



China, People's Republic of: Shanxi Energy Efficiency and Environment Improvement Project

Project Name	Shanxi Energy Efficiency and Environment Improvement Project		
Project Number	44013-012		
Country / Economy	China, People's Republic of		
Project Status	Closed		
Project Type / Modality of Assistance	Technical Assistance		
Source of Funding / Amount	TA 7736-PRC: Shanxi Energy Efficiency and Environment Improvement		
	Technical Assistance Special Fund		US\$ 550,000.00
Strategic Agendas	Environmentally sustainable growth Inclusive economic growth		
Drivers of Change	Gender Equity and Mainstreaming Partnerships		
Sector / Subsector	Energy / Energy utility services		
Gender	Some gender elements		
Description	The proposed Shanxi Energy Efficiency and Environment Improvement Project will improve energy efficiency and reduce emission of green house gases (GHG) and other pollutants in Shanxi province by introducing district heating in the four urban cities and expanding the gas distribution network in another city. The components of the project include (i) upgrading the district heating source, and installation of pipelines, heat exchangers and computer monitoring and control systems, (ii) construction and installation of coal mine methane (CMM) gas supply system and gas distribution network, and (iii) institutional strengthening. The project follows and complements a previous Asian Development Bank (ADB) project in the province, which has been completed and implemented successfully. This project preparatory technical assistance (TA) is being undertaken for the due diligence of the proposed project.		
Project Rationale and Linkage to Country/Regional Strategy	<p>Shanxi is an underdeveloped inland province in the north-central region with a nominal GDP per capita of \$3,173 in 2009, equivalent to 86% of the national average (\$3,678), ranking 21st among 31 provinces. It is a major coal producing province in the PRC and its coal mines are a rich source of CMM, which when vented to the atmosphere, becomes a potent GHG, or when released in underground coal seams has been the cause of explosions that have taken lives of miners. Shanxi has many typical examples of the major pollution and environmental problems that are closely related to the use and transport of coal. District heating in Shanxi depends primarily on coal. Many of the existing heating system in urban areas are old and inefficient and without any emission control equipment. Environmental impacts from current heating methods have a disproportionately high effect on the poor. Inadequate coverage of district heating in low-income urban areas drives residents to use indoor coal stoves for heating, a major cause of respiratory diseases. Urban pollution from small boilers also worsens outdoor air pollution and causes significant cumulative harm to public health.</p> <p>Serious efforts are being undertaken by the Shanxi Provincial Government (SPG) to improve Shanxi's environmental quality. SPG recognizes the importance of improving energy efficiency in district heating as a priority toward achieving the target for improving energy intensity. Large energy efficiency gains can be attained from the district heating subsector through (i) eliminating inefficient inner city small boilers and replacement with cleaner centralized district heating network; (ii) improving insulation in pipelines; and (iii) installation of demand control district heating systems; and (iv) implementing tariff and energy conservation reforms in buildings. Households connected to the modern district heating network will enjoy a cleaner and greener living environment in addition to a comfortable heating service. Similarly, capture and utilization of CMM will avoid GHG emissions and improve the safety of miners, while the expansion of CMM gas distribution network will reduce direct coal burning, improve energy efficiency, and create a lucrative market for CMM. This will result in reduced energy consumption, air pollution and related health impacts, and provide the poor with clean, convenient and affordable energy.</p> <p>The project has a strong rationale as part of ongoing energy intensity improvement in the PRC under the Eleventh Five-Year Plan, 2006 2010, which aims for 20% improvement in energy intensity compared to 2005. The ongoing emphasis on energy intensity improvement is likely to get reinforced in the emerging Twelfth Five-Year Plan, 2011 2015 and beyond to meet PRC's objective to achieve 40% 45% carbon intensity improvement by 2020 compared to 2005. The Project is also in line with the PRC's country partnership strategy, 2008 2010 and ADB's Energy Policy 2009.</p>		
Impact	Improved energy efficiency and environment in Shanxi province		
Project Outcome			
Description of Outcome	Improved air quality and reduced GHG emission in project targeted urban cities in Shanxi province		
Progress Toward Outcome	An ensuing loan project (Loan 2885-PRC) was approved on 31 August 2012 and the loan will be signed on 27 March 2013. The expected outcome of the project will be better air quality and reduced greenhouse gases emission in five urban areas in Shanxi province.		
Implementation Progress			
Description of Project Outputs	Expanded CMM gas distribution network Institutional strengthening Improved district heating system in project cities		
Status of Implementation Progress (Outputs, Activities, and Issues)	Various aspects of due diligence was conducted including (i) technical/technology selection, (ii) economic and financial analyses of all subprojects, (iii)estimated environment benefits, (iv) governance/procurement capacity assessment, (v) assessment of policies and reform programs. Workshops and trainings were also conducted as part of the project activities		
Geographical Location			
Summary of Environmental and Social Aspects			
Environmental Aspects			
Involuntary Resettlement			

Stakeholder Communication, Participation, and Consultation

During Project Design	A fact finding mission of the Asian Development Bank visited Shanxi province, the People's Republic of China, to discuss the project preparatory technical assistance (TA) for Shanxi Energy Efficiency and Environment Improvement Project with representatives of the Shanxi Provincial Government (SPG). The mission reached a good understanding with the SPG, the National Development and Reform Commission, and the Ministry of Finance on the objectives, scope, cost estimates, financing plan, and implementation arrangements of the TA.
During Project Implementation	The executing agency (EA) will be the SPG. Both Shanxi provincial Development and Reform Commission and Shanxi Provincial Finance Bureau (SFB) confirmed that the project management office (PMO) created under the Shanxi Provincial Development Reform Commission for Loan 2146-PRC: Coal Mine Methane Development Project will serve as the PMO for the project. The implementing agencies (IAs) will be the subprojects companies supported by their municipal governments. The loan implementation schedule, milestones, data and approval requirements was also discussed with the EA and the IAs.

Business Opportunities

Consulting Services	An early start in the implementation of the subprojects is critical to ensure that implementation activities are started during the non-heating season in 2013. Thus, in order to meet this requirement, immediate start of data collection and preliminary assessment of proposed subprojects' documents will help identify, at an early stage, critical issues to be investigated and ensure that good quality project documentation necessary to meet the loan processing schedule is produced. The TA will thus be implemented in two stages, Part 1 (data gathering and preliminary assessment) and Part 2 (detailed assessment). Part 1 can commence immediately while the consultant selection process for Part 2 is still ongoing. For Part 1, four individual national consultants (total of 8 person-months) will be recruited by ADB in accordance with the Guidelines on the Use of Consultants (2010, as amended from time to time). For Part 2, a consulting firm will be engaged by ADB in accordance with ADB's Guidelines on the Use of Consultants (2010, as amended from time to time) through quality- and cost-based selection method (with a quality-cost ratio of 80:20) using simplified technical proposal. Part 2 will require a total of 9.5 person-months of international and 22 person-months of national consulting services. The required positions and person-months are indicated in Table A5.3. The procurement of equipment by consultants, under the TA, will follow ADB's Procurement Guidelines (2010, as amended from time to time). These equipment shall be turned over to the executing agency upon TA completion. Disbursement under the TA will be done in accordance with the ADB's Technical Assistance Disbursement Handbook (2010, as amended from time to time).
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Responsible ADB Officer	Lee, Woo Yul
Responsible ADB Department	East Asia Department
Responsible ADB Division	Energy Division, EARD
Executing Agencies	Shanxi Provincial Government No. 21 Hou Xiaohu Street Taiyuan City Shanxi Province, PRC

Timetable

Concept Clearance	20 Aug 2010
Fact Finding	16 Jan 2012 to 19 Jan 2012
MRM	-
Approval	14 Dec 2010
Last Review Mission	-
Last PDS Update	27 Mar 2013

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Milestones					
Approval	Signing Date	Effectivity Date	Closing		
			Original	Revised	Actual
14 Dec 2010	13 Jan 2011	13 Jan 2011	30 Apr 2012	30 Apr 2013	13 Aug 2013

Financing Plan/TA Utilization							Cumulative Disbursements	
ADB	Cofinancing	Counterpart				Total	Date	Amount
		Gov	Beneficiaries	Project Sponsor	Others			
550,000.00	0.00	100,000.00	0.00	0.00	0.00	650,000.00	17 Jun 2022	468,093.84

Project Page	https://www.adb.org/projects/44013-012/main
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