

# COOL SOLUTIONS from COOL DAVIS



*This planning guide is one in a series that offers Cool Solutions for home heating and cooling as well as energy efficiency. The full series of documents will be available on the Cool Davis website. This document is provided as general guidance and is not intended to be health or technical advice.*

## Home Comfort and Health Issues

Cold or warm spots, annoying drafts, dirty ducts, and musty insulation all contribute to discomfort and overall poor air quality in our homes. You may have a serious pest infestation, either past or current, that's creating health issues for you and your family. Body temperature regulation can be a challenge for certain age groups or those with specific illnesses. Allergies or other respiratory conditions could also be a major concern.

### Think about your family's needs

Evaluating your HVAC options is a good time to reflect on your family's needs, values, and objectives. Remember to consider these questions and topics as part of your planning effort:

- How often do you change filters?
- What kind of filters are you using?
- How warm or cool do you want or need to be?
- Is system reliability essential for health and well being?
- What about comfort needs for babies or elders?
- Does your family have health concerns like asthma or respiratory disease?

### Dirty Filters

Whether you have an older system or a brand new one, a HEPA (or High Efficiency Particulate Air) filter (with a 17 to 20 MERV rating) might help family members with asthma or other chronic lung diseases. Unlike a typical filter, HEPA filters can remove particles as small as .3 microns at 99% efficiency. It's worthy to note that increasing the level of filtration can decrease system efficiency, and some systems may have challenges operating with HEPA filters.

Newer home heating and cooling systems generally come with new technologies to filter allergens or pull in cool night air. Ask your contractor about your options.

### Dirty Insulation

Dusty, moldy, or rodent infested insulation may mean you need to make a clean sweep of your attic. It costs more to remove old insulation before adding new insulation, but in some cases this step is critical. Talk to your

contractor about whether you should remove all the old insulation and replace it with new insulation or add the new insulation on top of the old.

## **Dirty Ducts**

Dust builds up on the insides of your HVAC ducts. Ducts are metal or synthetic tubes or other rigid systems that move heated and cooled air throughout your home. The national Air Duct Cleaners Association recommends getting your air ducts cleaned every 3 to 5 years. Dirty ducts can be a hidden contributor to allergies and respiratory conditions.

## **Hot and Cold Spots**

For some, comfort is simply being able to move from one room to another without putting on or taking off a sweater or slippers. Hot and cold spots can be a major annoyance or something you've just learned to live with. The best way to address these types of problems is to seal your home for leakage and talk to a service professional about correct zoning, placement of registers and returns, and right sizing the system (see our *Home Heating and Cooling: Working with Contractors Planning Guide* for more information).

Certain appliances or home electronics might also be putting off heat. Newer models or small desk or room fans can sometimes alleviate these problems. Using outdoor grills or solar ovens in the summer, spring, and fall can reduce heat build up in the kitchen.

## **Leakage**

Older homes with spotty or no insulation in ceilings and walls, unsealed windows, or wall and ceiling penetrations from lights or other fixtures might be the cause of drafty spaces. If you or other family members are particularly temperature sensitive, this can be a real issue. If you have a baby or an elder living with you, these fluctuations might cause considerable discomfort.

Sealing leaks can be a good first step in your home heating and cooling plan. If you need to reinsulate an attic, make sure to seal attic penetrations and ducts at the same time. And, don't forget that leaky attics and ducts also mean you're wasting money and energy. Sealing leaks can immediately improve your family's comfort and help pay for itself through energy savings.

## **Other Cool Solutions Home Heating and Cooling Planning Guides**

- [Understanding Home Heating and Cooling](#)
- [Make a Home Heating and Cooling Plan ... Now](#)
- [Help! My HVAC System Is Down!](#)
- [Home Comfort and Health Issues](#)
- [Working with Contractors](#)
- [Ways to Save, Ways to Pay for Home Energy Improvements](#)
- [Home Heating and Cooling Commonly Used Terms](#)

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## **What is Cool Davis?**

Cool Davis is a local non-profit organization dedicated to helping Davis residents and businesses adopt more sustainable practices and reduce their greenhouse emissions. Cool Davis has partnered with the city since 2010 to offer resources, host events, and provide outreach and educational experiences for Davis residents.

To learn more about other Cool Davis projects related to energy, transportation, and consumption of goods and services, visit us at [www.cooldavis.org](http://www.cooldavis.org).

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