



Harrison Rural Electrification Association, Inc.

RR 6, Box 502
Clarksburg, WV 26301-0502
304-624-6365

Your Touchstone Energy® Partner



www.harrisonrea.com

Forward thinking '2010 through 2015'

Looking toward the future is a necessity for any organization that competes in today's business climate. For HREA, that includes planning for our members' futures too! As we move forward with the ever-changing issues of today's economic pitfalls, we sometimes overcompensate for worst-case scenarios and other times underestimate the magnitude of lesser issues.

At Harrison Rural Electric, we are continually looking for what will make us a better-performing company while providing economical energy and reliable service for our membership. Although thinking ahead is the prudent thing to do, long-term planning is a high priority in order to succeed in the business world. General Dwight D. Eisen-

hower once said, "I have found that plans are useless, but planning is indispensable."

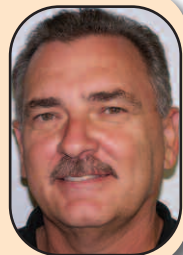
The year 2009 was a milestone for HREA. We were able to run the company on a "cash-flow" basis. This was a huge accomplishment that hadn't occurred in many years. Many cost-saving measures were implemented by the board and management in order to achieve those results. We curtailed all nonessential purchases and cut back on all major construction projects. The results created a year that didn't require additional funding from financial institutions in order to maintain operations!

Looking ahead toward the remainder of 2010, we are continuing to try to hold down costs. One large factor out of our control, however, is power supply. Again we were forced to impose a rate adjustment in June. While this increase is smaller than in past years due to the cost controls applied in 2009, it was still necessary in order to pay our energy provider, American Electric Power.

With issues affecting coal production plaguing the future of all West Virginians, and the new Marcellus wells dominating today's media, we find that "gas futures" are a component used in the pricing of electric energy. That being said, other issues are used to compute the final cost such as

Manager's Corner

by
Gary Jackson,
CEO/General
Manager



capacity, congestion and auction revenue rights. Many of these factors are beyond the scope or knowledge of the general public, but all are required for providing the final cost of electricity.

Due to the economic downturn in the commercial business community, the larger users of energy have curtailed production due to the current economic climate, the consequences of which have created an excess of electricity in the market place. Fortunately, we have been able to secure a new energy contract through July 2015. If conditions remain stagnant, and operational needs are held to a minimum, I foresee some stabilization in rates for HREA members.

Finally, during the fall of 2010, we will be replacing 4.5 miles of old infrastructure that was originally built during the early 1940s in the Adamsville area. Additionally, we are pursuing plans to add a second substation transformer to the Chiefton substation, located west of Clarksburg. This proposed addition will take place over a four-year period in order to minimize the economic impact on our membership while providing greater reliability for our members in the Jarvisville and Bridgeport areas.

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Helping consumers keep more green from green power

by Scott Gates and John Lowrey

Today, more than 80 percent of our nation's 900-plus electric co-ops provide electricity produced by "green power" sources. In tapping resources like wind, solar, hydro, geothermal and biomass (including landfill gas, livestock waste, timber byproducts and crop residue), electric co-ops receive 11 percent of their power requirements from such renewable sources, compared to 9 percent for electric utilities as a whole.

But most new renewable generation is expensive compared to traditional sources of generation. As a result, many electric co-ops are hard at work finding ways to integrate renewable energy sources like wind, solar and biomass into their power supply while keeping retail rates affordable.

The price of wind

Wind power remains the second most prevalent renewable energy resource in the United States, after hydro. More than 35,000 MW of wind-generating capacity had been installed by the end of 2009, enough to serve 9.7 million homes. Electric co-ops account for 2,060 MW of that capacity.

In some parts of the country, wind power is abundant and close at hand. This is the case for Grand Forks, N.D.-based Minnkota Power Cooperative, a generation-and-transmission co-op that currently has the highest percentage of energy from wind, equal to 31 percent of member-owner load. That's higher than any other utility in the country, according to the 2008 Wind Technologies Market Report from the U.S. Department of Energy.

Minnkota Power President and CEO David Loer points out that the co-op's North Dakota wind farm locations have some of the best winds in the nation, with 17 to 18 mile per hour average breezes. "The winds are very robust even though they don't blow all of the time. Transmission was also available close by, so our investment in that area was minimal."

However, wind doesn't always blow when electricity is needed, a condition referred to as "variability." In addition, transporting wind energy from reliably windy spots

to where the electricity is needed—population centers sometimes hundreds of miles away—costs money.

If the nation as a whole were to draw 20 percent of its electricity from wind, a huge amount of new transmission capacity would need to be built. For the eastern half of the country alone, this kind of buildout could require up to 22,000 miles of new extra-high voltage transmission, with a price tag as high as \$158 billion, according to a report by the National Renewable Energy Laboratory.

"It costs less to build transmission on that scale than it does to build wind turbines where there's less wind," explains Jay Morrison, senior regulatory counsel at the

National Rural Electric Cooperative Association. "But it will be difficult to get that done. The industry and policymakers will first have to reach agreement as to how to plan, site and allocate the costs of all of that transmission."

High-end energy

Solar power also experiences variability challenges. Just a fraction of 1 percent of the nation's electricity comes from solar—just over 500 MW of capacity—although some electric co-ops are finding ways to make the sun work for their members.

Over the past two decades, North Dakota's Verendrye Electric Cooperative has installed roughly 200 solar-powered livestock water-pumping systems to serve remote pasture wells. The effort has saved the co-op thousands of dollars in line construction costs. Whereas building a power line to serve a well would average \$20,000 per mile, a solar water pumping system

costs \$4,000.

"Thanks to a U.S. Department of Agriculture renewable energy grant, we've installed 120 solar pumping systems over the past three years alone," comments Randy Hauck, Verendrye Electric member services and marketing manager.

For consumers looking to invest in a solar panel or two of their own, Colorado-based United Power has devised a unique system that eliminates the headaches and expense



of installing a home solar system. Under its Sol Partners program, members can pay \$1,050 to have a 21-watt panel added to an array on the grounds of the co-op's headquarters in Brighton, a Denver suburb.

United Power estimates those who join in can expect to earn a 3 percent annual return on their investment, or roughly \$32 in electric bill credits. The co-op covers maintenance and liability costs.

United Power Communications Specialist Laurel Eller emphasizes that the program will help familiarize members with the "real costs and benefits of solar."

"I think a lot of consumers come into solar thinking it's the answer—and that they won't have electric bills anymore," she says. "This program establishes a living laboratory for demonstrating what they realistically can expect."

Even with these innovative projects, less than 1 MW of electric co-op power nationwide comes from the sun. But Colorado-based Tri-State Generation and Transmission Association has launched a project that will tip the scales on that figure in a big way.

The generation-and-transmission co-op plans to have a 30-MW solar facility completed by the end of this year. The first panels were installed in June, and when it's complete a whopping 500,000 photovoltaic panels, located on a sunny patch of northeastern New Mexico, will generate enough power to serve the needs of 9,000 homes.

"Our first utility-scale renewable energy initiative will be among the largest solar photovoltaic endeavors in the world," notes Tri-State G&T General Manager and Executive Vice President Ken Anderson.

Another log on the fire

Biomass consists of any biological material that can be burned as fuel to produce electricity; electric co-ops currently boast 255 MW of biomass generating capacity. Co-ops are adding wood chips and other organic items to tra-

Keep the 4th fun

Fourth of July fun often involves parades, picnics and fireworks. If fireworks will be part of your celebration, keep these items in mind:

- Never allow children to play with or ignite fireworks
- Read and follow all warnings and instructions.
- Be sure other people are out of range before lighting fireworks.
- Light fireworks only on a smooth, flat surface away from the house, dry leaves and flammable materials.
- Never try to relight fireworks that have not fully functioned.
- Keep a bucket of water close by in case of a malfunction or fire.
- Fireworks should be used only with extreme caution. Older children should be closely supervised, and younger children should not be allowed to play with fireworks.
- Firecrackers, rockets and sparklers account for nearly 60 percent of fireworks injuries.
- Nearly half of the injuries associated with fireworks are to children under the age of 15. For children under 5, sparklers are responsible for nearly 75 percent of injuries.

Source: Naval Safety Center

ditional fossil fuel power plants, like coal-fired plants, to lower carbon emissions, and burning methane, a potent greenhouse gas, drawn from livestock manure and decomposing garbage in landfills before it enters the atmosphere.

In Houston County, Ga., Flint Energies has entered a partnership with the county landfill and is set to turn methane gas into renewable power. A 3.2-MW methane gas generation facility landfill will begin sending out kilowatts later this year.

"The county plans to run the landfill for another 120 years," Flint Energies Manager of Public Relations Marian Douglas points out. "As its volume grows, the quantity of methane gas we can tap will also grow. We expect to add more generating capacity over time."

Biomass is being utilized in other parts of the state as well. Georgia's Green Power Electric Membership Corporation, a partnership of 38 local co-ops, is purchasing 17 MW from a waste wood-fired biomass generator in the scenic mountain town of Rabun Gap, Ga. A former Fruit of the Loom manufacturing facility houses the power plant, which is creating nearly 100 jobs in a community that was economically crippled in 2006 when the garment maker left town.

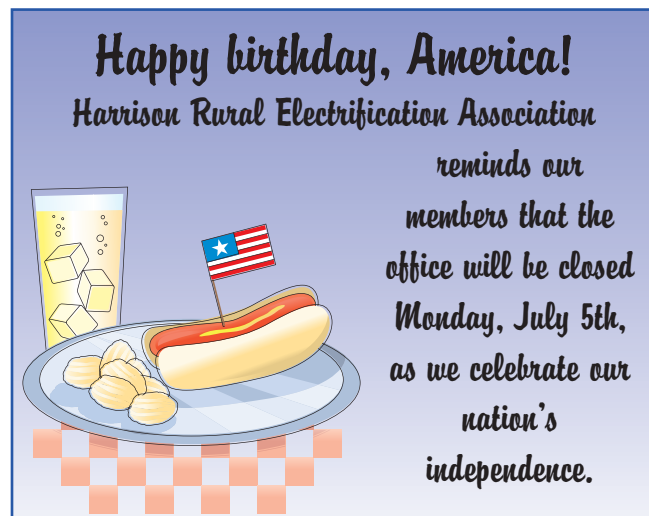
About 20 of the new jobs directly connect to the biomass plant, according to Green Power EMC President/CEO Michael Whiteside. The remainder involves folks who supply slash and scraps for fuel from local timbering operations.

"We will generate cleaner, greener energy, which on its own has tremendous merit," observes Whiteside. "But when you factor in the refurbishing of an abandoned plant for a useful purpose and the revitalization of a small town economy, the value becomes untold."

He concludes: "Rabun Gap is an example of what can be accomplished when we take a fresh look at renewable resources and ask, 'What are the possibilities?'"

Did you know ...

Line drying your clothes can save you a lot of money. To estimate how much you can save, visit www.laundrylist.org.



Happy birthday, America!
Harrison Rural Electrification Association
reminds our
members that the
office will be closed
Monday, July 5th,
as we celebrate our
nation's
independence.

A greener way to a green lawn

by Brian Sloboda, Cooperative Research Network

Most summer weekends are filled with the sounds of splashing in swimming pools, kids riding on bicycles, and the din of lawn mowers. Lawn mowers and other gas-powered lawn equipment roar to life in most neighborhoods to keep yards looking trimmed and pristine.

However, these small engines emit a surprisingly large amount of pollution. By some U.S. Environmental Protection

Agency (EPA) estimates, engines used to maintain lawns and gardens account for 5 percent of total U.S. air pollution. Although regulation of small engines has not been a priority for the government, new rules will go into effect in the next year or two governing emissions from small engines.

The gasoline engines powering lawn mowers and other yard equipment emit carbon monoxide, a colorless and odorless gas that is toxic to humans. They also emit hydrocarbons and nitrogen oxide that contribute to the formation of ground-level ozone. Operating a gasoline-powered lawn mower for one hour produces the same amount of smog-forming hydrocarbons as driving an average car almost 200 miles, according to the EPA.

What's more, gas lawn mowers are noisy—just ask anyone who wanted to sleep in on a Saturday morning when a neighbor decided to get an early start on yard work.

Luckily for your lawn (and neighbors), options do exist to help keep grass beautifully groomed while reducing air and noise pollution.

A manual reel mower is a great option. These mowers have no engine, no fuel and use human power to operate. They have zero emissions and operate with very little noise. The cost of a reel mower starts at \$70. To maximize their effectiveness, the blades should be sharpened regularly and the wheels lubricated. These mowers can last years with proper care. Though it's still hard to push a reel mower through tall grass, today's models are lighter and easier to maneuver than those of several decades ago. They are best-suited for smaller yards, although they can be used on any size lawn. Just keep in mind: the bigger the lawn, the more energy is needed from whoever is doing the mowing!

Electric- and battery-powered mowers offer a clean alternative to the reel mower. Like gas mow-

ers, electric- and battery-operated mowers have a motor that spins a blade, which cuts the blades of grass. They are quiet, emit no direct pollutants and can be either corded or cordless.

Costs for a corded mower are similar to that of a

gas-powered mower, ranging from \$150 to more than \$400. However, they do have one very limiting feature: they must be connected to the house via an extension

cord. As you could imagine, users must be aware of where the cord is at all times in order to avoid running over it with the mower.

Cordless rechargeable mowers are more convenient than their corded counterparts. Some cordless mowers have a removable battery that can be charged inside the home and placed in the mower when it is time to mow the lawn. Costs range from \$200 to more than \$500.

Rechargeable mowers are limited by the life of the battery pack. As a result they may not be best for large lawns. When shopping for a cordless mower, look for information on the size of lawn the mower can handle or the minutes the mower will be able to run on a single charge. Many cordless mowers claim to be able to do one-third to one-half acre of yard or have a cutting time of 45–60 minutes. Actual times will vary depending on the age of the battery, height of the grass and how quickly the user can get the job done.

In recent years, the choice in cordless mowers has expanded, with models introduced by well-established companies like Toro and Black and Decker, as well as newcomers to the field like Neuton. But cordless mowers receive mixed reviews. Given the high cost of the mowers, careful attention should be paid to

the brand and model being purchased. Online reviews of cordless mowers are a helpful resource in picking the right one. Many retailers offer customer reviews of products and these should be looked at prior to purchasing.

Gas-powered lawn mowers can be found on almost every street in America.

However, because of rising fuel costs and environmental concerns, more people are switching to human-powered reel mowers or electric mowers. These alternatives are a reliable and attractive alternative to gas-powered models. They pollute less, and perhaps most importantly, they won't disturb your neighbor's summer nap.

Energy Efficiency *quick tip*

Alternatives to gas-powered mowers are quieter and pollute less while getting the same job done. A manual reel mower is one option, if you don't mind pushing; plug-in and battery-powered electric mowers also have their perks.



Reel (above) and battery-powered mowers offer an alternative to gas-powered lawn mowers.

