

Source: OECD

When the discount rate was moved to 10%, then nuclear remained cheaper than other sources in both North America and Asia Pacific. Indeed, at that higher discount rate, the median cost for nuclear power in Asia Pacific is less than half that of wind. But nuclear's economics falter in Europe under a 10% discount rate making it slightly more expensive than both coal and gas, but it remains substantially cheaper than wind.

The study collected data from 190 power plants in 21 countries. And while the IEA included numerous factors in coming up with their estimate of costs, this text from the report is critically important:

The electricity generation costs calculated are plant-level (busbar) costs, at the station, and do not include transmission and distribution costs. Neither does the study include other systemic effects such as the costs incurred for providing back-up for variable or intermittent (non-dispatchable) renewable energies.

Those two sentences are telling. While the IEA report shows that wind energy is usually more expensive than conventional generation, their cost calculations do not include two of the most expensive -- and controversial -- aspects of integrating wind energy into a given electric grid: the transmission lines needed to carry wind-generated electricity to distant cities, and the cost of backup generation capacity that must be available to assure that the intermittent electricity supplied by the wind turbines doesn't cause the grid to go dark.

Expect wind lobbyists and environmental advocates to downplay the importance of this IEA report. But just look at the figures from the new IEA and consider the disparity in costs between wind and nuclear. Also look at the disparity in costs between wind and conventional generation, particularly in Asia. Then consider how much higher the costs of wind would be if all of the costs -- that means adding in the transmission line costs and the backup generation costs -- were factored into the equation.

The punchline here is abundantly obvious: Adding more wind energy to the US electricity grid will mean higher costs for consumers.

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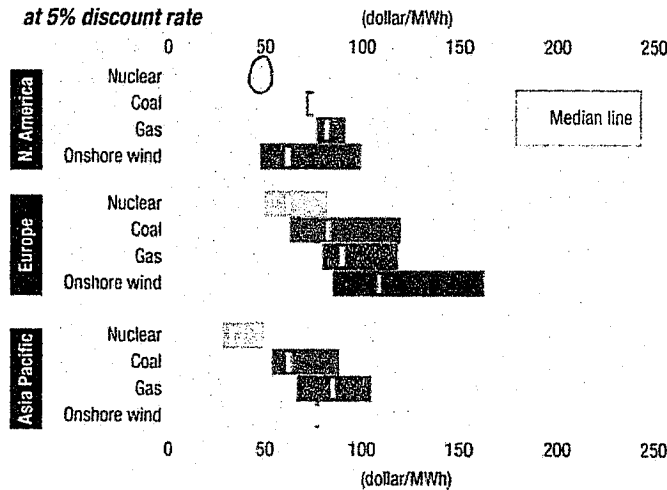
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The wind energy lobbyists love to claim that installing new wind turbines is the cheapest form of new electricity generation capacity. In fact, I heard that very claim while at a party here in Austin a few weeks ago. But as usual, there's the hype and there's the reality.

Today, the International Energy Agency, in cooperation with the Organization for Economic Cooperation and Development's Nuclear Energy Agency, released a study called "Projected Costs of Generating Electricity." The results are yet another refutation that wind is the least-costly source of new generation. Using what it calls the "levelized costs of electricity," a metric that includes key factors like the discount rate, construction costs, load factors, fuel prices, and carbon costs, the study found that nuclear power is the least-expensive option for new generation in North America, Europe, and Asia Pacific when the discount rate is 5%. Meanwhile, wind energy was often the most expensive option regardless of location and whether the discount rate was 5% or 10%.

Levelized Cost of Electricity for Nuclear, Coal, Gas, and Onshore Wind Power Plants

at 5% discount rate



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