

**DOCKETED**

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## **23-BUSMTG-01\_\_2024\_01\_24 CEC Business Meeting\_Item 11**

January 26th, 2024

California Energy Commission (CEC)  
Building Decarbonization Coalition Stakeholders

To Whom It May Concern:

Thanks to Bryan Early for sharing the formation of the Building Decarbonization Coalition. Thanks to CEC commissioners and staff who thought and posed questions on this endeavor. I see a possible resulting benefit of utility power combustion emissions being easier and less numerous to regulate than the many homeowner residential units and people.

Here is further "food for thought" for the future coalition to possibly consider:

Due to the diversity of heat pump, SMART thermostat, climate and house size combinations, plus how these installations might work and/or be occasionally hacked, installation does not seem to necessarily be 'an end game.'

For example, in my townhouse, purchased end of 1993, had an existing heat pump with an old-fashioned thermostat. When I started working for SMUD, around 2005, a replacement heat pump and traditional thermostat was installed. Both of these 2 past heat pumps performed well inside providing what seemed like consistent heat/cooling. Around 2020, a 3rd heat pump was installed with a SMART thermostat using a low income SMUD installation program which is said to no longer exist. I have always used heat pumps. Unfortunately, the most recent heat pump/SMART thermostat installation seems to perform the least efficiently. It stays on for lengthy periods of time, sometime, even when the outside temperature is mild and the setpoint is only requiring an additional degree. The system is quicker on other days. One technician suggested I replace the thermostat with a brand he preferred, which I have not done. I notice SMUD's Energy Store still sells the thermostat that is installed. When I turn off the thermostat, often the indoor temperature reaches the setpoint and beyond, if the temperature difference is small. It is possible that the outdoor heat pump unit is too large for the larger air filter in-take installed in 2018. When I asked about the possibility of the outdoor unit being oversized, the team suggested the heat pump size calculations may have been due to the townhouse vaulted ceilings, creating more volume to address. Though that may be true, remedying an "interesting" heat pump and SMART thermostat combination might not be easy for low income residents.

1). Can this coalition please address maintenance/performance issues with already

installed existing heat pumps and SMART thermostats for low income residents?

Perhaps suggesting not installing SMART thermostats at the time of new heat pump installations, could provide the primary data necessary to first assess. Unfortunately, this remedy is slower and probably not seem what energy leaders want. It is not what I would have recommended either, until having gone through time of using the 3rd heat pump/thermostat system and noticing differences.

2). I am not aware of how manufacturers and data collectors assessed auxiliary heat, aka resistant heat backup, in determining heat pump efficiency. My first 2 heat pumps automatically turned on aux. heat, seemingly to boost its heat pump performance. The 3rd turns aux. heat on and sends error messages. I noticed online in social media that some suggest nobody needs aux. heat, which is obviously less efficient and therefore less desirable. I am not sure this is true. I might guess we need aux. heat, but would love to be proved wrong. I think this is happening to collect better future data. Somehow this possible past data collection problem may need to be accounted for in determining efficiency and which heat pump/thermostats work best with or without resistant aux. heat.

3). I encourage the coalition to also account for various heat pump refrigerants when considering how these installations go forward.

Thanks for your time, consideration, and positive thoughts.

Sincerely,

Claire Warshaw