

Fewer US nuclear plants could curb climate change fight

May 7 2014, by Jean-Louis Santini



An aerial view of a nuclear power plant in Pottstown, Pennsylvania, on March 25, 2011

Nuclear power plants in the United States increasingly risk closure amid growing competition from cheap natural gas, which experts said could hamper President Barack Obama's efforts to combat climate change.

The White House on Tuesday urged action to fight the repercussions of

[greenhouse gas](#) emissions, warning that human-caused warming was already having a serious impact.

But an increase in the exploitation of abundantly available shale gas could mean that nuclear power plants—which do not emit greenhouse gases and accounted for 19 percent of US electricity production in 2013—could see cuts.

Aside from [natural gas](#), whose prices have dropped since 2009, new regulations put in place after Japan's 2011 Fukushima disaster and tax benefits for wind power production have also dented the competitiveness of atomic [energy](#), according to the sector.

These factors are casting doubt on the construction of new [nuclear power plants](#)—six are to be built by 2020.

Four nuclear reactors were shuttered in the United States between 2010 and 2013 with some 10 others possibly facing the same fate in the coming years, Doug Vine, senior energy fellow at the Center for Climate and Energy Solutions, told AFP.

"Each nuclear reactor retirement makes it more difficult for the US to achieve its climate pledge to reduce emissions 17 percent below the 2005 level by 2020," as announced by Obama in 2009, "and to achieve even greater reduction necessary over the longer term to avoid the worst effect of climate change," said Vine, who co-authored a recent report on the topic.

US second biggest CO2 emitter

The United States is the second biggest emitter of carbon dioxide after China. And even if the burning of natural gas produces 50 percent less of that greenhouse gas than coal, it does contribute to global warming.

The latest report by the Intergovernmental Panel on Climate Change (IPCC), the world has a likely chance of meeting the UN's warming limit of two degrees Celsius (3.6 degrees Fahrenheit) if it cuts annual [greenhouse gas emissions](#) 40-70 percent by 2050, especially from energy.

There would need to be a "tripling to nearly a quadrupling" in the share of energy from renewable and nuclear sources and from traditional fossil or new biofuel sources whose emissions are captured, it said.

In February, the Nuclear Energy Institute, which represents the industry, said "absent necessary changes in policies and practices, this situation has implications for reliability, longterm stability of electricity price and our ability to meet environmental goals."

Fossil energy sources generate about 66 percent of electricity in the United States—39 percent from coal plants and 27 percent from gas plants.

The rest is roughly derived from nuclear (19 percent) and [renewable energy](#) sources such as hydroelectric (6.2 percent), wind (4 percent), geothermal (0.41 percent) and solar (0.02 percent).

"We need to keep ramping up renewables, but they can't meet our need for reliable power 24/7," said Eileen Claussen, president of the Center for Climate and Energy Solutions.

What's more, she added, nuclear is "carbon-free."

Michael Jacobs, senior energy analyst at the Union of Concerned Scientists, said "the renewable energy sector could compensate the loss of energy provided by nuclear plants (but) only if they get the support in tax credit."

"If policies were supportive, renewable energy can provide 10 to 15 percent of US electricity," he said.

Jacobs added that while the renewable energy tax credit "comes and goes every two years," the fossil fuel tax support "is unchanged and constant."

In reference to current nuclear plants, "we don't believe they maintain that safety requirement," he said.

As for Vine, he acknowledged there were risks associated with nuclear power.

"But we feel that risk from unmitigated CO₂ emissions into the atmosphere and the risk of [climate change](#) are far, far greater than the risk associate with [nuclear power](#)," he said.

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