

# LEAGUE OF THEIR

A co-op-led group spreads the beneficial electrification message

By Cathy Cash



When night winds sweep across the prairies of west-central Minnesota this spring, the community of Erhard will experience the benefits of electricity like never before.

Power generated by a wind turbine at Lake Region Electric Cooperative's nearby substation will flow to 40 large residential water heaters, allowing households to enjoy hot morning showers at off-peak prices from a renewable energy resource. (See sidebar, page 22.)

"This is a really cool thing," says Cindy Johnson, a co-op member participating in the pilot project. "We have to have some place to put wind energy after hours when demand is low. A water heater makes sense. It's a win-win."

It's also a perfect example of how consumers experience beneficial electrification: They save money and protect the environment while gaining increased reliability, efficiency, and overall improved quality of life.

These key advantages are gaining traction under the leadership of the Beneficial Electrification League (BEL), a national group founded through a partnership between NRECA and the Natural Resources Defense Council (NRDC).

"This is a great opportunity for electric cooperatives," says Lake Region Electric CEO Tim Thompson. "By developing beneficial electrification technologies and adopting more renewable energy, our power supply becomes less carbon intensive, which gives us the opportunity to further electrify our economy and grow our cooperative."

## 'WE'VE ONLY JUST BEGUN'

Electric co-ops big and small are facing a new paradigm. Consumer-members are increasingly engaged with their energy use through smart devices. They expect 24/7 reliability and efficiency at the lowest cost. Plus, they want to know their electricity provider's impact on the environment.

For decades, "regulators have had a yard stick: reduce kilowatt-hours. There is still some merit in that, but it's not that simple anymore," says Gary Connett, who co-chairs BEL and recently retired from Great River Energy, a G&T in Minnesota, where he directed demand-side management and member services for 44 years. "The message has to be, 'Use electricity when and where it makes the most sense.' That's the BEL message."

"If someone is going to stand up for electricity, it's got to be us," says Keith Dennis, the league's other co-chair and NRECA's senior director for consumer-member engagement.

The nonprofit BEL's mission of expanding market acceptance of beneficial electrification sits on four pillars:

- Save money for electricity consumers and providers.
- Reduce environmental impacts.
- Create greater grid flexibility and resiliency.
- Improve the quality of life for members and their communities.

A product or service must check at least one of those boxes without harming any of the others to be considered beneficial electrification.

The league works with statewide cooperative associations, distribution co-ops, G&Ts, and other groups on electricity projects that are good for grid reliability and low in emissions and costs.

"Our groundbreaking collaboration to transition to clean and low-cost electrification solutions is drawing more supporters and interest with every passing day," says Ben Longstreth, senior attorney and deputy director of NRDC's federal policy group. "The partnership we have with NRECA and its members

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*Tim Thompson  
Lake Region Electric*

is helping to use smart electrification to lower consumer energy bills, help clean the air, and make America's communities more resilient.”

The effort began in 2018, when electricity stakeholders, invited by NRECA, crowded a hotel conference room in Arlington, Virginia. There were representatives from investor-owned utilities, public power, the Tennessee Valley Authority, environmental groups, energy technology developers, efficiency organizations, and renewable energy associations.

They talked about building value in electricity and moving toward a cleaner, more flexible, more resilient grid.

Since then, BEL has held similar events, called Electrify! forums, in six states and is in the final stages of chartering its first state chapter. (See sidebar, page 22.)

Numerous co-op projects rooted in beneficial electrification are under way.

“With the Beneficial Electrification League, we can advance the adoption of key energy- and bill-saving technologies, ranging from appliances like highly efficient heat pumps and grid-interactive electric water heaters to electric vehicles, that

can benefit all Americans,” Longstreth says. “We've only just begun.”

## HONING THE MESSAGE

**B**EL leaders say job No. 1 is honing the message.

That starts with defining the term “beneficial electrification.”

“We need to break it down for the average Joe,” says Erin Campbell, director of communications at the Iowa Association of Electric Cooperatives.

She says the key is to rely on BEL's four pillars and to view the issue from the consumers' perspective.

“We're not asking them to buy a \$2,000 refrigerator,” Campbell says. “The electric grid is going to take us to a clean-energy economy as co-ops add more renewables to the grid. As the grid gets greener, you automatically become a greener household with greater electricity use. It's a positive message to share.”

Kevin Condon, the Iowa state-wide's director of government relations, helped coordinate Electrify Iowa! last fall, which drew about 100 attendees from co-ops, economic

development interests, environmental groups, state agencies, and the public. He agreed that making the concept understandable is critical.

“I'm an electric industry lobbyist, and at times, I found myself getting lost in the technical details.”

He sees the transition from fossil-fuel home appliances to electric ones as gradual and tied to the pace of members making normal consumer choices. For example, when his gas-powered lawn mower broke, he weighed the options and decided to replace it with an electric one.

“As those decisions are made by consumers, we on the generation and delivery side see how it all fits together more easily,” Condon says.

But what about costs?

That's another bright spot for the beneficial electrification movement. Not only are prices of renewable power declining rapidly, but research from Touchstone Energy® Cooperatives shows co-op members, particularly young adult members, are receptive to paying higher rates for cleaner energy.

“The younger segment is more concerned with, ‘Where's my utility getting energy from? What is the energy mix?’” Campbell says. “They

want to see electric utilities investing in more renewable generation.”

As the price of renewables becomes more competitive, “that economic challenge is being removed from the conversation,” Condon adds. “The consumer who resisted renewable energy because of the higher cost than carbon-based fuels, that’s changing; that’s not as tough a sell as the economics tip the scales.”

## ‘AN OPPORTUNITY TO BE A LEADER’

Co-ops and statewides are embracing beneficial electrification by supporting projects ranging from electric school buses and farm equipment to bolstering electric vehicle (EV) charging infrastructure, appointing beneficial electrification “ambassadors,” holding Electrify! forums, and exploring neighborhood-scale microgrids.

“We want to be leading the way,” says Bob Richhart, chief technology officer at Indiana G&T Hoosier Energy. “We’re doing things today that are very focused on providing opportunities in the future.”

BEL worked with Hoosier Energy, statewide association Indiana Electric Cooperatives, Indiana G&T Wabash Valley Power Alliance, investor-owned utilities, and others for an Electrify! event in late 2019.

“When BEL approached us about Electrify Indiana!, it was the perfect partnership,” Richhart says. “The league really brought that breadth of information of all the different areas beneficial electrification

touches—not just EVs or storage, but that broad diversity of opportunities.”

He said including regulators and legislators in the conversation is a key factor in gaining traction for beneficial electrification.

“Co-ops have an opportunity to be

a leader here,” Richhart says. “They can be nimble at local and regional levels and have strength in numbers across the country. If we share all that information and work together in each region and state, we can be a big player in advancing technology that benefits end consumers.”

North Carolina’s Electric Cooperatives, the statewide association and G&T, also held an Electrify! forum in 2019 and is focusing on how beneficial electrification efforts can attract new commercial and industrial members and promote economic development.

“We believe these beneficial electrification technologies give us a competitive edge in attracting new load,” says Diane Huis, senior vice president for innovation and business development for North Carolina’s Electric Cooperatives.

The statewide is also collaborating with the Electric Power Research Institute, a utility industry research group, and Advanced Energy, a North Carolina-based nonprofit energy consulting firm, on energy audits and beneficial electrification assessments of industrial, agricultural, and commercial loads, with a focus on how electrification could help such key accounts.

The statewide also helped

“It’s a great way to live up to what the co-op mission is: to improve the lives of the people we serve and be part of the community. This is also a really great way for our co-ops to connect to their members.”

The statewide is considering starting a BEL chapter in North Carolina.

“BEL jumpstarted our efforts and has been very helpful in providing resources,” Huis says. “For us, beneficial electrification is a key focus.”

## ‘AT A WATERSHED MOMENT’

Inscribed in the lobby of Great River Energy’s Maple Grove headquarters are the poignant words of legendary singer-songwriter and Minnesota native Bob Dylan: “The times, they are a-changin’.”

For electric utilities, it’s an assessment that’s never been more apt, Connett says.

“The rules and laws that we have need to change as well,” he says. “We are trying to be the voice of reason for some of that.”

And as consumers adopt new time- and money-saving technologies in their lives, co-ops are well positioned to influence their choices.

“Co-ops can help their consumers make the right decision,” Connett says.

He says he’s encouraged by how co-ops are evolving to meet member needs in transportation, heating, efficiency, and storage, among other areas.

“The nature of electricity—how we

make it, how we deliver it, how we use it—is changing,” Connett says. “Electricity is getting cleaner. End-use technology is more energy efficient. We are at a watershed moment.” **RE**

“The message has to be, ‘Use electricity when and where it makes the most sense.’”

*Gary Connett*  
*Beneficial Electrification League*

Randolph EMC, one of its member co-ops, partner with a local school district and the state to develop a proposal to bring an electric school bus to its territory.

“Beneficial electrification is consumer-member-driven,” Huis says.

# TRI-STATE HELPS OPEN DOOR TO FIRST BEL CHAPTER

**By Cathy Cash**

**L**ed by Tri-State Generation and Transmission Association, Colorado will be home to the first state chapter of the national Beneficial Electrification League (BEL).

The G&T based in Westminster worked with BEL, NRECA, and the Natural Resources Defense Council to open the doors of BEL-CO in December.

Key state offices, including the Colorado Energy Office, Colorado Rural Electric Association, and South-west Energy Efficiency Project also lent their expertise.

“The overall goal is to increase community acceptance of beneficial electrification,” says Shaun Mann, Tri-State’s senior manager for R&D and beneficial electrification.

BEL-CO will serve as a completely independent organization with its own bylaws, board, and governance.

One driving force behind BEL-CO is Colorado’s mandate that power generation be 100% renewable by 2040 and statewide greenhouse gas emissions be cut by 90% by 2020.

Tri-State has its own goal of 50% renewable generation by 2023, Mann says. The G&T serves 43 electric cooperatives and public power districts in four states.

“It’s encouraging to see the collaboration around beneficial electrification that is taking place in Colorado,” says Jim Spiers, NRECA’s senior vice president for business & technology strategies. “As consumers and policymakers learn about electricity’s environmental and economic benefits, state and local efforts can help pave the way for a more responsible future by electrifying homes, businesses, and other sectors of the economy.” **RE**

# LAKE REGION’S WATER HEATER PILOT

**By Cathy Cash**

**L**ake Region Electric Cooperative (LREC) now includes beneficial electrification as a key facet of its strategic plan.

In 2019, Minnesota set a goal to have 100% of its electricity come from carbon-free sources by 2050. That’s on top of the state’s energy efficiency goals set through its conservation improvement program.

“If we reduce the carbon dioxide in our power supply, that opens up opportunities for us,” LREC CEO Tim Thompson says.

The Pelican Rapids-based co-op is piloting control technology on 40 large residential electric water heaters to allow them to be charged with off-peak wind power.

“Wind is variable. There are times where we can’t consume it all. Instead of that excess energy being lost, we can capture it and ‘store’ it in the water heaters,” Thompson says. “Any way we can help members save money and do it in a way that helps the environment, that is beneficial electrification, and that’s a win-win.”

LREC is working with NRECA, the newly formed Beneficial Electrification League, and Steffes Corporation, which developed the controller for the water heaters. Real-time data will ensure that power from the co-op’s 2.3-MW GE wind turbine is serving the program’s 80- and 100-gallon water heaters.

The co-op expects to see reduced peak costs from its power supplier, Great River Energy, and its local transmission providers.

And members won’t need to change a thing.

“When they wake up, their water heaters will be fully charged to 150 degrees,” says Dan Husted, LREC vice president of business development. “We don’t want members to adjust their lifestyle or even notice the water heater management.” **RE**