

Briefing Document
What Wind Turbine Development Can, and Cannot Do, for the State of New Jersey

What Wind Development Can Do:

- Wind Power is a zero air emission technology. This aids New Jersey's goals of reducing CO₂, NO_x, SO₂, and Hg emissions. Current PJM average emissions per MWh are approximately: 3 lbs / MWh NO_x; 11 lbs / MWh SO₂; 1268 lbs / MWh CO₂; and NJ facility Hg emissions are 0.0000072 lbs / MWh (PJM does not track Hg). Any wind generation that is constructed, and integrated into the PJM system such that other fossil generation plants can be scaled back, could result in emission reductions.
- Wind power supports the New Jersey Renewable Portfolio Standard, which calls for 6.5% of the total power consumed in NJ come from Class 1 and 2 renewable resources by 2008, with a 20% goal by 2020
- Wind power could provide distributed generation in the shore area, which is currently transmission constrained. Any new wind generation that is constructed could offset currently operating electric generation capacity in the shore region, and could serve as a more localized power source (reducing the need for long distance power transmission construction in New Jersey). New wind power generation could also require localized transmission system upgrades in the shore region, however, depending on the amount of new generation capacity constructed.
- Wind power can provide significant generation capacity, through placement of a number of turbines within a relatively small geographic area. The Feasibility Study conducted for the NJBPU indicated power densities of 20MW capacity per square mile
- Wind development in New Jersey can provide jobs and other economic development benefits, as well as increased tax revenues. Jobs could result from installation and maintenance of the turbines and other related infrastructure, and tax revenues assessed on the electricity generation.
- Wind power qualifies for federal Production Tax Credits – a federal subsidy for energy production based here in New Jersey

What Wind Development Cannot Do:

- Wind power cannot significantly reduce fossil fuel, or nuclear capacity serving New Jersey. New Jersey's power needs are substantial. Wind power is not capable of altering the traditional New Jersey fuel mix in a dramatic way, in the near-term. Additionally, oil fuels only a small fraction of electric generation in the United States.

Oil, rather, is predominantly used for transportation and home heating. Wind power will not, therefore, significantly impact foreign oil imports.

- Wind is intermittent. It will not provide “base load” power (power available on an “as needed” basis). The intermittent nature of wind power requires additional load management skill be applied by PJM, the regional system operator. PJM is quite adept, however, at scheduling intermittent resources into the region, and has stated it can accommodate additional intermittent resources without affecting system operating costs.
- Wind has environmental impacts, as well, potentially ranging from avian impacts, to commercial and recreational ocean uses, to wetland impacts.
- Wind power has aesthetic, or visual impacts. These can be minimized by placing wind projects far offshore, but cannot be totally eliminated.

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