

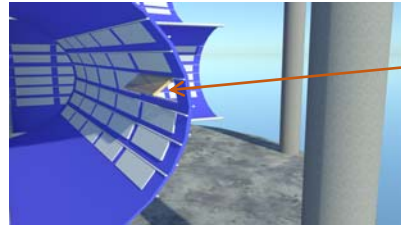
# Large scale wind power for densely populated areas

Conventional windmills present visual problems and are not feasible to be placed within populated areas.

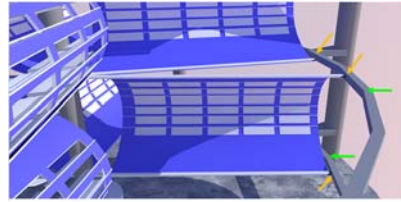
Vertical axis windmills known to date have not brought a solution for wind energy on a significant scale

A model for a vertical axis windmill resembling towers that blends with the urban environment presents a great source of clean energy at a low cost by requiring minimal transmission costs as it is placed very close to the consumers.

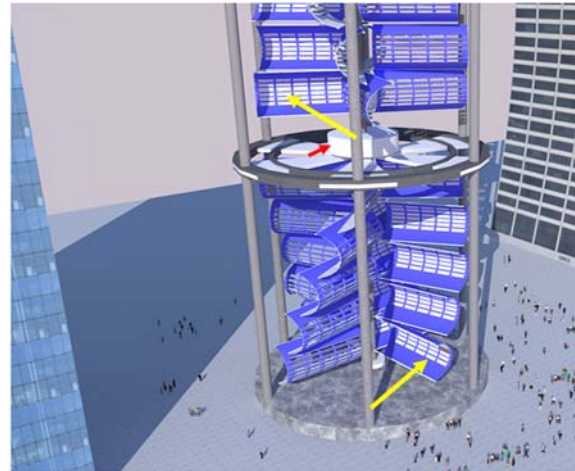
**Stabilizers for the blades/wings:** orange arrows (above) indicate small wheels built into the tips of the wings to turn within circular stabilizing structure indicated by green arrows. This helps keep a smooth and continuous movement.



Vertical Axis Windmill with dynamic shutters

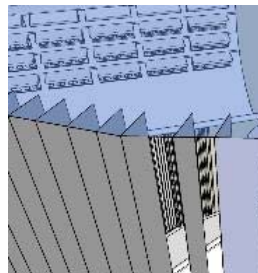
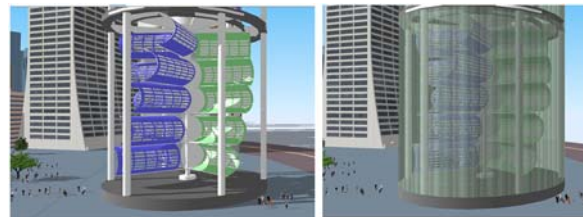


Spinning "wing" that captures the wind force with flappers/shutters that close from the wind pressure in the concave side and close from the wind pressure on the return (concave side) in order to reduce resistance on the return.



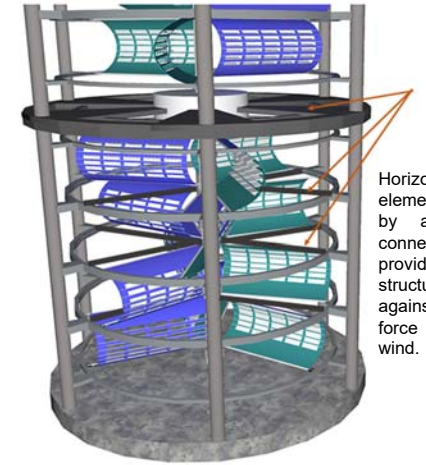
Vertical axis windmills turning in opposite directions. The lower windmill can be seen with the shutters closed indicated by yellow arrow (above) on the right side - white rectangles - while on the left side the shutters are open to minimize wind resistance until they reach into position to capture wind power again.

The upper windmill turns in the opposite direction to the lower where the upper yellow arrow indicates the shutters closed to capture the wind power. the red arrow indicates the placement of the generator capturing the power from both upper and lower rotors turning in opposite directions.

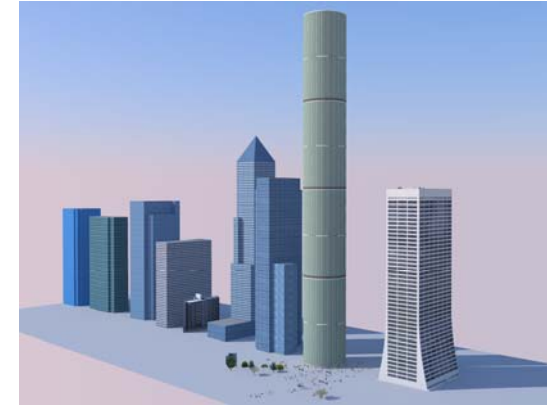
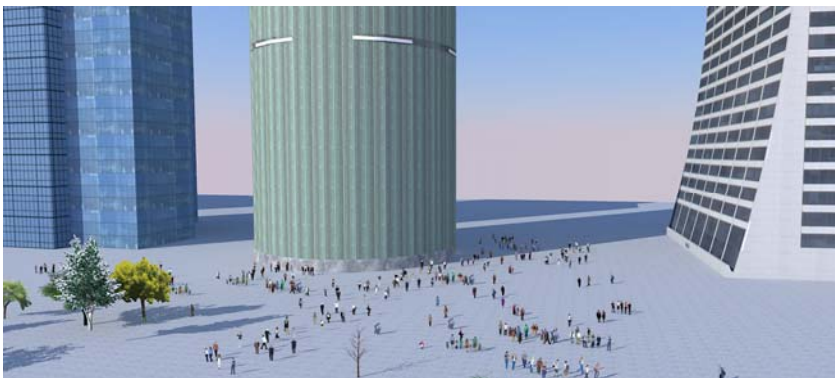
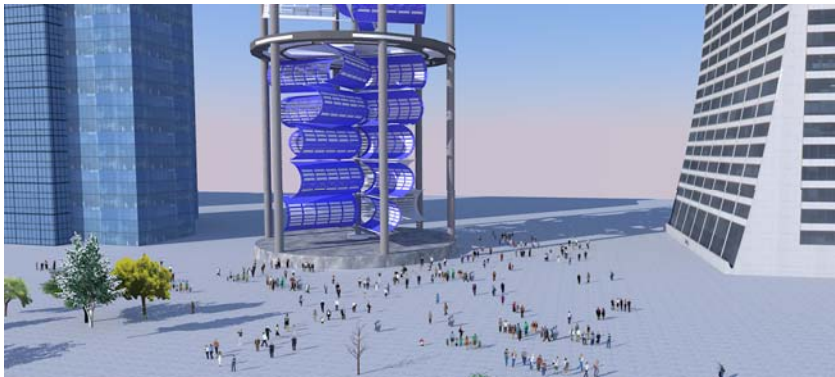


← "vertical blinds" - adjustable to parallel direction of the wind - designed to cover the windmills for safety and visual integration.

Alternatively - **Flexible Solar Panels** (instead of "vertical blinds" move from vertical to horizontal position when there is wind.



Horizontal elements (shown by arrows) are connected to provide structural support against lateral force from the wind.



Large scale wind power in densely populated areas

