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## The heat is on: What to know before you buy a furnace

By Paul Morgan

Seattle Times desk editor

It was mid-February when my wife woke me in the middle of the night. Through the haze in my brain, I heard something about the furnace, followed by the words "cold" and "baby" and "get up NOW."

I wish it had been a nightmare. That cold reality was the start of a monthlong journey in which I nearly went blind reading Internet message boards devoted to heating systems, did more math than since I was in high school and went from knowing nearly nothing about furnaces to making an educated decision.

It also brought me my proudest moment as a homeowner. But more on that later.

With an infant in the house, no way could we go without heat. When the repairman examined the gas furnace, the good news was that he could get it running again. The bad news: The furnace was on its last legs. "I could throw parts at it," he said. "But I think it's time to start looking for a new one."

That meant I had time. If your furnace is 15-20 years old, consider getting a new one (the energy savings alone might be worth it). Or at least figure out what you're going to need when the one you have konks out.

### The search pays off

I spent hours online, following false lead after false lead. My first instinct was a green technology. With natural gas prices only going up, I figured that would be the best way to "stick it to the man."

#### Resources

Puget Sound Energy: [www.pse.com](http://www.pse.com)

Check out the contractors:

So I researched solar and geothermal, but within a week I determined these were still out of reach on my salary. Then my fancy turned to a new technology called "dual fuel." This setup uses an electric heat pump, which operates efficiently until



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[www.lni.wa.gov/TradesLicensing/Contractors/HireCon/default.asp](http://www.lni.wa.gov/TradesLicensing/Contractors/HireCon/default.asp)

**Energy Star:** [www.energystar.gov](http://www.energystar.gov)

**Find out more about renewable energy:**

[www.consumerenergycenter.org/renewables/index.html](http://www.consumerenergycenter.org/renewables/index.html)

**Incentive offers:**

[www.northwestenergystar.com](http://www.northwestenergystar.com); click on "incentives"

**Snohomish County Public Utility District:**

[www.snopud.com/Default.ashx?p=1781](http://www.snopud.com/Default.ashx?p=1781)

**Seattle City Light:**

[www.ci.seattle.wa.us/light](http://www.ci.seattle.wa.us/light)

**Consumers' Checkbook:**

[checkbook.org](http://checkbook.org)

**Energy calculators**

**Energy Right:**

[www.energyright.com/cgi-bin/dtc?tvaparms](http://www.energyright.com/cgi-bin/dtc?tvaparms)

**Home Energy Saver:**

<http://hes.lbl.gov>

## **Tips**

1. Find out how much energy you use now and how much it costs.
2. Know how well your house is insulated. Any investment here may reduce energy usage. After all, you can't control energy prices, but you can control how much energy stays in your home.
3. Have a heating technician check the ductwork, or do it yourself. If you're losing heat before it gets to the vents, then it's not doing you much good.
4. Find the right size heating system for your house. A system that's too big could cycle on and off more often and lead to greater temperature swings.
5. Check out contractors before you call to get a bid. Most heating equipment is pretty comparable, so don't be sold just on the brand name.

temperatures get below freezing, with a gas furnace backup. Price tag for that system: Around \$10,000.

Gulp.

I was flailing. I was willing to pay more for a system that would save on energy, but I had no hard information, no idea what I really needed to comfortably and economically heat my house.

Then I hit the jackpot. I did a search for "energy calculator," and suddenly I had everything I needed. I found [energyright.com](http://energyright.com), a site run by the Tennessee Valley Authority, and Home Energy Saver, a project sponsored by the Department of Energy.

Each calculator required some important information, such as exactly how many therms my house used last year, the cost of therms in my area and how much the electric company charged per kilowatt hour.

Now I was on to something, except I hadn't saved all of my utility bills from the past year.

## **The power of knowledge**

On a lark, I went to the Web site of my local gas company, Puget Sound Energy, and hit another vein of valuable information. I was able to see my bills for the past year, including how much energy I was using and how much it was costing me.

That told me two things: I have a well-insulated house, and it would take a long time for an expensive system to pay for itself in energy savings, even if gas rates continued to rise.

So I plugged the numbers into the calculators and, like magic, I had everything I needed to talk to contractors.

Cold, hard numbers. All my research suggested an 80-percent-efficiency furnace would be perfect for my house. The added cost for a 90-percent-efficiency furnace would not be justified by energy savings. Unless a contractor could prove me wrong. That never happened.

That leads me to my proudest moment, which came the morning after I hit on this information. A contractor was at the house, and I actually knew he was trying to sell me a system I didn't need. That was a sweet moment, sweeter still that my mother-in-law heard me

It's the installation that will save you money in the long run.

6. Have your energy-use information with you when talking to contractors. Ask them to justify their suggestions.

7. Get at least three bids, and make sure you're comparing apples to apples.

frustrate the guy by asking him to *prove* that his system was going to save me money.

Needless to say, he didn't get the job.

### **The proof is in the bill**

So I cast my net wider. I checked the consumer Web site [checkbook.org](http://checkbook.org), which rates heating companies around Puget Sound based on customer feedback.

Using that list to call contractors, I collected three bids. All within the same \$4,500 range, all with roughly the same equipment.

We weren't disappointed. In March the work was done, and the furnace was quietly warming the house with a nice steady heat.

And the first gas bill? That was another sweet moment. The new furnace used 24 percent fewer therms than the previous year. I saved about \$15 that month. That might not be much, but at least I know I didn't get burned when I bought my furnace.

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