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VIA: CEC Electronic Commenting System

California Energy Commission
Docket Unit
Docket # 24-OIR-03
715 P Street
Sacramento, CA 95814
https://efiling.energy.ca.gov/EComment/EComment.aspx?docketnumber=24-OIR-03

RE: Request for Information (RFI) re Energy Data Collection Phase 3 – Space Conditioning And Water Heating Equipment Data Tracking (Docket 24-OIR-03)

To: California Energy Commission

I am writing on behalf of the Joint Committee on Energy and Environmental Policy, the Western States Council of Sheet Metal, Air, Rail, and Transportation Workers, and the California State Pipe Trades Council (collectively, "the Coalition") to provide comments on the Request for Information (RFI) re Energy Data Collection Phase 3 – Space Conditioning And Water Heating Equipment Data Tracking (Docket 24-OIR-03). The Coalition appreciates the Commission's engagement with stakeholders for this RFI and fully supports the development of regulations for a comprehensive strategy to track the sales and installation of Heating, Ventilation, and Air Conditioning (HVAC) and water heating equipment which will help align this market with California's short and long-term energy efficiency goals and standards. However, the proposed scope of tracking set forth in the RFI would fail to meet almost any of the stated underlying goals of such a tracking program, including those set forth in SB 1414. In particular, the proposed scope would do nothing: (a) to ensure quality installations, (b) to "promote compliance with Part 6 of Title 24 of the California Code of Regulations in the installation of central air-conditioning and heat pumps," or (c) to "increase

compliance with permitting and inspection requirements for central air conditioning and heat pumps, and associated sales and installations."[1]

The Coalition urges the Commission to learn from previous programs, research, and field results which consistently point to lack of permitting, circumventing California's Energy and Mechanical Codes, and the widespread prevalence of improper installation of HVAC equipment. To meet California's carbon reduction and energy efficiency targets while fostering healthy buildings, a more meaningful sales tracking program is essential in order to match the state's aggressive goals by focusing on the ultimate outcomes of code requirements, rather than the proposed program of merely collecting broad information on the number and types of units sold in California. It is unclear that collection of such narrow and limited information would have any value in reducing greenhouse gas emissions from HVAC and water heating equipment. And it is unlikely that any limited utility such information might provide would be of greater value than the cost of such a data collection program. By greatly limiting the scope of data collection, the CEC both makes the information collected of limited value and makes the entire proposal cost-ineffective.

In contrast, the energy savings estimated to be gained by an equipment tracking program that will improve actual installation compliance would greatly outweigh the costs of such information collection. As discussed below, collecting more relevant information such as equipment serial numbers, the identity of end-user purchasers, and the location of final installation would impose minimal costs on retailers and contractors because they are already required to collect and retain such information under federal law.

Finally, the RFI does not currently propose a HVAC and water heater sales tracking program that would meet the intent of SB 1414. SB 1414 clearly requires adoption of a program that would help "increase compliance with permitting and inspection requirements for central air-conditioning and heat pumps, and associated sales and installations." As discussed below, the RFI is also inconsistent with the 2016 Existing Building Energy Efficiency Action Plan Update which called for improving retrofit compliance with permitting and code requirements to 90% through the development of an HVAC equipment sale registry that can be used to track HVAC sales to ensure that permit requirements are being followed for all HVAC installations.

[1] See Public Resources Code § 25401.12.

I. STATEMENT OF INTEREST

The California State Pipe Trades Council ("CSPTC") represents more than 30,000 union plumbing, pipefitting, and HVAC installers throughout California. The CSPTC and its local union members have long advocated for building standards and regulations to improve the health, safety and efficiency of buildings in California, and for meaningful enforcement of these standards in order to level the playing field for high road contractors that take compliance with permit, code and energy code compliance documentation requirements seriously. The California State Pipe Trades Apprentice Program invests over $18 million annually to train the next generation of plumbers, pipe fitters, and refrigeration and air conditioning journeymen at 27 apprenticeship training centers across the state and to provide continuing education training opportunities to its existing members with a focus on new technologies such as heat pump water heating and HVAC equipment.

The Western States Council of Sheet Metal, Air, Rail, and Transportation Workers ("WSC") represents Sheet Metal Workers' Local Unions in California, Arizona, Nevada, and Hawaii. Its members install all types of HVAC systems, both residential and commercial, and are committed to not only ensuring indoor comfort through heating and cooling but also safeguarding air quality and promoting energy efficiency in HVAC systems. In California alone, the WSC operates over 15 training facilities, where thousands of workers are trained daily in HVAC specialties, including heat pump installations.

The Joint Committee on Energy and Environmental Policy ("JCEEP") is an advocacy organization that represents the California sheet metal workers' local unions and over 25,000 technicians working for over 600 contractors throughout California. JCEEP's mission is to promote responsible environmental and indoor air quality and energy policy in California as it pertains to and impacts the HVAC industry.

These organizations and their members have long advocated for quality installation practices, code and permit compliance, and the development and implementation of education and training programs that advance safety, performance and efficiency in California's building sector.

II. BACKGROUND

A. Permit Avoidance and Improper Equipment Installation Are Pervasive and Are a Barrier to Meeting California's Energy Efficiency and Greenhouse Gas Reduction Goals

Proper HVAC and water heating equipment installation is critical for maximizing energy savings and reducing greenhouse gas emissions. In particular, the efficiency of heating and air conditioning equipment is highly dependent on the quality of its installation. Studies show that poor quality installation of HVAC systems has been found to result in a 20-30 percent increase in energy use.[2] Moreover, poor quality installation is pervasive. The California Energy Commission found up to 85% of replacement HVAC systems are installed incorrectly.[3] It does no good to increase efficiency requirements for HVAC equipment if these systems are not being installed correctly. It also does no good to estimate energy savings through broad tracking of HVAC sales numbers if a many or most of such systems are installed incorrectly and without the assurance of HERS and acceptance testing compliance verifications.

The high percentage of poor quality HVAC installation can be directly correlated with the lack of permit compliance. It has been estimated that up to 90% of HVAC retrofit work does not comply with permit, inspection and Title 24 compliance documentation requirements. A 2008 Energy Commission report found that permits are obtained for residential HVAC replacements as little as 10% of the time, and that Title 24 quality installation requirements complied with by contractors as little as 15% of the time.[4] Without permits, there is no inspection, no Title 24 compliance documentation, and no Title 24 performance test compliance.

The 2008 Energy Commission report estimated that if these projects had complied with permit and inspection requirements, California peak energy demand each year could be decreased by 130 megawatts.[5] The CPUC recently revisited the

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[2] California Energy Commission, Strategic Plan to Reduce the Energy Impact of Air Conditioners (June 2008), CEC-400-2008-010 at p. 5 (poor quality installation of cooling systems results in a 20-30 percent increase in energy use).
[3] *Id.*
[4] California Energy Commission, Strategic Plan to Reduce the Energy Impact of Air Conditioners (June 2008), CEC-400-2008-010 at p. 17, 31.
[5] California Energy Commission, Strategic Plan to Reduce the Energy Impact of Air Conditioners (June 2008), CEC-400-2008-010 at p. 31.

estimate of the rate of permitting and concluded that permits are obtained for less than 8% of residential HVAC replacements. The CPUC also found that the number of replacement projects is now about 1 million per year, which is nearly triple what the 2008 report estimated.[6] **This means there could be 400 megawatts in energy savings just from increasing HVAC compliance.**

In addition, HVAC systems consume the most energy at times when peak energy demand is highest. In California, this means requiring the firing of natural gas peaking plants, which are the costliest and most inefficient power plants. Because these peak periods rely on natural gas to meet the additional demand rather than renewable energy, this additional peak period demand results in much greater greenhouse gas emissions per watt than during non-peak periods.

Contractors who are willing to do work without a permit can perform faulty work and underbid competitors. Contractors that perform unpermitted work are more likely to be unlicensed, use low wage, untrained workers, and to skip acceptance testing or commissioning of systems. If permits are not pulled, then local building departments can't enforce Title 24 Energy Code standards.

Permit compliance, however, is not sufficient on its own to ensure better installation outcomes. Even permitted jobs often fall well short of code compliance. Accordingly, permit compliance strategies need to be aligned with workforce standard and compliance documentation requirements to ensure that when permits are pulled, better code compliance and installation outcomes result. ***But without permit compliance, these other strategies cannot be enforced***. If a permit is not pulled, you can't enforce installation and acceptance testing requirements. Without permit compliance, the CEC's energy code compliance documentation requirements are rendered useless and ineffective. And without permit compliance, estimates of energy savings based on the number and type of equipment sold is unreliable and inaccurate.

B. Improper Installation Leads to Public Health Impacts

Increased permit compliance along with other compliance strategies can also increase public health outcomes associated with HVAC and water heating

[6] See California Energy Commission, Request for Proposals: HVAC Equipment Installation Compliance Tracking System Business Needs and Functional Requirements, RFP-16-403 (Feb. 2017) at p. 10

equipment installations. Improper HVAC installation and duct work increases indoor air pollution and exposure to bio-toxins that can lead to public health impacts. Proper installation of ducts improves proper air distribution and filtration. Improper installation can draw in contaminants, such as carbon monoxide, rodent waste, and molds. The additional peak energy demand created by poorly installed HVAC and water heating equipment installations also raises environmental justice issues. As discussed above, this additional peak energy demand is met through the use of natural gas peaking plants. Many of these plants have been sited near disadvantaged communities who bear the brunt of health and environmental impacts from these plants. Increasing energy savings during peak times can decrease impacts in these disadvantaged communities.

Improper water heater installation also poses significant risks to occupants and property. All water heaters pose a risk of leaks that can result in extensive property damage and mold. Standard gas installations pose risk of gas leaks, fire and explosion. Heat pump installations pose risk of refrigerant leaks and of electrical fires. Replacement of gas appliances with electric water heaters can increase electric load beyond what is safe for the existing wiring and electrical panel.

C. A Sales Tracking System Is Needed to Meaningfully Address Low Permit and Title 24 Compliance Percentages

The 2016 Existing Building Energy Efficiency Action Plan Update states that "[a]ddressing the application, compliance and enforcement of building standards in existing buildings is a high priority" and calls for improving retrofit compliance with permitting and code requirements to 90% by 2020. To meet this compliance goal, the 2016 Existing Building Energy Efficiency Action Plan recommends development of an HVAC equipment sale registry that can be used to track HVAC sales to ensure that permit requirements are being followed for all HVAC installations. JCEEP strongly supports development of such a registry.

A smartly designed sales tracking registry for HVAC and water heating equipment systems will allow for the CEC and other enforcement agencies to track sales to issued permits and submitted Title 24 compliance testing, including HERS testing and Acceptance testing documentation. HVAC and water heating equipment sold without corresponding permits, inspections and compliance documentation can be investigated, so that unpermitted work can be caught, and responsible parties held accountable. Without such a system, there is no viable way

for the CSLB or local building departments to identify systems being installed without a permit. Moreover, the cost of such a registry system will be offset by the approximately 400 megawatts a year in energy savings that could be obtained by ensuring code compliance and quality installation.

The current lack of permit enforcement creates a disincentive for contractors to pull permits and comply with Title 24 compliance documentation requirements. When approximately 90% of all HVAC retrofits are installed without permits, it becomes almost impossible for contractors that pull permits to win bids. A registry will flip this economic disincentive around by making it substantially more difficult and risky to perform HVAC and water heating equipment retrofits without permits. Contractors need to know that they will be caught if they do not pull a permit, and that punishment will follow. Only then will contractors that pull permits and comply with Title 24 HERS and acceptance testing requirements be able to compete for these jobs.

This will lead to higher quality work with more skilled workers since contractors know their work will be inspected and tested. More homes will be compliant, reducing energy consumption and greenhouse gas emissions and increasing the overall impact of Title 24 regulations. Indoor air pollution will decrease, leading to healthier homes for customers.

D. Federal Regulations Already Require Sellers and Contractors to Document and Retain Detailed Sales Information

Federal regulations already require the collection and retention of detailed sales and installation information for HVAC units. Pursuant to the Department of Energy's Regional Standards Enforcement Procedures, California distributors must retain the following records for at least 54 months from the date of sale of an central air conditioner unit: the manufacturer name, model number, serial number, date unit was purchased, party from whom the unit was purchased, date unit was sold to contractor or dealer, party to whom the unit was sold, and if delivered, delivery address. 10 C.F.R. § 429.142(a)(2). Contractors must retain the following records for at least 48 months from the date of installation of a central air conditioner: the manufacturer name, model number, serial number (except for split-system central air conditioner indoor units), location of installation, date of installation, and party from whom the unit was purchased. 10 C.F.R. § 429.142(a)(1).

Any sales registry adopted by the CEC should leverage this existing data collection. This is exactly the type of information that would be useful to the CEC not just to track the number and type of equipment being sold, but also to allow regulators to identify where equipment has been purchased but no permit has been pulled and no Energy Code compliance documentation has been submitted. The additional burden on retailers and contractors for the CEC to track this information would be minimal since this data is already required to be collected. This would be efficient, cost-effective and provide the actual information needed to be useful to shape CEC policy decisions and to improve compliance with energy code installation requirements.

III. RESPONSE TO CEC QUESTIONS

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

Coalition Response: HVAC and water heating equipment sales to contractors and/or the general public are the key step in the supply chain for collecting useful and accurate data. The most useful information that could be tracked is what HVAC and water heating equipment is actually installed, where is it installed, and who installed it. This will both provide reliable data regarding installation types, numbers and locations, and will also provide the data necessary to track whether HVAC and water heating equipment installations have complied with permit and energy code compliance document requirements. To do this, it is not necessary to require reporting from manufacturers and wholesalers unless they are directly selling equipment to contractors or other end users.

At the point of sale to an end-user, the HVAC and water heating equipment identifying information along with the identify of the party to whom the unit was sold needs to be recorded and reported. Contractors should then be required to report when and where the HVAC and water heating equipment was installed. This will provide all the information needed to be able to track HVAC and water heating equipment installations in a manner that allows for permit and CEC compliance documentation enforcement. Such a system would also allow for tracking of HVAC and water heating equipment units that receive upstream subsidies (e.g. subsidies provided through retailers such as Home Depot, Lowes or through wholesalers) to determine if the Governor's goal to install “At least fifty percent of the funding to achieve these goals shall be directed toward disadvantaged communities” is met.

This type of tracking system would also allow for accurate tracking of what type of equipment is being installed in what parts of the State, allowing for more targeted policies to be adopted where needed.

The following are recommended actions that the CEC should pursue when developing the regulations outlined in this RFI. These steps served as a framework for the Coalition's responses to the questions outlined below.

Step 1: Sales to Contractors or Individuals

At the time of sale to a contractor or a non-contractor individual, the seller (either a retailer, wholesaler or a manufacturer that engages in direct sales to end users), the selling entity should be required to document the following information that shall be reported to the CEC: (1) the date unit was sold to contractor or individual; (2) party to whom the unit was sold; (3) Contractor's license number if sold to a contractor; (4) customer address if sold to non-contractor individual); and (5) the manufacturer name, model number, and serial number of the unit. As discussed above, similar information is already required to be collected and retained by sellers under 10 C.F.R. § 429.142(a)(2). The seller should also be required to verify the purchaser's EPA 608 certification for units with refrigerants.

Step 2: Contractor Installation

At time of installation, a contractor should be required to document the following information to be reported to the CEC: (1) the manufacturer name, model number, and serial number of the unit; (2) location of installation, (3) date of installation, and (4) confirmation of permit and CEC compliance documentation compliance (including HERS compliance and acceptance test compliance). As discussed above, similar information is already required to be collected and retained by contractors under 10 C.F.R. § 429.142(a)(2).

Step 3: Provide Capability to Track Sales to CEC Compliance Documentation

The California Energy Commission should require that all Title 24 energy code compliance documents, including HERS and acceptance test forms, document the Unit manufacturer name, model number, and serial number.

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

CEC Recommendation
From the manufacturer, equipment most commonly moves to one or more distributors, distributors will distribute products to bulk purchasers such as wholesalers, who in turn supply products to retailers and other direct sellers, and these final sellers deliver equipment for installation at its end-use destination (often at the direction of a contractor). Often HVAC units are sold by distributors to contractors, who sell to and install units for building owners.

Thus, in considering who should be required to report data, staff's initial recommendation is for distributors, wholesalers, and retailers to report the number of units delivered to other parties.

The CEC is therefore interested in understanding which participants would be appropriate sources of unit shipment or delivery information and whether more or fewer steps in the supply chain should be required to report data.

Coalition Response: It is unclear what use it would be for distributors, wholesalers, and retailers to report the number of units delivered to other parties. This would not provide any reliable information on where such units were installed and would do nothing to address the pervasive issue of permit and acceptance test noncompliance by installers. Many contractors serve large regions all over the state, so such information would provide extremely unreliable information on the location of final installations. Additionally, it is unclear what policy objectives would be served by tracking this information.

As discussed above, the key step in the supply chain that needs to be documented is the sale to contractors and individuals, the contractor license numbers and, for sales to individuals, the customer address. The CEC should follow closely the documentation requirements already required for HVAC units under federal law. (10 C.F.R. § 429.142(a)(2).)

To effectively address the issue of unpermitted installations, enforcement entities such as building departments and the Contractors State License Board must be able to correlate each sold unit to a corresponding permit and the required HERS and acceptance test reporting.

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)?**

CEC Recommendation
Regarding the frequency of data reporting, staff's initial recommendation is a quarterly cadence for data reporting to match other CEC data collection programs, with monthly figures contained in those reports. The CEC is interested in hearing from participants how often similar information is compiled and reported internally or for other purposes and whether a different cadence would provide benefit to entities responsible for submitting data or state or local government agencies seeking to leverage submitted data.

Coalition Response: The Coalition agrees that quarterly reporting, broken into monthly figures, is required to ensure accurate monitoring of market dynamics, while minimizing the impact of short-term variances. Quarterly reporting would also be sufficient for any compliance or enforcement purposes since the time between purchase of a unit and completion of installation could be several weeks or months. As discussed above, the information required to be documented is already compiled for HVAC units at the time of sale pursuant to federal requirements. (10 C.F.R. § 429.142(a)(2).)

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

Coalition Response: As discussed above, all of the information that the Coalition proposes to be reported is already being collected and retained by wholesalers, retailers and contractors for HVAC units pursuant to federal requirements. (10 C.F.R. § 429.142(a)(2).) Accordingly, there is no valid argument for claiming that such information would be infeasible to report.

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?**

Coalition Response: If all that is required is reporting the number of units sold in a particular location, the information provided will be highly inaccurate as to its final installed location. Nor would simply identifying the county or zip code where

units are installed provide sufficient information to allow for improved permit and compliance documentation compliance or otherwise provide much useful information to help support policy and program decisions.

Furthermore, such a limited scope of sales data collection would be wholly inconsistent with the 2016 Existing Building Energy Efficiency Action Plan recommendation to develop a HVAC equipment sale registry *that can be used to track HVAC sales to ensure that permit requirements are being followed for all HVAC installations*.

In shaping this program, the CEC needs to first identify clearly what they want to be able to do with the information that is collected. Only then can it determine what information needs to be collected. As discussed above, the number one issue with HVAC installations is noncompliance with permit and acceptance test requirements – resulting in installations that fail to achieve assumed energy efficiency outcomes. At a minimum, any sales tacking system must be designed to provide sufficient information to support compliance and enforcement efforts.

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?**

Coalition Response: Cost impacts should be minimal. As discussed above, all of the information that should be reported at time of sale and installation are already required to be collected and retained for HVAC units pursuant to federal law. The only additional cost will be the time it takes to transmit this information on a quarterly basis to a CEC database.

In addition, contractors and technicians working with stationary refrigeration and air-conditioning equipment are already required to submit annual reports and maintain specific records under Section 608 of the Clean Air Act. Including a contractor license number or identifying information for the individual purchaser would be a straightforward addition to the existing data collection process.

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?**

Coalition Response: No, equitable reporting and tracking requirements must apply to all businesses, regardless of size, to ensure a fair marketplace and the accurate collection of data. Furthermore, the information recommended to be collected is already required to be documented and retained for central HVAC units by all wholesalers, retailers and contractors under federal law- with no size thresholds for businesses.

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?**

Coalition Response: As discussed above, Federal regulations already require the collection and retention of this information for HVAC units. Pursuant to the Department of Energy's Regional Standards Enforcement Procedures, California distributors must retain the following records for at least 54 months from the date of sale of an central air conditioner unit: the manufacturer name, model number, serial number, date unit was purchased, party from whom the unit was purchased, date unit was sold to contractor or dealer, party to whom the unit was sold, and if delivered, delivery address. 10 C.F.R. § 429.142(a)(2). Contractors must retain the following records for at least 48 months from the date of installation of a central air conditioner: the manufacturer name, model number, serial number (except for split-system central air conditioner indoor units), location of installation, date of installation, and party from whom the unit was purchased. 10 C.F.R. § 429.142(a)(1). In addition, most of this data is also already being collected for both HVAC and water heater units by manufacturers and large wholesalers and retailers to track sales orders and manage supply chains. Building on these existing practices to implement end-to-end tracking of HVAC equipment and water heating equipment is both practical and achievable.

There are also other existing models in California that demonstrate the feasibility of comprehensive tracking systems, such as seed-to-sale monitoring in the cannabis industry and VIN-based registration in the automotive sector.

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?**

CEC Recommendation
Staff determined that reporting units by model number would be desirable for enabling matching of equipment to energy use ratings stored in the CEC's certification database, allowing for highly precise estimation of electricity demand growth. Aggregating units by size or capacity would also allow for estimation of total energy use, though the CEC would need to rely on assumptions of "average" or "typical" performance and therefore be less precise than use of specific model data.

Conversely, aggregating units by model family or other arbitrary factor unrelated to energy use would diminish the utility of reported data, as would reporting only a nonspecific grand total of units of a given equipment type. Reporting the serial numbers of each specific piece of equipment may provide some utility for enforcement of certain laws but is not useful for electricity demand forecasting. Staff is therefore interested in information and feedback pertaining to these alternatives, including the level of detail of inventory data and the ease of providing model number data or aggregated data.

Coalition Response: As discussed above, the same information required to be documented and retained under federal law for HVAC units pursuant to 10 C.F.R. § 429.142(a)(2), should be required to be provided to the CEC for HVAC and water heating units. Anything less will result in information that is too limited and broad to provide sufficient utility to justify the cost of such a reporting program.

If all that is required is reporting the number of units sold in a particular location, the information provided will be highly inaccurate as to its final installed location. Nor would simply identifying the county or zip code where units are installed provide sufficient information to allow for improved permit and compliance documentation compliance or otherwise provide much useful information to help support policy and program decisions.

In shaping this program, the CEC needs to first identify clearly what they want to be able to do with the information that is collected. Only then can it determine what information needs to be collected. As discussed above, the number

one issue with HVAC installations is noncompliance with permit and acceptance test requirements – resulting in installations that fail to achieve assumed energy efficiency outcomes. At a minimum, any sales tracking system must be designed to provide sufficient information to support compliance and enforcement efforts, which means that serial numbers (or other unique tracking number) must be included.

The unique tracking number (e.g., serial number) can be matched to a specific unit model number, which provides all necessary information, including size and capacity, needed to estimate total energy use. In addition, the corresponding acceptance forms would identify the "as-installed" estimate of energy use, offering a more accurate representation of system performance in the field for use in modeling, while also providing a critical pathway to identifying HVAC and water heater installations that have not complied with CEC installation requirements, including HERS and acceptance test requirements.

In response to often asserted trade secret and privacy concerns, such concerns are overstated. Any information collected through the sales registry would be protected under existing public record and public database statutory provisions. California law provides that state electronic databases must protect personal information such as names and addresses and that information is not disclosable and state law exempts trade secrets such as aggregate sales data from public disclosure.

The Coalition also note that the databases would not collect any information that is not already required to be collected by local building departments as part of their energy code enforcement process, and is thus already publicly available.

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?

Coalition Response: As discussed above, the same information required to be documented and retained under federal law for HVAC units pursuant to 10 C.F.R. § 429.142(a)(2), should be required to be provided to the CEC for HVAC and water heating units. Anything less will result in information that is too limited and broad to provide sufficient utility to justify the cost of such a reporting program.

Accordingly, the Coalition recommend the following information be collected, consistent with the already existing requirements of 10 C.F.R. § 429.142(a)(2):

(1) *Reporting requirements for seller to contractor or non-contractor individual:*

At the time of sale to a contractor or a non-contractor individual, the seller (either a retailer, wholesaler or a manufacturer that engages in direct sales to end users), the selling entity should be required to document the following information that shall be reported to the CEC: (1) the date unit was sold to contractor or individual; (2) party to whom the unit was sold; (3) Contractor's license number if sold to a contractor; (4) customer address if sold to non-contractor individual); and (5) the manufacturer name, model number, and serial number (or unique California tracking number) of the unit. The seller should also be required to verify the purchaser's EPA 608 certification for units with refrigerants.

(2) *Reporting requirements for contractor:*

At time of installation, a contractor should be required to document the following information to be reported to the CED: (1) the manufacturer name, model number, and serial number (or unique California tracking number) of the unit; (2) location of installation, (3) date of installation, and (4) confirmation of permit and CEC compliance documentation compliance (including HERS compliance and acceptance test compliance).

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

CEC Recommendation

Staff's initial recommendation was for data reporting to be broken down by delivery zip code, supplemented by contractor license number for deliveries to contractors, as it provides the greatest granularity that avoids reporting personally identifying information (PII). Staff recognizes that some of the utility would remain if data reporting was broken down by delivery city or county in place of zip code, as it would still assist in identifying the transmission infrastructure and corridors that would be used to meet demand. Broader geographic regions, for example utility service territories, are technically feasible though have significantly diminished

utility. Staff is therefore interested in information and feedback relating to geographic destination data.

Coalition Response: As discussed above, staff's current limited data collection proposal is too broad and limited to provide sufficient utility to be worth the cost of such a program. The scope of information already required to be collected by 10 C.F.R. § 429.142(a)(2), will provide the detailed geographic and installer information necessary to meet the CEC's end goals and the legislative direction of SB 1414.

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

CEC Recommendation
Staff understands that refrigerant data is highly valuable to several state-led programs, though it has limited direct utility for demand modeling. Nonetheless, staff believes the information to be readily available for space heating, space conditioning and water heating equipment generally. Staff is therefore interested in information and feedback relating to specifying the refrigerant used by delivered equipment as a part of data reporting.

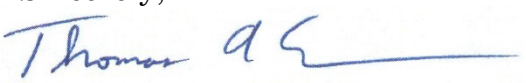
Coalition Response: The model and serial number (or other unique tracking number) would correspond to a specific unit and identify key characteristics helpful for other state programs, including the type of refrigerant used.

IV. CONCLUSION

The Joint Committee on Energy and Environmental Policy, the Western States Council of Sheet Metal, Air, Rail, and Transportation Workers, and the California State Pipe Trades Council appreciate past collaborations and discussions with the CEC and would like to extend an open invitation for future support from their staff and members who are subject matter experts in how HVAC and water heating equipment codes and standards are actually being enforced and followed in

the field, and why a meaningful sales tracking system is the key component to ensuring all other compliance efforts are successful.

Sincerely,



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