

**DOCKETED**

<b>Docket Number:</b>	17-EBP-01
<b>Project Title:</b>	Improving Energy Compliance of Central Air-Conditioning and Heat Pump Systems
<b>TN #:</b>	224335
<b>Document Title:</b>	AHRI Comments On Improving Energy Compliance of Central Air Conditioning and Heat Pump Systems
<b>Description:</b>	N/A
<b>Filer:</b>	System
<b>Organization:</b>	AHRI
<b>Submitter Role:</b>	Public
<b>Submission Date:</b>	8/1/2018 8:43:44 AM
<b>Docketed Date:</b>	7/31/2018

*Comment Received From: AHRI  
Submitted On: 8/1/2018  
Docket Number: 17-EBP-01*

**On Improving Energy Compliance of Central Air Conditioning and Heat Pump Systems**

*Additional submitted attachment is included below.*



July 31, 2018

By E-Mail: [docket@energy.ca.gov](mailto:docket@energy.ca.gov)

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

**RE: Joint Comments on 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:

The Air-Conditioning, Heating and Refrigeration Institute (AHRI) and Heating, Air-Conditioning and Refrigeration Distributors International (HARDI) (the Joint Commenters) respectfully submit the following comments to the California Energy Commission (CEC) request for public comment on Improving Energy Compliance of Central Air Conditioning and Heat Pump Systems, Docket Number 2017-EBP-01. These comments address the impacts on key actors and stakeholders of adopting regulations intended to increase compliance with permitting and inspection requirements in California.

The Joint Commenters and their members participated in the July 20, 2018 CEC staff workshop where stakeholders proffered a statewide digital tracking system that will collect manufacturers and distributors' data to manage permit compliance problems. The Joint Commenters oppose this proposal for all of the reasons stated during that meeting. These comments further explain our reason for opposition and raise alternative approaches for improving compliance.

## **Proposed Solutions**

The CEC has an evident permitting compliance problem. The Joint Commenters urge the CEC to reform the existing system and consider the value proposition of the below-list approaches, each of which could potentially resolve some or all of California's non-compliance issue. Further analysis is required to confirm whether any proposed measures to improve permitting compliance in California will indeed yield significant energy savings. CEC should quantify the energy savings potential prior to considering energy measures.

### **1. Training For Contractors/Workforce**

During the CEC Staff Workshop on June 29, 2018 and July 20, 2018, various stakeholders indicated that contractors were aware of their duty to pull permits as required by California Title 24. However, there are numerous situations where the permit-pulling practice is not occurring at all. The Joint Commenters recommend required training for all contractors, including seasoned and new contractors in the field. A uniform training program would review applicable laws and regulations, permit compliance process, and contractors' duties and responsibilities to the consumer. A uniform training program will ensure that all contractors are provided the same information and given proper notice of what is expected of them in the profession, the HVAC industry, and by the state government and regulatory bodies. Problems that can be addressed by education should be.

### **2. Quality Installation**

In 2015 and 2016, an Appliance Standards and Rulemaking Federal Advisory Committee (ASRAC) was convened and during the working group negotiations on central air conditioners and heat pumps, a term sheet was published on January 19, 2016 that stated the following:

“All parties recognize that the performance for any HVAC system relies on high quality installation. A typical residential system can lose 20% to 40% of the energy available at the equipment plenum because of poor installation practices, depriving the homeowner of expected gains in efficiency while increasing operating costs.

Typical deficiencies include: (1) selecting the wrong equipment for the home (climate conditions, capacity sizing, matching of components and controls, application usage), (2) poor installation and commissioning procedures (issues include: refrigerant charging, airflow/waterflow), (3) poor design, installation, and retrofitting of the air distribution system (excessive air leakage in supply or return, high ESP, under insulation of ducts), and (4) failing to assure that the owner can operate the system as designed.

All parties commit to exploring routes to improve installations for all consumers, using multiple processes and approaches, ranging from policies (such as tax incentives or inspections) to improved training and consumer information. Within six months, DOE shall convene a workshop

for all stakeholders to consider and rank alternatives, and to develop a road map for action, including both technical and policy items.”<sup>1</sup>

All voting members of the ASRAC working group unanimously approved the above recommendations. Subsequently, manufacturers executed the necessary steps to follow-through on their commitments. As a result, the Residential Central Air Conditioning and Heat Pump Installation Workshop Report was issued by the DOE.

CEC should consider the outcomes of the proactive steps taken by industry during and after the DOE negotiated rulemaking process. CEC can adopt the methods promulgated by industry to reinforce quality installations in each residence to save energy.

### **3. Contractor Education about rules and enforcement**

Currently, there is no requirement for HVAC Contractors to receive any professional continuing education. Similar to other professions where the law and regulations change and evolve, it appears reasonable to require all HVAC contractors to attend continuing education applicable to their industry in order to maintain their HVAC license. The continuing education topics could address innovations in the HVAC industry, from refrigerant changes to new technologies, like internet of things. Continuing education could result in greater energy efficiency by reinforcing the proper installation of HVAC equipment, with the added benefit of better information about permitting and regulatory requirements for contractors. The Joint Commenters are vocal advocates of contractor training programs and would be willing to engage with the CEC and other interested stakeholders in the development and execution of a contractor training strategy.

### **4. Consumer Education**

Joint Commenters support strategic and targeted consumer education. The Joint Commenters view this as a two-prong approach to educate the consumer on understanding the value of working with licensed contractors.

- a. The first prong requires coordinated efforts by CEC with various stakeholders to educate consumers in California about the importance of HVAC compliance and its effect on safety. Little information is available instructing or advising consumers why choosing a licensed contractor over a non-licensed contractor is important. Public service announcements in accordance with a strategic media and social media campaigns to educate consumers would bring more awareness to the issue and start changing consumers’ viewpoints.

The second prong is incentivizing the consumer to seek out services from only licensed contractors. The Joint Commenters recommend that utility companies offer a rebate to consumers that hire licensed contractors and purchase an energy-efficient central air conditioner and/or heat pump. Currently, limited options are available for consumer rebates on

---

<sup>1</sup> W. Goetzler, R. Zogg, J. Young, and Y. Bargach, *Residential Central Air Conditioning and Heat Pump Installation-Workshop Outcomes* (last visited July 31, 2018), <https://www.energy.gov/sites/prod/files/2016/11/f34/CAC-CHP%20Installation%20Workshop%20Report%20-%2011-30-16.pdf>

their central air conditioner unless consumers purchase the most energy efficient central air conditioner with a 16 SEER/ 13 EER in California. Most consumers who are in the market for a central air conditioner are looking for a reputable contractor they trust and trying to get the most value for their dollar. Licensed contractors correctly install energy efficient equipment and are more likely to comply with permitting requirements.

## **5. Online Permitting**

Currently, contractors must complete burdensome physical paperwork to pull a permit for HVAC replacement. The permitting process should be a simple and efficient process to allow the contractor to execute an installation or repair. Frequently, HVAC installation and repairs are unplanned emergencies precipitated by failed equipment. While the repair or replacement is ongoing, the consumer and her family are without air-conditioning or heat. Unsurprisingly, the consumers expect that the contractors complete the installation and repair as quickly as possible. Given the nature of the industry, it is unreasonable for CEC to expect a high compliance with required permitting if that permitting takes up valuable time where the consumer is expected to go without basic home comfort. Practicality dictates that the permitting process be simple. An obvious solution is to move to an online, user-friendly, uniform, statewide permitting process that will allow contractors to access the required portal at all hours and will allow for near immediate results.

## **6. Enforcement**

In addition, CEC should commit additional resources to the inspection and enforcement. It is inequitable to impose a new regulatory regime on manufacturers if the CEC and Building Codes inspectors are not enforcing the rules that already exist.

### **Digital Number Tracking is Not a Viable Solution**

As has already been established, a tracking system for HVAC sales and installations in California does not address the root of the problem. California's permitting compliance issues arise from a cumbersome and inefficient permitting process. Instead of creating more compliance requirements for additional stakeholders, the CEC should focus its resources on what can be done to fix the compliance and permitting system. Introducing a new digital tracking system in hopes that it will improve the compliance issues without any real assurances or examples of previous success is impractical from a standpoint of cost-effectiveness to all parties (consumers, state government, entities in supply chain). Rather, the permitting procedures in California should be thoroughly reviewed, vetted and streamlined. If stakeholders are reticent to comply with a burdensome and inefficient process, then improving the existing process is imperative; creating more processes will only add to the current problem. Thus, the Joint Commenters urge the CEC to focus its limited resources and time on reforming the existing compliance system to simplify the process and make compliance more effective and attainable. In addition, CEC should focus on standardizing and streamlining the process while reducing costs.

Proponents of a digital tracking system, none of which are manufacturers or distributors of HVAC equipment, allege that it is simple process with minimal impact on manufacturers, distributors,

contractors, and other HVAC industry stakeholders. This is simply not true. The impact to manufacturers and distributors would be significant.

First, manufacturers are not currently tracking products on the scale that is contemplated by California. Except for narrow circumstances when it is to the benefit of the consumer, such as for utility rebate programs, serial numbers, in particular the sale and installation location of a given piece of equipment, are not tracked or retained. Manufacturers and distributors have little specific information about where their products are eventually sold and installed outside of any warranty data and other responsibilities to the U.S. Consumer Product Safety Commission, Department of Energy and Environmental Protection Agency. Locating the final destination of the manufacturers' and distributors' product would be a costly and time-consuming effort to accomplish.

Second, the mass collection and disclosure of sales data threatens to expose vital confidential business information—namely market share. To the extent that manufacturers and distributors are engaged in basic product tracking, such as for Regional Standards Enforcement, it is for a small subset of products to which particular record keeping requirements currently apply. But importantly, the documentation is retained exclusively by the manufacturers. If a government agency, like the Department of Energy, were to request access to the records, it would be on a small-scale only. The Department of Energy's Request for Information are limited to a handful of products at any given time, therefore confidential market data that is inextricably entwined with the mass collection of sales information is never potentially exposed. CEC's proposal ensures no such limited reach and threatens to expose confidential business information.

Third, it is unreasonable to shift California's compliance problem onto manufacturers and distributors who have no direct role or impact in permitting and installations. It is California's costly permitting and investigative process that is the heart of the problem. The CEC should look within the current process and identify opportunities for efficiency and user-friendly options for consumers that can be addressed rather than look at developing a costly digital tracking system that will require the development of a database, hiring and training of staff and search of funds to support an endeavor that would ultimately be funded by consumers.

Fourth, proponents argue hypothetically that the information collected from a digital tracking system could be easily merged with the information collected by HERS inspectors. We are doubtful that such merger could be accomplished. The Joint Commenters have extensive experience with attempting to share information and facilitate database-to-database communication with the CEC, and the technical challenges are perennial and burdensome. Moreover, the merging of two sets of data would make the process more susceptible for errors and possible inaccuracies in the data results. CEC would need to develop an IT support system to handle these problems. Agency staff would have to develop a training program to educate the public and stakeholders on how to use the new system, as well as address questions. Manufacturers' current experience with regulatory reporting to the CEC has demonstrated that the IT infrastructure is not adequately resourced to collect and maintain large volumes of data in an efficient manner.

Lastly, digital tracking does not currently exist and would be exceptionally onerous to develop. HVAC equipment is shipped to various regional distributors throughout the nation and manufacturers do not know whether their equipment will end up in the State of California. Distributors also ship the equipment to various contractors throughout the nation with no idea if California is the final destination. In a hypothetical digital tracking system world, manufacturers would have to report the shipment of all their central air conditioners and heat pumps as they leave the manufacturing floor for the distributors. The distributor in turn would have to report the tracking information again to the same government database. Again, in this hypothetical scenario there is no guarantee that the HVAC equipment would end up in California but the burden would fall on the manufacturer and the distributor to be on the “safe side” and would be forced to report all HVAC equipment to the digital tracking system. Manufacturers and distributors alike would incur huge overhead costs to comply with a digital tracking system; they would need to hire additional staff to oversee the process and develop a database system that would easily work with the government agency’s digital tracking system. These costs cannot be justified on the hope that permitting compliance will be improved.

### **Digital Privacy Law**

Current restrictions in the California’s data privacy law likely prevent the development of a digital tracking system that would collect and maintain HVAC consumer information, i.e., any information that would be linked, directly or indirectly with a particular consumer or household. The digital tracking system would not only collect equipment type, model number, serial number and contractor’s license number but would also need to identify the consumer to whom the contractor installed the central air conditioner and/or heat pump to. California’s digital privacy law grants consumers control over and insight into their personal information. Consumers have rights to know what information is collected about them, why it is being collected, whom is the information shared with, and the right to tell these information collecting entities to delete their information as well as not to share any of their data. Coordinating the conflicting requirements of a digital tracking law with a data privacy law will cause confusion. At this point, manufacturers do not know the impact of the new data privacy laws. This new legislation goes into effect in January 2020. Consumers who are not in compliance with permitting requirements are not likely willing to consent to the collection of personal data that exposes liability. HVAC manufacturers have concerns about the potential for their liability and being caught between contradictory obligations.

Overall, the Joint Commenters urge the CEC to simplify and improve upon the current compliance process rather than develop a digital tracking system.

### **The Joint Commenters**

AHRI (Air-Conditioning, Heating, and Refrigeration Institute) is the trade association representing manufacturers of heating, cooling, water heating, and refrigeration equipment. More than 300 members strong, AHRI is an internationally recognized advocate for the industry, and develops standards for and certifies the performance of many of the products manufactured by our members. In North America, the annual output of the HVACR industry is worth more than \$20 billion. In the United States alone, our members employ approximately 130,000 people, and support some 800,000 dealers,

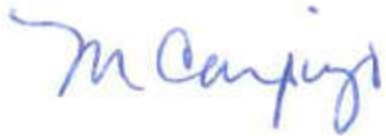


contractors, and technicians. In addition to its activities as a global standards developer, AHRI works closely with other global codes and standards developers as well as utilities to ensure their access to the latest technology and innovation from the HVACR and water-heating industry.

HARDI (Heating, Air-conditioning & Refrigeration Distributors International) is the single voice of wholesale distribution within the HVACR industry. HARDI members market, distribute, and support heating, air-conditioning, and refrigeration equipment, parts and supplies. HARDI Distributor members serve installation and service/replacement contractors in residential and commercial markets, as well as commercial/industrial and institutional maintenance staffs. HARDI proudly represents more than 480 distributor members representing more than 5,000 branch locations, and close to 500 manufacturers, manufacturer representatives and service vendors.

Thank you for the opportunity to comment on this important issue.

Sincerely,



Marie Carpizo  
Associate General Counsel  
AHRI



Alex Ayers  
Director of Government Affairs  
HARDI