

## Miracle # 1: Columbia Gas Home Energy Audit Program



For \$50, you can get a comprehensive energy evaluation at your home, including infrared-image testing of walls

Free LED lamps, low-flow shower heads, thermostat and pipe insulation installed and more to help save energy right away

Rebates of 20 to 50% on air-sealing and insulation work

<https://www.columbiagasohio.com/energy-efficiency/for-your-home/home-energy-audit>

## Miracle # 2: Baking in the Winter

Baking in the winter (vs. summer) can make the home feel warm and cozy, and it can also save a lot of energy.

- If you have a gas furnace and a gas oven, baking in the winter is 20 to 40% more efficient than furnace heating because there is no exhaust flue and the oven is a radiative heat source as well as convective. It's a net savings to your wallet and the environment.

- If you have an electric oven and air condition in the summer, avoiding baking a pie for one hour in the summer saves about 6 lb of CO<sub>2</sub>e of GHG emissions from the oven, and another 3 lb of GHG emissions from avoiding extra use of AC

## Eight Home Energy Miracles for Hanukkah

Prepared for Kehilat Sukkat Shalom by Eric Boxer, PE  
December, 2019

## Miracle # 3: Netting the Whole Value of Solar Net Metering



Net metering gives you deserved credit for any energy you produce but do not use on site at the time

If you have solar panels at your house, or are thinking of getting some, make sure your **electric generation provider** contract includes reimbursement for the generation portion of the net metering amount.

If shop for an alternative generation provider, you might need re-negotiate your contract. Or, consider going with generation service from AEP and making sure you have a solar-ready smart meter installed.

<https://www.puco.ohio.gov/be-informed/consumer-topics/net-metering-faq/>

## Miracle # 4: Switching to LED Light Bulbs



Think that switching to LED light bulbs doesn't matter because you mostly use lights in the winter and you need the heat anyway?

With current natural gas prices of about \$0.37/CCF, **Electricity costs 7x more for heating** even after accounting for efficiency.

Look for LED lamps that are rated at 2700K "CCT" (correlated color temperature) for that same warm glow of an incandescent. Using "warm" LEDs in the home is important to prevent the unwanted effects of blue light that can disrupt circadian rhythms,

IKEA has 8-W LED light bulbs at 2700 K (equivalent to a 15-W CFL or 60W incandescent) available for \$0.80 each!

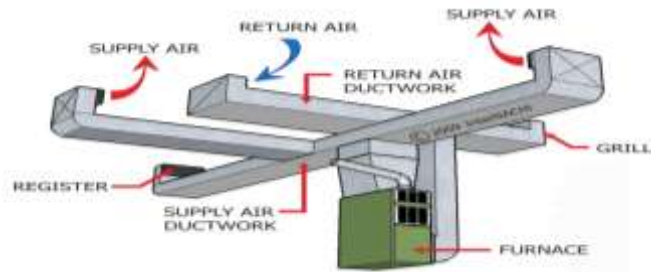
## Miracle # 5: Window Insulation Film



Adding a layer of heat-smoothed plastic film to the entire window frame area from Nov 1<sup>st</sup> to Apr 1<sup>st</sup> can **reduce drafts and reduce radiant discomfort** by increasing the inner surface temperature of the window opening. This is especially important for single-pane windows, but also very helpful for older aluminum frame storm windows.

A kit for 5-6 windows is about \$10 and can be used over a couple years.

## Miracle # 6: Balance your home airflow distribution



If you have a forced air (aka, “Central Air”) heating and cooling system in your home, it can make a world of difference to **make sure that the air is going to the places you want it**, and not to the spaces in the home you don’t use. Make sure the thermostat is located in a room that gets good airflow, but seal up vent openings to rooms you don’t need.

For example, if your bedroom is upstairs and you like it cool for sleeping in the summer, shut off most of the vents downstairs to distribute the cool air more effectively from the top down. Heavy blankets and rugs are good for sealing floor vent openings.



## Miracle # 8: Pressure Cooking



Pressure cookers work by increasing the pressure, and boiling temperature of the contents. They are also sealed vessels, meaning almost all the heat going in stays in and works to cook the food. **Using a pressure cooker can save 40 to 85% energy** compared to stovetop cooking or oven baking!

Modern pressure cookers are much safer than 1970s era predecessors.

Many automatic models available today are very well insulated, and come with timers and several mode settings – which can save you time too.

## Miracle # 7: Decide for yourself if you really need to operate a Radon pump

To be sure, radon poses dangers to health; magnified by risk factors like spending large amount of time in the basement, smokers, or having other particulate smoke in the home.

However, if your risk factors and radon level in your home don’t amount to much, **perhaps reconsider if operating a radon pump in your home is necessary**. Check your home inspection report for the radon levels measured in your home. The US EPA recommends taking action if your radon inspection shows levels of > 4 pCi/L.

A Radon pump at 80W running 24/7 can cost about \$100 / year to operate, and contribute to over 1,200 lb CO2e of GHG emissions.

<https://www.cdc.gov/features/protect-home-radon/index.html>

