

Coal to Fill China's Nuclear Gap

Gigawatt Buildup by 2030 Will Be Huge, but Likely Short of Goal

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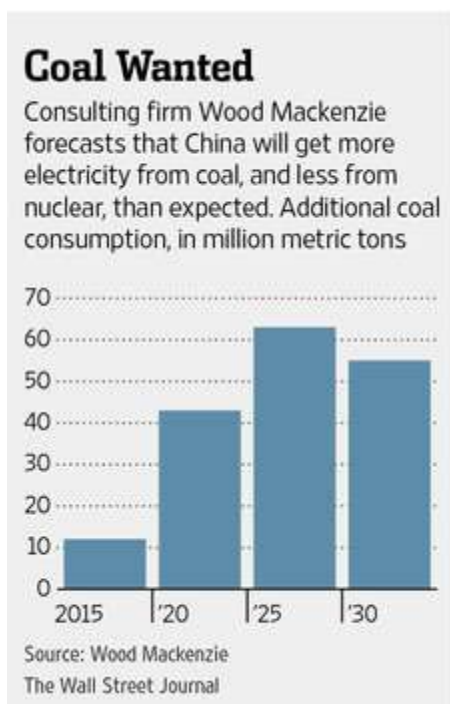
HONG KONG—Though China is pushing hard to promote the use of nuclear and renewable energy, coal is likely to be the fuel of the world's most populous and polluted country into the foreseeable future.

To combat worsening greenhouse-gas emissions and pollution, China aims to raise its nuclear capacity to 200 gigawatts by 2030, from only 14.6 gigawatts last year. But it probably won't reach that goal, energy consultancy Wood Mackenzie forecast in a report Monday—which will offer opportunities for mining companies to supply huge amounts of additional coal to make up the power shortfall.

Technology constraints, inadequate infrastructure for uranium-fuel fabrication and disposal, public opposition to inland nuclear plants, and shortages of qualified personnel all mean a more realistic nuclear capacity in 2030 will be 175 gigawatts.

"China's nuclear capacity will account for 30% of the world's total nuclear fleet," said Gavin Thompson, head of Asian-Pacific natural-gas and power research at the consultancy. "Putting things into context, in 2013 China made up a mere 4.5% of the global nuclear fleet. Therefore the growth we expect in this time frame is phenomenal, even if targets are not met."

A shortfall of 25 gigawatts would equate to additional annual coal demand of 63 million tons by 2025, falling to 55 million tons by 2030, with gas and renewables filling the rest of the gap, he said.



Coal produced 65% of the electricity used by China last year, with hydropower second at less than 20%, Fitch Ratings said in March, adding that coal plants represent about 70% of national power capacity. Wood Mackenzie puts coal's share of China's energy mix last year higher, at close to 75%, and forecasts it will ease to 64% by 2030.

While such forecasts can be affected by many factors, "our nuclear outlook for China reinforces Wood Mackenzie's view that coal will continue to play a dominant role in power generation in the foreseeable future, even with the successful implementation of new environmental measures," Mr. Thompson said.

One shorter-term clean-energy target—increasing natural gas to 10% of the power mix by 2020, from about 5% last year—might be achievable. New pipeline supplies from Central Asia, Myanmar and possibly Russia, higher output from China's own offshore reserves, exploitation of its huge onshore deposits—trapped in shale—and an increase in long-haul ship-borne liquefied-natural-gas deliveries could add up to enough gas.

By the end of 2013, China's wind-power capacity exceeded 75 million kilowatts, No. 1 in the world. Its solar-power capacity passed 15 million kilowatts and was growing faster than any other country's, [according](#)

[to Liu Zhenya](#), chairman of Chinese utility State Grid Corp. Still, China is struggling to meet its 2015 target of getting 11.4% of its electricity from such nonfossil fuels, officials said in December, despite heavy government subsidies.

Wind-power generators in China are paid between 25% and 40% more than those making electricity from coal or nuclear, according to Fitch. Hydropower plants also receive preferential tariffs, though slightly less generous than wind or solar.

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