

# We Energies' generating system



**WIND**

## Montfort Wind Energy Center



**Location:**

Montfort Wind Energy Center is located in the town of Eden in Iowa County.

**Type of plant:**

Wind turbine

**Units:**

20 turbines

**Year in service:**

2001

**Net generating capacity:**

1.5 megawatts each – 30 megawatts total

**Turbine manufacturer:**

General Electric

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**Turbine design:**

The GE 1.5 is an upwind turbine with active yaw and a three-blade rotor.

**Total weight:**

Tower and turbine: 215 tons

**Rotor design:**

Three blades constructed of fiberglass-reinforced epoxy that each consist of two airfoil shells bonded to a supporting beam.

**Rotor diameter:**

70.5 meters (231 feet)

**Rotor speed:**

Variable, 11-20 rpm

**Generator:**

Rotary current asynchronous with slip rings

**Generator nominal voltage:**

575 volts

**Integrated lightning protection:**

Protection system includes lightning receptors and conductors in the rotor blades, lightning arrestors, earth grounding and shielding.

**Control system:**

A microprocessor controls all turbine functions

**Tower dimensions:**

Hub height: 213 feet

Weight: 95 tons

Base diameter: 14 feet

**Cut-in wind speed:**

6-7 mph

**Cut-out wind speed:**

56 mph