

Energy

Wind power a key element in Beijing's green bid (SCMP)

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Under the mainland's green-power strategy, one-third of the electricity generated by 2050 will come from renewable resources.

The coal-dependent mainland, the world's biggest greenhouse gas emitter, said last month it would cut the amount of carbon dioxide produced for each yuan of national income by 40-45 per cent by 2020, compared with 2005 levels. Depending on economic growth projections, total emissions will still rise.

By 2020, renewable energy should account for 15 per cent of national primary energy consumption, supplying electricity equivalent to 600 million tonnes of coal, Xinhua said at the weekend.

It cited a renewable energy blueprint laid out by Han Wenke, director general of the Energy Research Institute under the top planning body, the National Development and Reform Commission.

By 2030, renewable energy's share should rise to 20 per cent of the national energy mix, displacing one billion tonnes of coal, Han said, and by 2050, it would supply one-third of the mainland's energy, displacing two billion tonnes of coal.

Coal now supplies more than 70 per cent of the mainland's electricity, and hundreds of coal-fired power plants are built every year to keep pace with demand, but Beijing is also investing heavily in renewable energy. For instance, the mainland is focusing on non-grain bioethanol and biodiesel to avoid diverting grain from the food and feed supplies.

It also plans to build seven large wind-power bases over the next decade, and it trails only the US, Germany and Spain in installed capacity, at 12.2 gigawatts - about equal to the energy produced by two-dozen average-sized coal-fired plants. But not all those turbines are hooked up to the electricity grid. Only 0.4 per cent of the mainland's electricity is now supplied by wind - or about 3GW.

Analysts said the gap between installed capacity and wind-generated power was more than just a footnote. Connecting the wind farms to national electricity grids was very difficult and expensive because the on-and-off gusts stressed the grids.

A recent US study has shown that the mainland could cut its emissions by 30 per cent in the next two decades if it switched to wind power to meet about half of its electricity demands.

The mainland's energy needs are expected to double by 2030, but a study says it could reasonably meet half of those needs with wind.

However, the mainland's drive for renewable energy has brought its own challenges. Wind power generating capacity has surged so fast that planners now warn of severe overcapacity in the sector, and dam after dam being built on Chinese rivers distort water flow, endanger fish species and pose a potential earthquake hazard.