

**STATE OF NORTH CAROLINA
UTILITIES COMMISSION**

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

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. E-2, SUB 927

In the Matter of)
Petition by Duke Energy Progress, LLC, for)
Approval of Modifications to Residential)
Service Load Control Rider)

DOCKET NO. E-2, SUB 1287

In the Matter of)
Application of Duke Energy Progress, LLC, for)
Approval of PowerPairSM Solar and Battery)
Installation Pilot Program Pursuant to Order of)
the North Carolina Utilities Commission)

DOCKET NO. E-7, SUB 1032

In the Matter of)
Petition by Duke Energy Carolinas, LLC, for)
Approval of Modifications to Residential)
Service Load Control Rider)

DOCKET NO. E-7, SUB 1261

In the Matter of)
Application of Duke Energy Carolinas, LLC, for)
Approval of PowerPairSM Solar and Battery)
Installation Pilot Program Pursuant to Order of)
the North Carolina Utilities Commission)

**COMMENTS OF THE
SOLAR ENERGY
INDUSTRIES
ASSOCIATION**

Pursuant to the North Carolina Utilities Commission’s (the “Commission’s”) *Order Granting Extension of Time for Comments, Interventions and Reply Comments*, the Solar Energy Industries Association (SEIA) appreciates the opportunity to comment in support of the innovative pilot program proposal by Duke Energy Carolinas, LLC (“DEC”) and Duke Energy Progress, LLC (“DEP”) (collectively, the “Companies”). The

Companies' PowerPairSM proposal incorporates a significant portion of the input that SEIA and other industry stakeholders provided regarding the design and amount of the upfront incentive that would be necessary to encourage meaningful customer participation during the pilot period. SEIA appreciates the continuing good faith efforts of the Companies to collaborate and make the PowerPairSM program—a first-of-its-kind program in the Southeast—a testament to the potential of customer-sited batteries and the future role of virtual power plants. SEIA believes that information gleaned from the PowerPairSM program pilot can lead to a broader permanent program that compensates customers for providing services to the grid, using a more flexible virtual power plant model with a larger role for non-utility aggregators.

SEIA supports the Commission's adoption of the program, as proposed, but encourages the Commission and the Companies to make process improvements on an iterative basis as data and early narratives emerge. For instance, the limited nature of this pilot program misses an opportunity to explore the role that third-party aggregators could play in optimizing customer experiences and expectations by maximizing personal benefit while balancing the need to perform at times of system constraints. Should a significant number of battery systems deploy under the TOU-CPP rate option—with no demand response (DR) obligation—it could be prudent to explore whether there are additional measures (including emergency payments for load reduction above and beyond the critical peak price) that could more effectively motivate the non-DR pilot participants to use their solar+storage systems to help the Companies meet system emergencies on a pay-for-performance basis. The involvement of aggregators could also reduce program

enrollment friction by allowing customers to register in the same smartphone apps that they already use to monitor and control their battery systems.

SEIA recommends that any permanent program move toward a pay-for-performance model, but also appreciates how the current pilot design will produce invaluable information that can be used by the Companies and the Commission to fully develop such a future structure. While the payments for DR participants for capacity availability attempt to capture a proxy for performance-based payments, actual performance data should give all parties confidence that if the price signals are established that adequately capture the full system benefit of customer-sited batteries, these systems will perform just as efficiently—and provide a better customer experience—without the direct control model at the center of DR in this pilot program.

SEIA is confident that the EnergyWise model for DR compensation, which is supported by a robust, upfront battery rebate, will encourage sufficient customer uptake in this pilot. But this approach will need to evolve as the market matures beyond this pilot to unlock a self-sustaining, permanent battery program. It is important that the Companies be flexible and patient with distinct customer situations to prevent strict application of any clawback of rebates or expulsions from the program. Expulsions will cause negative customer experiences that could deter other customers from investing in solar+storage and participating in this pilot. A pay-for-performance structure, once it can be developed, will be superior in that it rewards desired behavior and does not assess penalties for non-performance.

Similarly, SEIA recommends that the Companies reconsider applying a capability factor adjustment for the first year of the pilot. By reducing compensation of the

capacity-based payment, the capability factor adjustment serves as a de facto “pre-penalty” of discounting the hypothesized availability of battery storage devices before actual performance data is available. SEIA recommends that the capability factor adjustment be waived for at least the first year to allow actual battery performance to inform whether an adjustment is warranted to adequately share the risk of performance among ratepayers and participants. Additionally, in the future, if the EnergyWise program moves to a pay-for-performance model, a capability factor would be unnecessary, because each participating customer would be compensated based only on the measured performance and system benefits that their battery delivers rather than a cohort-wide estimation of performance across all participants.

To be perfectly clear, SEIA does not condition its support of Commission approval on the adoption of these recommendations, but rather offers these recommendations in the spirit of a continued collaboration to work with the Companies to ensure the best possible outcomes for participating customers. The PowerPairSM proposal positions North Carolina to become a regional leader on both the deployment of flexible, customer-sited distributed energy resources and the policies that help to cost-effectively deploy these technologies to all who would benefit. SEIA appreciates the Commission’s vision and leadership in ordering a battery pilot and commends the Companies for quickly and collaboratively working with interested parties to fashion a truly important pilot program that will meet the needs of North Carolinians. The potential for mass deployment of flexible, customer-sited resources such as the PowerPairSM program is well aligned with the state policy goals to achieve decarbonization. It does so while bringing more flexible resources on the distribution system to potentially increase

hosting capacity for additional renewables (e.g., through the smart inverter functions that will be tested here) and better integrate the large quantities of renewables that are coming to the grid over the next decade. Customers with solar+storage will not only help “shrink the challenge,” they will also be a part of shaping the challenge to help fit together more pieces of the State’s policy puzzle. For these reasons, SEIA recommends that the Commission adopt the Companies’ proposed PowerPairSM program.

Respectfully submitted this 21st day of August, 2023.

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CERTIFICATE OF SERVICE

I hereby certify that a copy of the Comments of the Solar Energy Industries Association as filed today in Docket No. E-2, Sub 927; Docket No. E-2, Sub 1287; Docket No. E-7, Sub 1032; and Docket No. E-7, Sub 1261 has been served on all parties of record on the official service list by electronic mail transmission, where parties have consented to electronic service, or by deposit in the U.S. Mail, first class, postage prepaid, on this day, August 21, 2023.

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