

BELTRAMI ELECTRIC: A COOPERATIVE WAY TO DO COMMUNITY SOLAR



As the sun beats down on a hot summer day in downtown Bemidji, the question begs: How much energy could be harnessed if solar panels covered the roofs, awnings, and parking lots of our homes and businesses?

A report conducted by the Institute for Local Self Reliance suggests 24 percent of Minnesota's electricity needs could be met by installing current solar technologies on existing residential and commercial rooftops right here in the state. Yet, currently in Minnesota, less than one-tenth of 1 percent of our electricity comes from solar. Integrating and storing intermittent electricity into the electrical grid are ongoing challenges. However, communities around the world are successfully finding ways to reliably integrate upward of 30 percent of their electricity from

intermittent renewable sources such as solar and wind.

The beautiful wooded environment in which we live here in northern Minnesota means that our buildings and yards are not always ideal locations for solar photovoltaic (PV) systems. However, customers increasingly want to take part in the clean energy future. Community Solar Gardens (CSGs) are one way utilities are offering that opportunity to their customers. CSGs are centrally-located solar photovoltaic (PV) systems that provide electricity to participating subscribers.

Many Minnesota electric utilities are already constructing CSGs including Xcel Energy, Minnesota Power, and many rural electric cooperatives such as Lake Region Electric Cooperative and Itasca-Mantrap. Locally, Beltrami Electric Cooperative has decided to move forward with their own 80kW solar garden, Northern Solar, once 50 percent of the panels are subscribed.

“Northern Solar is an 80kW CSG consisting of 192 photovoltaic panels, each rated at 400 watts” said Sam Mason, manager of Energy Services and Facilities for Beltrami Electric Cooperative. An 80 kW system would produce enough electricity to power nine typical Minnesota homes.

Using an average retail rate of \$0.08/kWh, single panel subscribers would be credited approximately \$36 per year on their electric bill.

Margaret Carlson and her husband Ray have been members of Beltrami Electric Cooperative for more than 70 years, since the co-op strung lines to their homestead

electrifying their home for the first time. This week, Margaret celebrated her 90th birthday and plans to subscribe to Northern Solar. “We know that emissions from coal are harming our health and our environment; and it is past time when we need to seriously do something about it” Margaret said. “It is time that we give solar energy serious consideration; not only consideration but action.”

“Though the immediate personal costs will seem higher than our fossil fuel costs, the benefits in the future will be long lasting” Keni said.

Margaret agreed, stating “We do need to be concerned about cost. We are all committed to the importance of keeping our costs of electricity down, but we need to be asking ourselves...the costs of what? Money, health, the environment, these are all costs that need to be balanced when we make our decisions. The outcomes of which will not only affect us but our children and grandchildren.”

“I imagine how the past generation must have looked at electricity,” Keni said.

“Wow, they could flick a switch and have a light, instead of candles or gas lamps.

It was an expensive endeavor, yet as people grasped the concept they worked together to make it accessible and affordable. We now know that we can’t continue with traditional energy development as it has been done in the past... we need to flick a new switch and work together to help make renewable energy accessible and affordable.”

Source: <http://www.cleanenergyresourceteams.org/blog/beltrami-electric-cooperative-way-do-community-solar>