

RENEWABLE ENERGY INFORMATION FROM THE PIER AQUARIUM LABYRINTH



Wind Turbines

Wind: one of the first renewable energy sources harnessed by humans.

1. Wind is a form of solar energy. It is the atmosphere's response to air masses heated unevenly by the sun.
2. Wind has been used to power ships, mill grain and pump water.
3. Wind power could be used without producing by-products that are harmful to nature.
4. The average wind velocity on Earth is 9m/sec.
5. Regional atmospheric pressure differences cause wind to flow from areas of high to low pressure.
6. The larger the difference in pressure, the greater the wind velocity.
7. Stronger winds are found higher above the Earth.
8. We use wind turbines to turn the wind's energy into electricity. The sun's heat drives the winds whose energy is captured with wind turbines.
9. The blade or floater of a wind turbine is very similar in design to an airplane wing.
10. Its shape very efficiently converts the wind's force into rotational energy, causing the blade to spin. The turbine blades then help to generate electricity.
11. Wind turbines can generate about 5% more power in the winter than the summer since cold air is denser than hot air.
12. Large wind turbines can be as tall as 200 ft. and can produce 500 kilowatts or more.

13. These utility-scale wind turbines are often installed in clusters and located on hilltops, mountains or passes.
14. The power that can be produced from the mills is around 50 watts.
15. Wind electricity: affordable, environmentally-friendly and sustainable
16. Residents worldwide are installing small wind turbines to generate their own reliable electricity.
17. The cost of wind electricity has dropped dramatically in recent decades and is expected to decline.
18. 1% of California's electricity currently is being generated by wind energy.
19. Wind power is growing at a rate of 30% annually.
20. The US government is promoting offshore wind projects.
21. Wind turbines: relatively low initial cost, produce no air emissions and require only the wind as fuel.