



The Road to Energy Savings

As your Energy Partner, OPPD wants to emPOWER you to take control of your energy use. This Roadmap to Energy Savings will serve as your step-by-step guide to energy savings.

Home improvements, both big and small, can help you create a more healthy, efficient home. But did you know it's important to make these home improvements in a specific order? For example, buying a new heating and cooling system without first sealing air leaks in your home can result in a system too large for your home, which means it will run less efficiently.

This roadmap will guide you through those steps to help you save the most energy possible.

Be sure to visit oppd.com and utilize the following resources on your energy-saving journey:

• **Video Tutorials** - OPPD's Energy Efficiency Video Library has instructional videos on caulking, weather-stripping, installing a water heater jacket, insulating, reading your meter and more.

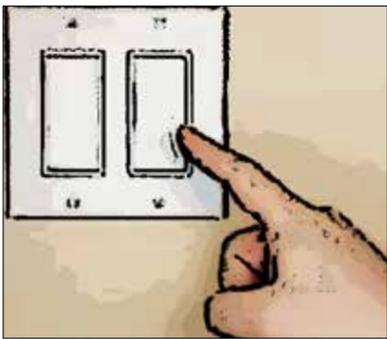
• **Energy Advisor** - Call 402-636-3850 or email EnergyAdvisor@oppd.com for answers to all your energy-related questions.

• **Energy Saving Calculators and Tools** - Access tools to calculate your appliance electricity usage, log your electric usage and calculate your monthly household expenses.

So come along for the ride! And watch out for road signs along the way. You're on your way to energy savings and your energy partner is here to help you every step of the way.

1 No Cost Improvements

- ❑ Utilize the Energy Tools and Calculators on oppd.com. These will help you better understand your home's energy usage.
- ❑ Keep windows and doors closed when heating and cooling your home.
- ❑ Close fireplace dampers when not in use.
- ❑ Set the thermostat on your water heater to 120 degrees.
- ❑ Wash only full loads of clothes and dishes, and air dry when possible.
- ❑ Use energy-saving settings on all appliances.
- ❑ Set your thermostat at 68°F in the winter and at 78°F in the summer. Every degree can save you 1 to 3 percent on your energy bills.
- ❑ Check your furnace filter every 30-days and replace when needed.
- ❑ Whenever possible, use cold water to wash clothes.
- ❑ Inspect the dryer vent duct and keep it free from lint and other obstructions.
- ❑ Turn off lights and fans and unplug electronics when not in use.
- ❑ In the summer, close window coverings to cool your home and in the winter, open them to let the sun in and help heat your home.
- ❑ Shut lights off when you leave a room! We know you've heard that before, but do it. It works!



2 Seal Air Leaks

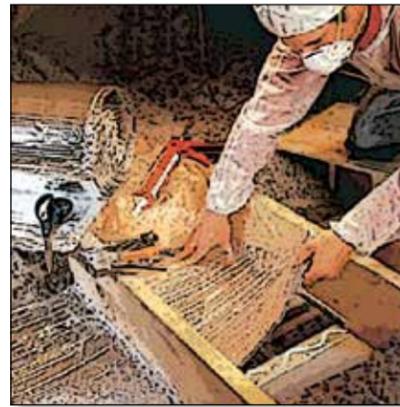
- ❑ Conduct a visual evaluation of your home. Light coming through openings, dirty or darkened insulation and dirty spots on the ceiling or carpet may all be indicators of air leakage.
- ❑ Install weather-stripping on windows and exterior doors.
- ❑ Install plastic storm window kits.
- ❑ Install outlet and switch plate cover foam gasket seals.
- ❑ Apply caulk around window frames inside and outside the home.
- ❑ Caulk around ceiling penetrations, such as recessed



- can lights and ceiling heating/cooling vents.
- ❑ Apply caulk or spray foam to band joists, rim joists (the area which goes around the top perimeter of your basement foundation), and other structural components.
- ❑ Refer to the manufacturing information of products, such as caulk and spray foams, to find the correct one for your project needs.

3 Add Insulation

- ❑ Check the insulation in your attic, ceilings, exterior and basement walls, floors and crawlspaces to ensure the insulation meets local Energy Code recommended levels.
- ❑ Insulate the water lines closest to your water heater and add a water heater insulating blanket.
- ❑ Make sure rim joists are properly sealed and insulated.



4 Lighting Improvements

- ❑ Replace incandescent light bulbs with more efficient CFL or LED lighting.
 - CFLs last about 7 years (ten times longer than incandescent light bulbs) and use 75 percent less energy.
 - LEDs use 85 percent less energy and last 20 years longer than incandescent lights.
 - CFLs and LEDs will also help to reduce summer cooling bills.
- ❑ Look for ENERGY STAR-recommended lighting.

5 Electronic Appliance Efficiency Upgrades

- ❑ Look for the ENERGY STAR label when purchasing TVs, stereos, computers and other small appliances.
- ❑ Consider purchasing a programmable thermostat. They can save as much as 10 percent per year for heating and cooling by using set-back features.
- ❑ Plug-in electronics use energy even when they're not in use. Use phantom power-rated plug-ins to prevent this wasted energy usage.
- ❑ Treat ceiling fans just like your lighting; when the room is unoccupied, turn them off. Ceiling fans will only reduce heating and cooling costs if you raise your thermostat setting in the summer or lower your thermostat setting in the winter.
- ❑ In the summer, use the ceiling fan in the counter-clockwise direction.
- ❑ In the winter, reverse the motor and operate the ceiling fan at low speed in the clockwise direction.



- ❑ Look for ENERGY STAR options for ceiling fans.

6 Energy Efficiency Appliance Upgrades

- ❑ Look for the ENERGY STAR label when purchasing new major appliances (refrigerators, washer and dryer, stove, etc).
- ❑ ENERGY STAR qualified appliances use 10-50% less energy than standard appliances.

7 Space Heating and Cooling Upgrades

- ❑ Complete Steps 2 & 3 before purchasing a new heating and cooling system.
- ❑ Be sure to inform your heating and cooling contractor of the energy efficient upgrades (air sealing, added insulation, new



windows, etc.) you've done and insist that they perform HVAC heating and cooling Manual J Load Calculations in order to "right-size" your new system.

- ❑ Ask your contractor to make your air distribution systems more efficient as well.
- ❑ Seal joints and openings in ductwork to help your heating and cooling system operate more efficiently.

8 Window and Door Replacement

- ❑ Look for the ENERGY STAR labels.
- ❑ Consider high-performance double-pane windows with a Low-E coating.



- ❑ Choose windows with a low U-Factor and a low Solar Heat Gain Coefficient (SHGC) for better efficiency.
 - SHGC levels will vary by direction for your home. Make sure your window professional takes direction into consideration.
- ❑ Hire a trained professional to install your windows.

the RoadMap

TO ENERGY SAVINGS

Energy saving projects, from little to large

Follow the map below for suggestions on how to start saving energy without spending a lot of your money. See the checklists on the reverse side of this map for specific actions.



the RoadMap

TO ENERGY SAVINGS

1 No Cost Improvements

You don't have to spend a lot to save a lot. For example, lowering your water heater thermostat from 140 to 120 degrees could cut energy usage by 3-5%.

This is also a good time to get a grasp on your energy usage. Watch *How to Read Your Electric Meter* and *Evaluating Your Energy Use* from the Energy Efficiency Video Library found on oppd.com and complete the Step 1 checklist found on the back of this map.

Map Key

 OPPD's Energy Usage Tools and Calculators can be used during this step – oppd.com/usagetools
 A video tutorial is available for this step – oppd.com/videos

3 Add Insulation

Proper insulation in walls and ceilings is essential for a healthy, efficient home. But did you know that insulation can also be used on pipes and water heaters to save energy?

2 Seal Air Leaks

Don't let the air you paid to heat and cool go out the windows! Caulk and weather-strip around doors and windows, install wall outlet covers, and use spray foams to seal air leaks throughout your home.



Step 2 is extremely important. It has a great return on investment in terms of energy savings, and may impact future steps that require a larger investment.

4 Lighting Improvements

Lighting has changed drastically in recent years in terms of efficiency. Do you know what a Lumen is? Do you know how long LEDs last? Refer to the Step 4 checklist on the reverse side for more information. Next time an old, incandescent bulb burns out in your home, reach for a long-lasting LED or CFL.



Use caution when purchasing CFL and LED bulbs. The cheapest bulbs may not live up to their life expectancy projections. Look for the ENERGY STAR logo on packaging for longer lasting options.

5 Electronic Appliance Efficiency Upgrades

Did you know your electronics still use energy when not in use? Purchase power-rated plug-ins to alleviate this problem. Also, consider a programmable thermostat for your home.



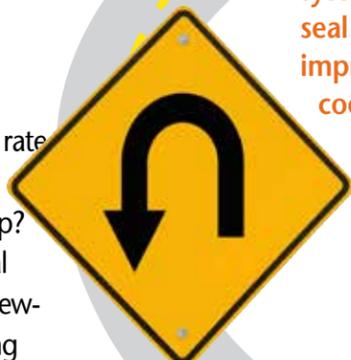
6 Energy Efficiency Appliance Upgrades

As you begin replacing old electronics and appliances, look for the ENERGY STAR label. While they may require a larger initial investment, they will help you save energy and money down the line.



7 Space Heating and Cooling Upgrades

There's a lot to consider when purchasing new heating and cooling equipment. Did you know OPPD offers a lower winter electric rate to customers with a qualifying heat pump? Consider geothermal heat pumps as a renewable source of heating and cooling.



If you're looking to purchase a new heating and cooling system and have not done steps 2 and 3, be sure to air seal and upgrade your insulation first. Making those improvements BEFORE purchasing a new heating and cooling system will help your HVAC dealer right-size your system. An over-sized system will operate less efficiently.

8 Window and Door Replacement

When it's time to replace your windows or doors, consider energy-efficient brands. These often have energy efficient features, such as multiple panes of glass, Low E-coating and more.

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Now that you've completed steps 1 through 4, it may be a good time to get an energy analysis performed by a Certified Energy Rater. Visit oppd.com/analysis.

See reverse side for Step-by-Step Checklists