

# Securing The Promise of Renewables

**S**INCE THE 1970s, ELECTRIC CO-OPS HAVE BEEN actively engaged in promoting renewable energy resources like wind, solar, hydropower and biomass (including landfill gas, livestock waste, timber byproducts, and crop residue). Today, nearly 90 percent of the nation's 900-plus electric co-ops provide electricity produced by renewable sources, all playing a key role in powering rural America while increasing our nation's energy independence.

"Renewable energy makes up approximately 11 percent of all co-op kilowatt-hour use (10 percent hydro and 1 percent non-hydro), as compared to 9 percent for the nation's entire electric utility sector," says Kirk Johnson, vice president of environmental policy at the National Rural Electric Cooperative Association (NRECA), the Arlington, Va.-based service arm of the nation's 900-plus consumer-owned, not-for-profit electric cooperatives.

The Electric Power Research Institute (EPRI), a nonprofit, utility-sponsored organization whose members include electric co-ops, released a study in 2007 outlining a seven-step plan for how U.S. electric utilities could reduce carbon dioxide emis-

sions to 1990 levels by 2030, while still meeting a 40 percent boost in electricity consumption. One of these measures includes increasing non-hydro renewable energy sources, primarily wind and solar, from 24,000 MW to 94,000 MW by 2030.

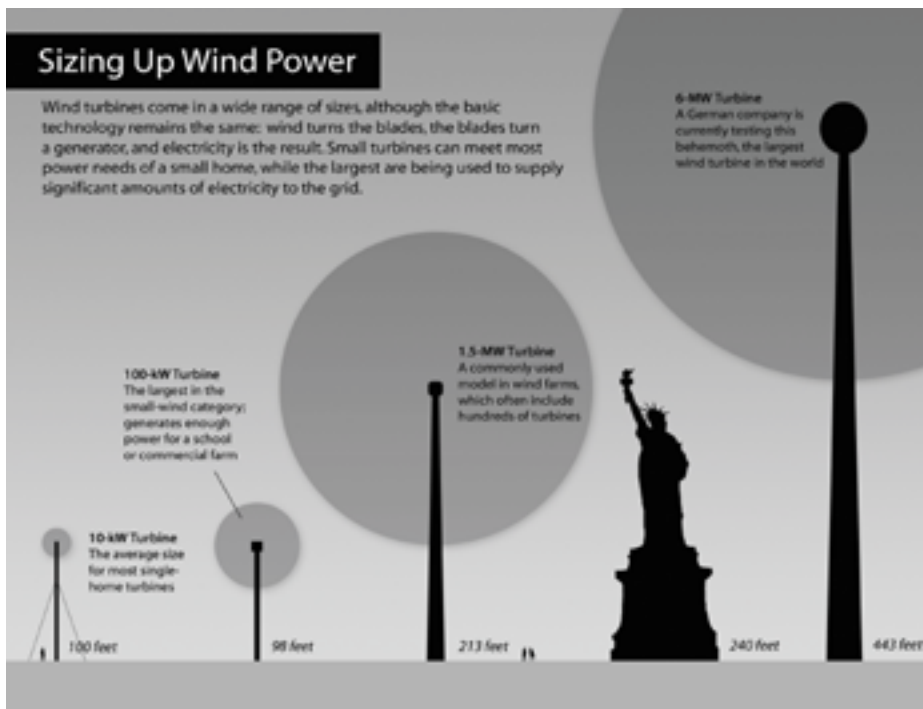
So, what needs to be done to enable a far greater use of renewable energy?

Currently, 150 electric co-ops either own wind turbines or buy output from wind farms, most of which are located in America's "wind tunnels"—the Upper Midwest and Great Plains, as well as down the spine of the Alleghenies in the East. However, wind and solar power face challenges: transmission; intermittency and the need for advancements in storage technology; and increased construction costs and delays. Overcoming these challenges is not impossible but will require strong leadership and investment from government.

• **Transmission** — Renewable resources are abundant in rural areas, but that also means they are located far from the concentrated power needs of cities and towns. To move electric generation from renewable sources (i.e., wind farms), new

By Jennifer Taylor





Today, nearly 90 percent of the nation's 900-plus electric co-ops provide electricity produced by renewable sources, all playing a key role in powering rural America while increasing our nation's energy independence.

transmission lines will need to be built to enable greater availability of renewable power sources.

- **Intermittency** – Most renewable sources are intermittent: the sun doesn't always shine and the wind doesn't always blow. Improved storage system technology would make it possible to store electricity produced by a wind turbine or solar system. When a storm cloud rolls up, stored solar power could be ready and waiting. Electric co-ops are studying ways to boost storage technology, although major breakthroughs have yet to be made.

- **Increased Costs/Delays** – Construction costs for power plants of all types are rising and renewable sources are no exception. Three years ago it was estimated that a wind farm would cost about \$1,000 per kw of capacity to build – today that estimate has doubled. In addition to increased costs, the skyrocketing demand for wind turbines has led to a manufacturing backlog of two years or more. For solar panels, costs for installation and operation can run five times higher than a traditional coal plant of comparable size.

To help electric cooperatives further tap into renewable opportunities, a National Renewables Cooperative Organization (NRCO) was formed in February.

“Electric co-ops remain committed to an overall goal of fostering domestic energy independence while benefiting the environment and assisting rural

economic growth,” concludes NRECA CEO Glenn English. “While no single approach or policy is appropriate for every co-op, we see renewable generation as an important part of our future. It will not be easy, but it is needed.”

Electric cooperatives are also asking Congress to seek out balanced solutions to energy and climate change. NRECA has introduced a public campaign, “Our Energy, Our Future: A Dialogue With America,” to ensure that the voice of cooperatives and their consumer-mem-

bers is heard as debates over energy and climate change legislation rage in state legislatures and Congress.

For more information about this campaign, visit [www.ourenergy.coop](http://www.ourenergy.coop).

*Sources: National Rural Electric Cooperative Association, Electric Power Research Institute, U.S. Department of Energy*

*Jennifer Taylor writes on consumer and cooperative affairs for the National Rural Electric Cooperative Association.*

