

Groundbreaking analysis shows China's renewable energy future within reach

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Wind and solar preferable and cheaper than coal for China Credit: © WWF - Canon

By embracing conservation measures and renewable energy, China can transition to an 80 percent renewable electric power system by 2050 at far less cost than continuing to rely on coal, according to a new report from WWF-US.

As a result, China's carbon emissions from power generation could be 90 percent less than currently projected levels in 2050 without compromising the reliability of the electric grid or slowing [economic growth](#).

The China's Future Generation report was prepared by the Energy Transition Research Institute (Entri) for WWF and uses robust computer modeling to simulate four scenarios based on today's proven technology: a Baseline, High Efficiency, High Renewables, and Low-Carbon Mix scenario. To develop its findings, Entri examines China's electricity supply and demand on an hour-by-hour basis through 2050 using its advanced China Grid Model.

"By fully embracing energy conservation, efficiency and renewables, China has the potential to demonstrate to the world that economic growth is possible while sharply reducing the emissions that drive unhealthy air pollution and climate change," said WWF's China Climate and Energy Program Director Lunyan Lu. "This research shows that with strong political will, China can prosper while eliminating coal from its power mix within the next 30 years."

In addition to ramping up development of [renewable power](#) sources, the world's most populous and energy-hungry nation will need to simultaneously pursue aggressive energy efficiency initiatives to reduce electricity demand. These efficiencies, including bold standards for appliances and industrial equipment, can reduce annual power consumption in 2050 by almost half, which would set the gold standard for these products globally and make the shift to a renewables-based power system possible.

"This research allows Chinese leaders to put the questions of technical feasibility aside and economic viability aside. Instead, it is time to focus on how to enact the right policies and establish the right institutions to ensure that China's citizens and economy are receiving clean, [renewable electricity](#)," said Lu. "The report shows that today's technology can get China within striking distance of WWF's vision of a future powered solely by renewable energy."

The analysis also describes recent Chinese regulatory efforts and challenges to increasing the percentage of renewable electricity in the country, while providing a set of targeted recommendations for Chinese leaders and policy makers on energy efficiency, prioritizing low-carbon electricity supply investments, allowing price changes to reflect the true cost of service, and prioritizing collection and analysis of key power usage data.

"Both China and the United States are at a crossroads where leaders need to choose between a future where healthy communities are powered by clean, [renewable energy](#) or a future darkened by air pollution and the dangerous effects of climate change," said Lou Leonard, WWF's US vice president for [climate change](#). "This year, as all countries develop new national climate targets in advance of talks in Paris, our leaders need to choose that brighter future. For Chinese leaders the choice is simple. This report shows that renewables are doable. China can meet bold new targets with today's technologies while cutting [energy](#) costs."

Provided by WWF

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