

Case: Mini-split, 1 head

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>
<p><b>Load Impacts</b>                      Before Participant                      14,843 kWh, 8.12 kW (coinc. with winter system peak), 2.25 kW (summer)</p> <p>Savings: <b>2,373 kWh, 0.43 kW (winter), 0.09 kW (summer)</b>                      After Participant                      12,470 kWh, 7.69 kW (coinc. with winter system peak), 2.16 kW (summer)</p>	<p>Electric Furnace and Central AC</p> <p>GDS kWh savings Ductless HP 9.4 HSPF2, Elec resistance Baseline, adjusted for <b>1</b> head instead of 3 heads. kW savings based on planning load profile.</p> <p>Before participant net of savings</p>
<p><b>Lifetime of savings</b>  <b>Discount rate for TRC and RIM</b>  <b>Generation Capacity Cost - \$174.60</b> per kW-year (no escalation). 73% winter 27% summer.  <b>Avoided Electricity Energy Costs - PJM</b> Market, AEP-Dayton hub, <b>\$45.96 /MWh</b> in 2025  <b>Transmission Capacity Cost - OATT tariff \$ 35.76</b> per kW-year in 2025  <b>Distribution Capacity Cost - \$ 4.93</b> per kW-year in 2025  <b>Participant Costs \$ 224.</b> 2% esc.  <b>Tax credit (benefit): \$667</b></p>	<p><b>16</b> Years  <b>5</b> percent per EKPC financial data; 3.5 % societal test from Mercatus Center report  <b>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.</b>                      based on December 26, 2023 ACES Forward prices for AEP_Dayton hub. <b>\$45.96 /MWh</b> in 2025. DSMore <b>Scenario 9, 0.587 esc in 2025</b>                      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, adjusted for <b>1</b> head instead of 3 heads                      30% of heat pump cost (<b>1</b> head), less utility subsidy, subject to \$2,000 cap</p>
<p><b>Administrative Cost</b>                      EK <b>\$6,175</b> (2025 value) fixed annual (2025-2039),                      Co-op <b>\$180</b> per new participant</p>	<p>Fixed admin - 2021 value of \$5300 escalated to 2025                      based on proposed tariff</p>
<p><b>Rate Schedule - Retail</b>                      Median Residential Rate for Co-ops                      Cust chrg <b>\$16.09</b>, Energy Rate <b>\$.088229</b>  <b>Rate Schedule - Wholesale</b>                      East Kentucky E-2 rate.</p>	<p>Current rates in effect as of January 2024.. <b>includes Environmental Surcharge and FAC</b>                      Current rates in effect as of January 2024. <b>includes Environmental Surcharge and FAC</b></p>
<p><b>Participation - 2025: 31. 2026-2039: 44 per year. 0% Free Riders</b></p>	<p>2025 - existing programs based on 2023 annual report. New programs - 0 (they begin in 2026).. 2026-2039 based on proposed new budget</p>
<p><b>Rebates</b>                      Co-op to Participant <b>\$ 500</b>, 2% esc                      EK to Co-op <b>\$ 1,025</b>, 2% esc</p>	<p><b>Proposed for new program design.</b>  <b>Based on proposed tariff. Reimburse for rebate, 50% of admin costs, plus compensation for lost margins.</b></p>