

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC TARIFF FILING OF EAST)	
KENTUCKY POWER COOPERATIVE, INC. TO)	CASE NO.
IMPLEMENT A RESIDENTIAL ELECTRIC)	2022-00439
VEHICLE OFF-PEAK CHARGING PILOT)	
PROGRAM)	

ORDER

On December 21, 2022, East Kentucky Power Cooperative, Inc. (EKPC) filed a tariff for a demand-side management (DSM) Pilot Residential Electric Vehicle (EV) Off-Peak Charging Program. This case was suspended on January 18, 2023, for the Commission to investigate EKPC’s proposal. EKPC responded to two rounds of discovery. There are no intervenors in this case. On May 17, 2023, EKPC filed a statement requesting that this case be submitted for a decision based upon the written record. The case now stands submitted for a decision based on the written record.

LEGAL STANDARD

KRS 278.285(1) authorizes the Commission to review and approve the reasonableness of DSM programs proposed by any utility under its jurisdiction. The statute lists multiple factors the Commission can consider when determining the reasonableness of the DSM programs. The listed factors in KRS 278.285(1) are:

- (a) The specific changes in customers' consumption patterns which a utility is attempting to influence;
- (b) The cost and benefit analysis and other justification for specific demand-side management programs and measures included in a utility's proposed plan;

- (c) A utility's proposal to recover in rates the full costs of demand-side management programs, any net revenues lost due to reduced sales resulting from demand-side management programs, and incentives designed to provide positive financial rewards to a utility to encourage implementation of cost effective demand-side management programs;
- (d) Whether a utility's proposed demand-side management programs are consistent with its most recent long-range integrated resource plan;
- (e) Whether the plan results in any unreasonable prejudice or disadvantage to any class of customers;
- (f) The extent to which customer representatives and the Office of the Attorney General have been involved in developing the plan, including program design, cost recovery mechanisms, and financial incentives, and if involved, the amount of support for the plan by each participant, provided however, that unanimity among the participants developing the plan shall not be required for the commission to approve the plan;
- (g) The extent to which the plan provides programs which are available, affordable, and useful to all customers; and
- (h) Next-generation residential utility meters that can provide residents with amount of current utility usage, its cost, and can be capable of being read by the utility either remotely or from the exterior of the home.

KRS 278.285(1) also states the factors listed are not exhaustive, the Commission can consider anything that will help determine if the programs are reasonable.

BACKGROUND

EKPC stated that it is proposing this EV pilot program to encourage the reduction of growth in peak demand resulting from the adoption of EVs, allow EKPC to utilize its system more efficiently, manage market purchases, defer the construction of new generation, and promote the adoption of EVs.¹ EKPC stated that the EV pilot program would last three years and end on June 30, 2026, and that the program would be voluntary

¹ EKPC Residential Electric Vehicle Off-Peak Charging Program Tariff Filing, Second Revised Sheet No. 55 (filed Jan. 18, 2023).

to its customers.² Also, EKPC stated that the program would have a 500 EV participation limit and the eligibility criteria would be that participants must be in the EKPC service territory and must utilize a Level 2 Electric Vehicle Supply Equipment.³ In addition, participants must charge their EV's from 10:00 p.m. through 6:00 a.m., which is considered EKPC's and PJM's off-peak hours, to receive the program incentive. However, other than paying full tariffed peak time rates, there will be no penalty for charging during peak hours.⁴

EKPC stated that the incentive for the pilot program would provide a \$0.02 incentive per kWh during off peak, with \$0.01 paid by EKPC and \$0.01 paid by participating owner-member cooperatives.⁵ Currently, the estimated maximum billing impact for the average participant would shift 4,423 kWh per year, amounting to an \$88.00 incentive per year.⁶ EKPC stated that the current total projected program costs would be \$406,630, which includes a one-time cost to upgrade EKPC's DSM software.⁷ EKPC also stated that participant costs will be \$0 and that EKPC will pay for all costs of the program.⁸

² EKPC Residential Electric Vehicle Off-Peak Charging Program Tariff Filing, Second Revised Sheet No. 55 (filed Jan. 18, 2023).

³ EKPC Residential Electric Vehicle Off-Peak Charging Program Tariff Filing, Second Revised Sheet No. 55 (filed Jan. 18, 2023).

⁴ EKPC Residential Electric Vehicle Off-Peak Charging Program Tariff Filing, First Revised Sheet No. 56 (filed Jan. 18, 2023).

⁵ EKPC Residential Electric Vehicle Off-Peak Charging Program Tariff Filing, Cover Letter (filed Jan. 18, 2023).

⁶ EKPC's Response to Staff's First Request for Information (Staff's First Request), Item 5.e.

⁷ EKPC's Response to Staff's First Request, Item 5.e.

⁸ EKPC Residential Electric Vehicle Off-Peak Charging Program Tariff Filing, Program Assumption Sheet (filed Jan. 18, 2023).

Additionally, EKPC stated that the program has a potential total resource cost (TRC) score of 2.47.⁹

EKPC stated that it plans to hire a third-party vendor to collect EV charging kWh data from participants. In response to EKPC's Request for Proposal (RFP), EKPC received bids from WeaveGrid, EnergyHub, ev.energy, Rolling Energy Resources, and ZEF Energy. Considering EKPC has not worked with any of these third-party providers before, EKPC plans to employ two methods of quality assurance in order to verify the accuracy of the data provided by our third-party vendor. Method 1 will use hourly advanced metering infrastructure (AMI) data available from five of its owner-member cooperatives. Method 2 will use the Sense Flex home energy monitor. The Sense Flex home monitor will provide hourly end-use data (the EV charging kWh directly).¹⁰ EKPC stated that it will randomly select 10 percent to 12 percent of homes to install these research meters that will be used for measurement and verification monitoring.¹¹ EKPC states that by hiring a third-party vendor and employing two methods of quality assurance, it would avoid the install of a second meter, which would require the utility to implement a special EV time-of-use (TOU) rate.¹²

DISCUSSION

The Commission has traditionally evaluated DSM effectiveness by focusing on the TRC results. A TRC score of less than one indicates that the cost of the program

⁹ EKPC Residential Electric Vehicle Off-Peak Charging Program Tariff Filing, Summary Sheet (filed Jan. 18, 2023).

¹⁰ EKPC's Response to Staff's Second Request for Information (Staff's Second Request), Item 3.d.

¹¹ EKPC's Response to Staff's First Request, Item 1.e.

¹² EKPC's Response to Staff's First Request, Item 4.

outweighs the benefits. The Commission finds that EKPC's proposal of an EV pilot program has the potential to be cost-effective as demonstrated by a TRC score of greater than one and should be approved.

The Commission encourages EKPC to study and evaluate this pilot program and modify the program to maximize the benefit. The Commission is persuaded by EKPC's purpose of the EV pilot program that allows EKPC to utilize its system more efficiently, manage market purchases, and defer the construction of new generation. Such an opportunity not only provides EKPC the ability to shift load and manage capacity needs but affords participating customers an increased ability to control a portion of their energy bill by receiving an incentive. The Commission further urges EKPC to research the \$0.02 per kWh incentive to ensure that it is high enough to encourage behavioral changes that are impactful. Additionally, the Commission notes that the first sentence of the Residential Electric Vehicle Off-Peak Charging Program Incentive tariff section currently states: "EKPC will provide a monthly \$0.01 per-kWh credit to the owner-member, to be passed onto the retail member" ¹³ EKPC stated in the cover letter that EKPC would provide \$0.01 per kWh incentive and the owner-member cooperative will provide the other \$0.01 per kWh incentive. Therefore, the Commission finds that EKPC should include language in its tariff that states the other \$0.01 incentive will be provided from the owner-members cooperative in the Residential Electric Vehicle Off-Peak Charging Program Incentive tariff section.

¹³ EKPC Residential Electric Vehicle Off-Peak Charging Program Tariff Filing, First Revised Sheet No. 56 (filed Jan. 18, 2023).

The Commission notes that EKPC continues to recover DSM costs through base rates and not a surcharge mechanism, therefore there is no true-up mechanism or periodic updates to DSM expenditures. The Commission finds the EV Pilot program is reasonable without any further modifications, and notes that, as a pilot program, it has the potential to be very beneficial and cost-effective to EKPC and its customers. However, given EKPC's winter-peaking characteristics and the effort it takes to hedge its winter insufficiency of generation,¹⁴ the off-peak time period of this program, the general occurrence of winter peaks in early morning, and the Commission's generalized understanding that greater electrification will increase the likelihood of growing winter load, the Commission cautions EKPC that it should closely monitor the program and its impact, particularly in winter months, to ensure it does not drive additional system costs by increasing demand at peak times, thus requiring greater investment in demand and energy related components.

IT IS THEREFORE ORDERED that:

1. EKPC's proposed Pilot Residential Electric Vehicle Off-Peak Charging Program is approved.
2. EKPC shall include language in the Residential Electric Vehicle Off-Peak charging Program Incentive tariff that states the other \$0.01 incentive will be provided from the owner-members cooperative.

¹⁴ See Case No. 2022-00098, *Electronic 2022 Integrated Resource Plan of East Kentucky Power Cooperative Inc.* (filed Apr.1, 2022), Table 8-3 at 166 and Table 8-5 at 168. EKPC's Response to Staff's Second Request for Information, Item 16f. Footnote 12 to Table 8-3 states, "Only generation added for the purpose of covering summer peak load capacity obligation is considered 'capacity additions.' All other intermittent or seasonal purchases are made to hedge the energy price exposure to the EKPC system and not to supply 'capacity' to its portfolio or the PJM system."

3. Within 20 days of the date of entry of this Order, EKPC shall file with this Commission, using the Commission's electronic Tariff Filing System, revised tariff sheets setting out the revisions approved herein and reflecting that they were approved pursuant to this Order.

4. This case is closed and removed from the Commission's docket.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

PUBLIC SERVICE COMMISSION



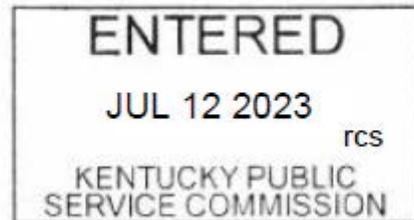
Chairman



Vice Chairman



Commissioner



ATTEST:



Executive Director

*L. Allyson Honaker
Honaker Law Office, PLLC
1795 Alysheba Way
Suite 6202
Lexington, KENTUCKY 40509

*Brittany H. Koenig
Honaker Law Office, PLLC
1795 Alysheba Way
Suite 6202
Lexington, KENTUCKY 40509

*Chris Adams
East Kentucky Power Cooperative, Inc.
P. O. Box 707
Winchester, KY 40392-0707

*East Kentucky Power Cooperative, Inc.
4775 Lexington Road
P. O. Box 707
Winchester, KY 40392-0707