

# CASE STUDY: WHEELER FAMILY



47

Solar Panels



25,000 Pounds

CO2 Emissions Saved/Year



87%

Electric Bill Reduction/Year



650

Equivalent Trees Planted

## PROJECT INSPIRATION

A few years ago, the price of LP gas skyrocketed, leaving customers with partially filled tanks during the cold Minnesota winter. After that, Jim and Terrie began considering green energy solutions to reduce their reliance on LP gas. Friends of the Wheeler's had just built a zero-carbon footprint home and the Wheeler's decided that "going solar" would significantly reduce their reliance on the local electric company, where their bills averaged \$350 per month.

## APPROACH

We completed an on-site visit at the Wheeler's home to determine where the optimal roof space was for the solar panels. We determined how many could fit on the home and garage, taking into account panel efficiency based on sun exposure. The Wheeler's wanted to maximize the number of panels knowing they would be able to sell excess electricity back to their electric company. The Wheeler system included:

- 47 - Solarworld 325 Watt solar modules - total 15,275 KW system
- 2 - 6 KW Inverters with the ability to accept a Tesla Power Wall in the future
- 47 - Solaredge P400 DC Optimizers
- Solaredge Module Level Monitoring System
- Solar Racking System
- Wire, Conduit and Disconnects
- Utility Interconnection
- Electrical permit including building inspections

## THE FINAL RESULT

The Wheeler's system went live on September 14, 2016. In the first month alone, the system produced 474 kWh and their consumption was 219 kWh. From October through mid-November the system was producing more than the Wheeler's were consuming. December and January were low production months, but bounced back mid-February. From March through October, solar production far surpassed electricity consumption.

- Total Energy Bills 2015: \$3,030
- 2016 System went live September 14
- Total Energy Bills 2017: \$395

In addition, the Wheelers replaced all their old lightbulbs with high efficiency LED bulbs.

For months when the Wheelers would have been paying the electric company \$350 per month, they consistently received credits ranging from \$30 - \$150 from the energy they sold back to the grid.

**The Wheeler's are thrilled with their solar array and the results they are achieving in energy savings.**



**“We can't speak highly enough of the entire team at Cedar Creek Energy. If you are considering a solar array for your home, I sincerely hope you will choose to work with the team at Cedar Creek Energy.” – Jim and Terrie Wheeler**

