Green Energy: Solar, Wind and Geothermal System Installations

Owners may wish to consider sources of Green energy to lower the carbon footprint of the apartment complex. Green energy is the term used to describe sources of energy that are considered to be environmentally friendly and non-polluting, such as geothermal, wind and solar. Green energy sources are often considered "green" because they are perceived to lower carbon emissions and create less pollution.

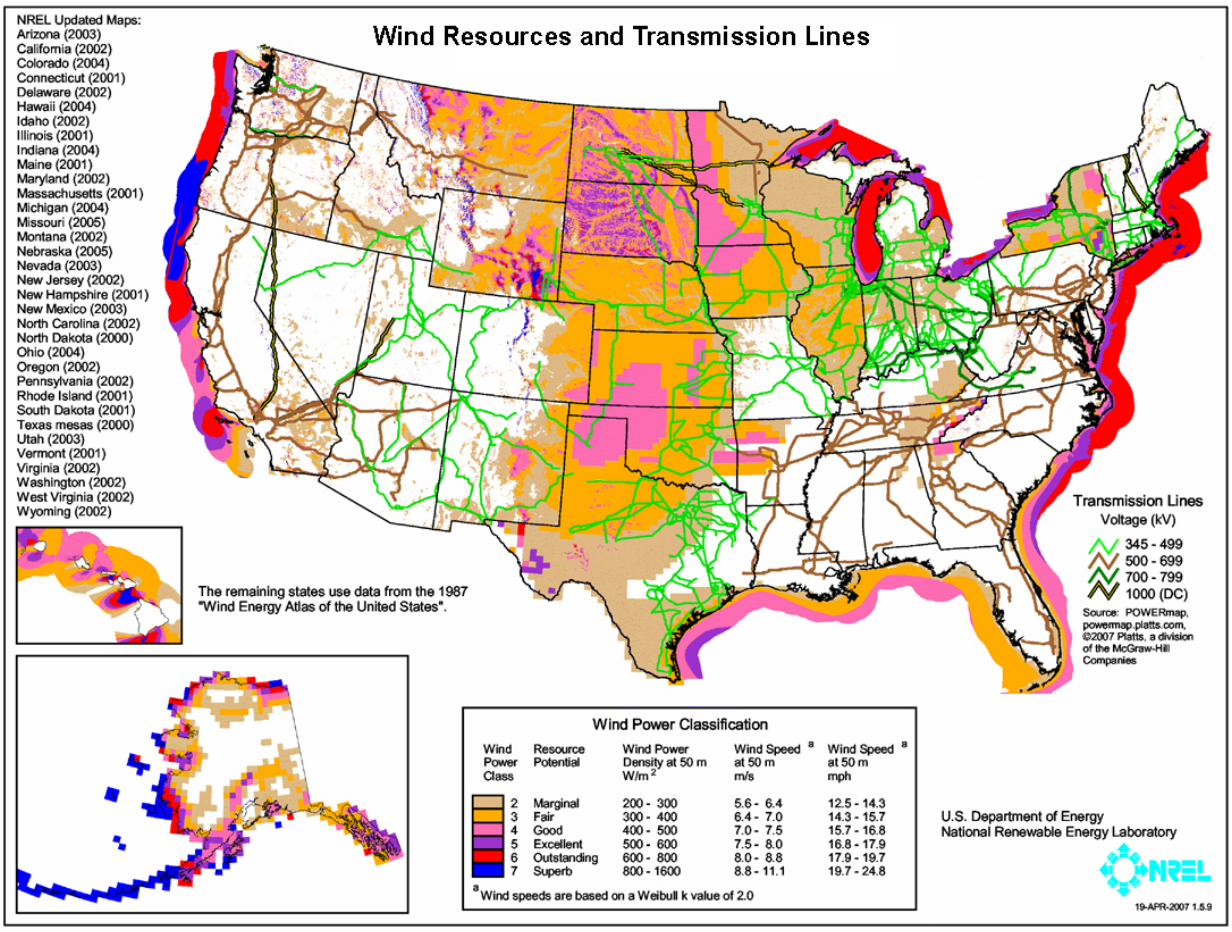
Wind Power:

Wind power is the conversion of wind energy into a useful form, such as electricity, using wind turbines. At the end of 2008, worldwide nameplate capacity of wind-powered generators was 121.2 gigawatts. Although wind produces only about 1.5% of worldwide electricity use, it is growing rapidly, having doubled in the three years between 2005 and 2008. In several countries it has achieved relatively high levels of penetration, accounting for approximately 19% of electricity production in Denmark, 11% in Spain and Portugal, and 7% in Germany and the Republic of Ireland in 2008.

The principal application of wind power today is the generation of electricity. Wind power, along with solar power, is non-dispatchable, meaning that for economic operation all of the available output must be taken when it is available.

“Small scale wind power” is the name given to wind generation systems with the capacity to produce 50 kW or less of electrical power. Apartment owners may purchase these systems to reduce or eliminate their dependence on grid electricity for economic or other reasons, or to reduce their carbon footprint. Grid connected wind turbines may use grid energy storage, displacing purchased energy with local production when available.

Wind power generation has negligible fuel costs and relatively low maintenance costs. In 2004, wind energy cost one-fifth of what it did in the 1980s. The map below shows classifications of geographic areas in terms of their potential for wind power. The cost effectiveness areas can be changed by local and federal incentives.



Additional information at: http://en.wikipedia.org/wiki/Green_energy