Duke Energy Allowable Ex Parte Briefing (Act 62)

Before the Public Service Commission of South Carolina

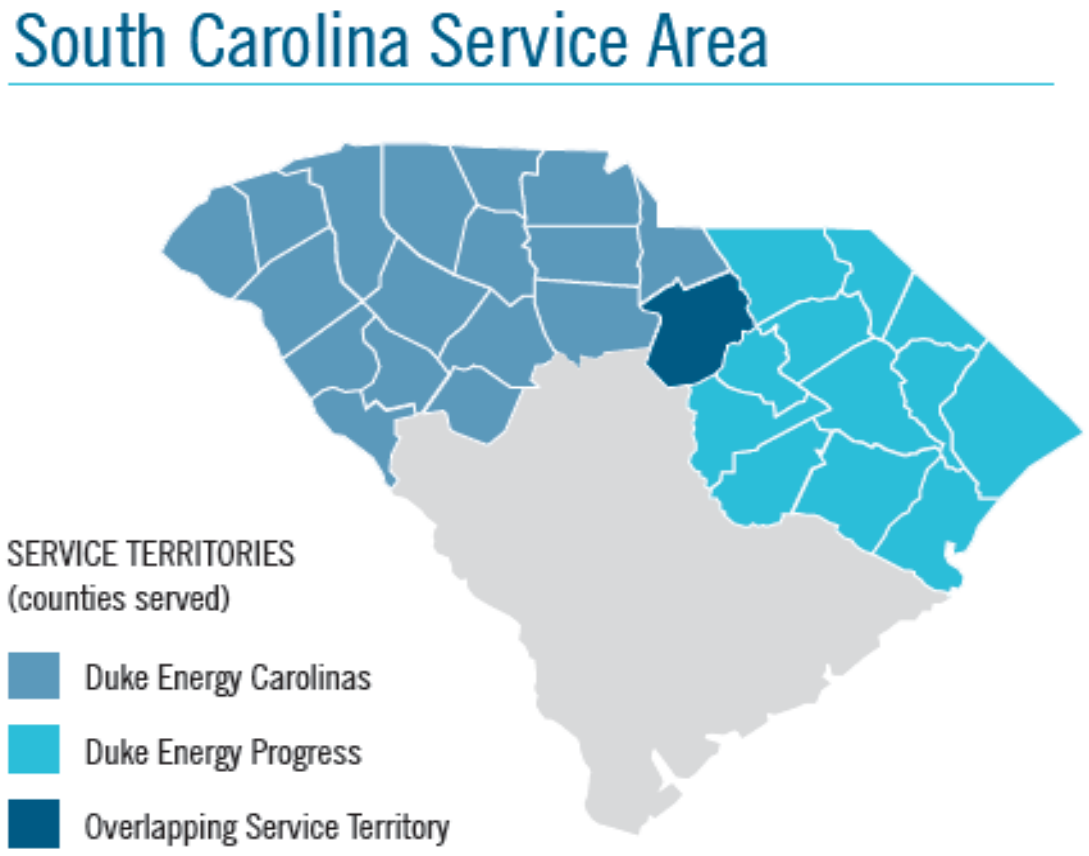
George Brown and Heather Shirley Smith

August 14, 2019

ACCEPTED FOR PROCESSING - 2019 August 19 4:47 PM - SCPSC - 2019-208-E - Page 1 of 15

Duke Energy in South Carolina

- **115 years of service**
- **Two utilities**
  - Duke Energy Carolinas (Upstate)
  - Duke Energy Progress (Pee Dee)
- **761,000 retail customers**
  - Duke Energy Carolinas – 591,000
  - Duke Energy Progress – 170,000
- **6 operating nuclear units**
- **$154.7 million in annual SC property tax payments**
- **4,500 employees in SC**
- **4,000 retirees in SC**



ACCEPTED FOR PROCESSING - 2019 August 19 4:47 PM - SCPSC - 2019-208-E - Page 2 of 15

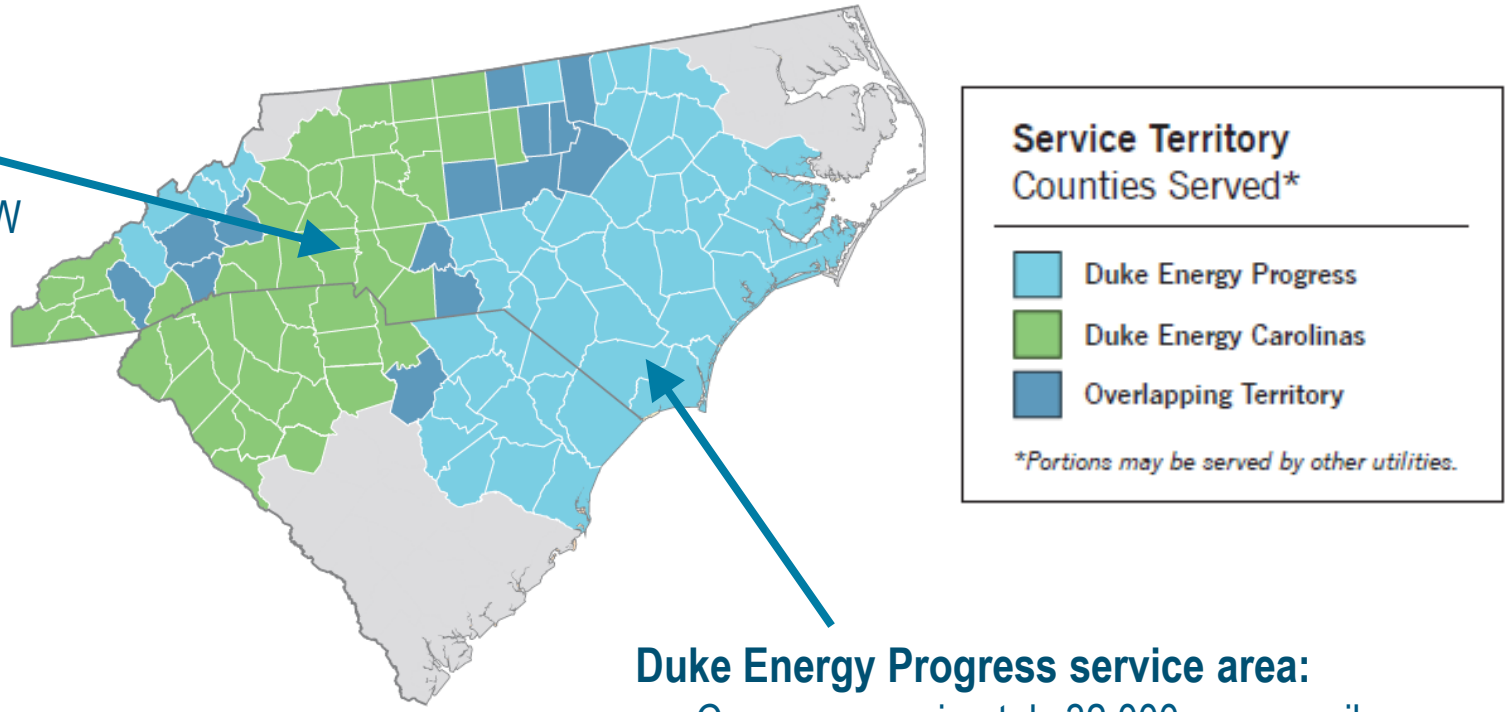
Two States – One Grid

Duke Energy Carolinas service area:

- Covers approximately 24,000 square miles
- Electric service to 2.5 million customers
- Duke-owned generation capacity: 19,700 MW

DEC Two State System

- Third-party Utility-Scale Solar: 670 MW
- Private and Net Metered Solar: 132 MW
- Duke-owned Utility-Scale Solar: 90 MW
- **Total Solar Generation Capacity: 892 MW**



Duke Energy Progress service area:

- Covers approximately 32,000 square miles
- Electric service to approximately 1.5 million customers
- Duke-owned generation capacity: 12,900 MW

DEP Two State System

- Third-party owned Utility-Scale Solar: 2,231 MW
- Private and Net Metered Solar: 63 MW
- Duke-owned Utility-Scale Solar: 141 MW
- ***Total Solar Generation Capacity: 2,435 MW***

3,327 MW of Solar Energy Connected in Carolinas

3,900 MW of Total Solar with executed PPA

ACCEPTED FOR PROCESSING - 2019 August 19 4:47 PM - SCPSC - 2019-208-E - Page 3 of 15

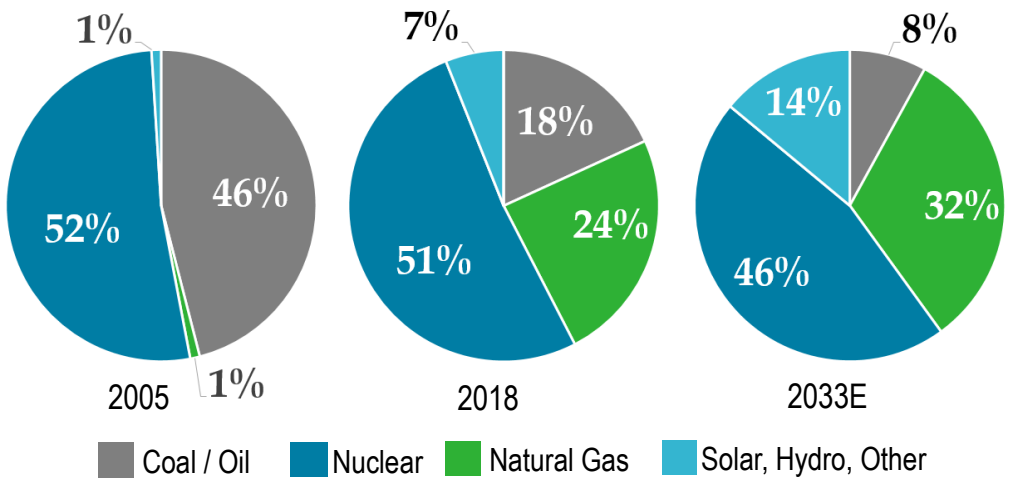
Moving to a Cleaner Energy Future

RETIRING COAL AND ADDING SOLAR…

- Retired ~6,000 MW of coal between 2011 and 2018
- No coal units operating in S.C.
- 3,327 MW solar connected

…REPLACING WITH LOWER-CARBON ALTERNATIVES

CAROLINAS FUEL DIVERSITY (MWh OUTPUT)



S.C GENERATION FLEET

HIGHLY-EFFICIENT NATURAL GAS

- W.S. Lee (Anderson County) – 2018

S.C. ZERO-CARBON NUCLEAR

- 5200+ MW
  - Catawba Station (York County)
  - Robinson Station (Darlington County)
  - Oconee Station (Oconee County)

S.C. RENEWABLES (DEC & DEP)

- SC Solar:
  - 93 MW private solar
  - 50 MW utility-scale
  - 330 MW under construction
  - ~5500 MW interconnection queue
- SC Hydro:
  - 1775 MW of Pumped Hydro
  - 433.5 MW of Traditional Hydro

ACCEPTED FOR PROCESSING - 2019 August 19 4:47 PM - SCPSC - 2019-208-E - Page 4 of 15

Key Provisions in Act 62

Section 58-41-05 – Act 62's opening sentence states: "The commission is directed to address all renewable energy issues in a fair and balanced manner, considering the costs and benefits to all customers…"

- **The balance provided in Act 62 is a key reason Duke Energy supported the passage of the Act.**
- **The considerations in place for customers resulted in the consensus that led to unanimous approval in both Chambers.**
- **Act provides guiderails for renewable energy expansion by requiring a close examination of impact to customers, including reliability and cost.**
- **Terms "fair" or "reasonable" are mentioned over 40 times throughout the Act.**

ACCEPTED FOR PROCESSING - 2019 August 19 4:47 PM - SCPSC - 2019-208-E - Page 5 of 15

Why did Duke Energy support Act 62?

- Duke Energy supports policy that promotes efficient and low cost renewable energy.
- Duke Energy supports policy that balances interests of renewable investors and utility customers. The policy effectuated by the Act is mindful to not burden customers with excessive costs.
- Duke Energy wants to provide its customers with renewable energy options through customer programs.
- Duke Energy is a leader in connecting utility-scale solar projects and believes solar is an important piece of the generation mix.

ACCEPTED FOR PROCESSING - 2019 August 19 4:47 PM - SCPSC - 2019-208-E - Page 6 of 15

Public Utility Regulatory Policies Act (PURPA)

What's the Public Utility Regulatory Policies Act (PURPA)?

- A federal law passed in 1978 in response to the energy crisis that requires utilities to purchase power from renewable qualifying facilities (QFs) like solar farms
- Implementation is shared responsibility between FERC and States
- FERC provides broad discretion to States on implementation

How does PURPA work?

- Creates a must-take purchase obligation on utilities for QFs' output at administratively determined rates
- No limit on the total megawatts that must be purchased
- Utility must purchase a QF's output even if they do not need it to serve customers
- All utility customers pay for PURPA – utility is just a pass through of cost

What PURPA does not do?

- PURPA does not require a competitive process to source the lowest cost renewable energy
- PURPA does not allow the utility to reduce purchases for economic reasons
- PURPA does not provide any flexibility for system planning purposes due to its must take obligations

Most States do not rely much on PURPA to incentivize renewable energy due to its potential for high implementation costs

ACCEPTED FOR PROCESSING - 2019 August 19 4:47 PM - SCPSC - 2019-208-E - Page 7 of 15

Support for efficient and low cost renewable energy in transparent proceedings

Avoided Cost/PURPA Implementation

Avoided Cost Methodology:

- Section 58-41-20 (A): "Any decisions by the commission shall be just and reasonable to the ratepayers of the electrical utility, in the public interest, consistent with PURPA and the Federal Energy Regulatory Commission's implementing regulations…" and "…shall strive to reduce the risk placed on the using and consuming public."

- Section 58-41-20 (F)(1): Ten year terms only applicable to "…to those small power producers whose qualifying small power production facilities have active interconnection requests on file with the electrical utility prior to the effective date of this act."

- Section 58-41-20(F)(2): The Commission must revisit the term of contract in a separate docket once a utility reaches "…an aggregate nameplate capacity equal to twenty percent of the previous five-year average of the electrical utility's South Carolina retail peak load…"

Commission is authorized to pursue Competitive Procurement to provide planning efficiencies and lower costs to customers:

- Section 58-41-20(E)(2) authorizes the Commission and provides direction to "…creat{e} programs for the competitive procurement of [renewable] energy… if the commission determines such action is in the public interest

ACCEPTED FOR PROCESSING - 2019 August 19 4:47 PM - SCPSC - 2019-208-E - Page 8 of 15

Support for efficient and low cost renewable energy in transparent proceedings

Avoided Cost/PURPA Implementation (*cont'd*)

Qualified Independent Third Party:

- Section 58-41-20 (I): "The commission shall engage, for each utility, a qualified independent third party to submit a report that includes the third party's independently derived conclusions as to that third party's opinion of each utility's calculation of avoided costs for purposes of proceedings conducted pursuant to this section. The qualified independent third party is subject to the same ex parte prohibitions contained in Chapter 3, Title 58 as all other parties…. Any conclusions based on the evidence in the record and included in the report are intended to be used by the commission along with all other evidence submitted during the proceeding…."

ACCEPTED FOR PROCESSING - 2019 August 19 4:47 PM - SCPSC - 2019-208-E - Page 9 of 15

Act 62 builds on Duke Energy's existing or filed customer programs

Voluntary Renewable Energy Program (Duke's filed "Green Source Advantage"):

Section 58-~~31~~41-30; Act 62 codifies a large customer program which provides customer the right to select the renewable energy facility and negotiate price;

Section 58-41-30 (D): "A participating customer shall bear the burden of any reasonable costs…" and "an electrical utility may not charge any nonparticipating customers for any costs incurred…"

Community Solar (Duke's current "Shared Solar" program):

- Section 58-41-40 (A) expands and supports access to solar energy options for all South Carolinians, including those who lack upfront investment or do not own their homes
- Notwithstanding that goal, Section 58-41-40 (C) provides that "…a utility may not charge any nonparticipating customers for any costs incurred…" for the program

ACCEPTED FOR PROCESSING - 2019 August 19 4:47 PM - SCPSC - 2019-208-E - Page 10 of 1

Act 62 builds on Duke Energy's existing or filed customer programs (cont'd)

ACCEPTED FOR PROCESSING - 2019 August 19 4:47 PM - SCPSC - 2019-208-E - Page 11 of 1

Net metering → 'Solar Choice Metering Tariff':

- Amendments to 58-40-20 provide a glide path from current state to future state; preserves current net metering paradigm until Commission establishes a new Solar Choice Metering Tariff
- Section 58-40-20 (A)(3): "Require[s] the commission to establish solar choice metering requirements that fairly allocate costs and benefits to eliminate any cost shift or subsidization associated with net metering to the greatest extent practicable"
- Section 58-40-20 (B) provides grandfathering guarantee for customers on current net metering tariffs until May 31, 2029
- Section 58-40-20 (G)(1) illustrate that the goal for next evolution of net metering is to "eliminate any cost shift to the greatest extent practicable . . ."
- Section 58-40-20 (G)(2): Customers can use "customer-generated energy behind the meter without penalty."
- New metering and compensation methodologies must balance impact to nonparticipating customers, participating customers, and the investors/owners of solar installation and leasing companies

Removal of Solar Leasing and Net Metering Caps in amendments to Section 58-27-2610:

- 2% caps were lifted with Act 62
- Duke Energy Carolinas re-opened net metering on May 29, 2019.

Improved efficiency in adding solar energy to grid

Act 62 positions Duke Energy to add to its industry leading position for installed solar in the Carolinas.

The Commission is authorized to initiate a System Integration Study:

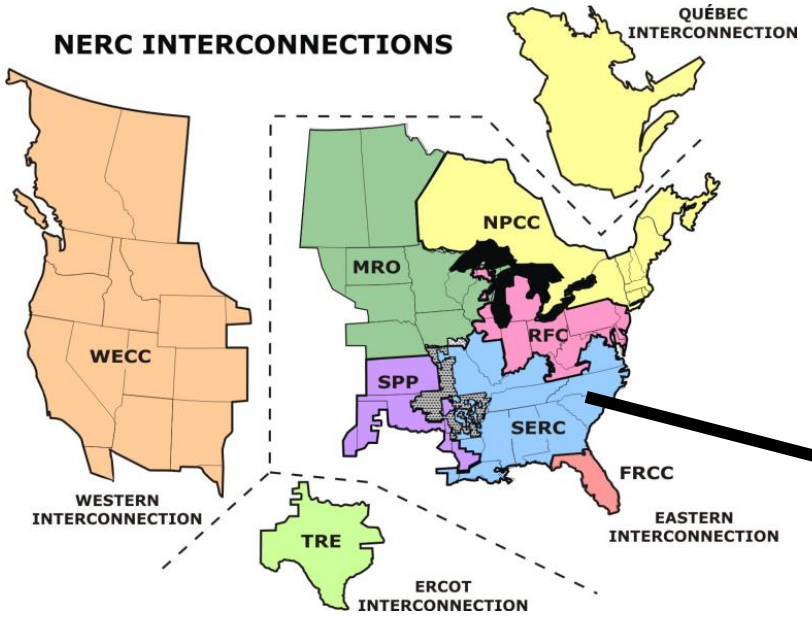
- Section 58-37-60: Study, if authorized, must be based on each utility's balancing area to evaluate "integration of increased levels of renewable energy …while maintaining economic, reliable, and safe operation of the electricity grid in a manner consistent with the public interest."

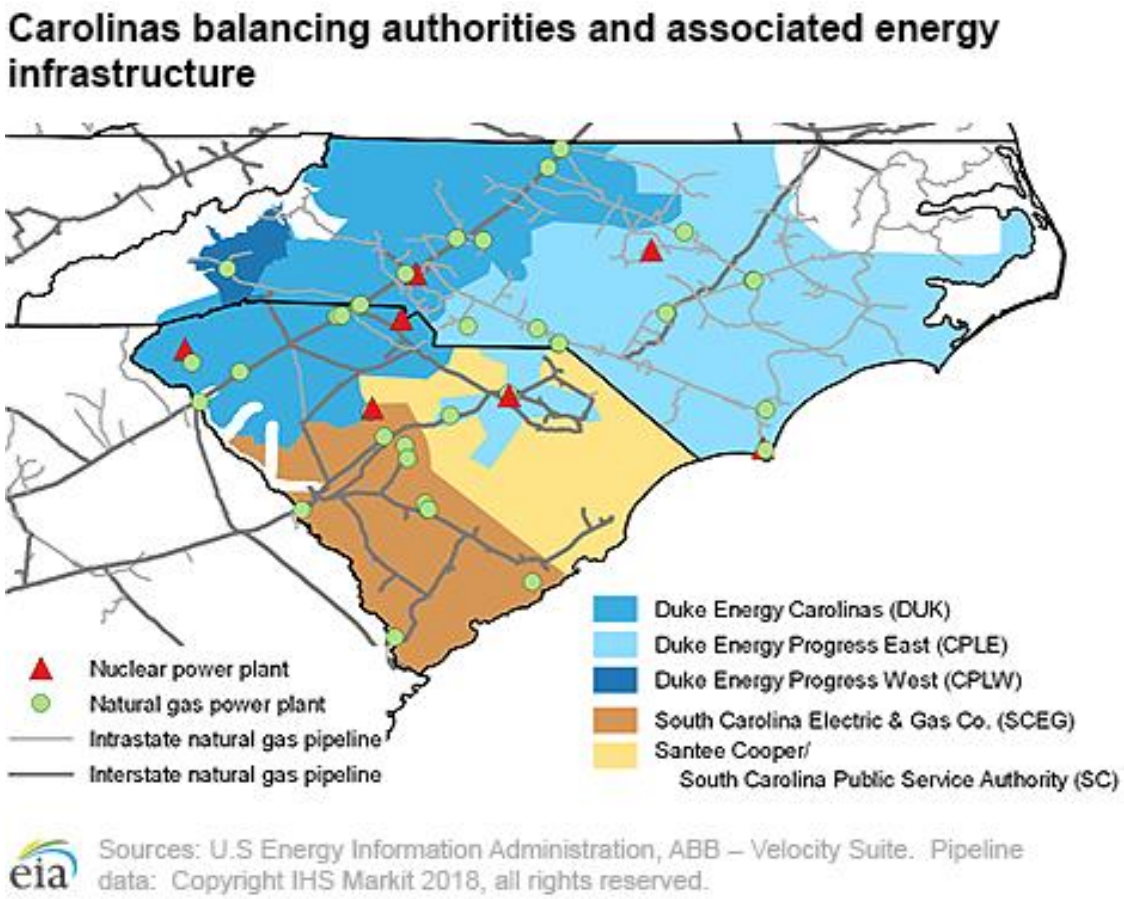
Refinement of interconnection procedures:

- Section 58-27-460: Review of procedures will ensure "standards that are fair, reasonable, and nondiscriminatory with respect to interconnection applicants, other utility customers, and electrical utilities, and the standards shall serve the public interest in terms of overall cost and system reliability."

ACCEPTED FOR PROCESSING - 2019 August 19 4:47 PM - SCPSC - 2019-208-E - Page 12 of 1

Section 58-37-60 - System Integration Study Provision





Section 58-37-60 - a study can be initiated by Commission or ORS to "evaluate the integration of renewable energy…into the electric grid for the public interest."

- To be considered if study is initiated: "increased renewable energy" *and* what is required to maintain "economic, reliable, and safe operation of the electricity grid in a manner consistent with the public interest"– by *balancing authority*, not solely by state.

South Carolina has four balancing authorities:

- Duke Energy Carolinas, LLC;
- Duke Energy Progress, LLC;
- Dominion South Carolina (SCEG); and
- Santee Cooper

ACCEPTED FOR PROCESSING - 2019 August 19 4:47 PM - SCPSC - 2019-208-E - Page 13 of 1

Other Act 62 Key Provisions – Resource Planning

Duke Energy supports the enhanced planning process in Act 62:

Section 58-37-40: Integrated Resource Plans (IRP) must now be approved or denied by the PSC.

- New law mirrors in many ways how Duke already prepares IRPs so Act 62's requirements are not a problem; approximately 1,000 additional words added to the statute

Section 58-33-110 amended: Major Utility Facility Construction now requires demonstration that the facility to be built has been compared to other generation options in terms of cost, reliability, and any other criteria deemed necessary by the commission.

The following discretionary measures are available to the Commission:

- Time period for interested parties to review and comment
- Facility must be consistent with IRP
- ORS may retain an independent evaluator to review the bidding process
- Utility affiliates may participate in same way as non-affiliates participating in the bidding process

ACCEPTED FOR PROCESSING - 2019 August 19 4:47 PM - SCPSC - 2019-208-E - Page 14 of 1

Other Act 62 Key Provisions

Increased requirements for Commission findings:

Section 16 – “no costs or expenses incurred nor any payments made by the electrical utility in compliance or accordance with this act must be included in rates…or otherwise borne by the general body of South Carolina retail customers…without an affirmative finding supported by the preponderance of the evidence of record and conclusion in a written order by the [Commission] that such expense, cost or payment was reasonable and prudent and made in the best interest of the electrical utility's general body of customers.”

ACCEPTED FOR PROCESSING - 2019 August 19 4:47 PM - SCPSC - 2019-208-E - Page 15 of 1