

Case: ENERGY STAR®

This program encourages Residential end-use members to convert their primary heat source from electric resistance heat to an efficient air source heat pump. This program has five heat pump cases: Federal Standard, ENERGY STAR®, and Mini-splits (1,2, 3 heads).

<u>Assumption</u>	<u>Source</u>
Load Impacts Before Participant 14,843 kWh, 8.12 kW (coinc. with winter system peak), 2.25 kW (summer) Savings: 6,724 kWh 1.208 kW (winter), 0.203 kW (summer) After Participant 8,119 kWh, 6.91 kW (coinc. with winter system peak), 2.05 kW (summer)	Electric Furnace and Central AC GDS kWh savings ASHP 16.2 SEER2, Elec Furnace Baseline. kW impacts based on planning load profile. Before participant net of savings
Lifetime of savings 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 \$ 1,273. 2% esc. Tax credit (benefit): \$1,882	16 Years 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, 0.587 esc in 2025 Network rate, 2023-24. 2.8 % escalation rate based on 10 yr PPI.. Applied to winter coincident peak. Based on marginal cost of distribution. 2.8 % escalation rate based on 10 yr PPI. . Applied to winter coincident peak. GDS costs for measure 30% of heat pump cost, less utility subsidy, subject to \$2,000 cap
Administrative Cost EK \$6,175 (2025 value) fixed annual (2025-2039), Co-op \$180 per new participant	Fixed admin - 2021 value of \$5300 escalated to 2025 based on proposed tariff
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: 92. 2026-2039: 131 per year. 0% Free Riders	2025 - existing programs based on 2023 annual report. New programs - 0 (they begin in 2026).. 2026-2039 based on proposed new budget
Rebates Co-op to Participant \$ 1,000 , 2% esc EK to Co-op \$ 2,241 , 2% esc	Proposed for new program design. Based on proposed tariff. Reimburse for rebate, 50% of admin costs, plus compensation for lost margins.