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MagLev Wind Turbine

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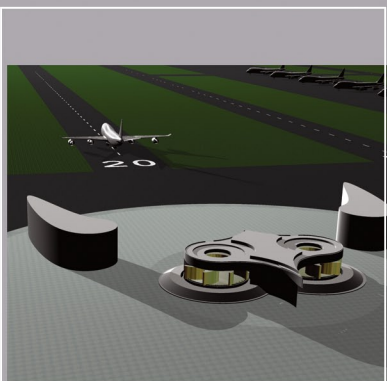
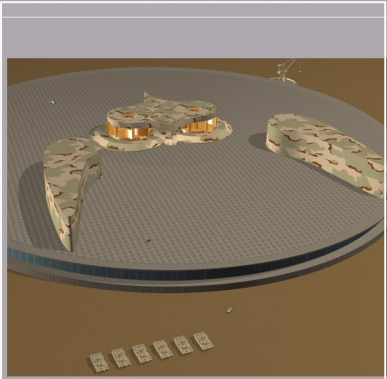
NuEnergy offers a range of sophisticated 21st century wind turbines designed to capture the wind and more efficiently generate power.

Conventional horizontal-axis wind turbines (HAWT) are based upon 16th century Dutch science; the common three-bladed HAWT converts less than 1 percent of the available wind. A traditional wind farm consisting of hundreds of spinning propellers on top of tall poles often creates more problems than energy. HAWT based wind farms are expensive to install, operate and maintain, noisy, inefficient in the conversion of wind to energy and pose dangers to the environment, especially birds. They do not turn in low winds and often need to be slowed or stopped in high winds. If a sailing ship was redesigned to replace the sails and rigging with a propeller attached to the mast, it would never generate enough power to leave the dock.

The Maglev Vertical Wind Turbine addresses these problems and provides a more efficient, versatile and elegant method of producing power from wind. Maglev is short for "magnetically levitated", meaning the design incorporates magnets to "float" or suspend system components. By definition, a maglev system involves

- Frictionless levitated operation
- Requires no lubricant
- Wear-free
- Maintenance free

Maglev is not new technology; it is the basis of the high-speed "Maglev" trains operating in Europe and Asia. The Maglev uses a magnetically levitated low-RPM high-torque power output turbine. The spinning turbine "floats" on a magnetic cushion, just as the high-speed train "floats" above the railroad tracks. Configured to capture winds from any direction, the Maglev converts wind to energy at very high efficiencies.





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NuEnergy is developing small 2.5kW to 50kW maglev wind turbines for local dispersed power generation; some units will be capable of roof mounting.

Working with a technology partner, NuEnergy offers Maglev Power Plants in sizes from 10MW to 1 GW. The advantages of a maglev wind power plant over a traditional wind farm are significant.

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|--------------------------------------------------|-----|-------------------------------------------------------------------------------------------------------------------|
| 1 GW Maglev Wind Power Plant | Vs. | 500 Traditional 3-blade 2 MW HAWT |
| Powers 750,000 homes | Vs. | Powers 500,000 homes |
| Requires less than 100 acres | Vs. | Requires ~ 32,000 acres |
| Costs ~ \$2.5 – 3B | Vs. | Costs ~ \$11B |
| Makes no noise | Vs. | Each turbine sounds like a motorbike |
| Generates power from wind at low and high speeds | Vs. | Needs higher minimum wind speed to start generating power and needs to be slowed or stopped at higher wind speeds |
| Minimal wildlife impact | Vs. | Spinning blades can be dangerous to wildlife |
| Major components at ground level | Vs. | Major components at top of tall mast. |

Maintenance costs for a maglev wind power plant are approximately 1/8th of the cost associated with a standard HAWT. The bottom line is that a maglev wind power plant has a better bottom line than a standard wind farm. The Maglev technology is the future of wind energy, as it is fully capable of fulfilling the promise that wind energy experts have touted for generations.

