ADB

Completion Report

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People's Republic of China: Strategic Analysis and Recommendations for Achieving the 2020 Low-Carbon Goal

Asian Development Bank

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<table>
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TA 8563-PRC: Strategic Analysis and Recommendations for Achieving the 2020 Low-Carbon Goal</td><td colspan="2">Amount Approved: $950,000

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<tr><td colspan="5">Description. The People’s Republic of China’s (PRC) sustained rapid economic growth and its energy-intensive economic structure has led to the country’s steep rise in energy demand. The demand grew from 1.46 billion tons of coal equivalent (btce) in 2000 to 2.97 btce in 2010 and 3.65 btce in 2012. As fossil fuels provide about 90% of primary energy needs, greenhouse gas (GHG) emissions have also increased rapidly, and the PRC is now widely recognized as the world’s largest emitter of GHGs. The government had recognized the challenges posed by the rapid expansion in both energy consumption and GHG emissions. The Eleventh Five-Year Plan (2006–2010) set the tone for low-carbon development by setting specific targets for energy intensity improvement. In addition, the Renewable Energy Law was enacted in 2006 to diversify the energy mix and allocate a larger share in it to renewable energy. In 2009, the government announced its 2020 low-carbon goal by committing to reduce carbon intensity by 40%–45% by 2020 from the 2005 level.

The Twelfth Five-Year Plan aimed to reduce energy intensity by a further 16% and carbon intensity by an additional 17% during 2011–2015. It also set a target for increasing the share of non-fossil fuel energy in the overall mix to 11.4% by 2015, up from 7.9% in 2010. In an attempt to moderate the demand growth rate, it emphasizes the need for the country to conserve and use energy more carefully. Despite these steps, making the transition from the energy-intensive development of the past to a new low-carbon growth future is proving to be a major challenge for the PRC. Despite its large new investments in energy efficiency, renewable energy, and modern industrial capacity, the PRC’s heavy reliance on fossil fuel continues, and the growth in its GHG emissions has not slowed as quickly as planned. The critical gaps in the comprehensive analysis, data, and information needed on the readiness of different industries and provinces to set and meet stricter low-carbon targets constitute an obstacle to improving these results. These results became apparent during the midterm review of the 12th plan in 2013.

In recognition of these challenges, and the fact that the Thirteenth Five-Year Plan (2016–2020) will be the plan for PRC to achieve its 2020 carbon intensity target, it was imperative that the plan should also set up a robust framework of policies, incentives, and regulations for achieving the target. But to establish the right plan target, policies, and actions, the PRC needed to (i) comprehensively analyze and assess what has worked well so far, as well as the challenges that have emerged that could put attainment of the low-carbon goal seriously at risk; (ii) compare, evaluate, and identify the right mix of policies, incentives, and regulation to balance socioeconomic development with energy conservation and emission reduction during the 13th plan; (iii) evaluate the readiness of important energy intensive sectors and provinces to meet more rigorous carbon intensity reduction target and, if needed, recommend a differentiated target mechanism across provinces, industries, and economic sectors to ensure its low-cost achievement; and (iv) study a nationwide implementation mechanism for low-carbon target setting, monitoring, and verification during the plan period. The government requested Asian Development Bank (ADB) technical assistance in this task.

The TA was formulated to help carry out the critical analyses and develop appropriate recommendations for the 13th plan. The TA outputs were expected to directly contribute to the government’s policy making and carbon emission control programs during the 13th plan and beyond. The TA tasks were to provide critical knowledge work that can be utilized in similar studies across other major emerging economies in the region.

Expected Impact, Outcome, and Outputs. The expected impact of the policy and advisory technical assistance (TA) is to firm up the PRC’s 2020 low-carbon goal and its timely achievement. The expected outcome of the TA was the adoption of the appropriate carbon intensity reduction target in the 13th plan. The approved outputs included: (i) assessment through studies of the opportunities for and the challenges in achieving the 2020 low-carbon goal; (ii)</td></tr>
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preparation of a report on carbon intensity target setting for the 13th plan and a breakdown of targets across economic sectors and provinces; (iii) an economic comparison of emission control policy tools and recommendations on the most appropriate mix of policies; and (iv) implementing guidelines and a framework for the 13th plan's carbon intensity reduction target.

Delivery of Inputs and Conduct of Activities. The TA implementation was efficient. While the engagement of the consultant team was delayed due to a delay in contract negotiations as the top ranked consulting firm was new to ADB, the team of 13 national consultants (102 person-months) delivered defined outputs efficiently in accordance with the agreed timeline in the contract. The consulting team, State Information Center, selected under the quality and cost-based selection, worked closely with the executing agency to deliver the outputs. A comprehensive study like this needs extensive hand-on experience and a deep insight of the specific issues and conditions in the PRC. SIC provided the required know-how about the PRC, which helped the team to make practical recommendations enabling good buy-in from the government. Thus, the TA outputs were of a high quality and all reports were prepared on time.

The Department of Climate Change of the National Development and Reform Commission (CC, NDRC) showed strong ownership of the TA. They worked closely with the consultant team to provide relevant data, participated in all key meetings and review mission, and helped disseminate the results. The TA outputs were timely and were used in framing the recommendation of the 13th plan. CC, NDRC's performance was highly satisfactory.

The performance of ADB was satisfactory. ADB fielded timely missions and provided guidance. Moreover, ADB provided flexibility in arranging a secondment of a senior expert from the Energy Research Institute to the World Energy Congress to enhance the PRC's knowledge and expertise on low-carbon and a resilient energy future.

The TA's capacity development and public outreach program included an international and, the Carbon Capture and Storage Roadmap Dissemination workshop. The TA also supported study tours for NDRC staff and stakeholders from academia to the Philippines, Japan, United States, and Canada. All TA outputs were shared widely with key stakeholders at various milestones of the TA's implementation.

Evaluation of Outputs and Achievement of Outcome. The TA was highly relevant. Achieving the 2020 Low-Carbon Goal was one of the main priorities of the Government of the PRC. The TA was timely as most of the analytical work was carried out ahead of the 13th plan formulation helping the TA outputs to contribute in that exercise.

The choice of NDRC as executing and implementing agency was excellent as it is the apex agency in the government to formally prepare the five-year plans and set appropriate targets. The TA was highly effective and sustainable. All designed outputs and the outcome of the TA were achieved.

This TA was instrumental in providing additional information to the government to achieve the 2020 Low-Carbon Goal.

Overall Assessment and Rating. The TA is rated highly successful. The designed outputs and outcomes were achieved. TA results were directly incorporated in setting the national target and their disaggregation across provinces and industries.

Major Lessons. Undertaking such deep analytical work requires engaging experts and consulting firm which are well experienced and knowledgeable, and are already active in the concerned developing member country. In this instance, the State Information Center brought together a set of highly reputable and influential experts to do credible analysis and promote its recommendations to decision makers and key stakeholders.

The other key lesson is that ADB's engagement in such type of high strategic importance studies is crucial to improve ADB's knowledge profile especially in upper middle income countries. However, this demands a more flexible approach in terms of consultants composition and engagement. In this instance only national consultants were engaged to reflect such needs.

Recommendations and Follow-Up Actions. Such type of top down studies is equally important to other developing member countries, which have since adopted the nationally determined contributions for climate change as reflected in the Paris Agreement. In conjunction with Climate Change thematic group, efforts should be made to disseminate the results and methodology of the studies more broadly within the region.

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