

## Two-blade downwind turbine

WindTurbine Co. (WTC) based in the United States is offering a patented two-bladed downwind turbine. A major benefit of the new system is its ability to shed excessive wind loads.

As the wind pushing on the blades causes them to bend in the direction the wind is blowing, blades oriented downwind of the tower can be much less rigid than blades oriented upwind of the tower. WTC's hinged-blade technology isolates the critical out-of-plane blade loading to the blades. Moreover, in the absence of restraints, wind turbines tend to self-orient downwind, eliminating the use of a costly, load-inducing, rigid mechanical yawing system. Finally, because it can be allowed to bend in the wind, a downwind turbine can make effective use of guy-wires to hold the tower upright. This permits downwind turbines to more economically employ taller towers to take advantage of generally higher wind speeds, higher off the ground.

WTC's turbines are considerably cheaper than common upwind designs and power can be generated at a cost of about US\$0.035/kWh. *Contact: The WindTurbine Co., 515, 116<sup>th</sup> Ave., Suite 263, Bellevue, WA 98004, the United States. Tel: +1 (425) 6371 470; Fax: +1 (425) 6371 483; E-mail: mileslw@windturbinecompany.com.*

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