ADB ASIAN DEVELOPMENT BANK

Mongolia: Energy Efficiency and Urban Environment Improvement

Project Name	Energy Efficiency and Urban Environment Improvement
Project Number	46343-002
Country	Mongolia
Project Status	Active
Project Type / Modality of Assistance	Technical Assistance
Source of Funding / Amount	**TA 8649-MON: Energy Efficiency and Urban Environment Improvement** Japan Fund for Poverty Reduction — US$ 2.00 million
Strategic Agendas	Environmentally sustainable growth Inclusive economic growth
Drivers of Change	
Sector / Subsector	**Energy** - Electricity transmission and distribution
Gender Equity and Mainstreaming	No gender elements
Description	The proposed Energy Efficiency and Urban Environment Improvement Project will upgrade the electrical transmission and distribution networks in and around Ulaanbaatar, thereby improve energy efficiency, reduce transmission and distribution losses and emission of greenhouse gases and other air pollutants from existing power plants in Ulaanbaatar. It will also facilitate financial closure of an on-going combined heat and power plant number 5 (CHP 5) through a public-private partnership (PPP) model, which has been supported by Asian Development Bank (ADB). The components of the project include (i) upgrading the electrical transmission and distribution networks, (ii) computerizing the system at load dispatch center, transmission and distribution level, and (iii) capacity building.
Project Rationale and Linkage to Country/Regional Strategy	In Mongolia, the energy sector has been unbundled into generation, load dispatch center and, transmission and distribution companies since 2001. Due to lack of available public funding, the private sector investment in the sector is a key policy priority for the Government of Mongolia. The existing facilities for providing heating and electricity (power plants and transmission and distribution lines) are energy inefficient and vulnerable since these facilities are old and outdated. Two out of three coal-based CHP plants (number 2 and 3) in Ulaanbaatar have been operating for more than 40 years without proper emission control devices, whereas the largest CHP plant, number 4, has operated for more than 25 years. Due to inadequate heat supply and coverage of central heating system, residents in ger areas surrounding Ulaanbaatar (60% of residents in Ulaanbaatar), have to use coal based household stoves and small inefficient heat only boilers without proper emission control devices. Lack of investments in expanding the coverage of electricity and heating network is the primary cause for continued use of inefficient and polluting heat system. The result is serious urban air pollution during the winter season in Ulaanbaatar, which is widely regarded amongst the most polluted cities in the Asia Pacific region. During winter months, particulate matter less than 10 micrometers (PM10) in Ulaanbaatar's atmosphere routinely measures 279 micrograms per cubic meter of air, which is about five times higher than World Health Organization's air quality guidelines of 50 micrograms/cubic meter. Mongolia has experienced rapid economic growth (11.5% in 2013) led by mining development. The electricity and heating demand has also been growing in Ulaanbaatar due to rapid urbanization and improved economic and commercial activities. But due to the unavailability of new power and heat plants these demands are largely unmet and suppressed. As a result, the electricity consumption in the central energy system (CES), which covers Ulaanbaatar and other major cities, and mining development areas grew modestly to 3,542 gigawatt-hour (GWh) in 2012, about 34% higher than 2003. It is projected that the electricity consumption in the CES will increase to 4,422 GWh in 2015 and will more than double to 8,189 GWh in 2025 compared to 2012. The reserve margin of heat and power supply has become close to zero. To overcome the potential supply shortage, the Government of Mongolia planned to (i) build a new CHP 5 in Ulaanbaatar through a PPP model, and (ii) install additional capacity in the existing CHP plant number 4.
Impact	

Project Outcome

Description of Outcome	
Progress Toward Outcome	
Implementation Progress	
Description of Project Outputs	
Status of Implementation Progress (Outputs, Activities, and Issues)	
Geographical Location	

Summary of Environmental and Social Aspects

Environmental Aspects	
Involuntary Resettlement	
Indigenous Peoples	
Stakeholder Communication, Participation, and Consultation	
During Project Design	
During Project Implementation	Scope of works under part 1 of the TA were completed in April 2015. The Part 2 of the TA is under implementation, and will be completed March 2018.

Business Opportunities

Consulting Services	The TA will take a unique approach (two stages of consulting services) to use efficiently the limited loan processing time. Part 1 (data gathering and preliminary assessment) will require individual consultants (2 international, 4 person-months; and 2 national, 4 person-months) while Part 2 (preparation of feasibility studies, capacity building, and due diligence) will require a consulting firm (8 international, 34 person-months; and 10 national, 103 person-months). The consulting firm will be engaged through quality- and cost-based selection method (with a quality-cost ratio of 90:10) using a simplified technical proposal. The consultants for Parts 1 and 2 will be recruited in accordance with Asian Development Bank's (ADB) Guidelines on the Use of Consultants (2013, as amended from time to time). The procurement of equipment by consultants under the TA will follow ADB's Procurement Guidelines (2013, as amended from time to time). The proceeds of the TA will be disbursed in line with ADB's Technical Assistance Disbursement Handbook (2010, as amended from time to time). The equipment procured under the TA will be turned over to the executing agency upon TA completion.
Procurement	All procurement will be undertaken in conformity with ADB's Procurement Guidelines (2013, as amended from time to time).

Responsible Staff

Responsible ADB Officer	Yamamura, Shigeru
Responsible ADB Department	East Asia Department
Responsible ADB Division	Energy Division, EARD
Executing Agencies	*Ministry of Energy* *Government Building 14, Khan-Uul District* *Chinggis Avenue, 3-r khoroo* *Ulaanbaatar, 17060 Mongolia*

Timetable

Concept Clearance	-
Fact Finding	-
MRM	-
Approval	12 May 2014
Last Review Mission	-
Last PDS Update	10 Mar 2017

TA 8649-MON

Milestones

Approval	Signing Date	Effectivity Date	Closing		
			Original	Revised	Actual
12 May 2014	30 May 2014	30 May 2014	31 May 2016	31 Mar 2018	-

Financing Plan/TA Utilization							Cumulative Disbursements	
ADB	Cofinancing	Counterpart				Total	Date	Amount
		Gov	Beneficiaries	Project Sponsor	Others			
0.00	2,000,000.00	200,000.00	0.00	0.00	0.00	2,200,000.00	12 May 2014	1,308,897.22

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