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Leland Teschler's Editorial: Not Enough Juice: Reality and Alternative Energy

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On the eve of the recently completed Wind Power Conference, Siemens Energy put out a press release trumpeting an order for 33 of its 2.3-MW wind turbines. The units are destined for a wind farm in North Dakota expected to have a generating capacity of up to 75 MW.

You might think a wind farm with 33 wind turbines would make a significant dent in the demand for fossil fuels. But its contribution as a green-power source only comes into perspective when considering the power needs of a big city. Peter Huber, a Manhattan Institute scholar and one-time MIT associate professor, has figured this out. He calculates that meeting New York City's total energy demand would take about 13,000 wind turbines the size of the Siemens units going into North Dakota, all spinning at top speed. And to meet the Big Apple's peak energy demands, you'd need about 50,000 of them sprinkled in dispersed locales to give yourself enough reserve margins of power.

Huber's point in making this calculation is that there is a lot of ignorance floating around about how difficult it is to get a large amount of power out of wind and, for that matter, out of solar cells. And though exhibitors at the Wind Power confab displayed a lot of interesting technology, there was nothing there that invalidated Huber's projections about getting enough juice from green-power sources to run cities.

Huber also points out that power would still be expensive even if the 50-story-high turbines themselves were free. Proponents of wind generation explain that the technology continues to improve, with more reliable generators, gearboxes, and ancillary equipment coming off the drawing boards. Nevertheless, the infrastructure costs of maintaining wind installations are significant and will remain so. There probably isn't even enough government subsidy money to make wind more than a niche

power source.

Companies supplying the wind industry understand this, but are enthusiastic about wind anyway. It is easy to see why: Capital-equipment manufacturers I spoke to all said their business is essentially dead except for wind-energy contracts.

The facts about wind power are all the more sobering in light of recent proposals to make coal-generated electricity more expensive through cap-and-trade climate bills. Backers of such legislation see it as a way of promoting green-power alternatives. Ironically, the more-likely outcome will be to make the U.S. more dependent on foreign oil. Even if wind farms were on an economic par with coal-fired generators, it would take time to erect enough turbines to make a difference.

For example, Siemens figures it will take about two years to get its 33 wind turbines up and running in North Dakota. At that rate, the 13,000 turbines necessary to meet New York's average needs would be ready in the year 2797. In the meantime, utilities will be burning more petroleum products to avoid passing onerous carbon taxes onto ratepayers.

Of course, there is an easy way around burning coal or buying foreign oil for electricity, and it doesn't involve dedicating thousands of acres to wind farming or solar cells. Nuclear power is clean and compact, and it is safely used in countries ranging from France to Japan. It's just not politically correct, at least in the U.S. But unlike some of the alternatives, it is not a green bridge to nowhere, either.