

PROJECT PERFORMANCE EVALUATION REPORTS

A. Third Natural Gas Development Project

1. Background

1. On 21 December 1993 ADB approved the Third Natural Gas Development Project¹ to (i) expand the gas production and treatment facilities at Titas, Habiganj and Bakhrabad gas fields; (ii) upgrade, rehabilitate and expand the gas transmission and distribution network in Bangladesh; and (iii) improve the efficiency and safety of the operations of the gas transmission and distribution companies.

2. The Third Natural Gas consisted of four components grouped by executing agencies (EAs) responsible for each component. The four EAs were Bangladesh Gas Fields Company Limited (BGFC), (ii) Bakhrabad Gas Systems Limited (BGS), (iii) Titas Gas Transmission and Distribution Company Limited (TGT), and (iv) Jalalabad Gas Transmission and Distribution System Limited (JGTD). The expansion of gas production and treatment of new facilities was to be achieved with the drilling of seven new development wells in Titas and Habiganj gas fields, and the workover of six wells in Titas and Bakhrabad gas fields. The improvements in the gas transmission and distribution network were to involve construction of 89 kilometers (km) of various sizes of transmission pipeline, rehabilitation and expansion of gas distribution networks in various locations. The efficiency and safety of the operations of the gas transmission and distribution networks was to be achieved by the installation of new metering and regulating stations (MRS), upgrading of existing MRS, and training of personnel of BGFC, BGS, TGT, and JGTD

2. Major Issues Raised During Loan Processing

3. **Management Review Meeting (MRM).** The MRM highlighted the operational inefficiencies of the EAs in part due to the pricing policy, poor collection rates, and high accounts receivables. The MRM authorized preappraisal which may be upgraded depending on the findings of the mission.

4. **Staff Review Committee Meeting (SRC).** The SRC advised the Mission to strengthen the formulation of covenants, in particular (i) the required conversion of the overdue principal and interest into equity for BGSL be made into a dated covenant; (ii) increasing private sector participation in the gas companies by at least five percent by 1996 increasing to at least 20% by 1999; (iii) propose a rate of return on a historical basis. It was also agreed that (i) the Project Agreements will reflect that valuation of assets will be done on a historical cost basis, and (ii) recalculate the economic internal rate of return (EIRR). It was also agreed that was no need to convene the loan and technical assistance coordination committee (LTACC).

5. **Board Discussion.** On 21 December 1993 the ADB Board approved the Third Natural Gas Development Project with one objection. There was a lengthy discussion on issues related to the assumptions underlying project formulation and the lack of political will to resolve these issues. The concerns that were raised included failure of the government to adjust gas prices to cost recovery, the operational inefficiencies of the gas companies and their failure to comply

¹ ADB. 1993. *Third Natural Gas Development Project*. Manila. (Loan 1293-BAN[SF] approved for \$107.0 million on 21 December).

with financial covenants embodied in World Bank and ADB loans, and the lack of vigor on the part of the government to pursue privatization for the gas sector.

6. Staff's response to Board concerns were (i) the loan would not become effective without the 10 percent price increase assurance given by the Ministry of Finance; (ii) more comprehensive sectoral reforms were underway than that reported in the draft RRP; and (iii) an incentive framework had been developed by the Government to attract private foreign investors to the gas industry.

7. Two technical assistance grants were concurrently approved. These were for (i) the preparation of a gas system development plan and for the strengthening the organizational and regulatory framework of the oil and gas sector;² and (ii) safety and efficiency improvements in the gas sector.³

3. Major Findings of the Project Completion Report

8. The Third Natural Gas Development Project became effective on 23 March 1994, as scheduled, and closed on 23 October 2003, almost four years beyond the scheduled closing date of 31 December 1999 indicated in the loan agreement, and after two extensions. The project completion report (PCR) was circulated to the Board in December 2005, two years after start of operations and project closing. The PCR rated the Project as highly relevant, efficacious, efficient and likely sustainable based on the EAs profitability and track record in maintaining gas production, transmission and distribution facilities. It was also reported that the Project did not produce any adverse environmental impact and there was no issue affecting indigenous people. Overall, the Project was rated successful.

9. The PCR likewise reported that the Project's planned outputs were achieved thus allowing for the expansion of gas production and upgrading the transmission and distribution network. All the four components of the Project were completed with substantial overruns ranging from over a year for the part implemented by Bakhrabad Gas System Limited to more than 4 years for the component implemented by Titas Gas Transmission and Distribution Company Limited. The major causes of the implementation delays were (i) the late engagement of consultants and contractors, (ii) EAs protracted processing of turnkey contracts for MRSs, data acquisition and monitoring system and the telecommunications component, (iii) longer time required by contractors to install facilities, and (iv) frequent changes of project manager. Despite the time overruns in all project components the Project was completed at 80 percent below appraisal cost.

10. The PCR recommended (i) continued monitoring of safety and efficiency improvements of the EAs; (ii) further reduction of system loss of Titas Gas Transmission and Distribution Company Limited; (iii) continue to address issues essential for gas sector entities to improve their operational performance, possibly through the introduction of a Gas Act; (iv) that government support autonomy of gas sector entities; and (v) continued support to the gas sector and pursue further reforms introduced by the Project.

11. The two TA grants that came with the loan were assessed as generally successful.

² ADB. 1993. *Preparation of a Gas System Development Plan and the Strengthening of the Organizational and Regulatory Framework for the Oil and Gas Sector*. Manila. (TA 2024-BAN approved for \$565,000 on 21 December).

³ ADB. 1993. *Safety and Efficiency Improvements in the Gas Sector*. Manila. (TA 2025-BAN approved for \$480,000 on 21 December).

B. Ninth Power Project

1. Background

12. The Ninth Power Project⁴ was approved on 18 December 1996 for \$134.4 million. The objectives of the project were to evacuate and utilize the power generated from the Meghnaghat Power Plant⁵; (ii) maximize utilization of system assets through optimized load dispatch; (iii) initiate the unbundling of the Bangladesh Power Development Board into separate generation, transmission, and distribution entities and the corporatization of the transmission segment; (iv) corporatize the distribution entity for the Dhaka area; (v) prepare projects for possible private sector participation.

13. The Ninth Power had four major components that included (i) construction of around 130 km of transmission lines, construction of a substation and extension by two bays each of two substations; (ii) construction of a National Load Dispatch Center; (iii) construction of around 280 km of distribution systems, enhancement of distribution capacity by about 200 megavolt-amperes (MVA) and over 100,000 new consumer connections.; and (iv) engineering services for the gas-based West Zone Combined Cycle Power Project and the East Zone Open Cycle Peaking Power Projects.

2. Major Issues Raised During Loan Processing

14. **Management Review Meeting.** The MRM authorized appraisal of the Project and endorsed the proposal of a 15 percent tariff increase and the introduction of a formula linking future tariff increases to increases in fuel costs or a devaluation of the Bangladesh Taka as an intermediary solution while awaiting the World Bank tariff rationalization study. The use of Asian Development Fund (ADF) fund despite the high FIRR was important to support the country's balance of payment position, institutional reforms and the restructuring of the power sector.

15. **Staff Review Committee Meeting.** There was one new issue raised at SRC for discussion and this was the confirmation of Overseas Development Administration (ODA) participation in the Project. In the event that ODA failed to commit additional ADF resources would have to be used to make up the shortfall. It was agreed that further discussion of ODA cofinancing was to be taken up by the Chairman and the Director of Programs West Department.

16. **Board Discussion.** There was unanimous support for the Project from the ADB Board when it was discussed on 18 December 1996. There was a lengthy discussion on the quality and clarity of the reforms and the will to implement them and the seeming lack of social assessment in the RRP. The Mission presented to the Board the three major policy reform areas ADB was focusing on. These were (i) financial viability of the power sector through tariff reforms, (ii) efficiency of the power system, and (iii) enabling environment for private sector activities. The Mission added that the Government had complied with reforms in these areas prompting the processing of the Project. The Mission also clarified that the Ninth Power was an economic-growth project and that the social benefit expected to come from it was job creation.

17. A technical assistance grant for in the amount of \$175,000 was approved by the President to accompany the Project for the purpose of estimating a reasonable value for the

⁴ ADB. 1996. *Ninth Power Project*. Manila. (Loan 1505-BAN[SF] approved for \$134.4 million on 18 December.)

⁵ The Meghnaghat Power Plant is a 450 megawatt combined cycle gas-fired power station operating in Meghnaghat, Bangladesh. The construction was supported by ADB through its public and private sector windows.

assets that will be transferred by the Dhaka electricity Supply Authority to Dhaka electric Supply Company.⁶

3. Major Findings of the Project Completion Report

18. The Ninth Power Project became effective in July 1997 and after three extensions closed in July 2004, three years after the scheduled closing date in the loan agreement. The PCR was circulated to the Board in January 2007, more than two years after loan closing. The Project was given a rating of highly relevant, efficacious, efficient, and most likely sustainable. No adverse environmental impact was reported. Overall the Project was assessed as successful.

19. The Project was originally set up in four parts with many components and subcomponents. During implementation project design was changed increasing the scope of work to be carried out, since surplus funds were available. All supply and installation contracts were completed satisfactorily and under budget but all parts of the Project had serious delays. The reasons included (i) delays in the appointment of Power Grid Company of Bangladesh (PGCB) management; (ii) delays in handing over of project assets by Bangladesh Power Development Board (BPDB) to PGCB because of resistance from BPDB workers' union; (iii) court cases by landowners over a number of tower locations; (iv) teething problems in Dhaka Electric Supply Company; and (v) Dhaka Electric Supply Authority (DESA) took excessive time for bid evaluation. The PCR also reports that the Project achieved the reform objectives envisaged at appraisal. At completion the total cost of the Project was 48% lower than the appraisal estimate because of significant changes in the design and cost during the course of the Project. The major reasons for the changes in cost were (i) lower-than-estimated prices and goods and services procured by PGCB and DESA; (ii) construction of the National Load Dispatch Centre was deleted from the Project because World Bank cofinancing component did not materialize; and (iii) cancellation of engineering for the combine cycle plant in the West Zone.

20. Some recommendations provided in the PCR are (i) monitoring and evaluation of the investments should be carried out during the annual country portfolio review and during further project processing; (ii) Government should respect and support the autonomy of the corporate entities that have been formed; (iii) to facilitate private sector participation similar projects focusing on balanced development of all segments of the sector should be developed in the future; (iv) power tariffs should be reviewed regularly; (v) financial restructuring of BPDB and DESA is essential to make these companies sustainable.

C. Key Issues of Concern for Independent Evaluation Mission (IEM)

21. The project performance evaluation reports (PPERs) will assess the Projects against the standard evaluation criteria of relevance, efficiency, effectiveness, and following the *Guidelines for Preparing Performance Evaluation Reports for Public Sector Operations*.⁷ The evaluation will cover, among others, the following issues for each project:

- (i) **Relevance.** How appropriate was ADB's assistance to Bangladesh's development needs in general and sector needs in particular? Were the needs of Bangladesh energy sector and power subsector adequately assessed? Did ADB

⁶ ADB. 1996. *Valuation of Assets of Dhaka electric Supply Company*. Manila. (TA 2715-BAN approved for \$175,000 on 18 December).

⁷ ADB. 2006. *Guidelines for Preparing Performance Evaluation Reports for Public Sector Operations*. Manila.

provide the appropriate intervention? Was there sufficient community participation at project design, during project implementation and post project completion? Was the ADB product extended to Bangladesh's gas and power subsectors well-balanced (institutional strengthening, provision of physical infrastructure, policy advice, regulation)? Was ADB's assistance to Bangladesh's gas and power subsectors consistent with ADB's development goals?

- (ii) **Effectiveness.** Did ADB's assistance to the Bangladesh's gas and power subsectors achieve what they intended?
- (iii) **Efficiency.** Did ADB's assistance to the gas and power subsectors use the resources economically? Did ADB's assistance achieve economic benefits at least cost? Determine the operational performance of the Project's facilities focusing on their physical condition and operational efficiencies.
- (iv) **Sustainability.** Assess the financial and physical sustainability of the assets created and/or rehabilitated and determine the adequacy of operations and maintenance to make the Project sustainable. How sustainable are the outcomes of ADB's projects, TA, and policy dialogues? Will changes in the political, business, or political environments adversely affect a sustained outcome even though outputs are maintained?
- (v) **Impacts.** Review available benefit and monitoring reports to assess the impact of the project facilities. What are the impacts of ADB's assistance to institutions and how significant and sustainable are they? Did ADB assistance improve or weaken the ability of Bangladesh to make more efficient, equitable and sustainable use of its human, financial and natural resources? Who benefited from ADB's assistance? How were the economic benefits distributed? Were there any adverse social impacts? If so did ADB initiate measures to mitigate these adverse impacts? Were there significant environmental impacts? Were they identified at appraisal? Were remedial measures taken?
- (vi) **Operational and financial performance of the executing agencies.** Bangladesh's gas and power subsectors' structure have undergone substantial changes since the loans were appraised. The OEM will assess their operational and financial performance.
- (vii) **ADB Performance.** Was ADB assistance effective in achieving the desired objectives? Did ADB providing quality support that demonstrated and adhered to good corporate governance practice? Was ADB sensitive and responsive to client needs, fostering client ownership? Did ADB comply with basic operating principles; meeting client capacity building objectives; consistency in furthering ADB's corporate, the country's sector strategies; and its client service satisfaction. Was ADB's supervision timely and adequate? Were review missions sufficient and useful? Did ADB provide adequate support to the EA in developing its own performance and audit systems? Did ADB respond promptly to EA's requests for changes during implementation?

D. PPER Approach

22. Table A1.1 presents the evaluation design matrix for the PPERs. The main activities of the IEM will include:

- (i) Meet with the officials of the project implementation organizations such as BGFC, BGS, BPDB, DESA, JGTD, Meghnaghat Power Plant, MPEMR, PGCP TGT to gain an overview of developments in the power and gas sectors,

- regulatory reform, institutional restructuring programs, procurement arrangements, key data on the operational and financial performance of the executing agencies and the Projects. The meetings will also be useful in obtaining strategic, operational, financial and economic data to determine historical and forecast financial and economic performance of the projects.
- (ii) Meet with social and environmental protection ministries to determine administrative arrangements for ensuring compliance with social and environmental regulatory programs and standards.
 - (iii) Perform site inspection to assess the quality of construction, appropriateness of design, level of maintenance, and social and environmental impacts, if any.
 - (iv) Meet with project consumers/beneficiaries in addition to the consumer survey that will be carried out.
 - (v) Hold discussions with the Bangladesh Resident Mission to discuss project design, implementation and their own views on the developments in the gas and power sectors.
 - (vi) Wrap-up meeting in Dhaka with key stakeholders. Preliminary findings will be contained in a draft Aide Memoire that will be distributed during the wrap-up meeting.

**TABLE A1.1: PROJECT PERFORMANCE EVALUATION REPORTS
EVALUATION DESIGN MATRIX**

Evaluation Question	Research Question	Method
1.0 Were the needs assessment of the Third Natural Gas and the Ninth Power Projects correct?	<ul style="list-style-type: none"> • Were the Projects aligned with Government priorities? • Were the Projects aligned with ADB priorities in the country? • Were the Projects aligned with ADB priorities in the sector? • Were the Projects formulated based on a thorough diagnostic analysis, building on existing knowledge and expertise? • Were the views of principal stakeholders reflected in the Projects' designs? • Were lessons learned from previous Projects considered in Project formulation? 	<ul style="list-style-type: none"> • Review of Government Plans and Priorities. • Review of ADB's CSPs (or equivalent) and ESW Reports • Discussions with relevant Government agencies/executing agencies (EAs)/beneficiaries. • Discussions with donors.
2.0 Were the resources and services provided adequate to the requirements of the Projects?	<ul style="list-style-type: none"> • Were the different levels of Project funding appropriate for achieving Project objectives? • Did the Projects' designs provide the most suitable mix of international and domestic consultants for achieving Project objectives? • What was the quality of the terms of reference? • Was the design complementary to support from other donors? 	<ul style="list-style-type: none"> • Review of Projects' implementation records. • Meetings/Discussions with Government representatives/EAs/beneficiaries and donors. • Meetings/Discussions with ADB Project officers. • Meetings/Discussions/or any form of communication (questionnaire) with consultants, if feasible.

Evaluation Question	Research Question	Method
3.0 Were the outcomes of the Projects, as defined in the appraisal reports/report and recommendation of the President (RRP), achieved or are expected to be achieved?	<ul style="list-style-type: none"> • Did the Project outcomes as achieved lead (or will lead) to the attainment of Project goals? • Did the implementation arrangements work well? • Was there adequate coordination with nongovernment organizations, community groups and other donors? 	<ul style="list-style-type: none"> • Review of Projects' implementation records. • Meetings/Discussions with Government representatives/EAs/beneficiaries. • Meetings/Discussions with ADB Project officers. • Meetings/Discussions/or any form of communication (questionnaire) with consultants, if feasible. • Socio-economic survey, if necessary.
4.0 Were the Projects' outcomes achieved efficiently and will they likely be sustained?	<ul style="list-style-type: none"> • How closely were the Projects' designs followed, and what changes were made? • Did ADB consultant recruitment procedures lead to timely recruitment of suitable, qualified, and experienced experts? • How did the consultants perform? • Were there any feedback loops to ensure early reporting of implementation problems? • Was ADB supervision sufficient to support Projects' implementation? • Will the Projects' facilities and benefits likely to be sustained? • Have adequate funds been provided for operation and maintenance of project facilities? 	<ul style="list-style-type: none"> • Review of Projects' implementation records. • Meetings/Discussions with Government representatives/EAs/beneficiaries. • Meetings/Discussions with ADB Project officers. • Meetings/Discussions/or any form of communication (questionnaire) with consultants, if feasible.
5.0 Was there adequate ownership and commitment on the part of the Government and the recipient agencies to implement the recommendations?	<ul style="list-style-type: none"> • Did the Government (central and local) provide adequate support to the Projects during implementation? • Was there adequate participation from Government representatives/EAs/ stakeholders in the preparation of Projects' documents? • Was there adequate participation from Government representatives/EAs/ stakeholders during the implementation of the Projects? • Was there sufficient consultation/collaboration with the Government/EAs/ stakeholders in determining recommended actions? 	<ul style="list-style-type: none"> • Review of Projects' implementation records. • Meetings/Discussions with Government representatives/EAs/beneficiaries. • Meetings/Discussions with ADB Project officers. • Meetings/Discussions/or any form of communication (questionnaire) with consultants, if feasible.

	Evaluation Question	Research Question	Method
6.0	Other areas to be assessed Procurement issues	<ul style="list-style-type: none"> Was the procurement process observed? 	<ul style="list-style-type: none"> Records of Government/EAs Meetings/Discussions with Government representatives/EAs/beneficiaries/NGOs. Meetings/Discussions with ADB Project officers.
	Risk of Corruption	<ul style="list-style-type: none"> Were potential risks of corruption identified on time and how were they addressed? 	<ul style="list-style-type: none"> Records of Government/EAs Meetings/Discussions with Government representatives/EAs/beneficiaries. Meetings/Discussions with ADB Project officers. Discussions/feedback from NGOs.

ADB = Asian Development Bank, CSP = country strategy and program, EA = executing agency, NGO = nongovernment organization

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