# The Viability of Solar

By William L. Caynor Sr., Price Electric Cooperative CEO

Is solar photovoltaic generation viable in Wisconsin? The short answer is yes. As long as the sun shines there's a potential to produce energy. The main difference between Wisconsin and other regions of the country is insolation. Insolation is the exposure to the sun's rays. More sun means more generation. We can all attest to the long dark winter season with minimal sunshine, so a proper solar assessment would have to factor your investment against your return. More investment with marginal generation equates to a longer period to recover costs, if you're looking at it from a financial perspective. If you're looking at it from an environmental perspective, there are several components you could be evaluating to validate an installation. In either case, the Clean Power Plan is creating more prospects in the renewable generation market as utilities, consumers and third parties evaluate opportunities to both reduce environmental emission pollutants and potentially decrease energy expenses. Another driving factor contributing to the recent surge in solar interest is the federal tax credit departure at the end of 2016. This tax credit would assist in recovering costs.

There are three separate solar avenues that are transpiring within the electrical sector today: net metering, community solar, and third party photovoltaic solar generation.

Net metering is the standard consumer rooftop or property solar panel installation. This generation would be connected to the utility grid through a meter that can register both consumption and excess generation going back into the grid. The intent is to size the solar array to the load so that solar generation equals consumption. If you are considering net metering please contact your cooperative to discuss interconnection.

Community solar is a newer venture that so far eight of the twenty-four Wisconsin cooperatives have endeavored in. This model is a cooperative-built solar array where members can purchase solar panels and receive a bill credit for its generation. This a great concept for those not wanting to bear the expense for a home array, who do not have an adequate location for an array on their property, or who wish to support by reducing emissions through renewable generation. Your neighboring cooperative, Eau Claire Energy, is in the process of constructing an impressive 858 KW Community Solar Project. Upon completion, this would be the largest cooperative community solar project in Wisconsin.

The last avenue is a third party photovoltaic solar generation project that's connected to the existing grid. Your generation and energy provider, Dairyland Power Cooperative (DPC), is currently reviewing quotations for a 25 Megawatt (MW) Request for Proposal (RFP) they submitted for bidding in June. This RFP could allow for several smaller solar photovoltaic sites of 1MW to 5MW in capacity tied back into their grid or even into the cooperative's distribution system. Some of our members have already been approached by solar enterprises seeking possible locations to meet Dairyland's RFP.

Solar photovoltaic generation is being promoted as reducing emission pollutants, increasing jobs, and maintaining a fixed cost for energy in a sphere that appears to be steadily increasing. The "Popular Mechanics" view of renewables is that you can generate at less expense than you can purchase from the electric utility. Of course, you must consider the initial investment recovery and the fact that whether it is wind or solar, the wind must blow and the sun must shine in order to generate. Because the wind doesn't always blow and the sun doesn't always shine, you will need to be tied to the electrical grid to purchase energy when your consumption exceeds generation. If you consume little energy you will require little generation.

One thing's for sure, the energy market and generation mix is transforming. Being within the Midcontinent Independent System Operator (MISO) system permits the purchase of energy from other generation sources when the cost is lower than can be generated through DPC, and can be generated and sold at a higher rate through our energy provider when the demand is high. MISO provides open-access transmission service and monitors the high voltage transmission system throughout the Midwest, and South, United States, and in Manitoba, Canada. DPC has done an exceptional job in forecasting in MISO to increase margins and savings to its 25 member cooperatives.

The future is bright and the power of the sun is a colossal energy resource. Rest assured that we at Price Electric Cooperative will continue to stay abreast of this evolving electrical sector in order to maximize any opportunity to reduce expense to you, our member/owners.