

To Whom It May Concern:

Attached you will find information pertaining to the proposed Lompoc Wind Farm backed by Acciona. My intention is to tell the story that has not been spoken. We all want to GO GREEN. I think it is the responsible thing to do. I believe that we need to make sure that we have an informed community when making the decision. I have researched the project proposed and others like it. I do not claim to be an expert, but based on my research, I have found that although I still believe that wind power is a valuable solution, I now believe that the wind turbines proposed will be out dated in a matter of 12-24 months. It is comparable to your computer. We all know how you buy a computer in January and by December technology has changed so drastically that you are now dealing with a slower machine. The technology today with these wind turbines has advanced so dramatically that these large wind turbines are going to be a thing of the past by the time they are installed.

As I read through the EIR I realized that not only will our Board of Supervisors have to go against county regulation that our community members must comply with, but also by allowing these wind turbines to proceed they are clearly making a decision to set a precedence for future projects that will impact our counties wildlife, ag-preserve requirements, ridge line requirements, building codes and so much more. The fact that the Planning Commission has allowed them to place 65 wind turbines anywhere within 3,000 acres is amazing to me. Further the turbines they think they might use are known to be about 112 decibels per turbines. Our county requires no higher then 50 decibels. This does not make any sense at all. They have multiple families living near these turbines and our county has not responded to the impact that these turbines will have on them. I am also not aware that our Board understands or the community that there has already been negotiations with other ranchers in the area for additional wind farms to go up after this one is approved. My point here is that this is the first wind farm in our county and the importance of it should not be understated in any way. The impact for future projects from homes to commercial and agriculture are immense.

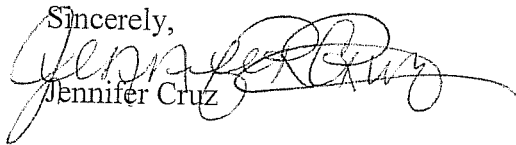
After talking to people within the community, it is apparent that people have no idea how big or how loud these turbines will be. Further, most people believe that the power from these turbines will be used for the community. When I asked some people about their thoughts on the turbines they had no idea that they were going in. The community does not understand that you will be able to see them from parts of Santa Ynez, Hwy 1, Jalama Beach, La Purisima Mission, Country Club, Harris Grade, Mission Hills, Surf Beach, VAFB Main Gate and South Gate etc... These wind turbines are 100 feet taller then the Statue of Liberty. They are bigger then a 747 and require 490,000 square cubic yards of earth to be moved for them to be installed.

We have a number of Golden Eagles in our hills, Red Tailed Hawks, Bobcats, Mountain Lions, Chumash Burial Grounds, and other wildlife that I feel should and could be preserved. However, we must make appropriate decisions NOW.

I do not believe that our community understands that the power generated from the 400-600 foot turbines (which by way the exact model, height, noise level or location has not been determined per the EIR) will be going to the PG&E main power grid and not to our community directly.

Finally, this project is not going to produce revenue for our county or jobs for our community as Acciona admits that it will only require 10 employees which they will bring in from other locations. They do not use local contractors, suppliers or equipment. The most economic impact I see is to the few land owners and the hotel owners for the few months they might have workers staying. PG&E, Acciona and the land owners seem to be the big winners. If the land owners want the opportunity to utilize their land for the betterment of our society and go green then let's help them do that. But why not be the place in the State that SETS THE STANDARD. I have found a few options that don't require these huge turbines, they don't kill wildlife, they are more efficient, less expensive, have NO noise to impact the neighbors, are environmentally friendly, and will have NO BIRD or BAT deaths and I urge you to carefully review the attached information related to these vastly preferable energy alternatives.

My question is why Acciona? Why these wind turbines? If we want green energy then lets look to the future lets put Santa Barbara on the map! Let's be INNOVATE and start looking for the NEW standard of GREEN energy.

Sincerely,

Jennifer Cruz





ENVIRONMENTAL TECHNOLOGIES LLC

English | Japanese



HOME NEWS VERTICAL WIND TURBINE OUR SYSTEM CONTACT US ABOUT US

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"Environmental Technologies LLC Commercializes Solutions to Stop Global Warming"

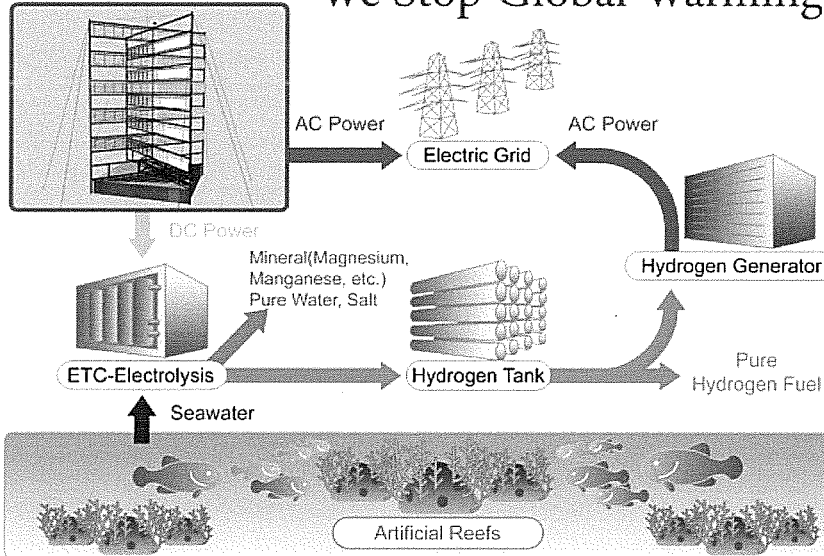
Our worldwide patented vertical shaft wind turbine produces clean, inexpensive electricity, using a highly efficient and compact proprietary turbine system. Our seawater electrolysis technology produces hydrogen, and our marine artificial reef solution can help save the earth by reducing CO2 in the air and sea. Our advanced technologies provide the best and most efficient commercialized solutions to help stop global warming.

Environmental Technologies LLC Official Brochure (PDF) DOWNLOAD

Environmental Technologies LLC Presentation Movie (WMV) DOWNLOAD MOVIE

ETC-LU Vertical Wind Turbine

We Stop Global Warming!



Vertical Wind Turbine

Ground Breaking News

Sullivan County Community College broke ground on Wednesday for construction of an energy-producing wind turbine that...

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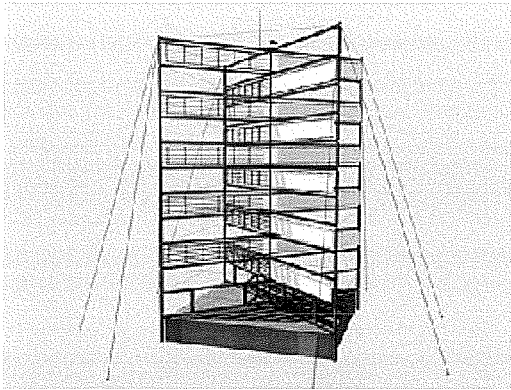
NEWS

Huge wind turbine will be built soon

LOCH SHELDRAKE - Sullivan County Community College broke ground on Wednesday for construction of an energy-producing wind turbine that will be the first of its kind in the world and could cut the college's electricity bill by half.

detail





ETC-LU VERTICAL TYPE WIND TURBINE

Wind power generation is watched by the energy industry as a low cost energy producer among renewable electricity sources. The ETC-LU Wind Turbine technology is the world's first innovative vertical type wind turbine system, patented worldwide, including the US. Our technology is the most efficient, trouble-free wind turbine providing cheaper electric power. This vertical wind turbine has been developed over 18 years and is now ready to be commercialized in megawatt class systems, up to 3 megawatts per unit.

The fan blades are attached to the vertical shaft and accept wind from any angle. Soon after the wind hits the retractable blades, they fall 90° horizontally by a battery operated device and make the turbine rotate smoothly.



This revolutionary method for capturing wind forces is the main reason that our vertical type wind turbine can convert wind power to electric power up to more than 70% efficiency - a much higher efficiency than the Betz theorem postulates (59%), and more than double, compared with conventional propeller turbines 30-35% efficiency. Because the efficiency is improved so drastically, our vertical type turbines can generate about two times more electricity compared to a conventional wind turbine, using the same capacity generator, and under the same wind conditions.

There are 5 major points which make our system superior to a traditional propeller system:

1. Better durability

The driving force is concentrated on one vertical main shaft. As a result, the weight and vibration of the fan blades are evenly loaded and distributed to the outside supporting frame, causing less damage to the working parts of the system compared to a standard propeller type turbine.

2. Its light weight makes it easy to set up

The fan blades are a very small size and made of thin (1 mm) aluminum plates which are coated by our Heatless Glass, making it free from damage from rust, freezing, salt, etc.

3. Easier maintenance

The power room is built either on the ground or on the roof of the building structure. The maintenance of generators, DC motors, batteries and gear box is easy and inexpensive.

4. Works under any weather conditions

The traditional propeller system operates under wind speeds between 4 m/s and 25 m/s. Our system works beyond this range - however, the cut-out wind speed is set at 40 m/s. Our system has several power generators (currently up to 4 units) and DC motors, making it possible to generate electricity on slower wind speeds such as 1-2 m/s. A lightning conductor is attached on top, protecting the system from lightning attacks.

5. Lower cost per operation

Variable and maintenance costs are lower, due to the smaller size, better durability, and easier maintenance.

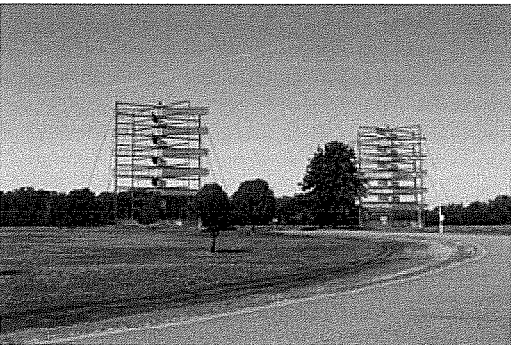
6. No noise problems

Unlike a regular propeller wind turbine it emits no low wave sound, and because of the blades' revolutionary development there is no issue with the amount of noise produced.

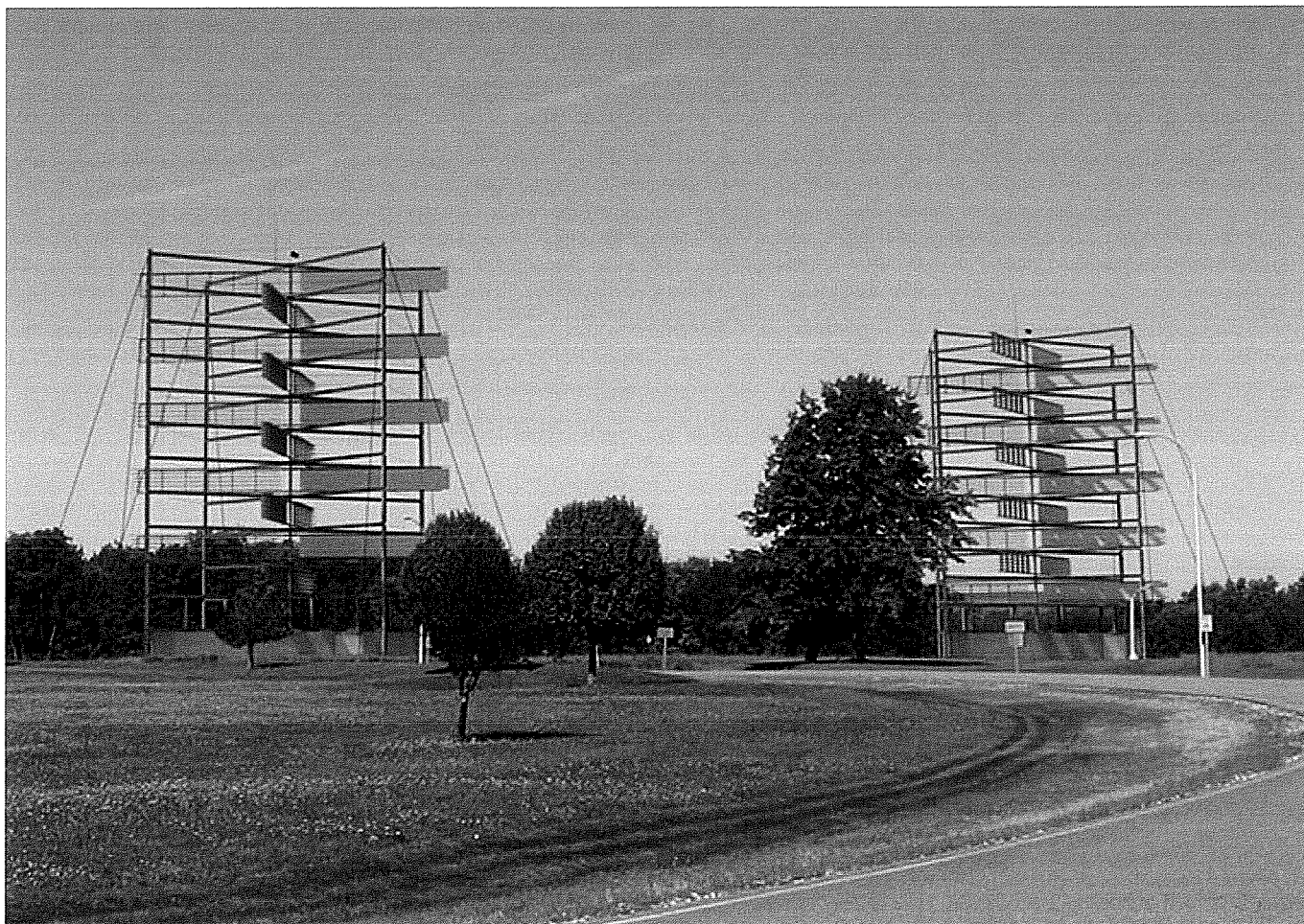
Also, because of its compact structure it is possible to build the system at locations where it was not possible to build with traditional propeller systems, such as on the roof of buildings. This makes it possible to generate electricity without polluting the environment and with a lower operational cost.

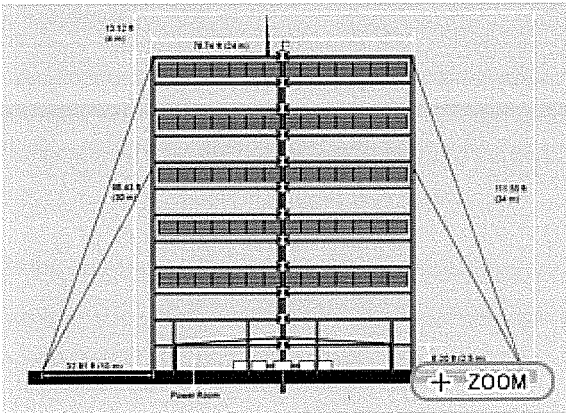
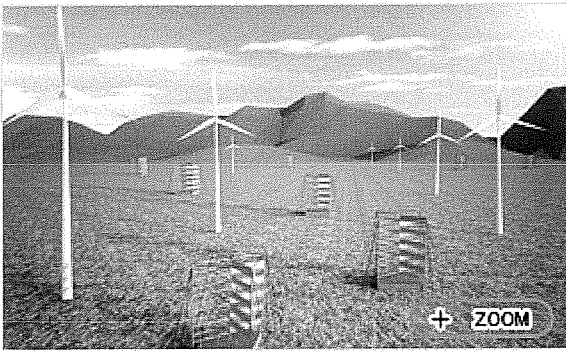


Wind Turbine application image rendering
On / Off - Shore Wind Farm
44 MWh (2MWh x 22units)



Wind turbine 1250kwh at a campus in NY

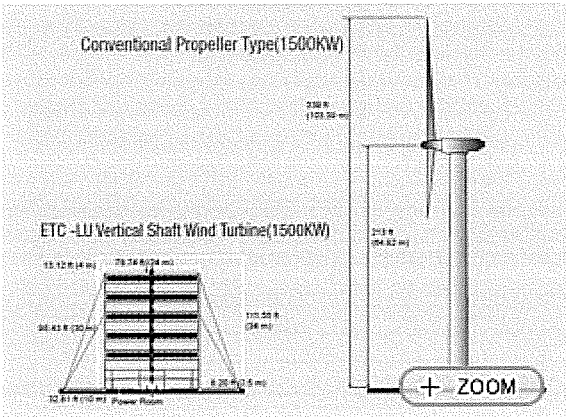


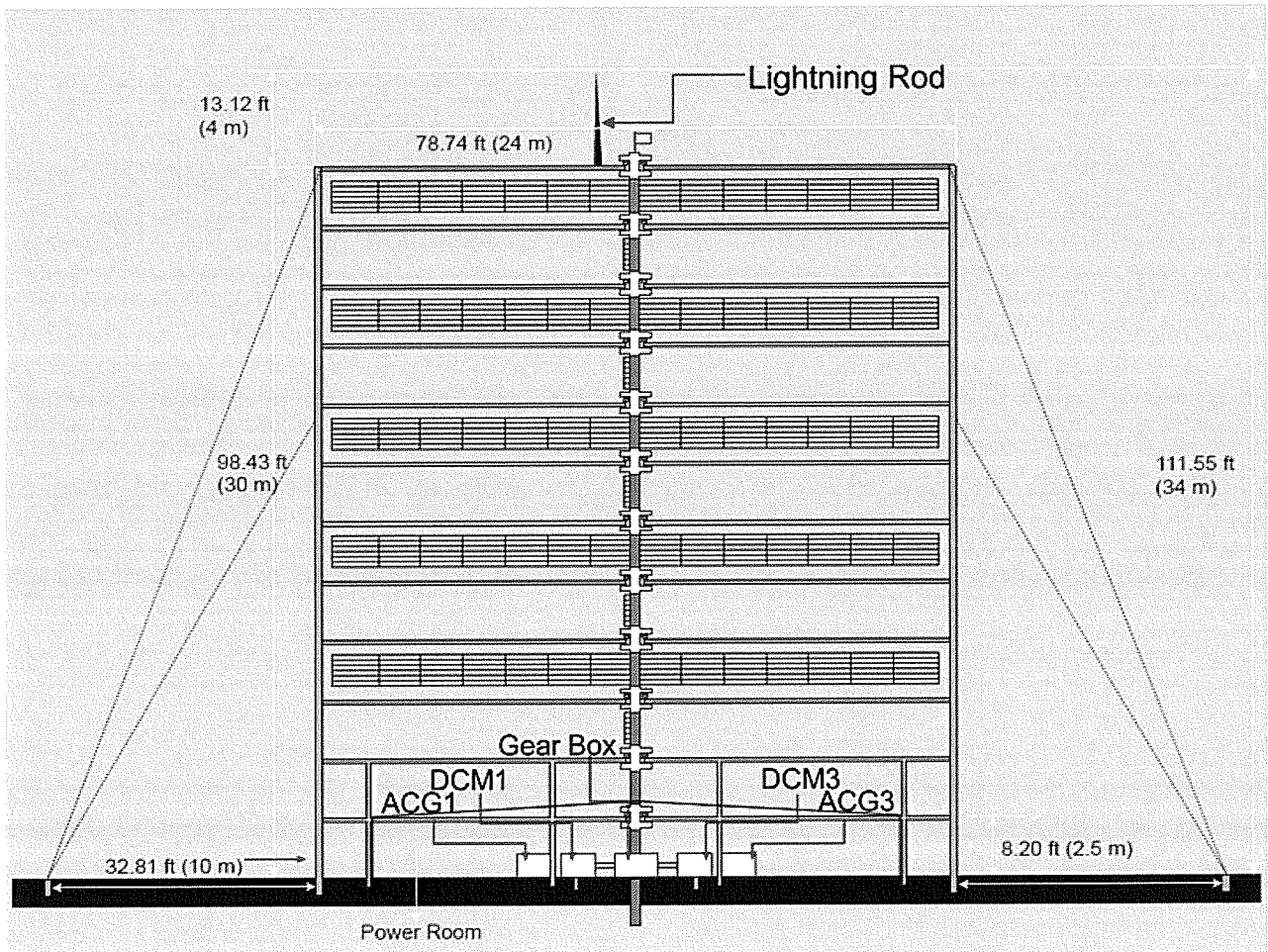
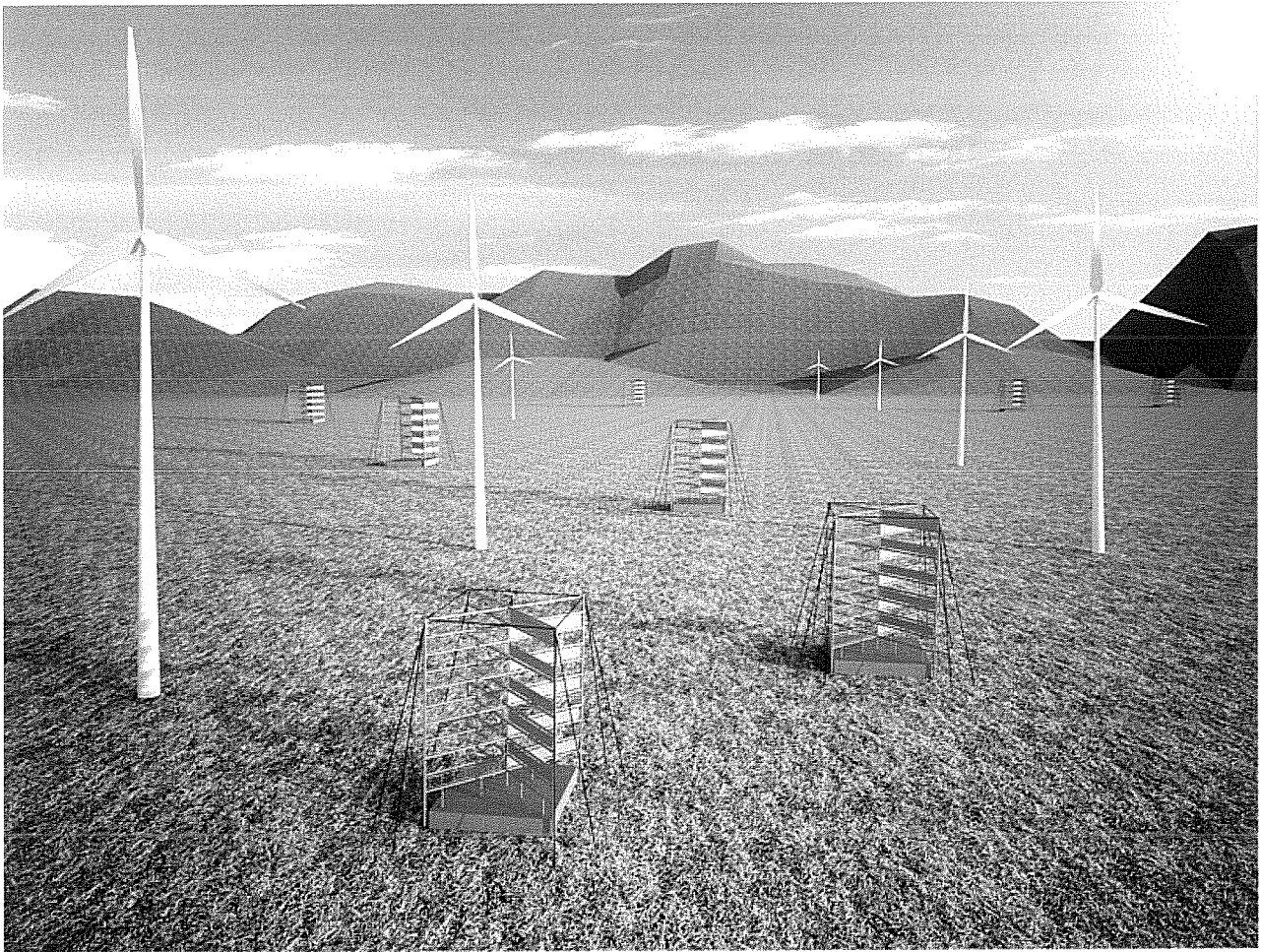


Innovative ETC-LU Vertical Shaft Wind Turbine

	Conventional Horizontal Shaft Turbine Type (1500KW)	ETC-LU Vertical Shaft Wind Turbine (1500KW)
Shaft Structure	Horizontal	Vertical
Total Height	336m (104m)	111.50m (366ft)
Capacity Factor	20-30%	50-70%
Noise	Uncomfortable Low Frequency Sound	No Low Frequency Sound
Lightning	Difficult to protect	Can be protected
Bird Strike	Dangerous	Safe
Maintenance	High Cost	Low
Visual Impact	High Negative	Acceptable

Height Comparison





Innovative ETC-LU Vertical Shaft Wind Turbine

Conventional
Wind Turbine Type(1500KW)

ETC-LU
Vertical Shaft Wind Turbine(1500KW)

Shaft Structure

Horizontal

→ Vertical

Total Height

339ft(104m)

→ 111.5ft(34m)

Capacity Factor

20-30%±

→ 50-70%±

Noise

Uncomfortable Low Frequency Sound → No Low Frequency Sound

Lightning

Difficult to protect → Can be protected

Bird Strike

Dangerous → Safe

Maintenance

High Cost → Low Cost

Visual Impact

High Negatives → Acceptable

Conventional Propeller Type(1500KW)

339 ft
(103.39 m)

ETC -LU Vertical Shaft(1500KW)

213 ft
(64.92 m)

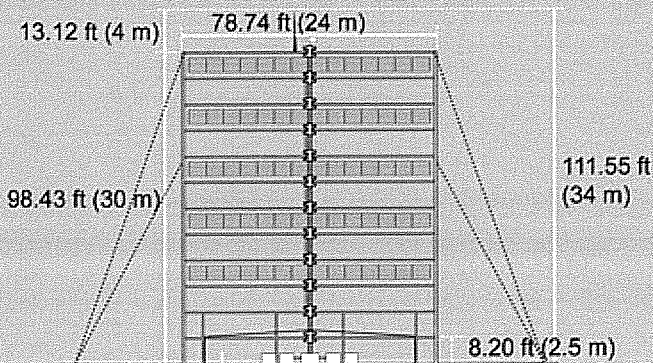
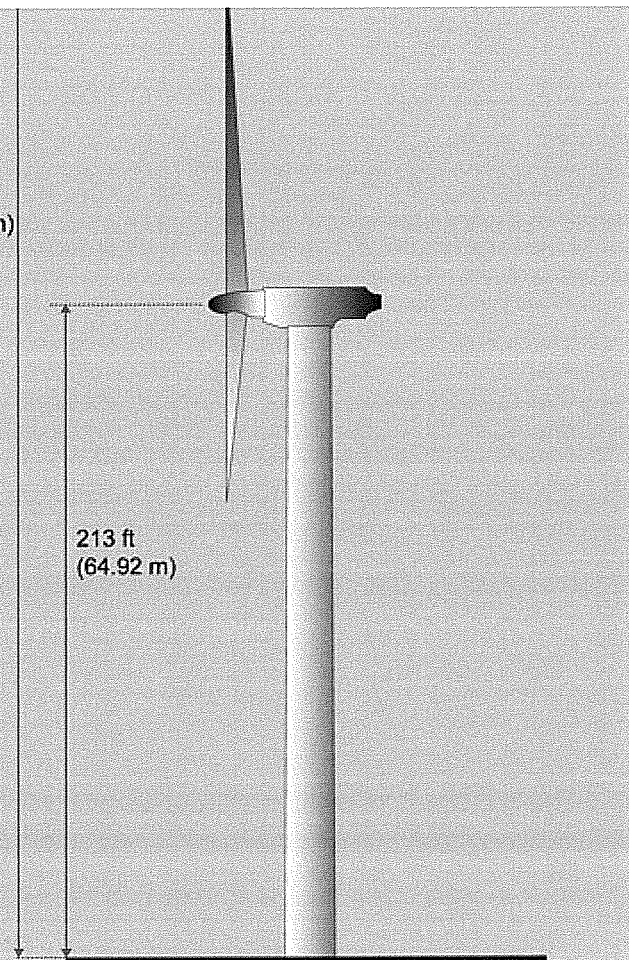
13.12 ft (4 m)

78.74 ft (24 m)

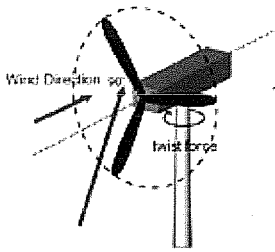
98.43 ft (30 m)

111.55 ft
(34 m)

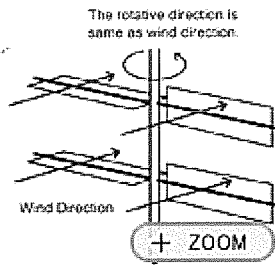
8.20 ft (2.5 m)



Conventional Wind Turbine

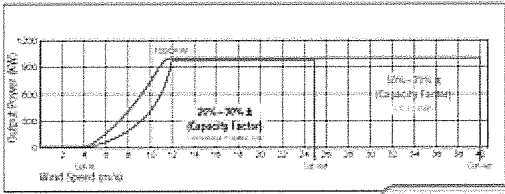


ETC-LU Vertical Shaft Wind Turbine



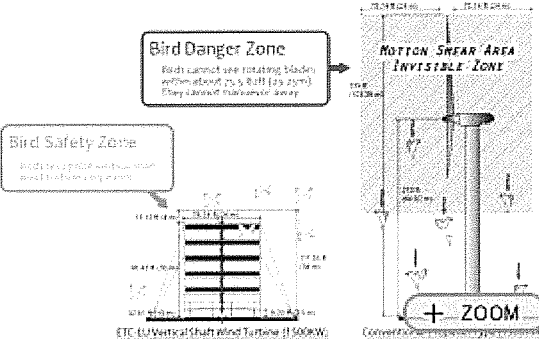
Power Curve and Capacity Factor

- ETC-LU Vertical Shaft Wind Turbine (1500KW)
- Conventional Propeller Type Wind Turbine (1500KW)



ETC-LU Vertical Shaft Wind Turbine (1500KW) and Conventional Propeller Type Wind Turbine (1500KW) power curves. The ETC-LU turbine shows a higher capacity factor (50%-70%) compared to the conventional turbine (20%-30%).

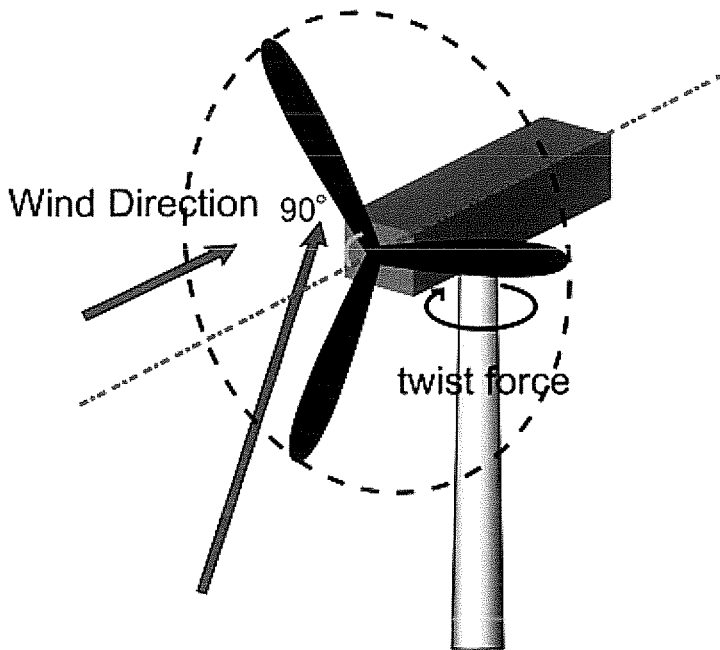
Bird and Bat Concerns



ETC-LU Vertical Shaft Wind Turbine (1500KW)

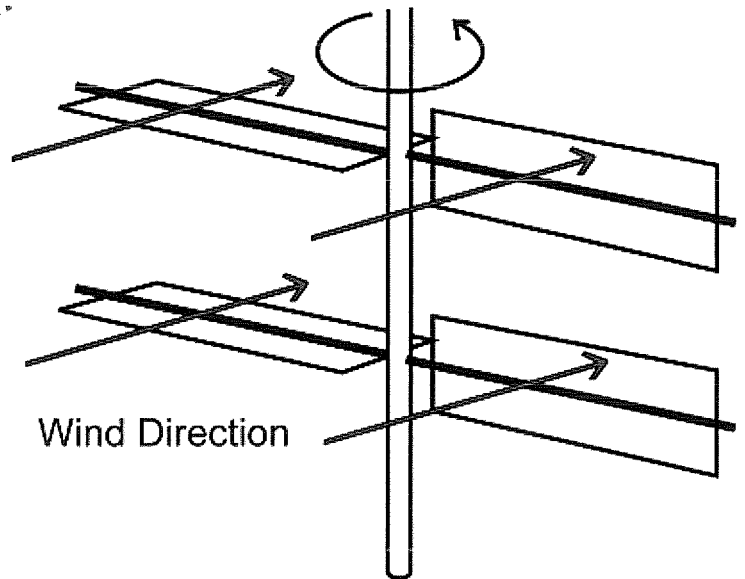
Conventional Propeller Type Wind Turbine (1500KW)

Conventional Wind Turbine



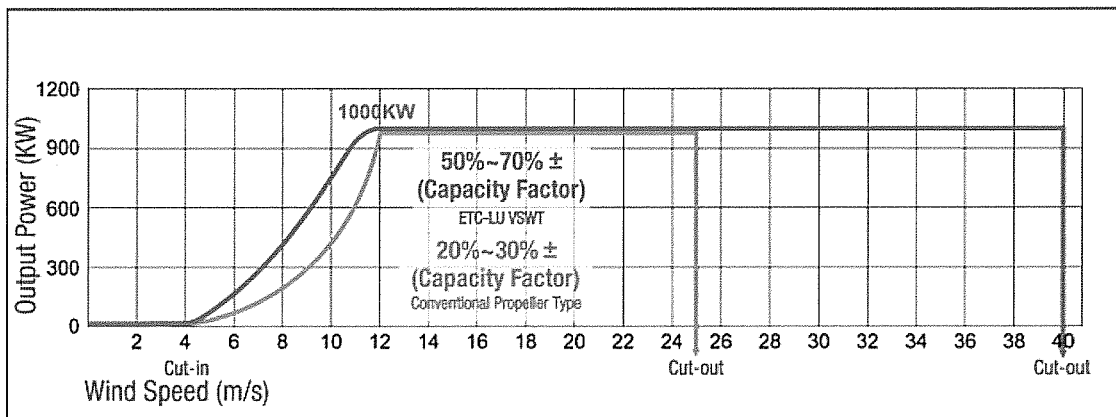
ETC-LU Vertical Shaft Wind Turbine

Blade rotation direction is same as wind direction.



Power Curve and Capacity Factor

- ETC-LU Vertical Shaft Wind Turbine(1000KW)
- Conventional Propeller Type Wind Turbine(1000KW)



Capacity Factor : If a 600 kW turbine produces 1.5 million kWh in a year, its capacity factor is $1500000 : (365 \cdot 24 \cdot 600) = 1500000 : 5259600 = 0.285 = 28.5$ per cent.
 Capacity factors may theoretically vary from 0 to 100 per cent, but in practice they will usually range from 20 to 70 per cent, and mostly be around 25-30 per cent. (Danish Wind Industry Association)

Bird and Bat Concerns

Bird Danger Zone
 Birds cannot see rotating blades within about 75.5-82ft (23-25m). They cannot maneuver away.

Bird Safety Zone
 Birds recognize vertical shaft wind turbine very easily.

