

Original Questions:

1. What is the actual efficiency of these wind turbines? I have seen numbers generated by the Mackinac Group that show these turbines operating below 10% of the rated capacity on an annual basis. It seems that a 90% loss on investment is a terrible idea. [See response to question AA4.](#)
2. How efficient are they? [See response to question AA4.](#)
3. What is the efficiency of industrial turbines located and operating in MI? [See response to question AA4.](#)
4. Is wind energy a consistent energy source? [See response to question L2.](#)
5. Can you compare the energy return on energy invested for wind, solar, coal, natural gas, oil, and nuclear? [See response to question L1.](#)
6. How much of a normal urban setting (residences and small businesses) can be supported by wind generation? In the case of some industrial uses, can a turbine supply three-phase electricity? [See response below.](#)

Questions and Responses

These questions may have been recategorized and reorganized. Some may have been sent to another “theme” area (this will have been explained in red under the “Original Questions” section). In other cases two or more questions will be answered with one response.

- S6. [How much of a normal urban setting \(residences and small businesses\) can be supported by wind generation? In the case of some industrial uses, can a turbine supply three-phase electricity?](#)

Response: The answer to this question depends on both the scale of the wind farm and the energy use of an urban setting. The average U.S. household consumes about 10,000 kWh of electricity each year. The general rule is that 1 MW of electricity is enough to power 220-300 homes. Generally, a 30 MW wind farm can produce enough energy for approximately 9,000 average American homes over a year. This is an aggregated calculation of wind energy production over a year.

Regarding the supply of three-phase electricity, most household loads are single-phase. In North America and a few other places, three-phase power generally does not enter homes. Even in areas where it does, it is typically split out and the individual loads are fed from a single phase.