



Submitted by: Suzanne Foss  
Company/Organization: Wire Belt Co of America

### Challenge or Opportunity:

Wire Belt Co of America has a huge commitment to its community and as such strives to reduce our reliance on fossil fuels and therefore reduce our carbon footprint. One way that we are working to do this is to harness the energy of the sun to provide at least part of our energy needs. This is a continuous journey for us. It all began with the installation of our first photovoltaic [PV] array. The 100kW array began monitoring activity on January 1<sup>st</sup> of 2010 and at the time of installation was the largest in the state. As of the end of last year, 2014, the array was producing about 20% (about 95,500 kWh) of our power needs and returning just over 6,200 kWh back to the grid (mostly weekends and holidays).

But we weren't done!

### Approach or Solution:

Wire Belt Co of America began installation of their second PV array in June of 2015 and it is expected to go live in the next couple weeks (mid to late August 2015). This new array is a 50kW array. Since we have added an addition to our building in Londonderry we hope the new array will offset the energy consumption for the new area of the building.

### Impact:

We have monitoring equipment on our photovoltaic [PV] arrays and with the installation of the new one we will be updating that system even more. These changes being installed with the new array will help data collection in the future to be cleaner and therefore easier to compile and monitor. We are also installing a flat screen monitor in the building lobby that will display some of this data as well as real-time stats on performance and show what the building is consuming.

A few stats just to give you an idea of what our current array is doing:

- Time period: 9/1/2011-7/23/2015 (we installed better monitoring equipment in Sept. of 2011)
- 370,180 kWh produced
- Offset 496,411 lbs. of carbon dioxide emissions
- Offset 541,934 miles worth of carbon dioxide emissions from an average American car
- Energy produced to supply 12,030 days (almost 33 years) of electrical usage in average American household
- Enough produced to run 28,475,385 hours using 13-watt compact fluorescent light bulbs

Expected output of the new array:

- Estimated 48,172 kWh of clean energy annually
- Estimated offset of 44,222 lbs. of carbon pollution each year