

## TECHNICAL ASSISTANCE COMPLETION REPORT

Division: ECEN

TA No. and Name			Amount Approved: \$700,000		
<b>TA 3299-MON: CAPACITY BUILDING FOR ENERGY PLANNING</b>			Revised Amount: \$685,800		
Executing Agency: Ministry of Infrastructure Development (MID)		Source of Funding: JSF	TA Amount Undisbursed \$6,130.06 <sup>1</sup>	TA Amount Utilized \$679,669.94	
Date			Closing Date		
Approval 17 Nov 1999	Signing 19 Jan 2000	Fielding of Consultants 29 Aug 2000	Original 30 Apr 2001	Actual 21 July 2003	
<b>Description</b>					
<p>The Government of Mongolia (the Government) agreed under the Power Rehabilitation Project to implement the Energy Sector Restructuring Action Plan, which identified policy reforms and sector restructuring needed to implement market-based discipline and prepare a road map or master plan for the energy sector. With the start of the unbundling process, the Government identified the need to develop the capacity of the Ministry of Infrastructure Development (MID) to undertake independent energy planning studies to ensure continued optimal use of the country's scarce capital and physical resources; promote efficient development of the electricity and heat sector; and to coordinate external assistance in the sector. Accordingly, ADB approved the advisory TA for Capacity Building for Energy Planning in November 1999. The executing agency (EA) was MID.</p>					
<b>Objectives and Scope</b>					
<p>The TA had the following objectives: (i) assist in the preparation of the revised electricity and heat supply master plan for 2000-2020, and (ii) provide capacity building for MID to independently undertake energy planning. The master plan was to identify optimal generation and transmission development program for the Mongolian electricity and heat subsectors given the energy resources available, the existing investments, and fiscal and other constraints.</p>					
<p>The TA was designed to (i) review all completed and ongoing energy sector studies; (ii) review the Government's energy policy; (iii) undertake a complete inventory of available energy sources in Mongolia; (iv) perform macroeconomic analysis to determine the fiscal constraints of the Government; (v) prepare load forecasts for electricity and heat for each major city, provincial capital, and administrative center; (vi) based on the resources and constraints, develop a least-cost electricity and heat development program for Mongolia up to 2020 with special attention to the period up to 2010; and (vii) build capacity in MID through organizational changes, training and the transfer of computer hardware and software used in the TA to enable future energy planning studies to be conducted independently.</p>					
<b>Evaluation of Inputs</b>					
<p>The TA design was adequate and the consultant's terms of reference was clear and comprehensive; no significant modifications were made during implementation. It was implemented by the MID and required 20 (design: 16) person months of international and 38 (design: 35) person months of domestic consulting services, which were adequate. The TA was completed within the budget. The software and computers were adequate for the envisaged planning tasks. The cost of consulting services, both international (by 13%) and local (by 63%), were higher than expected; however, overall savings were possible from the lower hardware price and from lower cost of international travel by consultants.</p>					
<p>Coordination with bilateral agencies was actively sought and the TA was adequately supervised through regular meetings and review missions. The performance of ADB in supporting the TA is rated satisfactory.</p>					
<p>The performance of the EA is rated partially satisfactory. It did not establish the energy-planning unit—with dedicated staff—at the commencement of the TA because of a lack of fund. Almost at the TA completion, the Government allocated all TA related documents and outputs, including computers, to a unit reporting to the science and technology department that was outside the MID.</p>					
<b>Evaluation of Outputs</b>					
<p>The consultant's final report developed a least cost generation capacity expansion plan. It was detailed and provided an overview of the sector, a description of poor financial health of the energy sector organizations, an analysis of donor activities, and a list of future challenges.</p>					

<sup>1</sup> \$14,200 was cancelled as TA savings.

In 2001, Government initiated restructuring of the energy sector. The initial phase involved the unbundling of the integrated entity, Energy Authority, and 18 separate companies—8 for generation, 4 for electricity distribution, 2 for heat distribution, 2 for electricity transmission and 2 others—were created. ADB was initially involved in commercialization and reform of the power and district heating subsectors.<sup>2</sup> However, it did not participate in the subsequent process of unbundling of the energy sector. The unbundling of the sector over a relatively short period has exposed new issues related to coordination, and also set limits for the direct use of centrally-managed least cost planning process.

Although the capacity building efforts provided skill building for the overall energy sector, it did not build the capacity of MID to do independent planning. According to feedback gathered by ADB, out of the seven participants from the international training, only two were working for the planning unit and only one was able to independently run the planning software.

### **Overall Assessment and Rating**

The TA is rated partly successful. While it made useful recommendations in some areas, particularly the energy needs of the future and the ways to meet growing demand, the objective of establishing an independent energy planning unit within MID as the focal point for planning was not met. The Government's delay in establishing the planning unit was a key reason for this failure.

Further, the timing of the TA was not consistent with the overall reform initiative because of the insecurity created by the unbundling process. The capacity building component also suffered from ADB's country strategy requiring to discontinue support for the energy sector.

ADB provided extensive comments on the draft final report and there were long delays in finalizing the final report. Although the consultant was partly responsible for the delay in completing the TA, the other reason was the uncertainty created by the restructuring. It eventually produced a technically satisfactory report. The performance of the consultant, despite the delays, was satisfactory.

### **Major Lessons Learned**

When the establishment of a certain department is an essential pre-requisite for the successful delivery of a TA's core output, the department unit—with details of funding needs to be established before the consultant is fielded.

It should be agreed with the EA during the design of a capacity building TA that ADB would review the selection of participants for study tours, and the candidates need to be technical staff at the operational level.

### **Recommendations and Follow-Up Actions**

The restructuring of Mongolia's energy sector into 18 different entities is not optimal in cost-benefit terms. ADB—may re-consider its country strategy and seek a presence in the energy sector, as energy is the key driver of all economic activities. This will help to ensure successful implementation of ongoing projects and long-term sustainable development of the energy and heat supply subsectors, which was one of the long-term objectives of this TA.

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<sup>2</sup> ADB. 1997. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to Mongolia for Ulaanbatar Heat Efficiency Project*. Manila. A timebound Action Plan for Energy Sector Restructuring was drawn up for the purpose.