

**STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH**

**DOCKET NO. E-2, SUB 1287
DOCKET NO. E-2, SUB 927
DOCKET NO. E-7, SUB 1261
DOCKET NO. E-7, SUB 1032**

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. E-2, Sub 1287	)	
	)	
Application by Duke Energy	)	
Progress, LLC, for Approval of	)	
PowerPair SM Solar and Battery	)	
Installation Pilot Program	)	
	)	
DOCKET NO. E-2, SUB 927	)	
	)	
Application by Duke Energy	)	
Progress, LLC, for Modification of	)	
Residential Service Load	)	
Control Program	)	COMMENTS OF
	)	THE ATTORNEY GENERAL'S
DOCKET NO. E-7, SUB 1261	)	OFFICE
	)	
Application by Duke Energy	)	
Carolinas, LLC, for Approval of	)	
PowerPair SM Solar and Battery	)	
Installation Pilot Program	)	
	)	
DOCKET NO. E-7, SUB 1032	)	
	)	
Application by Duke Energy	)	
Carolinas, LLC, for Modification of	)	
Residential Service Power	)	
Manager Load Control Program	)	

The North Carolina Attorney General's Office (AGO) respectfully submits these initial comments regarding Duke Energy Progress, LLC's (DEP) and Duke Energy Carolinas, LLC's (DEC and collectively, Duke or the Companies) proposed PowerPairSM Solar and Battery Installation Program (PowerPair Program).

BACKGROUND

On March 23, 2023, the Commission issued an Order Declining to Approve Proposed Smart \$aver Solar Program and Requiring Development of Pilot Program (Smart \$aver Order), in Docket Nos. E-2, Sub 1287, and E-7, Sub 1261 (Smart \$aver Dockets). In summary, the Smart \$aver Order denied the applications of the Companies for approval of their Smart \$aver Solar Energy Efficiency Program and instead required DEP and DEC to file a proposed pilot program pairing solar generation with energy storage.

On June 21, 2023, DEP and DEC each filed with the Commission in the Smart \$aver Dockets its Application for Approval of the PowerPair Program (PowerPair Application(s)), which is the Pilot Program the Companies were directed to develop.¹

On the same date, in Docket Nos. E-2, Sub 927, and E-7, Sub 1032 (Load Control Dockets), the Companies each filed a motion for the approval of modifications to their respective residential load control programs, EnergyWise for DEP and Power Manager for DEC (collectively, EE Program Modifications), to allow for certain PowerPair Program participation.

On June 29, 2023, in the Smart \$aver Dockets, the Commission issued an Order Requesting Comments on the PowerPair Applications. The Order set a

¹ The Applications, including their proposed tariff provisions and terms and conditions, appear substantively identical except being specific to each Company (e.g., for DEP requiring the customer to enroll and participate in the modified EnergyWise battery control program (Rider LC); for DEC requiring the customer to enroll and participate in the modified Power Manager battery control program (Power Manager Rider PM)).

deadline for initial comments for August 7, 2023, and for reply comments on August 28, 2023.

On July 12, 2023, the Public Staff filed with the Commission a Motion for Extension of Time, seeking to align the Load Control and Smart \$aver Order dockets and extend the time for the filing of comments for both the EE Program Modifications and the PowerPair Program (collectively, the Programs).

On July 14, 2023, the Commission issued an Order Granting Extension of Time for Comments, Interventions, and Reply Comments, which found good cause to allow interested persons to file petitions to intervene on or before August 21, 2023, to allow the Public Staff and all intervenors to file initial comments on the Programs on or before August 21, 2023, and to allow all parties to file reply comments on the Programs on or before September 11, 2023.

DISCUSSION AND RECOMMENDATION

The Smart \$aver Order required the Companies to each develop a pilot program to “evaluate operational impacts to the electric system, if any, of behind the meter residential solar plus energy storage,” and “elucidate” the “potential operational costs and benefits” and “the cost-effectiveness of achieving any such operational benefits in light of the various provisions of the [Inflation Reduction Act (IRA)].”² Among other things, the Order required the pilot to include: (1) a storage requirement; (2) participation in net metering—with two participant groups, one served under the time-of-use (TOU) rates approved by the Commission in its Order Approving Revised Net Metering Tariffs in Docket No. E-100, Sub 180 (NEM

² Smart \$aver Order at 5-6.

Order), and the other served under the Bridge Rate approved in the NEM Order; (3) monetary incentives—including an incentive of \$0.36 per watt toward customer’s costs of installation of the solar PV array and to develop an incentive for pairing with energy storage likewise based on watt capacity;³ (4) a limitation of customer incentives for solar to a maximum installed capacity of ten kilowatts (kW) alternating current (AC); (5) authorization for the Companies to recover all reasonable and prudent costs by amortization over a 20-year period; (6) eligibility limited to all-electric residential customers and to customers who use electricity for all purposes other than cooking; (7) an enrollment period subject to a maximum annual limit of 10,000 kW of solar generation; and (8) required customer program participation for at least ten years.⁴

In their PowerPair Applications, the Companies request approval of their respective PowerPair Pilot Programs, noting that the purpose of each Program is to (1) incentivize eligible residential homeowners to install solar panels and a battery storage system, and (2) comply with the Smart \$aver Order in analyzing the operational impacts to the electric system of behind the meter residential solar plus energy storage, the cost-effectiveness of those impacts, and the role of residential solar plus storage in meeting applicable carbon reduction requirements. The Companies state that their Pilot Programs comply with the several requirements set forth in the Smart \$aver Order.

³ The Companies propose that the PowerPair incentive for Battery be limited to a maximum installed capacity of 13.5 kWh.

⁴ Smart \$aver Order at 6-8.

Additionally, where the Order is silent, the Companies propose that participants can either own or lease the solar photovoltaic electric generating system (Solar Panels) as well as the battery storage system (Battery, and collectively, Installed Equipment) necessary for Pilot Program participation. The Companies also propose that the two participant groups required by the Order—the first group served under TOU rates approved in the NEM Order and having complete control over use of the Battery (Cohort A); and the second served under the Bridge Rate and giving control of the Battery to the Company (Cohort B)—be split equally (i.e., 50%/50%) with a 20% minimum Cohort participation and allowance for suspension by the Company in order to achieve the required minimum levels of participation for each cohort group. The Companies also propose that customers may switch between cohort groups after 12 months, subject to availability.

Per the Order's requirement that Cohort B participants give the utility complete control over the Battery, the Companies propose that Cohort B participants be required to enroll in a new demand response offering known as Battery Control, as a new demand response measure within a modified EnergyWise tariff for DEP, and a modified Power Manager tariff for DEC, respectively. These EE Program Modifications are proposed in the Load Control Dockets. In short, the Companies request the Commission approve the modification of the EnergyWise and Power Manager programs and tariffs to allow for and to include the new Battery Control program.

Under this new Battery Control program, the Companies propose that they or a third party would be able to control customer Batteries up to 18 times per winter control season (during the months of December through March); up to 9 times per summer control season (during the months of May through September); and up to 9 times in the remaining months (collectively, referred to as Control Events). The Companies state that they will not discharge the Battery below a 20% state of charge and reserve the right for interruption outside of these parameters in the event continuity of service is threatened. Cohort B participants are to receive an additional monetary incentive to encourage such participation. The Companies further propose, among other things, certain application requirements and an enrollment process, a prorated early termination charge, the right of the Companies to terminate service and require repayment of the PowerPair incentive, an inoperable equipment monthly charge, and annual reporting.

The Companies also request deviations from (or additions to) the Smart Saver Order requirements, developed and proposed after various stakeholder meetings were held and feedback was considered. Those requests include that the Commission:

- (1) allow the Incentive Payment for the Battery to be limited to a maximum installed capacity of 13.5 kWh;
- (2) require Cohort B participations to join the Companies' Battery Control option;
- (3) permit customers to have electric or gas heating systems; and

- (4) set a total participation limitation of no greater than 30,000 kW-AC of solar generation as opposed to the limit of 10,000 kW-AC previously set in the Smart Saver Order.

The Companies also state that based upon stakeholder feedback they intend to develop and propose that additional pilot groups (such as income qualified customers, customers dependent on medical devices, or other targeted participants) be included in the Pilot Programs in the future.

Upon review of the PowerPair Applications, the AGO believes that the Companies' proposed Pilot Programs (and related, requested EE Program Modifications) satisfy the requirements set forth by the Commission in its Smart Saver Order. The AGO is appreciative of the Companies' having met with, and considered the feedback of the AGO, the Public Staff, and the several other stakeholder groups in proposing certain deviations; in particular, the AGO agrees with the Companies' requests to increase the total participation limitation to 30,000 kW-AC of solar generation and to permit participating customers to have either electric or gas heating systems in order to, among other things, allow wider participation and collection of data.

The AGO also believes it important and appropriate for Duke to submit and the Commission to consider future requests for the Pilot Programs to include additional customer groups, including income qualified customers, customers dependent on medical devices, and critical infrastructure and facilities in service during and following various emergency events. To this end, the AGO notes some

examples from other jurisdictions that have implemented similar programs for such customers:

- The California Public Utilities Commission's (CPUC) Residential and Non-Residential Equity and Equity Resilience Programs, which provide incentives for certain customers of PG&E, SCE, SoCalGas, and SDG&E participating in the state's Self-Generation Incentive Program (SGIP). (See generally <https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/demand-side-management/self-generation-incentive-program/participating-in-self-generation-incentive-program-sgip>). In general, the SGIP provides rebates for qualifying distributed energy systems installed on the customer's side of the utility meter, including those utilizing wind turbines, waste heat to power technologies, pressure reduction turbines, internal combustion engines, microturbines, gas turbines, fuel cells, and advanced energy storage systems.
 - The Residential Equity Program serves certain eligible disadvantaged and low-income customers. The Residential Equity Resilience Program provides rebates for certain customers who either (1) have experienced two or more utility Public Safety Power Shut-offs (PSPS); or (2) live in a Tier 2 or 3 High Fire Threat District (HFTD) and: (a) are eligible for the Equity budget; (b) are enrolled in a utility Medical Baseline Program; or (c) have notified the utility of serious illness or life-threatening condition. (See <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M313/K975/313975481.PDF> at 22-24).
 - The Non-Residential Equity Resilience Program provides rebates to certain non-residential customers in high fire threat areas that "provide critical services or critical infrastructure" during fire events. These customers include first responder facilities, nursing and hospice facilities, homeless shelters, drinking water facilities, jails, etc. (See *id.* at 24-26; see also <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M325/K979/325979689.PDF> at 48 (CPUC expanding the program to include grocery stores, markets, and food banks)).
- The Washington Department of Commerce's Solar Plus Storage for Resilient Communities Program, which provides grants to install solar plus storage systems at community buildings—such as schools, community centers, libraries, and other buildings owned by local, state, tribal governments and non-profits—that provide essential services during power outages. (See

<https://www.commerce.wa.gov/growing-the-economy/energy/solar-plus-storage/>)

- Duke Energy Florida's installation of a 3.5 MW microgrid of solar plus storage at a middle school that serves as an emergency shelter during hurricane events. (See <https://news.duke-energy.com/releases/duke-energy-florida-announces-three-new-battery-storage-sites-including-special-needs-shelter-and-first-pairing-with-utility-solar>) The school is one of many that double as emergency shelters as part of the SunSmart E-Shelter Schools Program—there are more than 115, 10-kW PV solar systems installed throughout Florida, some with battery back-up. (See <https://energyresearch.ucf.edu/education/sunsmart-e-shelter-schools/>)

In conclusion, the Companies' proposed Pilot Programs (and related, requested EE Program Modifications) satisfy the requirements set forth by the Commission in its Smart \$aver Order and, as such, should be approved. Duke should submit and the Commission should also consider future requests for the Pilot Programs to include income qualified customers, customers dependent on medical devices, and critical infrastructure and facilities in service during and following various emergency events.

Respectfully submitted this the 21st of August, 2023.

JOSHUA H. STEIN
ATTORNEY GENERAL

/s/ Derrick C. Mertz
Special Deputy Attorney General
dmertz@ncdoj.gov
N.C. Department of Justice
Post Office Box 629
Raleigh, NC 27602
Telephone: (919) 716-6000
Facsimile: (919) 716-6050

CERTIFICATE OF SERVICE

The undersigned certifies that he has served a copy of the foregoing
COMMENTS OF THE ATTORNEY GENERAL'S OFFICE upon the parties of
record in this proceeding by email, this the 21st day of August, 2023.

/s/ Derrick C. Mertz
Special Deputy Attorney General