

DOCKETED

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Comment Received From: Alex Ayers
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RE: CEC's Request for Written Comments for the Improving Energy Compliance of Central Air Conditioning and Heat Pump Systems

Additional submitted attachment is included below.



445 Hutchinson Avenue
Suite 550
Columbus, OH 43235

August 20, 2018

The Honorable Andrew McAllister
Commissioner
California Energy Commission
Dockets Unit, MS-4
1516 Ninth Street
Sacramento, CA 95814-5512

Submitted via email

RE: CEC’s Request for Written Comments for the Improving Energy Compliance of Central Air Conditioning and Heat Pump Systems, Docket No. 2017-EBP-01

Dear Commissioner McAllister,

On behalf of Heating, Air-conditioning & Refrigeration Distributors International (HARDI) I write to offer comments on the California Energy Commission’s request for information on Improving Energy Compliance of Central Air Conditioning and Heat Pump Systems.

HARDI is a trade association comprised of nearly 1,000 member companies, nearly 500 of which are U.S.–based wholesale distribution companies. More than 80 percent of HARDI’s distributor members are classified as small businesses that collectively employ over 35,000 U.S. workers, representing more than \$35 billion in annual sales and an estimated 80 percent of the U.S. wholesale distribution market of heating, ventilation, air-conditioning and refrigeration (HVACR) equipment, supplies, and controls.

Background:

Since the release of California’s Energy Efficiency Strategic Plan in 2008 and passage of SB 1414 in 2016, the California Energy Commission has been tasked with developing a plan to

increase compliance of heating, ventilation, and air-conditioning (HVAC) equipment replacement under Title 24 of the California Code. Estimates by the California State Licensing Board and the statistics included in the Energy Efficiency Strategic Plan show compliance of five and 10 percent respectively. In examining the existing permit process, it becomes evident that several systematic failures drive energy inefficiency of replacement HVAC equipment:

- High barriers to obtaining permits outweigh benefits from obtaining permits
- Lack of continuing education requirements for the contracting industry leading to improper sizing of HVAC units
- Low consumer understanding of state regulations regarding HVAC replacement
- Unlicensed contractors and consumers installing HVAC equipment at low standards

In the following comments, and previous comments submitted jointly with AHRI, HARDI will outline ways to improve permitting and code compliance to reduce energy inefficiency in HVAC replacement equipment. Additionally, HARDI will supply further comments opposing a digital tracking system for HVAC equipment sold in California.

High barriers to obtaining permits outweigh benefits from obtaining permits:

According to estimates provided by the CSLB, up to 95 percent of HVAC replacements are done without proper permits. Anecdotal evidence points to high costs and excessive time commitments to obtain permits driving contractors and consumers away towards cheaper options by avoiding the permitting process. Complying with permit requirements can add over \$1,000 to the cost of replacing an HVAC unit.¹ This additional cost drives licensed contractors away from

¹ Permit (Fresno area): \$150, Ductwork sealing: \$500, HERS Rater and duct pressure test: \$300, Labor \$300, total: \$1,250

obtaining proper permits to compete with lower cost competitors. This anecdotal evidence is backed up by an evaluation of the Statewide Codes and Standards Compliance Enhancement Subprogram Pilot conducted in 2014; this evaluation found eight barriers to increasing code compliance, several of which were tied directly to the current permit process:

- The paperwork is too complicated for industry stakeholders to fill out correctly and for the inspectors to understand what is required.
- Building departments are lacking the time/resources to focus on energy code compliance.
- Building department staff's lack of interest in energy efficiency.
- Enforcement of code is inconsistent between jurisdictions.

As has been mentioned at all three workshops, an online permitting process with simpler permits and paperwork would reduce the time and cost of complying with the permitting process. In addition, increasing resources to ensure local building departments are adequately serving consumers and contractors through the permit process will increase the value proposition of permitting. Finally, increasing code enforcement via spot checks of small contractors will also lead to additional permitting (Anecdotal evidence suggests larger contractors are much more likely to be inspected currently than smaller contractors).

HARDI suggests CEC pursue three options to increase permit and code compliance by reducing the cost of permitting. First, explore online permitting as a solution to lower the hidden costs including time spent at building departments to obtain a permit. If permitting can be reduced to minutes instead of hours, equipment replacement can be completed in less time and at a lower cost than under the current system. Second, examine the total cost of permitting to find ways to reduce costs for contractors and consumers to obtain permits. Third, solicit feedback from local building departments on how best to reduce the barriers for code enforcement and increasing

energy efficiency as a local priority.

Lack of continuing education requirements for the contracting industry leading to improper sizing of HVAC units:

California does not require C-20 license holders to go through continuing education to maintain their license. HVAC equipment is increasing in complexity as new technologies drive increased energy efficiency and will continue to change as the California Air Resources Board (CARB) increases requirements for refrigerants used in new equipment. HARDI members provide up-to-date information and training regarding new HVAC equipment to contractors and dealers, however smaller contractors, common in the residential replacement market, have less consistent contact with distributors and are far less likely to have this training. Without updated information on modern HVAC equipment, contractors are more likely to install improperly sized units for the size of the home or ductwork if existing ductwork is not updated. According to CEC data, up to 80 percent of HVAC replacement systems are improperly sized for the home or existing ductwork. Oversized equipment installed without replacing old ductwork averages a 30 percent leak rate in newer homes and up to 50 percent duct leakage in pre-2000 homes.

Many states mandate continuing education to maintain HVAC licensure. Some states have also adopted voluntary energy efficiency and quality installation certificate programs. The HVAC System Adjustment and Verified Efficiency (HVAC SAVE) program in Illinois and Iowa allows contractors to become certified in performance testing and verification. HVAC SAVE also provides continuing education credits to contractors who complete the program. When partnered with a utility provider, every HVAC unit tested or installed is rewarded with a cash bonus to the contractor.

HARDI encourages CEC to work with CSLB to require continuing education requirements for contractors to improve contractor training on modern residential HVAC equipment sizing and installation to reduce the use of oversized equipment. Additionally, HARDI encourages CEC to partner with the state's Investor Owned Utilities (IOU) to add an efficiency testing and verification component similar to the HVAC SAVE program to the IOU Midstream HVAC Program. The IOU Midstream HVAC Program currently provide discounts on nearly 30,000 HVAC units per year, expanding the program with an increased focus on contractor compliance and training will ensure that the gains from high-efficiency equipment are not lost through improper installation or poor system design.

Consumers unaware of state regulations requiring permits for HVAC replacement:

Far too often consumers do not replace their HVAC equipment until the unit fails and needs immediate replacement. This emergency replacement leads consumers to look for the quickest and cheapest replacement option, regardless of permitting requirements. Even planned equipment replacement is done with little concern for the permitting process due to lack of consumer education. HARDI suggests CEC increase consumer education efforts about quality installation and the need for permits for replacement HVAC equipment.

One option to increase permitting suggested at the August 3rd workshop was requiring contractors to have a permit before purchasing HVAC equipment from distributors. HARDI believes this will slow down the replacement process and lead some contractors to offer repair of older systems as a faster option. These repairs could keep inefficient units in operation far beyond their normal lifespan continuing to use more energy than replacement options. Any changes in regulations should not cause delays in providing consumers with properly installed

replacement equipment. HARDI again encourages the state to find ways to increase online permitting and ease the permitting process; this in combination with consumer education on the need for permits will lead to more contractors obtaining permits.

HARDI encourages CEC to develop a plan to educate consumers on the need for permits for HVAC replacement and further education on energy efficient equipment. Any public education plan should address the connection between quality installation and actually achieving the efficiency gains of modern equipment. Consumer education can be partnered with an HVAC SAVE or similar program to encourage consumers to seek out certified contractors providing an additional incentive for contractors to participate in the program.

Unlicensed contractors and consumers installing HVAC equipment at low standards:

California does not currently limit the sale of HVAC equipment to licensed contractors by any seller. However, the Environmental Protection Agency (EPA) does limit the sale of refrigerants to Section 608 certified technicians. Distributors are required to keep the technician's certification number on record and are only allowed to sell refrigerant to the technician or an employee of the company employing the technician. This allows technicians to service more customers while the task of picking up required refrigerants is delegated to other employees. EPA Section 608 also prohibits uncertified technicians or contractors from installing refrigerant lines (including pre-charged lines) or charging equipment. Unfortunately, the restriction on installation and sale of refrigerant does not extend to purchases of equipment, this has led big-box stores and online retailers to sell complete mini-split units with pre-charged lines and equipment labeled as a Do-It-Yourself (DIY) product. These DIY products are sold to consumers and unlicensed contractors with zero training on how to properly install the unit and can be put

together with basic tools.

California can use the Section 608 refrigerant sales restriction as a guide in developing an HVAC equipment sales restriction regulation. Section 608 puts minimal requirements on contractors and distributors to ensure compliance. A model regulation requiring sellers to restrict sales to C-20 licensed contractors only can be easily implemented with few major changes to the current process distributors and contractors go through to sell and purchase equipment. Licensed contractors provide their license number and expiration date to the distributor to be stored in the customer file. A distributor can verify the license number and expiration date via the existing contractor database. Any employee of the contractor is allowed to pickup equipment purchased by the licensed contractor. CSLB will continue to make license revocations made public and should compile a contact list of distributors to keep them informed of any license revocations. This will eliminate the need for the license to be verified with every purchase. When a contractor renews his or her license the updated expiration date is provided to the distributor and verified with their next purchase.

Requiring all sellers to limit the purchase of HVAC equipment to licensed contractors will help reduce the number of unlicensed contractors from performing low-quality installations. It is important to note that this regulation must be kept simple to have the best chance at eliminating sales to unlicensed contractors. Because an unlicensed contractor cannot pass the first hurdle of supplying a license number for verification, there is no need for additional hurdles that make the regulation more burdensome and therefore reduce compliance. It will also be critical for the state to prevent online purchases of equipment by unlicensed contractors or consumers. As it becomes more difficult for unlicensed contractors to source equipment it becomes easier for licensed contractors to compete in a fair market to provide quality installation.

HARDI recommends CEC develop a new regulation, released with appropriate time for public comment, requiring all sales of major HVAC equipment be limited to licensed contractors. CEC should work with HARDI members, licensed contractors, and other HVAC stakeholders to further develop this regulation.

Opposition to digital tracking of HVAC equipment:

In addition to the joint comments previously submitted with AHRI, HARDI would also like to take this opportunity to further show opposition to a digital tracking system. Several commenters and participants in the previously held workshops recommended the implementation of a digital tracking system, however it is important to point out that an earlier version of SB 1414 included language to develop a digital tracking program before the language was removed after direct negotiations with the HVAC industry because it did not fulfill the goals of the legislation. Digital tracking, sometimes referred to as serial number tracking, has been rejected as a policy solution to the permitting and compliance issue multiple times because it does not solve the state's permitting and compliance problems. HARDI recommends CEC reject digital tracking of HVAC equipment because it does not address the issue of overly burdensome permits, installation of equipment purchased online or out of state by unlicensed contractors, or improve consumer education on the need for quality installation.

Conclusion:

Through a series of simple solutions, California can put a stop to the systematic failures that have prevented quality installation of energy efficient HVAC equipment. The current overly burdensome permitting process has driven contractors to disregard energy code compliance to provide customers with low cost services, streamlining the permitting process will reduce the

costs of compliance and improve energy efficient installation. Continuing education of contractors will ensure up-to-date training and best practices are used throughout the industry and instituting a HVAC SAVE type program rewards contractors for quality installation. Increasing consumer education to ensure customers understand permitting requirements will add another layer of checks to ensure contractors are following the permitting process. Limiting the sale of major HVAC equipment to licensed contractors will drive unlicensed contractors out of the market. Finally, rejecting a digital tracking system will save taxpayer dollars from being spent on a project that does not have a direct impact on the goals of the California Energy Commission.

HARDI appreciates the opportunity to comment and looks forward to working with the commission to solve this important issue.

Sincerely,



Alex Ayers
Director, Government Affairs
Heating, Air-conditioning, & Refrigeration Distributors International