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EcoConsumer: Time is right to explore alternative home power

Just because it's possible doesn't mean it's easy, however. You'll need to invest significant time and effort into research, planning and upkeep, but the green rewards should be worth it.

By TOM WATSON

Special to NWhomes

Making your own energy is finally a realistic goal for the average American homeowner. You can use sun, wind, the warmth of the ground or even water.

Just because it's possible doesn't mean it's easy, however. You'll need to invest significant time and effort into research, planning and upkeep, but the green rewards should be worth it.

Nationally, alternative home energy still faces frequent opposition and skepticism. For example, major power utilities in Arizona and elsewhere, worried about revenue loss, are urging governments to end "net-metering" agreements. Net-metering allows customers with solar panels to spin their electric meters backward and sell solar-generated power back to utility companies for credit.

In the Northwest, the political and regulatory climate for renewable energy seems more favorable. In July, Washington's Utilities and Transportation Commission changed its rules to make permitting, financing and insurance arrangements easier for homeowners who install solar panels and other alternative-energy systems.

State and local regulations for home alternative energy can still be a challenge to navigate. Start early when checking regulations, especially for less common types of systems.

Many government and utility-company financial incentives and rebates are available in Washington state. Search the federal Database of State Incentives for Renewables & Efficiency (dsireusa.org) for listings.

Here's a bright, brisk, warm and wet review of the most popular options:

Solar. For most Western Washington homeowners, energy from the sun is currently the most practical, financially feasible form of alternative home power.

Solar options have brightened considerably in recent years, as solar installers gain experience and manufacturers improve their products. The state offers a financial incentive when you buy specified types of home-energy equipment made in Washington, such as solar modules from Silicon Energy in Marysville or Itek Energy in Bellingham.

For best deals on solar, look into neighborhood programs that reduce costs through bulk purchases of solar panels and installation.

Wind. Small wind-power generators for homes have become more common, but most locations in Western Washington don't have enough wind to make these practical.

If you have average wind speeds of at least 10 miles per hour, generating electricity from wind might make sense, according to Seattle-based installer Northwest Wind & Solar. The company notes that area locations with suitable wind speeds include mountain foothills in the Enumclaw/Buckley area and certain island coastlines. A tall tower may still be needed.

Equipment innovations could make home energy generation from wind more feasible. Wind turbines called Powersails, with blades made of super-strong fabric, are manufactured in Auburn by 3 Phase Energy Systems. These and other new products and systems claim to produce power with wind speeds as low as 4 miles per hour, but most of them don't have a long operational history.

Geothermal. Utilizing heat from the earth doesn't generate electricity like other systems do, but it can warm your home. In a typical ground-source system, liquid runs though pipes buried in your yard. Heat (or cold in the summer) is transferred using a geothermal heat pump.

Quiet, durable and efficient, these systems perform well in the Northwest. However, for a medium-size house, they usually cost more and have a longer payback period than solar or non-geothermal ductless heat pumps.

Hydro. A surprising number of folks in our neck of the woods have streams on their property. If you're one of them, consider micro-hydro power, especially if your stream drops several feet in height. Unlike wind or solar power, small hydro can be fairly consistent, as flowing water turns a wheel or turbine to generate electricity.

A related idea that often gets floated is to put a turbine on a home's gutter downspout to generate electricity from the rain. Unfortunately, even in soggy Seattle, you wouldn't get enough water or flow to make that worthwhile, says Benjamin Root, a renewable-energy expert and writer for Home Power magazine.

But you have plenty of other options — and if you can generate at least part of your energy without fossil fuels, you and the planet will come out ahead. Remember, fighting climate change begins at home.

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