

COOL SOLUTIONS from COOL DAVIS



This planning guide is one in a series that offers Cool Solutions on 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 legal, financial, or technical advice.

Home Heating and Cooling: Working with Contractors

Planning ahead can help you avoid HVAC system breakdowns, rushed decisions, and waste. The best way to find your way to HVAC system success is to start with an annual service check-up.

First things first: Get a check-up and consider a home energy audit

If your HVAC system is more than 10 years old or not working properly, start by hiring a licensed HVAC contractor to evaluate its current performance and condition.

If it turns out you need to consider an HVAC repair or replacement, a home energy assessment or audit is a good idea. A home energy audit can uncover opportunities for energy efficiency “retrofits” or repairs and money saving adjustments. The added benefit? The audit will help you decide on the correct size for your HVAC system. By combining energy efficiency and new system components you might be able to replace your HVAC unit with a smaller one when the time comes.

A home energy audit performed within a specified timeframe is currently required in order to qualify for certain rebates on system improvements or replacements. So, if you’re wanting to benefit from rebates, check deadlines and be sure you’re ready to move forward before setting a date for an audit. Full service HVAC contractors perform these audits in-house or may contract with a Home Energy Rating System (HERS) professional to do the work. Some audits may include what’s called a “blower door test.”

See our *Cool Davis Home Heating and Cooling Commonly Used Terms* for information about home energy audits, the HERS program, blower door tests, and other terms contractors may use.

Select a contractor by asking the right questions

If the time has come to replace your system, you will need to select an HVAC contractor for the job. Here are some key questions to ask:

Questions about the services that contractors provide

- Is the contractor licensed by the State of California State Contractors Licensing Board? Eligibility for rebates depends, in part, on using a licensed and rebate program approved contractor.
- What services does the contractor provide? HVAC only? Both HVAC and energy efficiency retrofits? Only energy efficiency retrofits?
- Does the contractor provide home energy audits as well as energy efficiency retrofit services?
- How long has the business offered its services to local residents?
- Does the contractor comply with all state and local building permit requirements?
- Does the contractor participate in utility rebates and/or PACE financing programs? Will the contractor handle the paperwork, and what, if any, are the associated fees?

See our Cool Davis *Ways to Save, Ways to Pay for Home Energy Improvements* Planning Guide for information related to rebates and PACE financing.

System questions you should ask contractors

- How much life is left in your current home heating and cooling system?
- Ask for information about upfront purchase and installation costs, annual operating costs, and comparative energy efficiency ratings for different units of proposed new systems.
- How long it will take to pay back the difference in initial costs with energy savings if you go with a more energy efficient unit?
- Can you get by with a smaller HVAC system by doing home energy efficiency improvements, like sealing the attic and adding or replacing attic insulation?
- If comfort is a big concern, make sure that the contractor provides you with a thorough explanation about how those comfort issues will be solved.
- What are the costs and benefits of investing in home energy efficiency improvements now versus replacing the HVAC system later and what rebates might (or might not) be applicable?
- What is the anticipated lifespan of the new system and what kind of maintenance will it require?
- What kind of smart system tools and technology come with the units? New smart technology can help make an efficient system respond even better to your household needs!

Evaluate your options

State building and appliance efficiency code requirements and HVAC technology have changed significantly in the last several decades. Consider features and cost with these points in mind:

Consider a more efficient system

Most likely, a new HVAC system installed today will be much more energy efficient than your existing system. Be sure to ask for information and costs and benefits for systems that exceed state minimum energy efficiency standards. Consider choosing the most efficient model you can afford to maximize benefits and long-term savings. See our Cool Davis *Home Heating and Cooling Commonly Used Terms* for more information about SEER ratings (Seasonal Energy Efficiency Rating). Remember that currently state and utility rebates are only available when purchasing an HVAC system that exceeds the state minimum standards or as part of installing energy efficiency retrofits.

Right size the system

When you're ready to replace your HVAC system, ask the contractor to "right size" the equipment. If you have made home energy efficiency retrofits including sealing ducts you may be able to install a smaller unit to meet your needs and save on initial costs of equipment. HVAC units come in full and half sizes ranging from 1.5 tons to as much as 4 or 5 tons for the average residence. See our *Cool Davis Home Heating and Cooling Commonly Used Terms* for more information about tonnage.

Evaluate proposals carefully

It's best to interview more than one contractor to assess your HVAC system (and home). Contractors can help you to make informed decisions about the best solution for you and your home.

Compare apples to apples

- Don't hesitate to get a second or a third bid or proposal, but make sure you're comparing the same system features, options and whether energy efficiency retrofits are recommended and included in the estimate. Make a chart of upfront purchase and installation costs, annual operating costs, and comparative energy efficiency ratings for each bid. Compare payback periods and available rebates and incentives as well.

Don't immediately dismiss the highest bid

- Don't be surprised if the contractor who offers a more comprehensive approach does not have the lowest bid. If a contractor recommends a costlier initial investment, ask why and what it includes. By considering the lifetime of the system (including energy efficiency improvements), you may find it worthwhile to pay a little more now, but less in the future in operating costs.

Consider a contractor that will work on your timeline

- Your wish list of improvements may exceed your current budget or you might be in a time crunch. If you are interested in some energy efficiency improvements that aren't in the budget just yet, make a sensible plan with the contractor to bundle improvements in a timely and cost-effective order. Remember, a little more energy efficiency now may help you save for a replacement HVAC system in the future. Efficiency improvements will likely make your home more comfortable, too!

California now requires duct sealing Contractors in California are now required to inspect and seal ducts to a maximum 5% leakage for new ducting and HVAC systems.

What are those strange noises? Newer HVAC units run more efficiently than older ones. Don't be concerned if they sound different from what you're used to. They may run at slower speeds or cycle between higher and slower speeds.

Efficiency has other benefits Did you know that by improving your home's energy efficiency, you are also doing your part to reduce greenhouse gas emissions?

DID YOU KNOW? Cool tech and smart tech devices in newer HVAC equipment and designs can help you meet special needs or address your family's health concerns.

RESOURCES

Energy Efficient Products

Note: Products change constantly. Check these links as needed.

PG&E Marketplace for Energy Efficient Products

<https://marketplace.pge.com/>

Energy Efficient EnergyStar Central Air Conditioners and Air Source Heat Pumps (2018)

https://www.energystar.gov/index.cfm?c=most_efficient.me_cac_ashp.

Energy Star Certified Energy Efficient Products

<https://www.energystar.gov/products>

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

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.

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