



Oregon

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RE: Request for Information on the Inflation Reduction Act Home Efficiency & Electrification Rebate Programs (DE-FOA-0002981).

The Oregon Department of Energy (ODOE) is pleased to provide the following responses on the U.S. Department of Energy's (USDOE) Efficiency and Electrification Rebate Programs. These comments have been developed jointly with Oregon Housing and Community Services in consideration of a wide array of programs affecting residences and various stakeholders in our state. State agencies also coordinated closely with Energy Trust of Oregon, a non-profit organization that administers various energy efficiency programs and ratepayer-based incentives; Energy Trust will also be submitting separate comments to this Request. We are grateful for the opportunity to provide this feedback and are excited to launch these programs in the future.

B. Accessible and Equitable Program Design

2. What best practices can program administrators and other relevant stakeholders (e.g., retailers, contractors, or community-based organizations) use to ensure that disadvantaged communities and low-income households are aware of and have easy access to the Home Energy Rebate programs?

Simple program requirements. Arguably the most important best practice is to ensure simple and streamlined program requirements. For affordable multifamily projects and rental projects, having a simple and streamlined program would greatly increase the chances that these projects will be able to access the rebates and bring benefits to their residents. Affordable and multifamily property managers are often seriously resource limited and many do not have the capacity to navigate new, complex programs. **Flexibility for effective community engagement.** States should be given the opportunity to partner with community-based organizations (CBOs), utilities, and other entities to administer rebates and conduct targeted outreach. To ensure that disadvantaged communities are aware of and have access to these programs, the marketing materials and outreach need to be culturally responsive. Benefits from partnerships with CBOs and utilities include the ability of these organizations to center programs on community needs and the existing work and community connections of entities already engaging in energy efficiency work. USDOE can provide resources to states that enable administrators to engage

with these organizations, such as webinars for training on community engagement or public-facing fact sheets that can be customized by the state and distributed to consumers. USDOE should allow state energy offices to implement their programs based on this outreach to community-based organizations, including providing flexibility to states in how programs are implemented to ensure they are able to tailor programs to their state's specific needs based on feedback and engagement with CBOs and other entities that provide energy efficiency rebates and services. **Multifamily project support funding.** Property managers have limited time and funds as well as a high changeover of staff. These factors often result in projects having issues in successfully meeting program requirements. If these programs could include funding to support project oversight, whether through energy modelers, raters, or other contractor support, it would be more likely that these projects would be delivered successfully. **Sample Data Agreements.** USDOE can also provide sample data sharing agreements that states can adapt to facilitate sharing data between agencies working on low-income programs and between state agencies and utilities. For example, this could include providing sample language that a state energy office can use to facilitate the exchange of weatherization assistance program data with HOMES and HEEHR rebate program implementers.

4. How can DOE and program administrators ensure that community-based organizations, residents of disadvantaged communities, renters, and marginalized groups such as low-income residents, residents of color, rural residents, and Tribal residents are meaningfully engaged for the Home Energy Rebate programs? What other groups should be included?

Many stakeholders that ODOE spoke with in preparing these comments emphasized the importance of working with CBOs. Flexibility to create state programs based on input from these stakeholders will be key. USDOE should provide guidance and tools for implementing these programs, but should also allow flexibility for states to implement individual programs based on their specific needs and the needs of their communities. USDOE could provide general recommendations and examples of state energy offices could interact with CBOs and what role it sees CBOs playing in the implementation of these programs.

5. How can the Home Energy Rebate programs help to minimize energy burden and costs, particularly in low- and moderate-income (LMI) and high energy burden households?

To help minimize energy burden, rebates will need to be targeted to improve inefficient homes that have high heating bills. USDOE can provide tools and data to help identify these homes. USDOE can also provide recommendations on how to protect renters from potential rent increases due to the costs of installing energy efficiency upgrades.

Effective engagement of LMI and high-energy burden households will require application of best practices for working with disadvantaged groups, including efforts such as meeting in person, providing accessibility support like translation of program application and materials.

Many high-energy burden households in our state are comparatively low energy users living in smaller homes, which may mean it will be more difficult to achieve 20-35% energy savings. Keeping the funding flexible to allow for multiple types of projects (weatherization, heating system, etc.) to be combined will allow the states to better serve this population.

Oregon has a concern that the lack of a cap on incentives for the Measured savings approach could lead to program designs that motivate contractors/aggregators to conduct expensive improvements for wealthier homeowners, drawing attention and funding away from lower income household projects.

There are many best practices for fostering meaningful community engagement in program design and implementation. One example is the DEI Coalition that supports the Oregon Multifamily Energy Program (OR-MEP). OR-MEP is committed to equitably serving the people of Oregon and disrupting systems that maintain inequality within the energy industry and beyond. Coalition members represent diverse backgrounds and experiences.

Other groups to consider including in community engagement activities are immigrants and those for whom English is not their first language. These groups experience additional barriers to engaging in energy programs, including language barriers, cultural barriers preventing awareness of programs, lack of documentation, and fear of mistreatment and deportation of themselves, their family, and their friends.

The Home Energy Rebate program can help minimize energy burden in LMI households; however, the impact will likely not alleviate energy burden completely in many of these households. In 2019, the State of Oregon published its Ten-Year Plan to reduce energy burden in Oregon's affordable housing. The work for that plan included an affordable housing assessment, which quantified the energy affordability gap for low-income households in Oregon – nearly \$350M per year. Additionally, a potential savings assessment was performed to determine how much of that gap could be minimized through energy efficiency upgrades. That assessment identified \$113M per year of cost-effective savings for Oregon's low-income households – about one third of the annual energy affordability gap. One limitation of this study was that fuel switching, including electrification, was not captured – however, it is likely that most electrification upgrades in existing households would not result in significant reduced energy burden, unless discount rates are provided. Oregon is not an outlier in this aspect – it should be expected that these programs will be successful in minimizing energy burden, but not eliminating energy burden.

7. What types of policies or requirements can be used to ensure that owners of rental properties receiving rebates targeted for low-income households continue to offer affordable rents for a reasonable time after improvements are made? How might DOE also incentivize multifamily affordable housing property owners to participate in these programs?

One option would be to layer these funds with existing programs that already have their own processes for ensuring the rents stay affordable and rely on those existing processes instead of creating new ones. However, special steps will need to be taken to prevent combination with other federal funds.

One way to incentivize multifamily affordable housing property owners to participate in these programs is for State Energy Offices to work with other funding agencies, such as HUD, other state agencies, and municipalities to promote or reward property owners for using these rebates. Part of these promotions should include a clear description of the benefits that these improvements will have for their tenants, including those related to health and comfort, as well

as best practices for installation, operation, and maintenance of the equipment. The owners and managers of these properties often do not have the time to research new equipment, so the more information the program can provide to help them recognize the benefits, the more likely they will consider the improvement. To facilitate this collaboration, it's important that HOMES and HEEHR administrative funding support work to integrate and layer these programs with other state and local incentives.

10. For federally subsidized, low-income housing, what specific program design parameters are necessary to ensure rebates can be used at these properties?

Property managers of low-income housing properties are typically time and resource constrained. To encourage these properties to participate, the program design should allow enough flexibility to align with program requirements of existing state funding and tax credit programs as much as possible. Each additional requirement will be a barrier that reduces participation in these programs.

Additionally, the USDOE should work with the states to ensure adequate funds are available to support all new affordable housing under construction. For example, Oregon Housing and Community Services' (OHCS) [Oregon's Statewide Housing Plan](#) set a 5-year goal of 1,000 new, permanently supportive homes and 25,000 affordable rental homes. Additionally, the OHCS Multifamily Energy Program (OR-MEP) has a waitlist of nearly 5,000 units of new construction affordable housing and 2,000 units of existing affordable housing. However, funding rebates for all of these projects would exhaust available funds for the next five years.

22. Should program administrators establish set-asides or limits concerning the distribution of the rebates (e.g., bundled packages, disadvantaged communities, income or other definitions, incumbent heating fuel in the home, high-impact measures)?

USDOE should allow states flexibility to set aside funds based on individual state needs. As an example, a state could set funds aside for communities that do not have access to other utility programs or could establish set asides for unsubsidized low-income housing, also known as naturally occurring affordable housing (NOAH), which tend to have few funding options for these types of improvements.

27. While the electrification rebates allow for application in both new construction and existing buildings, are certain uses more likely to deliver greater benefits? For example, should electrification rebates focus primarily on existing buildings where such improvements are less likely to happen without additional funds? Are there important other applications (e.g., new construction of affordable housing, other?)

Affordable housing new construction projects are more likely to use rebates than affordable housing property managers or households navigating low incomes, given the availability of funds to cover up-front costs. So, while it is not necessarily more beneficial to give these funds to new construction affordable housing, it is likely that more funds will be accessed by new construction than existing affordable housing projects.

E. Integrating Existing Incentives & Programs

28. How can DOE encourage program administrators to build on and coordinate these funds with existing networks and programs to maximize impact? Other programs may include state energy efficiency Revolving Loan Funds (RLF), utility energy efficiency programs, U.S. Department of Health & Human Services Low Income Home Energy Assistance Program (LIHEAP), Weatherization Assistance Program (WAP), tax incentives, among other funding sources. a. What guidance is needed from DOE to make this successful? b. How should DOE encourage program implementers to design and implement rebate programs to leverage other resources and/or provide seamless services (e.g., through housing finance agencies (HFAs), state RLFs, WAP, or other complementary programs)? c. What concerns and risks should DOE be aware of in introducing these programs into existing programs and networks? How can program administrators prevent the layering of federal, state, and local incentives whose combined value is greater than that of the product being purchased?

- a. USDOE should **explicitly clarify** the types of program funds that USDOE would permit to be combined within a single project, including the funds listed in the question prompt, some of which are federal in nature and some of which are funded through state, utility, or private resources. State energy offices should receive **explicit guidance** on the types of funding that can be combined with HOMES/HEEHR rebates so we can maximize the effectiveness of our individual rebate programs. Additionally, USDOE should **clarify its definition of a project** to provide clear guidance on how multiple rebates can be applied in the same household. For example, can a single household receive a HEEHR rebate for a heat pump installation and HOMES funding for weatherization upgrades, or are these considered a single project? Does a certain amount of time need to lapse between projects in order to be distinct?
- b. The USDOE should build flexibility into the design and implementation of these rebate programs that allows for streamlining the leveraging of existing resources, such as aligning program eligibility requirements where possible, and defaulting to existing program requirements, such as contractor certification requirements. Program requirements should be aligned with existing energy efficiency programs and networks wherever possible to overcome barriers to entry for disadvantaged communities. For example, USDOE could provide recommendations on how any income eligibility requirements align with existing programs' income eligibility. USDOE could allow participation in any of these programs, as well as other social service programs like SNAP as a proxy for income eligibility, and require no other proof of income. USDOE could also allow funding to be used for deferred projects or repairs, for example mold remediation or minor roof repair, that will enable energy saving measures. USDOE should not disallow or set caps on the percentage of funding that can be used toward these measures in order to keep funding as flexible as possible to better incorporate with other funds.
- c. USDOE can appoint regional administrators to work with a specific set of states and provide troubleshooting and clarification of program rules as questions arise. These individuals would serve as the first point of contact as states encounter questions about what types of funding can be combined with IRA rebates and how to help consumers navigate this funding landscape. While we recognize and appreciate the existing staff within the State and

Community Energy Program office, we know that in order to ensure an effective launch, these new programs will require additional staffing and expertise. A regional approach could help with common problems for metropolitan areas that span across state lines, such as Portland, Oregon and Vancouver, Washington.

F. Opt-in Tools, Resources, Technical Assistance

32. DOE may invest in tools and resources that states, territories, and Indian Tribes can elect to use to implement their programs. Program components could include (i) systems to track or process rebates, transactions, and improvements; (ii) systems to verify income eligibility; (iii) software to model and optimize savings; (iv) systems and/or forms for data collection; (v) model program templates program administrators can adopt in their application; (vi) stakeholder engagement guidance and resources; (vii) standardized datasets and APIs, and (viii) program marketing, education and branding. a. Which of these should be prioritized? b. Are any of these not needed? c. Are other components needed?

- ii) For income verification, the focus should be on customer experience and accuracy. It should be relatively simple for a consumer to "pre-verify" if they are eligible for specific funding, particularly for point-of-sale rebates. For example, some way for a person to verify their income and receive an authentication (confirmation number, scan code, etc.) to present at the point of sale for an immediate incentive. This system should also be able to capture pending authorization and paid authorized to support tracking under the lifetime maximums under HEEHR, without exceeding the threshold of \$14,000 in cumulative rebates.
- iii) For the HOMES "modeled energy" pathway: in addition to allowing custom models of individual homes, also have a prescriptive pathway by creating a list of prescriptive "packages" of measures that can achieve required savings percentages. In other words, USDOE should permit advanced modeling for "typical" measures that that can be implemented in various home types to save 20% or 35% of energy. This can be based on verified pre- and post-conditions, but would allow for a streamlined modeled pathway. An alternative would be to create a model with a simple user interface that requires only a dozen or so user inputs and allows a consumer to select from a list of measures to implement. The model would then provide instant feedback to the user about if the package of measures selected would achieve the required savings percentage that can be verified through a screen print out for program enrollment. Such a system would need to have built-in safety factors to help ensure savings are not exaggerated. Where possible, these models could support other programs like Home Energy Scores.
- v) Model program templates should be available, but customizable to accommodate specific state needs.

33. What existing systems and tools can DOE, states, territories, Indian Tribes, program administrators, aggregators, and/or financiers leverage to implement the Home Energy Rebate programs?

States can leverage energy modeling software and interfaces such as those used in Home Energy Scores. User-friendly modeling programs that provide consistent results (across states, independent of area) would be helpful. Different states should be able to use the same

software to help ensure consistent results nationally. To aggregate available incentives, a tool like a residential consumer-focused DSIRE database could be helpful for program implementers. Income verification should be simple for the consumer — interface with other federal government income data, through an application or online portal, that can quickly inform a consumer if they are eligible for a particular rebate based on income levels. Where applicable, it will be important this verification integrates with other income-based federal programs.

H. Income Verification

37. What types of documentation should be considered sufficient for rebate applicants to demonstrate that they meet income eligibility requirements (e.g., prior year tax return, verification of other federal benefit program eligibility, or recent paystubs)? a. What are common barriers to effective income verification for LMI households and what industry practices are less effective or should be avoided? b. How long should a household's determination of eligibility last? c. Are there examples of programs that have demonstrated high levels of compliance while allowing self-attestation to establish income eligibility? d. Some programs determine income eligibility by address, such as if 80 percent of more of the census tract has a certain income. What are the benefits and drawbacks of this approach? e. How can program administrators prevent duplicative document or verification requirements?

a. USDOE could provide a standardized and easy-to-use income verification tool that includes a list of existing low-income programs whose eligibility requirements are at least equally as stringent as HOMES and HEEHR. Eligibility for these programs should be accepted as automatic income verification for these home rebate programs. This tool should also allow for some level of state customization to provide flexibility for states to adapt the tool to their specific needs or incorporate additional state programs that require income verification. USDOE could allow categorical eligibility based on community-based organizations' and utilities' verification of enrollment in existing energy assistance or weatherization programs. This could eliminate the need for the consumer to go through a burdensome verification process. Verification should be made as efficient as possible with the lowest possible barrier to participate to ensure that homes in urgent need of an upgrade (for example, if a furnace is no longer functional) do not have to spend extra time confirming their eligibility before installing a new system.

H. Estimating and Measuring Energy Savings

40. For the Home Efficiency Rebates, how should DOE support program implementers in selecting, developing and implementing the modeled and/or measured energy efficiency path? What factors will drive decisions to implement a modeled program, a measured program or both programs?

USDOE should follow past precedent with the OpenEI and Data.gov initiatives to provide more open-source tools for states to use. This includes modifications to the Home Energy Score tool for modeling and the Utility Rate Database as a consistent source of rates. This also applies to USDOE development of a fully operational open-source tool for the measured energy efficiency path. This will allow states to provide either pathway with little cost for IT development or

contracted fees. States would still be free to utilize privately developed software tools if they feel the need for those in their programs.

One factor to consider is that there are significantly fewer contractors that have multifamily-specific certifications for modeling or measuring energy savings. If the USDOE was to require certifications for contractors working on multifamily projects, this could be a significant barrier.

41. What have evaluations found to be key drivers of success in accurately modeling or predicting energy savings?

In evaluations that we have studied, there is often a bias applied to modeling inputs in order to maximize savings estimates. This has been true in WAP-funded weatherization programs and modeled savings utility programs. Perhaps the most reliable way to accurately estimate savings is to temper the estimates themselves. In our experience with the HES tool and other tools that typically provide conservatively low estimates of savings, there has been pushback from contractors that the estimated savings is too low. The complaint is that the limited savings estimation makes for a more difficult sale of an improvement. In our opinion, that represents consumer protection. Limiting the capacity of the model user to describe a home as poor in its current condition or excessively high performing in an improved state inhibits their ability to overstate savings. The HES tool is a good example of a tool that is built around these types of limits. We recognize that this conservative nature may make it difficult achieve the 20% or 35% savings thresholds prescribed in the IRA HOMES rebates. We believe that USDOE should create some more granular inputs to describe improvements within the HES tool to assist users in this program.

43. What software tools provide any of the following capabilities? (i) Energy usage calibration consistent with BPI 2400, (ii) Open-source advanced measurement and verification, (ii) Open-source advanced measurement and verification, (iii) Savings valuation based on time, location, or greenhouse gas emissions, (iv) Third-party certified documentation of the work scope and predicted impacts, or (v) Other capabilities of interest, including but not limited to use of standard data schemas (e.g., HPXML), application programming interfaces (API) integrability, etc.

- i. Two private companies, Optimiser and SnuggPro, have both made claims that their tools are consistent with BPI 2400. It is our opinion that the revision of the BPI 2400 standard will create a pathway for those two tools (and others) to be certified as compliant. We also believe the new BPI 2400 standard will create a pathway for the USDOE Home Energy Score tool to be approved as a compliant tool that is free and publicly available.
- ii. OpenEEmeter is an open-source tool that can be used for this purpose. We recommend that USDOE develop a user interface for this tool and make it available to state governments for use. This would be similar to the open-source software that was developed for the Data.gov initiative wherein 48 states are using the open-source code to create their own open data systems.
- iii. This is not yet fully mature. CA is developing a database of hourly electricity rates and hourly GHG emission profiles for electricity providers. This does not exist nationally. NREL's

OpenEI initiative includes the U.S. Utility Rate Database, and this is the best database of rates. GHG emission factors are provided by EPA for baseload and marginal power purchase at the utility level, but that does not capture the full range of hourly values. NREL's AVERT tool provides a good lower-resolution estimate of GHG reduction. NREL's Cambium database provides a forward-looking estimation of energy related impacts synthesized from utility IRP plans and other sources.

- iv. The Home Energy Score report as implemented by Fort Collins or the State of Missouri are the two best examples. The Fort Collins report pulls records of improvements from a measures database for inclusion in the report. The state of Missouri creates a Missouri Home Energy Certificate that details measures and is provided alongside a HES report which estimates energy.
- v. USDOE should invest in further development of open-source platforms that enable states to provide low-cost tools to the market that are reliable, consistent, and low cost.

44. Do you have any recommendations for applying BPI 2400 per the legal requirements of the Home Efficiency Rebates?

The BPI 2400 standard does not currently have a method to certify that software is compliant. It is also outdated in that it refers to expired standards. BPI has assembled an expert panel to update the standard in Spring 2023, in time for it to be utilized within state IRA implementation plans. The current BPI 2400 standard is fully reliant on the provision of historic energy fuel records. These records are not always possible to attain and sometimes they provide a challenging baseline estimation as occupancy intensity changes for a variety of factors related to mobile families. Separately, non-metered fuels are purchased in bulk and not necessarily on a regular schedule. There should be an allowance to use the Home Energy Score modeling tool, which has been designed to align with average energy usage across all climate zones, in lieu of actual utility bills to avoid this issue.

45. The Home Efficiency Rebates refer to savings based on "time, location, or greenhouse gas emissions." Please provide input on best practices for calculating savings based on these factors. How should program administrators value these savings in comparison to homeowner energy usage and bill reductions?

An emerging best practice is to estimate changes in energy consumption from energy-related improvements at an hourly level. The hourly energy use, or savings, can be correlated to the available Time of Use rates available to the rater payer at the location of the building to create cost savings estimates associated with different rate structures. Currently, a SBIR grant recipient is piloting this cost estimation with hourly energy data from the Home Energy Score tool. The hourly energy figure can also be multiplied by hourly carbon emission factors for the utility that delivers power to the location. RESNET, NREL, and others are currently exploring methods to standardize this calculation methodology. It is unlikely that these calculation methods will be commercially available at the time states must submit their IRA implementation plans, but it is highly likely that these methods will be commercially available during the multiyear life of the IRA-funded programs. We recommend that program administrators plan for the incorporation of these methods, but in the near-term default to a

less sophisticated method of inputting hourly results from annual energy use estimates. We suggest using NREL's AVERT tool, which is based on hourly analysis and provides a lookup table of averted GHGs from different types of measures. It produces results that are location and time specific, but based on previous NREL modeling rather than real time analysis for any given building.

L. Job Creation & Quality

54. Which contractor and/or laborer credentials and/or certifications should DOE and/or program administrators require for work funded in part by these rebates?

As discussed in question 40, there are significantly fewer contractors that have multifamily-specific certifications for modeling or measuring energy savings. If the USDOE was to require certifications for contractors working on multifamily projects, this could be a significant barrier. If this is a requirement, the USDOE should consider providing workforce development funding to support multifamily certifications of contractors.

N. Open Response

59. Is there anything else DOE should be aware of as it develops program design guidance and support for these rebate programs?

Many of the Disadvantaged Communities in Oregon identified by the Justice40 tools are in rural areas where there already exist significant workforce shortages. Even without certification requirements, the programs may be hindered by the lack of contractors available to do this work.

USDOE should consider dedicated funding for health and safety improvements, which would be necessary for households to effectively implement upgrades. There is limited funding available for health and safety improvements, and often efficiency improvements do not move forward in low-income housing, rental housing, and housing owned by people of color due to insufficient funding to make these repairs. Providing funding for this repair work would increase the number of households in Disadvantaged Communities that could access these rebate programs.

Sincerely,



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