



NY Times Energy Series: Nuclear

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The New York Times has been running [a series of articles on the future of energy](#) from a wide variety of perspectives and topics. [Today's article focuses on the challenges of increasing the level of power generated from nuclear power plants.](#)

My growing (and worrying) conclusion is that we are headed back to the future with coal - either [liquified for our cars](#) or simply burning it for electricity. Perhaps [somewhat cleaner coal](#), but even clean coal is more polluting in terms of global warming than most other forms of energy production.

From today's article comes the verdict from some utilities that many are not considering buying new nuclear plants because it is too risky:

Despite nuclear power's promise as a clean energy source that could hold down emissions of global warming gases, most environmentalists are skeptical of the latest claims by its advocates. They say that utilities, at best, will move ahead with a handful of plants that will receive lavish incentives from the government. But the risks of nuclear power are still so high, they argue, that no utility will be willing to put its own money into building a plant unless the federal government heavily subsidizes it.

It continues by pointing out that despite recent increases in the cost of all other forms of energy, Nuclear is still too risky to justify the investment:

because of high prices for natural gas and uncertainty about how emissions from coal plants will be regulated in the future, the nuclear industry is moving from near death to the prospect that perhaps a handful of plants will be ordered in the next few years. The Nuclear Regulatory Commission counts 27 potential reactors under consideration; 103 are now operable.

For all the momentum behind the push, however, there is still a high degree of skepticism within the utility industry. There are better places to put the money of shareholders, Mr. Hecht of PPL said. At the moment he sees a much greater advantage in cleaning up his coal-fired plants, investing \$1.5 billion to scrub out most of the sulfur dioxide. That would not only benefit the environment but also generate pollution credits PPL can profitably sell.

That decision was "dull and basic," Mr. Hecht said, but adheres to a paramount goal: maximizing shareholder returns. He won't rule out nuclear plants forever, Mr. Hecht said in an interview, but the business case would have to be a lot clearer than it is now.

"Technology often has zealots, it seems, behind it," he said of companies moving forward on nuclear power.

However, some are moving ahead, like Constellation Energy:

Constellation plans to apply for a reactor-operating license by the end of 2007, probably at either the Calvert Cliffs site in Maryland where it runs two nuclear reactors built in the 1960's and 1970's, or at Nine Mile Point, in Scriba, N.Y., on Lake Ontario, where it operates two reactors it bought in 2001.

Its decision has implications beyond the corporate bottom line for the global environment. There are also arguments over nuclear waste and the risk of accidents. Around New York City, especially, there is concern over reactors as terrorist targets.

But the risk that really matters to utility executives is financial. Among the companies that would actually build these plants, executives focus more on uncertain factors like the future price of power, the cost of producing competing fuels, and the cost of cleaning up coal plants to meet standards for the pollutants that Washington does regulate -- sulfur dioxide, nitrogen oxides and soot.

At this point companies do not face any constraints on carbon emissions.

That seems to be the critical point - Uncertainty. The main benefit of nuclear power, Less Carbon Emissions, lacks a clear economic incentive due to lack of regulation. A long term commitment to a Federal carbon cap and trade system or a simple carbon tax would be a great way to create more incentives for lower carbon emissions. But until then, increasing the share of power from Nuclear does not seem to be in the works:

even if a few plants are built, industry insiders do not expect nuclear power to assume a significantly greater role. Roger W. Gale, an electricity expert and former Energy Department official, asks several hundred utility executives each year what they foresee in their industry.

While they are convinced that a new plant will be ordered soon, the more than 100 senior utility executives who responded also said they do not expect "a future where nuclear generation represents a larger share of generation" than today.

And even with action now, it takes about a decade for a new nuclear plant to come on-line. Establishing a cap and trade system for carbon for sometime in the near future would help create incentives for all non-carbon emitting forms of power production.



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