

By Emerson Howell Nagel

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TIPS FOR SAVING ON YOUR ENERGY BILL (1,448 words)

Like it or not, winter will soon be upon us. And whether you live in Texas or Alaska, that probably means you're going to have to turn on the heat at some point.

According to the Department of Energy, heating and cooling account for 50 to 70% of the energy used in the average American home. Sure, you use energy to heat water (about 20%), and for all those lights and appliances (10 to 30%). But to really cut your energy bills this winter, the biggest bang for your buck is in reducing the energy needed to heat your home.

David Charles is an estimator with John J. Cahill Inc. in Evanston, Illinois. Charles does heat gain and loss calculations on homes all day long. He says the best way to lower your heating costs is to turn down your thermostat, even if just at night.

The Pacific Gas and Electric Company (PG&E) in California agrees with Charles. It may not get as cold in California as it does in Illinois, but they're in the middle of a serious energy crisis. "For every degree you lower your heat in the 60-70 degree range, you'll save up to 5% on heating costs." And you can save up to 10% if you close off heating to areas that don't need it.

In response to the crisis, PG&E has created a website with tons of information and great tools for conserving energy (www.pge.com). Another utility company that has invested in a very useful website is Allegheny Power (www.alleghenypower.com). Allegheny delivers electricity and natural gas to Maryland, Ohio, Pennsylvania, Virginia, and West Virginia. They have a checklist of 100 energy-saving tips, siting insulation as the most important step toward saving energy in the home.

OK, so turning your thermostat down costs nothing while insulating your entire house can cost thousands. Here are some suggestions at different price levels from the heating experts.

Things You Can Do For Free: Charles suggests that you check your meter yourself to make sure you're not being overcharged by the gas company (yes, he says it does happen). "The meter itself may be off, so try to find comparable houses and ask them what their usage is. The gas company can check the calibration of the meter to see if there's a problem."

PG&E recommends that you keep warm indoors by wearing warm clothing, several light-weight layers. You can then set your thermostat lower, and potentially save a lot.

On the subject of windows, they advise using insulating shutters or drapes and keeping them closed during winter nights. On sunny days, open the drapes on south-facing windows to use passive solar heating. But if you have a large expanse of glass that doesn't receive direct sun, keep the drapes closed. Up to 16% of your heat can escape through unprotected windows.

They also recommend that you keep your furnace clean, lubricated and properly adjusted. You can do this yourself up to a certain point, and save up to 5% because your furnace is operating more efficiently. To this Charles adds that you should "bleed" your radiators to get any air out, so they can heat more effectively.

Another way PG&E suggests you improve furnace efficiency is to seal any leaks in your heating system ducts or water/steam heat pipes. Depending on how bad the leaks are, you could save as much as 25% on your heating costs.

PG&E also stresses the importance of turning your heating down when you're using your fireplace, and not forgetting to close the flue when you're not using the fireplace. According to

Charles, you might want to consider not using your fireplace at all if it gets very cold. “Because hot air rises, and especially with the chimney effect, [fireplaces] draft so well that even after a fire is established, it can remove more heat than it produces.”

Allegheny Power suggests locating your heating thermostat on an inside wall away from windows and doors. “Cold drafts will cause the thermostat to keep your heating system running, even when the rest of your house is warm.” They also advise that you make sure draperies and furniture don’t block the registers or radiators. To avoid drawing heated air out of your home, use bath and kitchen exhaust fans only when you really need to during the heating season.

Tips Under \$50 In Fairbanks, Alaska, they have to cope with severe winters that last from September to May. Master plumber John McCoy, at Expert Plumbing and Heating in Fairbanks, says their “design temperature” (the temperature to which they have to design their heating solutions) is 58 degrees below zero. “We need dependability because things can freeze very quickly, and it’s very hard to thaw them out once they do.”

An inexpensive trick to conserve heat that McCoy has seen around Fairbanks is to take blue foam insulation board, cut it out and stick it in windows. “I often see 2/3 of the front windows covered!” Hmm. Hopefully you won’t have to get that desperate...

If you can only spend a little, Charles recommends that you change your furnace filters every month or two, so your furnace can work more efficiently. He also suggests inexpensive insulation like weather-stripping around doors and windows. Electrical outlets and switches on outside walls can be sealed with a special foam insert.

Of plastic sheeting for windows, Charles says, “You might think thin plastic isn’t much of a barrier, but especially on a windy day, it slows “infiltration” [the cold air that comes in around windows and doors].” But make sure you follow the instructions, because he says it can create a vapor barrier which can cause the windows to sweat.

Another inexpensive saver is the programmable thermostat, for which PG&E offers rebates to their customers. These cut down on energy usage by maintaining cycle levels so you don’t have to change your thermostat settings.

Tips around \$250: If you’re able to spend a bit more, Charles again steers customers to furnace maintenance: “Get a very good tune-up on your heating appliance. It makes it most efficient and goes further than anything in reducing energy costs.”

Allegheny Power recommends installing insulated glass windows with storms to provide a second thickness of glass and a layer of still air that retards heat transmission. And try to hold your glass area to 15% or less of the square feet of floor space.

If you have a fireplace, they suggest installing a tight-fitting damper and glass doors (which you should close when you’re not using the fireplace). They also mention installing an outside air vent for new fireplaces, to draw outside instead of inside air for combustion.

Tips for \$500 on up The design temperature for heating in San Antonio is 19 degrees. They have three months of heating, and the rest of the time, they have to worry about staying cool. John Freund is a mechanical engineer with Comfort-Air Engineering Inc. in San Antonio, Texas. He installs a lot of heat pumps, basically an air conditioner that you can reverse to heat the air instead of cooling it, and which are about equal in cost to a gas furnace. They can be used as air conditioners, too, so they’re perfect for San Antonio.

Says Freund, “The greater the temperature differential between inside and out, the more work is needed to pump the heat. As the temperature drops, the pump loses efficiency, so it’s primary application is really in areas with moderate winter temperatures.” PG&E in California offers incentives to customers who install high efficiency heating devices like the heat pump.

If you are ready for an alternative heating appliance, Jeff Christian, the Director of the Buildings Technology Center at the Department of Energy's Oak Ridge National Laboratories in Oak Ridge, Tennessee says don't just replace it with exactly the same thing. Do a thorough energy audit, and then figure out what your new heating needs are. You may very well be able to reduce your needed capacity.

Oak Ridge's great website (www.ornl.gov) can answer any question you could possibly have about energy usage in general, including insulation. Andre Desjarlais was involved in writing the site's Insulation Fact Sheet. He explains that insulation conserves heat because heat flows naturally from warmer to cooler spaces. It's rated in terms of its thermal resistance, called R-value (higher R-values are more insulating).

According to Charles, the average attic can be properly insulated for around \$500 with 8 inches (R-30) of insulation on the floor between attic and living space. PG&E agrees, and sites potential savings of up to 25%.

So as the mercury drops, don't despair. Take control of your heating situation and save yourself some money!

Sidebar: Conduct your own energy audit (470 words)

To conduct an energy audit of your home, you could go get a degree in mechanical engineering, or just do the legwork then use the tools available on-line for the calculations. You'll need the following information:

- General: Type of home; square footage (only heated or cooled areas); number of floors; ceiling height; year built; number of adults and children
- Structural: Percent of heated/cooled and not heated/cooled basement foundation or slab on grade foundation your house is built on; whether floors, heated basement walls, exterior walls and attic or ceiling are insulated and if so, type and R-value; number of exterior doors; condition of caulking, weather-stripping on windows, exterior doors; air leakage/drafts; number, size and type of all windows and glass doors
- Heating/cooling: Type of primary heating and cooling systems and years installed; if forced air, location of ducts, and whether insulated; normal thermostat temperature; if you set thermostat back, to what do you set it and for how many hours; whether you have a programmable or clock thermostat
- Water heating: Type, size and installation year of water heater; whether in a heated/cooled area; thermostat setting; whether high efficiency or insulated; number and length of showers/baths taken each week; whether you have low-flow showerheads
- Refrigerators: Size; defrost type; gasket condition; year manufactured
- Lighting: Number and size of incandescent, compact fluorescent, tube-type fluorescent, halogen torch and outdoor security/flood bulbs, and hours used per day for each
- Kitchen: Number of loads per week you run your dishwasher or hand-wash; type of energy your range/oven uses and number of burner-minutes range used per day; hours per week you use your oven and microwave
- Laundry: Type of clothes washer and number of loads per week; water temperature usually used; whether your clothes washer has a low water setting for small loads and if so, how many of your loads use this setting; type of dryer and number of loads per week

- Small Appliances: Number of small appliances like hair dryers, computers, clock radios and ceiling fans and average number of hours per week used

Once you've got all your material together, try one of these sources to get the results:

- The Lawrence Berkeley National Laboratory has a site (www.homeenergysaver.lbl.gov) that produces an estimated annual energy bill for the average house and an energy efficient house in your zip code, with a list of suggested upgrades and insulation R-values.
- For the most economic insulation level for your house, use the ZIP-Code Insulation Program available on Oak Ridge National Laboratory's website (www.ornl.gov/~roofs/Zip/ZipHome.html).
- The Pacific Gas and Electric Company site (www.pge.com) has an energy calculator.
- NICOR Gas, a natural gas utility in Illinois, has a website (www.comfortcheck.com) that asks you a series of questions then suggests ways to make your home more energy efficient.

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RECESSION-PROOF YOUR MARRIAGE (1,014 words)

Money is one of the main reasons marriages fail. But it doesn't have to be. If you are willing to spend some time up front to understand what you each think and feel about money, you can not only avoid endlessly repeating the same fruitless arguments, but you can also improve your marriage and your finances in general.

First, you both need to figure out – and communicate to each other – what your respective philosophies are about money. And that's easier said than done. A lot of us don't even realize we have a philosophy about money, though everyone does. You developed it when you're a kid, as did your partner. It mostly comes from your parents' attitudes – whether they lived gaily on the brink of financial disaster, or couldn't part with a dime without cringing.

So what is your money philosophy? Dr. Kathleen Gurney, an expert in the psychology of money and founder of the Financial Psychology Corporation (www.kathleengurney.com), has identified nine distinct financial “personalities”. Using a system she developed called the Moneymax Profiling System, you can figure out which one (or combination of) the nine types you are, and how to use that information to your financial advantage.

Knowing your own money personality enables you to be more confident financially. Knowing your partner's money personality lets you understand and anticipate how they'll react in a given financial situation and why.

For example, you might be thinking “If she really loved me she'd be taking me on an expensive vacation,” while she's thinking she's showing her love by staying home and saving to buy the new house. If you don't know how each other feels about money, this scenario could be the recipe for a disaster. If you do, you'll understand what the other is really trying to show, then together you can discuss what you actually want to do with your money. As a team.

Talking about your views on money won't just help you financially, though. Money is just generally an excellent communication tool. “Setting up a budget touches all major topics in a non-threatening way,” according to Jane Chidester, co-author with her husband John Macko of “Budget Yes! 21st Century Solutions for Taking Control of Your Money Now!” (www.tuliptreepress.com). “Money gives you a hook to hang a lot of discussions that need to take place.”

Since time is money, says Chidester, if you talk about it when you're first starting out together, time is on your side (see her website for a discussion about the time value of money!). Besides, if you get all your arguing done early on you can be done with it. If you don't, you can be setting yourselves up for an endless cycle of reactions. Instead of feeling in control, you'll always be in react mode. Also, you won't have the information you need to make good decisions. If you have a money crisis, this will show up as fear, because you won't know how to handle it.

So how should you get started? Well, just jump in.

Pick a time, preferably early on in your relationship, when you're not under a lot of stress. Set some ground rules – agree to respect each other's differences, don't judge or blame each other.

Open with a discussion of what your childhood experiences with money were. Did your parents plan and budget or wing it? Did you feel anxious about money as a child? What do you associate with money – security, having fun, having your phone turned off for non-payment?

Then move into the logistics. The areas you want to make sure you cover, according to Chidester, include:

- personal money habits: how much cash you carry, what types of credit/debit cards you use, what bank accounts you have
- spending habits: whether you're an impulse-buyer, catalogue-shopper, list-maker
- money handling: checkbook balancing, budgeting practices, approach to taxes, filing system
- credit history: how much and from whom, issues with repayment or debt
- investments: types you have, how you invest, risk appetite
- insurance: what you carry and with whom

So far, it's just been a simple, objective fact-finding mission. But you've laid the groundwork for the next part of the conversation: deciding together what you want as a couple. This is where the differences in your backgrounds will really show up, so go gently and carefully.

"Love and Money: 150 Financial Tips for Couples" is a great booklet written by Gurney and Ginita Wall, a financial planner and accountant as well as author of "Our Money, Our Selves" and co-founder of the Women's Institute for Financial Education (www.wife.org). In it Gurney and Wall cover what couples should discuss about money, like how you'll communicate, make decisions, general views on child-rearing and money, how you'll develop common goals and plans for your finances, and what your fantasies as well as fears are about money.

Once you've thrashed everything out, and are ready to set up your financial household together, think about setting up a budget.

Now, before anyone panics, "budget" doesn't mean "deprivation". Chidester says probably the biggest reservation couples have about budgets is the idea that they're like a diet, you have to "give up" things to make them work. In fact, you don't necessarily, you just need to organize.

If you're engaged and not yet pooling your assets, you may not yet need an elaborate financial plan or even a budget. But definitely set some time aside to talk about your views on money, and your financial dreams and goals. By investing just a little time now in understanding each other better, you can save yourselves a lot of misunderstandings and disagreements down the road. And maybe even a lot of money!

Setting up a Budget

Some common budget guidelines according to Ginita Wall, co-founder of the Women's Institute for Financial Education (www.wife.org) are:

% of Take-Home Pay	Should Be Spent On:
35 to 40	Housing
10 to 15	Food
10 to 15	Transportation
15 to 20	Variable expenses like household repairs, recreation, clothing
5 to 10	Insurance premiums and property taxes
5 to 10	Savings

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RENOVATING YOUR HOME – TEN TIPS FROM THE EXPERTS (843 words)

You're putting a \$100,000 addition onto your house. You're three-quarters of the way through. An inspector happens to pass by and asks for your permit. You didn't get one. He makes you take the whole thing down, and start from scratch.

Does that sound dire? Well, according to Ken Raap, the manager of Lemoi Ace Hardware in Evanston, Illinois, not following code is one of the most common mistakes homeowners make when remodeling.

Getting help isn't always easy, either. Brad Day, the owner of In A Day Construction in Fullerton, California, tells of a client he rescued who came to him distraught. Unscrupulous contractors ran PVC for all the plumbing, they glued 5 gallon buckets together with the bottoms cut out for heating ducts. They ripped out bathrooms and closets, stripped the house of fixtures, tore holes in floors, then took off.

OK, so maybe these are extreme and (hopefully) rare examples. You can protect yourself by using common sense, and heeding the advice of experts.

Work With An Experienced Contractor: The unwary can get into real trouble by picking an inexperienced contractor. Day says "I've never done anything but construction, every day of my life, this is what I do."

Last year, Day fixed six houses that had been "renovated" by unlicensed contractors.

Check Credentials: Day recommends checking with the Better Business Bureau and your state's Contractors Board when choosing a contractor.

"Find someone who's used [the contractor], go and see the addition," Raap advises. "Ask the owner how he did. Was he over budget, either in for time or money?"

Follow Code: Siting an example of non-code plumbing that can land you in hot water, Raap says, "Using PVC is against code in a lot of places. It varies from town to town. In some places you can use it for DWV – drainage, waste and venting – but not supplies [incoming water]."

Raap recommends getting the city involved up front. "[In Illinois] there's an inspection before you start, unannounced midway through, then at the end. The unannounced inspection can save you a lot of hassles."

It's Going to Be Ugly Before It Looks Good: Most customers, according to Day, aren't prepared for the havoc their vision of loveliness is going to wreak. He warns them in advance: "There's going to be some inconvenience. Get ready for a bit of destruction before it gets better. I'm going to be dropping walls, taking roofs off."

It May Cost More: In California, finished construction costs between \$100 and \$125 a square foot, according to Day. Raap says he sees between \$85 and \$100 in Illinois.

Raap encourages customers to do their own reality-checking. "Go out and talk to friends who've had additions, go to the experts and see how much they all charge before starting. Then add a fudge factor of 10% to the cost so the incidentals are all covered."

Can you save by being your own general contractor? “Yes, you may be saving a lot of money but there’s a lot of hassle. It’s easier to fix a problem if you have a general contractor then if you are the GC.”

Don’t Underestimate: “People start out gangbusters, then the cash runs out,” says Raap. “They’re left with an unfinished room or they can’t finish it right.”

He tells customers, “Never start a project late in the day or on a Sunday. It’s like opening a can of worms, you don’t think it’s going to be as difficult as it’s going to be.”

Beware of Cutting Corners: Cost overruns are legion in remodeling. But cutting corners because you didn’t factor in the possibility of an overrun can be even more expensive, warns Raap. “You might have to repaint more often, replace windows, re-carpet, or re-do tiles.”

Beware the “Good Deal”: “I have a friend who knows someone who’ll give you a good deal.” Famous last words, Day cautions. “Always get three bids, but beware of underbidding just to get the job. Cheapest isn’t always best.”

If things do go awry, sometimes it’s better to cut your losses. “People don’t want to change contractors mid-stream, but sometimes that original low bid ends up not being cheap at all.”

Make Your Mistakes on Paper: “Most people don’t have the ability to visualize, even with a 3D drawing,” says Day. “85% of the time, they want to change something once the work starts.”

Since homeowners are responsible for anything that changes the scope of the original quote, that means more money. Make sure you know what you want before construction starts.

Get It In Writing: Finally, some contractors try to get away with just a high-level no-detail quote, which means you can’t argue with them if they didn’t include a door to get into the room, or a toilet in the bathroom. Day says he gives a full breakdown, and a detailed quote.

It may all sound kind of scary, but just be careful. And think how nice that new kitchen will be, or how much the new bathroom will add to the value of your house!