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Is Nuclear Power Doomed to Dwindle?

By David Biello | February 5, 2013



Courtesy of Progress Energy

The nuclear reactor near Crystal River north of Tampa Bay will never fission again. Duke Energy has decided to shutter the troubled nuclear power plant, which has been shut down since 2009 thanks to a crack in the dome that shields the reactor. Attempts to repair the initial crack had caused other cracks to form and the company estimated that fixing

those cracks would cost another \$1.5 billion minimum, possibly much more.

As a result, the reactor will instead be mothballed while Florida electricity customers can expect to foot a \$1.6 billion bill from 2017 to 2037 to repay the utility for its investment in the nuclear power plant, according to a plan worked out by state regulators. The full tear-down will most likely wait for 40 to 60 years, according to a company statement, in part to avoid adding to that cost.

What will replace the reactor's 860-megawatts worth of power? Electricity generated by natural gas turbines, according to Duke. In fact, cheap natural gas may sound the death knell for the nation's dwindling number of nuclear reactors, now down to 102.

The Kewaunee nuclear power plant in Wisconsin will also close this year and plans for new nuclear power plants in Texas and Maryland have been scrapped. At the same time, costs have continued to rise for two reactors under construction in Georgia—the nation's first new nuclear reactor approved in more than three decades. Critics argue that the new reactors at the Vogtle Power Plant involve too much risk for taxpayers given the \$8 billion in loan guarantees that have been extended to Southern Company and partners to build them (though the loans have not been finalized or accepted as of yet). "They [the U.S. Department of Energy] are socializing the risk and privatizing the profits for big power companies," charged Sara Barczak of the Southern Alliance for Clean Energy in a conference call with reporters.

The woes facing nuclear reactors are not confined to the U.S. New reactors in France and Finland are behind schedule and over budget and Germany plans to phase out its nuclear fleet in coming years. Meanwhile, the politicians of Cumbria in northwest England voted to reject a planned repository for nuclear waste in their county. Paired with decisions by energy company Centrica to abandon plans to build new reactors in the U.K. and a new government report highlighting nuclear industry incompetence, nuclear energy may be "finished in the U.K.," according to nuclear power proponent and environmental columnist George Monbiot of *The Guardian*.

Nuclear power has more steam in countries such as China, which continues to push forward with a massive construction program in a bid to cut down on coal burning. Last week, Westinghouse lowered the top of the containment dome on its first new AP1000 reactor in Sanmen. But even 80 large nuclear power plants will do little to restrain China's now world-leading greenhouse gas emissions (and air

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pollution) from all of the country’s coal burning. And Japan’s greenhouse gas emissions have surged in the wake of the decision to shut down that country’s nuclear fleet after the [multiple meltdowns at Fukushima Daiichi](#).

U.S. greenhouse gas emissions have been falling in recent years, dropping by nearly 5 percent from power plants alone in 2011, according to [Environmental Protection Agency data](#). Yet, if natural gas power plants begin to replace low carbon but aging nuclear power plants as well as high CO2 coal-fired ones in this country, CO2 emissions will not fall as far as fast—more fallout from the [stalled nuclear renaissance](#).

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