

**DOCKETED**

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**Carrier's Comments for Improving Energy Compliance of CAC/HP Systems**

*Additional submitted attachment is included below.*

August 20, 2018

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

RE: Comments on CEC's Project: Improving Energy Compliance of Central Air-Conditioning and Heat Pump Systems

Dear Commissioner McAllister,

Carrier Corporation respectfully submits the following comments to the California Energy Commission (CEC) request for public comment on Improving Energy Compliance of Air Conditioning and Heat Pumps, Docket Number 2017-EBP-01. Our comments focus on the key impacts to stakeholders of adopting regulations to increase compliance in these areas.

Carrier Corporation is a part of UTC Climate, Controls & Security, a unit of United Technologies Corporation. We provide fire safety, security, building automation, heating, ventilation, air conditioning and refrigeration systems and services to promote integrated, high performance homes and buildings that are safer, smarter and sustainable. United Technologies is a leading worldwide provider to the aerospace and building systems.

Carrier is the founder of the modern HVAC industry and operates across the globe. Our range of products includes unitary residential and commercial products, including ducted and ductless, gas furnaces, refrigeration products, transport refrigeration products, air and water cooled chillers, and HVAC building services. Carrier is also the world's largest manufacturer of gas furnaces. The combination of our businesses makes us uniquely qualified to comment on regulatory issues associated with environment, product efficiency and the tradeoffs with costs and manufacturing burden associated with government regulation.

During the July 20, 2018 CEC staff workshop, and the subsequent August 3<sup>rd</sup> Commissioner Workshop, stakeholders were presented/proposed with a statewide digital tracking system that will collect manufacturers and distributors' data to manage permit compliance problems. Carrier opposes this proposal for all of the reasons stated during that meeting. These comments further explain our opposition and raise alternative approaches for improving compliance.

1. The CEC has an evident permitting compliance problem. Carrier urges the CEC to reform the existing permit 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.
2. 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. Carrier recommends required training for all contractors. 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.
3. 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." CEC can adopt the methods promulgated by industry to reinforce quality installations in each residence to save energy.
  4. 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.
  5. Carrier supports strategic and targeted consumer education. We view this to educate the consumer on understanding the value of working with licensed contractors, and secondly, incentivizing the consumer to seek out services from only licensed contractors.
  6. 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.
  7. In addition, CEC should commit additional resources to 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 we have already 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

8. As presented in the Commissioners Workshop by Mr. Charlie McCrudden, the mass collection and disclosure of sales data threatens to expose vital confidential business information—namely market share. 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.
9. 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. 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. And what about all the potential data input errors that can occur? 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.
10. Digital tracking does not currently exist and would be exceptionally onerous to develop. Also as presented during the Commissioner’s Workshop, HVAC equipment is shipped to various regional distributors throughout the nation and manufacturers may not ultimately know whether their equipment will end up in the State of California. Distributors also ship the equipment to various contractors throughout the nation, potentially not knowing whether California is the final destination. In a hypothetical digital tracking system world, manufacturers might have to report the shipment of all their central air conditioners and heat pumps as they leave the manufacturing floor to distributors. The distributor in turn might 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 over report. 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.

For the above reason, we oppose the digital tracking project as currently presented.

Carrier appreciates this opportunity to provide comments.

Respectfully submitted,



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