

2024 CPCN

System year 1 is 2025

Direct Load Control of Water Heaters using Switch technology

Reduce peak demand and energy usage through the installation of load control devices on electric water heaters .

<u>Assumption</u>	<u>Source</u>
Load Impacts Before Participant Water Heater control savings 18.5 kWh, 0.45 kW (coincident with winter system peak), 0.30 kW (summer)	Based on M&V data for the program.
Lifetime of savings 1 year.	Life of program. Program models all devices in the field. The participation represents the load that is available to the program each year,. Switch counts decline in some years.
Discount rate for TRC and RIM Generation Capacity Cost - \$174.60 per kW-year (no escalation). 73% winter 27% summer. Avoided Electricity Energy Costs - PJM Market, AEP-Dayton hub, \$45.96 /MWh in 2025 Transmission Capacity Cost - OATT tariff \$ 35.76 per kW-year in 2025 Distribution Capacity Cost - \$ 4.93 per kW-year in 2025 Participant Costs \$ 0 Tax credit (benefit): \$0	5 percent per EKPC financial data ; 3.5 % societal test from Mercatus Center report Avoided costs of a RICE unit. Updated escalators to match. Allocation is 73% winter 27% summer. Summer values based on PJM capacity performance market December 2023 with IHS Markit forecast, start year is 2024. based on December 26, 2023 ACES Forward prices for AEP_Dayton hub. \$45.96 /MWh in 2025. DSMore Scenario 9, 0.53 esc in 2025 Network rate, 2023-24. 2.8 % escalation rate based on 10 yr PPI.. Applied to winter coincident peak. Basd on marginal cost of distribution. 2.8 % escalation rate based on 10 yr PPI. . Applied to winter coincident peak. all program costs are borne by EKPC none for this program
Administrative Cost EK \$440,000 (2025 value) fixed annual (2025-2044). 2% esc. . Co-op \$0 per new participant	Fix admin cost is AC switch share of UPA costs No administrative costs incurred by member cooperatives
Rate Schedule - Retail Median Residential Rate for Co-ops Cust chrg \$16.09 , Energy Rate \$.088229 Rate Schedule - Wholesale East Kentucky E-2 rate.	Current rates in effect as of January 2024.. includes Environmental Surcharge and FAC Current rates in effect as of January 2024. includes Environmental Surcharge and FAC
Participation -2025-2033: 10,042 active devices). 2034-2039: 5,641 active switches.. 0% Free Riders	Based on access by communicating technology
Rebates Co-op to Participant \$ 10 per year for each active switch; 2% esc EK to Co-op All rebate payments, 2% esc	Based on tariff. Based on tariff.