Via Electronic Mail: jerrylyn.huckabee@mass.gov

February 28, 2023

RE: IRA RFI - PowerOptions Response to DOER's RFI Regarding the Home Efficiency and Electrification Rebate Program

Dear Ms. Lyn Huckabee,

PowerOptions appreciates the opportunity to submit suggestions on the Massachusetts Department of Energy Resources' (DOER) response to the U.S. Department of Energy's (DOE) Request for Information on the Inflation Reduction Act's (IRA) Home Efficiency and Electrification Rebate Programs.

PowerOptions, a nonprofit energy consortium founded in 1996, represents more than 400 nonprofit members across the Commonwealth, including hospitals and healthcare systems, colleges and universities, community and human service agencies, K-12 public and private schools, museums, as well as municipalities and housing authorities. Serving many of our members with energy efficiency, electrification, and decarbonization services, we were happy to see the commitment to decarbonization and electrification set out through the funding authorized by the IRA.

PowerOptions currently works with over 60 housing authorities, representing 12 percent of our membership, and we've worked with over 110 housing authorities since our inception. We recommend program administrators allow federally funded housing authorities to participate in the proposed Home Energy Rebate program, through a direct payment like other rebate programs for tax-exempt entities laid out in the IRA (ex: direct payments available when claiming the renewable energy investment tax credit (ITC) and production tax credit (PTC), or the energy-efficient home credit).

While the IRA states the Energy Consumer Home Energy Rebate Program will offer multi-family housing building owners up to $8,000 per unit for qualifying energy efficiency improvements, allowing the participation of housing authorities funded by the Department of Housing and Urban Development will maximize investments to low-income and disadvantaged communities. This will align the program with the Biden Administration's Justice40 Initiative, which commits to delivering forty percent of the overall

benefits from certain federal investments to marginalized and overburdened communities disproportionately impacted by pollution. Additionally, to further align the program with the Justice40 Initiative, we recommend that rebate "enhancers" be added to encourage certain communities and populations to participate. This would work to ensure that overburdened communities are meaningfully engaged in the program. Providing such enhancements would be in line with other credits and rebates authorized by the IRA, such as the 10% bonus credit available to projects located in low-income communities or energy-communities when claiming the ITC and PTC.

While creating the program, as noted in the RFI, it is important that program administrators consider how to minimize energy burden and costs in low-income, high-energy households. To address this, we recommend program designers consider how economic benefits are passed on to renters. While a landlord who receives a rebate through the program will benefit economically, the energy burden on the individual renter may remain unchanged, especially in cases where utilities are paid by the building owner. In these cases, although energy efficiency projects will result in lower monthly utility bills for the landlord, rent prices will likely remain the same. As a result, more money will be left in building owner's pockets, but the energy burden for many low-income households will not be improved. In worst-case scenarios, landlords may choose to raise rent prices given energy improvements increase overall property value.

Lastly, in order to ease accessibility and minimize complexity of the program, we urge DOE program administrators to build on and coordinate funds with existing networks and programs. Currently, numerous government agencies at the federal level are administering grants, credits, and other incentives for home energy improvement projects. Billions of dollars are currently flowing through the Department of Energy, the Department of Health & Human Services, the Department of Housing and Urban Development, and others, to decarbonize the nation. It is because of this we recommend coordinating across agencies administering similar programs, such as the Low-Income Home Energy Assistance Program and Weatherization Assistance Program, to ensure requirements and details are kept constant across programs, when applicable.

On behalf of our members, we urge DOER to emphasize the above in their response to DOE's RFI regarding the Home Efficiency and Electrification Rebate Program. Thank you for your consideration of our comments. We look forward to working in collaboration to build a cleaner, equitable state and country.

Sincerely,

Meg Lusardi
Executive Vice President
PowerOptions

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February 28, 2023

Lyn Huckabee
Regulatory and Innovation Program Manager
Massachusetts Department of Energy Resources

Transmitted via electronic mail

Dear Ms. Huckabee:

Thank you for the opportunity to inform the DOER's response to the Department of Energy's Request for Information on implementation of several sections of the Inflation Reduction Act (IRA). Specifically, the DOE and by extension DOER are requesting responses on two IRA provisions:

Section 50121: Home Energy Performance-Based, Whole House Rebates (Referred to as Home Efficiency Rebates)

Section 50122: High-Efficiency Electric Home Rebate Program (Referred to as Home Electrification Rebates)

The Boston Housing Authority (BHA) is highly interested in state and federal implementation of HOMES and HEEHRA. The BHA has established aggressive targets for electrification and also seeks to implement energy efficiency and other improvements to better tenants' quality of life. Combining HOMES and HEEHRA with the Mass Save program offers a powerful opportunity to enhance and refine state energy programs.

Current Massachusetts Energy Efficiency / Electrification Programs:
Currently, the key program in the Commonwealth for efficiency measures, the Mass Save program, contains limited electrification incentives tied to energy use intensity reductions. These incentives alone are insufficient to cover electrical panel upgrades or other "pre-electrification" barriers. Additionally, these incentives, while evolving, are not currently optimized for retiring gas-fired heating systems. The Commonwealth can learn from its experiences addressing barriers to energy efficiency for hard-to-reach, hard-to-serve communities and also authorize deeper incentives for phasing out gas-fired equipment.

Today, energy efficiency programs are also not aligned with capital planning undertaken by state- and federally-assisted housing authorities, and are difficult to sequence with even known and planned capital work. While for small interventions this can be effective—weatherization or lighting projects with less red tape—it can at times result in inefficiencies and partially redundant energy analyses. For example, it does not serve the public interests to have an energy audit for Mass Save, an engineering report with energy modeling for a parallel capital project at the same property, and an investment grade audit for Energy Performance Contracting—there is likely a more optimal solution for coordinating the necessary analysis.

Targeting Programs to Support Federally and State-Assisted Housing Authorities: Federal and State-Assisted Housing Authorities are required to conduct capital needs assessments and engage in multi-year capital planning. Federal authorities' capital plans are approved by HUD but advance with some independence in local planning subject to compliance with regulatory and funding requirements. The DOE/DOER should include early coordination with federally-assisted housing authorities early in the HOMES and HEEHRA program roll-out. Coordination with state energy offices and energy efficiency Program Administrators is particularly helpful because utility-funded projects typically occur outside of, or require modification to, regular capital planning processes. For more comprehensive rehabilitations as envisioned under HOMES, which meet specific energy reduction benchmarks, it is almost certainly necessary to coordinate capital projects.

State-Assisted Housing Authorities (Local Housing Authority or LHA) enjoy a comparably higher level of oversight by the Department of Housing and Community Development. For the purposes of HOMES and HEEHRA, this means that capital needs and capital work planned at LHAs are generally known to DHCD and the agencies could help streamline and even target measures where appropriate, issue guidance to Local Housing Authorities, and support deployment of a portion of HOMES/HEEHRA funds to LHA specific projects.

Promoting equity and efficient services - *Prequalifying architects and engineers, particularly minority and women business enterprises, for public agencies to undergo qualified energy projects***:** State agencies can coordinate energy incentives with state and local housing agencies by engaging in energy or construction design procurement prequalification measures that allow fast implementation of qualified energy projects. The DOE could provide guidance or support or connect these measures with its separate workforce development and energy contractor programs. State energy offices can also promulgate guidance on required standards for energy reductions under HOMES-funded projects and how these align with state energy programs.

In terms of procurement prequalification, parallel examples abound. The Massachusetts Office of Supplier Diversity regularly pursues blanket contracts for various kinds of work undertaken by state agencies. The DHCD prequalifies architects and engineers for Local Housing Authorities to use for certain projects. HUD also authorizes a form of blanket

contract (Indefinite Quantity, Indefinite Delivery) which some federal housing authorities use to retain on-call architects.

Utilization of State Flexibilities Under the Section 8 Voucher Programs:
The Department of Housing and Community Development, which subsidizes state-assisted housing, also acts as one of several administrators of federal Section 8 vouchers. Within the Section 8 Program, DHCD functions as a Moving to Work (MTW) authority, which allows it significant flexibility on programmatic measures, including, for example, the structure of utility allowances. BHA is currently reviewing whether non-MTW authorities can use existing regulation to develop more environmentally conscious utility incentives. The DOE and DOER should explore opportunities for Section 8 Administrators, including MTW and non-MTW authorities, to align rental subsidies with energy programs.

Rapid Verification of Income Eligibility
Supporting Federally-Assisted Properties and other affordable housing: DOE should allow states to easily prequalify HUD-assisted properties, HUD-assisted households, as well as state- and locally-assisted properties and households, for HOMES and HEEHRA incentives. DOE should allow states to offer enhanced incentives broadly in environmental justice communities and/or qualified census tracts.

Preserving Rental Housing *– Qualifying Project Based Voucher properties with an Agreement to Enter into a Housing Assistant Payment Contract (AHAP)*: DOE should allow and encourage states to issue incentives for preservation projects which are using a combination of funds, such as Project Based Voucher awards and utility/energy incentives, to preserve properties and bring properties up to code (and meet Housing Quality Standards, the Section 8 requirement). The HOMES/HEEHRA award can be paired with requirement that the housing is operating as low-income housing, i.e. through the PBV award, for a set number of years. This could help securing financing for the improvements under HOMES in large multifamily buildings. The operative point is that Section 8 households may not be residing in place at the time the work needs to happen if subsidy payments commence after work is completed, and the programs should be flexible.

Aligning with Low-Moderate Income Homebuyer Programs: The BHA is an administrator of Section 8 Homeownership vouchers. The DOE should assist state agencies in targeting assistance to all income-eligible federally-assisted homebuyers. The DOER should design incentives and outreach to target low-income homebuyers, including voucher homeownership buyers and income-eligible recipients of Mass Housing Partnership, Mass Housing, or City of Boston homebuying supports.

HOMES/HEEHRA Duplication of Benefits Regulation:
Federal agencies regularly, and rightly, promulgate rules to prevent duplication of benefits. Language in HEEHRA and similar language in HOMES preclude funding for the "same qualified electrification project through both a high-efficiency electric home rebate program and any other Federal grant or rebate program[…]"

This is well-intentioned to protect taxpayer expenditures, but requires clarification. For example, if a public housing authority upgrades electrical panels through its capital fund, and HEEHRA incentives are used to cover heat pumps on site, this should presumably be allowable. The language, however, does not clearly indicate what "same project" refers to, or how to structure a project.

If funds cannot be deployed in tandem, and project costs exceed each separate incentive, the program will be self-defeating. The Commonwealth should ensure authorities potentially receiving a mix of resources have clear guidance as to how to structure projects, and the DOE should provide flexibility.

Thank you for the opportunity to provide feedback on federal incentives programs. BHA appreciates your work to advance clean and efficient energy.

Regards,

Joel Wool
Chief of Staff
Boston Housing Authority

February 23, 2023

[Submitted via online submission]
State and Community Energy Programs
U.S. Department of Energy
1000 Independence Avenue SW
Washington DC, 20585

Subject: Home Energy Rebate RFI - DE-FOA-0002981 - Dandelion Energy

Thank you for the opportunity to provide responses to the Department of Energy (DOE) Office of State and Community Energy Programs request for information (RFI) on the Home Efficiency and Electrification Rebate programs.[1] Geothermal (Ground Source) Heat Pumps (GSHP) provide significant emissions reductions, grid benefits, and operating cost savings for households in all climate zones across the country, yet the higher up-front installation costs present a barrier to many homeowners.

Summary of Dandelion Energy Comments:

The Home Energy Rebate programs have the potential to help thousands of households to achieve energy and cost savings by making geothermal heat pumps affordable for all Americans. To achieve these benefits, the DOE should:

- Ensure that state programs include all eligible electrification measures listed in the authorizing legislation to provide clarity to customers, contractors, and retailers. The Inflation Reduction Act named specific electrification measures to help ensure market transformation and product development, and eliminating selected offerings would undermine these goals. DOE should therefore ensure that all state program applications include geothermal heat pump rebates as part of their heat pump rebates.

- Ensure that Home Energy Rebates are available to households who lease their equipment or otherwise sign a contract to electrify their heating and cooling.

- Encourage flexibility to use historical energy data from a wide variety of sources, including utilities, smart panels and sensors, and third-party data providers.

[1] Public Law 117-169, commonly known as the "Inflation Reduction Act," established the Home Efficiency Rebates program (Section 50121) and the Home Electrification Rebates program (Section 50122).

- Align implementation plans with existing energy efficiency and grant programs to reduce administrative burdens and duplication.
- Establish categories of pre-approved measures (or allow states to do so) that meet the modeled energy savings requirements under the Home Efficiency Rebate program.
- Establish common rebate applications, online portals, software, and processes to give states an option for easy adoption; DOE-provided baseline tools will be especially beneficial for streamlining processing of rebates for contractors operating in multiple states.

Full comments responding to the specific RFI questions are detailed below.

A. Respondent Contact Information

1. Please provide your contact information, including your name, organization, type of organization (state government, non-profit/community organization, individual, etc.), phone number, and email address.

Dandelion Energy, Inc., is one of the nation's leading providers of home geothermal heating and cooling systems; our mission is to provide earth-powered heating for every home. Dandelion Energy point of contact: Doug Presley, (617) 869-7338, dpresley@dandelionenergy.com.

B. Accessible and Equitable Program Design

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?

To make the rebates accessible to low- and moderate-income households, the Home Energy Rebates should be available to households who lease their equipment or otherwise sign an energy service contract for electrification of their heating and cooling (in addition to households who purchase their systems outright).[2] Leasing, energy service contracts, and third-party ownership models provide an important option for ensuring that disadvantaged communities and low- and moderate-income (LMI) households are able to affordably access the benefits of clean heating and cooling.

[2] For example, the New York State tax credit for geothermal heat pump systems includes both purchases and leases in determining the basis for the credit, which include in the categories of eligible equipment "the lease of geothermal energy system equipment under a written agreement that spans at least ten years…"; see New York Tax law section 66, paragraph (g-4), https://www.nysenate.gov/legislation/laws/TAX/606, accessed February 2, 2023.

Under a third-party ownership model for geothermal heat pumps, the system is owned by a third-party, who then either leases it, or sells thermal energy, to the consumer. Third-Party Owner leasing companies are able to reduce the price of the system by leveraging tax credits, accelerated depreciation, and lower commercial interest rates. Geothermal leasing allows a homeowner, renter, or business to receive immediate cost savings through lower energy bills without the up-front financial burden of loan financing or capital investment.

DOE should ensure that households who sign energy service contracts or lease agreements for heat pumps are eligible to receive rebates, and to assign the rebates to the installer to reduce the overall cost. Rebates could be provided as up-front rebates on the full value of the contract or annually based upon the yearly lease/contract costs to the household. Applying rebates to lease agreements will reduce the overall cost and keep the monthly payments as low as possible for eligible households.

5. How can the Home Energy Rebate programs help to minimize energy burden and costs, particularly in LMI and high energy burden households?

The Secretary of Energy should utilize the authority provided in the Inflation Reduction Act[3] to increase the rebate amounts for low- and moderate-income households for certain high-impact energy saving measures such as weatherization and geothermal heat pumps. This will ensure that all households are able to overcome up-front cost constraints and access the long-term energy savings of these measures.

6. What types of program design approaches, guidelines, tools, savings analyses, policies or reviews can help discourage contractors from using rebates for upgrades that will likely result in higher annual household energy bills, particularly for low-income households?

Geothermal heat pumps provide long-term annual operating savings in every climate zone compared to fossil-fuel, electric resistance, or air source heat pump heating and cooling – with household energy bill savings ranging from hundreds to thousands of dollars per year. DOE should require all states to include rebates for geothermal heat pumps in their Home Efficiency and Electrification Rebate programs in order to ensure that all households have access to long-term energy cost savings through geothermal heating and cooling. This would ensure the programs remain consistent with congressional intent for the Home Electrification Rebates definition of “heat pumps” to include both air source heat pumps and geothermal heat pump systems.

[3] Sec. 50121(c)(3) provides that “On approval from the Secretary, notwithstanding paragraph (2), a State energy office carrying out a HOMES rebate program using a grant awarded pursuant to this section may increase rebate amounts for low- or moderate-income households.”

8. Given that rebate allocations are intended to be applied to residential properties within that state, tribe, or territory's jurisdiction, how can program administrators ensure proper rebate processing in instances when the equipment/service provider and the household are in two different jurisdictions?

Contractors working across multiple jurisdictions already apply varying program criteria to projects with their customers across jurisdictional boundaries, and the administrative burden primarily falls on installation contractors to understand the details of different state- and utility-administered programs. DOE should provide guidelines and best practices to encourage uniform implementation across states and reduce overhead costs for implementers. DOE should provide common rebate applications, software, and online portals to encourage consistent state adoption of rebate programs and reduce administrative burdens for contractors operating across multiple jurisdictions.

9. What are best practices for implementing successful 'point of sale' rebates, including when considering contractor needs?

Providing up-front certainty in rebate amounts and eligibility is critical for customers and contractors to effectively access rebates. DOE should authorize state programs to take all available steps to maximize contractors' ability to offer customers set rebate amounts and confirmed eligibility as part of a contract proposal and at point of sale—including through pre-approval of eligible energy-saving measures, supporting aggregators in offering up-front rebates, and flexible income verification systems and processes.

Processing of rebates under existing state and utility energy efficiency programs continues to be a challenge in many states, often relying on lengthy manual processes with little transparency. State programs should allow up-front issuance of rebates to households, contractors, and aggregators, with subsequent verification and recovery mechanisms as necessary if projects are found ineligible. This will allow rapid payment to contractors and eliminate long wait times for rebate processing, while still ensuring verification of eligibility through appropriate channels.

Drawing on lessons learned from existing programs, DOE should also help streamline rebate processing through technology solutions, such as:

- Establishing common rebate applications for states to adopt;
- Leveraging online portals to provide transparency on rebate status for consumers and contractors;
- Providing software tools to calculate measured and modeled energy savings;
- Allowing electronic submission of rebates, including electronic signatures, rather than requiring hard copy submissions with wet signatures on documents; and
- Encouraging states to offer electronic payments to streamline rebate delivery in addition to offering paper checks when electronic payment is not feasible.

11. What quality control measures are needed to ensure that contractors practice safe and healthy homes best practices, and that projected savings are achieved?

DOE and states should rely upon existing certifications and training programs as the most effective mechanisms for quality control of heat pump installations. Certifications such as the International Ground-Source Heat Pump Association (IGSHPA) accredited installer certificate or certification as a GeoExchange Designer[4] provide robust assurance that geothermal heat pumps are installed in a safe and effective manner, and other existing certifications (such as the Air Conditioning and Heat Pump Professional certification offered by the Building Performance Institute (BPI)[5]) and manufacturer-provided trainings further emphasize appropriate heat pump sizing and installation. Energy efficiency programs such as the MassSave program[6] and the EnergizeCT program[7] provide an effective model where contractor participants in the Heat Pump Installer Networks must obtain IGSHPA certification for geothermal installers and cold-climate heat pump training for air source heat pump contractors.

D. Designing Programs for Maximum Impact

24. What practices should states, territories, and Indian Tribes include in program design to maximize uptake such as interim targets, incentives to contractors to install eligible equipment, or partnerships with for-profit, non-profit, or municipal entities)?

DOE should establish pre-approved categories of rebates under the Home Efficiency Rebate program for certain measures based on generic modeled energy savings. Since home heating and cooling accounts for approximately 55% of residential energy use nationwide,[8] geothermal heat pumps are one of a few select measures that will achieve at least 20% to over 35% energy savings in virtually every scenario, regardless of specific housing characteristics.

A GSHP replacing an existing air conditioning and heating system in cold climates will typically achieve heating and cooling energy savings of:

- 80% replacing fuel oil heating;
- 70% replacing a natural gas system; and
- 50% replacing an air source heat pump.

DOE should establish categories of pre-approved measures (or allow states to do so) that meet these modeled energy savings requirements, including GSHPs for the

[4] See IGSHPA website, https://igshpa.org/certified-geoexchange-designer/
[5] See BPI website, https://www.bpi.org/certified-professionals/ac-heat-pump
[6] "Heat Pump Installer Network," MassSave, https://www.masssave.com/partners/heat-pump-installer-network
[7] "Heat Pump Installer Network," EnergizeCT, https://energizect.com/contractor-portal/HPIN
[8] "Energy Data Facts," Office of Energy Efficiency and Renewable Energy, DOE, https://rpsc.energy.gov/energy-data-facts, accessed February 2, 2023.

maximum $4,000/$8,000 rebates under the Home Efficiency Rebate program. DOE pre-approved measures can leverage DOE energy use models and historical weather data, coupled with "Manual J" calculations of the home's energy use,[9] to be generally consistent with BPI 2400 modeling requirements, using simple inputs to account for climate zones, home size, and age. These select pre-approved measures will provide certainty on rebate values for homeowners, building owners, and contractors, simplify the rebate application process, and reduce duplicative calculation of energy savings.

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?)

DOE should ensure that states offer the Home Electrification Rebates for both retrofits and new construction, in accordance with the authorizing legislation, which specifically includes purchases "as part of new construction".[10] New construction builders have been slow to adopt all-electric building designs, and further incentives are required to transform both the new construction and retrofit markets towards electrification. Providing rebates for both new construction and building retrofits will ensure that all eligible households are able to take advantage of these programs and spur market demand in all construction and retrofit industries.

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.

DOE and states should align implementation plans with existing energy efficiency and grant programs to reduce administrative burdens and duplication. While the Inflation Reduction Act allows up to 20% of the total funds ($1.76 billion) to be spent on program administration, states can minimize administrative costs by aligning the implementation of the federal rebates with existing energy efficiency and grant programs.

- DOE should enable states to use consistent rebate submission forms and payment timelines as in existing programs.

[9] See question 42 for additional details on how the Manual J process can be used consistent with BPI 2400.
[10] Inflation Reduction Act (P.L. 117-169) Section 50122(d)(6)(A)(ii)(I).

- For income-eligible programs, states should leverage existing income verification methods to the maximum extent possible to streamline the verification process.
- Example to Avoid: In some states, the utility energy efficiency program rebates require different forms than the energy efficiency loan programs, even though they ask for the same data from the same household. In other states, multiple loan programs in the same state require different forms. States should seek to avoid such duplicative processes for Home Efficiency and Electrification rebates.

31. What safeguards can program administrators put in place to ensure local utility rebates and other local funding that existed before the Home Energy Rebates are not decreased in response to the availability of the Home Energy Rebates?

To maximize the positive impacts of the Inflation Reduction Act, states must pair the Home Efficiency and Electrification Rebates alongside state- and local-level energy efficiency programs. DOE should clearly establish in the program guidance that federal rebates should supplement existing rebate programs, not replace them.

DOE should require states with existing state- or utility-run rebate programs to certify annually that the state and the local utility commission are not planning to decrease existing funding levels for these programs or provide a justification and rationale for any decreases as part of their application package. This will help ensure that the Home Energy Rebates are additive to existing incentives and do not use the federal funding to reduce existing rebate amounts and offset their current spending.

F. Opt-In Tools, Resources, Technical Assistance, and Partnerships

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.

As addressed in questions 8 and 9, DOE should establish common rebate applications, online portals, software for measured and modeled energy savings calculations, and processes to give states an option for easy adoption; DOE-provided tools will be especially beneficial for streamlining processing of rebates for contractors operating in multiple states.

H. Estimating and Measuring Energy Savings

42. What recommended methodologies or standards could be used by states/programs to calculate energy savings and associated impacts, such as greenhouse gas emissions reductions? What software is used to implement that methodology? What are the key inputs and features?

For the Home Efficiency Rebate program, DOE and states should provide contractors with maximum flexibility in gathering energy usage data and choosing tools and standards for complying with the modeled and measured energy savings processes.

For the modeled energy savings pathway, the legislation authorizes the Secretary of Energy to approve processes that are "consistent with" the BPI 2400 standard, which allows some flexibility in approving methods that use alternate processes provided they are generally consistent with BPI 2400. The Air Conditioning Contractors of America Manual J Residential Load Calculation provides one such tool; the "Manual J" process performs modeling of home heating and cooling loads, but is specific to heating and cooling systems and does not include whole-home modeling. Where contractors can show sufficient energy savings compared to past energy usage using heating and cooling improvements modeled using the Manual J, they should be eligible for Home Energy Rebates without needing to further model the entire whole-home energy usage.

DOE should issue guidelines that encourage flexibility for contractors and aggregators to utilize historical energy data from a wide variety of sources, including utilities, in-home smart panels and sensors, third-party data providers, customer utility bills, and/or delivery records. DOE guidelines should minimize the data required to the minimum elements to ensure eligibility and program compliance, without requiring additional data which can act as a barrier to customer and contractor participation. DOE should also provide guidance for homes with less than 12 months of utility data (e.g. new homeowners) to ensure these households are not unfairly excluded from these programs.

I. Eligible Technologies for Rebates

46. How should DOE facilitate that clear information regarding qualifying technologies and projects is readily available to consumers, contractors, retailers, and other relevant Stakeholders?

To ensure program clarity for consumers, contractors, and retailers, the DOE should ensure that state programs include all eligible electrification measures listed in the authorizing legislation. DOE should not allow programs to selectively pick and choose a subset of electrification measures to include in the Home Electrification Rebate program – the Inflation Reduction Act named specific electrification measures to help ensure market transformation and product development, and eliminating selected offerings

would undermine these goals. Consistent eligible technologies across state jurisdictions will also simplify consumer outreach and education efforts.

To further ensure consistency, DOE should require that geothermal heat pumps are included in the offered heat pump rebates. Geothermal heat pumps provide energy savings in every climate zone across the country, and DOE should ensure that all state program applications include geothermal heat pump rebates in addition to air source heat pump rebates.

K. Compliance and Quality Assurance

51. How can program administrators track participation in rebate programs to protect against: (i) Double-dipping between various federally funded state and Tribal grant programs for the same upgrade; (ii) Households receiving more funds than are allowable under the law; (iii) Contractors/installers purchasing equipment in a way that violates the prohibition of combining efficiency and electrification rebates; (iv) Claims for work not done (v) Improper installations (vi) Ineligible products (vii) Falsifying income eligibility; (viii) Other risks – please identify other risks.

Existing state- and utility-administered energy efficiency programs already include safeguards against improper applications, including duplicate applications across multiple programs, ineligible equipment, and income eligibility. These validations are incorporated into the rebate application and quality assurance spot check process. DOE should leverage these existing processes to avoid creating unnecessary administrative burdens which could deter participation by consumers and contractors.

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?

DOE should require that contractors maintain IGSHPA certification in order for their geothermal heat pump installations to be eligible for the Home Energy Rebates.

55. What practices are needed to ensure quality installations? Please provide examples of how existing efficiency or electrification programs track quality installations by contractor.

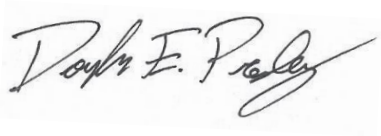
Existing state- and utility-administered energy efficiency programs already perform quality assurance/quality control (QA/QC) inspections of select systems following rebate applications, providing cost-effective verification while minimizing overhead costs. Contractors who consistently perform well during inspections typically are scheduled for a lower QA/QC sampling rate to further optimize inspection value. DOE should leverage these existing QA/QC processes for any further federal verification purposes.

M. Buy America and Supply Chain Considerations

57. Which technologies, products, or materials could face barriers to deployment or accessibility due to cost premiums, supply chain constraints, or other production issues?

There are currently significant supply chain, installer, and utility constraints for customers requiring a main panel upgrade or utility service upgrades when installing electric appliances such as heat pumps. Section 220.70 of the 2023 National Electrical Code (NEC) code (NFPA-70)[11] allows for utility service to be sized based on a maximum controlled load, which can substantially reduce the percentage of homes that require a utility service upgrade when adding electric appliances and EV chargers. However, not all states and localities are currently using the 2023 version of the NEC, and are instead recognizing the 2017 or 2020 version of the Code. While both of these older NEC versions have some provisions for this approach, they do not contain the clear language found in the current (2023) edition of the NEC. This ambiguity could present barriers to adoption of electrification technologies; DOE should therefore establish guidelines approving energy management systems that comply with 2023 NEC requirements as eligible for projects implemented through the Home Energy Rebate programs.

Respectfully submitted,



Douglas E. Presley
Policy and Regulatory Affairs Manager
Dandelion Energy

[11] *https://www.nfpa.org/codes-and-standards/all-codes-and-standards/list-of-codes-and-standards/detail?code=70*

MASSACHUSETTS
ASSOCIATION OF REALTORS®

MASSACHUSETTS ASSOCIATION OF REALTORS STATEMENT SUPPORTING THE INFLATION REDUCTION ACT HOME EFFICIENCY AND ELECTRIFICATION REBATE PROGRAMS

MASSACHUSETTS DEPARTMENT OF ENERGY RESOURCES

FEBRUARY 28, 2023

On behalf of our 27,000 members, the Massachusetts Association of Realtors® (MAR) supports the significant resources allocated to states through the Inflation Reduction Act (ACT). MAR recognizes the incredible gift that Massachusetts environment offers to our state's citizens. Furthermore, we understand the importance of the environment to our quality of life and the marketability of surrounding property.

As a result, our organization supports policies and programs aimed at incentivizing homeowners to make energy efficiency improvements to their home. The IRA's Home Energy Performance-Based, Whole House Rebates ("HOMES" Section 50121) and High-Efficiency Electric Home Rebate Program ("HEEHR" Section 50122) can provide homeowners with incredible opportunities to increase their energy efficiency and reduce costs.

MAR Supports Consumer Choice

As DOER plans next steps, we urge you to preserve consumer choice in rebate programs. One size doesn't fit all for homes or homeowners. It is essential, especially in a state like Massachusetts which has wide variations in housing stock and localized climate issues, that homeowners have the ability to select the equipment that best suits their individual needs. What homeowners need in Cape Cod is likely different from Boston or the Berkshires. Assuring consumer choice will maximize participation in these programs and increase their utility.

MAR Supports Consumer Education

We urge DOER and the DOE to consider the need for (and expense of) public education as part of these programs. We know that Massachusetts home buyers and sellers are interested in maximizing home energy efficiency. For example, the MassSave program performed roughly 50,000 home energy assessments in Massachusetts in 2022 alone. But even interested homeowners may not understand all the available opportunities. Educating consumers and property owners about the availability and benefits of these rebates, as well as how to access them, will assure their success.

MAR supports the IRA's home efficiency and electrification rebate programs and looks forward to their effective implementation. Please do not hesitate to contact Justin Davidson, General Counsel, MAR, jdavidson@marealtor.com.

Huckabee, Jerrylyn (ENE)

From: Edward Mcintyre <emcintyre1@comcast.net>
Sent: Thursday, February 23, 2023 11:36 AM
To: jerrylyn.huckabee@mass.gov
Subject: IRA RFI

Dear Ms Huckabee,
Thank you for this opportunity to address responses to the DOE's RFI on rebate programs.

In order to take full advantage of the new federal money, it is important that there be clarity and understanding of the options for the households that participate. To that end, I urge any program design to include at least a website that offers a coordinated and wholistic view of the funding available. Even better would be to have human advocates that can take on 'cases' of different households and provide ongoing advice and coaching about options. If possible, the coordination should include state funding, but at a minimum it is crucial to have clarity for new federal grants. Teams of DOER personnel could hold educational seminars and zoom calls to spread the word, and work with trusted local voices in order to maximize the impact. In short, outreach and education is critical to further the acceptance and full exploitation of the new money.

This information and coaching should be provided in multiple languages in order to reach disadvantaged communities and should highlight assistance to renters.

Thank you

Ted McIntyre

Huckabee, Jerrylyn (ENE)

From: Anderson, Erica <EAnderson2@MBTA.com>
Sent: Thursday, February 23, 2023 9:47 AM
To: Huckabee, Jerrylyn (ENE)
Subject: IRA RFI Comment

Hello Lyn,

I may have missed it, but I was hoping for additional focus to be given to electrification of rental properties in this RFI (including low income properties). I find that many landlords don't bother electrifying because the savings and energy costs don't impact them, which is a huge hindrance in majority rental properties (aka much of the cities surrounding Boston). I know that Mass Save has successfully changed the insulation rebate for rental properties specifically, so I think something similar should be implemented for HVAC.

Is there anyway we could ask/ remark/ comment on the RFI to include this?

Thank you,
Erica

Erica Anderson ENV SP, C.E.M. *(she/her)*
Energy Conservation Specialist
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February 28, 2023

VIA EMAIL

Lyn Huckabee
Regulatory and Innovation Program Manager
Department of Energy Resources
100 Cambridge Street, #1020
Boston, MA 02114
jerrylyn.huckabee@mass.gov

Re: **Implementation of the Inflation Reduction Act's Home Energy Rebates**

Dear Ms. Huckabee:

As the Program Administrators ("PAs") of the Mass Save® energy efficiency program,[1] we thank you for the opportunity to help inform DOER's response to the federal Department of Energy's ("DOE") *Request for Information on Inflation Reduction Act Home Efficiency & Electrification Rebate Programs* (the "DOE RFI"). The DOE RFI solicits comments on two significant new programs authorized by 2022's Inflation Reduction Act, the Home Energy Performance-Based, Whole-House Rebates ("HOMES Rebates"), 42 USC § 18795, and the High-Efficiency Electric Home Rebate Program ("HEEH Rebates"), 42 USC § 18795a. The PAs are grateful for the continued partnership with DOER, the Department of Public Utilities ("DPU"), and the Attorney General's Office ("AGO") in delivering nation-leading energy efficiency and electrification programs to Massachusetts residents and businesses. The PAs also intend to submit more extensive comments directly to DOE, which we will share with you.

The HOMES and HEEH Rebates represent a significant federal investment in efficiency, innovation, and home electrification. It is critical that the implementation of these federal programs integrates seamlessly with and builds on the Commonwealth's efforts in pioneering efficiency and electrification over the past 25 years. Thanks to the collaborative work by contractors, municipalities, DOER, DPU, the AGO, the Low-Income Energy Affordability Network ("LEAN"), the PAs, and many more, Massachusetts residents and businesses benefit from one of our country's best energy efficiency programs. For over a decade, the American Council for an Energy Efficient Economy has consistently ranked Massachusetts one of the top two states in the country for energy efficiency.

[1] The Massachusetts Program Administrators are: The Berkshire Gas Company, Fitchburg Gas & Electric Light Company d/b/a Unitil, Liberty Utilities (New England Natural Gas Company) Corp. d/b/a Liberty, Massachusetts Electric Company, Nantucket Electric Company, Boston Gas Company and former Colonial Gas Company, each d/b/a National Grid, NSTAR Electric Company, NSTAR Gas Company and Eversource Gas Company of Massachusetts, each d/b/a Eversource Energy, and Cape Light Compact JPE.

DOE and DOER should design and implement the HOMES and HEEH Rebates to complement existing, successful programs like those in Massachusetts, rather than requiring substantial reforms or creating competing offerings that consumers need to choose between. With that guideline in mind, the PAs propose four principles to inform the implementation of these rebates:

1) States like Massachusetts that have successful track records of implementing energy efficiency programs should enjoy flexibility in implementing the rebates. In these states, rebates can help drive even greater equity-focused investments in existing programs and lower the cost curve for the mass-market adoption of technologies like heat pumps. DOE should allow states to build on what's working, rather than align to a uniform national standard. We believe flexibility can be accomplished by establishing key metrics for success that build on existing performance indicators and reporting, while allowing funding to supplement existing incentives designed to achieve these goals. Further, it is also critical that program definitions be expanded to facilitate this approach. In particular, DOER, the PAs, and other stakeholders have redoubled our efforts to serve Environmental Justice Communities that have historically struggled to take advantage of energy efficiency programs. Yet DOE's draft definition of Disadvantaged Communities would exclude some of these Environmental Justice Communities—DOE should expand the definition of Disadvantaged Communities to encompass EJ communities identified through robust state-level processes, as in Massachusetts. Additionally, the definition of Program Administrators should be clarified to ensure that the Massachusetts Program Administrators are eligible to help implement the rebates on behalf of DOER.

2) Clarity for customers is critical. The infusion of federal dollars into efficiency has boosted the market for investments to electrify and decarbonize buildings, but this momentum risks being squandered if it is too confusing or difficult to access programs. The risk of confusion is exacerbated by the multitude of federal programs that could support investments in efficiency, clean energy, and climate mitigation. Coordinating the use of these funds with existing programs will be difficult, but essential. Substantively, federal money should layer on top of existing state-based dollars and the ongoing work of the PAs and LEAN, either deepening support in existing programs or facilitating expansion to underserved segments of the market. In the end, there should be no room for customer confusion over how much they will have to pay for efficiency upgrades.

3) Speed is important to achieve existing greenhouse gas reduction targets, so DOE should release funds promptly to states that have extensive experience implementing efficiency programs and reasonable proposals for deploying federal funds.

4) In the spirit of the Biden Administration's "whole-of-government" approach, program rules should be designed to facilitate leveraging of federal funds from other agencies, particularly the U.S. Environmental Protection Agency ("EPA") and the Department

of Housing and Urban Development ("HUD"). Grant funding, such as EPA's Greenhouse Gas Reduction Fund, present an ideal and flexible form of funding that can be leveraged by DOER and community-based organizations to accelerate decarbonization in environmental justice communities and among low- and moderate-income customers. Duplicative requirements across DOE, EPA, and HUD associated with environmental reviews and reporting will unnecessarily burden these communities and make use of these funds unmanageable. For DOER and community-based organizations that receive these funds, there must be streamlined oversight and reporting at the federal level. Creatively layering together funding from the newly available grants under the Bipartisan Infrastructure Law, the Inflation Reduction Act, and other sources will allow DOER and the PAs to pursue emerging priorities.

The PAs look forward to working with DOER to ensure that Massachusetts takes full advantage of the opportunity presented by the HOMES and HEEH Rebates. We would be pleased to discuss the PAs' comments, or DOER's own comments, with you prior to DOE's deadline. Likewise, we look forward to working with you to capitalize on other federal funds available through the Bipartisan Infrastructure Law, the Inflation Reduction Act, and other recent legislation. Please do not hesitate to contact us to collaborate on these or other issues as we continue to work together to advance the Commonwealth's energy and climate goals.

Sincerely,

The Massachusetts Program Administrators

/s/ *Katherine Peters*
Katherine Peters
Director, Massachusetts Implementation
Eversource Energy

/s/ *Christopher Porter*
Christopher Porter
Director, Customer Energy Management
National Grid

/s/ *Cindy Carroll*
Cindy L. Carroll
Vice President, Customer Energy Solutions
Unitil Service Corp.

/s/ *Hammad Chaudhry*
Hammad Chaudhry
Senior Manager
The Berkshire Gas Company

/s/ *Stephanie Terach*
Stephanie Terach
Manager, Energy Efficiency & Customer Programs
Liberty Utilities

/s/ *Margaret T. Downey*
Margaret T. Downey
Administrator
Cape Light Compact JPE

cc: Elizabeth Mahony, Commissioner, DOER
Patrick Woodcock, Outgoing Commissioner, DOER
Maggie McCarey, Director, Energy Efficiency Division
Jo Ann Bodemer, Esq., Assistant Attorney General
Jonathan Goldberg, Esq., General Counsel, DPU
Jerrold Oppenheim, Esq., LEAN

Huckabee, Jerrylyn (ENE)

From: Daniel Myers <dan@flair.co>
Sent: Monday, February 27, 2023 3:18 PM
To: jerrylyn.huckabee@mass.gov
Cc: Johnny Anderson; Charles Novoth
Subject: Public Comment for DOE's Request for Information on Inflation Reduction Act Home Efficiency and Electrification Rebate Programs

Hi Lyn / DOER,

I. Eligible Technologies for Rebates

47. The Home Electrification Rebates specifies that qualified electrification projects must include the purchase and installation of certain equipment or materials. Should other related improvements (e.g., smart thermostats, sensors and controls, LEDs) be allowable as part of a qualified electrification project for the purposes of calculating total project costs which can in turn affect the final rebate amount?

I represent Flair, a US company specialized in advance heatpump controls that is one of the most active companies driving residential electrification in Massachusetts and the US Northeast generally. We specialize in providing brand agnostic heatpump controls for ductless heatpumps (DHPs, sometimes called minisplits) that allow any brand/model to be included in load flexibility programs as well as popular heating hybridization applications ("integrated controls"). Often times, homeowners are hesitant to fully abandon their oil or gas boiler systems in Massachusetts and other cold climate states and increasingly, they are installing ductless heatpumps not because they want to displace their oil/gas usage in winter but because they want AC during summers that are getting warmer in the region. Flair's Puck Pro thermostats allow for homeowners, energy programs, and ultimately policy makers to utilize these heatpumps as much as possible during the winter while utilizing the legacy oil/gas system as backup for the homeowner and for grid resiliency. When these DHPs are being installed without smart controls, most of the time these units will not be put online and made available for load flexibility thus its critical that when incentivizing heatpumps, particularly ductless heatpumps, that DR ready smart controls are not just included in rebates but also required. NE-ISO is anticipating a shift to being a winter peaking region with the large shift to heatpumps but its important that we maintain grid resiliency by keeping backup heating systems available for load shedding scenarios and that we include smart controls to help homeowners confidently electrify knowing they still have their heating system that has served them in the past as a back up/back stop.

Further, we have seen many homeowners participate in rebate programs where they are doing 'full load' heatpump systems and are required to decommission their oil/gas boilers to capture rebates. Observationally, we have seen that many of these 'decommissioned systems' are not being decommissioned and instead being left in place for back up situations. Rather than fight with homeowners over whether they should be able to have a backup heating source, we should be encouraging homeowners to do smart hybridization whereby they can shift their homes partially or fully to heatpumps with smart thermostats and "integrated controls". This provides an onramp to electrification that avoids the cultural push back to electrification, provides opportunities for utilizing AC adoption for electrification, and provides critical grid resilience for a regional electricity system that does not have large amounts of spare winter capacity. Smart Controls are critical for successful electrification at both the home and grid level and thus should absolutely be considered for rebate inclusion.

Lastly, we want to emphasize that much like the traditional ducted hvac market, third party controls are a crucial means of both integrated disparate hvac systems in homes but also in having brand agnostic mechanisms for load flexibility. For instance, the DHP market is highly fragmented with over 200 brands available commercially. While some of the largest brands (Mitsubishi, Daikin, etc.) have smart controls availalble, even the largest brands often dont support DR applications while the smaller labels don't offer any sort of smart controls or load flexilibty options natively. Even if every one of the 200 brands of DHPs had a smart controls solution, utilities and aggregators are not able to integrate with so many partners thus third party options, like Flair, are critical to ensuring that the majority of ductless heatpump systems are able to be made smart and included in smart grid applications like demand response and other novel use cases like aligning heatpump demand with clean generation.

Regarding the coordination of the IRA with existing programs, we would also like to suggest that Masssaves is one of the most well run rebate programs in the Northeast and that we highly suggest that the IRA incentives should be used to bolster these programs by increasing rebate incentives to accelerating heatpump adoption. Relationships with contractors and distributors are crucial to get the trades onboard with electrification and Masssaves has done much of this hard work.

Thanks,
Dan Myers
Flair CEO
(954) 261 6679
dan@flair.co

--
Daniel Myers | CEO
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GREEN ENERGY CONSUMERS ALLIANCE

February 27, 2023

Dear Ms. Huckabee,

On behalf of Green Energy Consumers Alliance, I am writing to offer comments on the Inflation Reduction Act Home Efficiency and Electrification Rebate (HER) Programs RFI. We are a nonprofit organization based in Boston and Providence with a mission to harness the power of consumers to speed the transition to clean energy.

First, I will offer a perspective that is of a general nature. IRA is unquestionably providing a welcome boost to the Commonwealth's efficiency programs. However, the situation here is much different than in most other states. We have a GHG mandate and plans that call for clean heat through electrification. And we have program budgets existing now that dwarf the funding made available through the HER programs. For that reason, it is important to target the IRA support carefully and use it to learn lessons that can be applied as the Commonwealth continues to ramp up heat pump adoption over time. We advise against spreading these specific federal funds too thinly in an attempt to cover all the bases that could otherwise be covered by Mass Save and ARPA.

Green Energy Consumers asserts that it is most efficient and beneficial in the long run to use the HER programs to "max out" federal benefits per household to eligible recipients served. This would mean allocating $8000 to $14,000 per home for LMI households. The programmatic benefits of this approach would be:

- Lower administrative and marketing expenses as compared to spreading the federal benefits more thinly.
- The opportunity to maximize the learnings from going deeper per LMI household.

With this approach, the HER program funds would serve less than 10,000 households. This is actually a very small number relative to the goals laid out in Mass Save's Three-Year Plan for 2022-2024. This means that identifying eligible households should be quite easy. DOER should set expectations that program administrators should have plans in place relatively quickly, deploy the HER resources within less than one year, and provide reports to DOER that would satisfy US DOE's requirements and be useful in preparing for 2025 onward.

An implication of this approach is that it means that DOER should simultaneously develop separate plans for promoting IRA's tax credits to consumers who would not receive rebates from the HER programs.

Feedback on Specific Questions:

> *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?*

6. What types of program design approaches, guidelines, tools, savings analyses, policies or reviews can help discourage contractors from using rebates for upgrades that will likely result in higher annual household energy bills, particularly for low-income households?

DOER should solicit proposals from a range of organizations, not just investor-owned utilities, and be clear that successful proposals will address the issues described in questions 5 and 6. We further recommend that DOER allocate rebates to **LMI consumers currently heating their homes with oil or propane**. Customers on electric resistance heat should receive services from Mass Save or their municipal utility.

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?

DOER should reach out ASAP to public housing authorities, the Mass. Association of Community Development Corporations, LISC, New Ecology Inc., and similar organizations for ideas and proposals.

11. What quality control measures are needed to ensure that contractors practice safe and healthy homes best practices, and that projected savings are achieved?

Again, given that the HER programs will enable the electrification of approximately 10,000 homes, which is a relatively small number in the context of Massachusetts' efficiency programming, high-quality home energy assessments should be conducted, including blower door tests, heat loss calculations, and efficiency tests on the existing oil- or propane-systems.

18. How should DOE, states, tribes, and territories measure success? Examples may include high customer satisfaction, measured or estimated benefits (e.g., impacts on energy, bills, emissions, health, or peak demand), quality job creation, valuation of home upgrades or overall efficiency, etc. What specific data is needed to evaluate progress toward these recommended metrics of success?
19. What data should program administrators and DOE collect throughout the program for the purposes of evaluation? What evaluation protocols should program administrators and DOE put into place before program implementation begins?
a. How often should program administrators be required to evaluate program performance? How often should DOE evaluate the program?
b. What specific data is needed to evaluate program success in reaching disadvantaged communities?

For the Commonwealth, it is important to collect data necessary to answer these questions:

- What did the measures cost to install?
- What products were installed – makes and models?

- How much energy was saved and GHG emissions reduced?
- Were consumers satisfied?
- Overall, what did we learn that would be of value as the Commonwealth continues to ramp up the adoption of heat pumps in LMI communities?

20. How should these programs be designed to spur durable market demand for efficient and electrified homes? How can program designs best assure continued funding and financing for home efficiency and electrification improvements even after these funds have been depleted?

These programs simply cannot be designed in a way to assure continued funding. However, they can be designed in a way that demonstrates best practices and creates learning opportunities such that the Commonwealth designs the next Mass Save program more intelligently.

21. Based on past successes, what practices and/or policies should program administrators use to drive higher energy savings per rebate dollar invested (e.g., measure bundling, order of installation, home characteristics, or sizing equipment after insulation/sealing)?

It is simply more efficient to bundle measures in each house served by the HER programs. Th focus should be on heat pumps but while working within the unit, other measures should be installed as practical – panel upgrades, heat pump water heaters, dryers, and stoves. Air sealing and insulation should be done first before sizing the equipment.

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)?

Again, given the limited amount of dollars available to Massachusetts within the context of the Commonwealth's expenditures through Mass Save, rebates ought to be focused on electrifying the homes of LMI consumers with heating oil or propane.

23. What best practices, like bulk purchasing or bulk installation, should program administrators consider to reduce implementation costs for rebate recipients or to maximize the reach of program funding?

DOER should offer owners of large multi-family developments, especially public housing authorities, the opportunity to purchase products in bulk and set aside funding for a limited time in order to give housing authorities an opportunity to respond with proposals.

This concludes our comments on the RFI. Thank you for your attention.

Huckabee, Jerrylyn (ENE)

From: JOHN M BROWN <mit69@icloud.com>
Sent: Friday, February 17, 2023 9:59 PM
To: jerrylyn.huckabee@mass.gov
Subject: IRA RFI comment for DOER

Per an email I received from DOER, DOER is requesting public comment relevant to the Home Efficiency and Electrification Rebate Programs

"DOER is specifically interested in feedback on the following topic areas:

1. Coordination of IRA with existing state programs and funding

2. Targeted approaches to IRA implementation, including specific geographies or customers types for targeted approaches "

I am speaking as a townhouse-owning MA citizen interested in proactively replacing my relatively new and fully functional central ducted air conditioner with a central ducted heat pump, even though it will not save me much money on my heating bill given that I have cheap methane gas available to run my current furnace. I was hoping at least to be assisted by a rebate of about $3000 from MA for the heat pump conversion.

My HVAC vendor informs me, however, that I cannot simply replace my 9 year old top of the line Carrier air conditioner with a new top of the line Carrier heat pump (for about $10,000) and receive the rebate. The new Carrier heat pump has apparently been approved for the rebate only in specific combination with the latest model Carrier gas furnace, so I would have to also purchase the new furnace (for an additional $11,000) along with the heat pump to qualify for the $3000 rebate.

The dealer informs me that my existing 9 year old top-of-the-line Carrier furnace is fully compatible with the new Carrier heat pump - they can both be fully controlled and coordinated by my top of the line Carrier "Infinity" wireless zoned thermostats. But because Carrier has not performed an official paired testing of the new Carrier heat pump with the 9 year old edition of the Carrier furnace, that combination will not suffice for the rebate.

I wish there were some way that the MA program could be adjusted so that someone in my position could be allowed to get the rebate by only replacing the air conditioner with the heat pump, rather than having to spend an extra $11,000 to also purchase an unneeded new gas furnace.

(I don't know if the federal incentives being proposed in the IRA for heat pumps will also have the same constraints as the MA program. I hope they don't.)

John Brown
Winchester

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February 28, 2023

Lyn Huckabee
Regulatory and Innovation Program Manager
Massachusetts Department of Energy Resources
via email: jerrylyn.huckabee@mass.gov

Re: IRA RFI -- Comments of the Low-Income Weatherization and Fuel Assistance Program Network ("LEAN") regarding US DOE's Request for Information (RFI) on Inflation Reduction Act (IRA) Home Efficiency and Electrification Rebate Programs

Dear Ms. Huckabee:

Attached, on behalf of the Low-Income Weatherization and Fuel Assistance Program Network ("LEAN"), are LEAN's responses to DOE's RFI on IRA Energy rebate programs. We very much appreciate this opportunity.

As stated in response to Q. 59, LEAN's main focus is to integrate federal programs with existing successful state programs in order to avoid customer confusion and to enhance program efficiency. As a part of this flexibility, federal funding should be deployable to cover gaps in state funding (e.g., specific measures). Where, as in Massachusetts, the low-income programs provide low-income households the equivalent of a 100% rebate, federal funding should be available to displace a portion of the state 100% rebate, which can then be deployed to additional households (at a 100% rebate), thus increasing total low-income funding

Program flexibility is a key to success. As many years of American Council for an Energy Efficient Economy (ACEEE) studies show (ACEEE.org), there is a wide range across the country in the size, scope, funding levels and sources, comprehensiveness, sophistication, and delivery models for low-income programs. In order to be helpful across the country, any national program needs to be flexible to account for these differences. Notably, ACEEE has consistently found Massachusetts energy efficiency programs to be the first or second most effective in the country.

We would be pleased to talk with you further. Please contact me with any questions.

Respectfully submitted,

The Low-Income Weatherization And Fuel Assistance Network and The Low-Income Energy Affordability Network,
by their attorney

cc: Elizabeth Mahony, Commissioner, DOER
Patrick Woodcock, Outgoing Commissioner, DOER
Maggie McCarey, Director, DOER Energy Efficiency Division
Nate Forster, Esq., Assistant Attorney General
Jo Ann Bodemer, Esq., Assistant Attorney General
Jonathan Goldberg, Esq., General Counsel, DPU

Responses to Request for Information Categories and Questions
Of the Massachusetts Low-Income Energy Affordability Network
To the Massachusetts Department of Energy Resources
regarding US DOE's Request for Information (RFI) on Inflation Reduction Act (IRA) Home Efficiency and Electrification Rebate Programs
February 28, 2023

A. Respondent Contact Information

1. *Please provide your contact information, including your name, organization, type of organization (state government, non-profit/community organization, individual, etc.), phone number, and email address*.

Response: Jerrold Oppenheim, Esq., counsel for Massachusetts Low-Income Energy Affordability Network (LEAN), an organization of Community Action Programs (CAPs), which are non-profits. Tel. 978-283-0897; email JerroldOpp@DemocracyAndRegulation.com.

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?*

Response:The successful LEAN approach has been direct local outreach to identified low-income households, low-income property owners and landlord associations. As the low-income program has expanded, outreach has scaled to include other approaches, such as utility Program Administrator (PA) outreach agreements with municipalities and local community organizations ("Community First Partnerships") and marketing by contractors. To manage the resulting multiplicity of intake sources, LEAN has also instituted a centralized Customer Service Centre.

3. How can DOE encourage program administrators to design their rebate programs to align with the Justice40 Initiative, which commits to delivering forty percent of the overall benefits (home improvements, jobs, etc.) from certain federal investments to disadvantaged communities that are marginalized, underserved, and overburdened by pollution?

Response: The Massachusetts regulatory program includes equitable distribution requirements and oversight. Regulation and oversight is conducted by the Department of Public Utilities and its stakeholder advisory committee (Energy Efficiency Advisory Committee, which includes its Equity Working Group), the Department of Energy Resources, and the legislature (General Court). A key component to distribution of benefits to low-income households is that they make no co-payment to receive them. Thus a robust mechanism is in place to assure that benefits (home improvements, jobs, etc.) from federal investments are delivered to disadvantaged communities that are marginalized, underserved, and overburdened by pollution.

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?*

In Massachusetts, by statute, low-income implementation is performed by LEAN, a network of Community Action Programs. Community Action Programs are federal programs that, by federal statute, are rooted in their communities. Please also see the response to Question 2.

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?*
6. What types of program design approaches, guidelines, tools, savings analyses, policies or reviews can help discourage contractors from using rebates for upgrades that will likely result in higher annual household energy bills, particularly for low-income households?
Response to Questions 5-6. A major purpose of energy efficiency for low-income households is to minimize energy burden. Program cost-effectiveness is an important tool in assuring low-income bills are not raised. As objectives other than customer bill reduction have increased in importance (e.g., greenhouse gas reduction), LEAN has also applied a customer cost-effectiveness screen to prevent the program from increasing any customer's bills; this can require oversight on an individual customer basis, especially with respect to electrification. Similarly, options to protect multifamily tenants from energy bill increases include master metering to cover new operating costs of electrification and utility allowances to decrease rents or take over responsibility for tenant electricity bills. To make the low-income program more broadly available, it covers, with no co-payment, "pre-weatherization" measures that are preconditions to energy efficiency improvements; examples include replacement of knob-and-tube wiring, roof repairs, and electric service upgrades.

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?
LEAN requires multifamily building owners to agree to rent restrictions.

8. *Given that rebate allocations are intended to be applied to residential properties within that state, tribe, or territory's jurisdiction, how can program administrators ensure proper rebate processing in instances when the equipment/service provider and the household are in two different jurisdictions?*
Response: Massachusetts utilities do not cross state lines, although it is possible that out-of-state contractors are employed for in-state work at non-low-income projects.

9. *What are best practices for implementing successful 'point of sale' rebates, including when considering contractor needs?*
Response: The "point-of-sale" should be considered to be the point at which a low-income customer agrees to accept the program's comprehensive work on the customer's home at no cost to the customer. Traditional point-of-sale rebates do not otherwise fit within the Massachusetts low-income energy efficiency program, which operates as a program manager for all work with no customer co-payment. Thus, from the customer point of view, there is no "sale."

11.What quality control measures are needed to ensure that contractors practice safe and healthy homes best practices, and that projected savings are achieved?
Response: All LEAN projects undergo comprehensive in-process and final Quality Control inspections. In addition, Commissioning will be introduced in the low-income multifamily Deep Energy Retrofit program.

12. Which Home Energy Rebate program components across Sections 50121 and 50122 should be implemented separately or together? Some examples could include: (i) Marketing, communications, branding (ii) Income verification (iii) Rebate processing (iv) Contractor requirements (v) Home energy assessments (vi) Data collection and reporting
Response: Low-income verification is conducted in several different ways, i.e., by LIHEAP and by other categorical program intake. There may also be occasional verification performed by PAs under statutory income requirements (60% of state median income). Similarly, effective marketing is performed in a variety of ways, e.g., direct outreach by community organizations, direct mail, and centralized media. Data collection and reporting may be done for more than one program simultaneously. These examples illustrate the general principle that details such as program component implementation should be determined at the state level because it depends on specifics of state program operations. For example, in addition to regulatory oversight, the Massachusetts Low-Income Multifamily Program is advised by a stakeholder advisory committee. In any case, overview should be limited to one agency to avoid inconsistency; combining funding streams would be acceptable.

C. Additional Design Considerations Specific to Indian Tribes
13-16 not applicable in Massachusetts

D. Designing Programs for Maximum Impact
17. *What evaluations of similar programs exist that can provide lessons learned and recommendations for effective program guidance, support, and best practices?*
Response: See Oak Ridge National Laboratory evaluations of the DOE WAP program.

18. How should DOE, states, tribes, and territories measure success? Examples may include high customer satisfaction, measured or estimated benefits (e.g., impacts on energy, bills, emissions, health, or peak demand), quality job creation, valuation of home upgrades or overall efficiency, etc. What specific data is needed to evaluate progress toward these recommended metrics of success? 19, What data should program administrators and DOE collect throughout the program for the purposes of evaluation? What evaluation protocols should program administrators and DOE put into place before program implementation begins? a. How often should program administrators be required to evaluate program performance? How often should DOE evaluate the program? b. What specific data is needed to evaluate program success in reaching disadvantaged communities?
Response to Questions 18-19. Regulation and oversight in Massachusetts is conducted by the Department of Public Utilities and its stakeholder advisory committee (Energy Efficiency Advisory Committee, which includes and Equity Working Group), the Department of Energy Resources,and the legislature (General

Court). A considerable fraction of low-income Single Family projects are co-funded, regulated and overseen by the Department of Housing and Community Development (DHCD), which administers DOE WAP and LIHEAP (a fraction of the latter funding is devoted to heating systems). Regulatory requirements include robust data collection and reporting which include quarterly and annual reports, including of Key Performance Indicators, as well as Term (three-year) Reports and a public data dashboard (MassSaveData.com). Reporting requirements across programs should be coordinated to avoid duplicative efforts.

20.How should these programs be designed to spur durable market demand for efficient and electrified homes? How can program designs best assure continued funding and financing for home efficiency and electrification improvements even after these funds have been depleted?
Response: Funding is secured in Massachusetts by statute, regulatory oversight, and regulatory approval of Three-Year Plans. Regulatory oversight includes climate compliance requirements to 2050, required by statute and set out by the Executive Office of Energy and Environmental Affairs (EEA).

21. *Based on past successes, what practices and/or policies should program administrators use to drive higher energy savings per rebate dollar invested (e.g., measure bundling, order of installation, home characteristics, or sizing equipment after insulation/sealing)?*
An example of such cost control is LEAN's current focus on electric and oil conversions as the most economical place to start heat pump displacements. Broader training of technicians is also helpful. However, the premise of the question is not always appropriate to the goal of increasing low-income savings, especially in a state as advanced in energy efficiency as Massachusetts. As programs go deeper into potential efficiency savings, outreach to the hard-to-reach becomes more difficult and expensive and measures to achieve deeper energy savings and greenhouse gas reductions by electrification become more costly. Of course, attention must be paid to controlling the impact of this truth on low-income households. The taxpayer funding of the IRA is an important contribution to addressing this concern.

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)?
Response: Because states are so varied, considerations at this level of detail should be left to state discretion.

23.What best practices, like bulk purchasing or bulk installation, should program administrators consider to reduce implementation costs for rebate recipients or to maximize the reach of program funding?
Response: Please see the responses to Questions 5-6, 21.

24. What practices should states, territories, and Indian Tribes include in program design to maximize uptake such as interim targets, incentives to contractors to install eligible equipment, or partnerships with for-profit, non-profit, or municipal entities)?
Response: Please see the responses to Questions 2, 3, 4, and 7.

25. How can programs ensure effective consumer education and outreach? What types of tools and/or materials should DOE develop to support consumers in understanding how to maximize the benefits of these programs?
Response: LEAN has developed customer education material, which is distributed by home energy assessors who engage in further education and conversation. In addition, LEAN is working on a dynamic calculator in an effort to keep up with changing ASHP technology, electric prices, and originating fuel prices (gas, oil, propane).

26. What program design requirements are necessary to support increased investment in new business models, with the long-term goal of sustained financial and market investment and accelerated market adoption?
Response: Flexibility at the state level is necessary since business models vary from state to state. For example, in response to specific local dynamics, LEAN is developing a centralized statewide customer service centre and expanding statewide contractor support for local Community Action Programs (CAPs). In the Multifamily program, a pathway for Deep Energy Retrofits has been created by transferring cost-effectiveness requirements from project level to program level.

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?)
Response: Flexibility at the state level is necessary since prioritization is largely a matter of going where the opportunities present themselves when they present themselves, rather than deciding in advance what they will be.

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?
Flexibility at the state level is necessary since, for example, Massachusetts program income eligibility is based on State Median Income rather than Area Median Income.It should be noted that LEAN has coordinated federal (DOE WAP) and state programs for about 40 years.
In layering federal, state, and local incentives where low-income rebates are already at 100%, it is not difficult to avoid the combined value of incentives exceeding 100%. The fact that the low-income program provides 100% rebates

does not preclude adding federal dollars to the program as long as rules provide that supplementing the low-income program releases state program dollars to serve additional low-income households with 100% rebates. This would serve to stretch both Federal and state budgets to cover more households at 100% rebates, as well as to cover uncovered measures such as multifamily "soft costs" (scoping and design).

29.What are potential barriers to effective program energy savings attribution? Are there best practices to address these barriers?
30.What safeguards can DOE and/or program administrators put in place to ensure that low-income households are optimally served through various available programs (e.g., Home Energy Rebates, WAP, or other low-income weatherization programs)?
31.What safeguards can program administrators put in place to ensure local utility rebates and other local funding that existed before the Home Energy Rebates are not decreased in response to the availability of the Home Energy Rebates?
Response to Questions 29-31.Please see the response to Question 28. Local conditions may require specific rebates to be decreased; the important objective is to at least maintain existing total support for energy efficiency.I n this regard, it would be helpful for Federal programs to require that program rebates be deducted from local program costs for cost-effectiveness purposes. Also note that Federal funds could be used for measures that do not meet state program criteria but do lower customer bills and greenhouse gas emissions.

F. *Opt-In Tools, Resources, Technical Assistance, and Partnerships*
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?
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?
34. Are there any program components that DOE should provide nationally to avoid duplication of effort and/or encourage consistency?
35. What types of support or technical assistance would be most useful for DOE to provide to states, territories, Indian Tribes, and other program administrators to assist in developing program applications as well as in implementation?
Response to Questions 32-35. Flexibility at the state level is necessary since technical resources and needs, as well as other conditions, vary so widely. For example, model program templates would be acceptable as long as there is flexibility for states to use their own.
36. *What qualities should DOE seek in selecting intermediary organizations (e.g., non-profit and community-based organizations) to provide technical assistance, including marketing, education, and outreach to program implementors and others? Examples of support could include help on designing effective programs,*

braiding funding resources, and ensuring marginalized groups benefit from the rebate programs.
Response to Questions 32-36: Please see the Response to Questions 2, 3, and 4. Massachusetts provides an instructive model: A broad array of community organizations in Massachusetts receiving program assistance including LEAN, Community Action Programs, Community First Partnerships (municipalities and community organizations), and other community-based organizations.

G. 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?*
Response: As noted, the vast majority of Massachusetts low-income eligibility is established by other programs. Please see the Response to Question 12. In areas experiencing gentrification, defining income by geographic location is fraught with inaccuracy since incomes vary widely within gentrifying locations. Thus, not identifying individual low-income households would have the effect of identifying some non-low-income households as low-income, thus diverting low-income funding away from low-income households. Self-attestation provides no safeguards at all.

38. *If DOE established a national income qualification system that program administrators could opt into using, what features would be most useful? What features would be duplicative of existing systems?*
39. What are successful approaches for determining income qualification for a household in existing state and tribal programs? a. Are any of these applicable to varied levels of income (e.g., less than 80% area median income (AMI); 80-150% AMI)? b. Is it possible to easily modify existing approaches/tools to verify income at new levels (e.g., 80-150% AMI)? c. What eligibility criteria exist that DOE should consider as categorically eligible? d. Within existing multi-family programs, how is income verification required to be provided or confirmed by the building owner?
Response to Questions 38-39: In general, conditions across the country are sufficiently variable that most decisions should be left to states.

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

42. What recommended methodologies or standards could be used by states/programs to calculate energy savings and associated impacts, such as greenhouse gas emissions reductions? What software is used to implement that methodology? What are the key inputs and features?
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 (iii) Savings valuation based on time, location, or greenhouse gas emissions (iv) Third-party certified documentation of the work scope and predicted impacts (v) Other capabilities of interest, including but not limited to use of standard data schemas (e.g., HPXML), application programming interfaces (API) integrability, etc.
44. Do you have any recommendations for applying BPI 2400 per the legal requirements of the Home Efficiency Rebates?
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?
Response to Questions 40-45.Modeling estimated use can yield valuable information, but there should not be mandated models due to difficulties in collecting data (particularly for delivered-fuel homes) and imprecisions due to such variables as combinations of measures, unexpected household changes, and approaches that are not adequate to assure deep savings. Programs should avoid mandates that will delay program implementation and upset existing adequate state systems. For example, it is counter-productive to develop detailed and specific rules about what can be complicated calculations of GHG based on the time and location of energy use, in part because there are also other factors, such as transmission line losses. Broad high-level estimates are sufficient and will avoid delayed results and debates over minor differences. Similarly, software that is adequate to meet the standards of BPI-2400 is sufficient without additional requirements or calibrations, particularly since BPI-2400 may not accurately reflect a particular household's usage or occupancy and is, in any event, under review.

I. Eligible Technologies for Rebates
46. *How should DOE facilitate that clear information regarding qualifying technologies and projects is readily available to consumers, contractors, retailers, and other relevant stakeholders?*
Response: This is State-specific. For example, in Massachusetts the program web site provides clear information about qualifying measures and the PAs' Massachusetts Technical Advisory Committee (MassSave.com/MTAC) evaluates new technologies and communicates results. In addition, a Technical Reference Manual (TRM, https://fileservice.eea.comacloud.net/FileService.Api/file/FileRoom/14154670; electronically updated at https://etrm.anbetrack.com/#/workarea/home?token=6d6c45766e692f527044) provides current technical parameters.

47. The Home Electrification Rebates specifies that qualified electrification projects must include the purchase and installation of certain equipment or materials. Should other related improvements (e.g., smart thermostats, sensors and controls, LEDs) be allowable as part of a qualified electrification project for

the purposes of calculating total project costs which can in turn affect the final rebate amount?
Response: Other improvements should be allowable, dependent on local flexibility. There is also a need to be sensitive to individual customer needs, which supports the local flexibility approach.

48. Should rebates be allowed in instances where use of the rebate-eligible equipment or measure is already required by local code?
Response: The objective of the Act is not to be an obstacle to Code-compliant improvements that low- and moderate-income households cannot afford to undertake. Often, for example, an upgrade to Code requirements is the only feasible energy efficiency improvement.

J. Data Access and Sharing
49. What should DOE consider when drafting energy usage data sharing guidelines?
50. What are best practices for minimizing the complications of data collection, allowing data sharing where needed, and ensuring data security? Is there an opportunity to build upon Green Button and Green Button Connect?
Response to Questions 49-50. State privacy requirements should be met.

K. Compliance and Quality Assurance
51. *How can program administrators track participation in rebate programs to protect against: (i) Double-dipping between various federally funded state and Tribal grant programs for the same upgrade (ii) Households receiving more funds than are allowable under the law (iii) Contractors/installers purchasing equipment in a way that violates the prohibition of combining efficiency and electrification rebates (iv) Claims for work not done (v) Improper installations (vi) Ineligible products (vii) Falsifying income eligibility (viii) Other risks – please identify other risks*
Response: Such unlawful activity should be vigorously policed with the help of tracking systems.

52. *What types of quality assurance and/or quality control should DOE and program administrators require? What are recommendations for best practices?*
Response: The standard should be best practice which, in Massachusetts, is 100% QC including 50% in-process QC.

53. *What data should DOE and program administrators collect to ensure their ability to conduct effective quality assurance and/or quality control?*
Response: Data collected in Massachusetts, in addition to human inspection, includes tracked usage, program level evaluation, and TRM parameters.

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?*
Response: Necessary certifications and credentials may vary by state. In Massachusetts, they include Construction Supervisor License (CSL), Home Improvement Contractor license (HIC), BPI certification, lead safe certification, insurance as required, and specific trade licenses,

55. *What practices are needed to ensure quality installations? Please provide examples of how existing efficiency or electrification programs track quality installations by contractor.*
Response: Please see the Response to Question 52,

56. *How can DOE assure that these rebates support quality construction jobs and quality nonconstruction jobs?*
Response: Workforce education and training as well as workforce development programs. This includes developing relationships with trade schools, training oil dealers and independent gas heating service companies in ASHPs, setting up small training academies, and paying stipends to trainees.

M. Buy America and Supply Chain Considerations
57. *Which technologies, products, or materials could face barriers to deployment or accessibility due to cost premiums, supply chain constraints, or other production issues?*
58. *Are there approaches that program implementers can take to reduce supply chain constraints (e.g., bulk purchases, coordination with DOE manufacturing programs)?*
Response to Questions 57-58. Response: Massachusetts offers no exception to these national and international concerns. Any assistance DOE can provide in addressing them would be very welcome. One local response has been flexibility about resubmission of projects affected by these concerns.

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?
The most important goal of a federal program should be to integrate with existing successful state programs in order to avoid customer confusion and to enhance program efficiency. As a part of this flexibility, federal funding should be deployable to cover gaps in state funding (e.g., specific measures). Where, as in Massachusetts, the low-income programs provide low-income households the equivalent of a 100% rebate, federal funding should be available to displace a portion of the state 100% rebate, which can then be deployed to additional households (at a 100% rebate), thus increasing total low-income funding

As many years of American Council for an Energy Efficient Economy (ACEEE) studies show (ACEEE.org), there is a wide range across the country in the size, scope, funding levels and sources, comprehensiveness, sophistication, and delivery models for low-income programs. In order to be helpful across the country, any national program needs to be flexible to account for these differences. Notably, ACEEE has consistently found Massachusetts energy efficiency programs to be the first or second most effective in the country.

60.What evaluations, research, reports, or other resources can help inform DOE's program guidance?
There are hundreds of publicly available evaluations and reports on the EEAC web site, ma-eeac.org/studies.

Conservation
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February 28, 2023

By Electronic Submission Only
jerrylyn.huckabee@mass.gov
Lyn Huckabee, Regulatory and Innovation Program Manager
Massachusetts Department of Energy Resources
100 Cambridge Street, 9th Floor
Boston, MA 02114

Re: Inflation Reduction Act – Request for Information
Comments of Conservation Law Foundation

Dear Lyn Huckabee,

Conservation Law Foundation ("CLF") offers the following comments in response to Massachusetts Department of Energy Resources' ("DOER" or "the Department") Request for Public Comment to Inform DOER's Response to the federal Department of Energy's Request for Information on Inflation Reduction Act ("IRA") Home Efficiency and Electrification Rebate Programs.

CLF[1] has a long history of involvement in energy proceedings in Massachusetts, including matters relating to decarbonizing the Commonwealth's buildings and transportation systems before agencies within the Executive Office of Energy and Environmental Affairs ("EEA"). Massachusetts has recently enacted ambitious climate laws including *An Act to Create a Next-Generation Roadmap for Massachusetts Climate Policy* ("Roadmap Law"), under which the Commonwealth is mandated to achieve net-zero GHG emissions, or an 85% reduction below 1990 emissions levels, by the year 2050[2] and *An Act Driving Clean Energy and Offshore Wind*, which focuses on accelerating development of wind and solar energy generation.[3] Massachusetts' Executive Office of Energy and Environmental Affairs ("EEA") released its final Clean Energy and Climate Plan for 2025 and 2030 on June 30, 2022, including sublimits by sector for the first time as required by the Roadmap Law.[4] These significant and ambitious laws are further

[1] CLF is a non-profit, member-supported organization dedicated to protecting New England's environment. CLF protects New England's environment for the benefit of all people and uses the law, science, and the market to create solutions that preserve our natural resources, build healthy communities, and sustain a vibrant economy. Past CLF advocacy has included litigation to enforce the Massachusetts Global Warming Solutions Act, expand energy efficiency services, and support greater reliance on clean energy. In addition, CLF is dedicated to addressing the interests of environmental justice communities, which are disproportionately impacted by the impacts of climate change and by failing infrastructure.
[2] 2021 Mass. Acts Chapter 8.
[3] 2022 Mass. Acts. Chapter 179.
[4] Mass. Exec. Office of Energy and Env't Affairs, Massachusetts Clean Energy and Climate Plan for 2025 and 2030 (Jun. 30, 2022); available at: https://www.mass.gov/doc/clean-energy-and-climate-plan-for-2025-and-2030/download.

bolstered by additional research, modeling, policy and regulatory updates at the EEA and its agencies, but a great deal of work remains to ensure that the transition to Massachusetts' clean energy future is conducted in a just and economic manner. With the support of federal funding from the IRA, Massachusetts can be more aggressive with undertaking the changes needed to complete our transition to a clean energy future.

Comments regarding coordination of IRA with existing state programs and funding

Massachusetts can amplify the benefits of state financial incentives with IRA funding. The IRA does not allow Home Efficiency Rebates and Home Electrification Rebates to be applied to the same project, so the DOER should evaluate existing programs, such as Mass Save, and determine where each rebate option best fits. The DOER should ensure that monies received from these IRA programs are additive and serve to complement state funding and programming; the receipt of these funds should not result in rolling back of state funding for residential clean energy and energy efficiency programs.

Currently, MA DOER is working to release regulations under 225 C.M.R. 24.00, which will enable ten municipalities in the Commonwealth to prohibit the installation of fossil fuel heating systems in new construction and certain renovations. This is a major step toward electrification of buildings throughout Massachusetts. Given the significant interest in participation in the Municipal Fossil Fuel Free Building Demonstration Program, IRA funds from the Home Electrification Rebate could be used to aid many who would be interested in participating but find themselves financially barred from doing so. The Demonstration Program should first be expanded via the Legislature and DOER to include Boston, Worcester, Somerville, and other municipalities that have voiced an interest in participating especially where there are high rates of real estate development.

To ensure that low-income property owners and residents are able to undertake renovations that include electrification, additional mechanisms should be included to ensure that residents of the participating municipalities who meet certain thresholds for financial aid are able to take advantage of additional funding from the Home Electrification Rebate. This will help ensure that the transition to Massachusetts' clean energy future is not only reserved for those with the financial means to electrify their homes on their own, enabling anyone who wishes to electrify their heating to do so.

Comments regarding opportunities for targeted approaches to IRA implementation, including specific geographies or customer types for targeted approaches

Real estate development in Massachusetts has been occurring at high rates over recent years; each new home that is constructed to rely on gas resources will ultimately need to be updated to electrified technologies. To prevent waste of consumer time and money, Home Electrification Rebate funds should be targeted to geographies that are experiencing significant development, both in terms of new construction and major renovation projects. These include areas such as Boston, Cambridge, Somerville, Brookline, Worcester, and Springfield, as well as the

surrounding areas where development has rippled out. DOER should focus its efforts on communities with environmental justice populations.

Many communities in Massachusetts also include a mix of single-family and multi-family dwellings, as well as a mix of owner-inhabited properties and rental properties. Renters generally lack the authority and autonomy to make meaningful changes to their homes, so DOER should provide incentives to landlords to update building envelopes to increase energy efficiency and to electrify their rental properties. In addition to reducing emissions from these buildings and advancing Massachusetts' initiatives, these actions will hopefully benefit renters by lowering energy bills for those who pay separately from rent, and helping to stabilize rent pricing for those whose energy bills are included in their rent payments.

The IRA rebate programs are timely, as many Massachusetts residents are looking for solutions to mitigate ever-rising home heating prices. One way to reduce home heating costs is to increase energy efficiency by updating insulation, windows, and doors, so DOER should work to roll out programs that include Home Efficiency Rebates as soon as possible. The DOER should evaluate opportunities to provide education and outreach to property owners and construction, utility, and maintenance workers. Given the significant and rapid evolution of building heating and cooling, many have been subject to misinformation about the capabilities of electrified systems; for example, property owners are told that their heat pumps need a gas backup despite multiple models being capable of operating below 30° F, with some operating even in temperatures as low as -13° F.[5] This misinformation results in additional and unnecessary costs to homeowners and reduces the emissions benefits of electrification.

The IRA funding opportunities presented via the Home Efficiency Rebate and the Home Electrification Rebate can be used to complement existing and developing programs within Massachusetts. This funding should be carefully targeted to ensure that communities with environmental justice populations reap the benefits of these programs, including both low-income property owners and tenants of rental properties and multi-family dwellings. CLF thanks DOER for its consideration of these comments. We welcome any continued engagement on this effort; please do not hesitate to contact us with any additional questions or thoughts.

Respectfully submitted,

PGandbhir

Priya Gandbhir, Senior Attorney
Conservation Law Foundation

[5] Mitsubishi Electric Heating and Air Conditioning, *What is a Heat Pump?*, (Jan. 2023) available at: https://www.mitsubishicomfort.com/articles/what-is-a-heat-pump#:~:text=Mitsubishi%20Electric%20offers%20heat%20pump,F%20even%20without%20auxiliary%20heat.

Via Email Submission

March 3, 2023

The Honorable Jennifer Granholm
Secretary of Energy
1000 Independence Avenue, SW
Washington, DC 20585
E-mail: IRAHomeRebates@hq.doe.gov

RE: DE-FOA-0002981

Dear Secretary Granholm:

Thank you for the opportunity to respond to the Request for Information (RFI) in DE-FOA-0002981, "Inflation Reduction Act Home Efficiency & Electrification Rebate Programs".

We are providing comments on behalf of Sealed, a climate tech startup on a mission to stop home energy waste and electrify all homes. Sealed designs, manages, and finances home weatherization and electrification improvements, and is only paid by our customers based on actual, measured savings. Sealed currently operates in New York, Connecticut, New Jersey, Pennsylvania, Illinois, Wisconsin, Maryland, Virginia, and the District of Columbia.

Sealed is excited about the Inflation Reduction Act Home Efficiency & Electrification Rebate Programs ("Programs"), including the Home Energy Performance-Based, Whole-House Rebates Program ("HOMES Program"). Based on Sealed's 10-plus years of experience with measured savings, Sealed believes the HOMES Program has the potential to transform the energy efficiency market—turning every home that participates in the HOMES program into a Virtual Power Plant ("VPP").

Our detailed RFI comments are included below. Sealed comments are supported by the following organizations: Elephant Energy, Energy Pool, Homeworks, Posigen, and Tetra *(and potentially others to be added before Friday 3/3)*.

We look forward to working with you on successful implementation of this important program.

Sincerely,
Andy Frank
Founder and President
Sealed Inc.

RFI Comments

1. **Name: Andy Frank**
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2. ***Sealed believes that disadvantaged communities ("DACs") and Low to Moderate Income ("LMI") households will best be served by program designs that empower and incentivize aggregators to minimize soft costs and invest in education and outreach to these communities.*** See here for more information.

3. ***Sealed believes that DOE must empower states to minimize the soft costs associated with income verification.*** Since the Programs offer higher incentive levels for DACs, aggregators and trade allies will be incentivized to serve DACs, but may be deterred if the income verification burden is too high. Sealed supports FEPC in their comments on this subject.

4. ***Sealed believes that DOE and program administrators can ensure all community stakeholders are meaningfully engaged by program designs that give aggregators flexibility to leverage incentive dollars in many ways***, including supporting local community stakeholders. See here for more information.

5. ***Sealed believes that the Programs can minimize energy burden and costs for all households,*** including LMI and high energy burden households, by prioritizing the measured pathway of the HOMES program. Many studies demonstrate that deemed and modeled approaches to energy savings do not realize the estimated energy bill savings, particularly for LMI households[1]. The measured pathway, on the other hand, is much more likely to significantly reduce energy burdens given the accountability for work quality and accurate savings predictions taken on by aggregators.

6. ***Sealed believes the HOMES program measured pathway is the best program design to create market accountability for incentivizing projects that maximize total energy reductions and lower household energy bills.***

7. ***DOE should minimize any additional requirements for rental properties.*** Local laws and regulations are most appropriate for guidelines related to rent increases. Additional requirements will increase soft costs, making the Programs less accessible for people who need them most.

8. ***For the HOMES Program, program administrators should require recipients of incentives (consumers and contractors) to attest to the state or jurisdiction of household residence.*** DOE and program administrators can choose to audit these attestations, with any contractors that provide false attestations disqualified from further Program participation.

[1] For example, study by Fowlie, Greenstone, Wolfram (2018) on Michigan Weatherization Assistance Program found an energy savings realization rate of just 39%

9. ***Sealed believes it is important for DOE to make all "point of sale" incentives,*** including the HOMES program measured pathway, as simple as possible to ensure greater participation. Keeping project requirements simple and clear will benefit all households, particularly DAC and LMI households. Measured savings relies on incentives paid by program implementers to aggregators, who are accountable for the performance of energy efficiency projects. Innovation is built into the approach, which enables program implementers to reduce the information and paperwork required for projects—which is key to reaching more households through the HOMES program.

To reach the most households, we believe measured savings projects should only be required to provide program administrators with:

- Project location and customer identifier
- Project scope listing the measures installed
- Pre- and post-project installation photos
- A minimum of 12 months' worth of pre-project utility data
- Projected energy savings
- Determination of income and/or DAC eligibility

Contractors routinely collect this information. Minimizing program data requirements will provide important flexibility to aggregators, enabling innovation in the energy efficiency market.

11. ***Sealed believes the measured pathway of the HOMES program will incentivize aggregators to implement best practice quality control measures that include safe and healthy homes that achieve projected savings.*** See here for more details on how aggregators can ensure quality.

12. ***Sealed believes that as many program elements as possible should be implemented together.*** Income verification, in particular, will create additional unnecessary soft costs if managed separately across programs. In addition, Sealed believes that program branding and communications should be implemented together (for each state). Marketing, however, should be executed primarily by market actors (aggregators, etc.) in order to minimize administrative costs and ensure that consumers know the "next steps" when responding to direct marketing messages.

17. ***Sealed refers to Franklin Energy and Recurve comments that reference various evaluations that provide lessons learned and recommendations for the measured savings pathway and Advanced Measurement & Verification (AM&V).***

18. ***DOE, states, tribes, and territories should minimize data requirements from aggregators, contractors, and consumers to reduce program soft costs as much as possible.*** Ultimately, success should be measured based on measurement of energy and carbon emission reductions. Other best practice success metrics can include Net Promoter Score ("NPS"), co-investment from state, utility, and the private sector, and percentage of funds that go to LMI and DAC households.

19. See question 9 above for Sealed recommendations for the data collected by aggregators as part of the HOMES program measured pathway. See here for details on Sealed recommendations of evaluation protocols for the measured pathway.

20. ***Sealed believes that the HOMES program measured pathway is the program design that will provide the most durable market demand for efficient and electrified homes.***

For example, Sealed has raised tens of millions of dollars in private capital to invest in efficient and electrified homes in states and territories that cover ~35% of US households. We know there is significant private capital demand for investments in efficient and electrified homes, particularly when it comes to measured savings. See here for more on how the measured pathway can transform the market even after program funds are depleted.

21. ***DOE should incentivize the market to maximize energy savings per dollar by enabling states to prioritize the measured savings pathway of the HOMES program, and by encouraging incentive flexibility.***

The measured savings pathway provides aggregators with strong incentives to leverage existing (or create new) best practices that drive higher energy savings per dollar invested. Flexible market incentives allow aggregators to unlock innovative ways to utilize incentive dollars. Not every consumer requires the same incentive in order to implement energy efficiency upgrades, and a top-down approach will limit market adoption and innovation.

Flexibility instead give aggregators the chance to tailor incentives for consumers' needs and desires through different approaches, including **upfront rebates** to offset the cost of energy efficiency projects; **lowest possible sticker prices** for projects; **lowest possible financing charges** for projects; or **additional products and services** by pairing extras like smart thermostats with energy efficiency upgrades. Allowing aggregators to tailor incentives motivates aggregators to grow sales and ensures taxpayer money drives market transformation while meeting the policy goal of transforming the market for home weatherization and electrification.

25. ***Sealed believes it is important for DOE to empower aggregators and other trade allies to do the vast majority of education and outreach to households.*** Energy efficiency has historically been a top-down effort, where regulators or administrators try to entice consumers to adopt home energy upgrades. This approach is rigid and complex, and often results in the large program administrative costs instead of incentives[2].

DOE should empower aggregators to reach the market in different ways, including through local community organizations and other trusted messengers. And by employing a broad definition of aggregators, various aggregator types (financiers, retailers, solar companies, etc.) can participate in bringing energy efficiency upgrades to consumers. See comments from Elephant Energy and PosiGen for examples of companies that have the ability to reach consumers as aggregators if empowered by program administrators.

[2] EIA study (2020) of 600+ utilities and third-party program managers found that roughly 40% of total energy efficiency program costs were spent on just administrative and marketing costs, leaving only 60% for actual incentives to customers

26. ***Sealed believes that the HOMES program's measured pathway provides the best program design to increase investment in new business models.*** See here for examples of new business models that can be created.

28. ***Sealed believes it is important for DOE to ensure that IRA Program incentives are stackable with other state, local, and utility incentives.*** Consumer-facing incentives allow aggregators and contractors to grow the market for home weatherization and electrification. For the HOMES program's measured savings pathway, Sealed recommends making aggregators responsible and accountable for demonstrating that total incentive funds do not exceed the statutory limits for total incentive funds per project (50% for market rate, 80% for LMI).

29. ***Sealed believes that DOE and program administrators should prioritize measurement of gross energy savings impacts, not attribution.*** Focusing on attribution is likely to dramatically increase program soft costs without improving outcomes.

31. ***Sealed believes that ensuring local funding does not decrease in response to federal funding should be an important DOE goal.*** State funding applications should be required to describe existing state and local investment plans, and attest that they have no intention to reduce those investments while receiving federal Program funds. DOE should also reserve the right to modify state funds if states reduce state and local funding below the amount defined in their funding application.

32. ***Sealed believes that DOE should prioritize investments in tools that enable program administrators to implement the measured savings pathway of the HOMES program.***

Specifically, Sealed recommends that DOE provide program administrators with open-source Advanced Measurement and Verification ("AM&V") software such as OpenEEmeter; template RFP language for measured savings program implementation; and template contract language between program administrators and aggregators.

33. DOE and program administrators can leverage OpenEEmeter for the HOMES program measured savings pathway.

34. DOE should be careful to prescribe program components nationally, as state flexibility will be key to overall Program success. However, Sealed believes standardizing the certain HOMES program measured pathway components is likely to provide benefits to all stakeholders, including state program administrators. Those components are income qualification; minimum project data requirements (see question 9 for details; and accuracy metrics and guidelines such as Normalized Mean Bias Error and Fractional Savings Uncertainty.

35. See question 32.

36. ***Sealed believes that DOE should not select intermediary organizations, but instead leverage program administrators and aggregators to provide marketing, education, and outreach.*** See question 25 for more details on how aggregators, in particular, can effectively reach consumers.

40. Measured savings can deliver $1K-$6K more incentives per project, 4 terawatt hours of incremental energy reductions and an additional 3.2M metric tons of carbon emissions avoided[3] than traditional deemed or modeled programs by ensuring that energy savings are real, not estimated or predicted.

Measured savings is the electric vehicle of energy efficiency programs. It requires new thinking and some new infrastructure, but ultimately is simple, flexible, and dramatically more effective and efficient at reducing energy use and greenhouse gasses ("GHGs") compared to more complicated traditional energy efficiency programs.

The measured savings approach includes the following key elements:

- ***Performance Payments to Aggregators:*** Incentives are paid by program implementers to "aggregators" that operate as Virtual Power Plant ("VPP") developers, taking on project performance risk based on actual energy and GHG reductions to transform the market.
- ***Upfront Payments to Consumers and Contractors:*** While aggregators are paid over a year or more based on actual performance of a portfolio of projects, homeowners and renters that complete projects (and the contractors that install them) receive upfront incentives paid by the aggregator, ensuring a "point of sale" discount or other value proposition (lower financing costs, additional measures, etc.).
- ***Accountability to Consumers and Taxpayers:*** Since aggregators are only paid based on actual project performance, they are incentivized to ensure high levels of work quality, since they, not taxpayers, are accountable.

In order to ensure the successful implementation of the measured savings approach by State Energy Offices ("SEOs"), DOE should provide the following guidelines to SEOs:

- ***Prioritize the measured path:*** DOE should prioritize the development of guidelines and tools that allow states to make investments necessary to stand up the measured pathway as quickly as possible. Measured savings programs can launch within 4 months of funding approval[4] and cut down contractor soft costs by 3 hours per project,[5] dramatically reducing overall program soft costs.
- ***Enable data aggregator flexibility:*** In order to ensure consumer accessibility, DOE should draft SEO guidelines that provide aggregators with the flexibility to provide program implementers with energy data from a wide variety of sources, including utilities, third-party data providers (e.g. Arcadia, UtilityAPI), customer utility bills and delivery records, and/or in-home sensors.
- ***Build a competitive market****:* The legislative intent of the measured path is to create an accountable, market-based approach to investments in energy efficiency. DOE should provide clear guidelines that separate administrative and incentive funds so that no single

[3] Supporting calculations available to share. Per-project incentives figure based on size of difference between measured and modeled approaches for market-rate and LMI weatherization and electrification projects with natural gas as baseline heating fuel. Terawatt hours of incremental energy reductions based on state funding allocations divided by per-kWh incentive rates by state for market-rate and LMI projects; for modeled programs, amount reduced to 40% of measured programs based on common realization rates of 40% found in market scan. Carbon emissions figure based on EPA AVERT US national weighted average CO_2 marginal emission rate, year 2019 data.

[4] For example, the CA Market Access program started accepting project submissions just 4 months after the CPUC decision to fund the program.

[5] Contractors are commonly spending ~3 hours per project on energy modeling, in addition to other administrative work such as data collection and signature gathering (numbers based on interviews with current contractors). In the measured savings approach, this modeling and most other administrative work is instead handled by the aggregator, saving the contractor significant time and money.

entity (aggregators, program admins/implementers, etc.) can receive both administrative and incentive funds from the HOMES program in each state.
- ***Keep the measured path simple:*** This will only be possible if SEOs have the flexibility to collect the minimum required data from each project. DOE should therefore include these minimum project data requirements, but ensure they are truly minimal.

41. Evaluations have consistently found that deemed or modeled savings estimates do not accurately predict energy savings. This is due to three primary factors:
- Energy models struggle to capture many complex factors that determine energy savings, including household behavior
- Inputs to energy models can often be subjective such as the R value of existing insulation
- Contractors are often incentivized to maximize incentive levels and therefore "game" even the most accurate models

The best practice to drive success in accurately predicting energy savings is using Advanced Measurement and Verification ("AM&V") in the context of measured savings incentives. AM&V is extremely accurate, especially as project portfolio size increases. For example, by using AM&V strategies, Sealed's models have demonstrated close to 0% Baseline Portfolio Error [i.e. Normalized Mean Bias Error ("NMBE")] for all energy sources, including delivered fuels. See here for more information.

42. Sealed believes open-source methodologies such as CalTRACK and open-source software such as OpenEEmeter can be used by program administrators to calculate energy savings and associated impacts, including peak energy reductions and greenhouse gas emissions reductions.

In addition, Sealed believes that DOE should provide program administrators with standard accuracy metrics to determine methodology and software qualification, including Normalized Mean Bias Error ("NMBE") that calculates the difference between predicted and actual energy usage for a population of homes that have not installed an energy savings project; and Fractional Savings Uncertainty ("FSE") that calculates the confidence interval of energy savings in a population of projects.

Open-source methodologies and software will also enable households that participate in the HOMES program to become part of large Virtual Power Plant ("VPP") networks, with price signals sent to aggregators based on peak energy consumption times for each state/territory. Sealed believes utilities and other VPP stakeholders should be encouraged to partner with program administrators to expand and extend these VPP networks catalyzed by the HOMES program measured savings pathway.

43. ***Open-source software such as OpenEEmeter can provide open-source AM&V*** and savings valuation based on time, location, and greenhouse gas emissions.

Sealed believes that all third-party software should be compatible with HPXML and also provide aggregators with APIs that have input/output functionality (i.e. other software tools can send data and receive outputs without having to use a specific user interface).

44. ***Sealed believes that the legislative intent of the HOMES program is to apply BPI 2400 with calibrated models based on historical energy data*** *since* energy models that are calibrated using household energy usage data are more likely to be accurate[6].

Sealed also believes there can be limited exceptions to BPI 2400 requirements for projects not capable of meeting BPI 2400 requirements. Sealed believes contractors and aggregators should be allowed to provide modeled savings for projects that can demonstrate Qualified Exceptions.

Specifically, Sealed believes that the following Qualified Exceptions should be included in DOE guidelines: customer moved into home <12 months before the project is completed; customer heats primarily with a delivered fuel and has <3 fuel delivery records per year; customer heats primarily with a delivered fuel from a company(s) that does not keep delivery records.

In order to demonstrate that one or more of these Qualified Exceptions are applicable, a project should be required to provide a signed customer attestation identifying one or more Qualified Exceptions; provide a signed contractor or Aggregator attestation identifying one or more Qualified Exceptions, with an acknowledgement that the Program Administrator may penalize the contractor or Aggregator if one or more of the claimed Qualified Exceptions are found to be invalid; for the move-in Qualified Exception, provide a utility record that demonstrates a "start of service" date.

45. ***Sealed supports Recurve comments on best practices for calculating savings based on "time, location, or greenhouse gas emissions."***

46. ***Sealed believes that DOE should provide a website with simple, clear language, FAQs on qualifying technologies and projects that can be accessed by all stakeholders, and a "help desk" email for stakeholders to ask additional questions.***

48. ***Sealed believes local codes should not impact incentive eligibility***, especially for replacement of existing equipment in homes that are not likely to be replaced without incentives.

49. ***Sealed believes it is important for DOE to ensure that energy usage data is easily accessible for implementation of the measured savings pathway.*** Aggregators responsible for implementing measured savings incentives must be allowed to access energy data wherever they can find it.

DOE must enable multiple pathways for gathering energy data across all households. Sealed, for example, captures household energy data in numerous ways, including from **utility companies** via Electronic Data Interchange ("EDI") that includes monthly energy usage data provided by utilities in certain states; **third-party data providers** via data-management tools; **energy bills**, including records for delivered fuels, provided by customers; and **wireless sensors**, which transmit energy data from homes.

[6] Study of NYSERDA Home Performance with Energy Star Realization Rate Attributions (2015), which found that the single most important variable associated with accuracy of the savings predictions was the degree of calibration of the baseline simulation model to match actual home energy bills.

DOE should provide a Good, Better, Best framework for program administrators to leverage when it comes to energy data access. In "Best" states like California that have access to utility internal data and participant and non-participant data, programs will be able to more granularly calculate time of use and greenhouse gas emissions reductions while minimizing aggregator energy savings risk. Inr "Good" states that have no interval data or access to utility non-participant data sets, aggregators should be allowed to leverage an "All of the Above" approach to energy data as long as it is measured and auditable.

50. ***Sealed believes that DOE should empower aggregators to collect energy data wherever possible and practical.*** This may include Green Button and Green Button Connect, although to date this has not proved successful, and so should not be relied upon as the only strategy for aggregators to access energy data.

51. ***Sealed believes program administrators can best ensure compliance in the HOMES program measured savings pathway by making aggregators, not contractors or consumers, responsible for all compliance activities.*** Aggregators found not in compliance on any aspect of a project will be at risk of losing incentive dollars for that project.

52. Sealed believes program administrators can best ensure quality assurance and quality control in the HOMES program measured savings pathway by requiring aggregators to provide pictures of improvements (before and after installation) for all projects and measures.

53. See question 9 for the data Sealed believes DOE and program administrators should collect for the HOMES program measured savings pathway to ensure quality assurance and control.

54. Sealed believes DOE and program administrators should require that aggregators OR contractors have the following certifications:

- Weatherization: At least one person on staff that is a certified Building Performance Institute Building Analyst or Energy Auditor
- HVAC: Applicable local license for heating and cooling equipment installations and, for cold climates, a certificate that demonstrates cold climate heat pump training such as the Building Performance Institute Cold Climate Air Source Heat Pump Design certificate of knowledge or IGSHPA certification for Ground Source Heat Pumps
- Electrical: Applicable local license for installation of electrical equipment

55. ***Sealed believes that the HOMES program measured savings pathway provides the best program design to create market incentives for quality installation.*** For example, Sealed finances home weatherization and electrification projects based on measured savings. In order to ensure quality installations that save energy, Sealed vets contractors upfront to ensure certification and adherence to scoping and installation best practices; reviews measure pictures (pre- and post-installation) to ensure project-level quality control; and requires a measured savings analysis by contractors to quantify their aggregate quality level.

56. ***Sealed believes DOE can best assure quality construction and non-construction jobs by supporting the HOMES program measured savings pathway.*** Contractors and other market stakeholders are often under pressure to cut costs by hiring lower wage, lower skilled workers.

The measured savings pathway provides a market incentive to do the opposite and ensure that workers are paid a fair wage for quality work.

59.
Aggregator Definition
For the purposes of DOE guidelines, Sealed recommends the following definition to ensure a competitive aggregator marketplace: "An 'aggregator' is any commercial, government, or non-profit entity that receives rebates from the HOMES and/or HEEHRA programs within a given state or territory, but does not receive administrative funds from the HOMES or HEEHRA programs from that same state or territory. States and utilities must provide an open "Request for Qualification" process that enables any qualified entity to register and serve as an aggregator in their state or territory."

This definition will ensure a competitive and open aggregator market develops, where aggregators are responsible for marketing to customers and/or contractors; collecting customer energy data before and after energy upgrades; predicting energy reductions; and submitting project information to government programs and market administrators.

Aggregators will also be responsible for much of the administrative work currently placed on energy efficiency contractors, empowering them to do what they do best: installing great projects. See here for more on how aggregators will transform the market for energy retrofits.

Guidelines to Increase Accessibility of HOMES Program Measured Pathway

Sealed believes DOE should include guidelines that increase accessibility for the HOMES program's 15% savings threshold for the measured savings pathway. Specifically, Sealed recommends DOE include the following guidelines to program administrators:

- Total energy usage should be calculated based on the fuel(s) submitted by aggregators for projects without a fuel switch component (e.g. weatherization).
- Total energy usage should be calculated based on all fuels that represent meaningful energy usage (not including occasional wood fireplace use) for projects with a fuel switch component (e.g. heat pumps in a home with a natural gas furnace).
- The 15% energy savings threshold should be calculated for each aggregator (in a state) for portfolios that meet minimum Fractional Savings Uncertainty ("FSU") thresholds.
- Program administrators should have the flexibility to define the 15% energy savings threshold in terms of a combination of total energy reductions, peak energy reductions, and greenhouse gas reductions.

Without these guidelines, many states and territories may struggle to meet the 15% threshold, especially areas with temperate climates that do not offer the same total energy saving potential.

To: Lyn Huckabee
Regulatory and Innovation Program Manager
Massachusetts Department of Energy Resources (DOER)

February 24th, 2023

Re: IRA RFI and Designing a Massachusetts Residential Rebate Program to Maximize Energy Justice and Carbon Pollution Reductions

Dear Lyn Huckabee and DOER staff,

Thank you for the opportunity to provide input on the Massachusetts Department of Energy Resources' (DOER) response to the U.S. Department of Energy's (DOE) Request for Information (RFI) on the Inflation Reduction Act's (IRA) Efficiency Rebates and Electrification Rebates programs. As the nation's leading electrification nonprofit, Rewiring America was closely involved in the drafting of these programs and is eager to help DOER maximize their effectiveness and equity.

With respect to the DOE RFI, and in response to DOER's stated interest areas, DOER should make the following recommendations:

1. DOE should allow and encourage states to target the deployment of rebates by income, geography, housing type, and/or fuel type.

DOE should allow a phased deployment of the Efficiency Rebates, where funding is initially reserved for a smaller pool of eligible recipients — e.g. only those below 80% or 150% AMI — for the first phase.[1] Similarly, the Electrification Rebates could be reserved for households below 80% AMI for the first phase of the program.

These phased rollouts would increase equitable program uptake by building in time for low-income communities to learn about and access the rebates. Without such targeting, it is likely that the rebates will be exhausted quickly by wealthier households, as has been seen with the TECH program. Particularly since higher-income households are already eligible for tax credits, it's important that these rebate programs prioritize lower-income households.

Phased rollouts would also decrease the administrative burden for DOER by harmonizing eligibility requirements and expanding the potential uses of categorical eligibility. In addition,

[1] Unlike the Electrification Rebates, the Efficiency Rebates do not have an income-eligibility cap, set-asides, or a requirement for any of the funds to benefit low-income households or disadvantaged communities. Without further guardrails, the entirety of this funding could go to wealthier households.

they would give DOER time to understand the functioning of the rebate programs, adapt to any discovered program flaws, and ensure that funding is not rapidly exhausted by the upper end of the allowable income distribution in a market "sugar rush."

DOE should also allow targeted deployment by geography — e.g., disadvantaged communities or to facilitate the strategic decommissioning of gas infrastructure — and by housing type, especially multifamily housing. These kinds of targeted deployment would help Massachusetts achieve its climate equity goals and commitments more effectively.

In addition, DOE should allow states to target deployment of the rebate programs by fuel type, which would allow Massachusetts to target households with delivered-fuel heating. There are 800,000 delivered-fuel households in Massachusetts, over 300,000 of whom are low-income and face extraordinarily high energy burdens and volatile prices. Electrifying the space heating of these low-income delivered-fuel households would:

- Reduce energy burdens for over 91% of households;
- Save households an average of $953 per household per year; and
- Eliminate almost twice as much carbon pollution as Massachusetts could eliminate by electrifying the same number of gas furnaces.[2]

Out of these 300,000 low-income delivered-fuel households, the Efficiency Rebates could electrify only around 9,000 homes (3%), given Massachusetts' allocated funding under the program.[3] This means that Massachusetts could very well limit its entire Efficiency Rebates deployment to electrifying low-income delivered-fuel households.

2. DOE should allow states to steer the Efficiency Rebates toward electrification.

The Efficiency Rebates are fuel-neutral, but the statute explicitly asks states to include in their program application a plan "to value savings based on … greenhouse gas emissions." DOE should interpret this statute to allow states to maximize greenhouse gas (GHG) emissions reductions when deploying the Efficiency Rebates, in effect steering the Efficiency Rebates toward electrification.

Electrification of fossil fuel appliances maximizes carbon pollution reductions and furthers energy equity. This is especially important for low-income individuals and households in disadvantaged communities, who must not be locked into fossil fuel appliances that risk continued indoor air pollution and the soaring costs of stranded gas infrastructure.

Specifically, DOE should allow and encourage states to:

[2] Determined using NREL's ResStock Analysis Tool, which stimulates 550,000 building models comprising a representative sample of the U.S. building stock.
[3] The Electrification Rebates will be used predominantly for end-of-life replacements when equipment falters or fails, so proactive targeting may be less relevant for the Electrification Rebates than for the Efficiency Rebates.

- Maximize GHG emissions reductions;
- Match the energy savings thresholds to equivalent GHG reductions; and/or
- Consider fugitive gas emissions[4] and the evolving carbon intensity of electricity[5] when calculating the value of savings based on GHG emissions.

3. DOE should ensure that IRA funding is not used as an excuse to decrease or eliminate utility-funded incentive programs, like Mass Save.

Although DOE, DOER, and various state energy offices may not have direct control over utility incentive programs like Mass Save, each should do everything it can to ensure that federal rebates supplement, and not replace, existing state incentive programs. In Massachusetts, the two IRA rebate programs will likely cover only 15-20K homes: an important start, but nowhere near enough to meet the scale of need. Massachusetts' allocated funding from the two programs ($146 million over ten years) also pales in comparison to Mass Saves' annual budget of up to $700 million.

Given the high costs of some building retrofits — especially within disadvantaged communities and older building stocks — DOE should streamline guidance and expectations for how public utility commissions (e.g., Massachusetts' DPU) and other stakeholders should maximize incentives. This guidance should include both incentive layering and savings attribution recommendations. For example, DOE should encourage administrators to establish clear energy savings attribution methodologies, so that local utilities can continue to claim the savings that they did before the IRA rebates. If utilities cannot claim the same savings, their cost-effectiveness calculations will be impacted and they will be more likely to reduce incentive rates to improve program cost-effectiveness.

Thank you again for the opportunity to provide input on DOER's response to DOE's rebates RFI. Once application guidance is released, we look forward to continuing to work with DOER to implement successful, sustainable, and equitable rebate programs. If you have any questions, please reach out to Sage Briscoe at sage@rewiringamerica.org.

Sincerely,

Rewiring America

[4] 3% of all natural gas is lost to leaks between the well and the customer. When these leaks are attributed to gas-fired HVAC appliances, their associated emissions increase by 40% using 100-year global warming potential (GWP) values (and 115% with 20-year GWP). Importantly, while upgrading an old furnace to a high-efficiency gas appliance may reduce direct combustion emissions, the emissions from leaks will remain largely unchanged.
[5] The carbon intensity of electricity is projected to fall significantly as the IRA and Massachusetts policies decarbonize the electric grid. A recent independent analysis of the IRA anticipates that the electric grid will be powered by up to 85% carbon-free resources by 2030, and Massachusetts has committed to reducing electricity sector pollution by 70% by 2030.

February 24, 2023

Lyn Huckabee
Regulatory and Innovation Program Manager
MA Department of Energy Resources
100 Cambridge St.
Boston, MA 02114

Dear Lyn,

The Massachusetts Municipal Wholesale Electric Company (MMWEC), a not-for-profit, public corporation and political subdivision of the Commonwealth of Massachusetts, is pleased to offer comments regarding Home Efficiency and Electrification Rebate Programs (Inflation Reduction Act Section 50121 and Section 50122).

As the Commonwealth's designated joint action agency for municipal light plants (MLPs), MMWEC provides a variety of services to the Commonwealth's MLPs, including energy efficiency/weatherization, decarbonization and electrification programs through its NextZero program (www.nextzero.org).

MMWEC currently provides various programs and incentives through NextZero to 21 of the state's MLPs. The customers of these MLPs, with the exception of select customers provided gas service by an investor-owned utility (IOU), are not served by the state's MassSave program administered by the IOUs. To the extent that any of these federal funds are funneled to the MassSave program, MMWEC's NextZero customers would not be able to take advantage of these rebates and incentives.

The NextZero program would be capable of administering a program(s) to disperse these funds in alignment with our shared mission of further electrifying/decarbonizing the residential sector in Massachusetts. MMWEC staff are ready and willing to facilitate such a program, or otherwise cooperate with and assist the Commonwealth in ensuring that NextZero customers, including low and moderate income customers and renters, are able to take advantage of these rebate and incentive opportunities.

MMWEC welcomes further discussion with DOER on the most efficient ways to ensure these funds are allocated most effectively to MLP customers.

Sincerely,

Kathryn M. Roy
Director of Communications & External Affairs

Review DRAFT

March 3, 2023

Submitted by:
National Association of State Energy Officials (NASEO)
David Terry, President
1330 North 17th Street, Suite 1275
Arlington, VA 22209
703-299-8800
dterry@naseo.org

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

The National Association of State Energy Officials (NASEO) appreciates the opportunity to respond to the Request for Information (RFI) on Inflation Reduction Act Home Efficiency and Electrification Rebate Programs. NASEO is the only national non-profit association representing the governor-designated State Energy Directors and their Offices from each of the 56 States, Territories, and the District of Columbia. The State Energy Offices will administer the Home Efficiency and Electrification Rebates established in the Inflation Reduction Act. NASEO encourages the U.S. Department of Energy's (DOE) to provide State Energy Offices maximum flexibility to design programs that meet the unique needs and goals of their states, communities, and energy service providers, and we offer the following responses to select RFI questions, as well as our recommendations to the U.S. Secretary of Energy (attached) which were first transmitted on January 26, 2023.

B. Accessible and Equitable Program Design

3. How can DOE encourage program administrators to design their rebate programs to align with the Justice40 Initiative, which commits to delivering forty percent of the overall benefits (home improvements, jobs, etc.) from certain federal investments to disadvantaged communications that are marginalized, underserved, and overburdened by pollution?

NASEO recommends DOE work with State Energy Offices to understand their unique equity-related goals and provide flexibility for State Energy Offices to design rebate programs that meet local needs while complying with Justice40 requirements via the NASEO Residential Energy Efficiency and Beneficial Electrification Task Force and the NASEO Energy Equity Committee. Meetings with the NASEO Energy Equity Committee have highlighted that states' knowledge of distressed communities is not necessarily reflected in federal tools. To date, DOE has been responsive to State Energy Office questions regarding these programs and NASEO looks forward to future productive discussions. NASEO recommends having discussions with states through the NASEO Residential Energy Efficiency and Beneficial Electrification Task Force as soon as possible so that states' needs are fully reflected in any Justice40 reporting requirements and that those requirements are established with enough time for states to adequately plan to address them.

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?

NASEO recommends that DOE not add requirements for State Energy Offices to ensure meaningful engagement, because State Energy Offices are already robustly addressing this priority. As noted above, State Energy Offices have unique equity-related goals and priorities and are addressing them with processes that are relevant locally. Moreover, State Energy Offices have great expertise in community engagement and have worked to improve attention to equity and share best program design practices around equity through NASEO's Equity Committee and their own states' activities. DOE can engage with State Energy Offices via the NASEO Residential Energy Efficiency and Beneficial Electrification Task Force and the NASEO Energy Equity Committee to learn the specifics of the states' work, how they are planning to engage disadvantaged communities, and to share ideas on how this could be implemented in the context of the rebate programs.

D. Designing Programs for Maximum Impact

18. How should DOE, states, tribes, and territories measure success? Examples may include high customer satisfaction, measured or estimate benefits (e.g., impacts on energy, bills, emissions, health, or peak demand), quality job creation, valuation of home upgrades or overall efficiency, etc. What specific data is needed to evaluate progress towards these recommended metrics of success?

NASEO recommends deferring to State Energy Offices to identify individual state-level measures of success that reflect their unique needs and priorities.

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.

- **What guidance is needed from DOE to make this successful?**
- **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)?**
- **What concerns and risks should DOE be aware of in introducing these programs into existing program 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?**

State Energy Offices are already interested in layering rebate funds (and tax credits) with other funding to provide comprehensive energy upgrades that go beyond what is possible with rebate funds. DOE should focus on working with other federal agencies to better align the rules of various federal programs so that program layering and coordination is possible and practical for State Energy Offices. DOE should engage across the Weatherization Assistance Program, Low Income Home Energy Assistance Program,

U.S. Department of Agriculture programs U.S. Treasury, and other agency programs to determine what braiding will look like in practice and how State Energy Offices can comply with individual program requirements. The onus will be on DOE and other federal partners to streamline and coordinate requirements at a federal level so that consumers can be provided seamless, accessible services. NASEO recommends that DOE dedicate staff to identify these opportunities, work with states to gain input, and resolve federal programmatic differences to the extent practical.

F. Opt-In Tools, Resources, Technical Assistance, and Partnerships

32. DOE may invest in tools and resources that states, territories, and Indian Tribes can elect to use the 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 for their applications; (vi) stakeholder engagement guidance and resources; (vii) standardized datasets and APIs. And (viii) program marketing, education, and branding.

- **Which of these should be prioritized?**
- **Are any of these not needed?**
- **Are other components needed?**

DOE should prioritize the needs of State Energy Offices when making investment decisions as they will be the entities using the tools that DOE develops and/or directing their service providers in the use of these tools. NASEO can facilitate conversations between DOE and State Energy Offices to resolve which potential tools should be prioritized, which are not necessary, and any additional needs. Engagement with other DOE offices and federal agencies, as well as the states' private-sector partners in tool identification and development would be beneficial and would avoid duplication of efforts and needless costs. NASEO's Residential Energy Efficiency and Beneficial Electrification Task Force is an ideal mechanism for this type of collaboration.

35. What types of support or technical assistance would be most useful for DOE to provide to states, territories, Indian Tribes, and other program administrators to assist in developing program applications as well as in implementation?

DOE should defer all technical assistance decisions to the State Energy Offices. NASEO recommends that DOE solicit needs from the State Energy Offices, present their ideas for technical assistance to the State Energy Offices and then refine them as needed. NASEO strongly recommends that DOE gain the support of State Energy Offices for any technical assistance directed by DOE before DOE executes funding agreements with external entities for technical assistance.

36. What qualities should DOE seek in selecting intermediary organizations (e.g., non-profit and community-based organizations) to provide technical assistance, including marketing, education, and outreach to program implementors and others? Examples of support could include help on designing effective programs, braiding funding resources, and ensuring marginalized groups benefit from the rebate programs.

NASEO strongly recommends that State Energy Offices be given the opportunity to decide which, if any, organizations would be helpful to them in providing assistance. DOE should not engage with

intermediary organizations, where the intent is to use those organizations to assist states, before State Energy Offices have expressed support for the scope of work and the intermediary organization's capabilities and role.

G. Income Verification

37. What types of documentation should be considered sufficient for rebate application to demonstrate that they meet eligibility requirements (e.g., prior year tax returns, verification of other federal benefit program eligibility, or recent paystubs)?

- **What are common barriers to effective income verification for LMI households and what industry practices are less effective or should be avoided?**
- **How long should a household's determination of eligibility last?**
- **Are there examples of programs that have demonstrated high levels of compliance while allowing self-attestation to establish income eligibility?**
- **Some programs determine eligibility by address, such as if 80 percent or more of the census tract has a certain income. What are the benefits and drawbacks of this approach?**
- **How can program administrators prevent duplicative document or verification requirements?**

DOE should provide flexibility to State Energy Offices to determine what documentation is necessary to demonstrate eligibility. A State Energy Office may be interested in using participation in a state-run low-income program for eligibility and/or may be able to check for categorical eligibility without needing paperwork directly from a participant. However, DOE should clearly communicate what they would consider to be minimum standards for documentation so that states can prepare for any retroactive checks on participant eligibility. States can propose their ideas for eligibility checks in their application to DOE for their rebate funds.

H. Estimating and Measuring Energy Savings

42. What recommended methodologies or standards could be used by states/programs to calculate energy savings and associated impacts, such as greenhouse gas emissions reductions? What software is used to implement that methodology? What are the key inputs and features?

NASEO recommends that DOE accept tools and methods in addition to than the ones contained in BPI 2400 to calculate energy savings, such as Home Energy Score and a deemed savings option. Reasonable alternatives will provide options to simplify, in some markets, the work scoping process for the contractors or auditors that are in homes selling work and promoting rebates. It will also provide flexibility to states to determine which modeling tools and upgrades fit their priorities.

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

NASEO recommends that DOE be open to alternatives to BPI 2400 for the purposes of determining rebate eligibility for modeled energy savings. As noted above, it will provide flexibility to the states to define what combination of workforce training, energy modeling, and customer interaction makes the most sense for their residential market and policy conditions. It would also give states an opportunity to use the energy modeling software that may already be prevalent in their state.

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?

DOE should allow State Energy Offices to set credential and certification re requirements that reflect local priorities and local workforce development needs. Best practices can be communicated to State Energy Offices as options to consider but DOE should not develop federal "one size fits all" requirements.

N. Open Response

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

NASEO strongly encourages DOE to prioritize the needs and priorities of State Energy Offices in the development of program requirements and guidance. Additional concerns not reflected in previous question are noted below.

- DOE should make the full amount of administrative funds available to State Energy Offices when State Energy Offices apply for administrative funds. States need the certainty of having fund-in-hand in order to issue contracts and fund positions. It will also allow them to address the year 1 startup costs that will be significantly higher than program implementation years.
- It is critical that program requirements are as complete as possible before they are published. States cannot make planning decisions or issue contracts without knowledge of all legal requirements. Rewiring and reissuing contracts because of new DOE requirements is something to be avoided.
- The statute provides the opportunity for states to apply to the Secretary for permission to increase the energy efficiency rebate amount for low- and moderate-income participants. NASEO recommends that this application process be as simple as possible and for DOE to accept all applications, including those that would cover the entire project cost.
- DOE should communicate with states reasons they may need to withhold funds and whether those funds should come from administrative or rebate sources. For example, states may need to be prepared to pay for restitution when projects are installed incorrectly.
- DOE, in conjunction with State Energy Offices and market actors, need to communicate the critical importance and benefits of combining energy efficiency improvements (e.g., insulation, duct sealing) with electrification measures to program participants. NASEO and the State Energy Offices are prepared to work with DOE and others to try and prevent a circumstance where utility bills increase as a result of thermal electrification.
- NASEO recommends that DOE allow states flexibility in program design to the greatest extent possible. This includes allowing states to choose between measured energy savings, modeled energy savings, or both. Best practices are appreciated but the ultimate decisions should rest with states to the extent allowed in statute.

NASEO appreciates the opportunity to submit comments and we are able to provide follow-up information on any of the above comments. Our comments were informed and guided by the members of the NASEO Residential Energy Efficiency and Beneficial Electrification Task Force which includes over 25 State Energy Offices, additional observer states, and dozens of private-market partners. The Task Force meets regularly to discuss the implementation of the home efficiency and electrification rebates.

NASEO will continue to provide comments to DOE as priorities emerge from these conversations. We appreciate the engagement to date from the Office of State and Community Energy Program staff and look forward to ongoing conversations.

Thank you for your consideration.

Best regards,

David Terry
President, NASEO

DOE RFI

A. Respondent Contact info

1. Contact information
   Stephen Cowell, Northeast Energy Efficiency Council; steve@cowellconsulting.org
   617-816-4826

B. Accessible and Equitable Program Design

2. What Best practices to deliver to DJ communities and Low Income
   Many states have these plans with sometimes unique state specific determinations on definition and most have data tracking for service to those communities. Key is to address the difficult to serve: renters in low income apartments and multi-family buildings with mixed income residents. Create an 'ombudsman to deal with those buildings in a package'.
3. Align with Justice 40

The key is to compare existing state based targeted environmental justice targeted households/communities compared to HUD or IRS or other Federal definitions for each category of needy households. where there may be differences, DOE should allow states to use their existing targeted EJ communities/households. Summary by state would help.

4. Community Based Organizations and LI residents
   Would make sense to start with outreach to CAPs that run WAP and LIHEAP as well as Groundworks USA or other national organizations focused on EJ issues.
5. Rebates minimize energy burdens

There are studies in some communities on number of LI households served and LIHEAP may have specific information post WAP or LI efficiency services as to level of service provided and amount of energy burden reduced. The delivery of heat pumps on cold climates and poor housing may often increase energy burden. The policy should be to deliver efficiency to establish 'electrification ready' homes to avoid that impact

6. avoid contractors doing upgrades that result in higher energy bills
   This can be voided via good quality modeling pre and post which many states use but not all and sharing would help. States should present their plans for adopting the needed modeling tools for the whole range of programs and services delivered by the state and Federal programs. It is important that States avoid excessive and premature electrification that could drive up prices. For example using standard efficiency ratings for heat pumps is a good option. A multi-year strategy can help alleviate.
7. policies that ensure owners of rental property continue to offer affordable rents

This is important and signing an agreement with the owner/landlord to agree to maintain existing low rent is critical and a sample should be circulated. One of the critical issues that DOE should address is how the Hope for Homes and HEERA programs address multi family buildings since the % savings in Hope for Homes is most directly on single family homes but should be clarified to apply the same whole building % savings targets as the legislation has established with incentives based on per unit retrofits. HEERA might be able to address multi family building more easily but how are the packages prepared from multiple measures in each apartment and then the overall package in a building. It should be made clear that the % savings can be by overall building and not just one unit and HEERA can be used if more than x% of units are under the 150%.

8.proper rebate processing when providers and customers are in two different jurisdictions
This is done via good data tracking which can be addressed in the rules and data issues later. Many states do this and models can be circulated.

9. best practices for point of sale rebates
   The key is requiring the purchaser to report what customer will be receiving the measures if the contractor is purchasing while a form filled out by a customer for the incentive should be considered. Check what states are doing this already.

10.for Federally subsidized housing- program designs to ensure these properties receive
The state HUD agency that administers the subsidized housing-both public housing and unique unit based controlled rent should be the key agencies to work with as well as CAP agencies that manage LICAP payments to households.

11. QC measures
    There should be standard QC measures and procedures in most states that operate either WAP or utility programs. Request a sample of a QC report from each state.

12. which rebates programs (50121 and 50122) should be implemented separately or together?
    They should be implemented by the same agency to insure coordination and not overlap between the two which is prohibited by the legislation. The key is coordination with existing programs on both the EE and RE side.

C. Additional Design Considerations specific to Indian Tribes

Don't have clear knowledge of current Indian tribe programs.

13. Indian tribes allocation determination
14. third party admin or internal
15. barriers?
16. best practices from others

D. Designing Programs for Maximum Impact

17. Review of other programs

There are hundreds of programs at the state level and the ACEEE annual study would have a reasonable cut at states that should present a summary of programs that would relate to or coordinate with the IRA programs. The absolute most critical guidance from DOE will be how to braid and/or coordinate existing programs with IRA programs.

18. how to measure success?

Request a state report that presents IRA implementation in addition to any existing program implementation- either WAP/utility/state agency. Calculating the combined additional service is critical but might be difficult for some states that do not have adequate data tracking. DOE might consider added TA to states to assist with broad data tracking with using some states that

have that as a model. It is important, however, that TA from DOE should not prevent funding for TA at the state level.

19. what data to collect for evaluation
households served by each program/ estimated energy impacts by each program and by each technology category if possible.

20. how to spur market demand? For both
The key question is what is being done currently in the marketing/customer education/contractor training and reporting efforts. these are being done differently in each state and DOE guidelines could request some summary information that can be shared across states to assist. Also key is to work with trade associations that work with and coordinate at the industry level for EE and RE and EV.

21. how to drive higher savings per dollar rebate
Better training and deeper measure installation packages as well as targeting customers in the oldest and most inefficient homes. Evaluation reports are very helpful also. allowing for targeted combination of state/utility funds and measures with Federal funding for measures in a manner that increases funding for the household and includes measures that might not be allowed under state rules and increases overall savings in the state and at the customer level should be considered as part of a custom proposal from the state. Technical support to states on this issue by a selected DOE consultant might be helpful. Another potential option for larger multi-family housing is to leverage private investment/performance contracts with the IRA funds. in addition, coordination with the EPA GHG Reduction fund should be considered and supported.

22. set asides or limits
States should be allowed to establish set asides for specific EJ communities and types of underserved buildings and household limits should be reasonably established for households on the whole and for households that are under 150% or 200% of AMI. These limits would be to allow for combined state/utility and federal funding to allow for flexibility with % targeted savings using the H4H targets.

23. how to reduce implementation costs such as bulk buying
Competitive solicitations from contractors for specific measures and bulk buying should be allowed to lower costs but carefully reviewed at the state level to avoid a negative impact on the market. In New England, the WAP and utility programs established a bulk buying program in the 1980's called Energy Federation that has lowered energy costs for many decades and might be a good example to review.

24.practices to maximize uptake
Maximize uptake is critical and a combination of strategies in multiple states include: marketing; targeted analysis of household energy use; collaboration and cooperation between federal/state/utility programs to help target and deliver services to those in most need; also

cooperation and collaboration with communities via municipal government and community organizations that exist across all states.

25. consumer education and outreach
There needs to be good coordination and a working group established by IRS, DOE and HUD to establish coordinated information to insure that states, consumers and contractors have the best information on the guidelines and standards for each program and tax credits and well as any combined/coordinated programs which should be strongly encouraged to avoid consumer confusion. DOE should request states to provide models for addressing this strategy if they have them and can provide them at a reasonable cost.

26. new business models to secure increased investment
The Mass Save Heat Loan which is a 0 interest financing for energy efficiency investments is a good example of effective effort to increase consumer and bank investment which provides support for approximately 150 million dollars per year on average. Other models include facilitating coordination and collaboration between the contractors and programs that are providing different services such as efficiency/renewables/HVAC etc. Coordinating the DOE programs with EPA funding and financing efforts could help and a joint set of guidelines would help.

27. electrification rebates new or existing homes -is existing homes the priorityT?
Both new and existing should be considered with existing homes in greatest need from both a housing condition and resident need perspective be prioritized but not exclusively. States that have affordable housing that is not in efficient condition and costing residents for energy should be included.

E. Integrating Existing Incentives and Programs

28. Coordinate IRA with state and utility programs
-guidance from DOE
-Design programs to leverage other resources
-what concerns about introducing IRA into existing networks and programs
This is absolutely critical to avoid consumer confusion and potentially unplanned double dipping by unknown or unplanned efforts. A proposed plan for a state with aggressive existing programs, often combined with both state and utility funding should be required to present a coordinated plan to DOE to insure that there is best application of all funding. DOE should be clear that combining state and federal funds is acceptable as long as there is a clear delivery procedure and Federal funding does not supplant state/utility funding on a statewide basis. One added requirement might be to require contractors to use standard program descriptions for measures and packages of measures.

Sample proposal to a state:

Proposal for a targeted plan for delivery of IRA funds for a state with significant existing programs:

1. A proposal to a state that would present the idea of filing a plan for use of IRA funding for a more targeted objective: a. unregulated utility customers and b. a targeted group of environmental justice communities. This would lower the degree to which that funding could cause statewide chaos and confusion across the whole state which has a great amount of funding already from existing plans; IIJA (3.5 million in WAP additional funding) and other state, utility or other soures.

2. The proposal for EJC's could be focused on state agencies servicing them and the muni funds could be adjusted based on the % of customers who are supplied by them – an example from one state is the split in funds would be 80% to EJC's and 20% to unregulated utility customers.

3. The EJC funds would be xx% of IRA and would focus on large multi-family buildings where 50% or more of the occupants are less than 150% of SMI. Other households or commercial customers would be able to participate where the existing programs cannot provide similar level of support but the IRA funds could be applied.

29. what barriers to effective program energy saving attribution-address them!
One of the most significant barriers to program energy savings in the country is existing health and safety conditions that prevent measure installation. Several states have enacted programs to address these issues (MA; CT; PA) and DOE WAP program has also introduced a plan to assist with this barrier for low income households. These plans should be circulated and recommended to be considered. Coordinating the state and federal funds to avoid restrictive cost effectiveness requirements that exist on the state level could be a vehicle to address this issue.

The other barriers include non-english speaking households; marketing; and renter-landlord split incentives. All these and others should be considered by states.

30. Safeguards from DOE/Administrators to ensure low income are optimally served-connect with existing low income programs
This has been partially addressed above but collaboration on the state and DOE level for best use of WAP and IRA funds as well as state level additional low income funding is critical and should be required. Data tracking and target marketing is important component to the plan.

31. avoid decreasing existing program rebates as a result of IRA funded rebates
This is critical and DOE guidance should require that states provide a two or three year history of funding in their state and if they have approved plans for future years prior to considering the IRA funds, and the existing funding plans should insure that future funding is an addition of those level of funds plus Federal IRA/IIJA funds and not a reduction.

F. Opt-in Tools, Resources, Technical Assistance and Partnerships

32. DOE funding for tools and resources to implement these programs: tracking; software modeling; income eligibility; data collection; program templates; marketing: prioritize; needed; others

This is critical to those programs that require a target for savings and the legislative requirement to be consistent or meet BPI 2400 standards means that these standards should be and need to be reviewed and updated to insure that adequate tools are available. In addition, there is consistent data to support that use of modeled energy use and savings vs. collected actual energy use should both be allowed since % reductions are consistent using quality tools.

33. leverage existing tools and systems?
Yes- this is critical to avoid delays in program implementation and negative impacts on existing programs that have existing tools and systems. DOE and States should work with critical third party experts to insure that programs are effective and consistent. States should work with NASEO and other organizations to present a plan for use of existing tools and systems.

34. other components from DOE to avoid duplication and encourage consistency
DOE should fund some critical studies and technical assistance to support states that need to plan for coordination and collaboration between the existing State/Federal/Utility funding and the new additional IRA funding.

35. TA support from DOE to assist implementation
Yes, this is noted above and will be critical via both direct DOE support and indirect funded support from existing third party organizations, of which there are many such as BPA/BPI/NASEO/ACEEE/ASE/ Consultants etc.

36. what non-profits/CBO's that DOE should seek to assist in implementation
See the list above as well as REEO's and EESG members as wel as Solar and Wind advocates such as SEPA; SEIA ;AWEIA; AEU and others. A regular meeting would be very helpful and could be coordinated by NASEO

G. Income Verification

37. Income documentation-to meet income eligibility requirements: examples of existing ones; by address?; how to avoid duplication
There are multiple procedures in states and federal agencies that have been doing this with examples of insuring sharing of information about customers who have been approved for verification via tax form or authentication that is being used for other existing programs. If a customer has been determined eligible for WAP, LIHEAP, Low income housing, food stamps etc. they should automatically be eligible for the income required portion of the programs.

38. What would be needed for a DOE national income verification system?

Some program at the national level have verification systems (see above) and these should be used and explicitly allowed to be shared but also HUD affordable housing programs use income verification procedures to receive approval for subsidized housing (public and privately owned)

39. What existing successful income verification exist with state/tribal programs

See above – use of existing Federal program procedures and request any added State programs such as some that are used and should be considered to be allowed by census track with a target % of households under XX (60/80/150%) of SMI or AMI then all households in that tract should be eligible.

H. Estimating and Measuring Energy Savings

40. DOE support for programs adopting modeling or measured energy savings. Issues for each program.

Modeling should include both estimated use and collected use but not mandatory for each since % changes from specific combinations of measures will be very similar using both approaches and mandating collected household data will create significant program barriers (particularly for delivered fuel homes). Modeling will need to be based on existing conditions and not code or regulatory high level standards. Measured savings will need some added technical support for DOE and states who wish to use that approach and avoid poor results from unexpected household changes or approaches that target existing proposed measures or household changes that will not adequately insure deep and needed savings and not 'double dipping' the market.

41. What evaluations have found key drivers for successful modeling/prediction?

There are very many studies/evaluations that have data on the thousands of approaches both modeling and prediction. Some basic approaches can be reviewed by LBNL and others but the program should avoid excessive detailed mandates that will delay program implementation and upset the system in multiple states.

Commented [DG1]: It may take too long for national labs to produce this information, because they adhere to rigorous academic standards (e.g., peer reviews) for their published work.

42. methodologies for calculating GHG; SOFTWARE;

There are many efforts being made to both calculate GHG savings from measures using software but also evaluating use of energy in the building as well as GHG from collecting and transmitting energy and other causes of GHG. This should not be a significant barrier but some examples from existing programs and research teams that have been approved by regulators and either state of Federal levels should be evaluated and reviewed. There should be a list of organizations/companies/ agencies/studies etc. that can be presented and reviewed.

43. Software tools- BPI 2400

This is a good reference in the legislation but 2400 needs to be updated since it was not created for use in Federal Legislation.

44. applying BPI 2400-recomentations

There is a team of consultants who are working with BPI to upgrade and update 2400 and DOE should support that effort with adequate funding since it is a critical standard to insure that there are both adequate and sufficient number of software tools to implement the Hope for Homes program. A state should be able to present that the software they are already using is adequate to meet the standards of BPI 2400 without requiring the detailed review process that would delay program implementation.

45. best practices for calculating time, location, GHG

There is a question about how detailed and specific to dive into the calculations of GHG based on the time and location of the energy use but this also is impacted by where the energy is transmissioned from since the distance impacts losses and the starting point impacts GHG and time can n should be a broad estimate to avoid excessive calculations that will delay results and create debates over minor differences. Best to keep it at a high level. This can be a complicated process and states should be able to share best practice that is done at a national level by EPA; Labs or other research.

I. Eligible Technologies and Rebates

46. DOE qualification of technologies and projects

State, utilities, experts, evaluators, laboratories and others can have many opinions on the options for technologies and projects across the country. States should submit their current list of technologies that are targeted for incentives and projects also targeted but this should heavily rely on state plans with support by national experts, consultants and advisors. These should be presented as part of the state plans but states should also have opportunities to get advice and input on any proposed changes based on securing the goals established in the legislation. For states/tribes that do not have existing programs or analysis, DOE should assist in developing these, using appropriate information from existing programs and organizations working with NASEO and DOE and Labs. In all cases, using existing conditions is the starting point for evauation.

47. Electrificatiion rebates: purchase and installation?

We urge that electrification rebates be based on purchase and installation since both are critical to the success of the measure delivering the best results. Purchase is the first step but installation is the critical step. Purchase rebates should be combined with an installation agreement.

48. how to deal with equipment that is required by local codes

Equipment that is required by local codes should not be a reason to not support their installation since many of those codes are advanced codes with more efficient measures beyond standard codes. Customer assistance in meeting those codes is critical part of success and many reports have demonstrated that it often takes many years to actually implement a new expanded code. In all cases, using the existing conditions to upgrade to code or above standards is the necessary step that is needed to help households upgrade efficiency when not required.

J. Data Access and Sharing

49. DOE guidelines on energy use data sharing-?

Some of this has been address in questions above as a baseline with added recommendations at a state level but also with review and recommendations from national organizations which have been reviewing this issue for many years. This includes NASEO; BPA; ACEEE and others…

50. What are best practices on minimizing issues with data sharing or showing? Green Buttton?

This is a complex issue and DOE or NASEO should request states to collect and submit a summary of how data sharing has been carried out or been proposed to assist DOE in making recommendations for best practice. This should not be a requirement that might in some cases delay program implementation.

Data sharing has been a difficult issue to solve due to many concerns about breach of customer confidentiality.

K. Compliance and Quality Assurance

51. Tracking participation in rebate programs to protect against Double dipping between Federal programs.; excessive funding beyond what is allowed; equipment purchases that avoid combining H4H and HEERA; work not done; poor installations; false income; other risks

All these concerns need to be addressed through coordinated program implementation and tracking as well as clear QA/QC procedures that most states with existing programs have. There should be a clear guidance that state and federal programs may be combined as long as a % of cost beyond 100% for low/moderate income households and XX % for non-low/moderate income households be included in plans and reports. Clear guidelines from DOE on what can and cannot be combined should be included in guidelines. The issue of combining Federal and State/utility funding for a household should be clear and allowed with specific guidelines to avoid confusion at the customer and state level.

52. QA requiremenets?

Most programs operated by state agencies/WAP/utilities have QA procedures and should be submitted as part of the state proposed program. These should be included in the state plans while states that do not have existing programs with existing QA procedures should request assistance from DOE/NASEO of some high level examples.

53. QA data collection

States should maintain and received summary QA data and present a high level overview of QA data received to DOE.

L. Job Creation and Quality

54. Contractor and laborer credential and certification requirements

There are a range of existing credentialing and certification programs and procedures in place that should be referenced but not overly restricted to a few.

55. QA to insure quality installations?

QA procedures should be required and most existing programs have such procedures based on a third party random percentage review and summary of installation quality based on existing quality standards. Virtual QA is also available and can augment in person. QA of installations should not be considered admin but part of the implementation package.

56. DOE assurance for construction jobs and non-construction jobs

Construction jobs should have 100% data/information reporting and tracking by the program implementors with summary data maintained while non-construction jobs need to be defined and described based on self-installed with products purchased by the customer. These could require a third party review and assessment.

M. Buy America and Supply Chain Considerations

57. What technologies face barriers due to cost/supply chain/production

We do not believe that IRA has or should adopt Buy America requirements that would create barriers to the 100% install America efforts and 100% America benefits to consumers. The other cost/supply chain issues are significant and strategiea around reducing those barriers through bulk purchase or incentives to manufacturers should be considered and supported on a national scale with national associations but not as a barrier to rapid implementation of programs.

58. can program implementers reduce supply chain constraints (bulk purchase/DOE mfg programs)

Most program implementors cannot reduce supply chain issues on their own but DOE/NASEO and a coalition of organizations might be able to come together to made efforts in this area.

N. Open Response

59. Anything else DOE should be aware of….

We believe that we covered all the critical issues but the key one is being able to be flexible between states and tribes that have very different needs and existing initiatives that absolutely need to avoid confusion between the existing initiatives and the new Federal initiatives combined with the new tax credits. It will be critical to avoid confusing customers and contractors as well as program implementors.

60. Any evaluations/research/reports/ or resources and info to help with DOE guidance?

There certainly are thousand reports and studies that the teams should consider to review but it will take some time to sort through which ones are most appropriate and helpful.

Huckabee, Jerrylyn (ENE)

From: Paul M Martin <paulmmartin46@gmail.com>
Sent: Friday, February 24, 2023 1:24 PM
To: jerrylyn.huckabee@mass.gov
Subject: IRA RFI

Ms JerryLyn Huckabee

Massachusetts DOER

As a citizen of Massachusetts who is very concerned with the climate crisis, I believe that clear, well publicized, and easy to access incentive programs for changes to housing and transportation should be the goal. Following are some comments based on my own experience with efforts I have made in recent years toward Electrify Everything.

Air Source Heat Pump, mini-split and centrally ducted.

In 2022 I installed an ASHP system with inside units in each of the 4 bedrooms on the second floor of my home. I then closed off the ducts of the heating system (oil furnace using biofuel) that serves the second floor. I won't know how much oil has been saved till the end of the heating season, but so far it seems to be performing very well. I got no rebate money on this system since it did not replace the furnace. You might consider an incentive for people who are willing to convert a house from steam or circulating hot water to a warm air system in stages. It is difficult to get air ducts to the second floor without major work, but it is easy to heat the first floor via ductwork in the basement. There are many homes in New England that could be converted to warm air heating with mini-splits serving the upper floors and a central ducted system for the first floor.

My next step for my own home is to add a second ASHP to work in conjunction with with the furnace. It will provide heat down to some as yet undetermined point and then let the furnace come on when it is colder. I am told that there will be some rebate for this installation since it directly replaces at least some of the load on the furnace. Still, current rebates for this are a small help, but not much of an incentive for anyone who is not already motivated to make these changes. Some years from now when ASHPs are even better than they are now, I will be able to replace the furnace entirely for heating the first floor of my home.

Heat Pump Hot Water Heater

Earlier in 2022, I installed a hot water heater with integrated heat pump. Unfortunately, the installer was not initially aware of the rebate available for this. When I asked him about it he

assured me that he would get it to me, but has not been able to do so as of this writing. Apparently the rebate in this case is only available through the vendor – I have not been able to find any form to apply on the Mass Save or Mass CEC websites. Also, the $750 available for this installation is, as above, only a little help and not really an incentive for this type of installation. Total cost to me including electrical work and removal of the old tank was above $5,000.

General Comments

As noted above, my electric distribution panel had the capacity to install the items mentioned. The cost of such upgrades including from a 60 amp service with fuses must be considered – such things still exist.

If someone wants to replace a gas kitchen stove with electric it may need both a plumber to safely remove gas piping and an electrician to add the new outlet. The end user may also need to get new pots & pans for an induction stove. If the household is low income, then those costs should also be considered.

Any rebate or incentive program should be clearly explained on an easily available web site. Also, this should be available at every city or town office for anyone who does not have internet access. If funds are available to be paid directly to the consumer, the forms should also be easily available. If they are to be administered through the vendor then that should be explained and such payments should be audited to ensure that vendor pricing is still competitive and they are not padding the price to take some or all of the incentives.

People should be able to choose their own vendor / installer. I was not happy with the work done by an installer referred to me by Mass Save.

I have only recently learned about the existence of HERS consultants. I expect to be working with one on a project at a house not my own. If they are independent third parties offering advice and evaluating quality of work, then that should be promoted as a way to help people make good decisions and get the available rebates & incentives. Paying for that should be part of the program and should be independent of the vendor and should not burden the customer so as not to discourage the end user from getting the help.

Sincerely and with best wishes for a successful program,

Paul M. Martin

46 Oxford Street

Springfield, MA 01108

413-737-4471

February 24, 2023

To: Lyn Huckabee
Regulatory and Innovation Program Manager
Massachusetts Department of Energy Resources

Re: IRA RFI

On behalf of RMI, we respectfully submit these comments for consideration in DOER's IRA Rebate RFI Response. RMI (formerly Rocky Mountain Institute) is an independent, non-partisan, non-profit organization whose mission is to transform the global energy system to secure a clean, prosperous, zero-carbon future for all. RMI has been deeply engaged with the development and implementation of IRA funding including collaborating with numerous state energy offices across the country. In these comments, we have provided recommendations for the two key topics DOER identified and linked resources.

Coordination of IRA with existing state programs and funding (Question 28 in RFI):

To ensure Massachusetts is best positioned to stack funding, DOE should provide guidance on how the IRA rebates stack with other sources of funding. Clear rules and best practices for program stacking are vital to program success, especially with other federal funding sources. When developing guidance, DOE should:

1. Encourage common reporting requirements — which should be simplified and consolidated — across similar programs.
2. Ensure rebates are not subjected to cost-effectiveness tests that are not federally mandated. This is especially relevant to stacking the rebates with WAP, in which case strict cost-effectiveness tests would hamstring the potential benefits of layering the programs.
3. Consolidate eligibility requirements and endorse categorical eligibility.
4. Encourage program layering among all relevant stakeholders, including public utility or service commissions, community action agencies, weatherization or energy assistance programs, and housing financing authorities.

For Massachusetts, DOER can collaborate with Mass Save to blend existing and IRA incentives together. Given effective DOE guidance, Massachusetts will be able to provide a single application for residents to access incentives, technical assistance, and contractors for whole-home retrofits.

Targeted approaches to IRA implementation, including specific geographies or customer types for targeted approaches (Section B in RFI):

To set clear signals and expectations to states, DOE should incentivize state energy offices to engage with the disadvantaged and underserved communities through the following activities:

- Sub-contract with Community Based Organizations (CBOs) to conduct outreach to underserved and disadvantaged communities, particularly historically underserved communities of color. Local CBOs have established relationships with their communities and can serve as trusted ambassadors.

- Offer workshops to program implementers, contractors and Community Action Agencies (CAAs) on equity topics, including expanding services to underserved communities, understanding the administration's Justice40 initiative, and reaching out to rural/remote populations.
- Develop local plans that include place-based implementation. This involves building community based trusted relationships and microtargeting outreach to address historically underserved areas or demographic groups.
- Together with CBOs, develop culturally appropriate customer education and outreach toolkits to recruit historically underserved customers.
- Create an Equity & Innovation Coordinator position at SEOs to support program implementers.

Of particular difficulty to reach is engaging affordable multifamily rental housing. DOE can support states, including Massachusetts, in addressing barriers for affordable multifamily housing providers and residents in the following ways:

- Provide a flexible and streamlined income verification process.
- Provide technical assistance and project management services to building owners.
- Engage with residents of underserved frontline communities–including renters in affordable housing—to incorporate residents' lived experience and needs into the design and development of programs.
- Allow incentives to be used for in-unit, common area, and whole-building energy savings opportunities.
- Address economic obstacles, including split incentives and lack of upfront funding.
- Align and integrate the rebate process with housing finance agency refinancing programs.
- Encourage program administrators to work with community-based organizations to identify and engage affordable housing owners and residents.
- Provide funding for health and safety and repair measures to maximize energy savings opportunities.

Finally, DOE can support states in setting program objectives that align with Justice40 to ensure accountability and clear targets for reaching target communities. With less than half of states having metrics for serving low-income households through their energy efficiency programs, most rebates currently go to middle- or high-income households. Additionally, low-income households can't take advantage of the Energy Efficient Home Improvement tax credits (25C) that support building retrofits due to lack of tax liability. To address this and align with Justice40, DOE should provide guidance to SEOs on setting measurable goals to spend at an absolute minimum 40% (mirroring Justice40 goals) of program funding on low-income households, with a goal closer to 60-80%. Additionally, DOE should clarify that the $14,000 HEEHR rebate maximum to households applies to individual units in multifamily buildings, allowing multi-family building owners to leverage more rebates to benefit more multifamily households.

Additional Resources and Offer of Support

In addition to these direct responses to DOER questions, RMI and Evergreen Collaborative have developed two best practices and program implementation guides. Alongside informing DOER's RFI response, these documents can be a resource going forward as DOER scopes implementation of these programs.

- Home Efficiency Rebate Programs (focused on program design) - $4.3B for states to design programs that will incentivize whole-home retrofits.
- Home Electrification Rebate Program (focused on program design) - $4.5 billion for states to design programs that will help low- and moderate-income households electrify their living units.

If DOER has any questions on RMI's response or would like to discuss the rebate programs, RMI would welcome a conversation. We are working with numerous state energy offices across the country, and we would be happy to share lessons learned and best practices.

Thank you for the opportunity to comment on the Massachusetts's rebate RFI response. We are excited to see $146 million dedicated to home upgrades and electrification projects.

Sincerely,

Olivia Prieto
Sr. Associate, Carbon Free Buildings
RMI
oprieto@rmi.org

Huckabee, Jerrylyn (ENE)

From: Robert Turner <randtroofingpittsfield@gmail.com>
Sent: Saturday, February 25, 2023 10:25 AM
To: jerrylyn.huckabee@mass.gov
Subject: IRA RFI

Good morning,

We own a local roofing company in Western Massachusetts. I came across an article this morning in a local online newspaper regarding this new program. In particular, the part about potential funding for, " roofing repairs" as part of this state/federal program.

We're licensed and insured. We'd potentially be interested in helping the state/customer with the repairs or installs on any said residential/commercial property(s.)

Please let me know if I understood the article correctly and if you're potentially looking for contractors in the area.

I hope you have a well deserved weekend off and look forward to hearing from you in the future.

Thanks again,
Bob Turner
R&T Roofing and Remodeling
413-281-1105

Request for Information Categories and Questions

A. Respondent Contact Information

1. Please provide your contact information:
Name: Hannah Bascom, Vice President Regulated Business
Organization: Span.IO, Inc.
Phone Number: 401.486.4223
Email Address: Hannah.bascom@span.io

B. Accessible and Equitable Program Design

2. What best practices can program administrators and other relevant stakeholders:
Please see our answer for Question 25.

3. How can DOE encourage program administrators to design their rebate programs:
For households with income below 80% of area median income ("AMI"), these Rebates together with other federal and state programs should cover the total cost of an applicable project, including the cost of appliances and labor for installation, to maximize the participation and benefits for disadvantaged communities. Such zero cost to homeowner projects will drastically improve accessibility to low-and moderate-income households most burdened and impacted by climate change. While the Efficiency Rebates allow for State Energy Offices to increase the rebates for low- and moderate-income households, the Electrification Rebates have designated maximum capped amounts. Thus, to achieve zero costs to impacted households, DOE should allow for stacking and braiding tax incentive and rebate programs together, including without limitation, the Weatherization Assistance Program (WAP), the Low-Income Heating Assistance Program (LIHEAP) and/or other state-based efficiency programs.

For all households, but particularly for households with income between 80-150% of AMI, DOE should encourage states, tribes, and territories to pair rebates with 0% financing (or financing with interest rates significantly lower than market rate, e.g., <5 percent) to enable zero upfront costs to the homeowner. Given that studies have found that the majority of Americans do not have savings to handle unexpected expenditures, providing as many financial resources to eligible participants is crucial for viable uptake. This subsidized financing option can and should be supported by the Greenhouse Gas Reduction Fund. While financing is not within the rebate program's statutory requirements, easy financing APIs should be built into any DOE-provided digital infrastructure it creates, as well as into requirements of any alternate digital infrastructure that State Energy Offices elect to use. Below, please find some examples of existing subsidized financing programs for efficiency and electrification upgrades:

- Massachusetts Heat Loan, 0% for 7 year program. See details here: https://www.masssave.com/residential/rebates-and-incentives/heat-loan-program
- Energize Connecticut, 4.49% for 10 or 15 years. See details here: https://www.ctgreenbank.com/home-solutions/
- New York Green Bank, 4.99% loan. See details here:
- Sacramento Municipal Utility District (SMUD) – on bill tariff financing up to 30K, 6%, no qualifications required. See details here: https://www.smud.org/en/Rebates-and-Savings-Tips/Energy-Upgrade-Project-Financing
- Nebraska – statewide fund by Nebraska Energy Office. See details here: https://neo.ne.gov/programs/loans/loans.html
- Michigan Saves

4. x
5. How can the Home Energy Rebate programs help to minimize energy burden and costs:
The Electrification Rebate and Efficiency Rebate programs should be braided together, as well as with other weatherization and health and safety programs such as the Weatherization Assistance Program and the Low-Income Heating Assistance Program, to *maximize* efficiency and energy cost gains for households and *minimize* energy burden and overall costs. The Electrification Rebates can be maximized for appliance upgrades and any supplemental rewiring needs. Smart panels, in particular, are important enabling technology for home electrification due to the panel's ability

to provide data and automatically manage home load at existing utility service level, thereby avoiding unnecessary and costly service upgrades in their electrification journey that can cost tens of thousands of dollars.

6. What types of program design approaches, guidelines, tools, savings analyses, policies or reviews…
   Given the varied rate structures and customer consumption patterns, it will be difficult for contractors to decipher whether a particular upgrade will result in a higher annual energy bill for a given household. However, according to this study from Rewiring America [https://www.rewiringamerica.org/policy/high-efficiency-electric-home-rebate-act], the majority of households would save nearly $500/year versus their current electric resistance, fuel oil or propane. 67% of natural gas households would also realize savings. There are, however, some best practices that DOE can encourage through participating State Energy Offices.
   1) The Efficiency Rebates should prioritize efficient electrification over efficient gas products for heating and cooling. As the country continues to transition to electric heating, cooling, and cooking, gas is projected to experience a cost "death spiral" such that costs rise exponentially for the remaining customers within a gas distribution system. It is important for the Administration's Justice40 and equity priorities that the Rebates do not incentivize low- and moderate-income households to remain in this system, potentially locking them into more costly upgrades in the future, as well as higher energy costs.
   2) Both Rebate programs should prioritize households that currently rely on delivered fuels (i.e., fuel oil or propane) for their heating and cooling needs. By installing efficiency and electrification upgrades, these households will experience reductions in annual energy bills.
   3) Both programs should be implemented with weatherization upgrades in mind. The Efficiency Rebates can cover the bulk of these upgrades, while the Electrification Rebates can cover equipment upgrades. In addition, homeowners should be able to stack these Rebates with other efficiency upgrade programs, such as the Weatherization Assistance Program and the Low-Income Heating Assistance Program, to cover weatherization and other health and safety upgrades. However, under the programs, weatherization should not be a prerequisite to electrification to avoid the consequences of upgrade delays and unnecessarily gating homeowner electrification projects.
   4) The Efficiency Rebates should maximize electrification readiness for households. By ensuring that households have sufficient electrical wiring and capacity today, they will be able to upgrade and adopt electrical appliances when financially feasible for them in future coming years. Furthermore, as discussed in other questions, by installing smart panels now, households can avoid costly service upgrades in the future.
   5) DOE should consider requiring that the Efficiency Rebates assess modeled or projected savings from upgrade scenarios that include electrification over the expected lifetime of the proposed equipment. This will allow consumers to make educated decisions concerning which equipment upgrades they should choose, while helping contractors determine which upgrades to perform under the applicable rebate program
   6) DOE should take a holistic whole-of-government approach and work with the relevant Federal agencies to support participating stakeholders - states, tribes, and territories – to establish affordable residential electrification rates.

7. x
8. Given that rebate allocations are intended to be applied to residential properties within that state…
   Contractors working across multiple jurisdictions already apply varying program criteria to projects with their customers across jurisdictional boundaries, and the administrative burden primarily falls on installation contractors to understand the details of different state- and utility-administered programs. DOE should provide guidelines and best practices to help encourage uniform implementation across states and reduce overhead costs for implementers. DOE should provide tools such as common rebate applications, software, and online portals to help encourage consistent state adoption of rebate programs and reduce administrative burdens for contractors operating across multiple jurisdictions. Ultimately, dollars should follow the household - that is, if a contractor is based out of state, they should still be eligible to receive payment for work completed on a given household in that state.

9. What are best practices for implementing successful 'point of sale' rebates…
   All these use cases will require that the income and equipment eligibility process be easy and seamless for both the contractor/retailer and household consumer. In addition, reimbursement times to the participating contractor or retailer need to be swift (ideally, within two weeks) to enable businesses to promote these rebates at scale without taking on cash-flow risks. Collectively, these best practices should encourage greater participation in the Rebate programs.

To facilitate such processes, DOE can enable this streamlined rebate processing through the below technology solutions. (See question 32 for additional information.)

- Establish electronic/online qualification processes for customers;
- Establishing common and simple online rebate applications for states to adopt;
- Establishing financing funds that states may elect to offer to customers who are above 80% AMI;
- Leveraging online portals to provide transparency on rebate status for consumers and contractors;
- Allowing electronic submission of rebates, including electronic signatures, rather than requiring hard copy submissions with wet signatures on documents;
- Encouraging states to offer electronic payments to streamline rebate delivery in addition to offering paper checks when electronic payment is unavailable;
- Reimbursing contractors within two weeks.

10. x
11. x
12. Which Home Energy Rebate program components:

Implementation of the programs should maximize the ability to braid and stack the Rebates together (along with other efficiency programs) to maximize the energy savings, and the resulting cost savings, for households. Program implementation should as swift as possible to maximize uptake from existing consumer interest. Thus, if one of the two Rebate programs can be implemented first, then DOE should prioritize that program's rollout and then integrate the two programs once both are launched.

To efficiently and effectively braid and stack programs, a one-stop-shop digital solution for participating contractors and retailers is essential. This solution would identify customer and equipment eligibility, perform rebate processing, and simplify the data collection and reporting process from contractors/retailers to the State Energy Offices. Additionally, the ability to stack and braid programs together is crucial for efficiently reducing household costs and reducing greenhouse gas emissions. If a household is able to qualify for both programs, namely a low-and moderate-income household, a contractor can optimize which upgrades to offer to the customer in such a way that maximizes their energy and cost savings.

C. Additional Design Considerations Specific to Indian Tribes

13. x
14. x
15. x
16. x

D. Designing Programs for Maximum Impact

17. x
18. How should DOE, states, tribes, and territories measure success??

Program success should be measured in the following ways:
Participant Benefit: Customer satisfaction - as well as health and safety - are paramount. Both qualitative and quantitative data on customer experience should be collected both at the time of receiving the Rebate and on an ongoing basis. At the time of receiving the Rebate, customer satisfaction metrics should include ease of qualification and scheduling contractors, and installation experience. On an ongoing basis, metrics should include levels of home comfort, health data, and energy costs data to understand the impact of the program and inform future iterations of the programs.

Community Benefit - Jobs: The creation of local, high wage, green jobs that do not require college degrees is incredibly valuable to creating a positive reinforcing cycle of economic growth and health improvements in the community. Wealth accumulation for the contractors delivering these programs will enable investment in the other local businesses in the area, as well as improved living standards for installers and their families. Metrics around workforce

growth/unemployment, local business longevity, school attendance, and health outcomes are all suggested areas to evaluate success.

Climate Benefit: Current paradigms of focusing on kWh or thermal savings in the home as a measure for success are outdated and disjointed. With installation of new electric appliances, we would expect kWh consumption to rise in a home, but *carbon emissions* would fall. Moving towards a paradigm of using GHG emissions as measurement is essential to assess program success and impact.

System (Grid) Benefit: Studies indicate that there are high costs and long horizons associated with grid investments required to decarbonize the residential sector and integrate necessary renewable energy resources. Therefore, it is important to consider cost savings and GHG impacts of electrifying the system in a faster and more cost effective manner using new technologies to leverage both home and grid infrastructure in a more intelligent manner. ***See footnote 19 for cost breakdown: https://www.rewiringamerica.org/circuit-breakers-the-grid#18***

19. What data should program administrators and DOE collect:
    To effectively implement and evaluate both programs will require access to energy data. (Please see: https://sealed.com/homes-program-msi-energy-data/) Because DOE and State Energy Offices may have limited access to energy data, policymakers should encourage utility data partnerships. Importantly, DOE and State Energy Offices should access energy data through alternative and innovative technological sources, such as smart panels and technology-enabled solutions.

20. How should these programs be designed:
    The most efficient way to design the programs to spur durable market demand for efficient electrified homes is to maximize electrification readiness in as many homes as possible. The Efficiency Rebate program should be used primarily for these upgrades along with weatherization and health and safety upgrades — especially when the program can be stacked with the Electrification Rebates, which can then cover the appliance upgrades. And, for non-low- and moderate-income homes, Efficiency Rebates should *not* support gas infrastructure. To do otherwise would lock in consumers - and the grid - to these fossil fuel systems for another 10-20+ years. Importantly, updated smart electrical panels should be prioritized to support our electrified future, including electrical vehicles and electric heating, cooling, and other household needs. To use the rebate funding in the most cost-effective way, smart panels should be encouraged through higher incentive levels than non-smart panels. Smart panels allow smart management of electric household energy use — managing peak demand needs of the grid and reducing energy usage and costs for consumers. Importantly, smart panels can help households avoid costly or unnecessary service upgrades by managing and directing electric usage more effectively.

21. Based on past successes, what practices and/or policies should program administrators use:
    For the Rebates, DOE should encourage the use of customer targeting to identify high-impact customers. Per NREL, LMI households with electric resistance heating will save an average of $874 per year by electrifying, and LMI households with delivered fuel heating will save an average of $1,071 per year by electrifying.

    A recent U.S. Energy Information Administration evaluation shows that current program implementation paradigms are resulting in less energy saved because of growing marketing and administrative costs (please see https://www.eia.gov/todayinenergy/detail.php?id=42975). Typically, programs are burdened by:
    - Cumbersome qualification requirements (e.g. multiple data entry requirements for utility account number, income verification, etc.);
    - Friction-filled enrollment requirements (voluminous paper forms, long waiting periods, the hassle of chasing down installers, long lag times until appointments are available, etc.);
    - Lack of consistent marketing - differentiated program requirements make a consistent marketing approach very difficult.

22. x
23. What best practices, like bulk purchasing or bulk installation, should program administrators consider:
    It is essential not to require the removal of gas heating equipment in order to qualify for the HVAC update.

Displacement of fossil fuel usage, rather than replacement entirely, could offer a much more cost effective way to install heat pumps in certain home applications.

24. x
25. How can programs ensure effective consumer education and outreach:
    As stated in Question 32, DOE should develop tools to help consumers — especially LMI consumers — and contractors maximize incentives by prioritizing energy-saving measures and leveraging program stacking, especially between the two rebate programs.

    DOE should develop educational materials for contractors and retailers, as well as turnkey materials that State Energy Offices can use for consumers. State Energy Offices should then work with trusted community groups to help disseminate this information throughout their states, especially in areas with significant low- and moderate-income households or disadvantaged communities. State Energy Offices should also disseminate this information with trusted partners including participating utilities, retailers, and contractors. For instance, utilities can advertise the programs on utility bills or conduct targeted direct-to-customer outreach within their existing customer base. All of the materials and tools should be translated into multiple languages by DOE.

    These materials should include simple, easy-to-understand information on the different types of available upgrades together with their effects on energy use and costs. All educational materials should include information about smart electrical panels so that households understand their importance and benefits and *not* end up locking in old technology in their homes that may prevent them from future electrical, fossil fuel-free upgrades.

    In addition, DOE should establish official online tools: 1) that help consumers understand the incentives and rebates they qualify for under the programs, 2) displays products eligible under the programs, and 3) identifies next steps such as selecting a qualified installer. These tools should include both printed and digital, online versions of all these educational materials.

26. What program design requirements are necessary:
    Ensure timely payback for market participants: DOE should ensure that small-business contractors — whose cash-flow sensitivity is much greater than big businesses — can rely on receiving the incentives in a timely manner. This is especially important for single-family residential contractors in disadvantaged communities, who cannot shoulder long-duration rebate reimbursement cycles. To ensure equitable access, DOE should consider flow-of-funds requirements and phased repayments for projects that have a longer timeline and deeper investment.

    Harmonize program requirements: DOE should maximize regional and nationwide harmonization to allow businesses to scale rapidly across state lines and pass along the benefits of economies of scale to consumers. Similarly, DOE should encourage SEOs to harmonize existing incentive programs to enable low-friction incentive stacking.

    Include the measured pathway: DOE should ensure that SEOs do not offer only the modeled pathway for the Efficiency Rebates. While the measured performance pathway is relatively less common than the modeled pathway right now, it must not be left out of state implementation plans. The measured pathway will allow for new business models to enter the market and use performance-based contracts, which will encourage innovation and uptake.

27. While the electrification rebates allow for application in both new construction and existing buildings:
    DOE should ensure that State Energy Offices offer the Electrification Rebates for both retrofits and new construction, in accordance with the authorizing legislation, which specifically includes purchases “as part of new construction”.

E. Integrating Existing Incentives & Programs

28. How can DOE encourage program administrators to build on and coordinate these :
    To ensure SEOs are best positioned to stack funding, DOE should provide guidance on how the IRA rebates stack with other sources of funding. Clear rules and best practices for program stacking are vital to program success, especially with other federal funding sources. While the Inflation Reduction Act allows up to 20% of the total funds ($1.76 billion)

to be spent on program administration, states can minimize administrative costs by aligning the implementation of the federal rebates with existing energy efficiency and grant programs and improving/streamlining those processes. When developing guidance, DOE should:

1) Encourage common reporting requirements — which should be simplified and consolidated — across similar programs.
2) Ensure rebates are not subjected to cost-effectiveness tests that are not federally mandated. This is especially relevant to stacking the rebates with WAP, in which case strict cost-effectiveness tests would hamstring the potential benefits of layering the programs.
3) Consolidate eligibility requirements and endorse categorical eligibility.
4) Encourage program layering among all relevant stakeholders, including public utility or service commissions, community action agencies, weatherization or energy assistance programs, and housing financing authorities.

29. x
30. What safeguards can DOE and/or program administrators put in place:
    To maximize the positive impacts of the Inflation Reduction Act, states must pair the Efficiency and Electrification Rebates alongside state- and local-level energy efficiency programs. DOE should clearly establish in the program guidance that federal rebates should supplement existing rebate programs, *not* replace them.

    DOE should require states with existing state- or utility-run rebate programs to certify that they intend to maintain or increase existing funding levels for these programs. This will help ensure that the Energy Rebates are additive to existing incentives and do not use the federal funding to reduce existing rebate amounts and offset their current spending.

31. x

F. Opt-In Tools, Resources, Technical Assistance, and Partnerships

32. DOE may invest in tools and resources:
    For the Home Energy Rebates to be available in every state, DOE should support under-resourced state energy offices, territories, and tribes, (which will be referred to collectively as "stakeholders" for this answer). This support should include national digital infrastructure into which these stakeholders can opt. Simultaneously, DOE should provide these stakeholders the flexibility to choose alternate digital infrastructure providers as long as such providers meet a minimum set of DOE specified capabilities. This will help guide stakeholders to choose the appropriate platform to ensure efficient and effective implementation, as well as empower the market to provide the tools and compete in the marketplace with these stakeholders.

    This digital tool, or platform, should provide the following capabilities:

- **Feature Optimal Design:** This platform should be optimized for various use cases, namely for contractors, retailers, and consumers. In all cases, a best-in-class user-focused and user-friendly design that is simple and easy-to-use is pivotal to facilitating maximum uptake of the programs.
- **Enable Seamless Reporting:** This platform should enable easy reporting from both contractors and retailers up to the administering stakeholders, and then up to DOE. It should also provide *easy* and *seamless* income and equipment eligibility verification without the handling of personal identifiable information by contractors or retailers.
- **Swiftly Process Contractor/Retailer Reimbursements:** Pivotal to the success of the program is a simple rebate processing system for participating contractors and retailers that allows for easy and fast submission and reimbursement of their carried costs. DOE should require that contractors are reimbursed within two weeks if they sign up for direct ACH-payment. This type of system is already used in Maine through the Efficiency Maine program where contractors are often paid within one week. This is essential as the majority of contractors are small businesses for whom a long reimbursement cycle will be unsustainable for their business, ultimately reducing participation in the program. A platform that provides such infrastructure will help stakeholders who do not have experience with such payment set-ups at this scale.
- **Be Responsive to Market Transactions:** As over 80% of water and space heating decisions are made by households in a time of duress, providing a post-purchase reimbursement option for a qualifying product and household should be allowed. These transactions would largely occur with retailers or when digital infrastructure is inoperable.

Importantly, they would still provide point of sale cost savings to the household, but the contractor or retailer can verify and recoup the costs after the purchase is complete.

- **Integrate Financing Solutions**: Ideally, this platform would allow stakeholders and the users of the system to integrate their chosen financing platforms to provide options — including subsidized financing for low- and moderate-income households — for household decision makers to select for any outstanding costs.
- **Verify Income Eligibility:** There are multiple ways of performing efficient income verification. A universal scalable option should be made available to all stakeholders, with the flexibility to add on various other methods that may work for them.
- **Verify Equipment Eligibility:** The Electrification Rebates require qualified electrification projects to be part of new construction, a first-time purchase of that type of equipment, or to replace non-electric equipment. Given that some contractors or households in cold climates may not yet trust electric heat pumps, the term "replace" should allow for major displacement of their original fossil fuel system, enabling customers to keep their original equipment as a back-up. Also, first-time purchases of equipment should allow households to purchase an electric heat pump in cases when the original water or space heating system was electric resistance as these two types of equipment are different. These qualification details should be processed through a simple self-attestation process including the attestation of the installer. In cases where a household is installing the system themselves, perhaps a photo upload of the original system or the inputting of a serial number or model will suffice. As with the program implementation overall, the goal of the one-stop-shop should be to maximize uptake and reduce barriers for participation through seamless easy processes. Verifying equipment eligibility should be just as easy.

In summary, DOE should make a one-stop-shop available to all participating state energy offices, territories, and tribes. In upcoming guidance, the DOE should also provide these entities with a list of required capabilities to allow them to choose qualifying alternate providers. By providing the required capabilities, DOE will allow the marketplace to develop the best in class product.

33. What existing systems and tools:
    DOE should leverage data collection and reporting mechanisms that are part of some existing state incentive programs, with TECH Clean CA as the national model for data collection and reporting. Other state programs that collect and report data include Mass Save and Efficiency Maine.

34. Are there any program components that DOE should provide nationally:
    See our previous answer on data collection. DOE should also provide national income verification guidance, including on categorical eligibility with federal means-tested programs (see Question 37 for more). In this effort, DOE should build off its coordination with HUD on WAP categorical eligibility.

    To encourage consistency and market transformation, DOE should clearly specify rebate amounts and equipment eligibility. This would allow market actors with multiple state footprints (e.g., contractors, retailers, original equipment manufacturers, implementers, and software providers) to effectively operate in multiple markets across the country, thereby, creating consistency in the market as a whole and reducing friction for businesses to participate and promote uptake in the programs.

    This would be in addition to the one-stop-shop capabilities that DOE would require of participating state energy offices, territories, and Indian tribes detailed in Question 32.

35. x
36. x

G. Income Verification

37. What types of documentation should be considered sufficient for rebate applicants:
    As a summary of what was detailed in Question 32, SPAN recommends customers be considered eligible for rebates based on any one of a number of factors:
    - Previous year tax filing verified through a digital system whereby contractors and retailers handle limited personally identifiable information;

Commented [HB1]: It's almost impossible to switch from gas to electric under duress so not sure the strategic value of this point?

- Categorical qualification in another federally run program with proven income requirements (e.g., SNAP);
- Categorical qualification in a state run program with proven income requirements;
- Categorical qualification in a utility run program with proven income requirements (e.g., CARE rate in California);
- Address within a census tract or a metropolitan statistical area that has an average of less than 80% percent AMI income or between 80 – 150% AMI.

For low-income families, income verification across multiple assistance programs is burdensome and redundant. To receive program funds, SEOs should be required to pursue categorical eligibility for participants in programs with similar income eligibility requirements. At a minimum, these programs should include Medicaid, SNAP, WAP, LIHEAP, and HUD means-tested assistance. Programs targeting elderly Americans living in poverty, including Medicare Extra Help and Supplemental Security Income, should also be encouraged as sources of categorical eligibility.

38. x
39. x

H. Estimating and Measuring Energy Savings

40. x
41. x
42. x
43. x
44. x
45. x

I. Eligible Technologies for Rebates

46. How should DOE facilitate that clear information regarding qualifying technologies and projects:
To ensure program clarity for consumers, contractors, and retailers, state programs must include all eligible electrification measures listed in the authorizing legislation. DOE should not allow programs to selectively pick and choose a subset of electrification measures to include in the Efficiency and Electrification Rebate programs. The Inflation Reduction Act specified amounts for various electrification measures to help ensure market transformation and product development, and if states were allowed to eliminate selected offerings, they would undermine the goals of the Inflation Reduction Act. Consistent eligible technologies across state jurisdictions will also simplify consumer outreach and educational efforts.

Further, as previously noted, DOE should develop a database of all qualifying projects and contractors that are easily searchable by consumers, and allow other providers to develop complementary databases via API.

47. The Home Electrification Rebates specifies:
It is essential that guidelines do not require the removal of gas heating equipment in order to qualify for the HVAC update. Displacement of fossil fuel usage, rather than replacement entirely, could offer a much more cost effective way to install heat pumps in certain applications.

48. Should rebates be allowed in instances:
Yes, the rebates should be allowed in instances where use of the rebate-eligible equipment or measure is already required by local code. Both rebate programs can be used for new construction and retrofits. While the Electrification Rebates are limited to only serve low- and moderate-income households, both programs, if implemented together, would maximize the cost savings for these households, thereby reducing their energy burdens. These rebates were designed to serve LMI households precisely because these upgrades are expensive and oftentimes, cost-prohibitive. Furthermore, these households may have experienced sustained underinvestment and may need health and safety home upgrades before even starting weatherization and electrification upgrades. Thus, local code requirements without financial support may delay much-needed retrofits. Therefore, allowing the qualifying households in these areas to access these rebates is essential to meeting the programs' and the Biden Administration's equity goals.

J. Data Access and Sharing

49. x
50. What are best practices for minimizing the complications of data collection:
    Unfortunately, Green Button has not enabled mass market adoption of data sharing/ingestion because it is a manual process, requiring customers to download and then share data rather than establishing an automated process of data sharing without customer action required. Additionally, utilities have not universally adopted the solution, making coverage incomplete and adding costs to vendors/partners operating in multiple territories.

    Given the lack of consistent, national data sharing framework, DOE should leverage several other sources of data:
    - Data from smart electrical panels which can provide circuit-level data down to the one minute level on devices connected to the panel such as HVAC, water heating or cooking appliances, or
    - Utility data extraction tools such as Arcadia or UtilityAPI which enable customers to connect their data with program evaluators and other third party solutions.

K. Compliance and Quality Assurance

51. How can program administrators track participation in rebate programs to protect against:
- Claims for work not done – *require homeowner signature and/or affirmation*
- Improper installations – *request affirmation that work was completed to local building code requirements including Authority Having Jurisdiction (AHJ) contact information and permit number, and perform random spot audits (some will have public web records)*
- Ineligible products - *leverage third-party evaluations/certifications as much as possible (e.g., UL product listings, Energy Star certification, state-based "approved" product lists, etc.)*

    Existing state- and utility-administered energy efficiency programs already include safeguards against improper applications, including duplicate applications across multiple programs, ineligible equipment, and income eligibility. These validations are incorporated into the rebate application and quality assurance spot check process. DOE should leverage these existing processes to avoid creating unnecessary administrative burdens which may deter participation by consumers and contractors.

52. What types of quality assurance and/or quality control :
    DOE should strive to achieve programmatic quality assurance and/or quality control while also limiting friction for contractors and keeping administrative costs manageable. For example, DOE can encourage quality assurance through pictures of energy property installations as opposed to in-field inspections.

    DOE should also encourage SEOs to prioritize measured energy savings over modeled energy savings for the Efficiency Rebates, at least within the context of single-family retrofits. Modeled energy savings are easily manipulable and tend to result in smaller-than-predicted reductions in energy usage and energy costs. Measured energy savings, on the other hand, have an inherent accountability mechanism and are therefore more likely to lead to quality installations and significant energy usage/cost reductions.

53. x

L. Job Creation & Quality

54. Which contractor and/or laborer credentials and/or certifications:
    Not all states/cities require the same level of contractor licensing and insurance, but in general, contractors should confirm that they maintain a level of licensing and liability insurance in compliance with the local authority requirements. Where required, a contractor should be able to easily verify their license type and number.

55. x
56. x

M. Buy America and Supply Chain Considerations

57. Which technologies, products, or materials could face barriers to deployment or accessibility:
Major components of smart panel production, such as sheet metal and plastic injection moldings, are manufactured overseas because they are currently prohibitively expensive to purchase in the United States. This subjects smart panel manufacturers to supply chain constraints and production issues beyond our control.

58. Are there approaches that program implementers can take to reduce supply chain constraints:
To reduce potential supply chain constraints, both bulk purchases or coordination with the DOE manufacturing programs are potential solutions. SPAN would welcome the opportunity to work with DOE as it considers these options.

N. Open Response

59. Is there anything else DOE should be aware of as it develops program design guidance and support :
One of the keys to removing friction and cost (both consumer and utility-system cost) from the electrification journey is to eliminate the need for costly and unnecessary utility service upgrades to support the installation of electric appliances and products. The 2023 National Electrical Code (NEC) code specifically allows for panel sizing based on dynamic load control capabilities, which will substantially reduce the percentage of homes that require a utility service upgrade when adding electric appliances and EV chargers. However, not all states and localities are currently using the 2023 version of the NEC, and are instead recognizing the 2017 or 2020 version of the code which neither specifically allows nor permits home amperage sizing based on panel capabilities. This ambiguity could present barriers without the state or local Authority Having Jurisdiction ("AHJ") proactively recognizing the updated 2023 NEC language. DOE should recommend states recognize the 2023 NEC in implementation of both rebate programs.

In addition, permitting processes could present a large barrier to electrification measure uptake if they are not seen as standard and thus require time-consuming human reviews. DOE should work with their suite of programs concerning code and permitting improvement to indirectly boost the success of the rebate programs.

*Case Study: One recent process issued by the Honolulu Department of Planning & Permitting could be a model for other states/municipalities. The **Methods & Materials Approval Numbers** ("MM#") model allows for instantaneous permit approval for standardized housing improvement projects, now including SPAN installations, in Oahu, HI.*

- *A MM# application is filed with the Department of Planning & Permitting, which substantiates why the product installation should be seen as standard and thus not require human review.*
- *Once this MM# application is reviewed and approved, contractors are able to input the number when applying for the permit online, which grants instantaneous permit approval for single-family projects.*
- *The permit fee is calculated based on the estimated cost of work for the project so that it is identical for MM# or human-reviewed projects.*

60. x

Huckabee, Jerrylyn (ENE)

From: Steve Marantz <s.marantz@comcast.net>
Sent: Monday, February 27, 2023 4:06 PM
To: jerrylyn.huckabee@mass.gov
Subject: IRA RFI

As someone who has been trying to find a contractor who installs whole house air source heat pumps in the Berkshires for over a year, I believe the State needs to implement a large educational program aimed at contractors and residents concerning the benefits of heat pumps in Berkshire county. The contractors in Berkshire county are knowledgeable about ductless heat pumps and woefully ignorant of ducted heat pumps.
If an area is to be targeted for electrified heating (heat pumps) I believe Berkshire county should be a priority. It probably has the weather more than any other county in the state that requires the most immediate need for alternative heating methods. I do not have the statistics, I would be surprised if Berkshire country did not rank last in whole house heat pump installations in the state. The county is probably last in ductless mini splits as well.
When I called Mass Save on 11/15/2021 and received my energy audit on 2/14/22 I knew this area was not on anyone's priority list. When the company that did the recommended insulation works told me they were from Braintree, this belief was solidified.
While the goals of the State are laudable, their implementation on the ground in Berkshire county is sorely lacking. Contractor and consumer education-provided by someone other than the utility companies-is desperately needed here.
Thank you.

Steven Marantz
163 Red Barn Rd.
Dalton MA 01226

Huckabee, Jerrylyn (ENE)

From: TM <borntothesea@yahoo.com>
Sent: Monday, February 20, 2023 10:52 AM
To: jerrylyn.huckabee@mass.gov
Subject: IRA RFI

Good morning. My name is Tara Murray and I live at 22 Causeway Street, Jefferson, MA and I would like to submit a response to DOE's Request for Information on Inflation Reduction Act Home Efficiency and Electrification Rebate Programs. In short, **rebates should include DIY heat pumps and minisplits so the rebate goes to the homeowner and not the contractor.**

What I find with these rebate programs is that they benefit the contractor only and not the homeowner. There are a lot of towns that are not part of the MassSave program. Mine is one, Jefferson is part of Holden, MA. Holden has its own power company - HMLD, Holden Municipal Light Department. When I added insulation to my attic, there was no rebate for me unless I hired a contractor to do the work. The town rebate from MuniHelps was *up to* $500 but it would have cost more than $500 to hire a contractor. ***The contractor would have received that rebate, not the homeowner.*** It does not take a contractor to roll out fiberglass insulation across an attic floor. I did it myself and it cost me $600 in insulation but I was ***not given any rebates***. This is wrong. If you want homes to be more energy efficient, make sure the homeowner gets the rebate.

I have been thinking of minisplits for years but the contractor installation cost is outrageous. My town, again, offers a rebate but only if I use a contractor. The minisplit heatpump equipment is about $5,000 but each contractor I contacted for installation **wants $10,000 for a days worth of work**. This is keeping me from installing them and getting off fossil fuels. In my research, I have found Do It Yourself (DIY) minisplit options. One is from Mr. Cool making it super easy to install the heat pump minisplits myself and save the $10,000 but it will still cost me $5,000 in equipment. ***The largest part of this problem is that my town will not offer a rebate unless a contractor does the installation.*** This is wrong. If you want homeowners to get off fossil fuels, the rebates that are being offered should be allowed for DIY equipment and therefore should go to the homeowner, not the contractor. Or, perhaps contract a set of contractors to install the equipment at a set price so the rebate can go to the cost of the installation, and the rest to the cost of the equipment to ease the burden on the homeowner. $10,000 for a day's worth of work is outrageous. Our POTUS doesn't get that much.

At my last address, I was interested in a geothermal system and when the state offered a rebate program for installation, I was then given a new estimate from the contractor that was inflated to include the rebate. So again, the contractor would have received that rebate as well and therefore, I decided against the system. There should be a limit on how much the contractor is allowed to charge for installation to again, allow the homeowner to get the rebate. Otherwise, where is the real incentive for any of us to partake in these programs?

In regards to the questions and marketing of the program, please set up a public enewsletter that we can sign up for. I have no tv reception, refuse to pay the high cost of cable, do not get local news stations on my internet tv and do not pay for the local paper either. Collecting email addresses and keeping the public in the loop through email will ensure that those of us who have 'cut the cord' are informed of the details of these programs and when they will be implemented.

I would very much like to be free of my oil heating system and move my entire house over to a heat pump system. Please make it easier and more cost effective for us to do so. In order for this to happen, the rebates need to go to the homeowner in order to afford the system and not the inflated costs of the contractor and DIY systems should be part of the program for those of us who don't want to use a contractor.

Thank you for your time.

Kind regards,

Tara Murray
22 Causeway Street
Jefferson, MA 01522