

How Electricity is Produced from Wind

The turbines adjust so that the blades face into the wind. The wind blows against the blades and makes them turn, which also turns a shaft inside the nacelle. The shaft goes into a gearbox which increases the rotation speed for the generator. The generator uses electric and magnetic fields to convert the rotational energy into electrical energy. Electricity is generated at 600 volts and sent to a step-up transformer at each turbine site. These transformers increase the voltage to 34,500 volts for transmission to the substation. Another transformer in the substation increases the voltage to 115,000 volts and distributes it to NPPD's electrical grid.

