

DOCKETED

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Comments on CEC's RFI on the IRA Home Efficiency Rebate Program

Additional submitted attachment is included below.



January 26, 2024

California Energy Commission
715 P Street
Sacramento, California 95814

RE: A. O. SMITH CORPORATION COMMENTS TO THE CALIFORNIA ENERGY COMMISSION'S REQUEST FOR INFORMATION ON THE INFLATION REDUCTION ACT HOME EFFICIENCY REBATE PROGRAM (HOMES)

Dear Commissioner McAllister and California Energy Commission Staff:

A. O. Smith appreciates the opportunity to submit comments to the California Energy Commission's (CEC / Commission) Request for Information (RFI) on the Inflation Reduction Act (IRA) Home Efficiency Rebate Program (HOMES), released on December 21, 2023. The HOMES program is an important opportunity for California to leverage federal dollars in support of building decarbonization, especially for those who have traditionally not been able to access energy efficiency upgrades and other decarbonization technologies.

I. About A. O. Smith

A. O. Smith is a global leader in applying innovative technology and energy-efficient solutions to products manufactured and marketed worldwide. Our company is one of the world's leading manufacturers of residential and commercial water heating equipment and boilers, as well as a manufacturer of water treatment and air purification products. Along with its wholly owned subsidiaries, A. O. Smith is the largest manufacturer and seller of residential and commercial water heating equipment, high-efficiency residential and commercial boilers, and pool heaters in North America.

II. Heat pump water heaters are important for meeting California's decarbonization goals.

Heat pump water heaters (HPWHs) will play a vital role in two key California policy priorities – reducing the carbon footprint of our buildings as the state transitions water heaters from primarily gas-fired to electricity and helping to manage the integration of increasing amounts of renewable energy on California's grid.

Currently, approximately 81% of homes in California have a gas water heater.¹ These water heaters are typically the single largest source of natural gas usage in the home, comprising 59% of total household gas usage.² This makes focusing on water heating especially important for achieving California’s building decarbonization goals. Moving from gas to electric water heating helps to reduce the carbon emissions from California homes, especially as California moves towards an even cleaner electricity grid. Additionally, moving from gas to electric reduces emissions of air pollutants within homes and buildings that lead to negative health outcomes, including carbon monoxide (CO), nitrogen oxide (NOx), and fine particulate pollutants (PM 2.5). In the Bay Area, water heating makes up 41% of residential CO and PM 2.5 emissions.³ For this reason, transitioning to electric heat pump water heating is critical to meeting California’s climate and air quality goals.

HPWHs and grid-interactive electric storage water heaters also offer the ability to provide thermal storage that serves as a battery for assisting the integration of renewable energy into local distribution grids in both residential and commercial applications. Flexible demand [or smart] water heaters, which include grid-enabled electric resistance storage water heaters and HPWHs, have additional controls that allow the utility or third-party aggregator to control their energy use (e.g., load shifting) during the course of the day. Within a given local territory, a fleet of water heaters can be controlled to be a flexible energy storage system that can adjust the load on the grid. Given that every home in the state has a water heater, grid-interactive water heaters can play a key role in load management and carbon reduction within the built environment.

III. A. O. Smith supports braiding HOMES with the Equitable Building Decarbonization Program.

As a general matter, A. O. Smith supports braiding the HOMES program with the CEC’s ensuing Equitable Building Decarbonization (EBD) Direct Install Program. The Direct Install Program will be another important tool to increase access to building decarbonization technologies for low- and moderate-income (LMI) households. As California moves towards the installation of HPWHs and other electric water and space heating technologies, it is important to ensure that everyone has access to these appliances.

Consistent with the foregoing, many California air districts, such as the Bay Area Air Quality Management District (BAAQMD) and South Coast Air Quality Management District (SCAQMD), among others, are moving towards on-site zero NOx air quality requirements for space and water heating equipment that will push customers toward HPWHs. However, the overall costs (e.g., first cost and installation) to consumers must be considered with these mandates, especially for LMI households. Braiding the HOMES program with the EBD Direct

¹ U.S. Energy Information Administration. [Highlights for water heating in U.S. homes by state](#), March 2023.

² California Energy Commission. 2019 California Residential Appliance Saturation Study (RASS), July 2021 at Figure 6.

³ Bay Area Air Quality Management District. [Final Staff Report on Proposed Amendments to Building Appliance Rules – Regulation 9, Rule 4: Nitrogen Oxides from Fan Type Residential Central Furnaces and Rule 6: Nitrogen Oxides Emissions from Natural Gas-Fired Boilers and Water Heaters](#), March 2023 at Table 5-1.

Install Program would allow California to achieve these goals while reducing the financial burden of this transition.

Additionally, braiding the two programs together is simpler for customers and contractors, which in turn will make it easier, and more likely, for this funding to be leveraged. A. O. Smith appreciates that California has led the way in providing financial incentives for the installation of HPWHs. There are now a wide variety of programs throughout the State that provide different levels of incentives for different customers and different technologies. As a result, there are a myriad of different application processes as well. This has led to a complex landscape of rebates and incentives provided by utilities, Community Choice Aggregators (CCAs), Regional Energy Networks (RENs), and state agencies. Making HOMES its own standalone program would add to this complexity, as customers and contractors will have to: a) become aware of HOMES as a program; b) navigate another set of unique eligibility requirements and incentive amounts; and c) learn another new application process. As highlighted by the CEC, this will require additional administrative work and funding, but will also generally delay and reduce the utilization of HOMES.

One example of a successful braiding of programs is the Self-Generation Incentive Program (SGIP) HPWH program, which is fully integrated into TECH Clean California. By utilizing the existing TECH Clean California branding and application portal, SGIP HPWH has had a more seamless rollout, and contractors in particular have been able to use their existing TECH processes for the installation of HPWHs funded by that program.

IV. HOMES should set rebate values by paying a fixed portion of the project cost.

On the presumption that HOMES is braided into EBD, A. O. Smith supports having HOMES cover 100% of the project costs for these LMI households. Alternatively, if HOMES is not braided with EBD, and is instead its own program, rebates should still be based on a fixed portion of the project cost, not pay-for-performance. In this case, A. O. Smith recommends continuing to request that LMI households have 100% of project costs covered. If non-LMI households are eligible for HOMES, a lower percentage of project costs should be covered, such as the U.S. Department of Energy's suggested 50%. However, regardless of program structure, rebates should be a fixed portion of the project cost.

Some additional thoughts and perspectives on "pay-for-performance" for the CEC's consideration. The pay-for-performance option within HOMES introduces a higher level of uncertainty for contractors and households, and it will be harder to set an appropriate pay-for-performance rebate level for the State. The HOMES rebate covers not only the cost of heat pump equipment, which is critically important, but also the costs of main panel upgrades and electrical wiring work needed to install the heat pump equipment. For example, in California, about 75% of homes (or 9.75 million) were built before 1990 and older homes are less likely to have adequately sized electric panels to accommodate an all-electric household of appliances.⁴

⁴ California Energy Commission. *California Building Decarbonization Assessment - Final Commission Report*, August 13, 2021, at pg 109.

However, the amount of needed work and the cost for that work will vary by home, which makes setting appropriate fixed dollar rebate levels more difficult. In contrast, setting rebates based on a portion of project costs ensures that all households receive the intended amount of rebate, especially if HOMES is braided with EBD and is intended to cover full project costs.

Lastly, using a pay-for-performance option also eliminates the ability for contractors to use the modeled savings option for HOMES. While a measured savings approach has benefits, there are a lot of costs and risks to this approach, especially for LMI projects. The measured approach requires that the project be installed for 9 to 12 months prior to the issuing of the rebate. As mentioned in the RFI, it is unclear who will be able to provide financing for projects during this time, especially for LMI customers. Low-income customers are prohibited from being required to use personal funds for rebated work, and many households would be unable to pay out-of-pocket even if this restriction were not in place. At the same time, the vast majority of contractors are unable to provide this type of “floating” or financing for customers. For these reasons, a modeled savings approach should be, at a minimum, an option for HOMES compliance.

V. Conclusion

We appreciate the opportunity to comment on the RFI. We look forward to continuing the dialogue and working with the Commission to design a program that helps achieve our GHG reduction and equity goals as effectively as possible.

Please do not hesitate to contact me if you have questions.

Respectfully submitted,



Joshua C. Greene, Esq.
Corporate Vice President – Government and Industry Affairs
A. O. Smith Corporation
jcgreene@aosmith.com