# ICR Review
Operations Evaluation Department

Report Number : ICRR11042

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| **1. Project Data:** | | **Date Posted :** 08/20/2001 | | |
| **PROJ ID:** | P035784 | | **Appraisal** | **Actual** |
| **Project Name :** | Power Rehabilitation | **Project Costs (US$M)** | 75.80 | 69.14 |
| **Country:** | Georgia | **Loan/Credit (US$M)** | 52.3 | 49.58 |
| **Sector(s):** | Board: EMT - Power (71%), Oil and gas (29%) | **Cofinancing (US$M)** | 18.70 | 15.49 |
| **L/C Number:** | C2958 | | | |
| | | **Board Approval (FY)** | | 97 |
| **Partners involved :** | | **Closing Date** | 06/30/2000 | 11/30/2000 |
| | | | | |
| **Prepared by :** | **Reviewed by :** | **Group Manager :** | **Group:** | |
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## 2. Project Objectives and Components

### a. Objectives

(i) Increase the operational capacity and electricity generation of the power system, reducing shortages and improving the security, reliability and quality of power supply;
(ii) Stabilize electricity supply by increasing fuel reserves at Tbilsresi;
(iii) Establish Tbilsresi as a commercially independent and financially self -sufficient generation company;
(iv) Improve the local capability and assist in :
(a) project management, (b) corporate management and commercialization, and (c) privatization of power sector enterprises.

### b. Components

(i) Rehabilitation of a 300 MW unit (Unit #10) at the Gardabani thermal power plant (US$55.2 million);
(ii) Increase in working capital (US$15.8 million): to be used for financing fuel to be procured in two stages covering two winter seasons;
(iii) Technical Services (US$4.9 million) including project management and implementation (US$3.4 million); corporate management of Tbilsresi (US$1.1 million), and development and implementation of a privatization strategy of Tbilsresi (US$0.3 million);
(iv) Environmental Management Plan to help monitor impact of the plant on the environment .

### c. Comments on Project Cost, Financing and Dates

## 3. Achievement of Relevant Objectives:

**(i) Increase the operational capacity and electricity generation of the power system, reducing shortages and improving the security, reliability and quality of power supply** : *Achieved.* Increase in operational capacity and electricity generation -- a net increase of 288 MW -- was achieved mainly through rehabilitation of Unit # 10 of the Gardabani Termal Plant. The unit operated for two winters -- 1999/2000 and 2000/2001 -- but was stopped on April 9, 2001, as production from hydropower increased sufficiently to satisfy demand . Unit #10 was the most important production unit in Georgia's power system during the winter of 2000/2001, without which the energy shortage in the country would have been much worse . AES, a major international electricity company bought part of the assets of Tbilsresi company (including Unit #10) in April 2000, to create the AES-Mktvari company. AES initially experienced several outages in Unit # 10 due to some "idiosyncracies" that may have possibly been the result of the rehabilitation project and the need to correct some remaining problems . The unit began to work smoothly later, being available 91% of the time during the 2000/2001 season before being taken off production .

**(ii) Stabilize electricity supply by increasing fuel reserves at Tbilsresi** : *Achieved.* US$13.1 million was used from IDA credit to finance fuel purchases for the 1996/97 and 1997/98 winters, which partially mitigated problems of providing fuel for electricity generation . By mid-1998, it became clear that Tbilsresi would not manage to improve its financial and operating performance, and it did not make sense to insist that the company maintains fuel reserves in the form of heavy fuel oil, given the abundant supply of gas in the region . It is now considered cost-efficient for AES-Mktvari to mantain fuel reserves through gas supply back -up contracts.

**(iii) Establish Tbilsresi as a commercially independent and financially self -sufficient generation company** : *Partially Achieved.* As it became clear that Tbilsresi could not survive as a public company, privatization was seen as the only option, leading to the purchase of Tbilresi's assets by AES, and the establishment of AES -Mktvari company. AES-Mktvari now faces risk stemming from low collections by non -privatized distribution companies. If the Government of Georgia (GOG) privatizes the remaining public distribution companies, collections may improve and thus reduce the main commercial risk for AES.

**(iv) Improve the local capability and assist in -- (a) project management, (b) corporate management and commercialization, and (c) privatization of power sector enterprises** : *Achieved*. The project helped train a number of local staff in project management, mainly through "learning by doing", and some formal training as well. Significant experience in privatization has been accumulated by various government agencies .

An Environmental Management Plan (EMP) was developed and passed on to AES-Mktvari -- but the pollution measuring instrumentation has yet to be acquired. Since the share of heavy fuel oil is expected to be within acceptable limits (due to higher relative price of heavy fuel oil) the emissions of the plant are expected to stay within acceptable levels.

ERR and FRR: ERRs for the rehabilitation component were 31 percent at appraisal and 22 percent after implementation. The NPV and ERR for the fuel purchase component were estimated at US$ 7.2 million and 35 percent respectively, at appraisal. The NPV after implementation was lower at US$1.8 million while no ERR is mentioned. The FRR for the rehabilitation component was estimated at 10 percent at appraisal and 16-18 percent after implementation. For the fuel purchase component, the FRR was 16 percent at appraisal and was expected to be higher after implementation though no figure is mentioned.

Several risks may effect the sustainability of the project: reliability of gas supply is largely outside the control of the government due to a single supplier -- Russia -- as well as accumulated payment arrears to suppliers, regional geopolitics, and sabotage; unstable domestic political and economic situation; uncertainty of demand for electricity from Unit #10; low collection rates and accumulation of arrears from consumers (though all these risks are mitigated somewhat since assets created under the project were privatized ). If the government fails to rein in these risks, it will undermine and possibly reverse the reform successes and threaten the sustainability of project benefits .

## 4. Significant Outcomes/Impacts:

- The implementation of the project made the assets of the Tbilsresi plant more attractive for privatization and contibuted to its success
- The project helped establish a very active relationship between the Bank and other donors in the sector, and served as a springboard for intensive involvement of the Bank in the energy sector reforms .

## 5. Significant Shortcomings (including non-compliance with safeguard policies):

Government's tolerance of financial indiscipline and corruption in the publicly -owned power sector companies, especially in respect of low collections and high distribution losses contributed greatly to financial strain on Tbilsresi, and later for AES-Mktvari.

| 6. Ratings: | ICR | OED Review | Reason for Disagreement /Comments |
|---|---|---|---|
| Outcome: | Satisfactory | Moderately Satisfactory | Most major objectives of the project have been achieved. Unit #10 is well positioned to operate successfully for the next 10-15 years. However, significant risks remain (see section 3), and the outcome of the project may not be clear for the next few years. |
| Institutional Dev .: | Substantial | Substantial | |
| Sustainability : | Likely | Non-evaluable | There are significant risk factors that may affect the long-term outcome of the project, but the successful privatization of Tbilsresi may mitigate some of them. |
| Bank Performance : | Satisfactory | Satisfactory | |
| Borrower Perf .: | Unsatisfactory | Unsatisfactory | |
| Quality of ICR : | | Satisfactory | |

**NOTE**: ICR rating values flagged with ' * ' don't comply with OP/BP 13.55, but are listed for completeness.

## 7. Lessons of Broad Applicability:

- Private strategic investors involved in recovery of the power sector must have sufficient clout to resist political power and vested interests, and derive their commercial interests from a sustained and efficient operation rather than short term political and "commercial" deals.
- In a complex political and institutional environment, government ownership of the project and enabling reform is critical for the success of the project.

**8. Assessment Recommended?** ● Yes ○ No

**Why?** This project presents a situation where persistence and some innovativeness on the part of the Bank, borrower, and the private sector, helped to show results in a very complex and difficult political and economic environment. This project faced some of the same difficulties as the Oil Institution Building TA for Georgia . It would be instructive (apart from being cost-effective) to combine an audit of these projects with other relevant projects in the same sector and region, for drawing broader lessons .

**9. Comments on Quality of ICR:**

The ICR covers all relevant issues in good detail and presents them in a fairly balanced way .