Wind Energy Notes

* US Government subsidizes has lowered the cost of wind energy. The US produces the most wind power in the world and is set to support 30% of the US’ energy needs by 2030. More than 400 wind power facilities in 23 states.
* 2 Main problems of wind energy: 1) wind does not blow all the time, so there must be a back-up energy provider (natural gas). One state that offers a potential solution is Hawaii, where its officials want 70 percent of energy needs to be met by renewable sources like the wind, sun or biomass by 2030. At a 30-megawatt wind farm in Oahu, where the wind supply is gusty and erractic, the plan is to install a 15-megawatt battery to smooth out the flow. The Hawaii installation is designed to succeed at a crucial but obscure function: frequency regulation. The battery system can also be used for arbitrage, storing energy at times when prices are low and delivering it when prices are high. 2) Wind is strongest on plains and grassland, away from cities that need energy and using wires to transport the energy great distances is expensive.
* Offshore wind power plants serve as a potential answer to the problem; though building turbines offshore is expensive, the intensity of the wind is promising.

<http://topics.nytimes.com/top/news/business/energy-environment/wind-power/index.html>