

SMALL WIND FACTSHEETS



What About Visual Impact?

Because a small wind turbine must be mounted on a tall tower to function effectively, the turbine itself may be visible from some distance.

Why do small turbines need tall towers?

To capture the wind's energy effectively, a turbine needs unobstructed access to the wind. Close to the ground, built and natural features of the landscape create turbulence. As a rule of thumb, small turbines should be mounted at least 30 feet above any structures or natural features (buildings, trees, bluffs) within 300 feet of the installation. A second reason for mounting the turbine on a tall tower is to take advantage of higher wind speeds which occur at greater heights above the ground. Wind power increases exponentially with wind speed, so the same size turbine can generate much more power if it is mounted at 100 feet than if it is mounted at 65 feet.

How will a small wind turbine affect the "character" of the community?

The visibility of a small turbine will depend on its height and on the topography of the surrounding landscape. One turbine owner elected to paint his tower and turbine blades dark green to blend in with trees in the background. A turbine may be visible from one direction but not from another. Bear in mind that residential turbine rotors are about 23 feet in diameter, as contrasted with the 150 to 260-ft. rotors on today's large utility-scale turbines.

The "impact" of a visible small turbine depends to some extent on the eye of the beholder. Some people find on the aerodynamic design of the turbine graceful, others disagree. How will it affect the "character" of the neighborhood? Small wind turbines are consistent with agricultural land use, and probably would be considered to have less visual impact than a water tower, a common feature of the rural landscape. Utility poles, cellular phone towers, and satellite dishes may also be considered as comparable features of the existing landscape. Chances are, while a small turbine may be new to your community, it will not dramatically alter its character.

Will the turbine need to be lighted?

The Federal Aviation Administration does not generally require that towers under 200 feet be lighted. Thus, while some very large industrial-scale wind turbine towers may need to have lights (particularly if they are near an airport facility), it is unlikely that a residential-scale turbine will need to be lighted. For sites closer than two miles to an airport or runway, tower height may be restricted by FAA regulations.

Other Fact Sheets Available on Small Wind Energy:

- What is Small Wind?
- How Much Noise Do Small Wind Turbines Make?
- Do Small Turbines Kill Birds?
- Small Wind Systems and Public Safety
- How Do Small Wind Systems Affect Property Values?



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