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Southwestern Electric Power Company

Arkansas Energy Efficiency Program Portfolio Revised Annual Report

Docket No. 07-082-TF

April 28, 2023*

***Revised May 31, 2023-Page 8 Figure 1**

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1.0 Executive Summary

1.1 Historical Background of the EE Portfolio

On May 25, 2007, in Docket No. 06-004-R, the Arkansas Public Service Commission (APSC or the Commission) approved the “Rules for Conservation and Energy Efficiency Programs” (C&EE Rules). These rules, amended on January 19, 2018 require that each operating utility within the jurisdiction of the Commission file an Annual Report by May 1 of each year. The report should address “the performance of each conservation and energy efficiency program operated by the utility.”¹

Quick Start Period (Oct 1, 2007 – Dec 31, 2008)

- Southwestern Electric Power Company (SWEPCO or the Company) operated three energy efficiency programs and one demand response program
- SWEPCO achieved 5,640.1 MWh in energy savings and 2,926 kW in demand savings
- Approximately 4,300 customers participated in Energy Efficiency (EE) programs with the vast majority participating in the Compact Fluorescent Lighting Program

Program Years 2009 and 2010

- April 1, 2009, SWEPCO filed its first Comprehensive Energy Efficiency Plan (CEEP)
- SWEPCO achieved 6,075.5 MWh in energy savings and 5,611 kW in demand savings for Program Year (PY) 2009
- February 3, 2010, Company received approval to implement CEEP which included two new Market Transformation Programs
- PY2010, achieved 10,737.2 MWh in energy savings and 8,603 kW in demand savings surpassing energy and demand savings goals by 40% and 23% respectively

¹ APSC Rules for Conservation and Energy Efficiency, Section 9, p.11

Program Years 2011 – 2021

- March 15, 2011, SWEPCO filed a revised CEEP for the second half of PY2011 and for PY2012 and PY2013, pursuant to the portfolio energy savings goals established by the Commission under Order No. 15 in Docket No. 08-137-U
- July 1, 2011, SWEPCO made substantial changes to its approved CEEP, which carried into PY2012 and beyond
- Commission approved the Company's revised CEEP on June 30, 2011, with Order No. 36 in Docket No. 07-082-TF
- The Commission issued Order No. 57 in Docket No. 07-082-TF on January 30, 2013, which established "the existing Program Year 2013 energy savings target, budgets, and incentive structure, etc. for Program Year 2014...."²
- Order No. 15 in Docket No. 13-002-U issued by the Commission on February 20, 2014, approved the use of the PY2014 budgets for PY2015 with the same Performance Incentive structure but with increased energy savings targets
- On August 7, 2015, the Commissioned Order No. 87 in Docket No. 07-082-TF, approving PY2016 budget and changes to the portfolio which included implementation of the Consistent Weatherization Approach within the Home Performance with ENERGY STAR® Program
- Savings targets of 0.90% for PY2017 and PY2018 and 1.0% for PY2019 with a base year of 2015 were established by Order No. 31 of Docket No 13-002-U
- Order No. 43 of Docket No. 13-002-U established the savings target of 1.2% for PY2020-PY2022, and Order No. 110 in Docket No. 07-082-TF approved SWEPCO's CEEP for the same triennial period. The new portfolio included a pilot pathway for income qualified weatherization as well as an electric vehicle equipment education pathway.

Table 1 summarizes the energy savings goal and achievement for PY2011 – PY2021 and the energy savings goals associated with SWEPCO's approved CEEP incorporating the retail sales adjustments for those customers approved to Self-Direct (SD) in PY2012 – PY2021. The table also summarizes the Company's energy savings achievements and its net evaluated energy savings achievements as a percentage of its approved goals for PY2011 – PY2021.

² Docket No. 07-082-TF, Order No. 57, p.11

Table 1 – Net Evaluated Energy Savings PY2011 - PY2021

Program Year	Energy Savings Goal %	Net Energy Savings Goal	Net Energy Saved	Percent of Goal Achieved	TRC Ratio	Docket No. 07-082-TF Filing Date
2011	0.25	10,426 MWh	11,855 MWh	105%		
2012	0.50	15,714 MWh	15,714 MWh	113%	1.62	April 23, 2013
2013	0.75	23,093 MWh	25,388 MWh	110%	1.65	March 31, 2014
2014	0.75	21,339 MWh	30,055 MWh	141%	2.33	April 1, 2015
2015	0.90	24,273 MWh	31,462 MWh	130%	2.49	April 29, 2016
2016	0.90	23,958 MWh	34,356 MWh	143%	2.19	June 30, 2017
2017	0.90	23,823 MWh	33,667 MWh	141%	3.13	May 1, 2018
2018	0.90	25,196 MWh	36,735 MWh	146%	2.66	May 1, 2019
2019	1.00	28,688 MWh	35,952 MWh	125%	2.58	May 1, 2020
2020	1.20	34,506 MWh	35,785 MWh	104%	2.57	April 30, 2021
2021	1.20	34,506 MWh	37,339 MWh	108%	2.81	April 29, 2022

The Company's net evaluated energy savings attributed to its PY2011 – PY2021 EE Programs were determined by its independent Evaluation, Measurement, and Verification (EM&V) contractors. The Cadmus Group (Cadmus) was the primary evaluator for all of the Company's PY2011 – PY2015 programs with the exception of the statewide Arkansas Weatherization Program (AWP) which was evaluated by ADM Associates, Inc. (ADM) for PY2011 – PY2015. ADM became the primary evaluator for all of the Company's programs beginning with PY 2016.

For more details on SWEPCO's accomplishments, please refer to the Company's Energy Efficiency Program Portfolio Annual Reports filed annually in Docket No.07-082-TF. The filing date for each annual report is provided above in Table 1. The EM&V reports prepared by Cadmus for PY2012 – PY2015 and by ADM for PY2016 – PY2021 are included as Appendix A in each of the above referenced reports. The EM&V Reports prepared by ADM for the AWP for PY2012 through PY2015 are included as Appendix B in the above reference reports.

1.2 Program Year 2022 Results

1.2.1 Major Accomplishments

In PY2022, SWEPCO offered the Home Solutions Program (HSP) and the Business/Industrial Solutions Program (BSP) as part of its energy efficiency portfolio, which provided a comprehensive range of customer options focused on energy efficiency, demand reduction, and educational options. The HSP included the following four pathways: Home Performance with ENERGY STAR® Pathway (HPwES), Income Qualified Weatherization Pathway Pilot (IQW), Residential Energy Improvement Pathway (REIP) and the Efficient Products Pathway (EPP). The BSP included the following three pathways: Commercial and Industrial Energy Efficiency Pathway (CIEEP), Small Business Pathway (SBP), and the Load Management Standard Offer Pathway (LMSOP).

SWEPCO achieved 111% of its filed net energy savings goal with 38,163,633 kWh in net evaluated energy savings, and 15,086.38 kW in net evaluated demand savings which was 93% of its planned net demand reduction goal of 16,154.92 kW³ for PY2022. Activities for the year resulted in SWEPCO attaining 115% of the Commission's target of 1.2% of 2018 sales adjusted for the program year sales of the self-direct customers. The Company earned a Performance Incentive of \$875,040 for energy savings achievements. This incentive is equivalent to 8% of its approved PY2022 budget of \$11,667,200.⁴ The portfolio was again cost-effective with a TRC benefit cost ratio of 2.71 and TRC net

³ Appendix A, ADM Associates, Inc. PY2022 Evaluation Report, Table 2-1, p.19

⁴ Direct Testimony of Sherrill L. McCormack, Docket No. 07-082-TF, filed May 1, 2023, p. 15

benefits of \$21,788,547.⁵ The Company’s portfolio acquisition cost (i.e., cost per kWh) was \$0.27 per kWh in PY2022. The first-year acquisition costs for each of SWEPCO’s PY2022 programs are detailed in Section 2.5.2.2 of Appendix A, Table 2-18, page 39.

2022 Portfolio Summary										
Net Energy Savings		Cost			Cost-Effectiveness			Goal Achievement		
Demand MW	Energy MWh	Actual Expenses	LCFC	Performance Incentives	TRC Net Benefits (NPV)	TRC Ratio	PAC Ratio	Commission Established Target % of Baseline	Actual Savings Achieved % of Baseline	% of Target Achieved (%)
15	38,164	\$ 10,157,434	\$ 3,996,477	\$ 875,040	\$21,788,547	2.71	2.53	1.20%	1.37%	115%

Figure 1 – EE Portfolio Summary update

The Company’s net evaluated annualized kWh savings attributed to its PY2022 EE Programs were determined by its independent EM&V contractor, ADM. The process evaluation for Energy Education Arkansas (EEA), managed by the Arkansas Energy Office (AEO) has also been completed; the Company’s Educational Program does not undergo EM&V since it is considered an educational offering with no associated savings.

1.2.2 Goals and Objectives of EE Portfolio

As with past years, SWEPCO’s primary goal and objective in PY2022 was to exceed its prescribed energy savings goal by providing cost-effective and comprehensive energy efficiency programs which facilitate energy and peak demand reductions in all customer classes and market segments. In the residential sector, the Company sought to grow the “Consistent Approach for Weatherization” a/k/a Home Performance with ENERGY STAR Pathway (HPwES) in order to increase inter-fuel, inter-utility coordination as well as participation and comprehensiveness of its residential pathways. The Company continued its Income Qualified Weatherization Pathway Pilot (IQW) to align with Act 1102. SWEPCO sought to maintain momentum in its Efficient Products Pathway (EPP) and in its Residential Energy Improvement Pathway (REIP), particularly in the multi-family area. In the commercial and industrial sector, SWEPCO’s objectives were to maintain the momentum it has achieved from prior years and to continue seeking greater diversity of the measures offered through its C&I pathways, in particular its Small Business Pathway (SBP) and the Company’s Commercial & Industrial Energy Efficiency Pathway (CIEEP).

⁵ Appendix A, ADM Associates, Inc. PY2022 Evaluation Report, Table 2-9 p. 26

The Company set the following specific goals to achieve these objectives in PY2022:

Home Solutions Program

- Achieve a ninth consecutive ENERGY STAR® Partner of the Year Award, including a seventh “Sustained Excellence” designation, from the U.S. Environmental Protection Agency (EPA) for the PY2022 performance of the Company’s HPwES Pathway
- Educate REIP multi-family participants, both residents and property managers, about potential participation in SWEPCO’s EPP and commercial pathways
- Conduct regular retailer inspections and EPP training to ensure adequate incentivized product signage and pathway awareness
- Continue the use of a follow-up mailer and/or email for customers participating in HPwES and REIP, thanking customers for their participation in the SWEPCO pathway, while cross promoting other available pathways
- Enhance trade ally and customer participation with the REIP CoolSaver A/C Tune-up measure, utilizing an online CoolSaver sign-up form for interested customers
- Continue outreach on the New Homes package within REIP
- Continue offering the Income Qualified Weatherization Pathway Pilot to qualified customers
- Refine residential Quality Assurance (QA) practices and field tools to continue providing a high level of inspections, streamlined data tracking, and paperless forms

Business & Industrial Solutions Program

- Achieve seamless cross promotion and implementation of both the CIEEP and the SBP pathways
- Increase the measure mix in the CIEEP and the SBP with non-lighting measures
- Increase participation in Strategic Energy Management (SEM)
- Continue to grow inter-fuel, inter-utility project coordination with Black Hills Energy Arkansas (BHEA), the primary natural gas provider that overlaps SWEPCO’s northwest Arkansas service territory
- Continue to keep LMSOP customers informed of other SWEPCO energy efficiency programs.

Educational Solutions Program

- Encourage customers who utilize the Online Audit, Home Energy Management Tool, to participate in the various pathways
- Continue to expand and promote the Electric Vehicle Equipment Education pathway

All Programs

- Broaden program reach by enrolling new trade allies to target rural SWEPCO customers
- Achieve a high level of customer satisfaction with their program participation

1.2.3 Progress Achieved versus Goals and Objectives

SWEPCO met the vast majority of portfolio goals and objectives stated above. These achievements are more thoroughly described in Portfolio Pathway discussions in Section 2.0 below. Each customer class and market segment had access to energy assessments and pathways offering single or multiple measure incentives. The Company's plan continued to include a cost-effective portfolio of energy efficiency, conservation, and peak load reduction programs designed to facilitate reductions in electricity consumption and peak demand in every customer class. The trade ally networks for both residential and non-residential programs were expanded and active in the training provided by Implementation Staff. Examples include:

- Conducted three reduced cost Building Performance Institute (BPI) Building Analyst certification classes, and provided three virtual no-cost CoolSaver A/C Tune-up trainings for participating trade allies
- Expanded the use of a Virtual Assessment and Assurance Tool, allowing quality control inspections to continue with minimal overhead costs
- Incorporated the compressed air survey and leak repair promotion begun in PY2021 into an active measure during PY2022

The successful integrated marketing campaign was continued through the use of:

- Bi-annual trade ally newsletter to communicate pathway news and activities

- Digital marketing campaign to include geo-targeted Google Adwords, targeted contextual banner ads and Facebook sponsored posts
- Direct emails and bill inserts targeted at respective commercial or residential customers

1.2.4 High Level Recap of Portfolio Savings, Participation Levels, Prior Year Comparisons

The chart below details budgets, expenditures, and savings since the first full year implementation of SWEPCO’s revised Comprehensive Energy Efficiency Portfolio (CEEP).

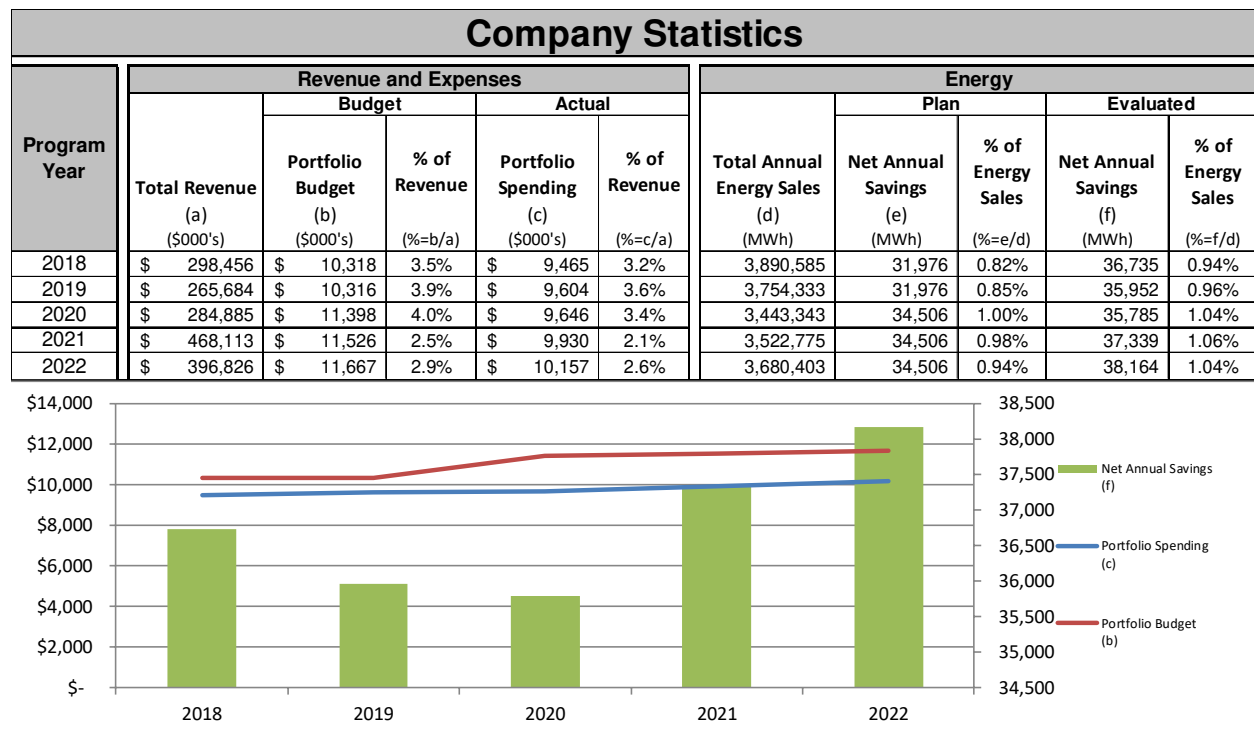


Figure 2 – SWEPCO Statistics

(Note: Total Revenue and Total Annual Energy Sales include revenue and energy sales from Self-Direct customers.)

As illustrated in the following figures, SWEPCO spent 87% of its approved budget of \$11,667,200. Approximately 50% of the dollars being expended were for customer and contractor incentives.

EE Portfolio Expenditures by Program					
Program Name	Target Sector	Program Type	2022		% of Budget
			Budget (\$)	Actual (\$)	
Efficient Products (EPP)	Residential	Consumer Product Rebate	1,077,570	888,866	82%
Home Performance (HPwES)	Residential	Whole Home	3,110,455	2,992,900	96%
Income Qualified (IQW)	Residential	Whole Home	234,592	219,831	94%
Online Audit Tool	Residential	Behavior/Education	12,000	-	0%
Res Energy Imprv (REIP)	Residential	Prescriptive/Standard Offer	1,645,650	1,454,949	88%
Electric Vehicle (EVE)	Res/Small Business	Measure/Technology Focus	12,000	11,286	94%
Comm & Industrial (CIEEP)	Commercial & Industrial	Other	3,731,897	3,204,519	86%
Load Mgt SOP (LMSOP)	Commercial & Industrial	Demand Response	296,968	198,153	67%
Small Business (SBP)	Small Business/C&I	Prescriptive/Standard Offer	1,374,744	1,084,166	79%
EnergyEfficiency AR (EEA)	All Classes	Behavior/Education	41,324	39,750	96%
Regulatory	-	-	130,000	63,014	48%
Total			11,667,200	10,157,434	87%

Figure 3 - EE Portfolio Cost by Program

EE Portfolio Expenditure Summary by Cost Type				
Cost Type	2022 Total Expenditures			
	% of Total	Budget (\$)	Actual (\$)	% of Total
Planning / Design	1%	142,200	8,464	0%
Marketing & Delivery	32%	3,780,169	3,475,773	34%
Incentives / Direct Install Costs	56%	6,502,871	5,858,432	58%
EM&V	5%	587,709	377,023	4%
Administration	4%	524,251	374,728	4%
Regulatory	1%	130,000	63,014	1%
	100%	11,667,200	10,157,434	100%

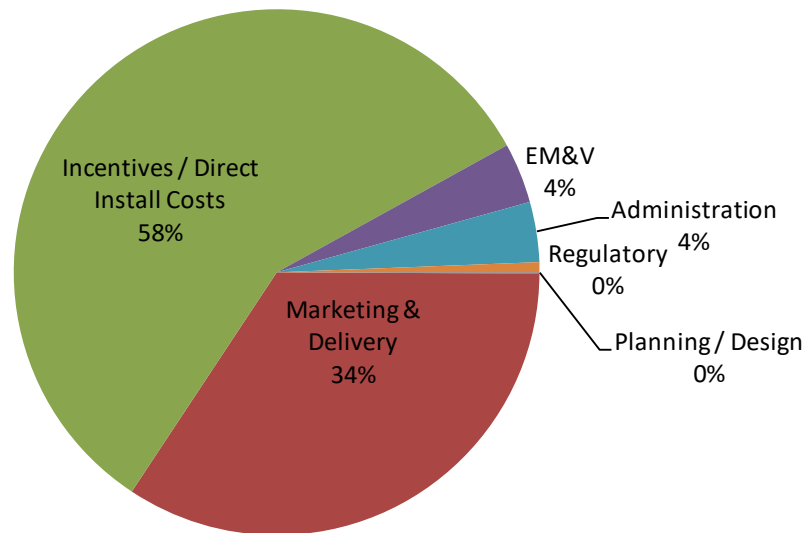


Figure 4 - EE Portfolio Summary by Cost Type

1.2.5 Highlights of Well-Performing Programs/Pathways

In a year filled with continued supply chain challenges and economic uncertainty, the Company achieved 111% of its planned energy savings goals. The CIEEP achieved 17,951,885 kWh in net evaluated savings or 122%⁶ of its planned net energy savings goal, while the SBP achieved 4,743,292kWh net energy savings or 79% of its planned net energy savings goal.⁷ The vast majority of the net evaluated energy savings in the SBP were attributed to non-lighting measures, while approximately 60% of the CIEEP's net kWh savings resulted from non-lighting measures.

The Company's EPP achieved 4,356,346 kWh net energy savings or 135% of its planned net energy savings goal.⁸ ENERGY STAR Smart Thermostats, ENERGY STAR Clothes Washers, and ENERGY STAR Air Purifiers led the way with online promotions and mail-in incentives further increasing the pathways success.

The Company's REIP achieved 4,873,998 kWh net energy savings or 132% of its planned net energy savings. The majority of participants in the pathway were multi-family homes with duct sealing accounting for a majority of the pathway's net energy savings.⁹

SWEPCO experienced strong interest in the Consistent Weatherization Approach (CWA) a/k/a HPwES Pathway. The pathway achieved 90% of its net savings goal for PY2022 with a total of 5,828,632 kWh net energy savings.¹⁰ For the ninth consecutive year, the EPA recognized SWEPCO as an ENERGY STAR Partner of the Year based on the performance of HPwES in PY2022. This recognition resulted in the Company's seventh "Sustained Excellence" designation.

SWEPCO continued an Income Qualified Weatherization Pathway Pilot (IQW) to align with ACT 1102 and resulting APSC orders. The pathway achieved 271,499 kWh in net evaluated savings or 111% of its planned net energy savings goal.

1.2.6 What's Working and What's Not

SWEPCO continues to experience barriers within its portfolio similar to those findings in prior years. The narrow noncontiguous geographic configuration of SWEPCO's service territory continues to create issues for trade allies and retail partners in all pathways. A high proportion of lower income customers and smaller, independently owned businesses

⁶ Appendix A, ADM Associates, Inc. PY2022 Evaluation Report, Table 2-7, p. 25

⁷ Ibid.

⁸ Ibid

⁹ Ibid

¹⁰ Ibid

located in rural areas of the state lack the discretionary income necessary for non-essential energy efficiency investments.

The Company continues to pursue Spanish speaking trade allies in an effort to reach and better serve our Hispanic customers. The language barrier hinders SWEPCO's ability to engage the Hispanic population within the service territory.

1.2.7 Planned Changes to Programs or Budgets

If necessary in PY2023, SWEPCO will shift funds between programs and pathways within the Commission's budget flexibility guidelines to assist the stronger performing pathways. SWEPCO plans to only shift funds from pathways that are not expected to reach goal or to require the full amount of the approved budget (ABudget).

Business/Industrial Solutions Program

The approved CIEEP incentive budget for PY2023 will be reduced to \$1,992,850 due to the transfer of approximately \$265,000 for the implementation of Strategic Energy Management (SEM), and the gross energy savings goal will remain at 16,375,100 kWh. The Company introduced SEM into the CIEEP during Q4 of PY2020. The PY2022 incentive budget for the SBP will remain at \$983,925 with a 6,350,622 kWh gross energy savings goal.

Home Solutions Program

The HPwES Pathway will continue to serve as the Company's pathway for the CWA. The approved PY2023 incentive budget will remain at \$2,192,125 and the gross energy savings goal will remain at 7,050,910 kWh. The REIP will continue with an incentive of \$590,125 and a gross energy savings goal of 4,328,182 kWh. SWEPCO's EPP will also continue PY2023 with an incentive budget of \$363,875 and a gross energy savings goal of 5,581,285 kWh. The IQW Pathway will have an incentive budget of \$118,625 and a gross energy savings goal of 266,750 kWh for PY2023.

Educational Solutions Program

The Online Audit Tool (OLAT) Pathway and the Electric Vehicle Equipment (EVE) Pathway which currently do not have incentive budgets, will each have pathway budgets of \$12,000 respectively. If the OLAT pathway continues to not require funding, the budget allocated to OLAT may be utilized by the EVE pathway as the need to increase EVE education strengthens.

1.2.8 Estimation of EE Resource Potential

The first statewide EE Potential Study that was filed with the Commission on July 2, 2015 in Docket No. 13-002-U. SWEPCO was actively engaged in the development of the 2015 EE Potential Study which provided achievable potential savings through 2022.

Seeing the possible need for a second statewide Potential Study, SWEPCO worked with the Parties Working Collaboratively (PWC) to request a bridge year for PY2023 and to recommend the Commission consider approving a second statewide Potential Study. The request and recommendation were granted in Order No. 62 within Docket No. 13-002-U. Order No. 67 of the same docket, approved the funding for the second statewide Potential Study which will be conducted during PY2023 with the information gained to be used to provide direction for the PY2027 – PY2029 triennial portfolio plan.

1.2.9 Training Achievements

SWEPCO and its Implementation Staff attended and hosted training and informational events, both in-person and virtually, as detailed in the training sections of the Standardized Annual Report Packet (SARP) Workbook. Some examples are as follows:

- SWEPCO hosted various training and informational events for customers and contractors throughout the year. These events covered topics including BPI Building Analyst training, home performance best practices, residential and commercial CoolSaver A/C tune-ups, and an introduction to SEM.
- Members of the Implementation Staff participated in training opportunities which included the Building Performance Association National Home Performance Conference, and Association of Energy Engineers (AEE) and ASHRAE virtual and in-person conferences.
- SWEPCO staff attended trainings throughout the year to gain increased knowledge regarding marketing of energy efficiency and improvements in technology. Examples of training attended include Association of Energy Services Professionals (AESP) conferences and webinars, Building Performance Association National Home Performance Conference, CLEARResult Energy Forum, and Arkansas Association of Energy Engineers.

SWEPCO staff was active on several AESP Committees, on the Board of Directors for Arkansas Advanced Energy Foundation, committees with Arkansas Advanced Energy Association, and committees with the Texarkana Habitat for Humanity during PY2022.

2.0 Portfolio Programs

2.1 Business/Industrial Solutions Program

In PY2022, SWEPCO offered the Business/Industrial Solutions Program (BSP) as part of its energy efficiency portfolio, which provided a comprehensive range of customer options focused on energy efficiency, demand reduction, and educational options. The BSP consists of the following pathways:

- Commercial & Industrial Energy Efficiency Pathway (CIEEP)
- Small Business Pathway (SBP)
- Load Management Standard Offer Pathway (LMSOP)

Program Highlights

- Continued the use of SWEPCO's EE portfolio website URL to function as an extension of SWEPCO's primary website, providing SWEPCO customers with a seamless transition to further EE pathway information
- Continued marketing CIEEP and SBP to SWEPCO's Arkansas customer base in direct mail, direct emails, bill inserts, digital, Google Ads, and social media ads as part of the entire portfolio's marketing campaign
- The BSP marketing materials provided information on the program pathways, including new two case studies for Small Business and one for Strategic Energy Management (SEM), as well as one Spanish language flyer for Small Business. The materials reference energy and cost savings and non-energy benefits such as improved comfort and longer lasting equipment.
- The BSP encouraged participants to capture deeper energy savings (kWh) through comprehensive projects. SWEPCO continued to collaborate with Black Hills Energy Arkansas to recruit and support customers for Strategic Energy Management (SEM), with five customers actively participating in PY2022, all of which were able to demonstrate energy savings by the end of PY2022, and additional customers expressing interest in participating in PY2023.
- As in previous years, the most significant HIM in PY2022 for the BSP was lighting, although SEM, commercial smart thermostats, commercial door air infiltration and compressed air leak repair each contributed significantly to the net energy savings (kWh).

- Maintained Contractor Portal software to provide SWEPCO customers and trade allies with the ability to create incentive estimates and submit project applications electronically
- Continued to offer a Midstream Portal which allows participating distributors to validate customers and products, and determine SWEPCO incentive amounts and submit projects electronically
- Revised the methodology for the commercial smart thermostat measure based on M&V data gathered over several years. Net kWh savings decreased for this measure by 13% from PY2021 to PY2022, but this was due to a decrease in prescriptive savings for the measure rather than a decrease in project volume. This measure is still expected to be a high impact measure (HIM) in PY2023.
- Increased incentives for HVAC measures for the second year in a row, including fixed rate incentives for heat pumps less than or equal to 5 tons of cooling, and solicited distributor and trade ally participation.
- Educational and communications efforts with trade allies were enhanced, including:
 - Created and distributed reference documents to supplement virtual trainings on incentive application processes
 - Scheduled recurring check-ins with high-volume trade allies
- Conducted seven virtual CoolSaver A/C Tune-up trainings for interested contractors at no cost
- Released Level 2 electric vehicle charging station and commercial food service equipment fixed rate incentives
- There was a significant increase in CoolSaver participation, with net kWh savings more than doubling from 386,613 in PY2021 to 799,731 in PY2022, including a large increase in Small Business net kWh savings. This was due to one trade ally expanding its operations in SWEPCO service territory from its base of operations in central Arkansas, with plans to start a field office dedicated to work in SWEPCO service territory in PY2023.
- Commercial Door Air Infiltration net kWh savings increased 61% from 1,465,855 in PY2021 to 1,883,259 in PY2022, with a 26% decrease in CIEEP net kWh savings but a 238% increase in SBP project savings. This increase was due to SWEPCO's

implementer accelerating the pace of these SBP projects to counteract the anticipated shortfall in savings from lighting retrofit projects.

Program Challenges and Opportunities

Challenges

- Decrease in participation of several previous high-volume contractors due to business failure, business relocation or change in business model which resulted in decrease in lighting retrofit net kWh savings PY2021 to PY2022.
- Midstream Lighting net kWh savings decreased significantly in PY2022 over PY2021 partially impacted by staff turnover and supply chain issues.

Opportunities

- SEM participation and net kWh savings both increased dramatically in PY2022 over PY2021, with additional participation expected in PY2023.
- Commercial Door Air Infiltration projects at refrigerated loading bays continue to be well-received by customers and provide substantial net kWh savings.
- Commercial smart thermostat, commercial food service and electric vehicle charging stations measures are expected to provide additional customer service and savings for customers.

2.1.1 Commercial & Industrial Energy Efficiency Pathway

2.1.1.1 Pathway Description

The Commercial and Industrial Energy Efficiency Pathway (CIEEP) targets SWEPCO's Arkansas commercial, industrial, municipal, school, and hospital customers. Incentives are paid to customers or project applicants for the installation of a wide range of EE measures that reduce peak demand and save energy in qualifying non-residential facilities with peak demands greater than 100 kW of annual usage. Savings are determined using the currently approved Technical Reference Manual (TRM) deemed savings or through custom Measurement and Verification (M&V) plans employing point-of-use metering. Project measures eligible for incentive payments include replacement of existing installations of lower efficiency electric end-uses. In addition to the retrofit market, this pathway also applies to new construction or expansions. The primary EE measures targeted include, but are not limited to, lighting, HVAC equipment, refrigeration equipment as well as custom projects that may involve manufacturing processes, variable frequency drives, and compressed air. SWEPCO markets this pathway both

internally and through its EE team, as well as leveraging the relationships of its Account Managers and Customer Service Account Representatives as part of its overall marketing strategy.

Project applicants, trade allies, contractors/vendors, architectural firms, engineering firms, and community allies are encouraged to actively promote energy efficient projects.

2.1.1.2 Pathway Highlights

- In PY2022, the CIEEP achieved 122% of the planned net energy savings goal and 143% of the planned net demand savings goal.¹¹ Effects from the Covid-19 pandemic continued to affect the CIEEP adversely, with capital improvements delayed, cancelled, or reduced due to supply chain issues, such a year's delay in one customer receiving delivery of a new chiller.
- Net kWh savings decreased from PY2021 to PY2022 from lighting retrofit projects for the second year in a row, from 48.3% to 42.1%, while commercial smart thermostats also decreased from 24.1% to 17.9% net kWh savings. A substantial amount of CIEEP net kWh savings was made up of two measures which have not been a major contribution to CIEEP in previous program years: SEM at 22.0% and compressed air leak repair at 8.5% of PY2022 net kWh savings. The impressive showing of these two measures is due to their ability to service a need not addressed by other measures.
- Continued to offer compressed air survey and leak repair incentives which resulted in five completed compressed air survey and leak repair projects in PY2022, with three additional projects requested or underway, and expected to complete in PY2023
- SWEPCO continued inter-utility collaboration with Black Hills Energy Arkansas (BHEA) such as continuing to offer the Strategic Energy Management component to large commercial and industrial customers, and recruiting customers for a PY2023 cohort
- Strategic Energy Management was well-received by participating customers as shown by customer surveys:

¹¹ Appendix A, ADM Associates, Inc. PY2022 Evaluation Report, Table 4-9, p. 82

- “We would otherwise slowly do changes, so many lights a month, but with incentives we can do it a lot quicker.”¹²
- “We also report out to customers ... our biggest customers, they are very big on sustainability and the environment and (want to know) what we are doing as a company to follow through with that. Times are changing. This is a big issue in the world when it comes to our resources and everything.”¹³
- “(We are) more active in sustainability and circularity and things like that. This program just fell in with what we were trying to do already.”¹⁴
- We are always looking for ways to improve. We are always caught up in our day-to-day stuff, so for them to come in and actually do a walkthrough on our whole facility, look at everything, tell us what could be improved on and ways to improve it. That really helped some of this.”¹⁵
- “I will do everything in my power to spread the word about it.”¹⁶
- “It is always good to have another set of eyes to look at our facility, environment, and processes. (We) go blind to things that may require some improvement. This has really helped us.”¹⁷
- Due to strong customer and trade ally demand for the pathway, marketing efforts were maintained but not expanded in PY2022. Beyond direct customer and contractor outreach, some of the more notable events included:
 - Promoted the CIEEP at local and regional venues, including:
 - Individual customer outreach and education
 - Two Community Ally Events
 - Two HVAC Lunch & Learns
 - Northwest Arkansas ASHRAE Chapter member meetings, including ASHRAE Golf Tournament sponsorship

¹² Appendix A, ADM Associates, Inc. PY2022 Evaluation Report, p. 114

¹³ Ibid

¹⁴ Appendix A, ADM Associates, Inc. PY2022 Evaluation Report, p. 115

¹⁵ Appendix A, ADM Associates, Inc. PY2022 Evaluation Report, p. 117

¹⁶ Appendix A, ADM Associates, Inc. PY2022 Evaluation Report, p. 118

¹⁷ Ibid

- Northwest Arkansas Community Showcase sponsorship
- Pathway staff continued to enhance their energy efficiency knowledge through trainings offered by the Arkansas Manufacturing Solutions, Energy Efficiency Arkansas, Arkansas Association of Energy Engineers, and the Association of Energy Service Professionals. Trainings included:
 - Association of Energy Services Professionals National Conference
 - Certified Energy Manager course
 - Louisiana Clean Fuels Summit
 - Latest Trends in Measurement & Verification course (Arkansas Association of Energy Engineers)
 - Arkansas Association of Energy Engineers + ASHRAE Conference
- Continued cross promotion of CIEEP and the Load Management Pathway has consistently increased customer satisfaction.
- Pathway staff observed continued market transformation with pathway participants from previous years seeking input on more comprehensive EE projects beyond lighting.
- The contribution in net kWh savings of lighting retrofit projects to CIEEP decreased 16.2% from PY2021 to PY2022, with SWEPCO diversifying with SEM, compressed air leak repair, commercial door air infiltration, commercial smart thermostat, HVAC, refrigeration, and custom projects.

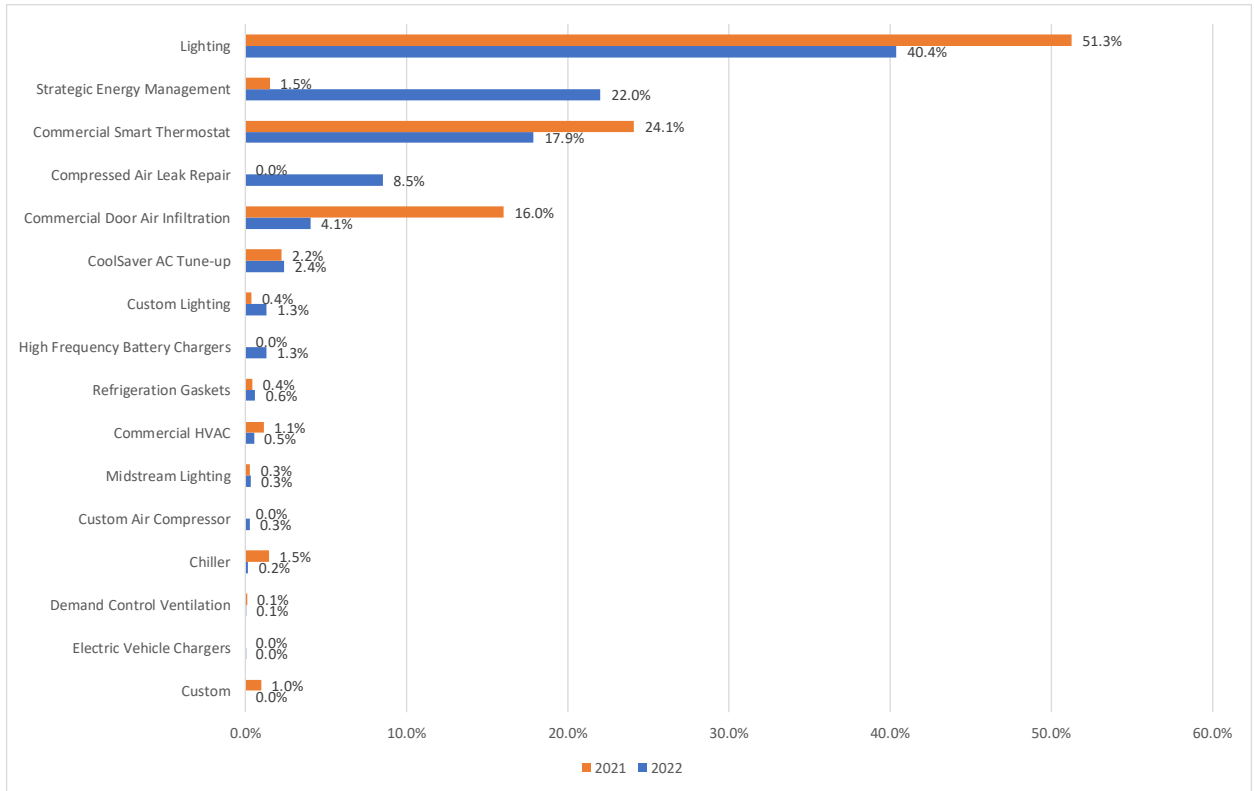


Figure 5 – PY2021 - PY2022 Net kWh Savings Achieved by Measure

Figure 5 highlights pathway comprehensiveness through multiple energy efficiency measures.

2.1.1.3 Pathway Budget, Savings & Participants

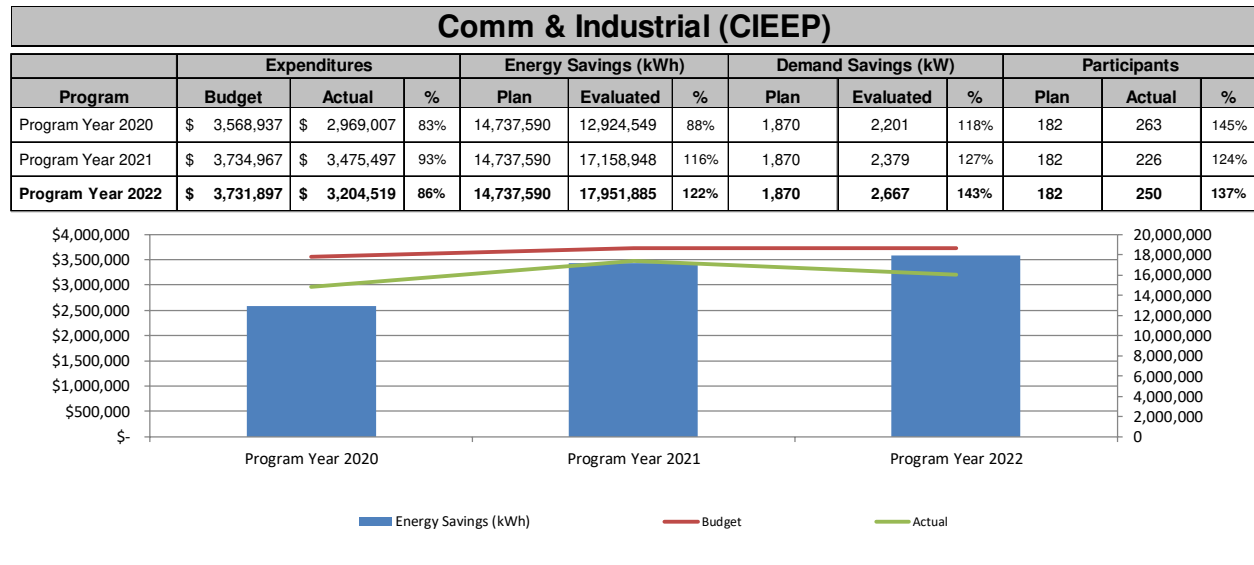


Figure 6 - Commercial & Industrial Energy Efficiency Pathway Trends

2.1.1.4 Description of a Participant for this Pathway

For the CIEEP, a participant is defined as a completed project. As previously stated, pathway eligibility was available to all commercial and industrial customers with a minimum peak demand greater than 100 kW, with the exception of customers approved to self-direct.

2.1.1.5 Challenges & Opportunities

Challenges

- Market conditions and upcoming federal regulations continue to highlight the need for energy savings measures other than traditional lighting measures. SWEPCO was successful in the CIEEP in PY2022 in diversifying the types of completed measures, so all lighting categories combined comprised just under half of the pathway’s net kWh, but ongoing outreach and new contractor recruitment is required to ensure this trend continues.

Opportunities

- SEM expanded dramatically from PY2021 to PY2022, with the number of participants the realized savings within the calendar year increasing from two to five

and total net kWh savings increasing from 259,632 to 3,955,138. This is due to the increased interest by SWEPCO's customers, and adoption growing with time as customers internalize the measure's concepts and processes.

- CoolSaver A/C Tune-up contributions to the CIEEP increased from PY2021 to PY2022, from 385,613 to 435,850 net kWh savings, with continued increases expected in PY2023.
- Midstream lighting contributions to the CIEEP increased from PY2022 to PY2022, going from 51,298 to 57,533 net kWh savings, with continued increases expected in PY2023.
- As a result of continued outreach, the implementation team completed several large facility energy audits in PY2022, including SEM energy audits and subsequent customer education of improvement opportunities, and will continue to do so in PY2023.
- Customers continued to show interest in compressed air leak repair projects throughout PY2022, with additional projects expected to complete in PY2023.
- Team members continue to increase their market engagement and outreach. This includes continual engagement of mechanical contractors and building a strong pipeline of new construction projects through outreach to customers, contractors, and Architect & Engineering firms.
- The Project Portal continues to allow both customers and trade allies to use a streamlined digital process to calculate incentives and submit project applications.

2.1.1.6 Planned or Proposed Changes to Pathway & Budget

- Team members will focus on recruiting a diverse group of participating contractors and A&E firms throughout the year, beginning with a joint CIEEP and Small Business Commercial Contractor Kickoff event in January 2023.
- SWEPCO's CIEEP incentive budget for PY2023 will remain the same at \$2,084,196 while maintaining a gross energy savings goal of 16,375,100 kWh.
- The CIEEP will remain a pathway within SWEPCO's Business/Industrial Solutions Program.

2.1.2 Small Business Pathway

2.1.2.1 Pathway Description

The Small Business Pathway (SBP) targets commercial customers with a maximum demand up to and including 100 kW. The pathway offers incentives for measures such as lighting, HVAC, direct install, refrigeration upgrades, and more. SBP is a contractor-driven pathway with much of the pathway marketing, site assessments, and project installations being performed by trade allies. Historically SWEPCO has paid incentives to the participating trade allies who deduct the incentive amount from the customers' project costs, but customers may now receive their incentive payment directly from SWEPCO in certain circumstances due to the increased diversity of measure types.

2.1.2.2 Pathway Highlights

- In PY2022, the SBP achieved 80% of the planned net energy savings goal and 65.0% of the planned net demand savings goal.¹⁸
- Pathway staff continued to focus on geographic regions with historically lower participation rates and on the diversification of measures contributing to the pathway savings. SBP projects were completed in 25 cities throughout SWEPCO's service territory.
- Maintained an online Field Tool & Portal to provide SBP trade allies with the ability to create incentive estimates and submit project applications electronically
- Promoted both the SBP and the CIEEP to 1,033 individuals via in-person and virtual outreach
- Maintained communications with trade allies by:
 - Hosting virtual meetings to keep in touch with participating contractors
- Marketing and outreach efforts increased in PY2022 included:
 - Continuing the use of an integrated marketing plan and tactics, which included emails, direct mail, bill inserts, postcards, digital ads, and social media
 - Increasing the focus on this customer segment through email, direct mail, and

¹⁸ Appendix A, ADM Associates, Inc. PY2022 Evaluation Report, Table 4-11, pg. 83

digital ad campaigns

- Directing outreach to customers to promote upgrades and participating contractors, including re-engagement of customers previously contacted by a contractor but who did not move forward with a project
- Promoting the SBP at local and regional venues, including two Community Ally Events which led to increased engagement with local communities and two HVAC Lunch & Learns to promote VRF and heat pump technology and associated incentives
- The contribution in net kWh savings of lighting retrofit projects to SBP (including midstream projects) decreased from 79% in PY2021 to 49% in PY2022, with commercial door infiltration commercial smart thermostats, CoolSaver A/C tune-ups and HVAC unit installations increasing.

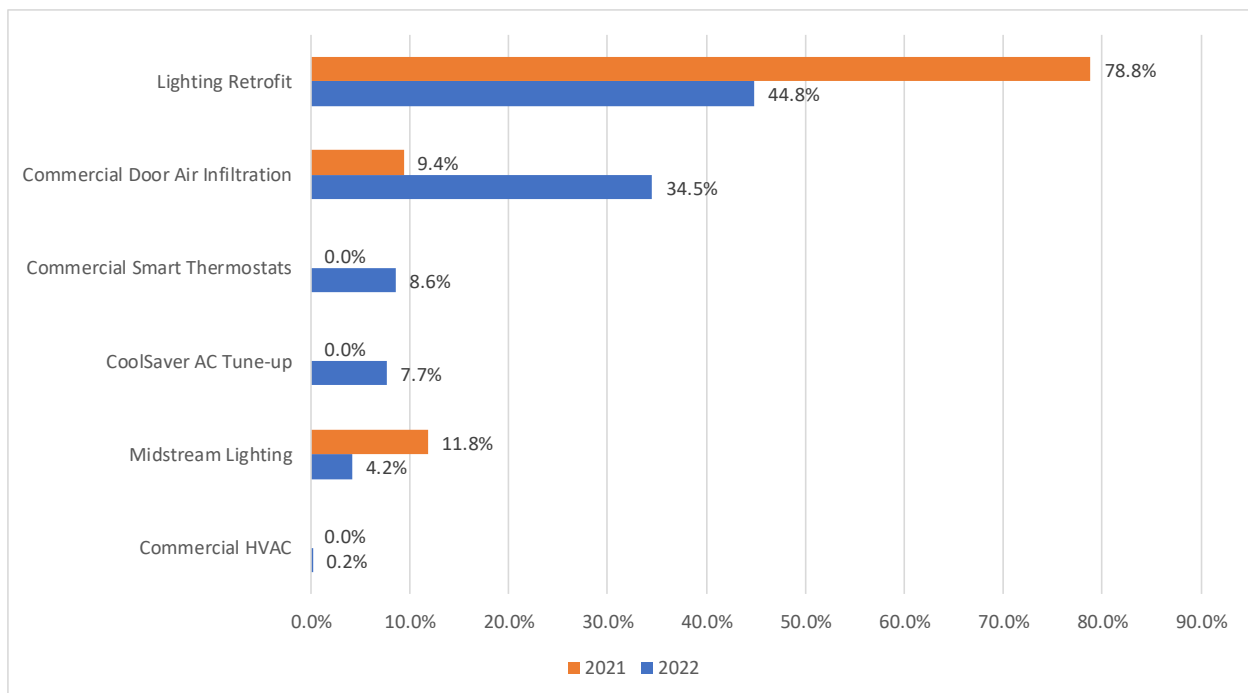


Figure 7 – PY2021 - PY2022 Net kWh Savings Achieved by Measure

2.1.2.3 Pathway Budget, Savings, & Participants

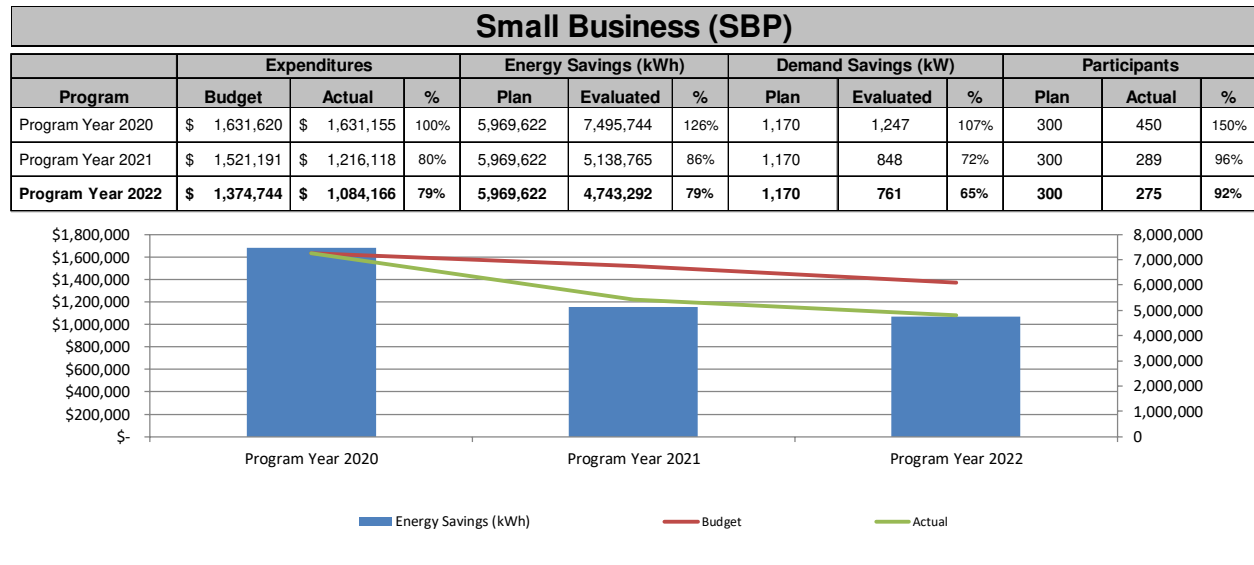


Figure 8 – Small Business Pathway Trends

2.1.2.4 Description of Participants

SWEPSCO considers each Small Business Pathway project to be a participant.

2.1.2.5 Challenges & Opportunities

Challenges

- In PY2022, for the second year in a row, SBP experienced a decrease in net kWh and net kW savings (7.7% and 10.2% respectively) compared to PY2021, although measure diversity increased from PY2021 to PY2022. Supply chain issues and staff transitions had negative impacts on contractor activity throughout the year.
- 3 Launched seasonal Sales Performance Incentive Funds (SPIFs) for qualifying Small Business lighting projects in Q4 to accelerate the completion and submission of eligible projects before year end, which influenced 28 projects, a decrease from PY2021 in which a similar SPIF influenced 67 projects. As a result, SWEPSCO will increase the incentive rate for Small Business lighting projects in PY2023 to influence projects throughout the year rather than offer seasonal promotions.
- Most trade allies have a business model which supports a single measure. Therefore, they continue promoting single, core measures to their customers.

Though several trade allies have expressed interest in expanding to offer additional measures beyond lighting, to date these attempts have not had long term success.

- The contribution of underserved markets to net energy savings decreased by half from 30.9% PY2021 to 14.1% in PY2022. However, there are additional opportunities to increase participation rates in southwest Arkansas, and this will continue to be an outreach focus in PY2023.
- Midstream lighting contributions to the SBP decreased from PY2021 to PY2022, going from 605,595 to 199,268 net kWh savings, as vendors faced similar staffing and supply chain challenges as other trade allies. One participating vendor in PY2021 did not participate at all in PY2022. Renewed engagement is planned to increase participation in PY2023.

Opportunities

- CoolSaver A/C Tune-Up contributions to SBP increased from zero (0) net kWh savings in PY2021 to 363,881 in PY2022. Likewise Commercial Smart Thermostat contributions to SBP increased from zero (0) net kWh savings in PY2021 to 408,791 in PY2022. These increases were due to a trade ally expanding its focus from large commercial customers to include those eligible for SBP, and they intend to continue this focus into PY2023.
- Commercial Door Air Infiltration increased from 356,125 net kWh savings in PY2021 to 1,636,539 in PY2022, demonstrating the ability to adjust the volume of these projects to compensate for a decrease in savings contribution from other measures. We expect this trend to continue in PY2023.
- Pathway staff will continue to pursue opportunities with trade allies whose core business model extends beyond lighting to become active in the SBP and the CIEEP.
- Team members continue to increase their customer & contractor engagement and outreach, especially for the recruitment of new construction, HVAC, and commercial food service contractors as well as Midstream vendors.

2.1.2.6 Planned or Proposed Changes to Pathway & Budget

- SWEPCO's Small Business Pathway incentive budget for PY2023 will remain at \$983,925 with a gross energy savings goal of 6,350,662 kWh.
- The SBP will remain a pathway within SWEPCO's Business/Industrial Solutions Program.

2.1.3 Load Management Standard Offer Pathway

2.1.3.1 Program Description

This program is a non-tariff based demand response (DR) program that targets large commercial and industrial customers with a minimum peak electric demand of 175 kW or greater. The minimum contract amount of demand reduction required is 175 kW per customer. When SWEPCO calls for a curtailment event, the participating customers are requested to implement their load reduction plan. The maximum number of hours a customer may be called upon in any Program Year (PY) is 49 hours which includes one-hour test. The Program Period is defined as June 1 through September 30, excluding weekends and holidays, during each PY. Events are limited to a maximum of four hours in duration and to no more than three events in a program month. LMSOP customers are notified at least one hour prior to an unscheduled event via telephone, e-mail and text.

SWEPCO installs interval data recorders (IDR) at LMSOP customer sites where an IDR is not already present. Prior to the program period, SWEPCO and the participating LMSOP customers perform a one hour scheduled curtailment test to determine a customer's ability to comply with the 175 kW minimum required curtailment threshold.

The criterion whereby curtailments are called is established prior to each Program Period. Prior to the LMSOP Program Period of PY2022, SWEPCO established the criteria to call for program curtailments when SWEPCO's peak load was anticipated to be at least 94% of the projected peak.

2.1.3.2 Program Highlights

SWEPCO paid \$178,112 in monetary incentive to eight customers (17 meters) that were capable of reducing electrical peak demand with a minimum one-hour advance notice during the program months of June through September. The approved incentive budget was \$250,000. The Company paid each of the eight participating customers \$20/kW

based on the average kW reduction during the program period. In addition, the Company paid \$0.25 for every kWh reduced during an event period. The program's total expenditures in PY2022, including incentives, were \$198,096, versus an approved budget of \$296,968.

During PY2022, four unscheduled curtailment events were called. Historically, system peaks coincide with above average daily temperatures. Through daily monitoring of forecasted SWEPCO system peaks, the four curtailment events occurred, on June 24, July 7, July 20, and July 26.

LMSOP participants are kept informed of other SWEPCO energy efficiency programs by program staff. Four participating LMSOP customers have been identified for potential CIEEP projects in PY2023, and these customers are waiting on management approval to proceed. Two of the participating LMSOP customers have shown interest in participating in the Strategic Energy Management program, SEM.

While the program evaluator conducted no customer satisfaction surveys as part of the PY2022 evaluation, the LMSOP program manager states customer satisfaction remains high with no program issues.

2.1.3.3 Pathway Budget, Savings & Participation

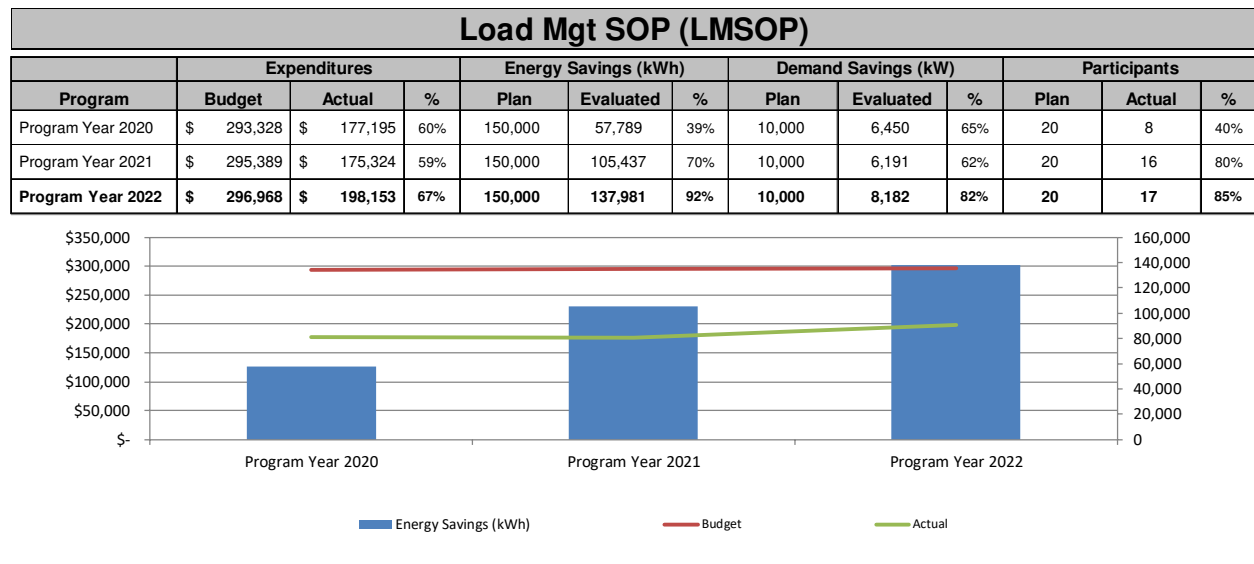


Figure 9 – Load Management Standard Offer Pathway Trends

2.1.3.4 Description of a Participant for this Pathway

This program is a non-tariff based demand response (DR) program that targets large commercial and industrial customers with a minimum peak electric demand of 175 kW or greater. The minimum demand reduction required for participation is 175 kW per customer. In PY2022, the Company continued to define a participant as a meter.

2.1.3.5 Challenges & Opportunities

The LMSOP achieved 81.8% of its demand reduction target and 92% of its energy-savings target.¹⁹ SWEPCO considers both its five-day demand forecast and knowledge of its available generating units when making unscheduled curtailment decisions. The LMSOP accounted for 54.2% of SWEPCO's PY2022 portfolio net demand reduction.

Challenges

- There were four unscheduled events in PY2022, which was the same number of unscheduled events in PY2021. The highest number of unscheduled events was nine, occurring in PY2011. In previous program years, temperatures have been the driving force for the initiation of curtailment events since they were in direct correlation to system peak demand.
- There are a limited number of program eligible customers that can participate without adverse business results, and a customer must be able to reduce their demand by a minimum of 175 kW.

Opportunities

- Continue to keep LMSOP customers informed of other SWEPCO energy efficiency programs. Each of the LMSOP customers have completed and received incentives by participating in the CIEEP.
- Two participating LMSOP customers have shown interest in participating in SEM
- Continue to pursue additional participants who have the potential to reduce their peak demand by 175 KW with one hour notice either through load curtailment or the use of onsite generation

¹⁹ Appendix A, ADM Associates, Inc. PY2022 Evaluation Report, Table 4-13, p. 84

- Continue to amend the criterion for when events are initiated by potentially lowering the forecast system peak demand threshold
- Continue to keep cold storage customers aware of potential curtailment events as system peak forecasts are updated
- The LMSOP customer that declined to participate in PY2021 due to equipment failures completed repairs and re-enrolled in PY2022 and successfully participated

2.1.3.6 Planned or Proposed Changes to Program & Budget

The minimum contract amount of demand reduction per customer will remain at 175 kW for PY2023. The approved budget (ABudget) for the LMSOP is \$296,968 for PY2023.

2.2 Home Solutions Program

In PY2022, SWEPCO offered the Home Solutions Program (HSP) as part of its energy efficiency portfolio, which provided a comprehensive range of customer options focused on energy efficiency, demand reduction, and education. The HSP consists of four pathways:

- Home Performance with ENERGY STAR Pathway
- Income Qualified Weatherization Pathway Pilot
- Residential Energy Improvement Pathway
- Efficient Products Pathway

Program Highlights

- Achieved a ninth consecutive ENERGY STAR® Partner of the Year Award, including a seventh “Sustained Excellence” designation, from the U. S. Environmental Protection Agency (EPA) for the PY2022 performance of the Company’s HPwES Pathway
- In-person outreach resumed in PY2022 with home and trade shows, Chamber of Commerce functions, Community Ally meetings, and a National Drive Electric Week event. There were 438 residential outreach and training events held in PY2022.
- Continued COVID-19 health and safety guidelines for implementers and contractors following the Centers for Disease Control and Prevention (CDC) protocols to ensure the health and well-being of all parties involved while continuing to administer the HSP pathways.

- Expanded the use of the Virtual Assessment/Virtual Assurance tool that maintained program integrity with minimal physical contact between implementers, trade allies and customers while performing live quality assessments/assurances, mentoring, and post-installation customer satisfaction interviews. Utilizing this tool also increased the day-to-day efficiency of the implementation team.
- Continued offering the New Homes Package through REIP resulting in participation from 6 homebuilders, for a total of 15 homes, with net energy savings of 47,469 kWh.
- Continued marketing all pathways to SWEPCO's Arkansas customer base using a diverse and comprehensive marketing campaign. For PY2022 marketing was accomplished through the use of paid search, social media, print ads, and email campaigns. This resulted in 198,192 unique website visits, amounting to almost four times as many as PY2021, and 185,385 new visits. Spotify ads were developed in PY2022 for use in PY2023.²⁰
- Continued to expand the use of an online portal to allow contractors to electronically submit single-family measures
- Utilized a bi-annual trade ally newsletter to communicate pathway news and activities
- Included pathway specific article in each monthly Energy Efficient Residential Newsletter
- Continued the use of SWEPCO's EE portfolio website URL to function as an extension of SWEPCO's primary website, providing SWEPCO customers with a seamless transition to further EE pathway information.
- Continued the use of a Thank You card emailed to participating customers, providing residential pathway cross-promotion and pathway contact information.
- Continued to utilize pathway brochures that included participating trade allies contact information and provided trade allies with marketing materials for their use in recruiting potential customers.
- Conducted three Building Performance Institute (BPI) Building Analyst training and certification classes, for trade allies resulting in 15 newly certified personnel. The

²⁰ Appendix A, ADM Associates, Inc. PY2022 Evaluation Report, p. 37

classes were funded by SWEPCO and BHEA and offered to participating trade allies at a reduced cost.

- Utilized a no-cost online trade ally training portal for Continuing Education Units (CEU) and provided low-cost, 'virtual' Building Performance Institute (BPI) training classes, sales training and personalized mentoring - all focused on superior customer service, quality workmanship, and time management.
- A Home Performance Coalition Conference was attended by the SWEPCO personnel, SWEPCO implementation team and contractors. SWEPCO provided two scholarships to assist contractors in attending this conference.
- Continued training the participating Income Qualified Weatherization Pathway (IQW) contractors to identify and implement additional measures and broaden the focus on health and safety.
- The Home Solutions Program marketing materials provide information on the program pathways along with a brochure for the CoolSaver HVAC tune. The materials reference energy and cost savings and non-energy benefits such as improved comfort and longer lasting equipment.

The Home Solutions Program encouraged participants to capture deeper energy savings (kWh) through comprehensive projects. SWEPCO worked with the gas utilities to share the incentive costs for HVAC measures for shared customers while coordinating in-field training and mentoring with trade allies that participate in multiple utility programs to better align installation practices and quality assurance for dual fuel customers.

In PY2022, LED lamps, duct sealing, and smart thermostats are the HIM of the residential sector.²¹

²¹ Appendix A, ADM Associates, Inc. PY 2022 Evaluation Report, p. 24

2.2.1 Home Performance with ENERGY STAR®

2.2.1.1 Pathway Description

The Home Performance with ENERGY STAR® Pathway (HPwES) targets SWEPCO's Arkansas residential customers and connects eligible customers with a network of trained service providers (trade allies) to install EE improvement measures that save energy, reduce peak demand, and improve indoor comfort, air quality, and safety in existing residences.

Effective in PY2016, HPwES was restructured to operate in accordance with the APSC's Consistent Weatherization Approach (CWA). HPwES eligible homes must have been occupied for the last twelve months and be 10 years old or older or have had an electric bill in the last twelve months that exceeds \$0.10 per square foot. All incentives are paid directly to the installing trade ally based on the eligible measures meeting energy efficiency standards in the home. Pathway core measures include a comprehensive energy assessment, duct sealing, air infiltration, ceiling insulation, wall insulation, LEDs, advanced power strips, low-flow showerheads, and faucet aerators. SWEPCO markets HPwES through an integrated marketing campaign, which includes a participating trade ally network and other community allies.

The national HPwES Program is a Department of Energy (DOE) and Environmental Protection Agency (EPA) backed program that endorses a “whole-house” approach where each project begins with a comprehensive home energy assessment. SWEPCO was the first ENERGY STAR® Sponsor in Arkansas of the HPwES Pathway. Based on the success of this program during PY2022, SWEPCO made an application for, and won the 2023 ENERGY STAR® Partner of the Year—Sustained Excellence Award. This was the ninth consecutive year for SWEPCO to receive the Partner of the Year Award.

2.2.1.2 Pathway Highlights

- In PY2022, the HPwES Pathway had 1,928 homes participate, achieving 5,828,632 net kWh savings, which is 90% of the planned net energy savings goal of 6,486,837 kWh²². The Pathway also achieved 2,183.60 in net kW savings or 98.6% of the planned net demand goal of 2,109 kW.²³

²² Appendix A, ADM Associates, Inc. PY 2022 Evaluation Report, Table 2-7, p. 25

²³ Appendix A, ADM Associates, Inc. PY 2022 Evaluation Report, Table 2-6, p. 22

- Total spend for HPwES in PY2022 was \$2,992,923, which is 93% of the pathway budget. HPwES was cost-effective, with the TRC, UCT, and PCT cost benefit ratios well above 1.0.
- Continued health and safety guidelines for implementers and contractors followed the Centers for Disease Control and Prevention (CDC) protocols to ensure the health and well-being of all parties involved while continuing to administer the HPwES pathway.
- Streamlined the Virtual Assessment/Virtual Assurance tool process that maintained project integrity between implementers, contractors, and customers while offering the opportunity to provide live quality assessments/assurances, consultation on EE measures, and post-installation interviews.
- Continued the use of SWEPCO's EE portfolio website URL to function as an extension of SWEPCO's primary website, providing SWEPCO customers with a seamless transition to further EE pathway information.
- Prepared and issued a Request for Qualifications (RFQ) for PY2022 trade ally participation. Each trade ally application was reviewed and scored to enroll and maintain a base of high-quality trade allies. The implementation team coordinated with the Black Hills Energy Arkansas (BHEA) implementation team throughout the process.
- Hosted a HPwES Pathway kick-off and training meeting for trade allies to launch the PY2022 pathway, train on best practices, and educate about new processes
- Continued the use of a joint utility Trade Ally Weatherization Portal for participating trade allies to submit project data electronically
- Continued to implement a project allotment system (1,305 leads generated and given out in PY2022) for all trade allies to ensure year-round pathway availability and increase trade ally consistency and performance
- Expanded contractor base to include one new contractor and several new teams to existing contractors.
- Developed and distributed HPwES yard signs and door hangers for contractor lead generation
- Attended the National Home Performance Conference in Nashville, TN.

- Provided two scholarships to participating trade allies to attend the 2022 National Home Performance Conference in Nashville, TN
- Conducted a mid-year virtual HPwES Trade Ally meeting to review pathway progress and provide additional training
- Continued the successful joint utility partnership with HPwES sponsor BHEA and with Summit Energy. In total, the partnerships resulted in 975 customers receiving a joint-use contractor visit, a single quality assurance visit and a joint comprehensive energy assessment report.
- Continued the use of a customer waiting list process to connect SWEPCO customers calling the toll-free pathway phone number, or signing up via the SWEPCO website, with an available contractor
- Continued to utilize a HPwES brochure that included participating trade allies contact information
- Continued the use of a contractor Scorecard which helped to quantify the successes and possible obstacles that contractors face, in addition to providing a comparison of their peers with HPwES
- Continued to utilize an Energy Assessment Report for contractors, helping to, streamline the data gathering process, and create a uniform customer report for SWEPCO and BHEA joint customers.
- On average, HPwES participants received measures that resulted in 3,476 kWh of energy savings and incentives that totaled \$1,022.²⁴ As shown in Figure 10 below, duct sealing continued to be the primary savings driver for this pathway.

²⁴ Appendix A, ADM Associates, Inc. PY2022 Evaluation Report, Table 5-105, p. 166

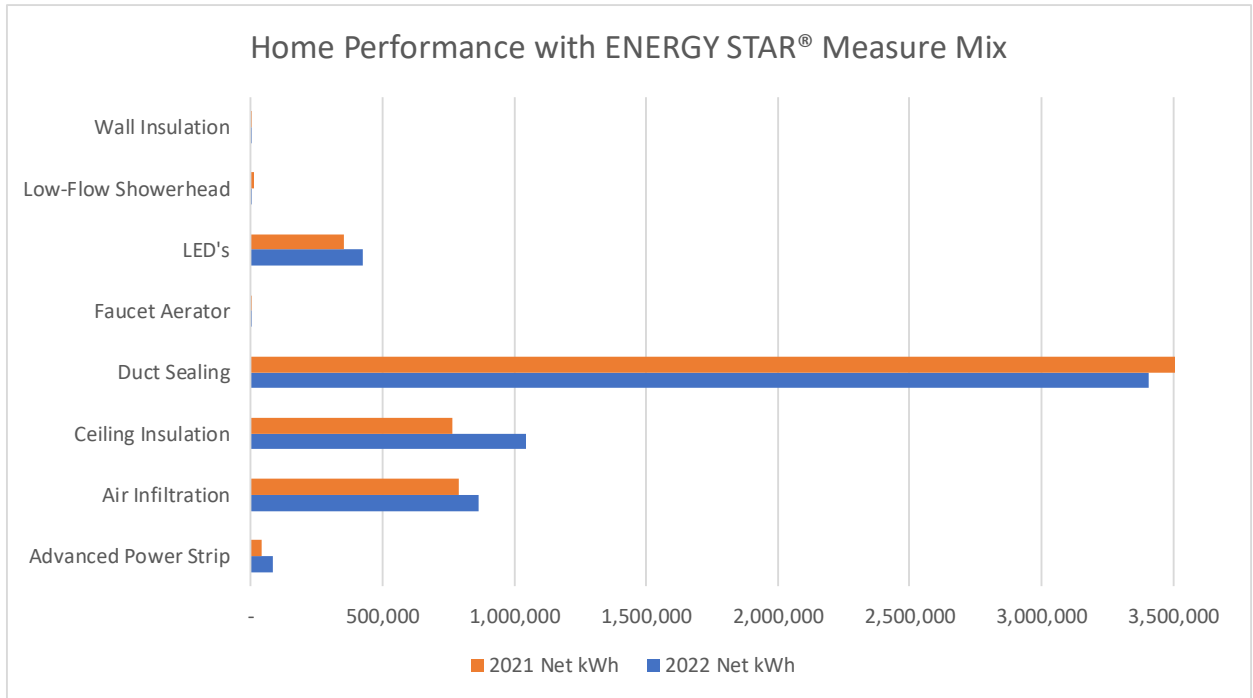


Figure 10 – PY2021 Measure kWh to PY2022 Measure kWh

2.2.1.3 Pathway Budget, Savings and Number of Measures

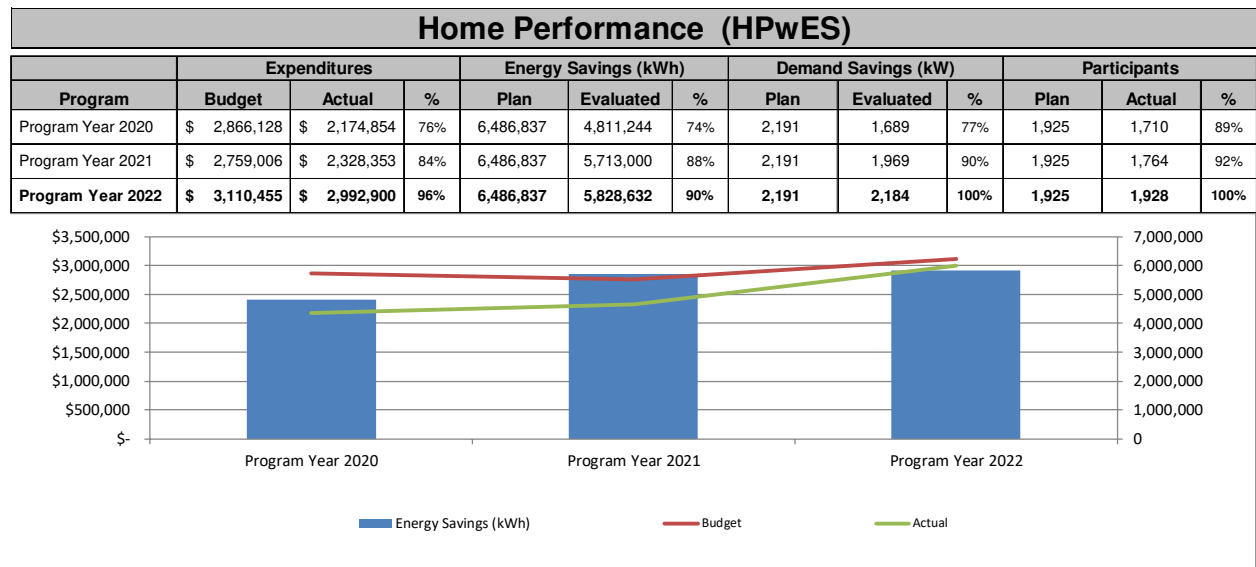


Figure 11 – Home Performance with ENERGY STAR Trends

2.2.1.4 Description of Participants

For HPwES, the participant count represents the number of incentivized projects (homes).

2.2.1.5 Challenges & Opportunities

Challenges

- Despite market constraints due to supply chain and contractor retention, the pathway saw an increase in subscribers, from 1,764 in PY2021 to 1,928 in PY2022. The lingering effects of the pandemic created minor supply chain issues during 2022 but did not halt the pathway's momentum. SWEPCO and its implementer continued to institute guidelines recommended by the Centers for Disease Control and Prevention (CDC) for contractors and customers.
- In PY2022, the pathway's outreach events included home and trade shows, Chamber of Commerce functions, Community Ally meetings, and contractor training and appreciation events. Outreach events reached more than 2,431 people throughout all residential pathways, utilizing both online/virtual and in-person meetings in PY2022. By utilizing both traditional and digital marketing tactics during the year, SWEPCO's HPwES pathway has continued to build customer awareness, employing the ENERGY STAR brand to enhance and validate the targeted marketing message.
- SWEPCO's Arkansas service territory, which spans parts of 13 counties, continues consistent HPwES penetration and success.

Opportunities

- Enhancing contractor awareness of the weatherization industry by providing ongoing resources, updates, and BPI Building Analyst training opportunities.
- Streamlining data collection methods, reducing paperwork, and faster incentive payment processing resulting from the use of the joint utility Trade Ally Weatherization Portal.
- Program participation had a positive impact on participant's perceptions of SWEPCO as an energy provider, with the majority of respondents indicating it increased their satisfaction with SWEPCO.

- Increased joint utility participation with a second natural gas utility.

2.2.1.6 Planned or Proposed Changes to Pathway or Budget

- SWEPCO's HPwES incentive budget for PY 2022 will remain at \$2,192,125 with a gross energy savings goal of 7,050,910 kWh.

2.2.2 Income Qualified Weatherization Pathway

2.2.2.1 Pathway Description

The Arkansas Public Service Commission (APSC) issued ACT 1102 to better serve LIHEAP eligible and 65+ customers. In PY2020, SWEPCO created a pilot pathway, Income Qualified Weatherization Pathway (IQW), based on the success of the existing Home Performance with ENERGY STAR® (HPwES) platform. The Pathway connects eligible customers with trained IQW service providers (trade allies) to install EE improvement measures that save energy, reduce peak demand, and improve indoor comfort, air quality, and safety. The IQW Pathway is one of four residential Pathways within the broader SWEPCO Home Solutions Pathway.

SWEPCO residential customers who meet the following requirements are eligible to participate in the IQW Pathway:

- Residential customers served by a SWEPCO electric meter.
- The residence must be individually metered, as verified by an active SWEPCO account number.
- The residence meets the AR CWA requirements
 - Must have 12 months of usage history and
 - Be 10 years old or older or
 - Highest electric bill in previous 12 months exceeds \$0.10/sq ft
- Customer must be LIHEAP eligible or at least 65 years of age and will self-certify
- Tenant-occupied dwellings are eligible providing the property owner provides permission.
- The home cannot have previously participated in the Arkansas Weatherization Pathway (AWP), SWEPCO HPwES or IQW Pathways, Black Hills Energy Home Energy Solutions Pathway, or Summit Utilities' Weatherization Pathway. Those that have previously participated may still participate in SWEPCO's Residential Energy Improvement Pathway (REIP).

SWEPCO's IQW customers receive the same, no-cost measures covered under the APSC's 2016 Consistent Weatherization Approach (CWA):

- Comprehensive Energy Assessment,
- Duct Sealing
- Air Infiltration
- Ceiling Insulation
- Wall Insulation
- LEDs
- Advanced Power Strips
- Low-flow Showerheads
- Faucet Aerators

SWEPCO's IQW Pathway developed incentives for non-traditional, no-cost direct install measures of:

- ENERGY STAR® Smart Thermostats (when Wi-Fi is available)
- ENERGY STAR Air Purifier
- Water Heater Tank Wrap
- Water Heater Pipe Wrap
- R-49 Attic Insulation

Order No. 51 in Docket No. 13-002-U allows for an additional \$500.00 to be used for Health and Safety Measures and include, but are not limited to:

- Electrical/Gas Repair
- HVAC Repair
- Clean Dryer Vent
- Flue Repair
- Exterior Moisture Control
- Furnace Filter
- Smoke/CO Detectors
- Mechanical Ventilation – Following ASHRAE 62.2-2013 Guidelines

The IQW Pathway is implemented in conjunction with the local gas utilities that share service territory. To supplement the IQW Pathway measures, SWEPCO offers additional measures through the REIP, to help reduce the cost of installing more energy efficient measures not included in the no-cost IQW Pathway.

2.2.2.2 Pathway Highlights

- In PY2022, the IQW Pathway achieved 111% of the planned net energy savings goal and

149% of the planned net demand goal.²⁵

- In PY2022, 72 homes participated in the IQW Pathway and achieved 271,499 kWh of net energy savings and 124 kW of net demand savings.
- Total spend for IQW in PY2022 was \$219,832, which is 100% of the pathway budget. IQW was cost-effective, with the TRC, UCT, and PCT cost benefit ratios well above 1.0 with a levelized cost of \$0.051 per kWh.²⁶
- On average, IQW participants received measures that resulted in 3,347 kWh of gross energy savings and incentives that totaled \$1,334.24.²⁷ As shown in Figure 12 below, duct sealing continued to be the primary savings driver for this pathway.
- Continued training the participating contractor to identify and implement the additional pathway measures and broadened the focus on health and safety.
- Additional training for contractor/crews on ASHRAE 62.2-2013 for adequate mechanical ventilation measures.
- Maintained health and safety guidelines for implementers and contractors following the Centers for Disease Control and Prevention (CDC) protocols to ensure the health and well-being of all parties involved while continuing to administer the IQW pathway.
- Utilized the Virtual Assessment/Virtual Assurance tool that maintained pathway integrity with minimal physical contact between implementers, contractors and customers while performing live quality assessments/assurances, mentoring, and post-installation customer satisfaction interviews.
- Continued communication between SWEPCO, BHEA, and Summit Energy implementation teams to further unify and streamline the pathway processes, interactions, trade ally engagement, and customer experiences beyond the current portal implementation.
- Continued the use of a joint utility Trade Ally Weatherization Portal for participating trade allies to submit project data electronically
- Used the project allotment system for trade allies to ensure year-round pathway availability and increase trade ally consistency and performance

²⁵ Appendix A, ADM Associates, Inc. PY2022 Evaluation Report, Table 2-7, pg. 25

²⁶ Appendix A, ADM Associates, Inc. PY2022 Evaluation Report, Table 2-17, pg. 38

²⁷ Appendix A, ADM Associates, Inc. PY2022 Evaluation Report, Table 5-111, p. 169

- Continued the successful joint utility partnership with BHEA resulting in 56 customers receiving a joint-use contractor visit, a single quality assurance visit, and a joint comprehensive energy assessment and report.

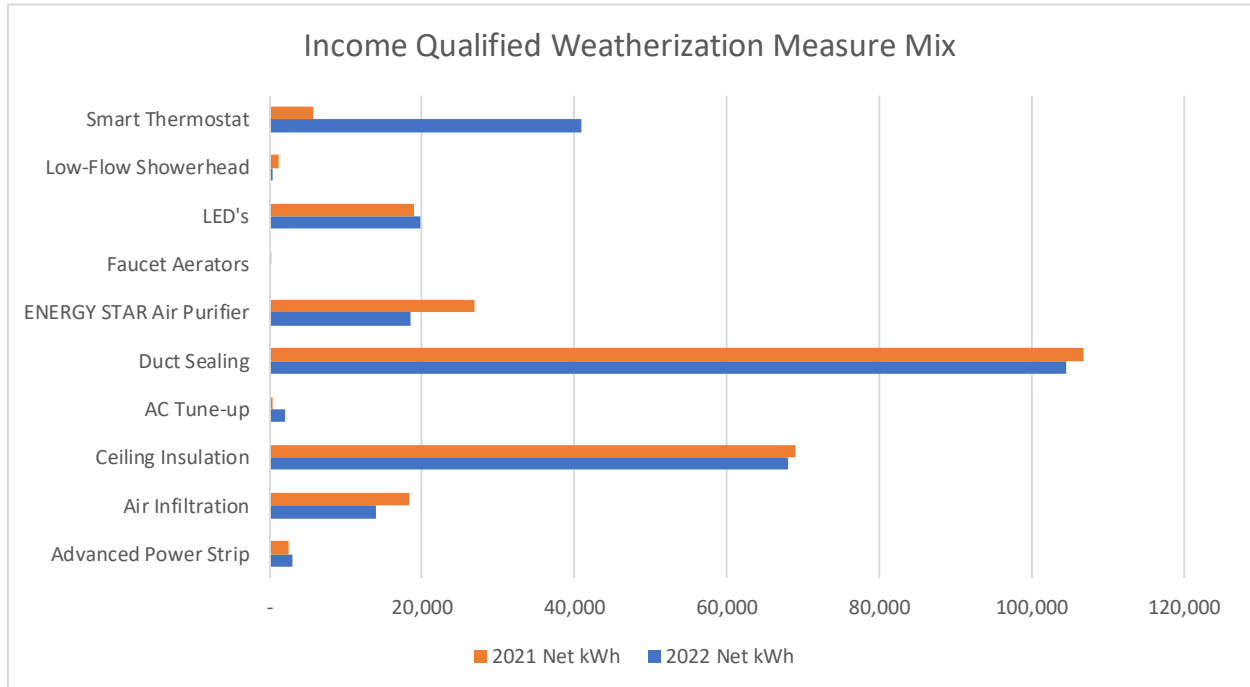


Figure 12 – PY2021 – PY2022 Measure kWh

2.2.2.3 Pathway Budget, Savings and Number of Measures

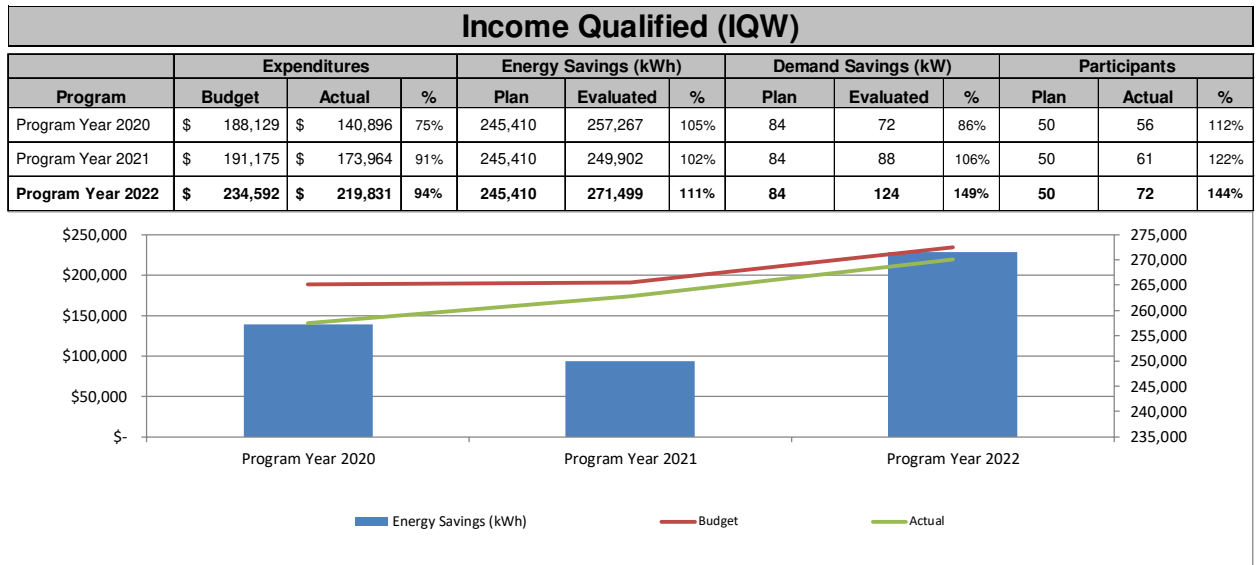


Figure 13 - Income Qualified Weatherization Trends

2.2.2.4 Description of Participants

For IQW, the participant count represents the number of incentivized projects (homes).

2.2.2.5 Challenges & Opportunities

Despite market constraints due to lingering supply chain issues, workforce retention, and inflation, the pathway saw an increase in participants and energy savings in PY2022. The pathway participant count increased from 61 in PY2021 to 72 in PY2022. SWEPCO and CLEAResult continued to follow the guidelines recommended by the Centers for Disease Control and Prevention (CDC) for contractors and customers.

Table 2: IQW Pathway Growth Summary 2022

Pathway Year	Total No. of Homes	Total Est. Gross kWh Savings	Total Est. kW Savings	kWh Goals	kWh/Home	Incentive \$/kWh
2020	56	268,773	72.5	266,750	4,800	\$0.31
2021	61	268,204	91	266,750	4,397	\$0.36
2022	72	267,727	120.69	266,750	3,718	\$0.51

Opportunities

- Evaluate other health and safety options or measures that might have application in the IQW demographic
- Enhancing contractor awareness of the weatherization industry by providing ongoing resources, updates, and BPI Building Analyst training opportunities.

2.2.2.6 Planned or Proposed Changes to Pathway or Budget

- SWEPCO's IQW incentive budget for PY2023 will remain \$118,625 with a gross energy savings goal of 266,750 kWh.
- Opportunity to grow IQW savings in PY2023 through an increased participation from 50 to 75 homes.
- SWEPCO will expand the participating contractor base to cover the southern and central portions of the service territory.
- Contractor development to drive increase in savings and fully subscribe incentive budget.

2.2.3 Residential Energy Improvement Pathway

2.2.3.1 Pathway Description

The Residential Energy Improvement Pathway (REIP) is available for all SWEPCO Arkansas residential customers, either owner or renter. Incentives are paid to customers and service providers (trade allies) for the installation of targeted EE measures that save energy and reduce peak demand in existing single-family residences and multifamily housing units. Measures eligible for incentive payments include, but are not limited to CoolSaver air conditioner tune-ups, ENERGY STAR® smart thermostats, hybrid water heaters, replacement of central air conditioners and heat pumps, and building envelope measures, such as duct sealing, air infiltration, insulation, and ENERGY STAR windows. The New Homes Incentive Package utilizes an incentivized tier system for the construction of new homes that capitalizes on high efficiency standards to meet or exceed local building codes and focuses on reducing energy use by 15-30% over conventionally built homes. Measures include 15+ SEER heat pumps, ENERGY STAR appliances, LED lighting, 240v outlet for Electric Vehicle charging, and/or heat pump water heaters and induction cooktops. SWEPCO markets this pathway through an integrated marketing campaign, which includes a participating trade ally network and other Community Allies.

2.2.3.2 Pathway Highlights

- In PY2022, the REIP achieved 4,873,998 kWh net energy savings or 133% of the 3,678,955 kWh planned net energy savings goal²⁸ and 581 kW demand savings²⁹ or 190% of the 306 kW³⁰ planned net demand savings goal.
- The New Homes Incentive Package increased to 15 homes with 6 builders participating, for a combined savings of 47,469 net kWh and 6 net kW.
- Provided in-person and virtual training to new trade allies, reviewing forms, pathway details, walk-through assessment training, and marketing opportunities

²⁸ Appendix A, ADM Associates, Inc. PY2022 Evaluation Report, Table 2-7, p. 25

²⁹ Appendix A, ADM Associates, Inc. PY2022 Evaluation Report, Table 2-6, p. 22

³⁰ Appendix A, ADM Associates, Inc. PY2022 Evaluation Report, Table 1-1, p. 17

- Continued to implement a direct install ENERGY STAR smart thermostat incentive for multi-family projects
- Increased CoolSaver A/C tune-up energy savings from 796,600 kWh in PY2021 to 924,448 kWh in PY 2022
- Continue to expand the use of an online portal to allow contractors to electronically submit single-family measures
- Conducted in-field and virtual training to trade allies to reinforce best practices in duct sealing, air infiltration, and ceiling insulation installation
- Continued to offer a special multifamily promotion of \$15 per apartment unit to previous multifamily direct install only participants, as an incentive to increase their energy savings via duct sealing, air infiltration and ceiling insulation measures
- Inspected 8% of the 2,023 completed projects, either in-person or virtually, to maintain high quality installation standards
- Conducted three virtual CoolSaver A/C tune-up trainings at no cost for participating trade allies, resulting in 9 new technicians being trained.
- Continued a CoolSaver A/C tune-up pre-clean process allowing trade allies to partially complete the A/C tune-up outside of the cooling season and to finalize the remainder of the tune-up when required weather conditions were met
- Continued to utilize an online CoolSaver A/C tune-up sign-up form on SWEPCO's energy efficiency website for interested customers
- Conducted multifamily project QAQC inspections to ensure quality work throughout the various stages of the projects. This process provided improved communication between all project stakeholders and increased multifamily property owner and tenant satisfaction.
- Educated multifamily participating residents about potential participation in SWEPCO's Efficient Products Pathway and Property Managers about SWEPCO's commercial pathways
- Continued the use of a Trade Ally Property Summary to help educate the participating multifamily property managers on the completed improvements and recommend additional energy saving opportunities

- In PY2022, installation of smart thermostats and CoolSaver participation all increased over PY2021 for Multifamily.

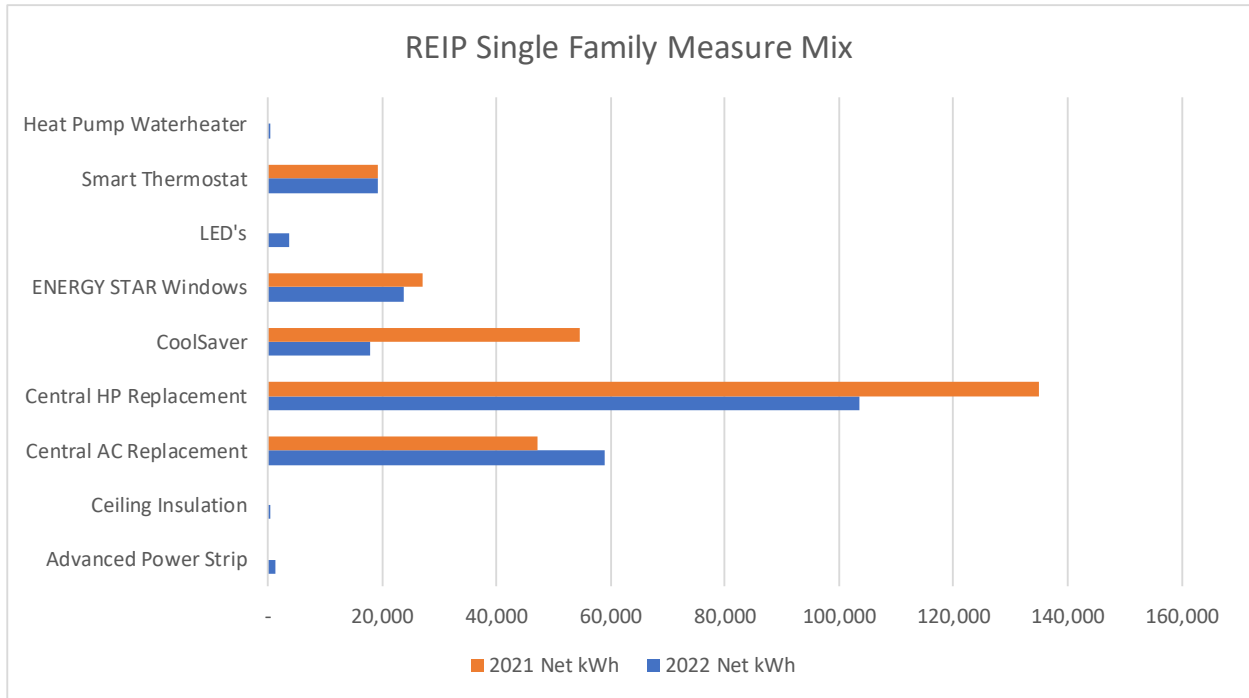


Figure 14 – Single Family Measure Comparison PY2021-PY2022

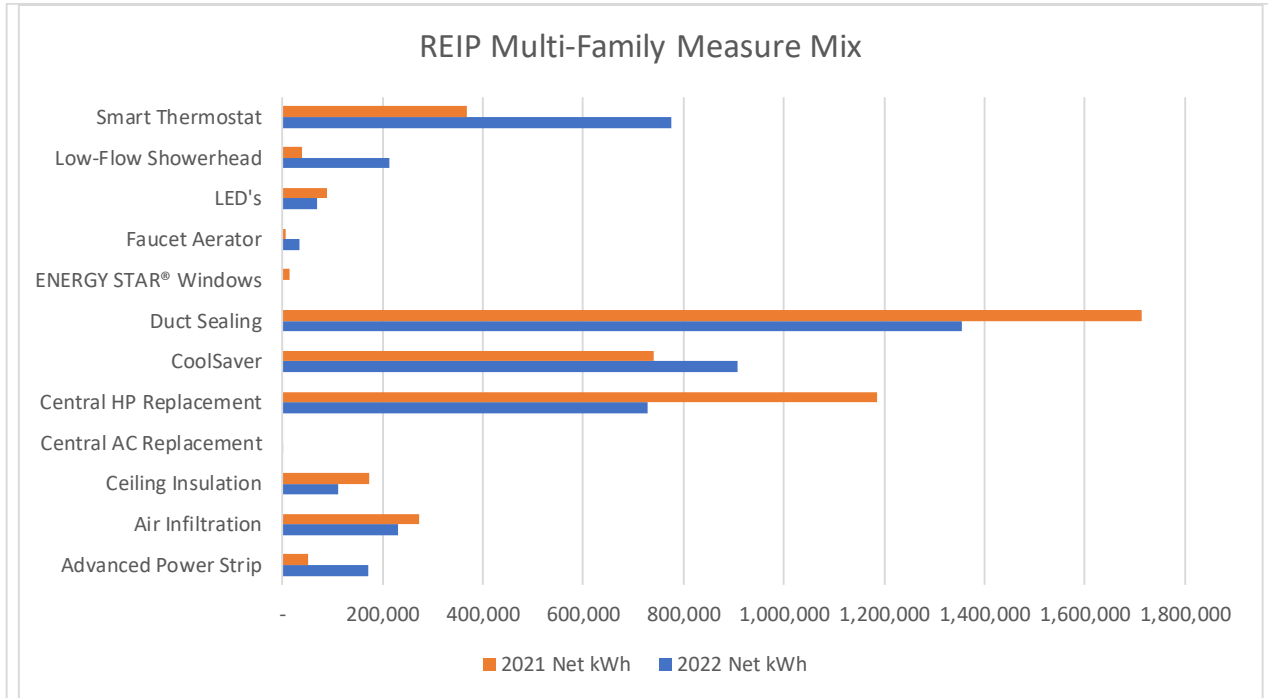


Figure 15 – Multifamily Measure Comparison PY2021 – PY2022

2.2.3.3 Pathway Budget, Savings, and Number of Measures

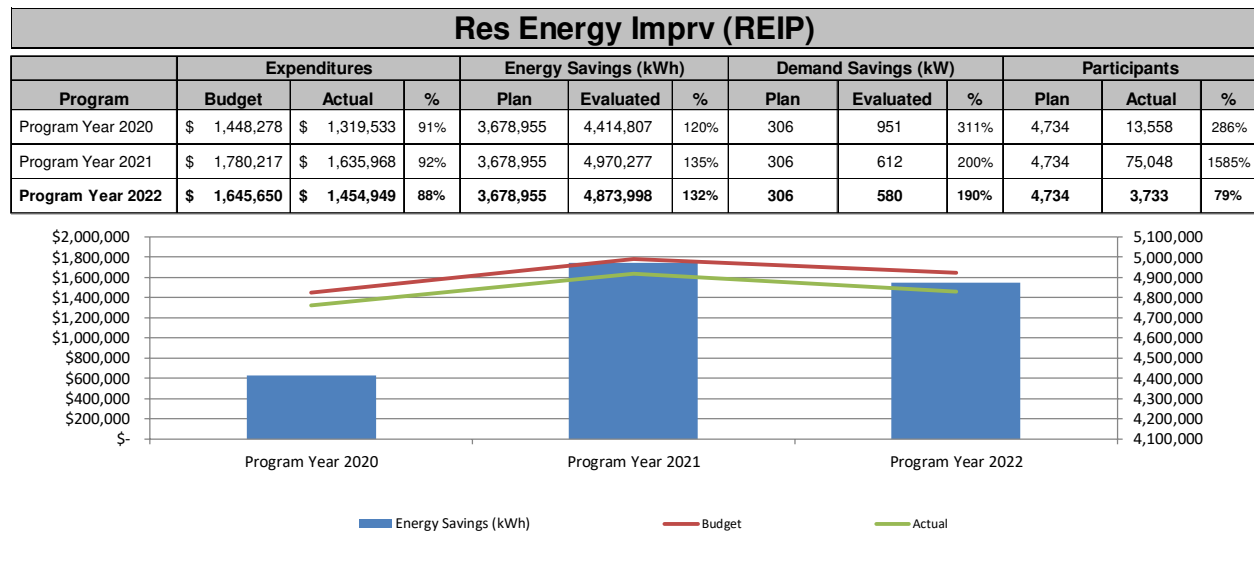


Figure 16 – Residential Energy Improvement Pathway Trends

2.2.3.4 Description of Participants

For the REIP, the participant count represents the number of incentivized measures.

2.2.3.5 Challenges and Opportunities

The measure mix was more balanced with a variety of other measures offsetting some of the duct savings. The geographic layout of the SWEPCO territory remains a major barrier, creating difficulties for pathway trade allies to identify eligible customers or specific areas to promote the pathway. In addition to the geographic challenges, below are a few specific examples of other challenges and opportunities:

Challenges

- The pathway continues to search for bilingual trade allies to reach a large segment of SWEPCO’s customer base.
- The majority of trade allies have a business model which supports a single measure. With SWEPCO’s continued efforts to encourage cross-promotion, several contractors have started to branch out, promoting additional measures beyond their core business model, such as bundling smart thermostats with the

CoolSaver A/C tune-up.

- While single-family customer awareness of the pathway has continued to improve each year, it continues to be an obstacle. Despite widespread marketing efforts by SWEPCO and the implementation staff, some customers still state they are unaware of the program. The replacement of air conditioners and heat pumps continued to improve but remains low. Pathway paperwork/code requirements, pathway awareness, and replacement cost continue as both trade ally and customer participation barriers.
- Despite a healthy incentive, the heat pump water heater measure continues to experience low participation.

Opportunities

- The primary driver for REIP in PY2022 continued to be the multifamily component. While many of the larger multifamily properties have participated in REIP, there are still a significant number of small to medium sized multifamily properties eligible to participate.
- Multifamily properties that had previously participated in REIP will continue to be leveraged to adopt additional measures such as CoolSaver A/C tune-up, smart thermostats, ENERGY STAR windows, HVAC replacement, and ceiling insulation. Their familiarity with REIP makes them more willing to participate than a new property.
- Trade ally training will be continued in PY2023 to encourage pathway participation and assist trade allies to adopt new measures or partner with other network trade allies.
- Expand outreach and recruitment efforts to plumbing contractors for the heat pump water heater measure
- Continue to drive CoolSaver growth through increased training of new and current contractors
- Expand ENERGY STAR window contractor base

2.2.3.6 Planned or Proposed Changes to Pathway or Budget

- In PY2023, the REIP will continue to be a Pathway in SWEPCO's Home Solutions Program.
- Design enhancements planned for PY2023 includes increased push of heat pump water heaters, additional focus on electric resistance to heat pump upgrades, new home incentives package, and further development of participating contractors.
- For PY2023, the minimum requirement for heat pump and air conditioning incentives will be 16 SEER.

SWEPCO's REIP incentive budget for PY2023 will remain at \$590,125, with a gross energy savings goal of 4,328,182 kWh.

2.2.4 Efficient Products Pathway

2.2.4.1 Pathway Description:

The Efficient Products Pathway (EPP) is designed to reduce the initial costs associated with the purchase of advanced power strips (APS), ENERGY STAR® qualified LEDs, ENERGY STAR clothes washers, ENERGY STAR air purifiers, ENERGY STAR heat pump water heaters, ENERGY STAR smart thermostats, ENERGY STAR pool pumps, and ENERGY STAR dehumidifiers, and ENERGY STAR certified Electric Vehicle Level 2 chargers to increase their penetration in the market.

A point-of-purchase (POP) discount is the incentive provided to customers for LED bulbs. SWEPCO buys down the cost of qualifying ENERGY STAR LEDs at partner retailers. All retail customers receive buy-down pricing, and no pre-qualification is required at the point-of-purchase.

All EPP product incentives may be applied via one of three methods: instant in-store, an online web portal, or paper forms. Product and customer qualification and other requirements are verified prior to the incentive payment.

SWEPCO markets the pathway through an integrated marketing campaign, in-store point-of-purchase signage with partner retailers, and various outreach events.

2.2.4.2 Pathway Highlights

- In PY2022, the EPP achieved 4,356,346 kWh net energy savings or 135% of the planned net energy savings goal of 3,237,145 kWh³¹ and achieved 587 kW net demand savings³² or 110% of the planned net kW demand savings goal
- Continued use of an online Instant Rebate Tool (IRT) which provides customers an instant discount code to be used at check out when purchasing ENERGY STAR air purifiers, ENERGY STAR dehumidifiers, ENERGY STAR clothes washers, ENERGY STAR heat pump water heaters, and ENERGY STAR smart thermostats at select retailers.

³¹ Appendix A, ADM Associates, Inc. PY2022 Evaluation Report, Table 2-7 p. 25

³² Appendix A, ADM Associates, Inc. PY2022 Evaluation Report, Table 2-6 p. 22

- Conducted 204 retailer visits to inspect signage, confirm stock, pricing, and placement of all incentivized products, and trained 45 retail store personnel
- Continued LED off shelf and end cap promotions with 51 end cap promotions and 8 off shelf promotions.
- Launched a lighting promotion with local food pantries resulting in the distribution of 23,808 bulbs and an energy savings of 764,951 kWh
- Continued market neutrality in terms of manufacturer and retailer partners, supporting all retailers and manufacturers equally
- Maintained a strategic selection of retail partner store locations to minimize leakage
- Carefully managed SKU options at retail partners throughout the year to maintain consistent pathway presence within the budgetary allotment

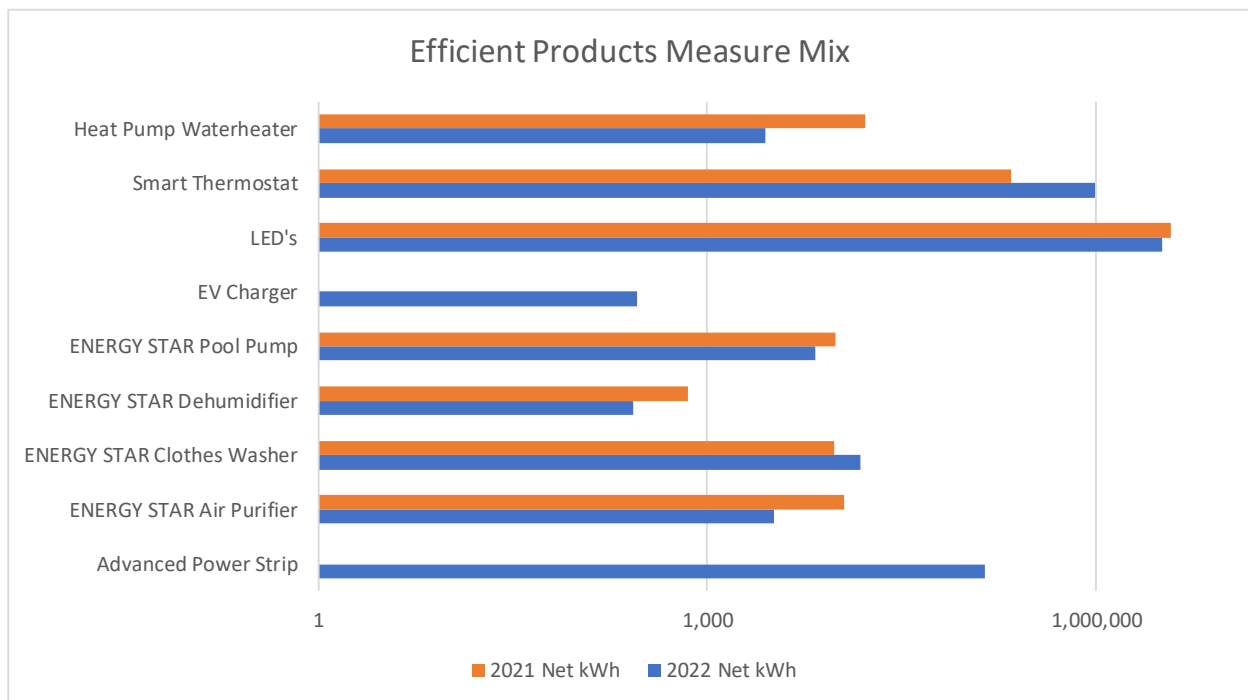


Figure 17 – Efficient Products Pathway Measure Mix Comparison PY2021 – PY2022

2.2.4.3 Pathway Budget, Savings and Number of Measures:

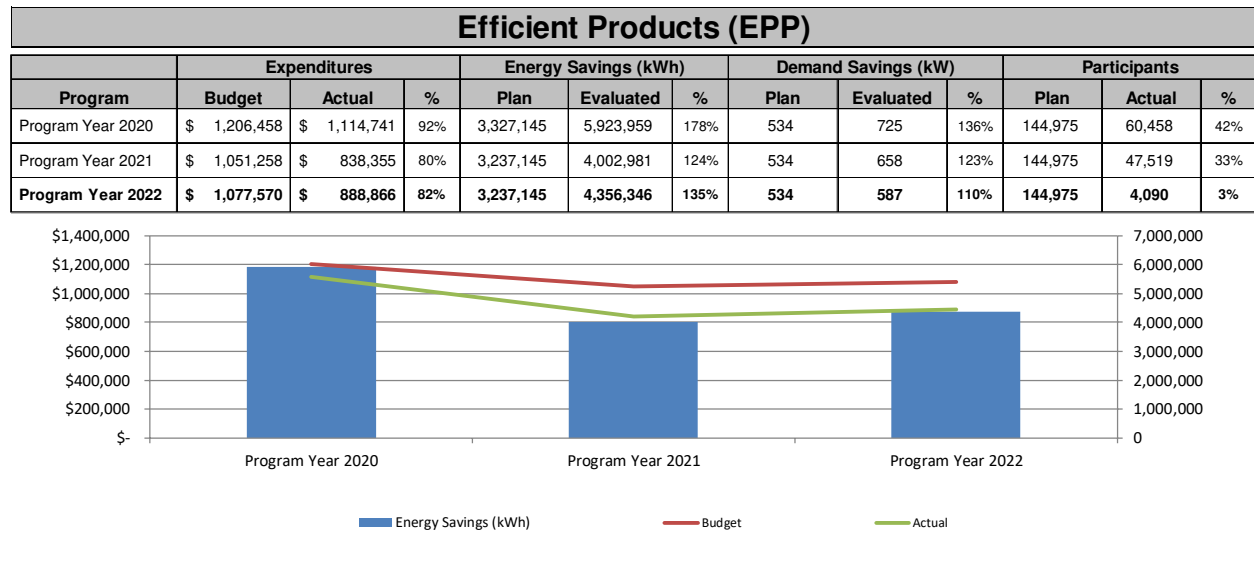


Figure 18 – Efficient Products Pathway Trends

2.2.4.4 Description of Participants

SWEPSCO defines a participant as an individual unit, i.e., a single LED, advanced power strip, clothes washer, smart thermostat, air purifier, heat pump water heater, pool pump or dehumidifier.

2.2.4.5 Challenges & Opportunities

During the PY2022 evaluation, SWEPSCO’s third party evaluator utilized the Price Response Model to evaluate free ridership. This methodology develops a regression to estimate the relationship between the price and quantity sold. The Evaluator used a negative binomial model to account for the right-skewed relationship between prices and quantities.³³

³³ Appendix A, ADM Associates, Inc. PY2022 Evaluation Report, p. 60

Challenges

- The point-of-purchase instant markdown delivery approach utilized by SWEPCO allowed for greater market penetration and influence compared to other delivery methods. This method creates challenges within SWEPCO's unique service area as it is conducive to leakage.
- Retailers have specific protocols in place that prohibit best practice evaluation techniques such as in-store surveys. As a result, the determination of the appropriate free ridership, spillover and net-to-gross adjustments will continue to be a challenge when performing pathway evaluation.
- Retailer supply chain and internal merchandise placement impacts the availability and ease of locating incentivized products. Some supply chain disruptions continued in PY2022.
- DOE moved forward with the Energy Independence and Security Act of 2007 (EISA) "backstop" efficiency standard for general service lamps which will greatly reduce the amount of energy savings for this pathway.

Opportunities

- SWEPCO will continue to focus on customer and sales associate education to help its customers make LED choices based on lamp application, efficacy, color, and lumens.
- Smart thermostat adoption rates will increase as customers continue to transform their homes with smart devices.
- SWEPCO will continue to work with its third-party evaluator to find ways to reduce leakage and free ridership.
- Increased promotion and use of the Instant Rebate Tool will provide a convenient way for customers to receive an incentive markdown. Market awareness campaigns will be utilized to expand customer adoption of this new process.
- Increased education for customers and contractors about Heat Pump Water Heaters will help to increase adoption of this measure

2.2.4.6 Planned or Proposed Changes to Pathway or Budget

- A partnership with local Food Banks for light bulb distribution will continue at least through the first two quarters of PY2023.

SWEPSCO's Efficient Products Pathway incentive budget for PY2023 will be \$363,875 with a gross energy savings goal of 5,581,285 kWh.

2.3 Energy Efficiency Arkansas

2.3.1 Program Description

EEA is an energy education program sponsored jointly by the gas and electric utilities of Arkansas and administered by the Arkansas Energy Office (AEO). The purpose of EEA is to provide fuel neutral information, education, and training that encourages the people and businesses of Arkansas to consume less energy through energy efficiency and conservation measures. The five primary components of EEA are as follows:

- Education and Information Outreach (Residential)
- Media Promotion
- Commercial and Industrial Education and Information Outreach
- EEA Program Evaluation
- Accountability

Additional details for the overall program are provided in the PY2022 EEA Annual Report filed in Docket No. 07-083-TF on or about May 1, 2023.

2.3.2 Program Highlights

- The EEA Facilitator with the Arkansas Energy Office continues to enhance the outreach efforts of EEA, specifically in the promotion of the utilities' energy efficiency programs.
- The EEA Facilitator provided outreach at many events throughout the state, including ten in or adjacent to SWEPCO's service territory.
- Details regarding all EEA trainings were provided to appropriate customers and trade allies.
- The AEO consistently provided Monthly Newsletters throughout the year beginning in January, 2022.
- In PY2022, EEA meetings were held March 8, 2022 for the Q4 2021 meeting, July 8, 2022 for the mid-year meeting, and November 9, 2022 for the third meeting. The 2022 Partner Meeting was held on February 2, 2023.

2.3.3 Program Budget, Savings & Participants

The 2022 approved budget of \$41,324 was approved by the Commission in Order No. 110 of Docket No.07-082-TF. Of this approved budget, \$39,324 was approved as SWEPCO's contribution to the PY2022 EEA budget. The EEA budgets to be used by the AEO for PY2020-2022, along with the associated Memorandum of Understanding (MOU) were approved by Order 60 in Docket No. 07-083-TF on June 17th, 2019.

With this MOU, EEA was allowed to expire on December 31st, 2022 with no fourth MOU needed and 2022 being the final Utility invoicing period. However, under Dockets No. 13-002-U, Order 65 and Docket No. 07-083-TF, Order 62, EEA will be allowed to administer final programming activities through Calendar Year 2023 in order to expend all remaining funds and both Orders extend the current MOU until December 31st, 2023.

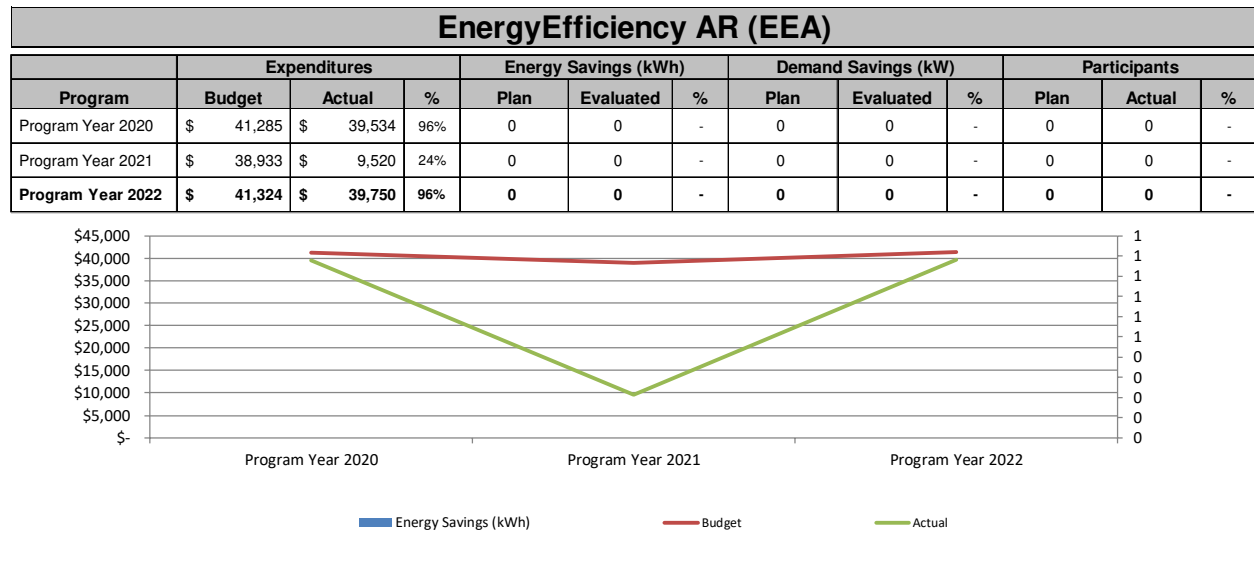


Figure 19 – Energy Efficiency Arkansas Trends (SWEPCO component only)

2.3.4 Description of Participants

This program does not have a participation goal, but SWEPCO considers a participant to be a SWEPCO customer.

2.3.5 Challenges & Opportunities

For information on program challenges & opportunities, see the EEA Annual Report provided on or about May 1, 2023.

Challenges

- The EEA Facilitator provided outreach at many events throughout the state with ten in or adjacent to SWEPCO's service territory.

Opportunities

- AEO's grassroots outreach efforts could refer qualified individuals in the local Investor Owned Utilities' (IOU) territory to participate as part of the IOUs' energy-efficiency offerings.
- During PY2022, swepcosavings.com received a total of 6 hits coming from the EEA website, but SWEPCO is not able to confirm which hits are being generated from the EEA Commercial/Industrial or Residential site.

2.3.6 Planned or Proposed Changes to Program & Budget

SWEPCO participated in the development of the Third Comprehensive MOU for the Energy Efficiency Arkansas Program. By Order No. 60 in Docket No. 07-083-TF, SWEPCO's portion of the total funding is \$39,284.72, \$36,933.38, and \$39,323.91 for years PY2020, PY2021, and PY2022 respectively. With the MOU scheduled to expire at the end of PY2022, the utilities and other interested parties of the PWC participated in a call with the Arkansas Department of Environmental Quality (ADEQ) and Arkansas Energy Office to discuss the future of the EEA Program. The EEA requested an extension of the existing funds from June 30, 2022 (approximate) to the end of 2023. This will allow for the additional use of the current account balance to provide continued training and distribution of EEA booklets, etc. EEA was allowed to expire on December 31st, 2022, but under Dockets No. 13-002-U Order 65 and Docket No. 07-083-TF Order 62, EEA will be allowed to administer final programming activities through Calendar Year 2023 in order to expend all remaining funds and both Orders extend the current MOU until December 31st, 2023.

2.4 Educational Solutions Program

SWEPCO continued to include the Educational Solutions Program (ESP) during PY2022, as part of its energy efficiency portfolio. While there are no participant goals or incentives tied to the program, the focus is to provide educational material to help customers make informed decisions regarding their energy use, energy efficiency and electrification. The Program consists of:

- Online Audit, currently offered through the Home Energy Management Tool (HEM)
- Electric Vehicle Equipment Pathway (EVE)

Program Highlights

- The Online Audit tool, Home Energy Management (HEM), enables SWEPCO residential customers to learn about and empower change in their energy usage habits.
- EVE pathway provides customers with information regarding environmental impacts of EV ownership and types of EV charging through the Company website [SWEPCO.com/Drive](https://www.swepcoco.com/Drive).

2.4.1 Online Audit

2.4.1.1 Program Description

The Home Energy Management online tool (HEM) was designed with integrated and enhanced features to capture more customer data, which will increase energy efficiency awareness and drive increased participation in the various residential pathways, thereby, providing additional savings for the portfolio. One component of this package is an online audit, known as the Home Energy Analysis.

The HEM tool features five embedded widgets:

- **Home Energy Analysis** encourages customers to take and complete an online audit, which provides us with valuable information about their home and allows the HEM tools to offer more relevant and personalized content.

- **Bill Comparison** lets customers compare their monthly bills and includes reasons why there are differences in cost. The default setting is a comparison between the current bill and the bill from the previous year.
- **Data Browser** helps customers understand their energy use over time with relevant comparisons to weather, similar homes and prior usage. They can see high-level trends and identify spikes in their use.
- **Tips** offer reasonable actions customers can take to control their energy use and to save on their bills. These savings tips are organized in collections of “guides” so they are relatable and fit into our customers’ lives.
- **Account & Preferences** is where customers can adjust their HEM tool settings.

The tool also provides **High-Bill Alerts**, which are emails to customers when they are on track to use more energy than they did during the same bill period the previous year. The alert uses weather data and historical usage data to estimate current usage, and to calculate a projected cost for the end of the billing cycle.

2.4.1.2 Program Highlights

Since its launch in 2020, a total of 4,192 SWEPCO customers have completed the Home Energy Analysis, receiving a report which provided detailed information regarding their specific home’s energy usage, energy efficiency tips and applicable SWEPCO residential pathways for further savings. It is unknown how many customers may have partially completed the required data fields prior to exiting the tool. Of the 4,192 completed reports, 1,594 were completed in PY2022, resulting in 342 customers participating in one of the SWEPCO Arkansas energy efficiency pathways during PY2022. Of the 342 customers, 188 participated in the Home Performance with ENERGY STAR (HPwES) Pathway with multiple customers being placed on the waitlist for HPwES for PY2023. The Efficient Product Pathway saw 100 customers participate in PY2022, while 14 customers participated in the Residential Energy Improvement Pathway single-family home offering and 36 participated in the multifamily offering. Another 4 customers participated in the Income Qualified Pathway for PY2022.

Additionally, of the 4,192 completed assessments, 165 participated in PY2021, while 399 participated in P/Y2020.

2.4.1.3 Program Budget, Savings & Participants

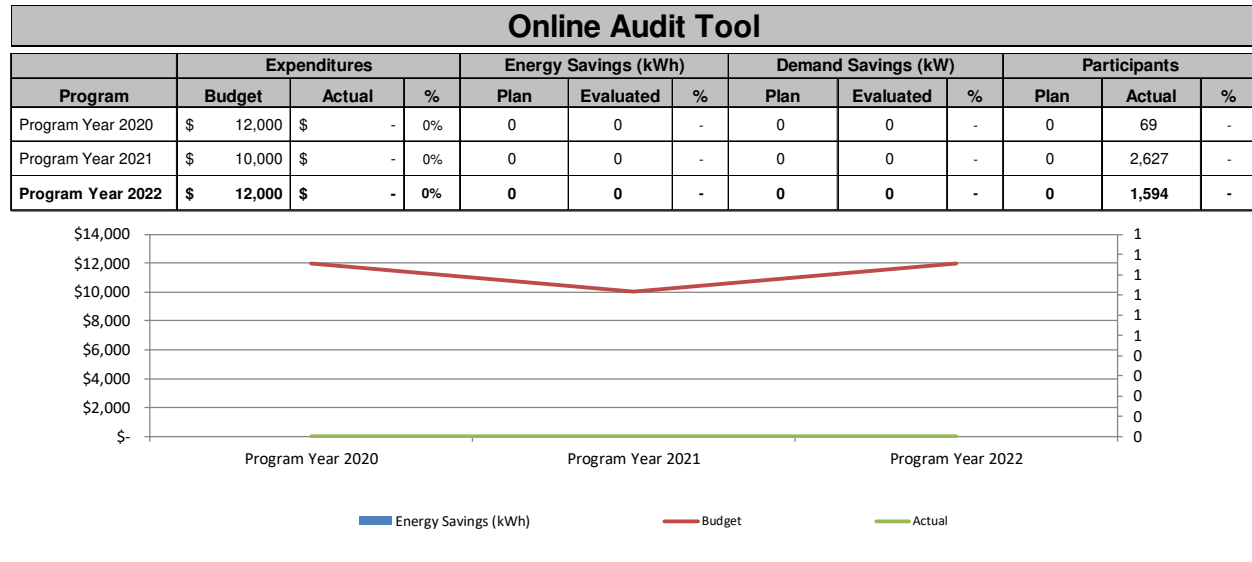


Figure 20– Online Audit Tool Trends

2.4.1.4 Description of Participants

A Participant is any SWEPCO Arkansas residential customer with an online account, which is where the online audit tool can be accessed.

2.4.1.5 Challenges & Opportunities

Challenges

- Data issues, such as invalid customer emails, can impact the timing and relevance of the outbound communications during the tool’s operation. Correcting inconsistent data due to customer miscommunication was a challenge throughout PY2022.

Opportunities

- SWEPCO is ramping up its marketing efforts to drive more customers to the new online audit tool. Based on the outcome of the new, more comprehensive completed Home Energy Analysis, links to applicable energy efficiency program information will be provided to those customers completing an analysis.

2.4.1.6 Planned or Proposed Changes to Program & Budget

SWEPSCO's Online Audit budget for PY2023 will remain at \$12,000.

2.4.2 Electric Vehicle Equipment (EVE) Education Pathway

2.4.2.1 Pathway Description

The Electric Vehicle Equipment Pathway (EVE) is a progressive educational opportunity created to help customers understand electric vehicles and the variations in charging infrastructure and impacts to the electric grid. The EVE Pathway, which was launched in PY2020, is part of the Educational Solutions Program. It is designed to provide Arkansas customers with information, education, and other useful materials that encourage the early adoption of electric vehicles. This is promoted through various integrated marketing activities such as SWEPSCO's website, social media, trade shows, ride and drive event, direct email, print and radio advertising, and collateral materials. SWEPSCO's webpage, "SWEPSCO.com/drive", provides customers with information covering the environmental impacts of EV ownership, information around types of EV charging, and where to find public chargers.

SWEPSCO provides the customer with valuable knowledge including, but not limited to:

- EV Environmental Impact
- Electrification and Installation
- Batteries and Charging
- EV Calculator
- Charging Locations
- Plug Star Vehicle Comparisons
- Manufacturer Incentives and Federal Tax Credits

2.4.2.2 Pathway Highlights

- The EVE Pathway continues to enhance the outreach efforts of electrification, specifically in the promotion EV Charging infrastructure and early adoption.
- SWEPSCO helped organize and sponsor the first in-person Northwest Arkansas National Drive Electric Week held on September 24, 2022.
- In PY2022, SWEPSCO began offering incentives of \$250 for qualifying Level 2 Energy Star single family chargers for residential customers and \$500 for small

business or commercial customers. These Level 2 chargers must be 16-80 amps and operate on 240V split-phase power (208V three-phase power supply is also acceptable).

- The EVE Pathway provided educational outreach and presentations at many events, including the Northwest Arkansas Planning Commission, The NWA EV Working Group, the Northwest Arkansas Council Electric Utilities Working Group, various Chamber meetings, and local municipal organizations.
- Dispersed educational materials and promotional handouts to internal employees as well as SWEPCO’s Arkansas Customers.
- During PY2022, the SWEPCO.com/Drive URL received a total of 3,620 page views and 3,033 unique page views.

2.4.2.3 Pathway Budget, Savings and Participants

Since the EVE Pathway is part of the Educational Solutions Programs with an educational focus, there were no associated energy savings.

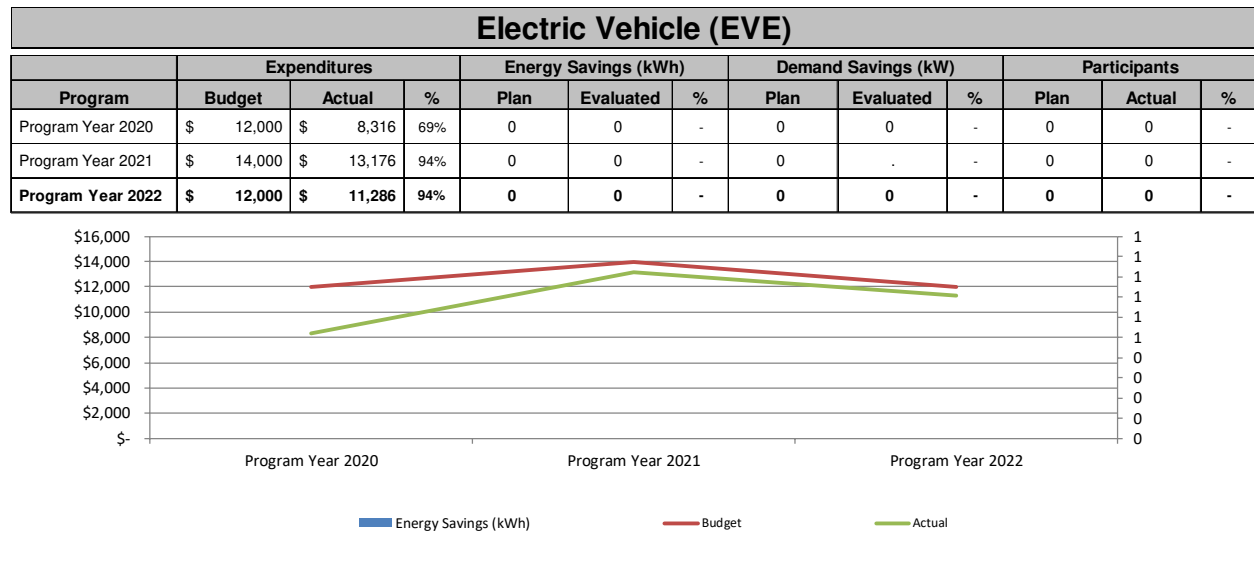


Figure 21 - Electric Vehicle Education Trends

2.4.2.4 Description of Participants

For EVE, there is no participation goal, but any SWEPCO Arkansas customer can be

considered a participant.

2.4.2.5 Challenges & Opportunities

Challenges

- Misinformation and confusion around EV support infrastructure and industry standard terminology
- The lack of EV charging infrastructure nationwide has led to range anxiety for potential EV customers.

Opportunities

- Increased awareness and new legislation at the local, State, and Federal levels that supports the development and adoption of electric vehicles. This has led to partnerships and nationwide collaborations with various working groups, utilities, and statewide municipalities to bring about EV adoption and the enhancement of EV charging infrastructure throughout SWEPCO's service territory and other regions throughout the country.
- The 2023 release of NEVI and CFI federal funding programs, as well as federal tax credits for all-electric, plug-in hybrid, and fuel cell electric vehicles purchased new in 2023 or after, may then be eligible for a federal income tax credit of up to \$7,500. Other opportunities include funding from the Inflation Reduction Act (IRA), though the specific details have not yet been released.
- The EPA released new exhaust standards in 2023, which will expedite auto makers to strengthen their positions on EVs.
- Partnerships and support for organizations like Arkansas Clean Cities Coalition, Arkansas Advanced Energy Association (AAEA), the NWA Planning Commission, and Electrify America plan to alleviate range anxiety and educate potential customers of the benefits of electric vehicles and their equipment usage. SWEPCO has joined efforts to support the nation's energy and economic security by building partnerships to improve transportation energy efficiency and advance affordable domestic transportation. Through these partnerships, SWEPCO will promote alternative fuels and reduce emissions by supporting legislation encouraging the use of alternative fuels, advanced technology vehicles, and other fuel efficiency strategies that bring about electrification.

2.4.2.6 Planned or Proposed Changes to Pathway or Budget

SWEPCO's EVE budget for PY2023 will remain at \$12,000.

3.0 Supplemental Requirements

3.1 Staffing

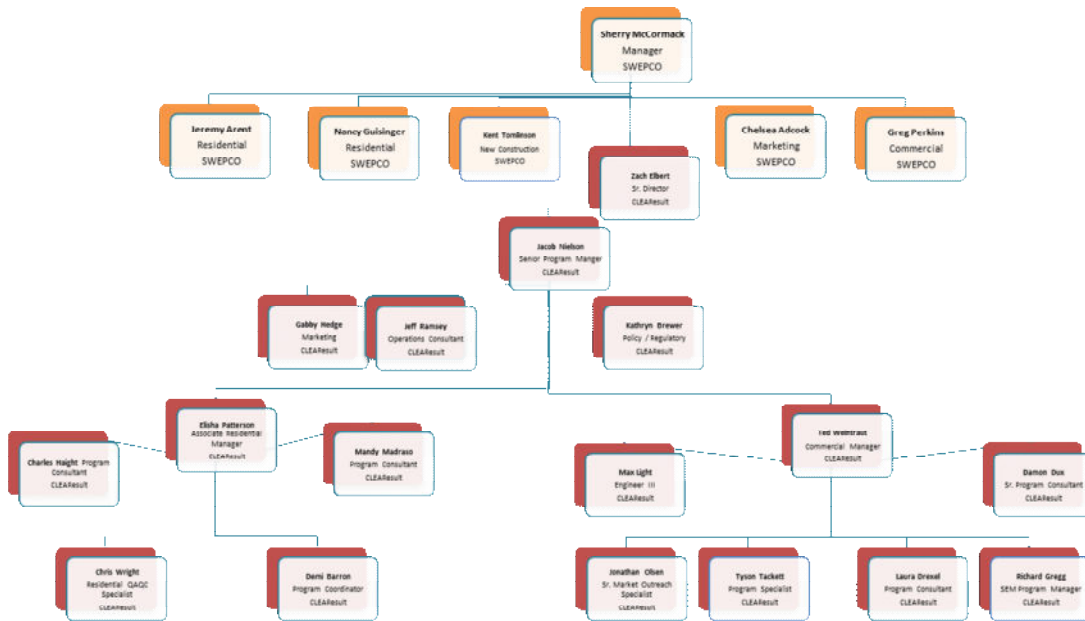
SWEPCO's internal program staffing as well as its implementation team staffing has remained relatively stable since PY2011. In PY2018, SWEPCO added a new Consumer Programs Marketing Coordinator role to support its Energy Efficiency department. During PY2019 Q4, a new EE Coordinator position was added and filled while the administrative assistant's position was upgraded to an EE Coordinator. This fourth EE Coordinator was filled in January 2020, increasing the SWEPCO internal team to five plus the shared Consumer Programs Marketing Coordinator. No changes were made during PY2022.

The Company's implementation contractor had a few personnel changes in PY2022. With the Portfolio Manager's retirement, there was significant shifting in roles primarily on the residential side. This began with internally promoting the residential Program Manger to fill the vacated position as a Sr. Program Manager. A residential Program Consultant was then promoted to Associate Program Manager, with the Sr. QAQC Specialist being promoted to fill his spot as a Program Consultant and followed by an external hire filling the QAQC position. The Program Consultant who oversaw the Efficient Products Pathway transitioned to a role with a trade ally and her spot was filled by an external candidate. Additionally, the commercial team's Sr. Consultant moved to another internal role late in the year and was subsequently backfilled by an external candidate. A new Operations Consultant was hired to oversee the portfolio database platform and incentive processing. In addition, the residential sector promoted from within for a new Program Consultant to oversee the Efficient Products Pathway; and a resulting open Market Outreach Specialist position was filled in PY2022.

The implementation team continued to enhance economies of scale by utilizing corporate subject matter experts when needed, plus sharing of resources, resulting in cross promotion and QA/QC of inter-fuel projects in both the residential and commercial programs.

The following is an organizational chart for SWEPCO for PY2022:

SWEPCO's Arkansas Energy Efficiency Program Team



3.2 Stakeholder Activities

SWEPCO's EE team, including its program implementation and evaluation team members, was again very active with the Parties Working Collaboratively (PWC). The following information was provided by the IEM at the request of the PWC members.

The PWC met 16 times via telephone conference in 2022 and held one in person Technical Forum on August 9, 2022. All meetings were open to all PWC members and interested parties. Meeting minutes are posted within five calendar days on the PWC's project dashboard.

Eight meetings focused on topics of interest to the entire PWC including discussion regarding Commission Orders, program planning, and the upcoming Potential Study

RFP. Six meetings addressed updates to the Technical Reference Manual (TRM) which has been suggested by the utilities, evaluators, IEM team or other interested parties.

Table 3 summarizes the PWC meeting activities during 2022.

Table 3: Summary of PWC Meetings in 2022

Meeting Topic	Number of PWC Meetings
PWC Meetings including planning and target setting	6
Potential Study RFP Discussions	2
AMI EM&V Discussion	2
Low Income Working Group	1
TRM Updates and Technical Forum	6
Total	17

In addition to the Stakeholder Activities involving the PWC, the SWEPCO Implementation Staff continued to participate in various activities regarding the EM&V of its EE portfolio. Some examples are as follows:

- Participated in bi-weekly/monthly conference calls with the Company's evaluation contractor, ADM, for the purpose of discussing and finalizing the PY2021 evaluation report on schedule
- Worked with ADM to complete the PY2022 evaluation plans and work through the various issues associated with numerous custom M&V projects

With Covid-19 restrictions being lifted during PY2022, SWEPCO began transitioning back to in-person events. However, some events were held virtually, including program kick-off meetings, CoolSaver Tune-up trainings, and a community ally meeting coordinated through the Texarkana Chamber of Commerce. As the year progressed, BPI Building Analyst trainings and contractor meetings were held in-person.

More detailed information regarding the various outreach and training activities hosted by SWEPCO and its implementation team as well as the teams' PY2022 trainings can be found in the Training section of the Company's SARP Workbook.

3.3 Information Provided to Consumers to Promote EE

SWEPCO again conducted a broad reaching integrated marketing campaign during PY2022. The campaign promoted the portfolio and individual programs while increasing customer awareness of energy efficiency and the availability of SWEPCO's services and incentives, as well as information on participating contractors across the Company's service territory. This multi-platform campaign, which ran quarterly in March, June, September, and December, consisted of targeted and contextual banner ads, print ads, Facebook, Google AdWords, and radio placements. The call to action included in the majority of the materials drove traffic to the SWEPCO Arkansas website (www.swepcosavings.com) and the EE portfolio phone number. Samples of the materials include, but are not limited to, bill inserts, Facebook Sponsored Posts, direct emails, radio ads, and print ads and are included in Appendix B to this report.

To supplement the quarterly campaign, SWEPCO published program-specific and energy efficiency content between the previously mentioned campaign months. This content included weekly social media posts (Facebook, Instagram, Twitter, LinkedIn), monthly residential energy efficiency newsletters, quarterly commercial & industrial energy efficiency newsletters, Google Ads, blog posts and news releases.

Additionally, SWEPCO continued to enhance the look and feel of its primary website, www.SWEPCO.com, which included an enhanced focus on energy efficiency with the webpages found at SWEPCO.com/Save. This focus includes program awareness along with tips and tools to help educate customers on the many ways they can save energy in and around their homes and businesses.