



**GREAT
RIVER
ENERGY™**

Beneficial electrification

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Background

Mounting research suggests that electrifying certain parts of the economy – using electric technologies to replace the use of fossil fuels such as natural gas, propane, gasoline and diesel – is necessary to achieve ambitious carbon emissions reduction goals worldwide. This is possible because electricity generation is resulting in lower emissions as utilities, including Great River Energy, continue incorporating more renewable sources of energy into their power supply portfolios. This is often referred to as beneficial or efficient electrification within the utility industry.

Great River Energy's position

Great River Energy and its member cooperatives encourage end-use members to pursue electric uses that meet these three criteria: save consumers money, reduce greenhouse gas emissions and improve overall efficiency of the electric grid. Great River Energy also believes that significant greenhouse gas reductions can be realized by electrifying water and space heating in addition to the electrification of the transportation sector. Beneficial electrification efforts coincide with ongoing greenhouse gas reductions from the power sector, and leverages utility investments in renewable energy generation.

In addition to the specific initiatives outlined below, Great River Energy and its member distribution cooperatives are working to modernize the grid to manage the integration of end-use technologies and renewable energy that lowers costs for all end use members.

Beneficial electrification initiatives

Electric school bus pilot

Beginning in the fall of 2017, some Minnesota students were transported to and from school on an all-electric school bus as part of a first-of-its-kind pilot project in the state. This opportunity was possible through a collaboration between Schmitt & Sons, Dakota Electric Association and Great River Energy to demonstrate a battery electric school bus in a cold-weather climate as well as on longer suburban and rural routes.

Electric vehicle charging infrastructure

Great River Energy and its member cooperatives helped establish Minnesota's first electric corridor. Charging infrastructure along Interstate 35 allows more electric vehicle owners to reach scenic northern Minnesota, a common road trip in the state.

Revolt electric vehicle program

Great River Energy's member cooperatives offer free wind energy to fuel electric vehicles owned by cooperative members. The Revolt program dedicates wind energy to completely cover the electricity used to fuel an electric vehicle for the life of the car. The program began in 2015 and has been extended each year, now through 2018, due to its popularity.

Off-peak programs

Great River Energy promotes the efficient use of electricity through programs that shift consumption to the lowest-demand part of the day: the overnight hours. Great River Energy's member cooperatives offer electric thermal storage water heating and space heating. This reduces electricity demand during the on-peak hours and puts to use inexpensive, and often renewable, energy produced overnight.