89.6 kWdc PV Solar Project: Kaukauna Fire Department

The City of Kaukauna has been in need of a new Fire Department building for many years as they have long outgrown the old facility.

The new building is adjacent to the municipal building in the center of Kaukauna. PV solar at the new facility was considered from the inception of the project; therefore the roof was engineered to accept approximately 90 kW of PV solar. The installation started in early November and was completed by mid-February, 2018. Energy efficiency was considered top priority therefore the building uses LED lighting for all indoor and outdoor needs, in addition to geothermal heating and cooling pumps to reduce energy costs.

The newly installed 89.6 kW PV Solar at Kaukauna Fire Department building roof started producing energy in February, 2018. The PV Solar system is net metered whereby if there is excess energy it will go into the Kaukauna Utilities distribution system. The project was funded with the assistance of a WPPI Energy grant of $78,677, covering 50% of the total project cost. The PV Solar was 100% engineered and installed by Kaukauna Utilities engineering, electrical and maintenance crew.

System Highlights	
Customer	City of Kaukauna
Building	Fire Department
Location	Kaukauna, WI
System Type	PV Solar Roof Ballast
Completion Date	February 2018
Installation Duration	~ 8 Weeks
Annual Energy Production	112,000 kWh/yr
AC Capacity	89.6 kWac
DC Capacity / DC:AC Ratio	Utilizing 124 – 700W Solar Edge optimizers
Module Number & Type	256 panels (350 watt each) SolarWorld's Sunmodule 350XL Mono
Mounting Scheme	100% Ballasted Unirack system used for the rooftop application.
Inverter type	(6) 14.4KWac Solar Edge inverters

Kaukauna's commitment to adopting renewable energy technologies is just one of the green features that Kaukauna prides itself on. Kaukauna Utilities used this project as another learning opportunity while showcasing the PV solar to the public with regard to photovoltaic technology. Kaukauna felt strongly to continue to support the initiative of fully understanding and mastering the field of solar PV installations which will assist policy and decision making in the future.