Advancing the Clean Energy Future

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Re: ASHP Program- Acadia Center Comments

Acadia Center is a non-profit, research and advocacy organization committed to advancing the clean energy future by offering real-world solutions to the climate crisis. Acadia Center tackles complex problems, identifies clear recommendations for reforms, and advocates to create significant change that supports a low-carbon economy across the Northeast which can then be a model for application elsewhere. Acadia Center identifies regional, state, and local improvements that will dramatically reduce carbon pollution and improve quality of life.

Residential Incentive

Rhode Island should approach the clean heating transition on multiple parallel tracks. New construction of residential units offers the easiest opportunity to integrate non-emitting Heating, Ventilation, Air Conditioning (HVAC) and water heating technologies. These appliances are widely available and zero-emissions buildings should be the standard moving forward.

For retrofits of HVAC and water heating systems in existing units, Acadia Center supports offering installation and rate incentives, where appropriate, to assist residents' transition to non-emitting appliances.

How large should the Residential Incentive be? Should it be on a per ton (only for space heating and cooling), per unit, or per home basis?

Rhode Islanders are currently eligible to receive standard incentives for heat pump installations that range from $150-$350 per ton of installed heating/cooling capacity as well as an enhanced incentive of $1250 per ton of installed heating/cooling capacity for customers that primarily heat with electric resistance technology.[1] As recently as 2019, Rhode Islanders have been eligible for incentives of $1,000 per ton of installed heating/cooling capacity.

Fossil fuel combustion in buildings comprises approximately one-third of total greenhouse gas emissions (GHGs) in Rhode Island. As the Act on Climate requires the state to significantly reduce GHGs, it is imperative the state prioritize the transition to non-emitting appliances, including HVAC equipment, water heaters, clothes dryers, and stoves. To this end, Acadia Center encourages the Office of Energy Resources to develop robust incentives of at least $1,000 per

[1] https://www.nationalgridus.com/ri-heat-pump

ton for all heat pump installations with additional offerings available to fully displace and discontinue on-site fossil fuel combustion and any associated connections to the fossil gas distribution network.[2]

What equipment could be eligible for incentives/what standards could be used for deciding that?

Acadia Center recommends discontinuing ongoing incentives for cooling-only systems offered through the energy efficiency programs and to instead direct those incentive funds and consumer interest to support the installation of heat pump systems that provide both heating and cooling capabilities. The difference in costs between installing or replacing a central cooling system and the costs of installing a central heat pump system is negligible and Rhode Island should be looking to central cooling installations as a natural intervention point to instead encourage and require installations of more versatile heat pump systems.

Who should the program administrator be and what would program administration look like?

Acadia Center recognizes the success of Rhode Island's current energy efficiency programs in driving energy savings in several categories. With proper program guidance and ambition, the program administrator of those programs could be successful in operating a more robust heat pump adoption program. Acadia Center also recognizes, however, that the current energy efficiency program administrator is also incentivized to drive new connections to its gas distribution system. This represents a conflict of interest that may hamper efforts to drive heat pump acceptance among customers they view as potential new, lucrative gas customers.

Complementary policies could help correct these conflicting business models. For instance, legislation or regulations that disincentivize new gas connections would help accelerate adoption of electric heat pumps. Redirecting incentives currently offered for new fossil fuel equipment would be another way to generate supplemental funds for weatherization and electrification. Electric heat pumps and heat pump water heaters are significantly more energy efficient than fossil fuel equipment and they provide immediate emissions savings even utilizing today's current electricity generation mix. As the electric grid continually decarbonizes and/or individual consumers generate or purchase 100 percent renewable electricity, heat pumps are also the only technology that is net-zero ready.

Despite this clear difference in technology and emissions impacts, National Grid is currently offering customers incentives of up to $800 for a new boiler, up to $500 for a new furnace, up to $600 for a new gas water heater, and up to $1,200 for a combined condensing boiler and on-demand gas water heater. All of these fossil fuel-based systems would be long-lived and provide additional incentives to customers to prolong the use of fossil fuels is inconsistent with the Act on Climate.

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[2] The RFI's footnote 1 seems to incorrectly or unintentionally imply ASHPs require supplemental "back-up" heat when "outside temps are well below freezing." Properly designed and installed ASHPs work in climates much colder than Rhode Island without the need for backup heating sources. Inclusion of this comment reinforces the misinformation and lack of common understanding related to this technology which could contribute to slower acceptance of these appliances in Rhode Island. Acadia Center recommends addressing the proven cold-climate capabilities of this technology in all future publications and stakeholder processes.

A third-party administrator focused primarily or exclusively on transforming the heating sector to non-emitting technologies could achieve still greater results. For more information on realigning the utility business model, please consult Acadia Center's RESPECT (Reforming Energy System Planning for Equity and Climate Transformation) proposal.[3]

Should weatherization be required to receive this incentive and, if so, what could that requirement entail?

Weatherization is critical to ensure the proper sizing and operation of heat pump systems. As such, the program resulting from this RFI should require energy assessments and all feasible attempts to weatherize the space before design/installation of the system is complete. Where pre-weatherization barriers or pre-electrification barriers arise, this program should be designed to leverage all available resources to overcome those barriers and enable the most efficient heat pump system operation possible. Attempts to weatherize or electrify within existing programs too often succumb to these barriers, particularly in older housing units that contain asbestos, lead paint, and outdated wiring. These residences also tend to be located in overburdened and underserved communities and home to families facing the most dire health and climate consequences of fossil fuel combustion. This RFI is an opportunity to break through the status quo and envision a new framework that focuses on delivering the myriad benefits of energy efficiency and electrification to those who need it the most.

Specifically, Acadia Center recommends:

- Enhanced incentives for implementing weatherization measures before electrification occurs;
- Setting enforceable, statewide targets for clean heating deployment and weatherization of buildings, particularly for lower-income homes to help provide to help improve health outcomes and lower energy burdens;
- Prioritize deployment of heat pumps in the highest-emitting buildings, which often overlap with low/moderate-income and environmental justice priorities.

For more on this approach, please consult Acadia Center's Next Generation Energy Efficiency[4] vision and PowerHouse and Building Electrification: Fact vs. Fiction.[5]

What would the incentive process look like to the customer and how would ease of access be prioritized?/How could low to no interest rate financing options be provided to customers?

The process should be as streamlined as possible and place little to no additional burden upon the customer than is necessary. This should include coordination by the program administrator to leverage all existing energy efficiency and electrification incentive opportunities, manufacturer rebates, as well as lowering barriers to participate in the zero-interest HEAT loan program to finance customer contributions to the projects. One opportunity to streamline

[3] https://acadiacenter.org/resource/respect-reforming-energy-system-planning-for-equity-and-climate-transformation/
[4] https://acadiacenter.org/resource/next-generation-energy-efficiency-brief/
[5] https://acadiacenter.org/powerhouse-and-building-electrification-fact-vs-fiction/

this process is to remove any "up-front" payments required by the customer which will ultimately be offset by rebates. For example, if a contractor requires a $3,000 deposit for a system installation that then qualifies for a $3,000 program rebate upon completion, this is an opportunity to lower barriers for customers. The program administrator could also explore on-bill financing opportunities in addition to existing offerings.

Enhanced Residential Incentive

In addition to principles of the Next Generation Energy Efficiency vision discussed above, Acadia Center offers additional comments on program design for an Enhanced Residential Incentive.

Who would be eligible for this incentive?

Acadia Center encourages the Office of Energy Resources to design this program to provide the maximum assistance possible to eligible members of overburdened and underserved communities. This could include additional funds to help coordinate remediation of pre-weatherization and pre-electrification barriers which could also leverage existing funding in other state and federal programs. The program should prioritize those living in areas with significant air pollution as identified by the Department of Environmental Management, the Department of Health, and/or other state and federal entities. Additional consideration should be given to eligible customers living in areas of Rhode Island with identified gas infrastructure challenges—weatherization and electrification is an opportunity to avoid new gas infrastructure buildout or even to aid in pruning back the existing gas distribution network in furtherance of the Act on Climate.

How could people eligible for the incentive be identified and verified?

Today's methods of income verification for the energy efficiency programs are a starting point but should not be viewed as exhaustive. For instance, there are customers who today would qualify for the low-income rate but are not signed up for that rate with the utility. Other metrics and strategies to identify eligible customers can and should be used and Rhode Island must also recognize the impacts of recent inflationary pressures when assessing assistance need for capital projects such as heat pump installation. This can include qualifying individuals based on census tracts, the state's Health Equity Zones, forthcoming identification of Environmental Justice Focus Areas, or providing automatic qualification for individuals and households that have been through other income verification processes for state and federal programs such as the Weatherization Assistance Program (WAP), Low-Income Home Energy Assistance Program (LIHEAP), Supplemental Nutrition Assistance Program (SNAP) and the Special Supplemental Nutrition Program for Women, Infants and Children (WIC) Programs, etc. Finally, the program should also seek to incorporate certain customer health conditions into eligibility criteria, including but not limited to diagnosis of respiratory and cardiovascular conditions which are linked to and exacerbated by fossil fuel combustion in buildings.[6]

[6] https://coeh.ph.ucla.edu/effects-of-residential-gas-appliances-on-indoor-and-outdoor-air-quality-and-public-health-in-california/

Community Incentive

How should the size of the incentive be determined?

The community incentive proposed by the Office of Energy Resources is designed to help small businesses, non-profits, public buildings, and the like, afford air source heat pump technology. The size of incentive for these uses could be influenced by several factors, including the applying entity's access to other forms of capital to finance the improvements, as well as the intended use of the system. For instance, it may be appropriate to provide adders to a base incentive if a non-profit or public entity provides essential services back to the community. This is particularly relevant if part of the entity's mission is providing shelter to address housing instability or if the entity operates heating/cooling shelters using this technology. In addition to incentives for installation, OER should consider structuring incentives to defray ongoing operational costs for these types of entities and work in coordination with the utility and other state agencies to advance rate design reforms to incentivize highly efficient electric heating provided by heat pumps.

Workforce Development

Please suggest ideas for workforce development programs.

Ideal organizations and entities for training programs include existing and new vocational programs in Rhode Island's secondary and post-secondary schools, trade and labor unions, original equipment manufacturers, and relevant trade associations. Additionally, training programs that provide skills and experience to incarcerated Rhode Islanders should be adapted/enhanced to include robust instruction on electric heat pump design and installation. Rhode Island should prioritize opportunities for those living in overburdened and underserved communities to pursue careers in this field to ensure everyone has access to the benefits of a clean energy economy.

What would incentivize contractors to participate?

Contractors should seize any opportunity provided to them to reinforce or supplement their existing workforce by adding the skill base necessary to design and install heat pump systems. As the HVAC industry transitions away from fossil fuel-based equipment, it is appropriate for entities to focus training for electric heat pump design/installation/maintenance/repair on newer entrants to the workforce, mid-career HVAC technicians, and supervisory employees with the understanding that technicians closer to the end of their careers will still have significant amounts of fossil-fuel HVAC systems to service and maintain over the coming decades. Ideally, there will be more than enough work related to Air Source Heat Pumps and related technologies to wholly sustain new entrants to the field which may obviate their need to train in legacy fossil fuel HVAC equipment. The Office of Energy Resources should work directly with industry and labor groups to identify the best pathways to ensure a just transition for workers in the legacy fuel industries.

Once again, Rhode Island should also establish an all-electric building code for new construction and major renovations, which would further signal the importance and opportunity for all parties to develop the skills and supply chains necessary to meet future building and energy needs.

Conclusion

Acadia Center appreciates the opportunity to provide comments to the Office of Energy Resources in support of its efforts to apply $37 million in federal funds to accelerate electric heat pump adoption in Rhode Island. Acadia Center strongly supports these efforts to reduce greenhouse gas emissions, improve public health, elevate the quality and safety of our buildings, and insulate Rhode Islanders from the extreme volatility of fossil fuel pricing. We look forward to continuing our work with OER and other state agencies to advance the clean energy future.

Sincerely,

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