

Virtual Energy Audits By Tom Tate

Do you know how well your home uses energy? Unless it was built quite recently to stringent energy efficiency standards and has been rigorously maintained, there are bound to be areas where you can improve efficiency, save money, and reduce your carbon footprint.

In a perfect world, the best option is to have a full blown, in-home energy audit conducted by a trained professional. This will take several hours and usually involves a detailed inspection of the shell (outside) of your home, the insulation, HVAC systems, lighting, and appliances, to name a few. It should also use test equipment such as infrared scanners to spot leaks in the walls, a blower door for pressurization testing (helps spot hard to find leaks in the exterior), and a duct blaster to find leaks in your ductwork.

The drawback in my mind to the in-home test is working it into your schedule. It takes several hours when done correctly which means you might have to take off from work, farm out the pets, get help with the kids and their after school activities, and so forth.

There is a viable alternative and that is the online or “virtual” home energy audit. These online tools have come a long way in the last ten years. I remember trying out the audit produced by one of the Federal Government’s national laboratories, also engaged in programs related to rocket science at the time. After about 20 minutes, it was clear that I needed to be a rocket scientist to complete the audit.

Today’s audits are a far cry from that early offering. They are short, to the point, take only a few minutes, provide an assessment of your home’s efficiency, and typically provide helpful tips on how to reduce energy waste. They have very sophisticated computer models that, depending on the provider, use local housing types (age, size, floors, construction materials, etc.), local weather data, and your energy bills (when provided through your cooperative).

I have used several of these audits and found they can come to within a dollar or two of my actual energy bills when fed the correct information. Amazing! True, the audit won’t provide a pressurization test of your home and ductwork (if applicable) but it is a great start. And I was able to do it at my convenience.

Information You’ll Need for a Virtual Audit

Each audit is a little different and the information required may vary but this is basically what you’ll need. Be as accurate as possible without creating so much work for yourself you regret taking the audit.

- Your home zip code – for weather and housing data.
- Your average monthly electric bill.
- Your electric rate if not your co-op’s audit.
- Your average monthly fossil fuel bill(s) – oil, propane, gas.
- Your fossil fuel rate(s).
- Age of your home and general characteristics (size, floors, exterior material).
- Age and number of appliances.
- Type and age of heating and cooling systems.
- How many incandescent, CFL, and LED lights you have.

Check with your co-op to see if they offer an online audit and if they do, be sure to use it. Should they not offer an online audit, there are alternatives you can use with a little prep work. See the sidebar for information you will need for any online audit.

Now, where to look for audits if your co-op does not offer one.

- Nearby utilities – they will have comparable weather and housing data so will be more accurate.
- Nearby fossil fuel utilities/providers.
- The rocket scientists: <http://hes.lbl.gov/consumer/> Not to worry, they have a quick input option.
- Socially conscious providers like: <http://www.myenergysolution.com/home-energy-basics/online-audit.html>

It is unfortunate that I have to add this warning but be careful when using audits provided by organizations other than utilities, governmental agencies, or universities. They may be trying to get information to sell you something. If you see phrases like, *“Learn what your power company does not want you to know”* or the site looks like a marketing page, move on. Unless you are dealing with your co-op or fossil fuel provider, do not provide any personal info outside of your physical address for data accuracy or an email address for receiving a report.

Don't want to mess with the online aspect? Fear not, here are a couple of DIY pages for your convenience.

- <https://ag.tennessee.edu/solar/Pages/Energy%20Audits/DIY-Home-Energy-Audits.aspx>
- <http://energy.gov/energysaver/do-it-yourself-home-energy-audits>

The bottom Line? Take an audit then implement as many of the recommendations as you can. Even taking small steps can add up to significant results when thousands of people participate. You'll see the benefits in your utility bills for years to come.