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AHRI Comments to CEC RFI Energy Data Collection - Phase 3

Please find attached, AHRI's comments to the CEC RFI Energy Data Collection “Phase 3; Docket Number 24-OIR-03 (August 18, 2025).

Additional submitted attachment is included below.



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Submitted via California Energy Commission Docket.

August 18, 2025

Peter Strait
Manager of Appliance Efficiency Branch
California Energy Commission
Docket Unit
Re: Docket 24-OIR-03
715 P Street
Sacramento, CA 95814

Re: Energy Data Collection – Phase 3; Docket Number 24-OIR-03

Dear Mr. Strait,

The Air-Conditioning, Heating, and Refrigeration Institute (AHRI) respectfully submits the following comments to the California Energy Commission's (CEC) Request for Information (RFI) Energy Data Collection Phase 3 – Space Conditioning and Water Heating Equipment Data Tracking, Docket Number 24-OIR-03.

AHRI represents more than 330 manufacturers of heating, ventilation, air conditioning, commercial refrigeration (HVACR), and water heating equipment. It is an internationally recognized advocate for the HVACR and water heating industry and certifies the performance of many of the products manufactured by its members. In North America, the annual economic activity resulting from the HVACR and water heating industry is more than \$211 billion. In the United States alone, AHRI member companies, along with distributors, contractors, and technicians employ more than 700,000 people.

Over the years, AHRI and its member manufacturers have been integral participants in the discussion surrounding serial number tracking, digital equipment tracking, quality equipment installation and an equipment registry. In the various proposed legislations and rulemakings, AHRI has been consistent that a serial number tracking and/or digital equipment registry by any other name is not sufficient to address the broken permit compliance system in California.

Since 2018, AHRI has submitted comments pointing out that a serial number or model level registry is fraught with complications, costly, and ineffective at raising permit compliance. Manufacturers highlighted the challenges in identifying which of their units were California bound once products enter regional logistics networks. The process for uploading every serial number would demand new resources such as a new database and appropriate staffing to manage the system and ensure its operating efficiently and effectively.

AHRI and its members have advocated for alternate solutions to address California's low permitting compliance. AHRI previously recommended mandatory contractor training and continuing education. AHRI encouraged California to embark on educating the consumer on the importance of pulling permits. Additionally, AHRI has encouraged consumer incentives tied to permitted, quality installations and targeted field enforcement to curb unlicensed activity. AHRI has advocated for a statewide online permitting system for contractors and installers to pull the necessary permits for the

installation of HVACR equipment in homes and businesses.

In previous comments, AHRI has identified the following online permitting systems in effect in California cities and counties and recommended that CEC analyze these localized online permitting systems as part of a viable solution. This may not be a complete list but one that can provide a starting point for CEC in its search and analysis of on-line permitting system costs, benefit, and feasibility. The California counties and cities include:

1. County of Sonoma
2. City of Los Angeles – Plan Check Permit Online Permitting System
3. County of San Bernardino – EZ Online Permitting Portal
4. City of Sacramento – Minor Permit Program
5. County of San Joaquin

The current request for information seeks feedback on potential data reporting requirements for space heating, space conditioning, water heating, and heat pump equipment delivered to California homes and businesses, including middle-step businesses such as distributors, wholesalers and retailers. Specifically, CEC asks stakeholders to provide detailed feedback on who should file equipment sales data, including how often, at what cost, and at what geographic precision, and what level of product detail best balances forecasting value and confidentiality. This recent request for energy data collection is part of a series of previous CEC Energy Data Collection rulemakings starting in 2016 and subsequently 2020. Then, the Commission's request was directed at utilities to provide data to support implementation of Senate Bill (SB) 350 (de Leon, Chapter 547, 2015) Clean Energy and Pollution Reduction Act of 2015.

Today, CEC is requesting this information to develop an accurate determination of the number of and types of space heaters, space conditioners, and water heaters (including heat pumps) sold, distributed, and installed within California over time. AHRI agrees with CEC's decision in not identifying manufacturers as a source in providing this information. As noted in previous comments, manufacturers are not the appropriate reporting entity. 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.

Questions for CEC

CEC refers to the statutory mandate to “conduct assessments and forecasts of ...energy industry supply, production, transportation, delivery and distribution, demand, and prices.”¹ “The commission may require the submission of demand forecasts, resource plans, market assessments, related outlooks, individual customer historic electric or gas service usage, or both, and individual customer historic billing data, in a format and level of granularity specified by the commission from electric and natural gas utilities, transportation fuel and technology suppliers, and other market participants.”² AHRI requests CEC to clarify how HVAC and water heating manufacturers fall within the scope of providing information to assist in energy industry assessments and forecasts. The code refers to public utilities and other related entities. AHRI questions whether HVAC and water heating manufacturers, distributors, and contractors were contemplated to fall even under the broad scope of “other market participants.”

Additionally, CEC has referenced its recommendations in response to SB 1414 relating to space heating, space conditioning and water heating equipment. AHRI understands that a SB 1414 Plan

¹ Public Resource Code Section 25301(a)

² *Id.*

was forthcoming to address quality installation of HVAC equipment. The RFI references two recommendations from a larger list of recommendations to be included in the SB 1414 Plan to address quality installation of heating and air conditioning equipment to be finalized in 2022. AHRI requests CEC to clarify if the SB 1414 plan was completed.

In the RFI, CEC references the recommendation for CEC to work with manufacturers and distributors to ensure that warranty registrations include the permit number for equipment installation, and that warranty claims require permits to have been pulled for the installation. Is it CEC's intent to require manufacturers to ensure that warranty registrations include the permit number for the equipment installation and that warranty claims require permits to be pulled for the installation? AHRI is concerned that the information collected in the warranty registrations are consumer private identifying information and confidential information.

AHRI and its members recommend CEC reconsider requiring manufacturers to include permit information to the warranty registration as California does not require warranty registration for consumers to exercise their warranty rights. The California Song-Beverly Consumer Warranty Act, as codified, states that manufacturer will inform the consumer on the warranty card that failure of the consumer "to complete and return the card or form does not diminish his or her warranty rights."³ Since warranty registration is not required in California, consumers may not submit a warranty registration and therefore manufacturers may not be privy to the permit number for equipment installation. For these reasons, AHRI requests that CEC reconsider requiring manufacturers to include the permit number.

AHRI encourages CEC to review the other recommendations relating to space heating, space conditioning and water heating equipment to address the permit compliance issue in California, specifically the request to implement a statewide online permitting program.

Overall, any rule should exclude manufacturer-level or serial-number mandates; they would generate enormous but disconnected datasets while draining resources that could be used for enforcement. Second, the Commission should avoid highly granular data fields that mirror the same flaws: high cost, limited analytical value, and inevitable gaps. Finally, the program will yield far better results if it centers on proven, lower-cost tools: statewide online permitting, contractor education, consumer incentives for permitted, high-quality installations, and robust field checks. Applying these measures will meet the RFI's forecasting objectives while respecting the operational realities of the HVACR supply chain.

Reporting Data Logistics Questions

1. Which steps of the supply chain are most/least appropriate for reporting of accurate equipment data, and why?

Once equipment leaves the factory, manufacturers cannot predict where equipment will be installed therefore it is impossible for manufacturers to predict which units will be installed in California. Distribution centers, meanwhile, operate on efficiency of transportation, not on jurisdictional borders. Original equipment manufacturer (OEM) level data only creates a repository of non-linked information and that manufacturers are not the responsible reporting entity. AHRI therefore regards upstream manufacturer reporting as the least appropriate for reporting accurate equipment data. It is important to note that there are issues with collecting information at all

³ Cal. Civ. Code § 1793.1(a)(1)(B) (West)

three levels of the supply chain, unless California homeowners are required to report though the level of accuracy in data collected could be questioned.

2. Should data be reported from more than one step of the supply chain? Why or why not?

AHRI opposes multi-layer requirements. Duplicative reporting by both manufacturers and distributors would force them to report all HVAC and water heating equipment, even for units that never enter California, imposing huge overhead costs with no compliance benefit. Overestimates also negatively impact consumers and forecasting. If energy forecasting is the goal for this data request, the utilities already collect this information for their service areas.

3. How often should data be reported? Should reported data be more granular than the frequency of reporting (e.g., a quarterly report that includes monthly sales figures)?

AHRI recommends annual reporting and not granular in nature. AHRI does not see the value in reporting, but if reporting is required it should be the least burdensome to consumers and a simple method.

4. What types of information are infeasible to report on?

Manufacturers are not currently tracking products on the scale that is contemplated by California; and serial numbers, in particular the sale and installation location of a given piece of equipment, are not tracked or retained. To add capacity or tonnage fields would force the same rebuild of enterprise systems; even locating where a product is installed would be a costly and time-consuming effort to accomplish. In short, any categorization scheme beyond what companies already compile would demand extensive new databases and staff resources while still leaving unavoidable gaps in the data.

The request by CEC to report shipment of HVAC equipment will not give the full image of energy consumed because energy consumed is configured by full system configuration. This happens at a contractor level and manufacturers do not have full insight on the installation of the paired systems at the job site, i.e., air handler and outdoor condenser unit.

If data is required, AHRI recommends submitting data on behalf of its members to ensure confidential business information is protected.

5. How geographically accurate will the reported location of delivery be to its final installed location? Is there a category of geographic information, such as zip code or county, that would best or most accurately inform forecasting, policy and program efforts?

The accuracy of the reported location of delivery to its final installed location will not be accurate. As noted in responses above, because units are shipped through national distribution networks, it is impossible for manufacturers to predict which units will be installed in California, and distributors likewise lack certainty about final destinations. Geographic precision finer than state or county level is unreliable.

6. What cost impacts are incurred by reporting sales and distribution information consistent with a potential reporting requirement? What are the different electronic reporting capabilities of

stakeholders at different points of the supply chain?

A potential reporting requirement would impose substantial costs at all levels of the supply chain. Electronic reporting capabilities of the stakeholders will vary at different points of the supply chain depending on their resources and staffing. Manufacturers, distributors, and the State of California alike would incur huge overhead costs since they would need to hire additional staff to oversee the process and develop a database system that would collect the data requested by CEC. This would negatively impact small businesses who would potentially need to hire additional staff or retain third-party service providers to fulfill the mandate.

7. Should businesses below a certain size threshold be excluded from data reporting requirements? If so, what should the size threshold be and why is it appropriate?

As noted above, imposing a sales and distribution reporting requirement on small businesses would create disproportionate compliance costs, as they would likely need to hire additional staff or retain third-party service providers to fulfill the mandate.

8. Who else collects this data? In particular, are there other governmental entities (i.e., federal, state or local agencies) that require reporting of sales and distribution data?

Currently, no federal, state or local government agency gathers comprehensive HVACR sales and distribution data. The Department of Energy's Regional Standards Program requires Contractors/Distributors/Manufacturers to retain records for certain types of equipment: serial numbers, model numbers, date of manufacture, date of sale, and contact information of party equipment sold to. These records are maintained for five years. Then, upon a 30-day request by DOE, Contractors/Distributors/Manufacturers are required to produce their records, however, they are not required to submit records to the agency but keep the records and provide to the agency when requested. The federal collection scope is narrow and limited to a handful of products at any given time.

Data Reporting Content Questions

9. How detailed should reported information be about the type or model of equipment? Should equipment counts be grouped or aggregated by model family, size or capacity, or by some other factor? Why or why not?

AHRI urges the CEC to explicitly exclude the collection of serial numbers and original equipment manufacturers' model numbers to protect confidential business information and avoid an unnecessary administrative burden. This type of information will not assist in the estimation on building load for electrical grid forecasting.

10. How detailed should reported information be about the destination and purchaser / receiver of any equipment? Should sales to contractors record their contractor license number?

For the same reasons above, AHRI objects to any requirement for manufacturers to provide installation addresses, which would expose sensitive customer information.

11. How detailed should reported information be about when equipment was delivered?

Reports should be simple. Each data point requested by CEC should reference the specific business purpose for the need and relevancy of that information.

12. Should refrigerants used by reported units be specified? Why or why not?

AHRI questions CEC's rationale for reporting the refrigerant used in reported units. Reporting refrigerants used will not assist with load forecasting if the intent for this information is to assist with demand modeling.

Conclusion

AHRI urges the Commission to pursue data collection methods that yield actionable insights without imposing disproportionate burdens on the supply chain. Focusing on streamlined online permitting, targeted field enforcement, and contractor education will deliver more reliable compliance data at far lower cost than a vast granular sales registry. We appreciate the opportunity to provide these comments and remain ready to work with CEC staff on solutions that advance California's energy forecasting and decarbonization goals while respecting the operational realities of the HVACR marketplace.

AHRI appreciates the opportunity to share this letter with CEC. Please do not hesitate to contact me directly if I can provide any further information or answer any additional questions.

Sincerely,



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