ADB

Completion Report

Project Number: 47258-001
Technical Assistance Number: 8534
September 2016

A Program of Studies on Low-Carbon Development of the People's Republic of China and India

Asian Development Bank

In preparing any country program or strategy, financing any project, or by making any designation of or reference to a particular territory or geographic area in this document, the Asian Development Bank does not intend to make any judgments as to the legal or other status of any territory or area.

<table>
<tr><td colspan="3">TA Number, Country, and Name:
TA 8534-REG: A Program of Studies on Low-Carbon Development of the People's Republic of China and India</td><td colspan="2">Amount Approved: $1,000,000
Revised Amount: N/A</td></tr>
<tr><td colspan="2">Executing Agency:
Asian Development Bank</td><td>Sources of Funding
TASF-Others</td><td>Amount Undisbursed:
$364,007.00</td><td>Amount Utilized:
$635,993.00</td></tr>
<tr><td>TA Approval
6 December 2013</td><td>TA Signing
6 December 2013</td><td>Fielding of First Consultants:
15 September 2014</td><td>TA Completion Date
Original:
31 December 2015
Account Closing Date
Original:
31 December 2015</td><td>Actual:
31 December 2015

Actual:
12 September 2016</td></tr>
</table>

Description

The People's Republic of China (PRC) and India together account for about 37% of the world's population, 12% of the world's gross domestic product, and about 32% of the world's Greenhouse Gas (GHG) emissions. This study intended to generate greater knowledge and better understanding by policymakers of low-carbon development experiences in the PRC and India, The process was initiated in 2012 through an initial research project about low-carbon development strategies, funded by United Nations Development Program (UNDP). In early 2013, the governments of PRC and India endorsed further studies on low-carbon development, seeking assistance from the ADB. The regional technical assistance (TA) supported the studies to help PRC and India embark on a low-carbon development trajectory. These studies consist of strategies and policy recommendations that will propel each country along this objective after assessing the status quo with regard to technology (i.e. Super critical / ultra-super critical electricity generation, carbon capture and storage, etc.), energy consumption by sector (i.e. building, transport) and the institutional environment (i.e. policy, regulation and incentives). ADB was the executing and implementing agency. Financing was provided by the Technical Assistance Special Funds (TASF) – Other Sources.

Expected Impact, Outcome, and Outputs

The impact of the TA was the increased cooperation between the PRC and India in bringing selected focus areas to a low-carbon development path. The outcome was the greater knowledge and better understanding by policy advisors in the PRC and India of low-carbon experiences, case studies and best practice. The expected outputs of the TA were: (i) Nexus of low-carbon development and energy examined; (ii) Building sector, appliance, and equipment standards assessed in the PRC and India for improved energy efficiency; (iii) Low-carbon development strategies for the transport sector analyzed in both the PRC and India; and, (iv) Findings and recommendations synthesized and summarized for low-carbon development strategies in energy, transport, and building sectors in the PRC and India.

Delivery of Inputs and Conduct of Activities

The original design of the TA was to engage consulting firms for the country studies to be conducted and Individual consultants will supplement the consulting firm teams. This was followed for the consulting inputs as regards the studies conducted for India while a minor change in implementation was done to change to engaging individual national consultants for the PRC studies. Both methods of engagements followed ADB Guidelines on the use of Consultants. The TA design had envisaged 36 person-months of national consultants and 29 person-months of international consultants. The Energy and Resources Institute (for both Energy and Buildings and Transport projects) was recruited using Consultants Qualification Selection (CQS) method and Biodata Technical Proposal. The consultants have utilized all the time stipulated in their respective contracts. The PRC team comprised of individual experts 5 international experts with 5 months engagement and 8 national experts with 19 months of engagement. These consultants were recruited in accordance with ADB's Guidelines on the Use of Consultants (2010, as amended from time to time). There were five studies conducted under the TA[1] that looked into the opportunities for low-carbon development in the energy, building and transport sectors in the PRC and India.

ADB as the EA helped recruit competent consultants and ensured that the outputs are in line with expected quality and delivered in time. However, due to delay in recruitment of the consultants, ADB could not receive feedback from the Governments of PRC and India before the close of the TA. The consultant's findings were to be discussed with them through a consultation meeting. This was also a major reason for the savings on allocations for workshops. Consultants' deliverables were completed satisfactorily and on time.

Evaluation of Outputs and Achievement of Outcome

The study on the energy sector focused on the assessment of the policy environment for emission reduction in electricity generation. Also, PRC study described efforts on smart grid, Carbon Capture and Storage (CCS) and

[1] These are: (i) PRC Country Report covering Energy, Building and Transport Sectors; (ii) Low-Carbon Development for the energy sector of IND; (iii) Low-Carbon Development for building sector of IND; and (iv) Low-Carbon Development for Transport Sector of IND (v) Consolidated analytical report on low-carbon development for the PRC and IND.

distributed electricity generation technologies. Further, PRC study covered the improvement of pricing regulation including rationalization of energy subsidies. The India study covered the assessment of opportunities in emerging areas such as the Renewable Energy Certificates (RECs) and Perform Achieve and Trade (PAT) schemes.

The buildings studies had the common objective of improving energy efficiency (EE) in this sector. The scope of the PRC side covered increasing investments through policy incentives, and harmonization of EE standards in this sector. The India side covered strategies to enforce EE standards and codes and the assessment of the policy, regulatory and financial environment to increase EE investments in buildings and support energy service companies.

The transport low-carbon studies covered low-carbon urban transport options like Bus Rapid Transport (BRT) and Metro Rail, policy options in promotion of low emission fuels like bio-fuels and natural gas, Electric Vehicles and modal shift towards railway and inland water ways. The studies also produced case studies of best practices and lessons in sustainable urban transport including public–private partnerships.

The outputs may be summarized as: (i) Relation of low-carbon development with energy was examined for PRC and India; (ii) Building Sector, appliances and equipment standards were assessed for PRC and India; (iii) Strategies for low-carbon transport followed in PRC and India were examined; and, (iv) Individual studies of PRC and India with respect to Energy, Buildings and Transport sector were summarized and analyzed. These target outputs were delivered in good quality and on time. These were reviewed in the three workshops that were conducted. The experiences, policy environment and investment opportunities in the focused sectors were compared between in contexts in the PRC and India. The outcome was achieved to the extent that the studies were produced but not in terms of its dissemination among and reception by policy-makers from the PRC and India. When both studies were completed in December 2015 as the TA is scheduled to end, no adequate time was available to submit the studies, obtain endorsement from the governments for the final outputs. Therefore the outcome was partially achieved.

Both the countries were studied individually by their consultant teams. However, both the teams and their respective sector experts interacted through three meetings: (i) the inception workshop in February 2015; (ii) a review workshop in May 2015; and, (iii) a tripartite workshop (PRC study team, India study team and ADB) held in July 2015. The results of both the studies were further consolidated by a coordinator. This led to two sets of country reports and a synthesis report. These will be disseminated once the endorsements from the respective countries have been obtained. Overall all the consultants individual and institutional delivered their expected outputs as per stipulated schedule.

Overall Assessment and Rating

The TA is considered to be relevant for PRC, India and other DMCs of ADB especially in light of the Paris agreement. The information and analysis are effective and would help in promotion of low-carbon development. The TA is rated less than successful. While the planned studies were successfully conducted and completed, these were not published and disseminated to policy makers in the PRC and India before the scheduled end of the TA. It took nine months to mobilize one of the many individual consultants for the PRC side of the studies while the firm for the India studies was engaged more than a year after TA approval. The remaining operational life was constrained to effectively one year for the India studies with the PRC study having some marginal latitude in its completion.

Major Lessons

The process to secure concurrence from the concerned governments should be started early—in parallel with the TA concept processing. The Indian Government gave theirs in late 2012 while the PRC's sometime in April 2014. If there is no impediment to initiating consultant recruitment as long as the prospective TA is straightforward in terms of the terms of references, positions and methodology of recruitment, the process could be started at an earlier date to maximize the time and internalize any delay that will be encountered.

Recommendations and Follow-Up Actions

It is recognized that learnings form this study are important for low-carbon development not only in PRC and India but, also for other countries. Hence, the publication and dissemination of finding will take place once the endorsement of the countries to the final report has been obtained. As part of the endorsement process, the studies will need to go through the review and feedback of the concerned governments to see how these are received and if there are any gaps that can be filled by existing available resources in the energy portfolio or by future technical assistance. The PRC and India stand doubly critical in tipping the point towards low-carbon development and substantially making a dent in emissions reduction given both countries' levels of energy consumption. There is also much for other ADB developing member countries to learn from the two countries' experiences in how they have and will further shift towards low-carbon development.

Prepared by: Priyantha Wijayatunga Designation: Principal Energy Specialist