

BPA Energy Efficiency Program Response Memo: Findings and Recommendations from the Low-Income Utility Program Process Evaluation

May 7, 2024

General

The Bonneville Power Administration (BPA) Energy Efficiency Evaluation team with Evergreen Economics and Apex Analytics published a report on the process evaluation of BPA's Low-Income Energy Efficiency (LIEE) Program. This report provides key conclusions, findings, and recommendations for improving the LIEE Program. The primary focus of this independent assessment is on program implementation through BPA's utility customers and their use of Energy Efficiency Incentives (EEI) to fund low-income projects. The assessment took place in Fiscal Year 2023. The final report was published in May 2024 and is [posted on BPA Energy Efficiency's Evaluation webpage](#).

This program response memo addresses the conclusions and recommendations in their final report. This memo outlines the ideas and recommendations the BPA LIEE team is intent on discussing further but is not necessarily committing to changing at this time, with some exceptions. Any changes implemented in the BPA Utility Low-Income EEI Program or the BPA Low-Income State and Tribal Grants will be shared as they are being considered, approved and implemented.

Snapshot of Utility EEI Program Activity FY2018 to FY2022

36%: Percentage of utilities reporting Low-Income EEI spending, representing **41 out of 140** utilities within BPA's service territory.

\$19.8 million: Amount of utility BPA EEI, spent on Low-Income measures between FY2018 – 2022, accounting for:

- **15%** of BPA's residential spending
- **6%** of BPA's total portfolio spending

1,000: Average number of households **per year** benefiting from low-income EEI utility programs between FY2018 – 2022, with a heavy utilization of insulation and ductless heat pumps.



Key Findings and Recommendations

#1 Conclusion: BPA's Low-Income Energy Efficiency Program Is a Valuable Resource for Northwest Utilities

Process Evaluation Conclusion: This evaluation confirmed that BPA's LIEE Program is a valuable regional resource.

Program Response: The LIEE team will recommit to hosting the BPA Northwest Low-Income Workgroup to explore and increase opportunities for regional collaboration, improve partnerships with entities implementing low-income programming, and provide resources to grow this program. BPA is committed to finding new and innovative ways to highlight the work across the region

#2 Conclusions & Recommendation: Measure Cost Caps Constrain Program Activity

Process Evaluation Recommendations: To better support installation of low-income measures, BPA should assess whether the benefit of measure cost caps justifies the constraints placed on the program and to develop a systematic way to set caps that reflect market costs for installing these measures.

During the ongoing data collection for this Process Evaluation, BPA increased cost caps for many low-income measures, including windows and heat pumps, in October 2023 for the 2024-25 Rate Period Implementation Manual. Some respondents were aware of the increased cost caps but could not assess yet if the increases more sufficiently cover most installations.

Examples of findings based on utility feedback during the Process Evaluation:

- **Insufficient cost caps can prevent low-income projects from being completed.** When discussing ductless and ducted heat pumps, for example, the payment cost caps were too low in the 2022 – 2023 Rate Period. As a result, some utilities suggested BPA should increase the cost cap or remove it entirely. Otherwise, projects could not be completed unless the utility was able to partner with a CAP agency that could draw on other funding sources or a contractor willing to offer discounted pricing in exchange for guaranteed work.
- **Measures with no cost caps, such as insulation, are more popular measures** and utilities noted the benefits of their dollar-for-dollar reimbursement without a cost cap.

Program Response: Despite the fact that BPA increased the payment cost caps for several low-income measures in for 2024 – 2025 Rate Period, initial informal feedback to the LIEE team has been that the rising equipment and labor costs for some measures, including ducted heat pumps, are still insufficient. The LIEE team understands some utilities are reluctant to offer LIEE measures when cost caps are too restrictive, potentially putting some financial burden on their low-income residents for utilities unable to contribute additional funding to cover the cost above the cap.

The LIEE team will develop a process to determine whether payment cost cap restrictions help to keep installation costs within a reasonable range as intended, or if they simply restrict work.



If the LIEE team determines that cost caps are justified, the team will develop a more frequent review of market costs and streamline the process for updating payment cost caps to better reflect average market costs. If the LIEE team and BPA determine that cost caps are not justified, the team will explore alternatives to ensure costs are within a reasonable range or remove cost limitations.

#3 Conclusions & Recommendations: Limited Installer Availability Is a Critical Barrier

Process Evaluation Recommendation: The most immediate barrier preventing increased low-income program activity in the Northwest is the limited capacity of contractors and measure installation crews as well as CAP agency administrative staff. Some utilities and agencies are often more limited by their capacity to serve customers than by the availability of funding. Limited staff capacity also impacted utilities' and Community Action Agencies' (CAAs¹) ability to identify and recruit participating customers into Low-Income programs, particularly for hard-to-reach demographics such as multifamily renters, seniors, households in remote areas, immigrant communities and non-English speaking households.

To alleviate capacity constraints, BPA should consider opportunities to increase contractor, utility and CAA capacity, including:

- Workforce development efforts to increase contractor availability, especially in rural areas, where distance between homes compounds capacity shortages.
- Increase incentives to support measure installation in remote areas.
- Add payments for administrative costs.

Program Response: BPA's influence is limited with regard to contractor hiring practices and staff retention at individual agencies but there are opportunities for the agency to support workforce development. BPA will consider:

- Researching how EEI funds might be used to cover administrative costs at CAP agencies without increasing overall costs of the program.
- Exploring how to help utilities use EEI funding to better serve the business needs of CAP agencies.
- Working with BPA's Comfort Ready Home Program to capitalize on an established and growing contractor network to recruit and train more regional contractors.
- Collaborating with local training centers, vocational schools, trade organizations and tribes to increase regional contractor capacity.
- Developing resources to support utilities seeking to improve workforce training and education.

¹ Community Action Agencies are often referred to either CAAs or Community Action Programs (CAPs).



#4 Conclusions & Recommendations: Utility Staff Capacity Constraints Limit Low-Income Activity

Process Evaluation Recommendation: Managing low-income programs is labor intensive considering the many tasks, including income qualification and ensuring technical and program compliance. Utilities building and maintaining relationships with local CAP agencies or managing these programs in-house take time and effort to be successful.

BPA should consider opportunities to provide administrative or staffing support that could ease the burden on utility staff either through third-party implementation support, directly supporting staff positions or utility program liaisons or advocates.

Program Response:

The LIEE team has enacted changes to alleviate some of our partnering utilities administrative burdens, including allowing self-attestation of income, creating a project information template and creating more centralized resources to support utilities implementing low-income programming. Additional efforts being consider include:

- Developing additional informational materials for utilities without low-income programs to present to local CAPs, other potential partners and potential participants.
- Utilizing demographic analysis from this process evaluation to identify and support utilities whose service territories have a greater percentage of low-income earners but lower program uptake.
- Determine how BPA can more effectively partner and/or collaborate with existing regional program advocates and liaisons to support utilities.

#5 Conclusions & Recommendations: Increased Low-Income Funding May Compete with Other Priorities

Process Evaluation Recommendation: Utilities and CAAs reported some competition between funding low-income and non-low-income projects. However, other constraints, such as limited staff capacity, are currently more pressing. If BPA and utilities are able to overcome capacity constraints, utilities might choose to prioritize projects that provide greater energy savings at a lower cost and require less effort from staff over support for residential low-income measures.

BPA should consider separating the Low-Income Program's funding and utility incentive structures and distinguishing low-income activity from other non-low-income EEI incentives. This effort could include assessing if setting unique goals for low-income activity, becoming increasingly common for states and utilities across the country, could increase program activity.

Program Response: There are additional program benefits not highlighted or incorporated into the business case for offering these measures. BPA will consider discussing:

- Opportunities, benefits and drawbacks of distinguishing BPA's Low-Income program from its other energy efficiency programs, including different approaches to funding channels, goals and targets, and tracking low-income activity.



- Possible pathways for offering low-income energy efficiency measures to other sectors beyond residential, including but not limited to supporting qualifying small-business owners.
- Whether designating specific spending or savings goals for low-income activity would be a motivator or disincentive to utility uptake of low-income measures.
- If, and how, nonenergy benefits could be better incorporated into the business case and value of low-income measures.

#6 Conclusions & Recommendations: There May Be Opportunities to Broaden and Expand Program Outreach

Process Evaluation Recommendation:

To expand the outreach of BPA's LIEE program:

- BPA could adopt more neutral language, including renaming the program title to something other than "Low Income" to help reduce social stigmatization and better align with its customer utilities and equity-focused efforts around the country.
- BPA could broaden its low-income program offerings to adopt a more expansive view of equity, consistent with efforts occurring in other jurisdictions within the Northwest and nationally.

Program Response: BPA will discuss how the LIEE team can change the name of this program to encourage and support outreach efforts to qualified residents. Thinking more broadly, there are opportunities to improve how equitable BPA programs are for utilities, states, tribes and others. For more discussion of "Equity in Energy Efficiency," see the "Additional Findings & Recommendations" section below.

#7 Conclusions & Recommendations: It Is Difficult to Accurately Track the Extent of Low-Income Activity in the Region

Process Evaluation Recommendation: There are a significant number of projects being implemented in low-income homes. These projects often use funding from multiple sources to cover costs, making it difficult to track the overall amount of low-income retrofit activity occurring in the region. Within BPA's EEI and grant funding sources, there are inconsistencies in how projects are tracked and reported. These barriers make it challenging to fully assess what has been accomplished and the remaining potential in the Northwest.

To support improved tracking of low-income activity, BPA can:

- Develop standardized reports for Low-Income EEI funding, as well as state and tribal grant funding.
- Consider supporting additional research to better understand the full extent of low-income retrofit activity occurring in the Northwest across funding sources.
- Consider ways to measure whole-home projects, enabling some utilities to more easily report their current activity.



Program Response: It is important to have a clear understanding of our overall project activity, and specific projects completed through different BPA funding sources that intersect within the same utility service territory. The LIEE team has begun making improvements to how program activity is recorded and tracked through the LIEE state and tribal grant program. The LIEE team is also discussing how low-income activity data trends can be shared to provide a better snapshot of the success or challenges of this program, along with highlighting case studies of current projects.

Currently, BPA is limited to reviewing activity through its own funding sources. However, the LIEE team intends to collaborate with other regional entities with a mission to report broader regional low-income activity.

The LIEE team is also considering possible pathways for utilities to claim whole-home projects through their low-income EEI program to better align with how CAP agencies operate with other funding sources not as focused on single, deemed measures. See the “Additional Findings & Recommendations” for more discussion on “Whole–Home Projects.”

Additional Findings & Recommendations:

In addition to the key conclusions and recommendations listed in the process evaluation final report, the BPA LIEE team also identified valuable findings that should be addressed in this memo.

Regional Collaboration

Process Evaluation Finding and Recommendation: BPA could consider stakeholders and partnerships beyond CAP agencies. Other stakeholders may include community health organizations, nonprofits, food banks, housing financing organizations and gas utilities. These organizations may be able to support utility low-income programs by creating a “one-stop-shop” offerings for low-income customers that extend beyond energy retrofits into other needed services. Additionally, these partnerships may be able to support programs with targeted outreach to potential participants, as many of the CAP agencies that BPA utilities partner with draw on multiple funding sources.

Program Response: Regional programs are more successful in serving communities when there is improved collaboration between entities who implement similar programs. The LIEE team is reviving the BPA Northwest Low-Income Workgroup as a venue to facilitate these conversations, meeting with BPA utilities, state agencies, local agencies, regional CAP networks, tribal partners, implementers, other federal agencies and regional investor-owned utilities with the goal of aligning program offerings to streamline implementation.

There is an interest in a “one-stop-shop” approach for CAP agencies to more easily braid multiple funding sources together. This will be a longer-term discussion, as BPA must determine first, if this approach and process is possible, and second, how BPA should best support that approach.



Equity in Energy Efficiency

Process Evaluation Finding: Utilities and agencies cited a social stigma against seeking or accepting assistance as a barrier to ratepayer participation in low-income programs. A review of national programs found an increased emphasis on setting goals for increased program uptake in underserved communities and improving equitable practices and recruitment in workforce development efforts.

Program Response: There is an opportunity to take a wider view of equity within the BPA low-income and energy efficiency programs. This would be a broader, longer-term effort to define how BPA can adopt more intentional practices supporting equitable access to energy efficiency across the Northwest. This effort would expand beyond a name change of the Low-Income Program.

With sufficient time and resources, BPA could research and discuss:

- Definition of equity in the context of BPA's energy efficiency programs.
- LIEE Program interactions with other programs with regards to equity, including if there are meaningful equity goals and metrics BPA can adopt.
- Pathways to offer a measure suite for moderate income households to help serve a market segment that cannot easily access energy efficiency upgrades.
- Measure suite expansion into other energy efficiency sectors.
- Pathways to increase the number of utilities that use BPA's Low-Income funding to serve residents in their service areas.

Repair costs

Process Evaluation Finding: The evaluation report found some utilities were not aware they could claim EEI for repair costs related to low-income measures, or were unclear about what is covered. For those utilities aware of this option, they reported repair cost coverage provided significant value to their programs. According to one respondent, "the ability to do repairs is fantastic because that can completely shut down a job, if you have a repair that needs to be made in order to make the insulation last."

Program Response: The LIEE team will use the Low-Income Workgroup, along with other means of existing communication, to increase awareness of available cost coverage and clarify how utilities can access it.

Whole-Home Projects

Process Evaluation Finding: The evaluation report highlights a common conflict between BPA's prescriptive approach and whole-home approaches. Agencies utilizing funding sources like the DOE Weatherization Assistance Program (WAP) are often required to perform a pre-and post-audit review on the home. This cost effectiveness test is called the Savings-to-Investment Ratio (SIR) and calculates what cost-effective energy upgrades can be completed in the home. Issues arise when a prescriptive project has already been completed at the home, thereby



eliminating it from the cost effectiveness calculation. This can significantly change the SIR and sometimes prevent other upgrades from being completed.

The BPA Low-Income Program could consider incorporating a whole home measure into its measure suite. Since utilities are unable to claim whole-home measures, some are not able to report all low-income activity. The evaluation report suggests focusing more on comprehensive retrofits that address all energy efficiency opportunities within the home, rather than single-measure upgrades. This would better align with federal and CAP agency partners funding sources.

By offering a whole-home measure approach, BPA could encourage comprehensive retrofits and allow utilities engaging in whole-home retrofits to claim them using their EEI budget more easily and help reduce issues with agency cost-effectiveness calculations.

Program Response: The LIEE team understands choosing between the whole-home and single deemed measure approach can lead to a number of issues, including prioritizing costs amid utility and grant funding. Claiming deemed measures within a whole-home project can add administrative burden to extract individual measures from whole-home projects. Whole-home projects can be expensive and challenging for a single utility to support without braiding in additional funding. The LIEE team intends to research and discuss how to:

- Align BPA's utility EEI low-income program with its existing low-income grant offering, which currently allows for whole-home measure coverage.
- Improve collaboration with state agencies when considering how to take more advantage of BPA's list of deemed measures.

Ducted Heat Pumps

Process Evaluation Finding: Ducted heat pumps are a low-income measure with the lowest adoption rate. Primary contributing factors include difficult installation in some homes and low payment cost caps. Most low-income customers are unable to make up the difference, sometimes as high as \$5,000.

Program Response: BPA increased the payment cost cap to \$9,000 effective Oct. 1, 2023. Over the current rate period, the LIEE team will use the Low-Income Workgroup, and other communication channels, to determine whether this cost cap increase is sufficient to encourage uptake of this measure.

In addition, the LIEE team will research what technical information and materials contractors need to better understand how to install ducted heat pumps, especially as a wave of new funding will soon be available through the Inflation Reduction Act.



Heat Pump Water Heaters

Process Evaluation Finding: The low-income measure with the lowest uptake is the heat pump water heater (HPWH). While incentives were sizable, heat pump water heaters are difficult to install in manufactured homes, a common dwelling among limited-income customers. Partnered contractors are often unfamiliar with the technology and installation and therefore reluctant to offer heat pump water heaters.

Program Response: On Oct. 1, 2023, BPA increased the payment cost caps for HPWHs. This is a critical measure to the region, delivering valuable energy and utility cost savings among residential measures. The LIEE team is collaborating with Comfort Ready Home to locate contractors installing these systems. The team is also following HPWH research from Northwest Energy Efficiency Alliance (NEEA) and regional entities to better understand the challenges with installing these units.

Electric Vehicle Chargers

Process Evaluation Finding: Five utilities recommended incentives for residential electrical vehicle chargers. Three utilities suggested incentives for electrical work, such as for wiring and panel upgrades.

Program Response: The LIEE team is interested in exploring whether an EV charger measure would improve the program's equity and if there is a demand within the Low-Income measure suite. The uptake for this measure has historically been low as a non-LIEE measure; however, the LIEE team will consider the benefits of this measure as well as impacts to the overall portfolio.

Additionally, wiring and panel upgrades, if related to the work being done (i.e., panel upgrades to accommodate a heat pump installation), may currently be covered through repair costs. This is another example of the need to clarify how repair costs are used through EEI and what repairs can be covered.

Acknowledgement

BPA appreciates how comprehensively the independent Evaluation team approached this project and their thoughtful recommendations. The in-depth details regarding the implementation barriers and creative ideas for improving the program will provide significant support to BPA for years to come.

If you have additional feedback or ideas or questions about the BPA Low-Income Energy Efficiency program, please reach out to ResEEprogram@bpa.gov. If you represent a BPA customer utility, please reach out through your energy efficiency representative.

