

2021 Q7

(NET VALUES, PERCENTAGES)

One Energy's projects are different from a typical wind farm because they are installed behind the meter, directly powering the customer's facility. Some of our customers take advantage of a policy called net metering. Under this policy, the customer is only billed by the utility for the net electricity consumed by their facility. If the wind turbines produce less power than the plant is using at a given time, the facility receives power from their utility. If the wind turbines produce more power than the plant is using at a given time, the power is sent to the grid, and shows as a negative usage on their statement. The energy consumed and produced is netted at the end of the billing period, and the customer only pays for the net energy consumed from the grid.

Level 1: The daily facility usage and wind project production for one week at a facility are shown below.

DAY	FACILITY USAGE (kWh)	WIND PROJECT PRODUCTION (kWh)
Monday	65,600	45,677
Tuesday	77,300	40,579
Wednesday	60,750	68,817
Thursday	68,250	47,607
Friday	88,900	95,503
Saturday	78,500	73,436
Sunday	75,600	81,699

What is the net energy purchased from the utility for the week?

Level 2: Say that the facility in the Level 1 question is charged 5.5 cents/kWh by One Energy, and 6.25 cents/kWh by the utility. What would the total cost of energy be for the week shown? What would be the percent increase if all of the energy consumed was purchased from the utility?

A wind turbine in front of the net-metered facility it powers.

