

IMPACT OF SOLAR POWER ON YOUR ELECTRIC BILL

Installing a solar array on your property or at your facility can save money by reducing your energy purchases from the utility. For small to large power customers, demand charges can comprise a significant proportion of your monthly electric costs. The information below helps explain the impacts of solar project on these two components of your electric bill.

Two Components of Commercial and Industrial Electric Costs

Energy: Total energy consumption (kWh) during the billing period is multiplied by the price of energy (cents/kWh).

Demand: The maximum amount of power (kW) drawn for a given time period is multiplied by the relevant demand charge (\$/kW).

How Does Solar Impact Your Electric Bill?

Energy: While the daily amount of energy produced by solar panels varies with the weather, on average they will produce a predictable amount each year, which for the upper Midwest is 1250 kWh for each 1 kW of solar panels. The solar energy will reduce the energy charges on your electric bill.

Demand: Power demand is measured in 15-minute increments. Periods of high solar generation may not always coincide with a facility's highest demand, and therefore, demand cost impacts are more difficult to predict.

A typical example is shown in the graphs on the reverse side.



At Menasha Utilities, we join forces with other local not-for-profit utilities through WPPI Energy to share resources and lower costs.

menashautilities.com

(920) 967-3400

 A WPPI Energy community

IMPACT OF SOLAR ENERGY ON YOUR ELECTRIC BILL

The graphs below represent hourly demand from a customer's "peak" days in December and July.

Demand charges apply from 8:00 a.m. to 8:00 p.m., Monday - Friday, as shown in light blue shaded below.

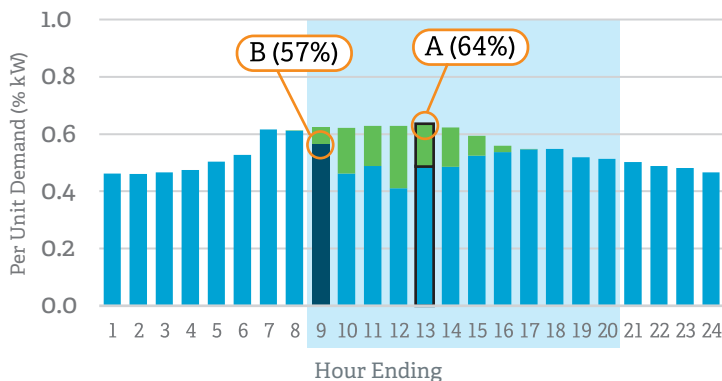
The "demand reduction" percentage is the difference between the highest hourly peak (bar outlined in black, labeled A) and the highest utility-supplied demand (dark blue bar, labeled B).

The nameplate DC rating (capacity) of the solar project in this example is 84% of the customer's July peak demand.

Despite the nameplate rating of the solar PV project being nearly equal to the customer's peak July load, the demand savings impact is small for an average day. Commercial and industrial customers should not always count on demand savings to determine the value of a solar project. A conservative approach is to use only the estimated energy cost savings to assess the economic impact.

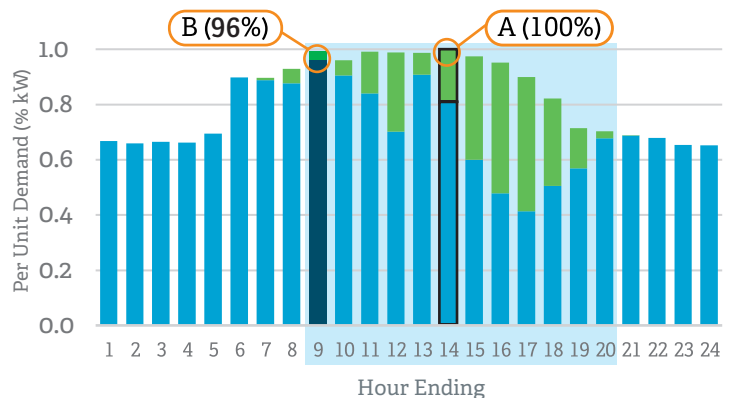
Demand Reduction = 7% of Peak Load

Typical December Day



Demand Reduction = 4% of Peak Load

Typical July Day



Power supplied by customer's solar array

Power supplied by utility's electric grid