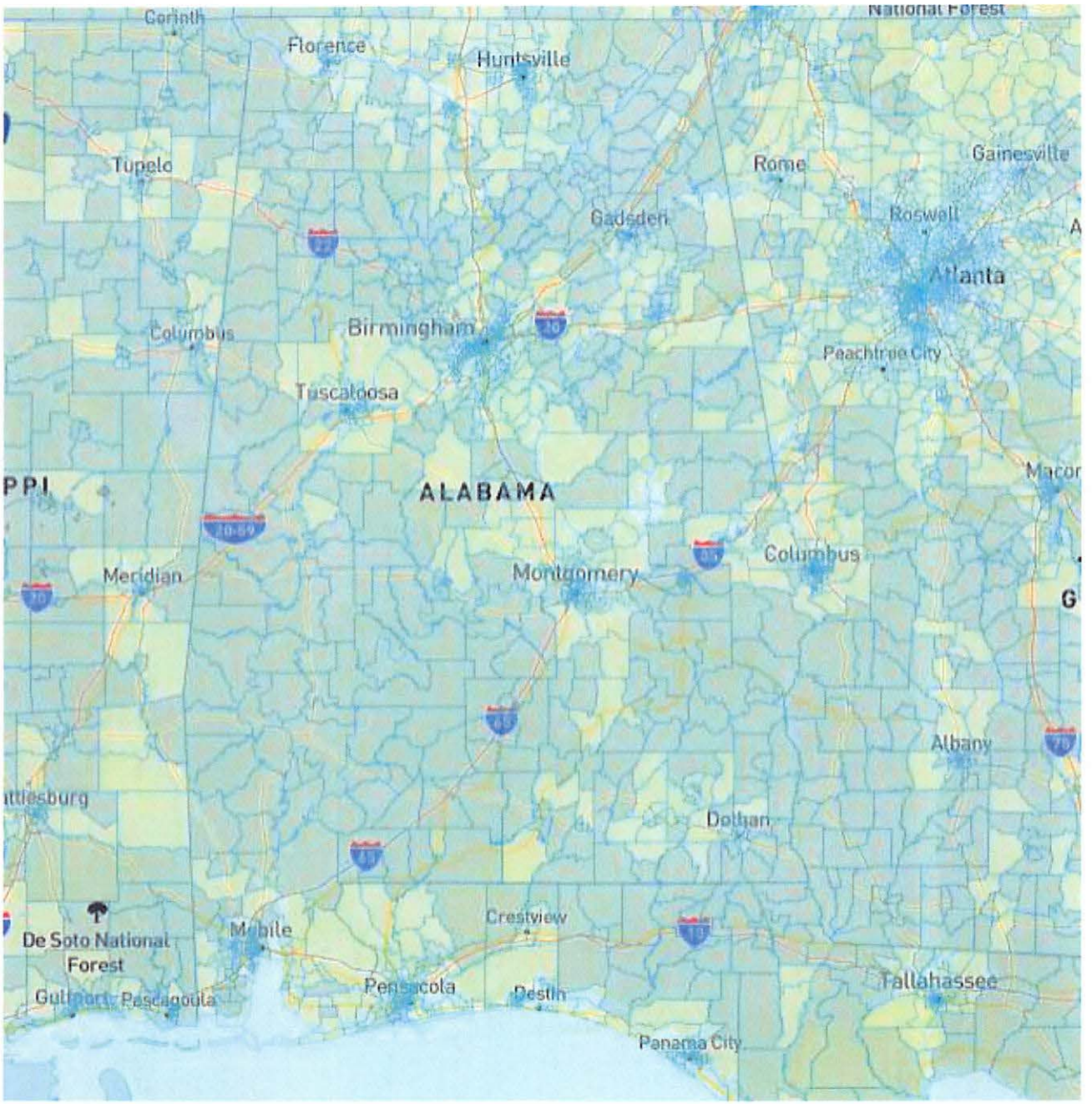
01103000400	Morgan County	TRUE	3	2	TRUE	3920
01103000600	Morgan County	TRUE	12	7	TRUE	2538
01103000700	Morgan County	TRUE	8	5	TRUE	3862
01103000800	Morgan County	TRUE	1	1	TRUE	2723
01103000900	Morgan County	TRUE	2	2	TRUE	5151
01103001000	Morgan County	TRUE	2	2	TRUE	3763
01103005106	Morgan County	TRUE	1	1	TRUE	6450
01103005109	Morgan County	TRUE	5	4	TRUE	4015
01103005500	Morgan County	TRUE	4	3	TRUE	5912
01103005702	Morgan County	TRUE	1	1	TRUE	6661
01133965501	Winston County	TRUE	2	2	TRUE	2532
01133965502	Winston County	TRUE	2	2	TRUE	2736
01133965503	Winston County	TRUE	3	3	TRUE	2721
01133965600	Winston County	TRUE	4	4	TRUE	5451
01133965700	Winston County	TRUE	4	4	TRUE	4013
01133965800	Winston County	TRUE	4	4	TRUE	4064
01133965900	Winston County	TRUE	5	4	TRUE	2267

Appendix F

CEJST Map and Spreadsheet

Alabama CEJST Map



Census tract 2010 ID	County Name	State/Territory	Identified as disadvantaged	Total population
01001021100	Autauga County	Alabama	TRUE	3185
01003010100	Baldwin County	Alabama	TRUE	3433
01003010200	Baldwin County	Alabama	TRUE	3158
01003010600	Baldwin County	Alabama	TRUE	3730
01003011000	Baldwin County	Alabama	TRUE	4644
01003011202	Baldwin County	Alabama	TRUE	5997
01003011502	Baldwin County	Alabama	TRUE	12957
01005950100	Barbour County	Alabama	TRUE	3091
01005950200	Barbour County	Alabama	TRUE	3949
01005950300	Barbour County	Alabama	TRUE	1598
01005950400	Barbour County	Alabama	TRUE	3817
01005950500	Barbour County	Alabama	TRUE	3285
01005950600	Barbour County	Alabama	TRUE	1960
01005950700	Barbour County	Alabama	TRUE	1521
01005950800	Barbour County	Alabama	TRUE	2259
01005950900	Barbour County	Alabama	TRUE	3881
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01007010004	Bibb County	Alabama	TRUE	9635
01009050102	Blount County	Alabama	TRUE	7108
01009050200	Blount County	Alabama	TRUE	4249
01009050300	Blount County	Alabama	TRUE	4972
01009050400	Blount County	Alabama	TRUE	3868
01009050500	Blount County	Alabama	TRUE	7840
01009050700	Blount County	Alabama	TRUE	8634
01011952100	Bullock County	Alabama	TRUE	1579
01011952200	Bullock County	Alabama	TRUE	5814
01011952500	Bullock County	Alabama	TRUE	2855
01013952700	Butler County	Alabama	TRUE	1930
01013952800	Butler County	Alabama	TRUE	1278
01013952900	Butler County	Alabama	TRUE	2336
01013953000	Butler County	Alabama	TRUE	1565
01013953100	Butler County	Alabama	TRUE	2939
01013953200	Butler County	Alabama	TRUE	3610
01013953300	Butler County	Alabama	TRUE	1861
01013953400	Butler County	Alabama	TRUE	2765
01013953500	Butler County	Alabama	TRUE	1544
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01015000400	Calhoun County	Alabama	TRUE	3143

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01015000700	Calhoun County	Alabama	TRUE	2918
01015000800	Calhoun County	Alabama	TRUE	981
01015000900	Calhoun County	Alabama	TRUE	3617
01015001201	Calhoun County	Alabama	TRUE	2830
01015001202	Calhoun County	Alabama	TRUE	4260
01015001300	Calhoun County	Alabama	TRUE	2009
01015001400	Calhoun County	Alabama	TRUE	3105
01015001500	Calhoun County	Alabama	TRUE	5076
01015001600	Calhoun County	Alabama	TRUE	3621
01015001700	Calhoun County	Alabama	TRUE	6858
01015001800	Calhoun County	Alabama	TRUE	7051
01015002101	Calhoun County	Alabama	TRUE	3327
01015002103	Calhoun County	Alabama	TRUE	6784
01015002200	Calhoun County	Alabama	TRUE	3391
01015002300	Calhoun County	Alabama	TRUE	3454
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01017954200	Chambers County	Alabama	TRUE	3445
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01017954500	Chambers County	Alabama	TRUE	3883
01017954600	Chambers County	Alabama	TRUE	3163
01019955701	Cherokee County	Alabama	TRUE	3236
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01019955800	Cherokee County	Alabama	TRUE	5571
01019955900	Cherokee County	Alabama	TRUE	3912
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01023957000	Choctaw County	Alabama	TRUE	2122
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01025957601	Clarke County	Alabama	TRUE	1008
01025957602	Clarke County	Alabama	TRUE	5064
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01035960400	Conecuh County	Alabama	TRUE	3362
01035960500	Conecuh County	Alabama	TRUE	1644
01035960600	Conecuh County	Alabama	TRUE	3511
01037961000	Coosa County	Alabama	TRUE	3587
01037961200	Coosa County	Alabama	TRUE	3711
01039961700	Covington County	Alabama	TRUE	3744
01039961800	Covington County	Alabama	TRUE	2957
01039961900	Covington County	Alabama	TRUE	2103
01039962000	Covington County	Alabama	TRUE	3815
01039962100	Covington County	Alabama	TRUE	2009
01039962300	Covington County	Alabama	TRUE	3378
01039962500	Covington County	Alabama	TRUE	1392
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01069040600	Houston County	Alabama	TRUE	1945
01069040700	Houston County	Alabama	TRUE	2788
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01069041400	Houston County	Alabama	TRUE	3454
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01073005500	Jefferson County	Alabama	TRUE	1746
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01073010301	Jefferson County	Alabama	TRUE	2856
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01073010602	Jefferson County	Alabama	TRUE	6026
01073010603	Jefferson County	Alabama	TRUE	2242
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01073011209	Jefferson County	Alabama	TRUE	3563
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01073012103	Jefferson County	Alabama	TRUE	4147
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01073012602	Jefferson County	Alabama	TRUE	2894
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01087232300	Macon County	Alabama	TRUE	1357
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01089000302	Madison County	Alabama	TRUE	3737
01089000501	Madison County	Alabama	TRUE	2031
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01089000602	Madison County	Alabama	TRUE	2062
01089000701	Madison County	Alabama	TRUE	2478
01089000702	Madison County	Alabama	TRUE	2441
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01089001302	Madison County	Alabama	TRUE	1955
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01089002502	Madison County	Alabama	TRUE	3336
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01089010902	Madison County	Alabama	TRUE	3100
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01091973000	Marengo County	Alabama	TRUE	3977
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01091973200	Marengo County	Alabama	TRUE	2909
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01091973400	Marengo County	Alabama	TRUE	3774
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01095030802	Marshall County	Alabama	TRUE	8277
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01097006104	Mobile County	Alabama	TRUE	4720
01097006200	Mobile County	Alabama	TRUE	5246
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01097006802	Mobile County	Alabama	TRUE	2960
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01097007101	Mobile County	Alabama	TRUE	4983
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01121011800	Talladega County	Alabama	TRUE	1916
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01125010404	Tuscaloosa County	Alabama	TRUE	2324
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01125011701	Tuscaloosa County	Alabama	TRUE	3249
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01127020900	Walker County	Alabama	TRUE	5039
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01131035100	Wilcox County	Alabama	TRUE	3152
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01133965502	Winston County	Alabama	TRUE	2736
01133965503	Winston County	Alabama	TRUE	2721
01133965600	Winston County	Alabama	TRUE	5451
01133965700	Winston County	Alabama	TRUE	4013
01133965800	Winston County	Alabama	TRUE	4064
01133965900	Winston County	Alabama	TRUE	2267

Appendix G

Stakeholder Meetings

1. Summary			
Meeting title	Alabama CPRG Stakeholder Meeting		
Attended participants	27		
Start time	1/31/24, 8:45:15 AM		
End time	1/31/24, 9:28:23 AM		
Meeting duration	43m 8s		
Average attendance time	24m 45s		
2. Participants			
Name	First Join	Last Leave	In-Meeting Duration
Edwards, Lisa R	1/31/24, 8:55:13 AM	1/31/24, 9:28:23 AM	31m 51s
Gray, Shonda	1/31/24, 8:55:26 AM	1/31/24, 9:27:32 AM	32m 5s
Mel Monk	1/31/24, 8:56:57 AM	1/31/24, 9:26:54 AM	29m 56s
12057185745	1/31/24, 8:57:34 AM	1/31/24, 9:27:01 AM	29m 27s
Christina Andreen Tidwell	1/31/24, 8:58:08 AM	1/31/24, 9:26:54 AM	28m 45s
Schuyler Espy	1/31/24, 8:58:11 AM	1/31/24, 9:26:50 AM	28m 39s
Jaclyn Brass	1/31/24, 8:58:34 AM	1/31/24, 9:26:52 AM	28m 17s
Kristi Barnett	1/31/24, 8:58:34 AM	1/31/24, 9:26:45 AM	28m 10s
Lita Waggoner	1/31/24, 8:58:36 AM	1/31/24, 9:26:55 AM	28m 19s
Ed Castile	1/31/24, 8:58:40 AM	1/31/24, 9:13:34 AM	14m 53s
michael	1/31/24, 8:58:48 AM	1/31/24, 9:26:53 AM	28m 4s
Daniel Tait	1/31/24, 8:59:16 AM	1/31/24, 9:26:52 AM	27m 35s
Gandhakwala, Hasin	1/31/24, 8:59:38 AM	1/31/24, 9:26:54 AM	27m 15s
Lisa Rollan	1/31/24, 8:59:41 AM	1/31/24, 9:26:55 AM	27m 14s
Gore, Ron	1/31/24, 8:59:49 AM	1/31/24, 9:26:53 AM	27m 3s
Michael Malley	1/31/24, 9:00:11 AM	1/31/24, 9:26:54 AM	26m 43s
Clark, Denson	1/31/24, 9:00:30 AM	1/31/24, 9:26:58 AM	26m 28s
Chris Blankenship	1/31/24, 9:00:44 AM	1/31/24, 9:26:56 AM	26m 12s
Arthur Bishop	1/31/24, 9:00:56 AM	1/31/24, 9:27:00 AM	26m 3s
Emily Ham	1/31/24, 9:00:59 AM	1/31/24, 9:26:53 AM	25m 53s
Baker Allen	1/31/24, 9:01:13 AM	1/31/24, 9:26:54 AM	25m 41s
Eric Spicer	1/31/24, 9:04:22 AM	1/31/24, 9:26:57 AM	19m 53s
Michael Berson	1/31/24, 9:06:58 AM	1/31/24, 9:26:50 AM	19m 51s
Mark Bentley, Alabama Clean Fuels	1/31/24, 9:07:44 AM	1/31/24, 9:26:55 AM	19m 10s
Roberts, Cedric	1/31/24, 9:09:35 AM	1/31/24, 9:28:23 AM	18m 48s
Lee, Jennifer	1/31/24, 9:13:07 AM	1/31/24, 9:26:53 AM	13m 46s
Carolyn Williams	1/31/24, 9:24:39 AM	1/31/24, 9:26:54 AM	2m 14s
3. In-Meeting Activities			
Name	Join Time	Leave Time	Duration
Edwards, Lisa R	1/31/24, 8:55:13 AM	1/31/24, 9:26:53 AM	31m 40s
Edwards, Lisa R	1/31/24, 9:28:12 AM	1/31/24, 9:28:23 AM	11s
Gray, Shonda	1/31/24, 8:55:26 AM	1/31/24, 9:27:32 AM	32m 5s
Mel Monk	1/31/24, 8:56:57 AM	1/31/24, 9:26:54 AM	29m 56s
12057185745	1/31/24, 8:57:34 AM	1/31/24, 9:27:01 AM	29m 27s
Christina Andreen Tidwell	1/31/24, 8:58:08 AM	1/31/24, 9:26:54 AM	28m 45s
Schuyler Espy	1/31/24, 8:58:11 AM	1/31/24, 9:26:50 AM	28m 39s
Jaclyn Brass	1/31/24, 8:58:34 AM	1/31/24, 9:26:52 AM	28m 17s
Kristi Barnett	1/31/24, 8:58:34 AM	1/31/24, 9:26:45 AM	28m 10s
Lita Waggoner	1/31/24, 8:58:36 AM	1/31/24, 9:26:55 AM	28m 19s
Ed Castile	1/31/24, 8:58:40 AM	1/31/24, 9:13:34 AM	14m 53s
michael	1/31/24, 8:58:48 AM	1/31/24, 9:26:53 AM	28m 4s
Daniel Tait	1/31/24, 8:59:16 AM	1/31/24, 9:26:52 AM	27m 35s
Gandhakwala, Hasin	1/31/24, 8:59:38 AM	1/31/24, 9:26:54 AM	27m 15s
Lisa Rollan	1/31/24, 8:59:41 AM	1/31/24, 9:26:55 AM	27m 14s
Gore, Ron	1/31/24, 8:59:49 AM	1/31/24, 9:26:53 AM	27m 3s
Michael Malley	1/31/24, 9:00:11 AM	1/31/24, 9:26:54 AM	26m 43s
Clark, Denson	1/31/24, 9:00:30 AM	1/31/24, 9:26:58 AM	26m 28s

Chris Blankenship	1/31/24, 9:00:44 AM	1/31/24, 9:26:56 AM	26m 12s
Arthur Bishop	1/31/24, 9:00:56 AM	1/31/24, 9:27:00 AM	26m 3s
Emily Ham	1/31/24, 9:00:59 AM	1/31/24, 9:26:53 AM	25m 53s
Baker Allen	1/31/24, 9:01:13 AM	1/31/24, 9:26:54 AM	25m 41s
Eric Spicer	1/31/24, 9:04:22 AM	1/31/24, 9:12:51 AM	8m 28s
Eric Spicer	1/31/24, 9:15:31 AM	1/31/24, 9:26:57 AM	11m 25s
Michael Berson	1/31/24, 9:06:58 AM	1/31/24, 9:26:50 AM	19m 51s
Mark Bentley, Alabama Clean Fuels	1/31/24, 9:07:44 AM	1/31/24, 9:26:55 AM	19m 10s
Roberts, Cedric	1/31/24, 9:09:35 AM	1/31/24, 9:28:23 AM	18m 48s
Lee, Jennifer	1/31/24, 9:13:07 AM	1/31/24, 9:26:53 AM	13m 46s
Carolyn Williams	1/31/24, 9:24:39 AM	1/31/24, 9:26:54 AM	2m 14s

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Audio file

Alabama CPRG Stakeholder Meeting-20240131_085533-Meeting Recording.mp4

Transcript

Shonda Gray

How are you all?

Lisa Edwards

Pretty well. How about you?

Shonda Gray

Doing fine. Thank you. Yeah. Jennifer had a conflicting appointment. And so, she's gonna join us a little later.

Lisa Edwards

OK, that's great. That's great. Glad to see you.

Shonda Gray

Glad to see you too, Lisa.

Lisa Edwards

Good morning. Good morning, everybody. We still have a couple of people joining, so we'll wait just a minute or two before we get started.

Ron Gore

Good morning, everyone. I've got 902. I've got nine O 2. I'll give everybody a couple more minutes. We've got somewhere in the neighborhood of 20 or 25 participants so far. OK, we'll get started here again. I'm Ron Gore. I'm the head of the Air division of ADEM. I want to apologize y'all to y'all today I've got COVID, so I'm sitting at home in sweatpants. And my laptop doesn't have a camera so. You just hear my beautiful voice. Be nice to me. Thank you all for being here. I don't think we'll go through a uh round of introductions just for time. Hope to keep this down below 45 minutes or an hour if we can. If you do have a question or comment during the meeting, please identify yourself. One of my favorite sayings is uh. Where you stand is determined by where you sit so. I'm gonna give a little brief background on this and then Lisa is going to go. Lisa Edwards is going to go through a short. PowerPoint presentation on where we are, we start hearing about this. Availability of grant money about last April or May. And EPA came up with a 2-step process to give out this money. First, states are supposed to submit a plan to EPA. Describing the projects that. Entities in the state want to submit and then the entities themselves submit the grant applications directly to EPA. And you might ask yourself, like we did. Why does ADEM need to be an intermediary in this and? One reason I can think of it helps spread the word better if each state does it. And uh. Second, I think EPA wants every state. To have a climate office and use this money to establish 1. Alabama, probably half the states, probably more. Do not have a climate office within their environmental agency or in any state agency. So, EPA gave ADEM $3,000,000, which we received in July.

To prepare this plan. And there's $4.6 billion available across the country. For applicants to apply for. So, if Alabama got its proportionate share of that. That'd be close to $100 million in those 18 months. EPA came up with a very tight time frame for this. As y'all know, we're supposed to have our plan submitted to EPA one month from now and any of y'all who want to apply for grants are supposed to have your grant application in by month from that date. Our speculation today is that EPA wants to. Encumber this money very quickly. Income or meaning write the checks. And I'll leave y'all to speculate why that might be. So, there's been a lot of stopping to start with this. Grant program at first, EPA implied that nonprofits. Apply for this money. For example, I see mailbox nice face sitting there, so his association asphalt paving plants. Could have. Under that scenario, applied for money, but since then, EPA has said only government entities can be the applicant applicants for the money. And if Mel and his group wanted to. Apply for. Money. You'd have to find some state or local agency to partner with. And back to the tight time schedule. Lisa has been to several national meetings over this program and every time she and other states ask, is there going to be any delay on this from these March 1st and April 1st dates? But until last week there was no check in the armor on that that EPA keep insisting. That those dates were hard and fast, but there was a little a little break in that last week, but I wouldn't count on it. You don't want if you have a project to submit, don't count on it. Your April first date is being delayed. Well, so. Up until mid-fall, ADEM worked with a sister state agency. Hoping that. A huge project. Could be applied for on behalf of. That state agency, but that fell through. And so, since then, our philosophy has been we want as many as people as possible. To apply for grants more, the mayor, you're in hopes that. 1-2 or possibly even more applicants in the state will receive these grants. We won't. Our fair share of that $100 million and more possible. So, if your group applies, ADEM is basically going to pass that through on the EPA. We are not going to. Quality assures or second guess any of them. Calculations, assumptions, time frames, so on so on of your project. Since EPA is the granting agency. They'll do that. And if you are granted a grant. Uh EPA will. Be the agency responsible for making sure that the money is spent. In a timely way, without corruption and all that good stuff. The sad truth is, though, that ADEM will not be an applicant on behalf of itself or anybody else with this money. The Air division of ADEM is a regulatory body. ADEM does have a group. In our agency, which loans, and grants billions of dollars every year. To wastewater treatment plants. And clean water plants. However, that group is so filled up. With dealing with. All the federal money that's come in this administration, they don't have any resources to do that. Basically, as an intermediary, ADEM is mainly just a. Blow tube for y'all to get your applications to EPA. So, we have received inquiries about probably five or six or eight projects already. They range from. Building insulation through. EV charging stations and agricultural product project. A carbon capture and reinjection project. And I can't think of anymore, but there may be one or two others in different areas. And again, we encourage anybody out there on this call. To put together a project if you have the time and inclination to do so. And what one last thing about this is. With a few exceptions. These grants are really energy grants. There are a few projects like carbon capture and sequester sequestration, which are not really energy products, but in general, if you're going to reduce CO2, you're reducing fossil fuel fired energy generation like in. Electric cars. Nuclear plants. In the case of this agricultural product, the outcome would be that. Agricultural products could be grown here in Alabama versus. Being transported from the Midwest, so on and so on. OK so. I'm winding down here and I'm going to ask Lisa Edwards. To go through her PowerPoint in a few minutes. And Lisa, on a routine basis, deals with regulations and finances here we're at ADEM. Training. But she volunteered to do this project and I'll turn it over to her.

Lisa Edwards

Good morning. We would like to welcome all of you to our first stakeholder meeting to discuss our PCAP. In the brain here we've made today I have Ben Scheierman with the Air Division and Ethan Spiegel with our IT department. He's going to keep us running smoothly this morning. Then let's see our presentation. OK, this one is our agenda for today. I was going to do a quick roll call to begin with, but I think we can get everybody from our list. Of attendees. So. We'll work on that for save time. We'll talk quickly about the CRG program. As Ron's mentioned, a lot of it to you already. And then we're going to talk a little bit about our PCAP or our priority climate action plan. And then very briefly about the implementation grant applications. Once again, we must thank everybody for joining us today and we'll move forward with discussing CPRG. Hey, it is. Everybody probably knows the CPRG program is part of the Election Reduction Act. It is going to provide about $5,000,000 in grants to states, local governments, tribes, and territories to develop and implement plans for reducing greenhouse gas emissions. Hey, Ron mentioned earlier there's two phases to this program, there's the non-competitive planning grant phase, which is what we're in now and ADEM did receive a $3,000,000 planning grant. The second phase is competitive and that's the implementation grants. There's a $4.6 billion pot of money out there that's available nationwide and. As far as eligible entities apply, as Ron mentioned earlier, they are gearing it towards governmental agencies in the non-competitive planning grant phase. There are three deliverables that we have to EPA with the first deliverable being ours. Priority Climate action plan, which will be submitted to EPA on or before March 1st of this year. The planning grant recipients, of course, are using this money to design these plans. To incorporate a variety of measures to reduce greenhouse gases and these plans can incorporate measures to reduce these emissions in 16 key sectors, electricity generation industry, transportation, buildings, agricultural natural working lands. Waste management. The PPAP or the priority Climate Action Plan is a prerequisite for those advocates that desire to obtain a grant in the second phase. Those that wish to apply for an implementation grant must be covered under A P CAP, and what that means is that basically in that. Recap, we must have measures that they are going to. Included in their plan in ours. And there are four required sections to the PCAP and the first one is the greenhouse gas inventory and for the peak cap this is going to be a very simplified inventory and what we have used for that EPA state level greenhouse gas data. So, we have used EPA data for this. The stagnant section that's going to be required is a low-income disadvantaged community benefits analysis and basically with this this is going to be a preliminary analysis of benefits to those low-income areas. In other words, what are these measures that you want to implement, how are they going to benefit? Our health alone comes. The third section is going to be a review of authority to implement, and when we talk about that, that's going to be for the grant recipient. They must indicate whether they have existing, you know, statutory or regulatory authority to implement each measure that they have in their implementation. And if they don't? Describe how they are going to obtain that. OK. The last one that's up there is going to be the quantified greenhouse gas reduction measures or what are you going to do? What measures are you taking? Grant package and the following slides has nine items that we will need to include in our P caps for each measure. When you look at this list, the 1st 2:00. Are going to be estimates of greenhouse gas emission reductions in the near term and long term. When you look at the first one, it goes from 2025 to 2035 and let me explain those numbers a little bit in our guidance it had you could do 20-30 or 2035. I think some of the Federals are looking toward 2030. So, if someone has a project and you send me a number for 20-30 that is perfectly OK. #2 going out through 2050, that's the long-term greenhouse gas emissions that they're looking for. The next thing that we would need is the implementation agency or agencies, your implementation schedule or milestones and you know this is. This is just. An estimate. You know, we realize it might change later. The geographic scope of things. You know, we might say

something depending on the project. We may say various counties in Alabama, or a certain project may be more defined. Also, how you're going to track the progress. Cost estimates and these are just estimating as well. #8 is going to deal with the impacts on the low income and disadvantaged communities. In other words, you know, how is this going to help that woman income, disadvantaged community and then the authority to implement. And once we have all that information, we'll compile everything and finalize our PCAP and. And as said before, get it turned into EPA on or before March 1st and then we'll move on to the second phase of the program, which are the implementation grants. And if you can see. The timelines are tight. The notice of funding opportunity for this came out in September of this past year and I have put the link for the notice of funding opportunity on the slide. But if anyone needs me to send them that link, I will be more than happy to do that. And like I said earlier, as you can see from the chart, the timeline is. Very tight the implementation grant applications are due to EPA April 1st and last week heard they are anticipating awarding this money in. They anticipate awarding approximately 30 to 115 grants ranging anywhere from 2 million to $500 million under this general competition. What you plan as things move along to have another stakeholder meeting February 20th at 9:00. And of course, as most of you already know here, they don't. I am the contact for a CPRG, and I have my contact information here on this slide and don't hesitate to e-mail or give me a call if you should need any information. And that concludes my presentation. And as Ron said. We have gotten the information for about for about 8 different groups. For projects that we are compiling here. So, at this time, since we finished up the presentation, if anybody has any questions or would like to make any comments. You know, feel free to raise your Hand and we'll. I'll let you everybody talk. OK. OK. Mail.

Mel Monk

Uh, yes, ma'am. I'm, I'm. I'm muted. Yes, Sir. OK, thanks. Thank you, Lisa, and Ron. Thank you for the information. Ron, I hope you feel better. The application grants, are they already up on a site?

Lisa Edwards

The UM the notice of funding opportunity for the implementation grant.

Mel Monk

The application form itself.

Lisa Edwards

Is that what? Now they have the notice of funding opportunity and I believe they have a template on that on that website and I can get that to you if you would like.

Mel Monk

Yes, thank you, I would.

Lisa Edwards

OK, I sure will. OK, Michael.

Michael Malley

Yeah. So, I caught the end of the eligibility requirements, our universities eligible or would we have to work through? Like a local or state government agency.

Lisa Edwards

Refer to the notice of funding opportunity on that and maybe we can have a one-on-one as well. Initially they were saying that you would. Need to go. Through a governmental agency and I, let me put this out to everyone that's on the call as well. There is a question-and-answer document that I can also send the link to everyone. And the Eva updates and they updated every other week. And the reason I'm saying this, Michael, is because in that question and answer they. Have elaborated a little bit with universities on there and there's some stipulation if you answer to the state for this or for that. So, there is a possibility that universities could be eligible, but there is some specific information in that Q&A question. That I would also like to refer you to, and I'll be happy to get you that information. OK, so there is a possibility that yes, you might, but to be certain that everything is going as it should be if you have. The opportunity to connect with governmental agency, I would recommend that, but I can absolutely get you that information, but I would want you to read that specifically.

Michael Malley

Great. I will look at it. Thank you very much.

Lisa Edwards

I'd like to stay then.

Cristina Tidwell

Hi. Hi, everyone. I'm Christina Tidwell. I work for the Southern Environmental Law Center, and I just had a question about projects that ADEM would be including in the PCAP. So, I guess. My understanding is that a project must be listed in the PCAP to get funded and so would you. I'm sorry.

Lisa Edwards

I'm sorry to interrupt you. The measures. Yes, the measures for it. That's correct.

Cristina Tidwell

OK, so would y'all, would ADEM just encourage any eligible entities to kind of reach out if they have any project ideas that they want listed in the PCAP to make sure that you know they're able to then apply for a grant?

Lisa Edwards

Yes, yes.

Cristina Tidwell

OK. Thank you.

Ron Gore

Christina, this is Ron. I would say for example. If you and your group wanted to partner with some. Government agency for some projects. That specific project that would be you. And then I'm applying must be in our P camp, not something broad like you know, we want to insulate houses in North Birmingham or something. You've got to have the specifics there. It's going to be SEC partnering with the

City of Birmingham or whoever. To apply for money to insulate houses in North Birmingham, Cape B insulate houses somewhere.

Cristina Tidwell

OK. Got it. Thank you.

Lisa Edwards

We had a question too. Someone asked if we were going to make the slides available after the call. And yes, I would be glad to send. The slides out to everyone. Do we have any other questions? OK. And I just wanted to tell you all, feel free to give me a call, e-mail me. I'll be glad to help you in any way that I can. I you know, I will say this. I think we are going to have some interruption with our phones on Friday. So, if you try to contact me on Friday and you don't get me or I don't return your call quickly, we're having some switch out with our phone system. And so, we are going to be down for a time on Friday. So, I will get back with you as soon as possible. Well, one last thing. Any other questions before we adjourn for the day? Hey. Well, we want to thank everyone for joining us and look forward to working with you and talking with you again soon. Thank you. Bye bye.

1. Summary				
Meeting title	CPRG Stakeholder Meeting #2			
Attended participants	34			
Start time	2/20/24, 8:02:16 AM			
End time	2/20/24, 9:20:26 AM			
Meeting duration	1h 18m 9s			
Average attendance time	17m 58s			
2. Participants				
Name	First Join	Last Leave	In-Meeting Duration	Email
Edwards, Lisa R	2/20/24, 8:02:31 AM	2/20/24, 9:20:12 AM	1h 17m 40s	LHicks@adem.alabama.gov
McCloud, Marcelle	2/20/24, 8:13:23 AM	2/20/24, 8:16:51 AM	3m 28s	MMcCloud@adem.alabama.gov
Handsome, Geraline	2/20/24, 8:13:29 AM	2/20/24, 8:16:45 AM	3m 15s	GH@adem.alabama.gov
Emily Ham	2/20/24, 8:56:46 AM	2/20/24, 9:20:08 AM	23m 22s	emily.ham@ipaper.com
Jones, Al	2/20/24, 8:56:46 AM	2/20/24, 9:20:16 AM	23m 29s	al.jones@forestry.alabama.gov
Eric Spicer	2/20/24, 8:58:41 AM	2/20/24, 9:20:09 AM	21m 27s	espicer@wiregrassconstruction.com
Gore, Ron	2/20/24, 8:58:54 AM	2/20/24, 9:20:06 AM	21m 12s	RWG@adem.alabama.gov
Lisa Rollan	2/20/24, 8:59:18 AM	2/20/24, 9:20:12 AM	20m 53s	lisa.rollan@accs.edu
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Christina Andreen Tidwell	2/20/24, 8:59:44 AM	2/20/24, 9:20:10 AM	20m 26s	ctidwell@selcal.org
Michael Malley	2/20/24, 8:59:51 AM	2/20/24, 9:20:09 AM	20m 17s	msmalley@ua.edu
Laurel McCarthy	2/20/24, 8:59:51 AM	2/20/24, 9:20:07 AM	20m 15s	lmccarthy@constructionpartners.net
Mel Monk	2/20/24, 8:59:53 AM	2/20/24, 9:20:07 AM	20m 14s	
13342333774	2/20/24, 9:00:07 AM	2/20/24, 9:03:42 AM	3m 35s	
Michael Staley	2/20/24, 9:00:12 AM	2/20/24, 9:03:09 AM	2m 57s	
Kelley Gillikin	2/20/24, 9:00:21 AM	2/20/24, 9:20:09 AM	19m 47s	kgillikin@alabamacounties.org
Lee, Jennifer	2/20/24, 9:00:35 AM	2/20/24, 9:20:08 AM	19m 33s	Jennifer.Lee@adeca.alabama.gov
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Ed Castile (Guest)	2/20/24, 9:00:56 AM	2/20/24, 9:12:47 AM	11m 51s	
Daniel Tait	2/20/24, 9:01:15 AM	2/20/24, 9:20:07 AM	18m 52s	
Chuck Faulkner	2/20/24, 9:01:24 AM	2/20/24, 9:20:17 AM	18m 52s	cfaulkner@madisoncountyal.gov
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13344628293	2/20/24, 9:02:00 AM	2/20/24, 9:20:08 AM	18m 7s	
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13348506548	2/20/24, 9:02:36 AM	2/20/24, 9:20:07 AM	17m 31s	
admrda3	2/20/24, 9:02:40 AM	2/20/24, 9:20:22 AM	17m 41s	admrda3@dot.state.al.us
Michael Staley	2/20/24, 9:03:38 AM	2/20/24, 9:20:10 AM	16m 31s	
Vicky Ohlson	2/20/24, 9:03:38 AM	2/20/24, 9:20:08 AM	16m 29s	Vicky.Ohlson@accs.edu
Heather Dylla	2/20/24, 9:06:08 AM	2/20/24, 9:20:08 AM	14m	hdylla@constructionpartners.net
13342681428	2/20/24, 9:17:09 AM	2/20/24, 9:20:08 AM	2m 59s	
Jaclyn Brass	2/20/24, 9:20:06 AM	2/20/24, 9:20:08 AM	2s	jbrass@selcal.org
3. In-Meeting Activities				
Name	Join Time	Leave Time	Duration	Email
Edwards, Lisa R	2/20/24, 8:02:31 AM	2/20/24, 9:20:12 AM	1h 17m 40s	LHicks@adem.alabama.gov
McCloud, Marcelle	2/20/24, 8:13:23 AM	2/20/24, 8:16:51 AM	3m 28s	MMcCloud@adem.alabama.gov
Handsome, Geraline	2/20/24, 8:13:29 AM	2/20/24, 8:16:45 AM	3m 15s	GH@adem.alabama.gov
Emily Ham	2/20/24, 8:56:46 AM	2/20/24, 9:20:08 AM	23m 22s	emily.ham@ipaper.com
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Christie, Eric	2/20/24, 8:59:29 AM	2/20/24, 9:20:03 AM	20m 34s	christiee@dot.state.al.us
Pilcher, Chad	2/20/24, 8:59:38 AM	2/20/24, 9:20:04 AM	20m 26s	cpilcher_balch.com#EXT#@soco365.onmicrosoft.com
Christina Andreen Tidwell	2/20/24, 8:59:44 AM	2/20/24, 9:20:10 AM	20m 26s	ctidwell@selcal.org
Michael Malley	2/20/24, 8:59:51 AM	2/20/24, 9:20:09 AM	20m 17s	msmalley@ua.edu
Laurel McCarthy	2/20/24, 8:59:51 AM	2/20/24, 9:20:07 AM	20m 15s	lmccarthy@constructionpartners.net
Mel Monk	2/20/24, 8:59:53 AM	2/20/24, 9:20:07 AM	20m 14s	
13342333774	2/20/24, 9:00:07 AM	2/20/24, 9:03:42 AM	3m 35s	
Michael Staley	2/20/24, 9:00:12 AM	2/20/24, 9:03:09 AM	2m 57s	
Kelley Gillikin	2/20/24, 9:00:21 AM	2/20/24, 9:20:09 AM	19m 47s	kgillikin@alabamacounties.org
Lee, Jennifer	2/20/24, 9:00:35 AM	2/20/24, 9:20:08 AM	19m 33s	Jennifer.Lee@adeca.alabama.gov
Matthew Tice	2/20/24, 9:00:35 AM	2/20/24, 9:20:14 AM	19m 39s	matthew.tice@accs.edu
Clark, Denson	2/20/24, 9:00:47 AM	2/20/24, 9:20:04 AM	19m 17s	Denson.Clark@governor.alabama.gov
Ruth, Dan	2/20/24, 9:00:48 AM	2/20/24, 9:20:07 AM	19m 19s	druth@balch.com
Ed Castile (Guest)	2/20/24, 9:00:56 AM	2/20/24, 9:12:47 AM	11m 51s	
Daniel Tait	2/20/24, 9:01:15 AM	2/20/24, 9:20:07 AM	18m 52s	
Chuck Faulkner	2/20/24, 9:01:24 AM	2/20/24, 9:20:17 AM	18m 52s	cfaulkner@madisoncountyal.gov
George, Scott	2/20/24, 9:01:24 AM	2/20/24, 9:20:26 AM	19m 1s	georges@dot.state.al.us
13344628293	2/20/24, 9:02:00 AM	2/20/24, 9:20:08 AM	18m 7s	
Hartzog, Zane	2/20/24, 9:02:17 AM	2/20/24, 9:20:19 AM	18m 1s	hartzogz@dot.state.al.us

13348506548	2/20/24, 9:02:36 AM	2/20/24, 9:20:07 AM	17m 31s	
admrda3	2/20/24, 9:02:40 AM	2/20/24, 9:20:22 AM	17m 41s	admrda3@dot.state.al.us
Michael Staley	2/20/24, 9:03:38 AM	2/20/24, 9:20:10 AM	16m 31s	
Vicky Ohlson	2/20/24, 9:03:38 AM	2/20/24, 9:20:08 AM	16m 29s	Vicky.Ohlson@accs.edu
Heather Dylla	2/20/24, 9:06:08 AM	2/20/24, 9:20:08 AM	14m	hdylla@constructionpartners.net
13342681428	2/20/24, 9:17:09 AM	2/20/24, 9:20:08 AM	2m 59s	
Jaclyn Brass	2/20/24, 9:20:06 AM	2/20/24, 9:20:08 AM	2s	jbrass@selcal.org

0:0:0.0 --> 0:0:6.490
Gore, Ron
Risk the possibility that EPA might say you didn't turn your planning on time.

0:0:6.920 --> 0:0:8.770
Gore, Ron
All your applicants are ineligible.

0:0:8.820 --> 0:0:18.790
Gore, Ron
I don't think they'll take that hard line, but they've not indicated they won't and so therefore we will submit what we're going to submit of March 1st.

0:0:19.750 --> 0:0:27.920
Gore, Ron
And that means that those of you who would tend to apply for real money uh by the 1st of April need to have.

0:0:28.790 --> 0:0:32.390
Gore, Ron
ADEM stated information again.

0:0:34.340 --> 0:0:37.170
Gore, Ron
Early to mid next week for us to turn it in on time.

0:0:38.410 --> 0:0:40.600
Gore, Ron
So I'm going to turn things over to Lisa.

0:0:40.610 --> 0:0:41.500
Gore, Ron
She's going to.

0:0:44.140 --> 0:0:46.880
Gore, Ron
Refresh your memory of what we went through last time.

0:0:46.890 --> 0:0:47.930
Gore, Ron
Very, very short.

0:0:47.940 --> 0:0:48.300
Gore, Ron
Sweet.

0:0:49.210 --> 0:0:53.600
Gore, Ron
Uh, and kind of give you a few uh numbers on who we talked to and so on.

0:0:55.60 --> 0:0:59.890
Gore, Ron
And then of course, if you got any questions of her, feel free to ask what we're through.

0:1:0.700 --> 0:1:1.210
Gore, Ron
Uh.

0:1:1.620 --> 0:1:6.80
Gore, Ron
Once March 1st passes the torch of this and this.

0:1:7.480 --> 0:1:8.80
Gore, Ron
Project.

0:1:9.260 --> 0:1:12.950
Gore, Ron
From the governmental standpoint goes to EPA.

0:1:12.960 --> 0:1:16.0
Gore, Ron
So after March 1st. Umm.

0:1:17.90 --> 0:1:26.430
Gore, Ron
You out there in our audience are responsible for turning in your applications on time and with all the necessary information.

0:1:27.20 --> 0:1:28.280
Gore, Ron
By April the 1st.

0:1:29.230 --> 0:1:32.430
Gore, Ron
So with that, I'm gonna turn it on over to Lisa.

0:1:34.490 --> 0:1:35.460
Edwards, Lisa R
Uh, good morning.

0:1:35.490 --> 0:1:38.300
Edwards, Lisa R
I would like to thank everybody for being with us this morning.

0:1:39.90 --> 0:1:42.710
Edwards, Lisa R
I have a couple of folks that are going to help me keep everything running smoothly.

0:1:42.720 --> 0:1:54.440
Edwards, Lisa R
We've got Eric Cleckler and play first from the IT department, so they're going to help me out if anything goes awry, we'll start this morning with the presentation.

0:1:55.70 --> 0:2:2.540
Edwards, Lisa R
It is a very short presentation that we've got, umm, if I can get it. Uh.

0:2:7.130 --> 0:2:7.970
Edwards, Lisa R
OK, get it.

0:2:8.50 --> 0:2:10.200
Edwards, Lisa R
Can everybody see on the slides?

0:2:13.100 --> 0:2:13.360
Edwards, Lisa R
OK.

0:2:13.370 --> 0:2:13.970
Edwards, Lisa R
Thank you.

0:2:15.220 --> 0:2:15.340
Vicky Ohlson
Yes.

0:2:14.310 --> 0:2:16.820
Gore, Ron
Lisa, you, you're not at the start, Lisa.

0:2:16.830 --> 0:2:17.590
Gore, Ron
You're at the end.

0:2:24.50 --> 0:2:24.630
Edwards, Lisa R
That's good.

0:2:25.980 --> 0:2:26.790
Edwards, Lisa R
Sickening.

0:2:27.560 --> 0:2:28.120
Edwards, Lisa R
Umm.

0:2:28.660 --> 0:2:29.40
Edwards, Lisa R
OK.

0:2:29.50 --> 0:2:30.210
Edwards, Lisa R
Well, we will get started.

0:2:30.220 --> 0:2:51.930
Edwards, Lisa R
Here's our agenda for today and it's very short and we'll do just a little bit of review over the the priority Comment action plan and over the implementation grant applications and then we'll talk briefly about some of the projects in the priority measures that have come to us over these last few weeks stop.

0:2:52.910 --> 0:3:6.180
Edwards, Lisa R
And these first few slides are going to just be some reminders and the first one I think Ron

mentioned it as well, but our PCAP, our priority climate action plan is going to be the EPA by March 1st and 10.

0:3:6.190 --> 0:3:13.80
Edwards, Lisa R
That plan and as we talked about before, there are four sections that are required in that PCAP.

0:3:13.120 --> 0:3:16.920
Edwards, Lisa R
And when we turn it in, we're going to have our greenhouse gas inventory.

0:3:17.810 --> 0:3:24.640
Edwards, Lisa R
Umm, we will have a section talking about low income, disadvantaged communities and the benefits analysis for those.

0:3:25.630 --> 0:3:33.840
Edwards, Lisa R
The review authority to implement and let me under reminder in there too, that that review of authority to implement is for.

0:3:33.850 --> 0:3:44.760
Edwards, Lisa R
The agency that is going to, you know, implement the project of what statutory regulatory authority did they have to be able to implement those projects.

0:3:45.30 --> 0:3:52.350
Edwards, Lisa R
And then the last section is going to talk about the the reduction measures of those priority measures.

0:3:53.990 --> 0:3:55.830
Edwards, Lisa R
That everybody wants to implement.

0:3:57.10 --> 0:3:59.870
Edwards, Lisa R
The next thing is also a review slide.

0:4:0.640 --> 0:4:17.850
Edwards, Lisa R
Umm, the windows things with the priority measures that you guys see it sent to us and I've

taught with most everybody individually, but there are nine things that EPA requires for each one of those priority measures.

0:4:18.120 --> 0:4:23.200
Edwards, Lisa R
The first couple are near term and long term emission reductions.

0:4:23.930 --> 0:4:29.660
Edwards, Lisa R
Umm, you are also going to have authority to implement at the geographic scope.

0:4:30.250 --> 0:4:30.680
Edwards, Lisa R
Umm.

0:4:31.300 --> 0:4:32.780
Edwards, Lisa R
Milestones.

0:4:32.790 --> 0:4:38.560
Edwards, Lisa R
Basically your schedule so on and so forth and the last one they put that out that authority to implement.

0:4:38.570 --> 0:4:44.680
Edwards, Lisa R
And I think it's #8 is talking about the low income disadvantaged communities.

0:4:44.690 --> 0:4:48.970
Edwards, Lisa R
And let me point out, #8 and nine are really, really important there.

0:4:49.90 --> 0:4:58.330
Edwards, Lisa R
So umm, so that was done things if you send a priority measure, please make sure that these nine items are included with that information.

0:4:59.510 --> 0:5:6.340
Edwards, Lisa R
Once we get everything together and submit the plan on March 1st, arrange this as well.

0:5:6.350 --> 0:5:19.760
Edwards, Lisa R

Keep in mind that those implementation grant applications are due on April the 1st and as of right now the last we heard, they are anticipating awarding the money in October.

0:5:20.670 --> 0:5:30.490
Edwards, Lisa R
Umm I left the link for the notice of funding opportunity up there, but if there's anybody that needs that link, just let me know and I'll be happy to email that too.

0:5:32.710 --> 0:5:39.880
Edwards, Lisa R
That's gonna bring us to our our last slide, but there's several things we'll talk about there.

0:5:41.870 --> 0:6:3.840
Edwards, Lisa R
During these weeks, people that have contacted just just inquiring about CPRG, I've had about 20 inquiries coming in, Umm and the as far as what I received in the House, it's like full blown project proposals that are definite I we've got three of those in House.

0:6:4.640 --> 0:6:11.90
Edwards, Lisa R
Umm, we've also got 7 probable project proposals that are coming in.

0:6:11.300 --> 0:6:16.930
Edwards, Lisa R
Those when, when I say probable project proposals, those are people that have contacted me.

0:6:17.0 --> 0:6:28.620
Edwards, Lisa R
They're in the process of getting their information together and they are going to send information in or they planned and then we've got six possible project proposals.

0:6:30.720 --> 0:6:33.800
Edwards, Lisa R
All of those proposals we've got anything from?

0:6:35.750 --> 0:6:41.800
Edwards, Lisa R
Things reaching into the agricultural sector, transportation of power.

0:6:42.10 --> 0:6:45.690
Edwards, Lisa R
We've got multiple sectors that will be represented.

0:6:46.390 --> 0:7:7.440
Edwards, Lisa R
Umm, but the draft PCAP I have pretty much got it drafted other than the information that I'm waiting on for priority measures that I have not received, I still need to of course you proofread that and and my plan for this week is to proofread, proofread everything.

0:7:7.450 --> 0:7:20.510
Edwards, Lisa R
That's that's final in it and as the priority measures and and the other proposals come in, I will insert that information into the plan and we should be ready to go by March 1st.

0:7:21.680 --> 0:7:26.70
Edwards, Lisa R
So that that's pretty much all I had.

0:7:26.120 --> 0:7:27.910
Edwards, Lisa R
Uh, do I have any questions?

0:7:34.120 --> 0:7:35.430
Emily Ham
Lisa, good morning.

0:7:35.440 --> 0:7:37.150
Emily Ham
This is Emily Hamm with International Paper.

0:7:37.160 --> 0:7:37.720
Emily Ham
Can you hear me?

0:7:38.330 --> 0:7:39.20
Edwards, Lisa R
I can't.

0:7:39.30 --> 0:7:39.250
Edwards, Lisa R
I can't.

0:7:40.20 --> 0:7:40.690
Emily Ham
Thank you.

0:8:7.450 --> 0:8:7.850
Edwards, Lisa R
Thank you.

0:7:40.700 --> 0:8:12.480
Emily Ham
This first I wanna I wanna thank you and your team for your work to pull this together and your wonderful communication with stakeholders throughout this process as we've been exploring opportunities in the state of Alabama and as I'm looking at this slide of of definite possible and probable projects in terms of the language that's going to be included in your PCAP, what level of detail are you guys seeking from some probable project proposals?

0:8:12.490 --> 0:8:13.820
Emily Ham
Are you looking for a paragraph?

0:8:13.830 --> 0:8:14.670
Emily Ham
An outline.

0:8:14.940 --> 0:8:18.460
Emily Ham
What kind of specifics are you needing for this stage of the PCAP?

0:8:19.940 --> 0:8:23.330
Edwards, Lisa R
The main things that I need are those nine items.

0:8:23.880 --> 0:8:30.530
Edwards, Lisa R
That's the main thing, and I would also include a paragraph that, you know, explains what your project is about.

0:8:30.540 --> 0:8:34.600
Edwards, Lisa R
But the main thing that they are requiring for the PCAP are those nine items.

0:8:36.950 --> 0:8:37.460
Emily Ham
Understood.

0:8:37.470 --> 0:8:37.810
Emily Ham
Thank you.

0:8:38.250 --> 0:8:40.180
Edwards, Lisa R
And and and with those projects.

0:8:40.190 --> 0:8:47.900
Edwards, Lisa R
What I have done with those because because nobody knows the project like like the the individuals that are going to implement it.

0:8:47.910 --> 0:9:4.770
Edwards, Lisa R
So what I have done with that is I literally take the information that I have been given and the way I have set that section up, I've got a section that had projects and I've just basically 1234 and I just transfer the information over.

0:9:9.670 --> 0:9:12.600
Vicky Ohlson
Lisa, this is Vicki Olson with ACS.

0:9:13.70 --> 0:9:29.500
Vicky Ohlson
In the definite project proposals that have been sent to you and even some of the probable or possible ones that have been sent to you, is there any indication that they have used specific methods for calculating the greenhouse gas reductions?

0:9:29.710 --> 0:9:39.810
Vicky Ohlson
So for example on electric vehicles I have found information at EPA about like the average number of gallons.

0:9:40.400 --> 0:9:48.410
Vicky Ohlson
Ohh, miles per gallon that that cars get and the emission rates for the average car.

0:9:48.500 --> 0:9:59.370
Vicky Ohlson
But is anybody being like specific to a car that's being replaced, or are they just using general information to calculate these estimates?

0:9:59.380 --> 0:10:15.100
Vicky Ohlson
Right now we're we're kind of panicking on how specific we have to be on our calculations that we send to you and how they have to align with what we eventually put in our implementation proposal.

0:10:15.170 --> 0:10:15.350
Vicky Ohlson
So.

0:10:16.960 --> 0:10:32.870
Edwards, Lisa R
For the PCAP and and from what I've been told, these are just these are estimates and I I have not really had those conversations with individuals as far as how they are calculating as far as projects.

0:10:32.880 --> 0:10:37.650
Edwards, Lisa R
You know, that's kind of left up to each individual group to to calculate.

0:10:37.660 --> 0:10:52.770
Edwards, Lisa R
Its as they see fit or the particular type of project that they are doing, so I wouldn't be able to speak a whole lot to that, but I can't say that for the PCAP it is just an estimate for those time frames.

0:10:54.630 --> 0:10:55.110
Edwards, Lisa R
Did that?

0:10:55.520 --> 0:10:55.670
Vicky Ohlson
The.

0:10:55.120 --> 0:10:55.960
Edwards, Lisa R
Did that help me?

0:10:57.70 --> 0:10:57.910
Vicky Ohlson
Yes, thank you.

0:10:58.640 --> 0:10:59.300
Edwards, Lisa R
You're welcome.

0:11:1.0 --> 0:11:2.830
Edwards, Lisa R
Uh, see, I think Michael.

0:11:2.840 --> 0:11:3.440
Edwards, Lisa R
Michael malley.

0:11:5.120 --> 0:11:5.500
Michael Malley
Yes.

0:11:5.510 --> 0:11:8.730
Michael Malley
So kind of building on the last two questions.

0:11:8.940 --> 0:11:23.460
Michael Malley
When it comes to the 9 sections, do we, you know, are we basically just summary, you know providing a summary or is there like you know across the existing proposals, is there sort of like a expected length or is it?

0:11:23.730 --> 0:11:24.400
Michael Malley
You know this?

0:11:23.370 --> 0:11:36.420
Edwards, Lisa R
No, no, it's just it as long as you answer those nine questions and and give a little summary of of what you're doing as long as you feel that you have answered those nine items completely then that is fine.

0:11:37.450 --> 0:11:37.880
Michael Malley
Great.

0:11:37.970 --> 0:11:38.290
Michael Malley
Thank you.

0:11:46.750 --> 0:11:47.740
Edwards, Lisa R
Any other questions?

0:11:52.330 --> 0:11:52.450
Edwards, Lisa R
The.

0:11:51.560 --> 0:11:53.890
Vicky Ohlson
So I heard this is Vicki Olson again.

0:11:54.650 --> 0:11:54.920
Edwards, Lisa R
Ah.

0:11:53.900 --> 0:12:2.450
Vicky Ohlson
So I heard a few minutes ago that you guys are expecting to get these from us by sometime next week.

0:12:2.460 --> 0:12:5.370
Vicky Ohlson
But I had heard originally the 23rd.

0:12:5.380 --> 0:12:9.250
Vicky Ohlson
So is there an extension on that from the 23rd?

0:12:10.330 --> 0:12:20.110
Edwards, Lisa R
And as long as you can give them to me sometime that that beginning of that week of the 26th or so and and I'll work with you however I can it, it'll be fine.

0:12:21.270 --> 0:12:21.690
Vicky Ohlson
OK.

0:12:21.700 --> 0:12:22.450
Vicky Ohlson
Thank you very much.

0:12:22.960 --> 0:12:23.780
Edwards, Lisa R
Are you problem?

0:12:29.210 --> 0:12:32.50
Edwards, Lisa R
Hey anybody else?

0:12:43.10 --> 0:12:43.450
Vicky Ohlson
I'm sorry.

0:12:43.460 --> 0:12:44.440
Vicky Ohlson
This is Vicki Olson again.

0:12:44.450 --> 0:12:51.720
Vicky Ohlson
Is there any way you could give us an idea of the kinds of proposals, not names or anything, but what people are applying for?

0:12:54.280 --> 0:12:59.150
Edwards, Lisa R
Ohh we have like what are the three definites that we have.

0:12:59.240 --> 0:13:6.820
Edwards, Lisa R
We have one agricultural project that's dealing with irrigation.

0:13:8.240 --> 0:13:8.740
Edwards, Lisa R
Umm.

0:13:10.540 --> 0:13:16.910
Edwards, Lisa R
And then we have a waste management project and energy efficiency project.

0:13:18.840 --> 0:13:21.60
Edwards, Lisa R
That they're the definites or something, you know?

0:13:20.790 --> 0:13:21.420
Vicky Ohlson
OK.

0:13:21.650 --> 0:13:22.340
Vicky Ohlson
Thank you.

0:13:22.590 --> 0:13:23.180
Edwards, Lisa R
You're welcome.

0:13:28.560 --> 0:13:32.730
Vicky Ohlson
One more question, is there any cap on the?

0:13:33.580 --> 0:13:42.640
Vicky Ohlson
That that Alabama hopes to submit for, and if so, are y'all anticipating a cap for the individual agencies?

0:13:45.30 --> 0:13:47.460
Edwards, Lisa R
ADEM individually.

0:13:47.470 --> 0:13:59.810
Edwards, Lisa R
We are not going to submit an implement implementation grant application individually, and when you, you know in in putting together the PCAP, we're trying to make it that PCAP.

0:14:0.950 --> 0:14:1.380
Edwards, Lisa R
Yeah.

0:14:1.390 --> 0:14:8.550
Edwards, Lisa R
Our put it together in such a way that anyone, any eligible entity in the state would have the opportunity to apply.

0:14:9.960 --> 0:14:10.390
Edwards, Lisa R
Umm.

0:14:10.960 --> 0:14:22.970
Edwards, Lisa R
And as I said, the individual grants could be anywhere from, I think it's 2 to 500 million, I believe I don't have the paperwork right in front of me, but I believe that's correct.

0:14:23.940 --> 0:14:24.230
Vicky Ohlson
Alright.

0:14:23.560 --> 0:14:44.820
Edwards, Lisa R
They say that they are going to award no more than two per level of government, per state, but when you're looking in the Novo and and I can't remember exactly what page, but in there there's a there's a section where they they talk about there could be partial funding.

0:14:44.910 --> 0:14:54.900
Edwards, Lisa R
They also talk about that, you know, they reserve the right that basically if they didn't get enough applications, that meant certain qualifications that they could switch off what they were going to do.

0:14:54.910 --> 0:15:0.330
Edwards, Lisa R
So at this point, you know, we're not totally sure exactly how it's going to pan out, but.

0:15:1.830 --> 0:15:8.660
Edwards, Lisa R
Like I said, we're just trying to get the PCAP put together in such a way that anyone that is eligible to apply would have that opportunity.

0:15:11.400 --> 0:15:12.170
Vicky Ohlson
Thank you.

0:15:12.560 --> 0:15:13.150
Edwards, Lisa R
You're welcome.

0:15:14.720 --> 0:15:16.380
Edwards, Lisa R
Do I have any other questions?

0:15:19.520 --> 0:15:20.100
Edwards, Lisa R
Hey guys.

0:15:20.110 --> 0:15:26.50
Edwards, Lisa R
Just keep in mind that you know like if you need me, just give me a call, I will tell you guys this.

0:15:26.110 --> 0:15:29.890
Edwards, Lisa R
Umm, I will more than likely be out of the office on Thursday.

0:15:30.950 --> 0:15:39.420
Edwards, Lisa R
Umm, but I will be back on Friday, so if that just to let you guys know that in case you need anything umm.

0:15:40.40 --> 0:15:42.820
Edwards, Lisa R
If there's not any other questions, any further questions?

0:15:44.280 --> 0:15:45.770
Edwards, Lisa R
I guess we'll adjourned for the day.

0:15:48.220 --> 0:15:50.80
Edwards, Lisa R
So anybody else?

0:15:52.640 --> 0:15:52.990
Edwards, Lisa R
OK.

0:15:53.0 --> 0:15:59.950
Edwards, Lisa R
Well, thank you guys so much for joining us today and I look forward to talking to you all and we'll keep you updated on how things are going.

0:16:1.410 --> 0:16:2.680
Edwards, Lisa R
It was good seeing everybody.

0:16:4.280 --> 0:16:4.800
Emily Ham
Thank you.

0:16:2.990 --> 0:16:5.720
Edwards, Lisa R
See you next time. Ah.

Appendix H

Review of Authority

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

[illegible] PEACHTREE ST., N. E.
ATLANTA, GEORGIA 30308

January 30, 1974

Mr. James W. Cooper, Director
Division of Air Pollution Control
Alabama Air Pollution Control Commission
645 South McDonough Street
Montgomery, Alabama 36104

Dear Mr. Cooper:

On January 2, 1974, Governor Wallace informed the Administrator that your agency has the authority to prepare and submit any revisions made to the Alabama Air Implementation Plan.

With this letter I make formal acknowledgement of your authority. Moreover, I thank you for your cooperation in the past, and look forward to the continuation of smooth working relations between your agency and my Air Programs Office.

Sincerely,

John C. White

for Jack E. Ravan
Regional Administrator

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Alabama Air Pollution Control
Commission

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MONTGOMERY 36130

March 13, 1991

Mr. Greer Tidwell
Regional Administrator
U.S. Environmental Protection Agency
Region IV
345 Courtland Street, N.E.
Atlanta, Georgia 30365

Dear Mr. Tidwell:

This letter is to notify you that I have designated the Alabama Department of Environmental Management (the Department) as the lead state agency for the purposes of Alabama's responsibilities under the Federal Clean Air Act. The Department is authorized to take all actions necessary and appropriate to secure to the state the benefits of said federal act under the Alabama Environmental Management Act, Code of Alabama 1975, Section 22-22A-4(n), and by implication through the Alabama Air Pollution Control Act, Code of Alabama 1975, Section 22-28-11(13) and (14).

This action that I am taking will help facilitate the implementation of the new Clean Air Act Amendments in Alabama. I am sure the Department and your office will continue to cooperate in managing Alabama's environmental resources.

Sincerely,

Guy Hunt

Guy Hunt
Governor

GH:ch

cc: Mr. Leigh Pegues