Beijing renewable energy growth

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China"s party and state leader Xi Jinping declared a carbon-neutral China by 2060 when he addressed the United Nations General Assembly in September. The target took many observers by surprise. China"s sustainability record has been mixed: Beijing"s Covid-19 stimulus has relied heavily on polluting industries, and China"s Nationally Determined Contributions (NDCs) to curbing global warming are considered weak by organizations tracking international climate policy (exhibit 1).1 Continued investments in fossil fuel have also cast doubt on China"s commitment to sustainable development.

China"s rapid economic growth since 1978 has been fueled mainly by coal. Combined with poorly regulated impacts of industrial production, this led to severe environmental damage to air, land and water. China overtook the US as the world"s largest emitter of greenhouse gasses in 2006. Today, it is the source of over a quarter of global carbon dioxide (CO2) emissions. China"s government acknowledges the unsustainability of this development path and has started to attach greater importance to green growth and climate action, especially with regard to pollution.

Domesticsustainability targets have been included in China"s Five-Year Plans (FYPs) for social and economic development since 2001 (the 10th FYP). Since then, targets for the environment, energy transition and resource efficiency have proliferated (exhibit 2). Concepts promoting sustainability have become intrinsic parts of national policymaking (exhibit 3). Environmental regulations and emission standards are becoming stricter, and fighting pollution has become a top-level priority.

The Party-state has three strategic concerns that suggest Beijing"s ambitions for greater sustainability must be taken seriously. Firstly, regime stability is the main driver of Party-state leadership. With the CCP ruling everything,4 delivering both a livable environment and continuous growth are key to regime survival and its notion of legitimacy. A healthy climate and environment are increasingly important to the public as well. Severe pollution causes a million premature deaths and costs hundreds of billions of Chinese yuan a year.5

Secondly, worsening relations with the US and other providers of strategically important goods and raw materials lead Beijing to strive for more strategic autonomy and security. China is a net-importer of grain, soy, oil, gas and other vital commodities. Food and energy security are thus highly susceptible to external shocks. Sustainable policy for industry and agriculture is furthermore aiding the goal to make domestic supply chains more efficient and self-reliant, especially when it comes to reducing imported critical resources.

To establish sustainability in all spheres of life and fulfill the ambitious goal of creating a "beautiful China", Beijing has launched a centrally orchestrated, non-disruptive and incremental push affecting science, technology, industry, policy making and everyday life. China"s top-level policy making is gradually moving towards promoting green notions at all levels, albeit at variable speeds and scope.

Beijing"s green policies are mostly industry or region-specific, often rolled-out in a piecemeal fashion, and tend to clash with policies aimed at fostering fast growth and social stability. Officials are often reluctant to promote green initiatives, because they fear negative socioeconomic impacts like job losses and a decline in output performance.

If such discrepancies between strategic vision at the top level and practical implementation on the ground prevail, the transformation involved in greening China will remain partial and slow. If structural shortcomings are overcome, however, Beijing"s sustainability agenda could lead to system-wide change.

China"s road to sustainability is paved with grand rhetoric. In spring 2020, President Xi said an "ecological environment itself is the economy."6 China"s green development has certainly progressed under the current 13th FYP (2016-2020). Thirteen out of 16 major green targets have already been met - and the remainder are about to cross the finish line (exhibit 5).

However, these achievements must be put in context. For instance, China"s energy transition has made remarkable progress over the past 20 years (exhibit 6), and state-owned utility corporation State Grid has become a global behemoth in ultra-high voltage (UHV) electricity transmission technology - enabling swift distribution of renewable energy. Yet China"s share of renewable energy in domestic total primary energy consumption in 2018 was 12.7 percent, lagging behind the EU which had 14.1 percent.7

Progress has also been made in other areas: China"s government stepped up efforts to promote municipal waste recycling and wildlife protection. China"s first national fund focusing on the ecological environment was set up in July. It has already raised 88 billion CNY and is expected to become the country"s second largest national fund, smaller only than the "Big Fund" for China"s chip industry.8 And Tsinghua University published a roadmap for China"s carbon neutrality by 2060 - the most authoritative research on the matter so far - only 20 days after President Xi"s pledge.9

Beijing attaches high strategic value to green technologies - a term that in the Chinese policy context refers to virtually any technology, material or equipment that is conducive to climate action and promotes a circular, sustainable economy. A slew of plans including the "13th FYP for Strategic Emerging Industries"14 and MIC25 push for advances in such green technologies.