

Germany set to abandon nuclear power for good

March 23 2011, By JUERGEN BAETZ, Associated Press



In this March 18, 2011 file photo, a traffic sign stands next to the nuclear power plant of Biblis, Germany. Germany stands alone among the world's leading industrialized nations in its determination to abandon nuclear energy for good because of the technology's inherent risk. Europe's biggest economy is betting billions on expanding the use of renewable energies to meet its demand instead. The transition was supposed to happen slowly over the next 25 years, but now it is being accelerated in the wake of Japan's Fukushima disaster. Chancellor Angela Merkel said the "catastrophe of apocalyptic dimensions" irreversibly marks the start of a new era. (AP Photo/Michael Probst,File)

(AP) -- Germany is determined to show the world how abandoning nuclear energy can be done.

The world's fourth-largest economy stands alone among leading industrialized nations in its decision to stop using nuclear energy because of its inherent risks. It is betting billions on expanding the use of renewable energy to meet power demands instead.



The transition was supposed to happen slowly over the next 25 years, but is now being accelerated in the wake of Japan's Fukushima Dai-ichi <u>nuclear plant</u> disaster, which Chancellor <u>Angela Merkel</u> has called a "catastrophe of apocalyptic dimensions."

Berlin's decision to take seven of its 17 reactors offline for three months for new safety checks has provided a glimpse into how <u>Germany</u> might wean itself from getting nearly a quarter of its power from atomic energy to none.

And experts say Germany's phase-out provides a good map that countries such as the United States, which use a similar amount of nuclear power, could follow. The German model would not work, however, in countries like France, which relies on nuclear energy for more than 70 percent of its power and has no intention of shifting.

"If we had the winds of Texas or the sun of California, the task here would be even easier," said Felix Matthes of Germany's renowned Institute for Applied Ecology. "Given the great potential in the U.S., it would be feasible there in the long run too, even though it would necessitate huge infrastructure investments."

Nuclear power has been very unpopular in Germany ever since radioactivity from the 1986 Chernobyl disaster drifted across the country. A center-left government a decade ago penned a plan to abandon the technology for good by 2021, but Merkel's government last year amended it to extend the plants' lifetime by an average of 12 years. That plan was put on hold after the March 11 earthquake and tsunami compromised nuclear power plants in Japan, and is being re-evaluated as the safety of all of Germany's nuclear reactors is being rechecked.

Germany currently gets 23 percent of its energy from nuclear power about as much as the U.S. It's ambitious plan to shut down its reactors



will require at least euro150 billion (\$210 billion) investment in alternative energy sources, which experts say will likely lead to higher electricity prices.

Germany now gets 17 percent of its electricity from renewable energies, 13 percent from natural gas and more than 40 percent from coal. The Environment Ministry says in 10 years renewable energy will contribute 40 percent of the country's overall electricity production.

The government has been vague on a total price tag for the transition, but it said last year about euro20 billion (\$28 billion) a year will be needed, acknowledging that euro75 billion (\$107 billion) alone will be required through 2030 to install offshore wind farms.

The president of Germany's Renewable Energy Association, Dietmar Schuetz, said the government should create a more favorable regulatory environment to help bringing forward some euro150 billion investment in alternative energy sources this decade by businesses and homeowners.

Last year, German investment in renewable energy topped euro26 billion (\$37 billion) and secured 370,000 jobs, the government said.

After taking seven reactors off the grid last week, officials hinted the oldest of them may remain switched off for good, but assured consumers there are no worries about electricity shortages as the country is a net exporter.

"We can guarantee that the lights won't go off in Germany," Environment Ministry spokeswoman Christiane Schwarte said.

Most of the country's leaders now seem determined to swiftly abolish nuclear power, possibly by 2020, and several conservative politicians, including the chancellor, have made a complete U-turn on the issue.



Vice Chancellor Guido Westerwelle said Wednesday "we must learn from Japan" and check the safety of the country's reactors but also make sure viable alternatives are in place.

"It would be the wrong consequence if we turn off the safest atomic reactors in the world, and then buy electricity from less-safe reactors in foreign countries," he told the Passauer Neue Presse newspaper.

But Schuetz insists that "we can replace nuclear energy even before 2020 with renewable energies, producing affordable and ecologically sound electricity."

But someone will have to foot the bill.

"Consumers must be prepared for significantly higher electricity prices in the future," said Wolfgang Franz, head of the government's independent economic advisory body. Merkel last week also warned that tougher safety rules for the remaining nuclear power plants "would certainly mean that electricity gets more expensive."

The German utilities' BDEW lobby group said long-term price effects could not be determined until the government spells out its nuclear reduction plans. Matthes' institute says phasing out nuclear power by 2020 is feasible by better capacity management and investment that would only lead to a price increase of 0.5 cents per kilowatt-hour.

In Germany, the producers of <u>renewable energy</u> - be it solar panels on a homeowner's rooftop or a farm of wind mills - are paid above-market prices to make sure their investment breaks even, financed by a 3.5 cents per kilowatt-hour tax paid by all electricity customers.

For a typical German family of four who pay about euro1,000 (\$1,420) a year to use about 4,500 kilowatt-hours, the tax amounts to euro157



(\$223).

The tax produced euro8.2 billion (\$11.7 billion) in Germany in 2010 and it is expected to top euro13.5 billion (\$19.2 billion) this year. The program - which has been copied by other countries and several U.S. states such as California - is the backbone of the country's transition toward renewable energies.

"Our ideas work. Exiting the nuclear age would also be possible in a country like the U.S.," Schuetz said.

Another factor likely to drive up electricity prices is that relying on renewable energies requires a huge investment in the electricity grid to cope with more decentralized and less reliable sources of power. Economy Minister Rainer Bruederle just announced legislation to speed up grid construction but gave no cost estimate.

And even if non-nuclear power is more expensive, Germans seeing images daily of Japan's crippled Fukushima nuclear complex seem willing to pay the higher price.

Ralph Kampwirth, spokesman for Lichtblick AG, Germany's biggest utility offering electricity exclusively from renewable sources, said since the Fukushima disaster it has been getting nearly three times more new clients than normal, up from 300 to more than 800 per day, despite prices slightly above average.

Sticking with nuclear power would also have its costs and require public funds.

The only two new nuclear reactors currently under construction in Europe, in France and in Finland, both have been plagued by long delays and seen costs virtually doubling, to around euro4 billion (\$5.7 billion)



and euro5.3 billion (\$7.5 billion) respectively.

The disposal of spent nuclear fuel is also a costly problem, but it has no set price tag in Germany because the government has failed to find a sustainable solution.

Many decades-old reactors are highly profitable as their initial cost has been written off, but they now face higher costs as regulators push for safety upgrades in the wake of the <u>Fukushima</u> disaster. One of the most pressing - and costly - requirements is likely to be a mandatory upgrade to reinforce all nuclear power plants' outer shell to withstand a crash of a commercial airliner.

Utility EnBW pulled the plug for good on one reactor temporarily shut down by the government because the new requirements made operating it "no longer economically viable."

But even if Germany abandons <u>nuclear energy</u>, some of Europe's 143 nuclear reactors will still sit right on its borders.

Since France and other nations are firmly committed to nuclear power, shutting down all reactors across Europe won't happen, but Merkel is now pushing for common safety standards. The topic will be discussed at the European Union summit in Brussels on Thursday and Friday.

Merkel said the 27-nation bloc, which has standardized "the size of apples or the shape of bananas," needs joint standards for nuclear power plants.

"Everybody in Europe would be equally affected by an accident at a <u>nuclear power plant</u> in Europe," Merkel said.

©2010 The Associated Press. All rights reserved. This material may not



be published, broadcast, rewritten or redistributed.

Citation: Germany set to abandon nuclear power for good (2011, March 23) retrieved 2 May 2024 from <u>https://phys.org/news/2011-03-germany-abandon-nuclear-power-good.html</u>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.