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U.K. Should Build More Nuclear, Less Offshore Wind Power

By Alex Morales - May 9, 2011

The U.K. should build more nuclear reactors than planned and slow down investment in offshore wind power to meet targets for carbon emissions and renewable power, the government's climate advisory panel said.

Two more reactors than currently planned, totaling 3.2 gigawatts, will be needed by 2030, the Committee on Climate Change said today in a [report](#) to the government. It noted the disaster at a Tokyo Electric Power Co. plant in [Japan](#) may slow nuclear developments in Britain and recommended delaying some offshore wind parks, saying current targets are "aggressive."

"Nuclear, for the foreseeable future, looks like it will be the lowest cost low-carbon technology," David Kennedy, chief executive of the committee, said in [London](#). "It's only as you get to the end of the 2020s and the beginning of the 2030s that the cost of renewables starts to converge."

The government in the past has followed the committee's advice. Decisions lawmakers make on the power mix will affect wind turbine makers such as [General Electric Co. \(GE\)](#), [Siemens AG \(SIE\)](#) and Gamesa Corporacion Tecnologica SA, which plan factories in the U.K. German utilities [RWE AG \(RWE\)](#) and EON AG are working on both nuclear plants and offshore wind farms. [Centrica Plc \(CNA\)](#) and Electricite de France SA are also planning new reactors.

Officials should lower targets for 13 gigawatts of wind farms off Britain by 2020, the panel said.

EU Goals

The U.K. is striving to meet a European Union target of deriving 15 percent of energy for power, heat and transport from renewables in 2020. The government should aim to double that proportion by 2030, the committee said. By then, 40 percent of electricity, 35 percent of heating and 15 percent of transportation fuels could come from renewables, it said.

At the same time, ministers should look for cheaper ways of meeting the EU goal, according to the report. Kennedy said this could involve switching from offshore to onshore wind, buying renewable energy certificates from other European nations, and purchasing concentrated solar power from a project being developed in Tunisia by London-based Nur Energie Ltd.

The study is "clearly" a negative for the offshore wind industry, Meg Brown, a renewables analyst in London with Citigroup Inc., said today by telephone. "The climate change committee

have recognized the costs of offshore wind, and ministers will probably be quite open to their advice.”

The U.K. currently has 1.3 gigawatts of offshore [wind turbines](#) in operation, with another 2.2 gigawatts being built and 1.8 gigawatts approved. Last year the country’s third round of seabed licenses were awarded, paving the way for a further 32 gigawatts to be built in projects starting later this decade.

Turbine Rights

The biggest of the round 3 projects allows a group that includes [Scottish & Southern Energy Plc \(SSE\)](#), RWE, [Statoil ASA \(STL\)](#) and Statkraft SF erect up to 9 gigawatts of turbines, while an alliance of [Iberdrola SA \(IBE\)](#)’s Scottish Power unit and Vattenfall AB was given rights to 7.2 gigawatts of potential farms.

The U.K. currently aims to build 13 gigawatts of offshore wind farms by 2020, according to its [renewable energy action plan](#) submitted last year to the EU. That should be slowed, with some of the construction moved to the 2020s because the technology is expensive and would get stronger backing if its growth was ensured through 2030, Kennedy said.

“We don’t envisage shaving off more than 3 gigawatts” by 2020, he said. “There’s a very aggressive schedule, and then there’s nothing in the 2020s. A smoother profile going out to 2030 would make a lot of sense. We need to avoid stop-start investment cycles.”

Energy Efficiency

Current U.K. plans would add about 50 pounds (\$82) to U.K. energy bills in 2020, according to the study. Once plans to boost the energy efficiency of homes and appliances are factored in, costs would instead decline by about 150 pounds, it said. Switching 3 gigawatts of offshore wind to onshore wind would knock an extra 5 pounds off, the committee said.

The government in the past has followed the committee’s advice on greenhouse gas reductions, raising its commitment to an 80 percent cut by 2050.

The committee said carbon emissions, which are blamed for [climate change](#), can be nearly eliminated from electricity production by 2030. By then, 40 percent of power could come from renewables, 40 percent from nuclear power, 15 percent would come from gas and coal plants fitted with [carbon capture](#) and storage equipment, and the remainder from unabated gas plants, it said.

Current plans for nuclear power mean that in 2025, Britain would have 18 gigawatts of new nuclear power stations, with one existing 1.2-gigawatt plant still operating, according to the committee, which recommended an additional two reactors be built by 2030.

Fukushima Effect

“While the specific circumstances in Japan differ significantly from those for new nuclear in the U.K., in principle this could affect the potential for nuclear power to contribute to decarbonization,” the committee said. “Full reliance on nuclear would be inappropriate, given uncertainties over costs, site availability, long-term fuel supply and waste disposal, and public acceptability.”

The environmental groups Greenpeace and Friends of the Earth both said nuclear power shouldn't play a significant role in the U.K.'s efforts to cut [carbon emissions](#).

“Nuclear power can't be part of the answer,” Friends of the Earth Director of Policy Craig Bennett said in an e-mailed statement. “If their promises of cheap, low carbon energy were true, they would have been delivered by now.”

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