Horry Electric Cooperative, Inc.

Conway, South Carolina

Initial Comments Regarding The Two PURPA Standards In The Infrastructure Investment and Jobs Act Of 2021

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On Behalf Of
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Introduction

The Infrastructure Investment and Jobs Act of 2021 ("IIJA 2021") that was enacted November 15, 2021, contains two new federal standards that must be considered for implementation by all electric utilities with annual retail sales greater than 500 million kilowatt-hours during calendar years 2020 or 2021. Those new standards are in addition to the six standards set forth in the Public Utility Regulatory Policies Act of 1978 ("PURPA"), the four standards contained in the Energy Policy Act of 1992 ("EPAct 1992"), the five standards contained in the Energy Policy Act of 2005 ("EPAct 2005"), and the four standards contained in the Energy Independence and Security Act of 2007 ("EISA 2007"). The relevant sections of IIJA 2021 are shown in Appendix A hereto. IIJA 2021 adds two new Federal standards to PURPA Section 111(d):

(1) Demand-Response Practices, 16 U.S.C. § 2621(d)(20),

(2) Electric Vehicle Charging Programs, 16 U.S.C. § 2621(d)(21).

The requirements of IIJA 2021 do not mandate that the affected electric utilities implement those new standards; instead, PURPA states that "[e]ach state regulatory authority (with respect to each electric utility for which it has ratemaking authority) and each nonregulated electric utility shall consider each standard" and then "make a determination concerning whether or not it is appropriate to implement such standard." 16 U.S.C. 2621(a). Further, "[n]othing in this subsection prohibits any State regulatory authority or nonregulated electric utility from making any determination that it is not appropriate to implement any such standard." Id.

The "baseline years" for the 500 million kilowatt-hour sales applicability threshold are the one and two calendar years prior to calendar year 2022 during which the standards are being considered. Horry Electric Cooperative, Inc. (the "Cooperative") had annual retail sales of

approximately 1,206,314,000 kilowatt-hours during calendar year 2020 and 1,266,490,000 kilowatt-hours during calendar year 2021, both well above the threshold of 500 million kilowatt-hours that identifies which electric utilities must consider implementation of the PURPA standards.

The Cooperative is a nonregulated electric utility, which PURPA defines as "any electric utility other than a State regulated electric utility." 16 U.S.C. § 2602(9). Thus, it is the responsibility of the Cooperative's Board of Trustees ("Board") to make its own independent determination regarding whether to implement each of the new PURPA standards. That determination must follow an appropriate consideration of the standards that includes evidence presented during the course of a public hearing.

The purpose of these initial comments is to contribute to the body of evidence used by the Board to make their determination on each of the two new standards based upon findings that are appropriate for the members of the Cooperative. The federal legislation anticipates that state regulatory authorities and nonregulated electric utilities would need to consider utility-specific conditions and circumstances during their evaluation of the PURPA standards and determine the ability of each utility to accomplish the goals of PURPA via the implementation of the two new PURPA standards. For that reason, with respect to each of the two PURPA standards, the Board may decide to implement the standard as stated in IIJA 2021, implement a modification of the standard, or decline to implement the standard. Subject to the receipt and review of additional evidence, if any, the following comments and recommendations address general considerations regarding each of the two standards and specific issues and circumstances applicable to the Cooperative that the Management and Staff of the Cooperative believe should be a part of the Board's deliberations.

PURPA Goals

The goals of PURPA continue to be the same as those stated in the original Public Utilities Regulatory Policy Act of 1978, that is, to encourage (1) conservation of energy supplied by electric utilities, (2) optimal efficiency of electric utility facilities and resources, and (3) equitable rates for electric consumers. The first goal focuses on retail energy users and promotes conservation by end-use consumers. The second goal applies to electric utilities, their use of energy, and the facilities they utilize to deliver energy. The third goal recognizes the need for proper development and administration of retail rates, providing a check and balance relative to the other two goals, so that the programs, policies, and rates employed by electric utilities to achieve the first two goals reflect their associated costs and are not arbitrary, unfair, or unduly discriminatory.

The Cooperative's Board should make its determination regarding each PURPA standard based on whether, given the Cooperative's particular circumstances, that standard will accomplish any one or more of those three goals, without harming the Cooperative's ability to accomplish the others(s). Thus, if implementation of a standard adversely impacts even one of the three goals, the Cooperative's Board may decline to implement that standard.

Horry Electric Cooperative, Inc.

The Cooperative has several organizational and operational characteristics that should materially influence the Board's consideration of the PURPA standards. First, the Cooperative is member-owned and thus self-regulated. The Cooperative's members elect the Board that establishes and oversees the Cooperative's policies, rates, service rules, and regulations. Unlike investor-owned electric utilities, the Cooperative has no third-party investors to satisfy. Thus, there is no conflict of interest between the utility's owners and consumers regarding profitability. In fact, the Cooperative is a not-for-profit organization. Revenues collected in excess of operating

expenses (such difference referred to as "margins") are assigned back to the Cooperative's members as capital credits. Under this form of organization, all costs associated with the programs, policies, and rates adopted to implement the PURPA standards will be borne in full by the Cooperative's members.

The Cooperative owns and operates an electric distribution utility. Unlike vertically integrated electric utilities that also own and operate electric generation facilities and transmission lines (together commonly called "bulk power systems"), the Cooperative does not make decisions independently regarding the generation and transmission functions and the related costs incurred to furnish electric energy to the Cooperative's members. Instead, such bulk power system services are planned and coordinated by the Cooperative and 19 other electric distribution cooperatives in South Carolina through a generation and transmission electric cooperative, Central Electric Power Cooperative, Inc. ("Central"). Central is governed by a Board of Trustees comprised of representatives from each of those electric distribution cooperatives. It is through that participation on Central's Board of Trustees, as a "Member" and owner of Central, that the Cooperative has direct input to and an active role in decisions made affecting generation and transmission issues.

Many years ago, the Cooperative and the other Members of Central executed a long-term "all-requirements" wholesale power contract with Central. The term of that contract extends through calendar year 2058. The Cooperative is required by contract to purchase from Central all of the power that it distributes to its member-consumers. As later discussed herein, the Cooperative's status as a Member of Central and its wholesale power contract with Central are significant contributing factors in the Cooperative's consideration of the PURPA standards and impact the Cooperative's ability to implement the standards. Attached hereto in Appendix B are comments prepared by Central that reflect Central's input regarding the Cooperative's

consideration of the two PURPA standards in IIJA 2021. Additional references to Central's comments contained in Appendix B are made herein, where appropriate.

Demand-Response Practices Standard

The first of the two new PURPA standards that the Cooperative's Board must decide whether to implement is the Demand-Response Practices standard, which states:

> (A) In general. Each electric utility shall promote the use of demand-response and demand flexibility practices by commercial, residential, and industrial consumers to reduce electricity consumption during periods of unusually high demand.
> (B) Rate recovery.
> (i) In general. Each State regulatory authority shall consider establishing rate mechanisms allowing an electric utility with respect to which the State regulatory authority has ratemaking authority to timely recover the costs of promoting demand-response and demand flexibility practices in accordance with subparagraph (A).
> (ii) Nonregulated electric utilities. A nonregulated electric utility may establish rate mechanisms for the timely recovery of the costs of promoting demand-response and demand flexibility practices in accordance with subparagraph (A).

16 U.S.C. § 2621(d)(20).

The Board should view Part (A) of this PURPA standard in the context of the role it plays in Central's Integrated Resource Planning ("IRP") activities. The IRP process consists of several steps, starting with identification of basic objectives such as reliability of service, quality of service, and meeting peak demand requirements. Next, historical and current data are collected to examine the electric system's load patterns and trends. Based on that information and other data such as econometrics, demographics, and appliance saturation, a demand forecast is prepared to determine the current and future power requirements. To meet those forecasted power requirements, the IRP process considers and evaluates the utilization and management of two types of resources generally categorized as supply-side and demand-side.

Supply-side resources for Central and its Members primarily consist of contracts to purchase power from wholesale power suppliers, including renewable resources. Demand-side resources for Central and its Members include active load management of customer appliances, consumer and Member-owned distributed generation, passive load management via time-of-use rates, and energy efficiency and conservation programs.

Demand-response and demand flexibility practices by consumers are facets of demand-side management. Electric utilities nationally and the Cooperative have promoted *demand-response practices* for many years, including the examples of both active and passive load management of consumers' electric loads just described. According to the US Department of Energy, Office of Electricity, demand-response measures reduce or shift electricity usage during peak periods in response to time-based pricing or other forms of financial incentives. By comparison, *demand flexibility practices* are relatively new and, as described by the Alliance to Save Energy, focus on "[t]he use of communication and control technologies to shift electricity use across time of day while maintaining (in some cases improving) the quality and value of end-use services." In that regard, according to The Brattle Group, demand flexibility includes demand-response, but "also more broadly includes new opportunities for managing load to provide a wider range of grid services following the rapid emergence of consumer-oriented energy technologies such as AMI, smart appliances, electric vehicles, behind-the-meter battery storage, behavioral tools, and automated load control for large buildings."

The PURPA standard specifies promoting practices by commercial, residential, and industrial consumers to reduce electricity consumption during periods of unusually high demand, which the Cooperative is actively doing through several long-standing programs:

- A demand rate option is offered to residential consumers. The Demand Charge encourages consumers to reduce their monthly peak demands, which are likely to occur at times during the system peaks.
- Time-of use pricing is offered to consumers under Schedules EV and EVR. The base rate Energy Charge for electricity consumption during defined off-peak periods is 75% lower than the base rate energy charge applied to electricity consumption during defined on-peak periods in summer months, and 70% lower in winter months. These time-based rates encourage a reduction in electricity consumption for electric vehicle charging during periods of unusually high demand. The Cooperative's ability to offer this time-based rate alternative is due in part to Central's wholesale rate structure that bills a significant amount of the Cooperative's wholesale power cost on coincident peak demand charges.
- Consumers receiving irrigation service are billed an On-Peak Demand Charge that encourages those consumers to reduce electricity consumption during periods of unusually high demand.
- Large power consumers and large schools (requiring over 100 kVA of transformer capacity) are offered time-based rate structures containing Coincidental Peak Demand Charges that promote and reward reductions in the consumer's capacity and energy consumption during periods when Central's monthly system peaks occur.
- A "Smart Thermostat" program is being promoted to residential consumers to help them manage their energy use and reduce load on the electric grid at times of peak use. Participants can purchase a smart thermostat at a discounted price and receive an incentive payment of $50 per year, in return for permitting the Cooperative to control the thermostat during peak periods.
- Under the Cooperative's "Beat The Peak" program, consumers elect to receive notices of peak load periods so they can voluntarily reduce their electricity consumption during those periods.
- The Commercial and Industrial Lighting Rebate program offers non-residential consumers a tiered incentive dollar amount based on the consumer's energy use for lighting during on-peak periods. The rebate pertains to costs associated with the installation of more efficient LED lighting, which reduces those consumers' electricity consumption during periods of unusually high demand.

Looking forward, the Cooperative will soon be implementing a new rate structure applicable to the residential and general service rate classes, representing the vast majority of the Cooperative's consumers. The key feature of that rate structure is a Peak Charge applicable to the consumer's highest hourly energy usage during defined on-peak periods. This time-based price signal encourages a reduction in electricity consumption during periods of unusually high demand.

Additionally, the Cooperative uses a wide range of ways to educate their members on the benefits of energy efficiency, which, in turn, promotes reductions in energy consumption during periods of unusually high demand. For example, the "Energy Programs" link on the Cooperative's website includes a "Tools and Calculator" item that contains resources such as "Residential Energy Advisor", "Managing Demand", and Energy Efficient Appliance Savings". That link also references a "Smart Energy Store" and the South Carolina Energy Office's "Energy Savings Tool".

Subpart (ii) is the portion of Part (B) of the Demand-Response Practices standard that applies to the Cooperative. It permits the establishment of "rate mechanisms" that provide the "timely recovery" of costs for promoting the practices described in Part (A). Rate mechanisms can take many forms, including base rates, fees, surcharges, discounts, riders, cost adjustment factors, and so on. The form of the rate mechanism for timely cost recovery will vary depending on the practice being promoted. It should not unreasonably hinder the intended response from the consumer, but it should reflect proper price signals that are aligned with costs, particularly Central's wholesale power costs. If these tenets are followed, along with the other generally accepted principles of retail ratemaking, then demand-response and demand flexibility practices can be promoted in a way that benefits the consumers participating in those practices, while not adversely impacting (and perhaps even benefiting) the non-participants.

Impact on PURPA Goals

Regarding the three stated goals of PURPA, and in particular as to their application to the Cooperative, Part (A) of the Demand-Response Practices standard is consistent with accomplishing the first two goals of conservation of energy and efficient use of facilities and resources, and Part (B) is consistent with accomplishing the third goal of equitable rates.

Furthermore, neither Part (A) nor Part (B) adversely impacts any of the three PURPA goals, and there are no known inconsistencies between that standard and State law.

Summary

In light of the Cooperative's current and planned demand-response and demand flexibility programs, coupled with the Cooperative's continued participation in Central's demand-response and demand flexibility programs, the Board should find in its determination of the Demand-Response Practices standard that the Cooperative, to the extent it is able to do so as an electric distribution utility and Member of Central, has already adopted programs that promote demand-response and demand flexibility practices by commercial, residential, and industrial consumers to reduce electricity consumption during periods of unusually high demand; and further, that the Cooperative will continue to evaluate its current programs and opportunities for other programs in the future to ensure that demand-response practices provide benefits to the Cooperative and its members. The Board should adopt a finding to that effect.

Electric Vehicle Charging Programs Standard

The second of the two new PURPA standards that the Cooperative's Board must decide whether to implement is the Electric Vehicle Charging Programs standard, which states:

> Each State shall consider measures to promote greater electrification of the transportation sector, including the establishment of rates that—
>
> (A) promote affordable and equitable electric vehicle charging options for residential, commercial, and public electric vehicle charging infrastructure;
>
> (B) improve the customer experience associated with electric vehicle charging, including by reducing charging times for light-, medium-, and heavy-duty vehicles;
>
> (C) accelerate third-party investment in electric vehicle charging for light-, medium-, and heavy- duty vehicles; and
>
> (D) appropriately recover the marginal costs of delivering electricity to electric vehicles and electric vehicle charging infrastructure.
>
> 16 U.S.C. § 2621(d)(21).

Notwithstanding the specific wording that directs each "State" rather than each *utility* to consider the standard, the Cooperative is including this standard in its IIJA 2021 PURPA compliance process, with the caveat that the Cooperative's ability to implement this standard is limited to its own electric distribution system grid and service area.

To consider this standard, the Board must understand what is meant by "electrification of the transportation sector." "Electrification" in general is the switching (entirely or in part) from technologies that use fossil fuels to those that use electricity with the primary goal of reducing greenhouse gas ("GHG") emissions. In regard to the transportation sector, electrification includes replacing fossil fuels with electricity as the means of powering light-, medium-, and heavy-duty vehicles. Electrification of the transportation sector may also provide benefits to electric utilities by improving electric grid stability and providing opportunities for demand flexibility.

Unlike the first PURPA standard addressed in these Initial Comments that specifies action ("shall promote"), this standard is more passive ("consider measures to promote") in its implementation. Perhaps the standard's wording is intended to reflect the uncertain and fast-evolving nature of the electrification of the transportation sector, such that if adopted, this standard could mean an ongoing, or periodic, effort to "consider measures." In that regard, the Cooperative's Board could make a determination to implement the second PURPA standard and then, after considering several measures to promote greater electrification of the transportation sector, decide only certain of the measures are feasible at the present time.

There are many types of "measures" that could be considered, including consumer education (website, presentations, demonstrations), participation in activities as a Member of Central (programs, feasibility studies), partnerships with third parties (businesses, dealerships), incentives (rebates, loans), and as identified in the standard, rates. Since Parts (A) through (D)

pertain specifically to the establishment of rates, the following comments will mostly address that measure. It should be noted that the standard contains several broad terms that may lead to conflicting, or at least competing, objectives. For example, the term "affordable" in Part (A) implies a focus on consumers' ability to pay regardless of the utility's cost of service, whereas the direction in Part (D) to "appropriately recover the marginal costs of delivering electricity" recognizes the importance of the utility recovering the cost to provide service. Thus, implementation of the standard might necessitate establishment of priorities for the various objectives therein.

Part (A): Promote affordable and equitable electric vehicle charging options for residential, commercial, and public electric vehicle charging infrastructure.

Part (A) contains the dual objectives of promoting affordable and equitable options for electric vehicle charging. These objectives emphasize making electric vehicle charging available throughout the Cooperative's service area by employing rates that do not deter consumers from acquiring and operating electric vehicles. Obviously, simply establishing lower rates will promote affordability. To also be equitable, however, rates must still appropriately recover costs, as noted in Part (D) of this PURPA standard.

The dual objectives can be attained by establishing rates that encourage the use of electric service for electric vehicle charging in a manner that is beneficial to both the consumer and the Cooperative. Central's wholesale rate structure that includes coincident peak billing demand charges and time-differentiated energy charges provides opportunities to its Members for the establishment of lower retail rates for energy sold to their consumers during off-peak periods. This time-of-use pricing is particularly applicable to residential consumers since most electric vehicle charging occurs at homes during the evening hours.

The time-of-use Energy Charges in Rate Schedules EV and EVR, specifically designed for electric vehicle charging service, encourage and reward electrical consumption during off-peak periods. Such pricing clearly promotes affordable and equitable electric vehicle charging options for vehicle charging infrastructure. The new residential and general service rate structures previously described herein will also promote affordable and equitable electric vehicle charging options via the Peak Charge applicable to the consumer's highest hourly energy usage during defined on-peak periods, which reduces the cost of charging electric vehicles during off-peak periods.

Although the Cooperative's standard residential and general service rate schedules do not currently offer time-of-use pricing, the Facility Charge of $25.00 per month in those rate schedules enables the Cooperative to employ lower base rate Energy Charges that promote affordable and equitable electric vehicle charging options for residential vehicle charging infrastructure. Those two rate schedules also employ declining block Energy Charges that enable more affordable electric vehicle charging.

The Cooperative's rate offerings to non-residential consumers include rate structures that contain Coincidental Peak Demand Charges that provide consumers with opportunities for more affordable electric vehicle charging if that charging can be managed. Even the Cooperative's rate schedules that do not contain time-based demand or energy charges applicable to commercial and industrial consumers nonetheless do utilize demand charges based on the consumer's monthly peak load. Since those demand charges recover a portion of the cost of service to the consumer, the energy charges are lower than they would be without the use of demand charges. The lower energy charges promote affordable and equitable electric vehicle charging options for large

commercial consumers able to charge their vehicles at times other than when their own monthly peak load occurs.

Establishing affordable and equitable rates for public electric vehicle charging infrastructure is more difficult because the power requirements are greater and the energy consumption characteristics are difficult to predict. In particular, electric vehicle fast charging stations typically have a high peak demand that requires a significant electric facilities investment but a low energy consumption due to infrequent use. Further, that infrequent use might occur during high cost peak periods. Those electric load characteristics create a high marginal cost of electric service delivery that challenges the establishment of affordable rates for electric vehicle fast charging stations that are also equitable in terms of cost recovery.

Part (B): Improve the customer experience associated with electric vehicle charging, including by reducing charging times for light-, medium-, and heavy-duty vehicles.

Consideration of Part (B) of the standard must begin with recognizing some of the significant aspects of the present customer experience associated with electric vehicle charging, including the cost of charging, managing charging, range anxiety, and charging time. The Cooperative's role with respect to charging cost and management were addressed above in Part (A).

The Cooperative is currently improving the customer experience associated with electric vehicle charging via the "ChooseEV" item on its website, which provides a wide range of information on electric vehicles, including EV facts, EV models, benefits, a savings calculator, incentives and promotions, home charging, and public charging locations and capabilities.

Part (C): Accelerate third party investment in electric vehicle charging for light-, medium-, and heavy-duty vehicles.

Through its memberships in the Electric Cooperatives of South Carolina, Inc. ("ECSC") and Central, the Cooperative is participating in Docket No. 2023-121-E before the Public Service Commission of South Carolina regarding the "Identification of Regulatory Challenges and Opportunities Associated With Electrification of Transportation Sector Pursuant to S.C. Code Ann. Section 58-27-265". ECSC and Central submitted joint comments in that proceeding earlier this year that mentioned the evolving and somewhat uncertain electric vehicle landscape, the unique challenges from the electric vehicle sector faced by electric cooperatives, the potential impact that the heavy demands of commercial electric vehicle charging facilities can have on the utility's infrastructure, and that electric cooperative consumers should not be made to subsidize the cost of developing electric vehicle charging infrastructure.

Part (D): Appropriately recover the marginal costs of delivering electricity to electric vehicles and electric vehicle charging infrastructure.

This final part of the standard provides a safeguard to ensure the rates established to meet the objectives of the other three parts are sustainable and do not result in adverse financial impacts. The *marginal* costs of delivering electricity to electric vehicles and electric vehicle charging infrastructure might be higher or lower than the *embedded* costs that electric rates are typically designed to recover. That is why any retail rates established by the Cooperative to promote greater electrification should contain charges that are reasonably aligned with Central's wholesale rates and will recover distribution system costs based on the estimated load characteristics. It should be acknowledged that in some cases appropriate recovery of marginal costs may result in rates that lessen to some extent the affordability of electric vehicle charging and hamper the acceleration of third-party investment in electric vehicle charging.

Impact on PURPA Goals

The Electric Vehicle Charging Programs standard that aims to "promote greater electrification of the transportation sector" does not specifically meet the first stated goal of PURPA, which is to encourage "conservation of energy supplied by electric utilities". However, "electrification" views energy conservation from a broader perspective than merely reduced kilowatt-hours supplied by electric utilities. According to the Electric Power Research Institute, "economy-wide electrification leads to a reduction in energy consumption, spurs steady growth in the electric load, and reduces greenhouse gas (GHG) emissions — even in scenarios with no assumed climate policy." Thus, given the many benefits of electrification, the Board's consideration of this standard may include looking beyond the strict meaning of the first goal stated in the original Public Utilities Regulatory Policy Act of 1978.

PURPA's second goal of optimal efficiency of electric utility facilities and resources can be achieved by the Electric Vehicle Charging Programs standard if the measures are considered and implemented with that goal in mind, and not forsaking that goal when addressing specific objectives stated in the standard such as improving the customer experience associated with electric vehicle charging and accelerating third-party investment in electric vehicle charging. Electric utilities have an opportunity to influence how the growing and evolving power requirements of electric vehicles can be met in ways that make more efficient use of electric utility facilities and resources. For example, the efficiency of existing facilities and resources can be enhanced by measures promoting electric vehicle charging that is controlled during peak periods or encouraged during off-peak periods.

The third PURPA goal of equitable rates for electric consumers is contemplated by Part (D) of the standard that states the rates used to promote greater electrification of the transportation sector should appropriately recover marginal costs. This facet of the standard is important in two

respects. First, rates that recover marginal costs provide reasonable and meaningful price signals to influence consumer behavior in ways that support the first two PURPA goals. Secondly, recovery of marginal costs precludes the measures implemented to promote greater electrification of the transportation sector from being subsidized by utility consumers through rates that are thereby inequitable.

Summary

The Cooperative has already considered and implemented measures to promote greater electrification of the transportation sector in their service area. Going forward, adoption of the Electric Vehicle Charging Programs standard does not require a specific action by the Cooperative's Board, other than to *consider measures* to promote greater electrification of the transportation sector. Such potential measures as the Board deems worthy of consideration may take many forms, including the application of rates that appropriately recover marginal costs. The Cooperative will continue to evaluate its current programs and consider opportunities for future electric vehicle charging programs that promote greater electrification of the transportation sector, while implementing such measures subject to the recovery of the marginal costs of delivering electricity to electric vehicles and electric vehicle infrastructure. The Board should adopt a finding to that effect.

Conclusion

Based on the foregoing, the Cooperative's Board should consider taking the following action on the two new PURPA standards set forth in IIJA 2021:

Demand-Response Practices Standard—The Board should find in its determination of the Demand-Response Practices standard that the Cooperative has implemented this standard, to the extent it is able to do so as an electric distribution utility and Member of Central, and has

already adopted programs that promote demand-response and demand flexibility practices by commercial, residential, and industrial consumers to reduce electricity consumption during periods of unusually high demand.

Electric Vehicle Charging Programs Standard—The Board should find in its determination of the Electric Vehicle Charging Programs standard that the Cooperative has implemented this standard, to the extent it is able to do so as an electric distribution utility and Member of Central, and that the Cooperative will continue to consider evaluating additional measures regarding this PURPA standard, subject to such measures appropriately recovering the marginal costs of delivering electricity to electric vehicles and electric vehicle charging infrastructure.

APPENDICES

APPENDIX A

Excerpts from The Infrastructure Investment and Jobs Act of 2021

PURPA 111(d) STANDARDS
in the
INFRASTRUCTURE INVESTMENT AND JOBS ACT OF 2021

Demand-response practices (26 U.S.C. § 2621(d)(20))

(A) In general

Each electric utility shall promote the use of demand-response and demand flexibility practices by commercial, residential, and industrial consumers to reduce electricity consumption during periods of unusually high demand.

(B) Rate recovery

(i) In general

Each State regulatory authority shall consider establishing rate mechanisms allowing an electric utility with respect to which the State regulatory authority has ratemaking authority to timely recover the costs of promoting demand-response and demand flexibility practices in accordance with subparagraph (A).

(ii) Nonregulated electric utilities

A nonregulated electric utility may establish rate mechanisms for the timely recovery of the costs of promoting demand-response and demand flexibility practices in accordance with subparagraph (A).

Electric vehicle charging programs (26 U.S.C. § 2621(d)(21))

Each State shall consider measures to promote greater electrification of the transportation sector, including the establishment of rates that—

(A) promote affordable and equitable electric vehicle charging options for residential, commercial, and public electric vehicle charging infrastructure;

(B) improve the customer experience associated with electric vehicle charging, including by reducing charging times for light-, medium-, and heavy-duty vehicles;

(C) accelerate third-party investment in electric vehicle charging for light-, medium-, and heavy-duty vehicles; and

(D) appropriately recover the marginal costs of delivering electricity to electric vehicles and electric vehicle charging infrastructure.

APPENDIX B

Central Electric Power Cooperative, Inc.'s Comments to Members Regarding Their Determination of Implementing the PURPA Standards Under the Infrastructure Investment and Jobs Act of 2021

CENTRAL ELECTRIC COOPERATIVE, INC.'S COMMENTS TO MEMBERS

REGARDING THEIR DETERMINATION OF IMPLEMENTING

THE PURPA STANDARDS UNDER THE INFRASTRUCTURE INVESTMENT AND JOBS ACT OF 2021

Innovative Demand Response Programs and Initiatives provided by Central Electric Power Cooperative, Inc. (CEPCI)

Central Electric Power Cooperative, Inc. is dedicated to providing its member consumers with a range of innovative programs and initiatives aimed at lowering demand growth, improving energy efficiency, reducing costs, and promoting sustainable practices. These programs reflect Central Electric Cooperative's commitment to its Members' well-being and environmental responsibility. The following are key initiatives offered by CEPCI, highlighting their objectives and benefits.

Amazon Marketplace – Smart Solutions Store:

The Amazon Marketplace, also known as the Smart Solutions store, is an online marketplace that serves as a platform for member consumers to easily access cooperative recommended products. The primary goal of this project is to enhance the services offered to cooperative members by providing a convenient way to discover and purchase energy-efficient products.

Beat the Peak Programs:

Peak Alerts:

Central Electric Cooperative offers the Peak Alerts program, a free and voluntary initiative that encourages members to collaborate with their electric cooperative to achieve energy savings for the entire community. Under this program, cooperative members can choose to sign up and receive alerts that prompt them to reduce their electricity consumption during specific high-demand periods, referred to as "peak demand" times. This cooperative effort not only empowers members to contribute to energy cost reduction but also enhances the reliability of the electric grid during times of increased demand.

Smart Thermostat Program:

The Smart Thermostat Program leverages smart thermostats to control HVAC loads and reduce kW consumption during peak hours.

The Water Heater Load Control Program:

The Water Heater Load Control Program involves purchasing and installing water heater switches by distribution cooperatives to turn water heaters off during peak periods. These switches play a pivotal role in managing energy consumption during peak demand periods. By utilizing these switches, the cooperative can effectively and remotely deactivate water heaters, helping to alleviate strain on the grid and reduce overall energy demand when it matters most.

The Voluntary Load Management Signal

The Voluntary Load Management Signal employs a pricing strategy for its wholesale and passthrough industrial rates that centers on coincident peak demand billing. This approach sends a robust price signal to incentivize load reduction during peak periods, aligning with efforts to manage energy consumption efficiently. As a complementary service to these rate structures, Central extends load management signals to consumers who possess consumption flexibility and the capability to curtail their load during peak times. This initiative directly benefits consumers by translating into reduced demand charges on their bills, fostering a win-win scenario for both the cooperative and its members.

Dual Fuel Heat Pump Program:

The Dual Fuel Heat Pump Program features innovative heating systems that combine a heat pump with a gas furnace and an outdoor thermostat. These systems are designed to optimize energy usage by automatically switching to the gas furnace when temperatures drop below a set threshold, ensuring efficient heating during colder periods. The Dual Fuel Heat Pump systems not only enhance energy efficiency but also serve as a viable replacement for traditional gas heating systems. In addition to these benefits, this initiative aims to boost kWh sales and mitigate system peak usage, aligning with the cooperative's commitment to responsible energy consumption. To further incentivize the adoption of these advanced systems, CEPCI offers rebates for each Dual Fuel Heat Pump installation to its cooperative members, making energy-efficient heating solutions more accessible and affordable.

ChooseEV:

ChooseEV is a web-based tool available on the cooperative's website, designed to educate and inform members about electric vehicles (EVs). This frequently updated tool ensures members have access to accurate information about EVs, promoting the adoption of environmentally friendly transportation options.

ZEF Energy Chargers:

CEPCI partners with ZEF Energy to provide level II and DC fast charging options. These chargers support utility metering and billing systems, time-of-use (TOU) and demand rates, and traditional demand response programs. CEPCI’s collaboration with ZEF aims to expand the availability of smart EV chargers throughout co-op service territories.

CHARGE:

CHARGE is a national charging network created by cooperatives to encourage EV adoption. It offers educational materials for members and car dealers and provides branding solutions for co-op-owned chargers. This program facilitates the growth of EV infrastructure and promotes clean transportation options.

Optiwatt (NEW):

CEPCI’s Optiwatt program is designed to leverage the growing popularity of electric vehicles. By controlling the vehicle's charging rate through telemetry, Optiwatt collaborates with EV manufacturers to implement load management during peak periods, optimizing energy usage and reducing costs.

C&I Lighting:

CEPCI incentivizes the purchase of energy-efficient lighting products for commercial and industrial members. These incentives help lower electric bills, provide quality lighting, and reduce the need for costly new electric generation. The tiered rebate system offers up to 50% of the total project cost, making energy-efficient lighting accessible to members.

C&I Audit and Demand Management:

CEPCI supports commercial and industrial member owners seeking to improve energy efficiency. It offers free energy audits and rebates of up to $5,000 per project for demand management retrofits identified in the energy audit. This encourages energy-conscious practices among members.

APPENDIX C

GDS Associates, Inc. Qualifications and Experience

STATEMENT OF QUALIFICATIONS

GDS Associates, Inc. is a multi-service consulting and engineering firm with extensive engineering, project management, and consulting experience. The firm was formed in 1986 and employs a staff of approximately 180 professionals and support personnel. GDS Associates' broad range of expertise focuses on clients associated with, or affected by, electric, gas, water and wastewater utilities. In addition, services regarding electric distribution and transmission design, information technology, market research, and statistical analyses are provided to a diverse client base. GDS Associates is headquartered in Marietta, Georgia, with offices in Austin, Texas; Auburn, Alabama; Manchester, New Hampshire; Madison, Wisconsin; Orlando, Florida; Augusta, Maine; and Redmond, Washington, and serves clients throughout the United States.

J. Steven Shurbutt is a founding Principal of GDS Associates and for more than 30 years held the position of Vice-President for Distribution Services, in which capacity Mr. Shurbutt oversaw most of the financial services performed by GDS Associates on behalf of electric distribution utilities. During the past 45 years, he has conducted retail rate studies, cost allocation studies, financial forecasts, and other financial and rate design services for more than 150 electric utility clients. He has appeared as an expert witness before regulatory authorities in 13 states and has also been involved in technical analyses associated with wholesale rate cases before the Federal Energy Regulatory Commission. Mr. Shurbutt has participated in member/pooling rate studies and rate design on behalf of generation and transmission electric cooperative utilities. He has advised wholesale rate customers on issues regarding interpretation of wholesale rate provisions and price signals, and the incorporation of same into retail rates. His retail rate assignments have included developing innovative rates for various classes of utility service customers and numerous successful power supply contract negotiations with large industrial customers on behalf of utility clients. He assisted more than 20 electric utilities in Florida, Georgia, Texas, South Carolina and Virginia with evaluating the PURPA Standards set forth in the Energy Policy Act of 2005 ("EPAct 2005") and the PURPA Standards set forth in the Energy Independence and Security Act of 2007. Mr. Shurbutt holds an MBA in Finance from Georgia State University and a Bachelor of Industrial Engineering from the Georgia Institute of Technology. He is a registered Professional Engineer and Senior Member of the Institute of Industrial Engineers.