



## HVAC System in Home Performance

### How does the HVAC system fit in?

The house is constructed of many parts; all of the parts act as a system and create the indoor environment in which we live.

As Home Performance professionals we always start with safety first—do no harm i.e. combustion safety. Then water management (moisture control). Next, we can increase home energy efficiency by adding air-sealing and insulation to the scope of work.

### Heating and Air-Conditioning

Do we integrate the existing system into the retro-fitted home or do we scrap the entire system and start over? Much of this depends on your client's budget!

### Pros and Cons

In California the heating and air-conditioning systems installed to maintain the health and comfort of the occupants are typically 60% oversize. This is in part due to the fact that HVAC contractors typically do not use a design tool; many use an outdated "rule of thumb" as a way of sizing the system.

Another issue is the loss of system capacity. In

## Specifying the Correct HVAC System

The goal is to create an indoor environment that is a comfortable space for the occupants and their guests, one in which the occupants don't even think about their comfort. To meet this goal we must specify a properly designed system, using our best design tools (such as ACCA Manual J, D, S, and T.)

This will give us the appropriate size of the heating and air-conditioning unit and the right size duct system to deliver the conditioned air to all of the rooms in the home. The system should be quiet and the air that is being delivered to condition the room should not blow directly on the occupants.

The result - happier clients and happier clients lead to referrals



the average home, about 55% of the rated capacity and efficiency of the Heating and A/C equipment is lost due to the flaws in the design and installation of the system.



In addition the age of the system will most likely rule out the option of re-using the existing HVAC unit and its ductwork if both contractor and homeowner want to achieve the optimum benefit of having a comfortable system with lower operating cost.

SMUD recommends its participating contractors to right-size the HVAC unit, which is almost always a downsizing of the equipment after proper air sealing and insulation, and offers incentives for any downsizing of equipment in the current Home Performance Program.

**Next newsletter**

We will look at various types of systems available for us to choose from in creating a system for the home and its occupants.

*We should remember that one size does not fit all!*

Learn how to expand your HVAC business into home Performance Click [here](#)



**Upcoming Event**

*Stay tuned for the upcoming SMUD/Contractor meeting around mid March*

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**Our mailing address is:**

1000 Broadway, Suite 435, Oakland, CA 94607  
1-888-352-2722 (1-888-35CBPCA)  
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