



Getting off the roller-coaster

China's 11th Five Year Plan (11th FYP), spanning 2006 to 2010, was historic for its action on climate change, effectively reversing a rapidly increasing trend of energy intensity, as measured by energy use per unit of GDP. Within five years, this energy intensity was cut by more than 19 per cent, helping to avoid 1.55 billion tons of carbon dioxide emissions — five times the emission reduction committed by the EU under the Kyoto Protocol. However, this historic success is shadowed by two other simultaneous changes: China, for the first time in recent history, surpassed the United States as the world's largest carbon emitter and, soon afterward, as its largest energy consumer. The country's



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energy related carbon emission grew by a third in five years. Growing and daunting challenges lie ahead

During the 11th FYP period energy intensive industries continued the rapid growth experienced during the period of the previous Five

Year Plan, posing stern prospects for China's energy saving targets. Intensive regulations — coupled with an unprecedented scale of both investment and stringent enforcement — achieved a cumulative 12.5 per cent reduction in energy intensity between 2007 and 2009. However, the stimulus package implemented in response to the global economic crisis promoted investment in infrastructure and triggered a quick rebound of energy intensive industries. Action to save energy saving slowed down in the first half of 2010 and energy intensity began to grow again.

The legacy of the economic stimulus carried over into the 12th Five Year

plan (12th FYP) period. The motivation for local government to achieve economic development remains high. As a result, the GDP growth rate reached 9.6 per cent in the first half of 2011, and, not surprisingly, the reduction in energy intensity was unsatisfactory. This poses an enormous challenge if China is to meet its low-carbon targets for the next four years. The reappearance of a roller-coaster pattern of energy intensity implies that the foundation of China's low-carbon development is less than solid.

Nevertheless, the achievement of low-carbon development in the 11th FYP period deserves significant recognition for effectively curbing, and dramatically reversing, the rapidly rising trend of energy intensity. There was also tangible improvement in technological progress and in reducing energy intensive industries' and products' contribution to the economy, eliminating inefficient production capacity. A system of policies and institutions for low carbon development has been established, and is improving.

Rapid development of the alternative energy industry also demonstrated China's accomplishment in low carbon development during the period. With a surge of installed capacity, the manufacturing of wind and solar equipment has greatly improved in terms of technology, production capacity, and export. Investment in alternative energy technologies, their growth, and their construction onsite have been impressive. It should be noted that the manufacturing process itself sometimes consumes fossil fuels, but deployment of alternative energy equipment has immense potential to reduce carbon emissions.

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Export and urbanization are two key drivers behind China's energy consumption and carbon emissions. The growth of exports has slowed in recent years, but they remain high for the 12th FYP period. China's urban population will surpass its rural one this year for the first time in history. As it formally enters an urban society its citizens' consumption behaviour will change dramatically. The economic system has to provide additional necessities for the newly urbanized population, now living urban standards. Since a urban resident in general consumes three times more energy than a rural one, urbanization will drive up energy consumption and carbon emissions tremendously, with impacts that will last for decades.

The 11th FYP period is an important window through which to observe China's challenges in low carbon development. Despite the country's relatively low per capita emissions, and even lower cumulative ones, the fact that it has become the world's largest carbon emitter puts it into the forefront of world attention — and this brings huge pressure. China experienced unprecedented inter-

national pressure during the 11th FYP period, and this has now grown greater than ever. It will soar again over the next five years when China will further widen the gap with the United States, now the second largest energy consumer and carbon emitter in the world. The sin is in the size!

What will happen next? China's success in the 11th FYP demonstrated its commitment and resolution in addressing climate change challenges — and the effectiveness of its policies, despite a lack of efficiency on some occasions. Tackling climate change is not just an international obligation, but a national imperative and domestic mandate, because of concerns about energy security, environmental quality and economic sustainability. The challenges that China faces are only matched by the willingness of its government and people to act.

Despite the size of the economy, China is limited by its technological and human resource capacity, like most developing countries. But the 11th FYP's achievement showed the world that governments can and ought to act to provide public goods of strategic significance. Policy-makers of nations must be willing and courageous to lead with vision, a sense of mission and high moral standards — all of which, unfortunately, tend to be obscured by localized and short-sighted interests in international talks.

China's challenges are those of the world, just as are the financial challenges in the West. Now that we are living in one globalized world, let us face them, show our helping hands and hide our pointing fingers.