
From: Brian <brian@calhot.com>
Sent: Monday, February 19, 2024 12:51 PM
To: Heather Farr <hfarr@aqmd.gov>
Subject: [EXTERNAL] Rule 1146.2 proposed changes

I understand the want for new buildings to be equipped with heat pumps. Retrofitting an existing building is going to be a bigger endeavor than you may think. In Rule 1146.2 when changing out the standard atmospheric equipment for Low NOx equipment you were changing a gas box that used the same power requirements for another box that was about a foot longer and the storage tank stayed the same size. In changing a gas water heater to heat pump that box is being replaced by a number of slightly smaller boxes. That is not the problem, the amount of storage required for the heat pumps is the problem.

The roof or the building was designed for 500 gallons of water now has to be upgraded to handle 2,000 to 4,000 gallons of water. The structural for the roof in most apartment buildings will need to be reinforced to handle the additional weight of the storage tanks and the water they hold.

The power to the building will need to be upgraded to handle the current that the heat pumps require. Again you are not changing out one or two boxes for the gas box that uses 120V you are going to need to supply 240V to 10 or more units. The line entering the building is about a thick as your thumb for the gas, the power wires needed to enter the building will need to about as thick as your wrist. This upgrade in power will be expensive, some of it will have to wait as the power grid in the area is upgraded to supply the needed power. Until the power company has the infrastructure to power the heat pumps, your rule can not be enacted.

For buildings that have the equipment rooms inside the building, the boilers use one square inch for every 4,000 BTUs of fresh air for combustion and for ventilation. A million BTU boiler will need two screened opening to the room two (2) feet by two (2) feet. Each heat pump will need an opening about five (5) feet by eight (8) feet and to replace the million BTU heater you will need about eight (8) of the units.

Most installations are going to close the business for a time, my guess is 3 to 9 months to do the upgrades and set up the equipment. In the case of a Hotel, Motel, Restaurant, coin laundry, and apartment complex they will need to close. Many of the companies will not be able to afford the millions of dollars required in your change out to handle the added weights and power requirements of the equipment.

For apartment dwellers, they will need to move out and find another place to live, the good news is that in LA that landlord has to pay each lease \$12,000 to move. Rents will increase, to pay for the moving costs, the lost rents while the building is retrofitted, and the cost of the equipment and labor to do the work. Condo owners will have to move out, pay mortgage, pay rent, and pay their part in the cost of the equipment and upgrades to make the equipment work.

With the replacement of Gas BTU to Electric KW we are going to need to add about 293 KW for each Million BTUs you eliminate. We don't have the power production capacity to meet the needs. Before you say renewable sources, they turned off all fossil fueled sources and we had less than 7 minutes of renewable power. It was actually around 5 seconds but I am guessing that after a year it may have increased up to 40% new sources. There was talk about building a power plant in Arizona to power Los Angeles. But what would stop that local Air Quality Board from passing a rule that forbids plants that export power or taxes / fines them excessively? Is the SCAQMD going to allow new gas powered power plants in the SCAQMD area? Other wise we are going to have to ration power. Only charge your electric car on even or odd days according to your address?

We sell Heat Pumps. But as I said the problem is three fold, not sufficient power or infrastructure, the amount of water and the weight needed for a heat pump to work, and the closing of businesses and residents to make the switch from BTU to KW that will result in an increase in the costs of Housing, lodging, food, laundry, and as those go up associated business will raise their prices.

Brian McDonald

Sales

o 310.725.5144

c 424-391-0833

e Brian@calhot.com

15705 Condon Ave #D-2

Lawndale Ca 90260

www.calhot.com

CALIFORNIA HOT WATER



SUPPLY, INC.