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For Improving Energy Compliance of Residential Air-Conditioning and Heat Pump Systems

Additional submitted attachment is included below.

June 19, 2019

Via email: Docket@energy.ca.gov

The Honorable Andrew McAllister
Commissioner
California Energy Commission
Dockets Unit, MS-4
1516 Ninth Street
Sacramento, CA 95814

RE: The Energuy Comments on CEC's Request for Written Comments for Improving Energy Compliance of Residential Air-Conditioning and Heat Pump Systems (SB-1414), Docket # 2017-EBP-01

Dear Commissioner McAllister:

The Energuy appreciates the opportunity to provide feedback to the California Energy Commission. We work directly with HVAC and retrofit contractors to provide high-quality Energy Rating services. Since 2010, the Energuy team has been providing third party verification for California's Building Energy Efficiency Standards, Title 24, Part 6, of the California Code of Regulations. Our firm focuses on improving the way that testing and verification is handled, in order to ensure quality work and cost-effective verifications for homeowners.

Moving the Needle

California has one of the most progressive building energy codes in the nation, with a wide array of actors and stakeholders participating in the HVAC marketplace. HVAC compliance has increased minimally, robbing the State of their ability to fulfill resource conservation goals sought by the code established more than two decades ago. Significant commitment has been invested in HERS regulations, and clear guidance remains crucial to achieving the benefits possible within this industry. Each stakeholder sees their solution/idea as a silver bullet, yet none have served to move the industry past a 10% permit level. It is our view that a combination of ideas are necessary; many of which will serve as carrots, rather than sticks, to move industry actors.

Homeowner Education and Participation

If we desire increased compliance in the market, engaging and educating the homeowner early in the process enhances their public awareness of the installation and verification process. Homeowner education is often the missing piece in effective program design. Having the homeowner educated on the benefits of quality installation, permitting, testing, and maintenance, allows for their participation in understanding the benefits of working with a licensed contractor. Raising their awareness of the benefits

of quality installs, increases their desire to hire a reputable contractor. HERS Rater-provided education can teach the homeowner about the importance of HVAC compliance, as well as serve as a conduit for other type of energy-efficiency measures and rebates available. We support a consumer path that allows individuals to pursue energy efficiency actions in support of our statewide goals.

Lower the Cost of Compliance

The cost of compliance is too high when compared to the percentage of low or non-compliant actors participating in the market. Field diagnostic equipment that automatically transmits testing data securely through the use of cloud technology is available. The use of smart tools can reduce the cost of diagnostic testing and field verification, and over time, can reduce the volume of QA needed to ensure proper installation.

Current Title 20 regulations limits the use of technology that can serve to facilitate permit participation. We suggest that regulations be addressed to make it easier to approve smart tools, especially tools which minimize errors and provide for incorruptible data. Costs of these tools are essentially the same as existing tools currently used in the industry. Allowing for the use of available technology also lowers the cost of compliance by minimizing the number of individuals involved in the compliance process. Digital data levels the playing field, minimizes manual errors, and can confirm geo-locational data to ensure accuracy & minimize manipulation.

Regulations allow for CEC-approved Third Party Quality Control Programs (TPQCP) to verify the work of participating installers, collect data for compliance, and identifies invalid or inaccurate installations or installer testing. Contractors who participate in TPQCP are required to use diagnostic testing on every job. The data collected by the TPQCP program is more detailed than the data required for Standards compliance and cannot be altered by the installer to indicate that compliance has been achieved. Verified in real time, this program enables correct testing with the goal of compliance *BEFORE* the installer leaves the job site. The use of approved smart tools can translate into increased data accuracy – at a lower cost of compliance to the industry.

Permit compliance alone is not sufficient to ensure better installation outcomes. Approved TPQCPs are required to provide training to participating installers to ensure proficiency in installation procedures. The TPQCP maintains a database of all data submitted by participating installers and is required to analyze the data to determine whether compliance has been achieved. Data analysis uncovers invalid or erroneous information and provides an opportunity to align training to support compliance efforts.

As smart tools are validated as to provide accurate, quality data on the install, technology can upload the data directly into the HERS registry. We support the ability for contractors to use smart tools to test their own jobs and provide the data to the HERS registry. The approved use of smart tools in a Third Party Quality Control Program provides a more efficient, less expensive way to modernize HVAC compliance and enforcement within the industry.

Conflict of Interest

Because Raters are typically engaged by HVAC contractors, there are concerns of an inherent conflict of interest. Currently, the HVAC firm pays the HERS Rater to perform testing/verification on the equipment the company installs. Not requiring the homeowner to pay for the testing fee leaves out one of the most

important stakeholders in the install process. Research indicates homeowners will get more involved in the process if they are required to financially pay for compliance.

While the potential for conflict exists, the Energuy believes this perceived conflict often minimizes the benefits that HERS Raters, and Energuy as a third party verifier, have provided HVAC contractors. Our firm serves as a technical and training resource to the industry and sees energy code assistance and education as an integral part of our business. We support a coordination of strategies that facilitates verifiable compliance and enforcement of the standards.

Online Permitting Standardized

The extreme diversity of building department permitting systems and requirements is unmanageable for the average contractor.

Consider a single, online hub, made accessible to all contractors, Raters, and building departments statewide to simplify and expedite the permit process with standardized data. It should be simple to use, integrate with current jurisdictional systems, and include an open API interface to facilitate communication between all parties and software programs. Local governments have implemented their own online systems, but establishing a statewide hub presents a streamlined and consistent process for the contractors.

An HVAC contractor can get their CF1R and look up jurisdictional requirements for the site location. If the jurisdiction has a digital system, the online portal links them to the municipal system and allows for the standardized CF1R data upload. If not, the contractor is linked to the jurisdictional website, where they can access requirements and how to apply. The online system should integrate with other systems, such as the HERS Registries, to facilitate the permit process. The hub can be a repository for information pertinent to the compliance process; such as Energy Code Ace's suite of tools designed to identify forms, installation techniques, and relevant standards.

Compliance Process

Require the CF1R at time of equipment purchase and require CF1R as the building permit application "base" for a HVAC change-out.

Currently, the only stakeholder not part of the permit process is the HVAC distributor[1]. This engages the missing actor when a CF1R is required throughout the compliance process. The distributor is not required to complete the CF1R, but it is required at time of equipment order. All distributors must maintain records on the sale of each split-system central air conditioner condensing units and single-package central air conditioners. All installing contractors in California must maintain all of the same information AND the installation address for each unit. This action supports the end goal of buying from distributors, while also meeting equipment sale federal record requirements. Since each CF1R has a unique equipment ID number, once the equipment is CF1R registered, it is sold.

[1] Defining HVAC manufacturer, distributor and wholesaler roles in the compliance process is key to simplifying and clarifying the necessary stakeholder actions needed to accelerate HVAC compliance in California. The current system relies on stakeholders playing *assumed* roles, but it has little leverage to ensure these roles are carried out as presumed under the current standards.

Completing a CF1R at purchase with an online, standardized, user-friendly hub, would facilitate a process that would allow a contractor to execute an installation or repair in an efficient, timely manner. It would facilitate tracking the number of units purchased and the number of building permits pulled by a contractor. Compliance is increased over night without creating a new documentation system.

Requiring the CF1R as a building permit application base, entered into the online hub, could be utilized by local building departments to efficiently determine if permits are being pulled, and allow the State to determine if Title 24 compliance documentation is filed. It is likely that municipal use of the CF1R and online hub would increase permitted HVAC alteration revenues while decreasing municipal permit costs.

Simplify Permitting

The current system relies on stakeholders to play assumed roles, and actually contributed to the lack of enforcement by ignoring actions by various parties. Addressing and removing barriers to the permit process may serve to increase compliance.

The HERS Rater is not allowed to pull or close a permit, as Title 20 regulations restrict this activity. Consider removing barriers for the contractors wanting to pull permits by allowing additional/multiple users to complete the permit pulling process. Updating regulations to allow for the HERS Rater to permit pull, helps address the perceived conflict of interest between the HVAC contractor, installer, and Rater. Acknowledging that these actions already occur in the marketplace, and shifting the roles, allows for the Rater to be a resource for the HVAC, rather than a conflicted participant.

In Closing

The Energuy appreciates the opportunity to provide comments on Improving Energy Compliance of Residential Air-Conditions and Heat Pumps. The Energuy is pleased to work with the Energy Commission and other stakeholders to help shape and improve compliance with the energy code.

Respectfully,

Eric Beriault
President
The Energuy, Inc.