

**PROJECT INFORMATION DOCUMENT (PID)
CONCEPT STAGE**

Report No.: AB1130

Project Name	EG-EL TEBBIN POWER
Region	MIDDLE EAST AND NORTH AFRICA
Sector	Power (100%)
Project ID	P091945
Borrower(s)	GOVERNMENT OF EGYPT
Implementing Agency	Egyptian Electricity Holding Company (EEHC) Egypt, Arab Republic of
Environment Category	<input checked="" type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> FI <input type="checkbox"/> TBD (to be determined)
Safeguard Classification	<input checked="" type="checkbox"/> S ₁ <input type="checkbox"/> S ₂ <input type="checkbox"/> S ₃ <input type="checkbox"/> S _F <input type="checkbox"/> TBD (to be determined)
Date PID Prepared	September 24, 2004
Estimated Date of Appraisal Authorization	July 1, 2005
Estimated Date of Board Approval	September 18, 2005

1. Key development issues and rationale for Bank involvement

Sector Background

Egypt has a rapidly expanding economy based on the availability of reliable and reasonably priced electric power. Installed capacity of electric power was 17,671 MW in 2002/03, of which 84% comprised thermal power (8% of which is provided by the private sector through 3 IPPs). The remaining capacity was attributed to hydropower (15%) and wind (1%). Peak load reached 14,401 MW and close to 90% of the thermal power production was based on natural gas. The increase in demand for electricity in Egypt has averaged 7% during 1997/98-2002/03 and is expected to remain in the 6%-7% range over the next 10 years. To meet the expected demand, the Egyptian Electricity Holding Company (EEHC), responsible for generation, transmission and distribution of electricity in Egypt, has developed a least cost generation expansion plan. This plan has two phases: a fast track phase (2002-2007), during which 4,500 MW of combined cycle gas turbines will be implemented, and a medium-term phase (2008-2012), during which 8,375 MW of steam and combined cycle turbines will be implemented. Financing for the first phase is already in place and includes participation by EIB, AfDB and the Arab and Kuwaiti Funds. The Government is seeking financing for the medium-term phase and has requested the World Bank to contribute towards the financing of a 650 MW plant to be operational in 2009.

The electricity sector falls under the Ministry of Electricity and Energy (MOEE). Decision-making by the Ministry is supported by three central organizations: (i) the Organization for Energy and Planning (OEP), which covers integrated energy planning, policy analysis and energy efficiency under the supervision of the MOEE, (ii) the Egyptian Electric Utilities and Consumer Protection Regulatory Agency (EEUCPRA), also under the MOEE, responsible for

regulating activity of the sector, and (iii) the Egyptian Environmental Affairs Agency (EEAA), which handles issues related to environmental protection.

In 2001, the electricity sector was unbundled to form 14 power sector companies (5 generation companies, 1 transmission company and 8 distribution companies) 100% owned by the EEHC. While the Cabinet of Ministers, which operates through specific ministerial committees, is responsible for setting prices to consumers of electricity (75 consumers buy directly from the transmission company), EEHC is responsible for setting the internal prices and managing cash flow between the companies. In setting each company's selling price, the EEHC takes into account each company's performance with regard to collection rates, cost structure, etc., aiming for equal return on equity for each company, and that, overall, the holding company operates on a full cost recovery basis. The year ending 2003/04 was the first year since the holding was established that a deficit was incurred. The deficit reached about LE 600 million (US\$100 million), or approximately 4% of the holding company's overall turnover. The key reason behind the deficit was the devaluation of the Egyptian pound in 2003, which resulted in an increase in the cost of debt service and electricity purchased from the IPPs. Furthermore, tariffs have remained constant since 1992 whilst operating costs, notably salaries, have increased.

Sector Development Issues

While significant changes in the structure of the electricity sector in Egypt have taken place in recent years, including the 2001 restructuring, establishment of a regulatory body and private sector participation through three IPPs, challenges in the sector remain. The key sector development issue is related to financial cost recovery. At the moment, the main input cost, natural gas, is subsidized. Until recently, the price for natural gas to the power sector was US\$0.70/mmbtu. In November 2003, the price was increased by about 28%. The opportunity cost is to export the gas as LNG, for which the netback value is about three times the domestic price. Furthermore, retail tariffs have remained constant since 1992 at 13 piaster/kWh on average (US\$0.02/kWh).

The Government policy of subsidization in the sector is resulting in inefficient use of energy by consumers and high energy demand growth, which in turn reduces the export potential of the gas. The Government is aware of the implications of the subsidized energy prices in the country and the November 2003 increase in the gas price, and the drafting of a retail tariff increase proposal due to be discussed in Parliament this Fall are efforts to gradually eliminate the subsidies and improve the financial performance. The Government has already started to increase the tariffs in selected neighborhoods where consumer ability and willingness to pay is high. The donors who have been active in the sector to date, notably EIB and the AfDB, have assisted the Government in analyzing the implications of the subsidies and recent financing from both institutions include assistance to further analyze the tariff situation, as well as conditions to increase retail tariffs. In fact, a project to be financed by EIB (750 MW CCGT plant) is ready to be presented to the EIB Board for approval but is on hold pending commitment from the Government that a new tariff scheme/policy be implemented.

Rationale for Bank Involvement

Recent Bank involvement in the energy sector has focused on the preparation of an integrated solar-thermal power project supported by the GEF (there is no IBRD lending involved in this

project). This project is one of four projects globally receiving substantial grant funding from the GEF in the interest of its Operational Policy 7, which seeks to contribute to the reduction of technology cost over the long-term. Dialogue between the Bank and the Government on Bank support to the infrastructure sectors more generally was revived in the context of the preparation and board approval of the Airports Development Project last fiscal year and during an infrastructure exploratory mission that took place in May 2004, when the Government indicated its interest in Bank assistance to the power sector. The Bank received an official request for financing towards the proposed project in June 2004, and an identification mission was carried out in August 2004.

The rationale for Bank involvement in the sector is to assist the Government in gradually improving sector performance. The past decade has witnessed significant political resistance to sustainable sector reforms. The recent unbundling of the power sector and the creation of the regulatory body are steps in the right direction, but will have limited impact as long as the financial performance of the sector remains weak and subsidies continue to play a major role. The increasing pressure on tariff and subsidy reform from donors who have financed power projects in the past, coupled with the deteriorating financial position of EEHC and lack of interest by the private sector to invest due to policies passed by the authorities on projects involving foreign currencies,¹ the Government is recognizing the need for change as evidenced by the increase in the gas prices and the decision to start increasing tariffs in selected areas in parallel to the formulation of a national tariff proposal to be tabled this Fall. The proposed project will allow for the Bank to re-engage in the power sector at a time when there is momentum for change and to work with the Government towards sustainable power sector performance over time. It is very likely that there will be follow-on projects given the significant investment needs in the sector, the time it will take to improve sector performance and the fact that a key financier, EIB, is not able to commit to lending operations after 2006.

2. Proposed objective(s)

The project development objective is to assist the Government in reaching its goal of providing the country with energy supply, at least cost and in a sustainable manner, through investment in new generation capacity and support for improved sector performance.

3. Preliminary description

The proposed project is a 650 MW power plant comprising of two 325 MW steam turbines using natural gas as the main fuel and fuel oil as the back-up fuel. The total project costs have been estimated at about US\$350 million, of which the Bank has been requested to finance US\$250 million. The plant would be built on an existing site that covers an area of 100,000 m², 200 meters from the Nile River. The existing plant comprises of three 15 MW steam units operating on mazout and two 23 MW gas turbine units operating on natural gas. The units date back to

¹ Following the devaluation, the Government passed a set of BOOT regulations, which require that foreign investors bear the foreign exchange risk unless the national entity earns revenues in the foreign currency concerned. This has evaporated international private sector interest in infrastructure projects in Egypt.

1958 and 1979, respectively and the existing plant is expected to be decommissioned, and the site will be cleaned and prepared for the proposed project. A decommissioning plan will be prepared and will determine how assets will be disposed. Preparations of the proposed project are quite well advanced. A draft feasibility study has been prepared on which the Bank has provided detailed comments, a preliminary environmental assessment has been drafted as have comprehensive terms of reference (TORs) for a full blown environmental and social impact assessment. As stated above, land is available, the gas pipeline already reaches the site, and power can be evacuated to the transmission network. However, upgrading of the gas pipeline and the transmission network will be required to accommodate the larger power production plant. Make up and cooling water for the plant will be drawn from the Nile.

The preliminary project components are: (i) demolition of existing plant and site preparation works to accommodate the new power plant, including the decommissioning of the existing plant and removal from site of existing equipment and debris resulting from demolishing of existing buildings; (ii) engineering services to include design, procurement and construction management services; (iii) environmental monitoring equipment; (iv) water intake and discharge structure to include pump house building, pumps and mechanical and electrical equipment; (v) new power plant (power house) to include 2 X 325 MW steam turbines, 2 steam generators and auxiliary boiler, 2 transformers and auxiliary transformer, water treatment plant, stack, instruments and panel controls, switchgear, civil works, critical piping, mechanical and electrical equipment, switchyard, yard tanks; and (vi) interconnection to the national power grid. In addition, a technical assistance component is envisaged that will aim at improved sector performance.

4. Safeguard policies that might apply:

The project is an Environmental Category A project. As such, a comprehensive Environmental and Social Impact Assessment has to be carried out to ensure that any adverse environmental and social impacts can be mitigated.

5. Tentative financing

Source:	(\$m.)
BORROWER	100
INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT	250
Total	350

6. Contact point

Contact: Anna Maria Bjerde

Title: Senior Infrastructure Specialist

Tel: (202) 473-3541

Fax: (202) 477-1993

Email: Abjerde@worldbank.org