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Wind Energy Investment of $65 Billion May Curb Fossil Fuel Use

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By Jeremy van Loon and Alex Morales

March 22 (Bloomberg) -- China WindPower Group Ltd., Iberdrola SA and Duke Energy Corp. will lead development of an estimated $65 billion of wind-power plants this year that let utilities reduce their reliance on fossil fuels.

The estimate from Bloomberg New Energy Finance assumes a 9 percent increase in global installations of wind turbines this year, adding as much as 41 gigawatts of generation capacity.
That's the equivalent of 34 new nuclear power stations.

Utilities that built natural gas-fired generators during the last decade are increasingly erecting turbines and buying wind power from competitors, tapping a renewable-energy source as governments consider ways to penalize carbon-based fuels.

"Wind development is moving fast," James Rogers, chairman of Duke, which owns utilities in the U.S. Southeast and Midwest, said in London on March 18 at the Bloomberg New Energy Finance conference. "In the last 10 years, 90 percent of plants we've built have been gas. I've used gas plants like crack cocaine."

While gas-fired plants are relatively cheap to build and pollute less than coal plants, they still emit carbon dioxide, which will carry higher costs if governments tighten environmental rules.

Last year, $63 billion was invested in turbines, adding 37.5 gigawatts of new capacity and bringing potential output of electricity from wind to 157.9 gigawatts, according to the Global Wind Energy Council, a Brussels-based industry group. A third of those turbines were installed in China, which doubled its capacity to 25 gigawatts.

Lower Prices

Wind is gaining support as turbine costs fall and government stimulus money helps pay for the plants. Prices for turbines have declined by about 15 percent to 1.05 million euros ($1.44 million) per megawatt over the past two years, according to William Young, an analyst at Bloomberg New Energy Finance.

"It makes sense and it makes money," said Michael Liebreich, founder of the London-based consultant bought by Bloomberg LP in December.

If this year's forecast holds, the new wind turbines may supply up to 12.3 million homes, less than the almost 33 million customers that the 34 nuclear plants would power with the same capacity, according to data from the U.S. Department of Energy and American Wind Energy Association. Output from a nuclear plant is steady while turbines work only when the wind blows.

Renewables Boom

Worldwide investment in renewable-energy, which also includes solar and biomass facilities, may top $200 billion this year after outlays fell 6 percent to $162 billion in 2009, Bloomberg New Energy Finance estimates.

That investment is moving ahead even after world leaders failed to reach a binding agreement limiting emissions from carbon-based fuels when they met in Copenhagen in December, Deutsche Bank AG Vice Chairman Caio Koch-Weser said. The cost of carbon permits for December 2010 traded in Europe has fallen 3.2 percent since that summit ended.

“The renewables story is gaining momentum independently now,” Koch-Weser said in an interview at the same conference.

“I see with many clients from China to California to India now a really good renewables paradigm shift happening.”

This year, Duke plans to install 250 megawatts of wind equipment in the U.S., Rogers said. Bermuda-based China WindPower will invest about HK$900 million ($116 million) in 10 to 12 wind farms this year, nearly doubling its capacity, the company said on March 8. Iberdrola SA’s clean-energy unit expects to add 1,750 megawatts of new capacity in 2010, most of that from wind power, it said last month.

Market Share

Renewable energy sources may expand their share of the electric power generation market to 9 percent worldwide by 2030 from 2.5 percent now as gas use remains about 21 percent, the International Energy Agency estimates. Natural gas consumption has risen 20 percent since 2000, the IEA says.

Coal, which produces the most carbon when burned, also is benefiting from rising energy demand. Its market share for electric generation will grow 3 percentage points by 2030 to 44 percent, according to the IEA.

Lower wind turbine prices mean more power for the same money, and developers are rushing to take advantage of $184 billion in economic stimulus money set aside for clean energy projects, said Mike O’Neill, president and chief operating officer of wind project developer Element Power.

“We are getting low-cost, low-risk money into this market,” O’Neill said. “You are getting money coming in.”

‘Scalability’

Making wind power even more attractive is its “scalability,” or the ease with which a developer can add turbines as demand rises, said Petra Leue-Bahns, chief financial officer of Ecolutions GmbH.

“Wind is relatively easy to install in big packets and then scale up,” she said. “Wind will probably reach grid parity” and be able to compete with fossil fuels without subsidies within four years, she said. Ecolutions invests in renewable-energy projects in Europe and Asia.

BP Plc, the world’s biggest oil producer, is investing in wind and solar power as renewable energy gains market share on fossil fuels.

“If you want to have the same size of company that you have today, then you need to start the shift,” said Katrina Landis, chief executive of the London-based company’s alternative energy unit. “It means to some degree giving up what you’ve done for the last 100 years.”

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