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**HOW WILL
I KNOW
GREEN
POWER IS
COMING TO
MY HOUSE?**

States in the U.S. are connected by a vast electric power network, often referred to as “the grid.” This electricity grid provides a large pool of energy for everyone to use.

Each region has its own power pool, although electricity can be delivered between regional pools. Our demand for power would drain these electricity pools in an instant if

not for power plants continuously replenishing the pools by generating more electricity.

Once any generated power enters the grid, it is not possible to trace exactly to which power lines the electricity flows. The green power you purchase becomes part of the power supply, replacing the amount that would have been generated using fossil fuels.

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**HOW
DO I
PURCHASE
GREEN
POWER?**

Green power is purchased each month in 100 kilowatt-hour “blocks.” Your green power purchase will appear as a separate item on your electric bill, in addition to your regular electricity usage. There is no maximum to the number of blocks you can purchase, but you must make a 12-month commitment to purchase the same number of blocks each month. The yearlong commitment allows New-Mac to properly forecast the amount of green energy needed.

Please contact New-Mac Electric, at (417) 451-1515 or (800) 322-3849, for the current cost of green power blocks or more information on the program.

**Put away
a little
“GREEN”
for the
Future**

**SPENDING A
LITTLE MORE FOR
“GREEN POWER”
SAVES VALUABLE
RESOURCES
FOR THE FUTURE.**



New-Mac Electric Cooperative

Your Touchstone Energy® Partner

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WHAT IS “GREEN” POWER?

There is not yet a clearcut and universally accepted definition of “green power.” “Green” energy or “green” power is usually defined as electricity generated from a renewable source in an “environmentally friendly” way. However, “green” and “environmentally friendly” are widely defined terms within the energy industry. Large-scale hydroelectric facilities (dams), for example, generate with a renewable source, but the electricity often is not considered green because of the dam’s environmental impact.

Making electricity from green sources is not as inexpensive nor as easy as generating with coal or natural gas. We simply cannot get as much energy out of renewable resources as we can from conventional fossil fuels.

Although there is little or no fuel cost, there are other factors involved. Renewable sources tend to be located in remote areas, making it difficult to get fuel to the power plant. For example, there are high costs associated with handling, transporting, and storing large quantities of biomass fuel. In addition, expensive high-voltage transmission lines must sometimes be built to distribute the electricity. For these reasons, and others, the costs to produce green power can still be quite high.

WHAT RENEWABLE SOURCES ARE AVAILABLE?

The total amount of green power generated from a specific resource on any given day is limited and generation costs can vary widely. Your electric cooperative purchases green power at the lowest cost available; using multiple sources helps balance supply and demand.

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WHY DOES GREEN POWER COST MORE?

The most common renewable sources used to generate electricity are biomass, wind, solar, geothermal, and small-scale/low impact hydropower.

The total amount of green power

BIOMASS

The definition of accepted biomass fuels varies from state to state. Wood and crop scraps, paper, liquids such as fish oil and waste alcohol, tires and some plastics can be burned to generate electricity. Methane gas from landfills, wastewater treatment plants and large cow and pig farming or processing operations is usually considered a renewable source.



WIND

Commercial wind farms require 200- to 300-foot towers spread over a large area to generate enough electricity for wholesale use. Generation happens only when the wind is blowing at the correct speed, so location is an important factor. Wind energy potential varies greatly from state to state and region to region.

Wind farms also need high-voltage transmission lines to distribute the electricity generated. The cost of building transmission lines to the location of the best wind affects the feasibility of a wind farm project.



SOLAR

“Solar power” in the energy industry refers to power plants that produce electricity by collecting solar radiation. Solar thermal plants focus sunlight on a water-filled boiler to create steam and turn a generator. Other plants use acres of photovoltaic panels (solar cells) to convert sunlight into electricity.



GEOTHERMAL

Geothermal power plants use steam that lies below the surface of the earth in certain locations. Geothermal plants emit little air pollution and can have minimal impacts on the environment. Plant locations, though, present a challenge to electricity distribution.



SMALL-SCALE HYDROPOWER

Small-scale hydroelectric facilities use smaller dams to lessen the environmental impact of their generation. Low (or no) impact hydroelectric plants place a waterwheel directly into a quickly-flowing stream or use a small dam partway into the stream to divert water to the turbine.