At **Urban Green Energy**, we are focused on providing a complete range of wind energy products for various applications. One we are just finalizing is our “second generation” vertical axis wind turbine which will work well in urban environments.

One of the advantages of placing wind turbines in an urban environment is the efficiency gained in generating the energy where it is needed. Typically, energy, whether from coal, nuclear, or hydro, is generated far away from where it is used. The transmission of energy across large distances introduces considerable losses resulting in lower efficiencies. A vertical axis wind turbine placed in an urban environment has almost no loss do to transmission. Furthermore, urban environments often allow for placement of wind turbines without a costly and space consuming tower. Rooftops provide a platform for wind turbines with the need of only a short tower. Research has concluded that there is a concentration effect of wind flowing over and around buildings. This concentration effect means placing wind turbines on rooftops can provide additional advantages. However, wind flow around buildings tends to be more turbulent and multi-directional than wind in open areas meaning traditional three-blade wind turbine designs have difficulty achieving peak energy output. Here the vertical axis design offers significant advantages as its shape means it reacts instantaneously to a change in wind direction, eliminating the need for a fin or yaw system.

The wind turbine’s visual appeal takes on added significance in an urban location. Our design team has considered the product’s visual appeal at every step of its design. Future models will all be designed to combine functionality and attractiveness.

Another important consideration is the product’s noise level. Our vertical axis wind turbines are very quiet. With wind speeds of 20 mph (32 kmh) one can stand at a distance of ten feet (3 m) and hear noise of less than 37 decibels. In comparison, an average human whisper is generally considered to register approximately 40 decibels. Similarly, if two people at a distance of three feet speaking in regular voices can understand each other, the surrounding noise level is considered to be less than 85 decibels.

Two things have to happen in order for wind turbines in urban environments to be successful. First, companies like ours must produce an affordable, attractive, safe product that is easy to install and maintain. We believe we achieved this. Just as importantly, it is necessary for governments around the world to create wind turbine-friendly regulations that allow for the installation of wind turbines in urban environments, as well as net metering and economic incentives to encourage their use. Many governments have already done this, it’s time for the rest to follow.

UGE WindTurbines

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