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Beneficial Electrification Gains Momentum: Strategies For Communicating with Consumer-Members

By Jim Hight

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NRECA
America's Electric Cooperatives

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ARTICLE SNAPSHOT

WHAT HAS CHANGED IN THE INDUSTRY?

Beneficial electrification (BE) is the process of electrifying energy services currently provided by onsite fossil fuel combustion—when the transition provides certain economic and environmental benefits (further explained in the Introduction of this article). This opportunity is largely the result of technology that has increased performance and reduced costs of owning and operating electric devices. BE is gaining an increasingly high profile in the energy utility industry, including among cooperatives. Within the last three years, generation and transmission cooperatives (G&Ts) and distribution cooperatives have invested greater resources in BE, expanded or adjusted rebate and incentive programs for electrification and launched new initiatives. However, with some regional exceptions, BE is still very much an emerging idea, with very limited consumer awareness. To develop greater understanding and participation by their consumer-members, co-ops, along with industry organizations such as NRECA, Touchstone Energy Cooperatives, and the Beneficial Electrification League[1], are refining their BE strategies and improving marketing and engagement practices.

WHAT IS THE IMPACT ON ELECTRIC COOPERATIVES?

Beneficial electrification offers multiple benefits to consumer-members and their cooperatives. The strategies and practices covered in this article can provide guidance and inspiration to co-op consumer-members, staff, managers and board members who are considering or investigating BE initiatives. While the benefits of BE are well understood by many industry and co-op leaders, this article discusses how to engage consumer-members with messages and strategies that are tailored to their needs and interests. Implementing beneficial electrification will require direct communication with consumer members, so a better understanding of how to communicate this effort will have an impact on overall BE efforts.

WHAT DO COOPERATIVES NEED TO KNOW AND DO?

Beneficial electrification can save consumer-members money and improve comfort, and in addition, can provide a favorable counterweight to the stagnant or declining loads faced by many rural electric cooperatives. Yet, these benefits notwithstanding, it is up to consumer-members to choose to adopt the efficient electric options being promoted by their cooperatives. Reaching consumer-members with programs that meet their needs and messaging that appeals to their interests are key ingredients in achieving widespread adoption of BE. Additionally, understanding how to communicate around issues of beneficial electrification can help to demonstrate to consumers-members and the community that emerging expectations are being met. Notably, the language used to promote or implement beneficial electrification will be different to consumers than it is to people in the energy industry. The term "beneficial electrification," for example, may not mean much to a consumer-member who may simply be interested in heating their home and meeting other daily needs in a cost-effective way. This article discusses strategies and tools for talking about this topic with energy consumers.

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[1] **https://be-league.com**

Introduction: What is Beneficial Electrification?

Beneficial electrification (BE) is a term of art within the energy utility industry that has been developed over the past several years based in part on research and advocacy by NRECA. BE includes the application of electricity to end-uses where doing so satisfies at least one of the following conditions, without adversely affecting the others:

- Saves consumers money over time;
- Benefits the environment and reduces greenhouse gas (GHG) emissions;
- Improves the quality of energy services for consumers (e.g., comfort, indoor air quality); or
- Fosters a more robust, resilient and economically efficient electric power grid.

BENEFICIAL ELECTRIFICATION RESOURCES FOR NRECA MEMBERS

NRECA and Touchstone Energy® Cooperatives have collaborated to provide resources to help electric cooperatives communicate the benefits of end-use electrification, including lower overall energy costs for consumer-members and optimizing the power grid to enhance resilience and provide sustainable energy options to communities. The goal is to establish NRECA and electric cooperatives as leaders in and trusted sources for beneficial electrification (BE), and position beneficial electrification as a strategic value option for electric cooperatives.

Resources are targeted to both NRECA's co-op members and their consumer-members. This enables co-ops to fully understand and communicate the benefits to their consumer-members with key messages and overview presentations. Other resources are designed to reach the consumer-member directly through social media and informational pieces.

See: **https://www.cooperative.com/topics/beneficial-electrification/Pages/Beneficial-Electrification-Member-Resources.aspx**.

This definition of BE allows policymakers and stakeholders to identify and promote electrification initiatives that will be widely viewed as beneficial. While this definition is important to frame beneficial electrification, it is generally not necessary for the average consumer to understand this level of detail about the initiative.

The bottom line is that recent developments in electric power generation and end-use technologies are amplifying the benefits of BE and leading to wider acceptance and support. On the generation side, the increasing proportion of emissions-free renewable power makes BE an attractive strategy for reducing GHGs, while advances in electric vehicles, air source heat pumps and other equipment make switching from fossil fuel to electric energy more attractive to users. In essence, by virtue of being plugged into the grid, the environmental performance of electric devices improves over time as the electricity that powers the device becomes cleaner.

What's Driving Co-ops' Interest in Beneficial Electrification?

For cooperatives, BE can offer a way to help consumer-members improve the energy efficiency of their homes and businesses without negatively impacting the co-op's electricity sales, as often happens with energy efficiency (EE) programs. With BE, cooperatives can increase revenues, while consumer-members are shielded from the price volatility of fossil fuels, especially propane. As power grids become less carbon-intensive, BE can reduce GHGs for cooperatives that consider this a priority.

For a more detailed explanation about beneficial electrification and what drives cooperative interest, as well as six mini-case studies, please refer to NRECA's related white paper on this topic, **Case Studies in Beneficial Electrification—*Electric Cooperatives Develop Programs to Build Consumer Value and Meet Climate Change Goals***. The remainder of this article will focus on what can drive member interest and participation in BE programs.

Consumer Awareness—Key Market Barriers and Opportunities

While awareness of and support for beneficial electrification have increased significantly over the past several years, BE is still in the early stages of development, according to a review of research and news reports, and interviews with experts. "Awareness of the value of beneficial electrification is still emerging, and many regional markets are in their infancy," said Rich Hasselman, a managing director of GDS Associates, a utility consulting and engineering firm that completed a BE market study for Colorado in 2019. "Unlike energy efficiency, beneficial electrification requires in most cases changes to well-established technology markets and ways of doing things."

Even in California, where building electrification is a key element in the state's greenhouse gas reduction strategy, BE is still just getting started. The dominant obstacle in California and most of the country is the lack of well-developed markets for equipment, such as air-source heat pumps (ASHPs) and heat pump water heaters (HPWH). "Most homeowners haven't heard of electric heat pumps… and most contractors don't know how to install them," wrote the consulting firm E3 in a recent report for three California electric utilities.

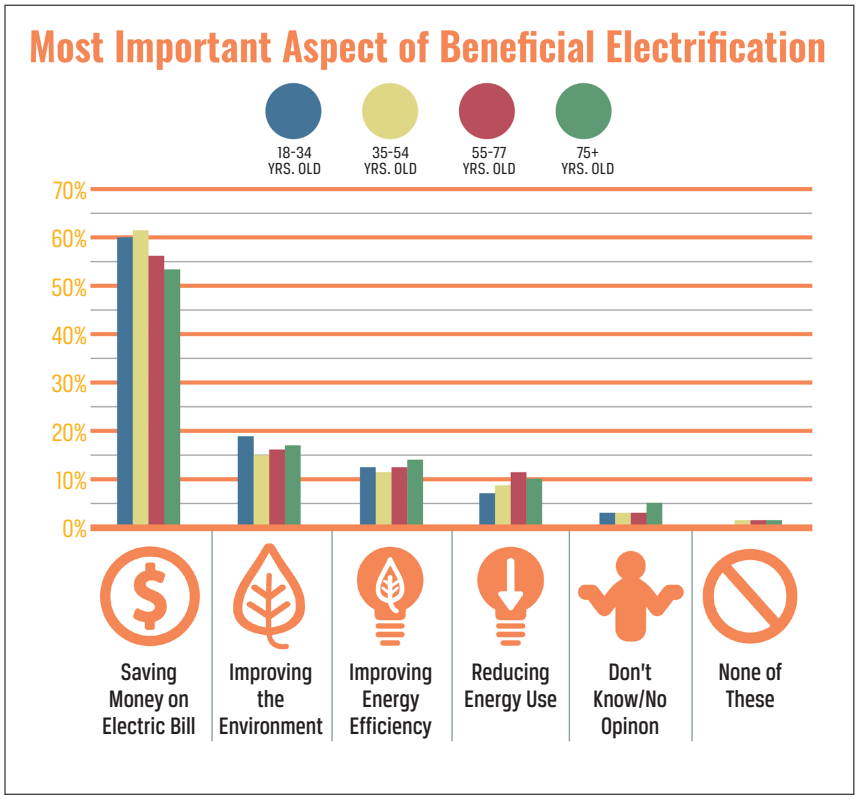

FIGURE 1: Touchstone Energy, Co-op Insights©: A Snapshot into the 2019 National Survey on the Cooperative Difference

For electric vehicles (EVs), market penetration is growing rapidly in many metropolitan areas. Co-ops that serve suburban communities and resort areas are best positioned to promote EVs among consumer-members. But, most cooperatives serve rural service territories where public EV charging infrastructure is scarce. "As in most rural areas, there are large gaps in our service area with regard to EV charging options," said Marshall Cherry, COO for Roanoke Electric Cooperative. With inadequate charging infrastructure, the "range anxiety"[2] associated with owning an EV is greater in rural areas. Observers also note that automakers have offered few electric pickups or 4WD vehicles, like those preferred by many rural residents. For more information on electric vehicles, the progression of the market, and the impact on cooperatives, please see NRECA's additional resources on **cooperative.com**.

What Messages Work for Consumers?

The lack of awareness about the benefits of electric technology provides both a challenge and an opportunity. Over the past few years, NRECA and Touchstone Energy have conducted research to understand how to best communicate the increasing benefits of electrification to consumers. In 2019, Touchstone Energy's National Survey on the Cooperative Difference found that the number one driver (by far) of why a consumer would choose an electric product is cost savings. Figure 1 shows that more than three times as many respondents said saving money on electric bills was a higher priority than improving environmental

[2] "Range anxiety" is the fear of an electric vehicle running out of power before reaching a desired destination.

performance. Therefore, when possible, it is logical to focus messaging about beneficial electrification on costs savings. For more information on the National Survey on the Cooperative Difference, see **cooperative.com**.[3]

In 2019, Touchstone Energy and NRECA conducted a mini-focus group "Front Porch Forum" to further develop messaging strategies around beneficial electrification. Some of the high-level results are presented in Figure 2.

Co-op Insights©: A snapshot Into the 2020 National Survey on Cooperative Differences

	Do	Don't
Name	Refer to it as **"smart electrification"** or "beneficial electrification"	Refer to it as **"efficient electrification"**
Benefit: Money Savings	Focus on messaging related to saving money specifically on an **"electric bill"** or on **"electricity"**	Focus on general messages about saving money (i.e. **"provide cost savings," "save money so that you can use it elsewhere"**)
Benefit: Environment	Focus on messaging containing general statements about the **"environment"** (i.e. "improves environmental health," "make a positive impact on the environment")	Focus on messaging which includes technical or scientific terminology related to the environment (i.e. **"climate change," "CO_2 emissions," "carbon footprint"**)
General: Electricity	Refer to electricity as **"efficient," "economic,"** and **"reliable."** Refer to it as **"clean"** when the source of generation is solar, wind or hydro.	Refer to electricity as **"the future."** Refer to it as **"clean"** when the source of generation is not defined for members.
Motivate Members to Electrify	Present the benefit of saving money (i.e. **"Electrifying your home and devices keeps more money in your pocket"**)	Focus solely on environment benefits.

FIGURE 2: Touchstone Energy, Co-op Insights©: A Snapshot into the 2019 National Survey on the Cooperative Difference

The study provided some interesting insights. For example, consumers respond well to simple messages, such as learning that they will save money on their electric bill. With beneficial electrification, however, it is likely that consumers will save money on propane bills if they switch to electric heat pump heating, or gasoline if they switch to an electric vehicle. Overall, consumers will save money on their energy use while experiencing a higher electric bill, but communicating that point can be more challenging. The 2019 study also found EV charging discounts were desired by one in five members, which aligns with overall interest in EV ownership. In fact, one in six respondents agreed that their next vehicle purchase was likely to be an electric vehicle. Automakers are rolling out more pickups and SUVs, however, including Tesla's Cybertruck, Rivian's RIT and others, and this could result in further increased interest in EVs.

In 2020, the Smart Energy Consumer Collaborative (SECC) conducted extensive testing on what messages work for consumers in their "Beneficial Electrification: The Voice of the Consumer Report." NRECA participated in interviews for the report and Touchstone Energy provided a financial sponsorship. The study found considerable interest in switching to electricity for both residential use and for transportation. Over two-thirds (68 percent) of Americans believe it is important for their electric utilities to invest in electric vehicle charging stations, and 70 percent are open to electric water heating. As shown in **Figure 3**, the research found that consumers were generally very interested in electric space heating, water heating, and cooking technologies. Additionally, of 22 statements presented to consumers, the phrase "Electricity is becoming cleaner and more renewable every day," provided the broadest and clearest message to link aspiration with action.

[3] **https://www.cooperative.com/programs-services/touchstone/cooperative-performance/Pages/Secure/Coop-Difference-Research.aspx.**

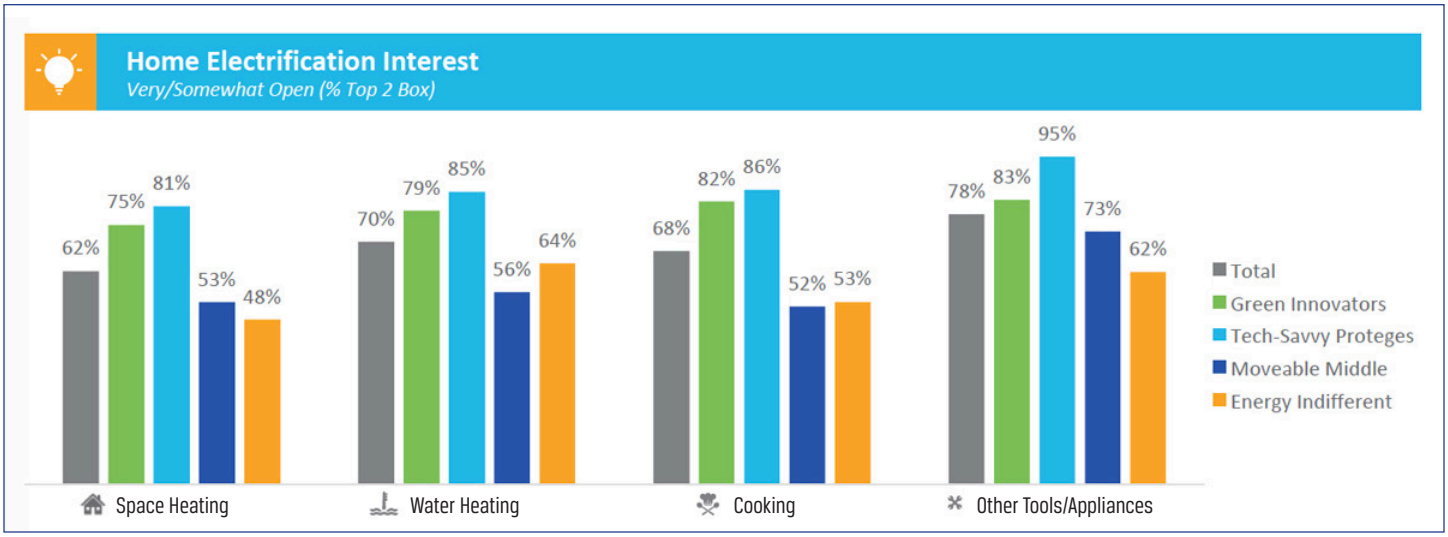

FIGURE 3: Smart Energy Consumer Collaborative, Beneficial Electrification: The Voice of the Consumer.

Strategies and Common Practices to Engage Consumers

REACH OUT AND ENGAGE MEMBERS

According to cooperative managers with robust BE programs, member engagement and outreach have been key elements in the success of their programs. To assist in some general outreach, NRECA and Touchstone Energy have collaborated on developing tools and resources to communicate to members. These resources can be found at: **https://www.cooperative.com/topics/beneficial-electrification/Pages/Beneficial-Electrification-Member-Resources.aspx**.

CULTIVATE MEMBERS TO BE "ELECTRIFICATION AMBASSADORS"

Consumer-members who are pleased with their new air-source heat pump, heat pump water heater, induction cookstove, or other rebated electric appliance make the best salespersons for BE. "Customer satisfaction has led to a powerful marketing campaign that is largely word of mouth," said Michael Stoddard, executive director of Efficiency Maine, which has incentivized the installation of ASHPs in more than 40,000 Maine homes.

"There's nothing more effective than a member talking about how much she likes her new cold-climate heat pump," agrees Lisa Morris, energy services planner for Vermont Electric Cooperative.

Image from OPALCO's website.

Many Orcas Power & Light Cooperative (OPALCO) consumer-members have become champions of OPALCO's *Switch it Up* program for ASHPs, HPWHs and EV charging stations. "When a member finishes an upgrade, we always try to recruit them to tell their story, why they did it, and what the results have been," said Suzanne Olson, PR administrator. "We've been making our own simple iPhone videos [of member testimonials], and those have helped a lot during the COVID-19 pandemic, as we have had to cut back on face-to-face communications."

COMMUNICATE...RELENTLESSLY

OPALCO is famous among BE boosters for its snappy slogan—"Switch it Up"—and its marketing, which includes a jingle played for inbound callers, special events and branded merchandise. But according to Olson, she and her staff are constantly looking for new ways to reach out. "I meet people every day who have never heard of our program. We can't

assume that just because we have a good program and value-aligned members, that they're going to know about it and take advantage of it. We have to continually beat the drum to get members' attention."

"A passive approach doesn't work," agreed Rich Hasselman of GDS. "Simply putting an incentive out there is not going to overcome the purchasing habits of consumers or the specifying and selling habits of distributors and contractors. In theory, you could fund an incentive that was high enough to drive that kind of change, but that would be a very expensive program."

Stoddard of Efficiency Maine reports that his group's communications strategy has evolved to feature more videos and earned-media stories about "people who experience the comfort and financial savings from a good cold climate heat pump system," he said. "We constantly emphasize the point that this is true, even throughout all the winter months, because of how well the newer cold-climate heat pumps perform."

MAKE IT WORK FOR CONTRACTORS

Contractors are usually the people that consumers turn to when they need to replace or upgrade heating and water heating equipment. Partnering with them on rebates and messaging—often called "trade ally programs"— is an important strategy.

Cooperative consultant Pat Keegan, who has worked with cooperatives on trade ally programs, points out that some contractors have been burned by previous utility incentive programs—when generous rebates have been cut back or eliminated. And, they have good reason to stick with technologies they're familiar with. "This is their livelihood, and they're used to doing things in certain ways." Embracing new technologies brings risks, and "if they make wrong decisions for customers, that can even put them out of business."

In the Northwest and Northeast, cooperatives can build on the market development work of regional groups like the Northwest Energy Efficiency Alliance, Efficiency Maine, and Efficiency Vermont. "We have more than 900 small businesses registered through Efficiency Maine as heat pump installers," said Stoddard. The organization teaches not only best practices for sizing and installation, but also provides its Registered Residential Vendors with brochures and online videos to share product information and user tips with homeowners to help them get optimal performance from their heat pumps.

"About three years ago, we did some evaluations which caused us to realize that in cases where there's a dual-fuel arrangement, which is most homes in our climate, the central heating systems were taking over too often and preventing the heat pump from coming on," said Stoddard. The fix involves setting the heat pump's thermostat a bit higher than the central system thermostat, turning off "auto" mode, and opening doors to adjacent rooms to ensure that the heat pump performs most of the heating work, while the oil-, gas- or propane-fired furnace in the basement remains idle except when it is needed in very cold temperatures or to heat other zones of the home.

Elsewhere, like in the Rockies, BE advocates are at an earlier stage in educating contractors. "The biggest thing that we are doing to affect market transformation is launching our Quality Install Program for air-source heat pumps," said Matt Fitzgibbon, beneficial electrification manager for Tri-State G&T. "Our crew will do training sessions with contractors… teaching all the little things to watch out for to make sure they're installing the heat pumps correctly."

In some cases, tuning up the amount of a rebate can provide the needed incentive to get contractors onboard. Great River Energy (GRE) reports that after its ASHP program began to plateau about three years ago, it convened a panel of distribution cooperative member service managers and HVAC contractors. "We asked them what it would take to create success," said David Ranallo, director of culture, communications, marketing and member services. Combining the input from these stakeholders with internal analyses of net benefits of an ASHP changeover to the G&T, Great River doubled, then tripled its rebate amount for ASHPs. "Suddenly, we had contractors selling our electrification. As a result, the program has been wildly successful."

Educating contractors and enlisting them as supporters may be one of the most important tactics for a BE program.

Conclusion

Beneficial Electrification is an emerging opportunity for cooperatives to engage members, improve quality of life in their service territory, increase revenue, and help residential and commercial members address environmental and climate issues, if they have goals to do so. The changes in electricity industry trends are showing that beneficial electrification will be here to stay. While the benefits of electrification are evolving, the concept is as old as co-ops. Many of the strategies that can engage consumer-members are tried and true, but now have a new flavor. NRECA and Touchstone Energy, and partners like the Beneficial Electrification League, continue to conduct market research and develop tools to assist in cooperative efforts to engage members on this topic. ■

APPENDIX A: EVs—EARLY START ON A LONG ROAD TRIP

Electrification of transport is by far the largest opportunity for cooperatives and other electric utilities to increase electric revenues and advance goals related to greenhouse gas reduction. But, sales growth of electric vehicles in the United States has not lived up to expectations. According to consulting firm McKinsey & Company, U.S. EV sales actually declined by 12% in 2019, to reach total sales of 320,000 units, less than two percent of approximately 17 million new passenger vehicles sold that year.

Automakers are still betting on significant sales growth, especially with a new federal administration with clear goals to increase adoption. They launched 143 new models of battery electric vehicles (BEVs) and plug-hybrids (PHEVs) in 2019, with more than 400 planned to debut by 2022 globally, according to McKinsey. The federal tax credit of up to $7,500 will continue to be available for most brands (it expires after 200,000 unit sales; a threshold already reached by Tesla and GM, according to Edmunds.com); and some states also offer tax credits.

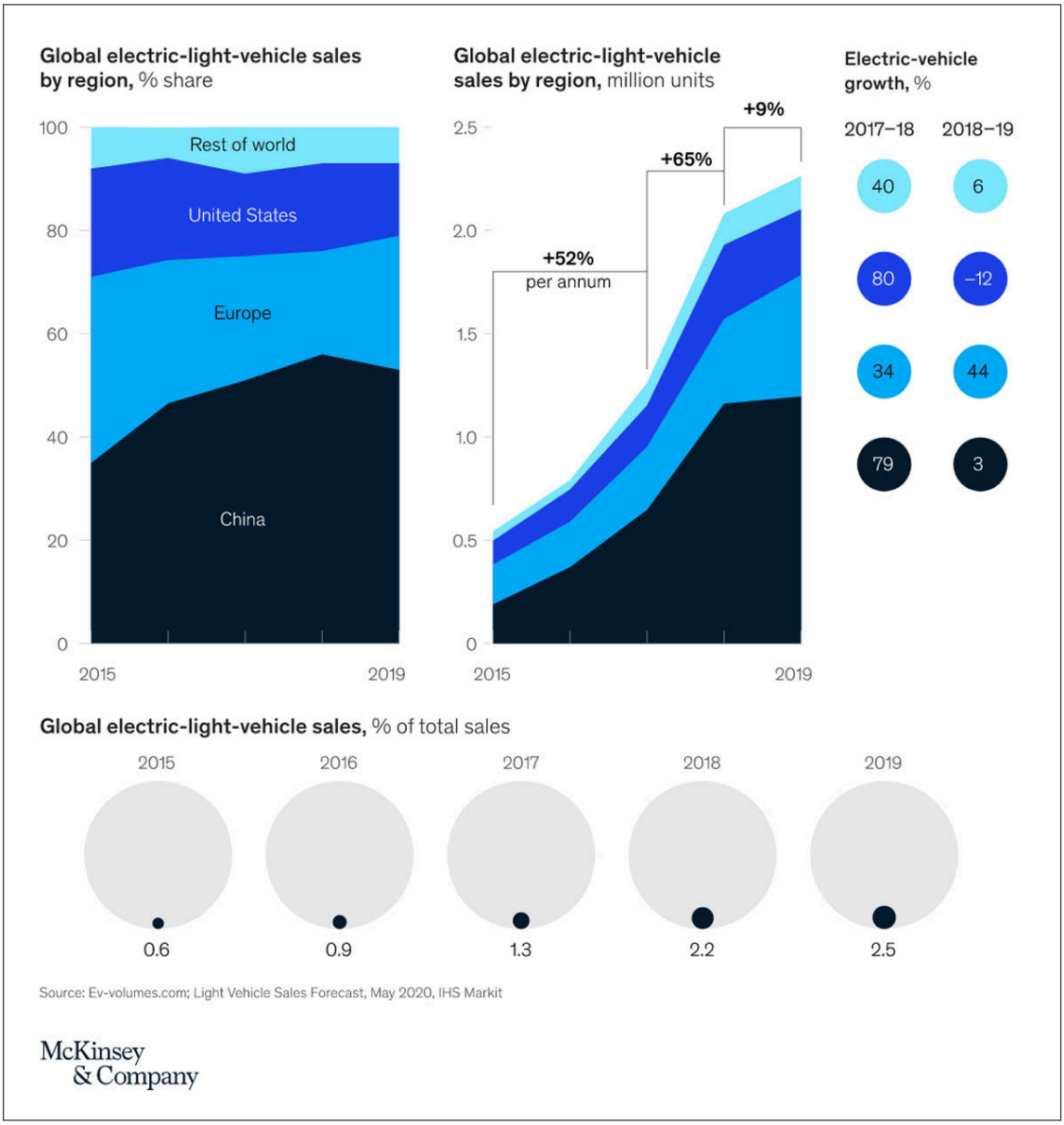

FIGURE 4: Electric Vehicles Sales Data

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APPENDIX A: EVs—EARLY START ON A LONG ROAD TRIP (CONT.)

But in most cooperative services territories, the EV market is behind its national status due to a combination of factors: scarce public charging stations; higher levels of range anxiety caused by the longer drives inherent in rural living; a lack of models—such as pickup trucks and 4WD vehicles—preferred by many rural residents; and lack of inventory at dealerships. "It's challenging to promote EVs in rural markets," said Jeff Huber, a managing director of GDS Associates who has worked with cooperatives on EV market development. However, automakers are rolling out more pickups and SUVs, such as Tesla's Cybertruck, and Rivian's RIT.

To pique consumer-members' interest in EVs, some G&Ts and even some distribution cooperatives have purchased EVs to demonstrate them to employees and consumer-members. "In this way, members can look at them and test drive them," said Huber. "Some co-ops as well as [municipal utilities] allow members to rent them for a day, after figuring out the insurance requirements."

Indiana G&T Hoosier Energy has purchased three all-electric Chevy Bolts and is making the vehicles available on a rotating basis to its 18 distribution co-ops. "Each member co-op has a Bolt for at least a month, and during that period, both employees and board members can use it," said Ryan Henderson, production manager for Hoosier. "In some cases, co-ops are utilizing agreements that allow consumer-members to try them out."

Tri-State G&T in Colorado, New Mexico and Wyoming has a fleet of five EVs that are loaned to member cooperatives. "More than 1,000 people have driven these in the past four months," said Matt Fitzgibbon, beneficial electrification manager, in November 2020. "A lot of people are saying they're interested."

APPENDIX B: THE CUSTOM TOUCH FOR C&I AND AG MEMBERS

As underscored throughout this article, most BE programs are designed for residential consumer-members. BE measures for commercial & industrial (C&I) and agricultural member-owners are typically offered on a custom basis, due to the wide range of energy uses and requirements among C&I and agricultural operations. Electric forklifts are something of an exception, as Great River Energy (GRE) has operated a forklift rebate program for many years. The G&T is currently offering a "try it before you buy it" approach. "We offer member-owners a risk-free trial of the technology," said David Ranallo, director of culture, communications, marketing and member services. "We've had four trials and three [of the businesses] have gone on to purchase. Their motivation wasn't just energy cost savings, but improvements in air quality for health and safety." The G&T is also launching a high-capacity forklift pilot program with the Electric Power Research Institute (EPRI).

Other G&Ts are researching or piloting programs for C&I and agricultural consumer-members. Hoosier Energy has budgeted funds for C&I and agricultural BE rebates, but is researching the best options for technology. "We need to be flexible," said Blake Kleaving, manager of energy management solutions. Some technologies on the co-op's radar: lighting for greenhouse horticulture, radio wave grain drying, and center-pivot irrigation systems that utilize single-phase motors instead of the standard 3-phase. "To run 3-phase to the middle of a field in some of our most remote service territory is prohibitively expensive," said Kleaving.

Great River Energy is conducting three demonstration projects with indoor hydroponic food production systems. "Our partners are schools, food banks, and healthcare systems," said Ranallo. "The results so far have been fantastic." The systems use plant-friendly LED lighting and heat pumps for heating. "It's off-the-shelf technology that uses no pesticides."

GRE has partnered with Dakota Electric Association, bus operator Schmitty & Sons, and bus manufacturer Lion Electric to pilot a battery electric school bus in the state. "Anecdotally, we hear that drivers and kids love the battery electric school bus," said Ranallo. "Schmitty & Sons are looking at adding more electric buses to their fleet, which says a lot to us about their experience." GRE is supporting—with a $5,000 match—member co-ops that partner with school districts to seek Minnesota Volkswagen settlement grants for electric school buses.

ADDITIONAL RESOURCES:

Case Studies of beneficial electrification for C&I: **https://www.cooperative.com/programs-services/bts/Pages/TechSurveillance/Beneficial-Electrification-CI-Case-Studies.aspx**

Electric Buses: *Flipping the Switch on Electric School Buses* (RE Magazine): **https://www.cooperative.com/remagazine/articles/Pages/co-ops-see-electric-school-bus-builds-interest-electric-vehicles.aspx**

Electric Vehicles: **https://www.cooperative.com/topics/distributed-energy-resources/Pages/EV-Overview.aspx**

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To find more resources on business and technology issues for cooperatives, visit our **website**.

DISTRIBUTED ENERGY RESOURCES WORK GROUP

The **Distributed Energy Resources (DER) Work Group**, part of NRECA's Business and Technology Strategies department, is focused on identifying the opportunities and challenges presented by the continued evolution of distributed generation, energy storage, energy efficiency and demand response resources. For more information, please visit **www.cooperative.com**, and for the current work by the Business and Technology Strategies department of NRECA, please see our **Portfolio**.

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