

Bipartisan Infrastructure Law - SECTION 40101(d)

PREVENTING OUTAGES AND ENHANCING THE RESILIENCE OF THE ELECTRIC GRID

South Carolina
[Date]

Proposed Draft Program Narrative

Overview

South Carolina Governor Henry McMaster appointed Santee Cooper as the sole state entity within South Carolina to apply for, receive, and administer the formula grant provided under the Infrastructure Investment and Jobs Act (IIJA), also referred to as the Bipartisan Infrastructure Law (BIL), Section 40101(d).

Santee Cooper is a body corporate and politic created by the Enabling Act¹, which, among other things, authorizes it to produce, distribute and sell electricity. Santee Cooper currently serves more than two million South Carolinians (directly and through its wholesale customers) and is the state's largest power provider. In addition to serving more than 200,000 retail customers, Santee Cooper supplies power directly to 27 large industrial customers, the state's 20 electric cooperatives, the town of Bamberg, the city of Georgetown, and the 10 cities of the Piedmont Municipal Power Agency.

As both a state agency and a power provider with a long history and extensive experience in planning, developing, and operating electricity and water infrastructure, Santee Cooper is uniquely positioned to act on behalf of the state of South Carolina to oversee and execute the Section 40101(d) grid resilience grant.

With the BIL formula grant, Santee Cooper will establish the South Carolina Grid Resilience Grant Program ("GRG" or "Program") to improve the resilience of the electric grid against disruptive events. Per BIL Section 40101(a)(1) a disruptive event is "...an event in which operations of the electric grid are disrupted, preventively shut off, or cannot operate safely due to extreme weather, wildfire, or a natural disaster."

South Carolina is vulnerable to a multitude of natural hazards, which have the potential to impact citizens and property within the state. The South Carolina Hazard Mitigation Plan² identifies hurricanes, tropical storms, floods, tornadoes, and severe winter weather as hazards of high probability and high consequences for South Carolina. These hazards create significant risks to life, loss or damage to property and damage to the electric grid. The duration of power disruptions that stem from these hazards can range from hours to weeks. The South Carolina Grid Resilience Grant Program will focus on projects that help prevent or mitigate such natural hazard disruptions.

¹ [S.C. Code Ann. § 58-31-10, et seq. \(known as the "Enabling Act"\)](#)

² [South Carolina Hazard Mitigation Plan, pages 6-7, Figure 1 – Probability vs. Consequence, page 8](#)

Santee Cooper intends to focus the Program on projects that have clear material and near-immediate impact and can be readily implemented leveraging local skills and resources (existing or developed as part of the Program).

Initially, Santee Cooper anticipates receiving applications from the following categories of eligible entities:

- (1) transmission owner or operators; and
- (2) distribution providers.

It also anticipates that there could be multiple proposals arising from each of these categories, or other categories as included in the BIL.

The following sections discuss the objectives for our overall Program as well as the process and methods we propose to utilize to achieve those results.

1. Objectives and Metrics

In developing the proposed Program, Santee Cooper sought to enable and encourage innovative thought and creativity on the part of those who would propose subaward grant projects, while simultaneously ensuring a dual focus on the goals of the BIL and the needs of South Carolina, as outlined in its Hazard Mitigation Plan.

Using the BIL and the Hazard Mitigation Plan, Santee Cooper has identified a set of Program-level objectives. Those objectives enable a range of project types and outcomes that would support achieving the overall Program objectives.

Santee Cooper's proposed GRG Program objectives are fully aligned with the goals articulated in the program purpose of the BIL and the following minimum measures:

- Address resilience and energy justice concerns, including reducing the frequency and duration of outages in disadvantaged communities
- Use strong labor standards and protections (including for direct employees, contractors, and sub-contractors), such as using project labor agreements, local hire agreements, and an outline of a plan to attract, train, and retain an appropriately skilled workforce (i.e., through registered apprenticeships and other joint labor-management training programs that serve all workers, particularly those underrepresented or historically excluded)
- Include plans to partner with a training provider (labor, community college, etc.)
- Assure the use of an appropriately credentialed workforce (i.e., requirements for appropriate and relevant professional training, certification, and licensure)

The Program objectives are to make meaningful progress in one or more of the following ways:

- a. Demonstrate measurable improvements in energy resilience in the South Carolina grid and mitigate climate-related risk.
- b. Invest in modernized grid infrastructure that can enable consumer access to lower-cost energy and accommodate increased electrification, increased penetrations of variable renewable electricity and distributed energy resources, and other evolving system needs over the coming decades.

- c. Invest in clean energy and decarbonization solutions in keeping with the federal administration targets of 100% clean energy by 2035 and net-zero economy-wide greenhouse gas emissions by 2050.
- d. Create good-paying jobs with the free and fair choice to be a part of a represented workforce as specified in the BIL.
- e. Adhere to and further the principles of equity and justice in alignment with the Administration's Justice40 initiative.
- f. Show a clear, positive impact on underserved communities or disadvantaged populations.

Santee Cooper is mindful of the need to strike an effective balance between meeting the needs of the wide range of stakeholders statewide and maintaining the cost-effectiveness of the grant monies deployed. We believe that this will result in criteria that tend to favor medium to larger projects that can deliver stakeholder value with lower overhead as a proportion of the total spend. We will remain open to proposals of any size but will also apply a Program benchmark related to material impact delivered as a percentage of the total grant awarded.

Using the overall Program Objectives discussed above as the foundational requirements for any proposal, Santee Cooper intends to solicit grant proposals from qualified respondents for subawards that would deliver against one or more of the following project objectives.

Objective 1 - Increase monitoring and control capabilities to provide visualization and enhance situational awareness leading up to, during, and after extreme weather events. Examples of projects in this objective area include:

- Installation or expansion of Distribution Automation (DA) or Distribution Management Systems (DMS/ADMS)
- Installation of equipment for remote operation of facilities (reclosers, switches, etc.)
- Installation of line monitoring equipment
- Installation of remotely controlled sectionalizing devices

Metrics

The metrics for this project objective would likely consist of:

- Increased number of
 - monitored facilities
 - facilities under centralized control centers
 - line miles benefiting from automation
 - customers positively impacted by additional automation (broken out by customers in disadvantaged/underserved communities)
- Improved situational awareness/visualization for operators (% of the system and customers covered by situational awareness/visualization)

Objective 2 – Harden or adapt the electric system to increase resiliency during extreme weather events. Examples of projects that could achieve these objectives include:

- Overhead to underground conversion
- Upgrades of overhead facilities, such as lines and substations
- Construction of redundant paths

Metrics

The metrics for this project objective would likely consist of:

- Avoiding or reducing consequences to
 - key electric infrastructure (expected reductions in outage events and permanent damage to facilities)
 - disadvantaged communities - expected reductions in SAIDI (system average interruption duration index) and CAIDI (customer average interruption duration index), including normal and extreme events
 - priority customers (through expected reduction in the number and/or duration of outages, impacting emergency services or key employers, with an emphasis on those in disadvantaged communities)
 - key geographic areas (avoiding loss of wages and production due to disruption in electric service)
- Reduction in the average electric infrastructure age
- Increase in the percentage of underground miles of lines versus total miles of lines
- Reduction in the number of radial line miles

Objective 3 – Enhance vegetation management programs to reduce exposure to tree-related damage to the electric system during extreme weather events or wildfires. Examples of projects in this objective area include:

- Advanced technologies to improve vegetation management practices (Artificial Intelligence (AI), satellite analytics, vegetation, and wind modeling, etc.)
- Reclassification and removal of danger trees along transmission and distribution corridors
- Analytics-based adjustments to tree trimming activities to reduce vegetation risks
- Reconfiguration or relocation of lines to reduce vegetation-related impact risk

Metrics

The metrics for this project objective would likely consist of:

- Refined and optimized vegetation management programs
- Number of miles cleared, or number of danger-trees removed
- Reduction in the number of miles/customers exposed to danger-tree risk
- Reduction in the number of predicted vegetation-related outages during extreme weather events

Objective 4 – Develop energy storage and microgrids to provide system adaptive capacity, e.g., systems able to provide electrical energy during disruptions and, therefore, increase resilience for communities and customers. Examples of projects in this objective area include:

- Development of a microgrid(s)
- Installation of battery storage at substations to serve load during disruptive events
- Installation of distributed battery storage at a critical facility or critical customer locations, such that when the power is out, the battery supplies energy to the facility. This distributed storage could include one or more of the following:
 - Hospital(s)/Retirement and Nursing Homes or Long-term Care facilities
 - Police or Fire stations
 - Key government facilities
 - Low Income Housing facilities
 - Facilities used as shelters during severe weather events
 - In specific communities, distributed storage could be set up to island or isolate and create a micro-grid on demand.

Metrics

The metrics for this project objective would likely consist of:

- Number of
 - MWh of resilient energy supply
 - customers made resilient because of the installation
 - residents benefiting from resilient public facilities (hospitals, fire, police, shelters, etc.)
 - community/essential locations made more resilient (community centers, long-term care facilities)
 - underserved residents benefitting from resilient supply

2. Criteria

The intent of the GRG Program is to support projects that reduce the risk of outages and that increase the resilience of the electric grid during extreme weather events of high probability and high consequence. Subaward grant applications will be required to meet one or more of the Program objectives while delivering results against one or more of the Project objectives discussed in the previous section.

Section 40101(d) also requires adherence to specific criteria for the selection of subawards and the distribution of funds. GRG Program awards will be assessed for funding using the following criteria:

Greatest community benefit

Priority shall be given to projects that will generate the greatest community benefit (whether rural or urban) in reducing the likelihood and consequences of disruptive events. The project applications will be required to describe, to the greatest extent possible, how the project would generate community benefit in reducing the likelihood and consequences of disruptive events. Given the as-yet undetermined scope of the grant proposals, we would expect to measure community benefit through a combination of:

- Tangible impact demonstrated
- Community population impacted beneficially
- Current level of advantage/disadvantage of the subject community
- Overall project cost in relation to overall impact

Small Utility Allotment

Santee Cooper used 2021 utility data from the South Carolina State Energy Office³ to identify small utilities in South Carolina that sell not more than 4,000,000 MWh per year and to calculate the percentage of customers within South Carolina served by these small utilities. The electric cooperatives, municipal electric systems, and one small investor-owned utility qualify as small utilities. The table below summarizes the data, and Santee Cooper will ensure that no less than 35.7% of the available funds are made available to these small utilities. 35.7% represents the minimum amount that will be made available, but small utilities may receive more than this amount as a percentage of the overall total amount available.

³ SC Energy Office Data Hub

Utility	Small Entity	Number of Customers	% of Total
Large IOUs	No	1,568,860	57.1%
Santee Cooper	No	198,722	7.2%
Small IOU (Lockhart Power)	Yes	6,195	0.2%
Cooperatives	Yes	852,728	31.0%
Municipal Systems	Yes	120,792	4.4%
Total		2,747,297	100%

Projects within South Carolina

Project applications must identify the location of the project and the community or communities which the project benefits and confirm that the project and its award will be invested solely in the state of South Carolina. Santee Cooper shall verify that the selected project(s) and communities are located within the State.

Dollar-Weighted Impact

Santee Cooper anticipates that there could be a greater number of requests for funding than could be funded under the Year One allocation. Should the overall number of requests exceed the available funds for Year One, Santee Cooper will evaluate each proposal based on the metrics discussed in the previous section, and the criteria listed above. Once those assessments have been completed, Santee Cooper will compare the level of funding requested for each project to the promised impacts. Those projects able to deliver the greatest level of impact, per dollar requested, will be prioritized for further examination and award.

3. Methods

Santee Cooper recognizes that executing the GRG Program will require dedicated Program and project management. Therefore, Santee Cooper expects to establish a small team whose primary accountability will be long-term planning and ongoing Program implementation. We expect to establish this group so that it sets the foundation not only for Year One investments, but creates a set of sustainable, repeatable, and adaptive processes to ensure maximum delivered value in the first year, as well as subsequent Program years. Santee Cooper will ensure that no more than five percent of the total Federal grant allocation amount will be used to administer the grant and provide technical assistance in support of grant objectives in any given year.

Santee Cooper also recognizes that it could be an applicant for project funding in the overall five-year GRG Program, therefore, it plans to engage a third-party to provide the overall Program management. In such an arrangement, Santee Cooper would provide Program governance, while remaining independent from decisions related to individual project funding and execution.

The following paragraphs discuss the major activities Santee Cooper sees as critical to delivering on the GRG Program. Upon approval of the formula grant for South Carolina, Santee Cooper will establish a Program management team. The team would then undertake the following activities:

Phase 1 – Planning and Preparation

Each year, Santee Cooper will provide a Program Narrative that describes the criteria and methods that will be used by Santee Cooper to make subsequent subawards to eligible entities. Santee Cooper

understands that a new Program Narrative is not required each year; and with no significant changes, the current Program Narrative may be re-submitted. If different, the Program Narratives for future funding will follow the same process for development and adoption after notice and a public hearing; and will describe the proposed funding distributions and recipients of the subawards to be provided. Santee Cooper will ensure that no more than five percent of the total Federal grant allocation amount will be used to administer the grant and provide technical assistance in support of grant objectives.

Task 1.0: Program Management & Administration

The GRG Program team will provide oversight of subawards to ensure each is on track to achieve GRG Program and approved project objectives. The activities will include tracking and disseminating information regarding the performance of the Program, as well as administrative tasks associated with Government reporting.

An initial Master Program Management Plan (PMP) will be developed and provided within 45 days after the initial award. Subsequent PMPs will be submitted within 90 days prior to the beginning of each budget period. PMPs will be revised if major project changes are proposed, with less significant changes documented in the submitted Quarterly Progress Report (QPR). This task would include the following activities and actions:

1. Establish Roles and Responsibilities for the Program team and define the governance and decision-making processes
2. In parallel with the above, establish an Overall Program Schedule, including the review of project applications and award of grants under the GRG. With each award, the schedule will be updated to include each project, its expected delivery dates and any benefits capture dates identified in the subaward proposals. This Program schedule will be used for required quarterly reporting.
3. Develop a request for grant proposals, which includes:
 - a. The technical scope of work definition
 - b. Performance objectives definition
 - c. Metrics refinement to assure they are:
 - i. Clear and measurable
 - ii. Fully aligned with Program Objectives and Criteria
 - iii. Fully compliant with BIL requirements
 - d. Proposal scoring and funding allocation matrix development
 - e. Requirements to demonstrate engagement and support of community leaders in the affected communities
 - f. Proposal requirements, formats, information requirements, due dates, identification of the proposed cost share being covered by the applicant, etc.
 - g. Reporting requirements for project reporting, community reporting and post-project reporting to the community and Santee Cooper
 - h. Terms and Conditions
 - i. Due date
4. In parallel with item 3 above, issue notice of pending RFP

5. Develop an eligible entity list (likely to be all qualified utilities in the South Carolina) to which to directly send the RFP
6. Issue an Open Request for Proposals to which only qualified parties can respond
7. Receive and review proposals to confirm qualification criteria are met
8. Evaluate qualifying proposals
 - a. Compliance with requirements
 - i. Seek additional info and clarification if needed
 - b. Scope and Value delivered
 - i. Which objective(s)
 - ii. How they propose to carry out their work
 - iii. How their proposal achieves the objectives, criteria, and other requirements
 - c. Rank and prioritize proposals
9. Evaluate support from impacted communities included in subaward proposals (this may include meeting notes, transcripts, letters of support)
 - a. Review scope and impacts of proposed projects
 - b. Review community input and support regarding the project
 - c. Understand community leadership perspectives regarding the proposed worker and community engagement efforts

Task 2.0: Technical Assistance and Planning

Santee Cooper will submit a Program Narrative each year in accordance with the minimum requirements described in Appendix A.2, Section 40101(d) Program Narrative Template, and Instructions, of the Statement of Project Objectives (SOPO), as these requirements are currently established. Santee Cooper will ensure that the Program and associated grant award projects conform to all aspects of the Program Narrative in execution of the award. As previously noted, Santee Cooper understands that a new Program Narrative is not required each year; and with no significant changes, the current Program Narrative may be re-submitted.

Task 3.0: Resilience Project Approval(s)

Drawing from reviewed and complete proposed project applications, Santee Cooper will prepare and submit, to the DOE Project Officer Resilience, Project Packages in accordance with the Resilience Project and Subaward/Subcontract Notification Term in the Assistance Agreement. This task would include the following activities and actions:

1. Prepare and submit Project Packages for the proposed subaward projects
2. Review proposed subawards with DOE and seek approval of awards
3. Upon approval from DOE, award grants to each of the selected subawards

Santee Cooper will not execute a proposed resilience project or issue subawards/subcontracts for resilience projects without DOE Project Officer review and written determination of adequacy of the Resilience Project Package.

Phase 2 - Implementation

Task 4.0: Resilience Project Execution

Upon DOE’s written determination of adequacy of the Resilience Project Package, Santee Cooper will execute the approved resilience project(s) and/or issue subawards to eligible entities to execute the resilience project(s). As stipulated per 2CFR200, for each resilience project and subaward/ subcontract, Santee Cooper will:

- A. Monitor the performance of the entity/awardee to assure adherence to the Terms and Conditions of the subaward
- B. Collect necessary information for Santee Cooper to provide evidence of measurable progress towards completion of the funded activity, and
- C. Collect necessary information for Santee Cooper to verify the extent to which its established objectives are being realized.

Santee Cooper will monitor the execution and performance of the resilience projects and provide the implementation status, progress towards measurable performance targets, and verifiable progress towards Program and resilience project objectives, as part of its QPRs to the Department of Energy.

Periodic and final reports will be submitted in accordance with the “Federal Assistance Reporting Checklist” and the instructions accompanying the checklist. In addition to the reports specified in the “Federal Assistance Reporting Checklist,” Santee Cooper expects to provide the following deliverables during the Program:

Task	Deliverable	Delivery Date
1	Project Management Plan (PMP)	<ul style="list-style-type: none"> • Within 45 days after start of budget period one • Within 90 days prior to start of the subsequent budget period • Revised PMPs within grant years submitted if any major project plan changes
2	Program Narrative	Program Narratives will be submitted within 90 days prior to start of the subsequent budget periods
3	Resilience Project Package(s)	Submitted prior to the execution of resilience projects and/or issuance of subawards for resilience projects
4	Subaward Monitoring Reports	Submitted quarterly with QPR

Briefings And Technical Presentations

Upon request by DOE, the Santee Cooper will prepare detailed briefings for presentation to the DOE explaining the plans, progress, and results of the grant activities.

4. Funding Distribution

Santee Cooper anticipates that there could be multiple proposals arising from eligible entities. Santee Cooper does not and will not have a preference by category, however, it anticipates receiving applications primarily from distribution providers and transmission owner or operators. All proposals will be evaluated based on the Objectives, Criteria, Requirements and Methods discussed above. It is possible, therefore, that all the awards could fall into one category or another, based on the impact and value they deliver.

At a minimum, 35.7% will be distributed to small utilities with less than 4,000,000 megawatt hours of electricity per year. This target is based on 2021 utility data from the SC Energy Office Data Hub.

5. Equity Approach:

Santee Cooper understands and fully supports the equity requirements outlined in the BIL. It supports the need to not only contribute to the country's energy technology and climate goals, but also to (1) support the BIL objectives to invest in America's workforce by including specific elements to accelerate job growth and job quality, including approaches to give workers a free and fair choice to join or form a represented workforce; and to (2) advance DOE's equity, environmental and energy justice priorities, including DOE's commitment to the Justice40 Initiative. Accordingly, Santee Cooper's Program Narrative describes how we will ensure that the proposed Program and supporting grant projects will incorporate:

- a. **Quality Jobs:** Strengthening prosperity by expanding good-paying, safe jobs accessible to all workers and supporting job growth through investments in domestic supply chains is a key goal set by President Biden, discussed in depth in his Executive Orders on Ensuring the Future Is Made in All of America by All of America's Workers (EO 14005), Tackling the Climate Crisis at Home and Abroad (EO 14008), Worker Organizing and Empowerment (EO 14025), Boosting Quality of Federal Construction Contracts (EO 14063), Promoting Competition in the American Economy (EO 14036), and Implementing the Infrastructure Investment and Jobs Act (EO 14052). These requirements, and compliance with them, will be included in Santee Cooper's Request for Proposals. The responses will be used to evaluate the proposals, giving preference to those that further the objectives for quality jobs.
- b. As part of our Request for Proposals, we will include the scope and requirements for the project grant proposals to identify how they support these goals, including:
 - i. efforts to attract, train, and retain a skilled workforce (with a preference to permanent employment in South Carolina); and
 - ii. workforce opportunities in communities that have lost jobs due to the displacements of fossil energy jobs.
- c. **Community Benefits:** Per Section 40101(d)(5), Santee Cooper has identified high-level metrics that support this requirement and will include detailed metrics and measures in its Request for Proposals. All proposals will be evaluated to prioritize projects that would generate the greatest community benefit (whether rural or urban) in reducing the likelihood and consequences of disruptive events.
- d. **Diversity, Equity, Inclusion and Accessibility:** Santee Cooper will prioritize project proposals that reach historically underserved populations, racial minorities, and women. We will include in our Request for Proposals a requirement to demonstrate how the proposed projects create the connectivity and conditions for growth where they may not exist, such as in rural and underserved communities.

Santee Cooper will ensure that the benefits delivered under the Program are clear, distinct, measurable, and directly attributable to the Program and its projects. This will be apparent in all project-related measures and benefits reporting. These requirements will be embedded in the Request for Proposal and the governance framework for the program management team. Santee

Cooper insists that the State of South Carolina be able to see the tangible benefit of the investments made under this Program. This will be critical information that Santee Cooper uses in improving the processes and identifying the next level of investments in the Grid Resilience Grant Program.

6. Technical Assistance and Administration

Santee Cooper has hired nFront Consulting to assist with the application development and program design.

As discussed in Section 3 – Methods, Santee Cooper also expects to engage a firm to provide project administration and technical assistance (see Section 3 for details). This would likely include the full range of grant management services, from receiving applications from eligible entities to awarding subawards to monitoring and reporting compliance. Santee Cooper anticipates that the entire 5% will be used for administration and technical assistance in Year 1. Santee Cooper will track and monitor these administrative expenses and will allocate any of the 5% unused budget towards subawards.

7. Public Notice and Hearing

Santee Cooper gave public notice beginning on October 24, 2022, of a public hearing for the South Carolina Grid Resilience Grant Program. The public notice included a press release to media outlets across the state with a link to our Grid Resilience Grant web page and registration information, a display advertisement placed the week of Oct. 24 in all daily newspapers in the state that included a QR Code linking to the web page and registration information, and posts on four days between Oct. 25-Nov. 6 on LinkedIn, Facebook and Twitter, promoting the meeting and linking to the web page and registration information. A copy of the notice is provided as an attachment to this Program Narrative.

(Summar of Hearing to come.)