EG-Giza North Power Project (P116194)

Utilization of Project Savings for the Procurement, Construction and Operation of additional pipelines to supply natural gas to additional Power Plants in Egypt

Environmental and Social Due Diligence of Associated Facilities to the Proposed Natural Gas Pipelines

February 2016
1. Background

The proposed project is an integral part of Egypt’s strategy which aims to expand the use of natural gas as a clean source of energy; this would be achieved through delivery of natural gas to houses, industrial facilities and power plants. The *EG-Giza North Power Project (the original and additional financing)* (P116194) have three main components: Component 1: namely the power plant component, construction of 2250 MW Combined Cycle Gas Turbine; Component 2: The construction of transmission lines to connect power plant to national grid; Component 3: The construction of gas pipeline to strengthen the gas supply network and ensure supply of gas to power plant. The power plant is 92% completed, the transmission lines are 95% completed and the gas connections are 96% completed and all are in operation. *Component 3: Gas Pipeline Construction* which aims to provide natural gas to North Giza power station and to strengthen the national network of gas is implemented by the Egyptian Company for Natural Gas (GASCO) with the assistance of the World Bank.

After completion of the procurement of all Bank financed packages has been concluded, there are still financial savings which can be utilized by the Government of Egypt.

The World Bank received formal requests from the Government of Egypt to utilize the financial savings resulting from the Giza North Power Plant project to procure pipelines required for an upgrade of the gas network to connect new and existing power plants. The Giza North Power Plant project development objective is to contribute to improving the security and efficiency of electricity supply by adding a new generation capacity based on the most efficient thermal power generation technology. The new gas pipelines connections to the existing and new power stations will improve the security and efficiency of electricity supply and therefore this additional scope is fully in line with the Giza North Power Plant project development objectives.

In this regard, it is planned to procure, construct and operate 10 new gas transmission pipelines to the 8 power plants as follows:

1- Six October Power Station, expected operation date: June 2017

*This line of length 400 meters with diameter 20 inches and pressure reduction station that will feed 6 October power station, the route will pass mainly in a desert area.*

2- Damnhour expected operation date: February 2018

This line is of length 4 kilometers, with a diameter 24 inches and pressure reduction station that will feed Damnhour power station, the route will pass mainly in privately owned agricultural land

3- El-Syof Power Station, expected operation date: September 2017

This line is of length 3.5 kilometers with a diameter 16 inches and pressure reduction station that will feed El-Syof power station. The route will pass mainly in privately owned agricultural land.

4- El-Mahmodia Power Station, expected operation date: September 2017

There will be 3 lines feeding this station and pressure reduction station: the first line will be of length 7 kilometers with diameter 16 inches; the second line will be of length 15 kilometers with diameter 30 inches; the third line will be of length 27 kilometers with diameter 42 inches. The routes of the 3 lines will be passing through privately owned agricultural land

5- El-Suez Power Station, expected operation date: June 2017

This line is of length 2.5 kilometers with diameter 16 inches and pressure reduction station that will feed El-Suez power station. *The route will be passing in desert land.*
6- Soumid import gas pipe line, expected operation date: April 2017

This line is of length 4 kilometers with a diameter 42 inches and pressure reduction station that will feed the New Capital power station through another gas pipe line which is not included within the scope of this ESIA. 2 k.m of the pipeline will be on platform (already constructed by summed company) and the other 2 k.m will be in desert.

7- New Capital/ Dahshour gas pipeline, expected operation date: March 2017

This line is of length 115 kilometers with diameter 32 inches and will feed Beni Sweif power station. The route will be passing in agricultural lands and desert lands.

8- Dahshour / El Wasta gas pipeline, expected operation date: December 2017

This line is of length 65 kilometres with diameter 36 inches and will feed Beni-Sweif power station. The route will be passing in agricultural lands and desert lands.

9- El-Wasta/Beni-Sweif gas pipeline, expected operation date: June 2017

This line is of length 65 kilometers with diameter 36 inches and pressure reduction station that will feed Beni-Sweif power station.

10- El-Gamel /Damita gas pipeline, Expected operation in December 2016

This line is of length 50 kilometers with diameter 42 inches and pressure reduction station that will feed Burullus power station

Currently, GASCO is in the process of conducting environmental and social impact assessment studies, resettlement policy framework study and resettlement action plans for the proposed gas pipelines. Public consultations will be carried out in order to seek input from the project affected communities and key stakeholders. In addition, this ToR is part of the World Bank requirements to ensure that associated facilities to the proposed project are conforming to the required environmental and social standards.

2. Objective of the assignment

The purpose of this assignment is to undertake environmental and social due diligence on the existing and planned power plants and facilities for gas taking off. This will essentially entails the identification of the power plants considered as associated facility, and which are not based on meeting the three elements of the criteria which are:

- directly and significantly related to the Bank-assisted project,
- necessary to achieve its objectives as set forth in the project documents; and
- carried out, or planned to be carried out, contemporaneously with the project

Once identified as an associated facility, the consultant shall undertake an environmental and social due diligence to of the plant (s) in conformity with World Bank guidelines under OP/BP 4.01.

3. Scope of Work

The scope of this assignment covers the following facilities:

1. Damanhour power plant;
2. Burullus power plant;
3. New Capital power plant;
4. El-Syouf power plant;
5. Mahmoudiya power plant; 
6. Suez power plant; 
7. Beni Souif power plant; 
8. Sixth of October power plant 
9. Facilities of gas taking off (directly linked to the gas connection); 

The consultant shall utilize the following tools and methods to perform the required due diligence. 

- Review the national legal requirements pertinent to the construction and operation of power plants in Egypt; 
- Identify gaps between national requirements and The World Bank requirements concerning environmental limits and standards; 
- Review existing relevant environmental and social documentation prepared for each of the power plants; 
- Identify any sensitive environmental or social issues related to the construction or operation of the power plants; 
- Research the historical land use of the power plant (e.g. through historical aerial photographs, interviews with key informants, and other local resources); 
- Identify the land uses, communities and facilities located on or surrounding each power plant; 
- Interview persons and key stakeholders familiar with the power plants 

4. Specific Tasks 

The due diligence activities will include, but not limited to, the following activities: 

1. Ensure environmental compliance of the above mentioned power plants - prior to construction - to the national Egyptian environmental legislations; 
2. Review the existing Environmental and Social Impact Assessment studies which were prepared for the power plants; 
3. Review the Environmental and Social Management and Monitoring Plans and assess its implementation; 
4. Review the environmental and social reports prepared by the power plants which are in operation; and highlight key environmental and social issues and how they are being managed and mitigated 
5. Conduct site visits to the power plants and review existing environmental and social reports where available Identify mitigation measures or actions taken to mitigate any environmental non-compliance; 
6. Assess and opine on the plants monitoring program and the preventive and major maintenance program; and finally 
7. Assess if existing plants are constructed in conformity with good engineering and construction standards and industry practices. 

In addition, the consultant shall investigate the following: 

Permits and Licenses 

- Does the power plant (s) have a nationally approved Environmental and Social Impact Assessment study? 
- Does the power plant have all the required environmentally related permits (such as: extraction of Nile water or ground water, building, environmental, use of soil and construction permits, disposal of solid and hazardous wastes, traffic permits, civil defense,…etc.)
• Does the power plant have or need wastewater or storm water permits?
• Are the current operations being conducted in compliance with the plant permits?
• Verify that all major permits have been obtained and are in full force and effect, and identify what major permits have not obtained, if any, and comment from a technical perspective, on the likelihood that they may or may not be able to obtained in a timely manner

Violations, fines and complaints
• Are there any outstanding violations or pending fines or penalties on the plant? (such as air emissions, noise, disposal of wastewater, disposal of wastes…etc.)
• Does the plant have a history of violations or penalties?
• What is the power plant’s relationship with regulatory agencies and the local community?
• Does the plant maintain and regularly update an environmental register?

Waste disposal
• What are the current and historical methods of waste disposal?
• What offsite facilities have been used for waste disposal?
• Are the offsite facilities recognized as “formal” or legally accepted site?
• Does the plant identify and separate hazardous wastes from domestic wastes?
• How are the hazardous wastes treated?

Operational and Maintenance Program
• The O&M program of the plants, including routine and unscheduled maintenance, review and opine on O&M costs;
• Staffing, training program, labor management, key staff qualifications, capability and experience including international exposure/capabilities and track record;
• Spare parts inventory and availability/risk of shortage.
• Expected major maintenance requirements

Spill control and management
• What are the current and historical methods of controlling oil spills not only from storage tanks and pipelines, but from tank truck loading and unloading operations?
• How many and what kind of spills have occurred and are there records to document satisfactory remediation?

Institutional arrangements for Environmental and Social Management
• Does the plant have an environmental department/unit/officer who is responsible for ensuring environmental compliance?
• Does the person in charge for environmental affairs have sufficient capacity to perform his/her duties?

Land acquisition
• Amount of land acquired by each of associated facilities
• Time of land acquired
• Ownership and land use of acquired land (for instance, vacant state owned land, state owned land with occupancies and uses, private owned land with legal titles, land used by tenants)
• Approaches of land acquisition (for instance, transferring by government at free of charge, willing buy and willing seller approach, eminent domain)
• Documentation of land acquisition
• Number of people affected
• Compensation value and payment if eminent domain is used for land acquisition
• The method in determining the compensation value and willing buy-willing seller price
• Any pending issues or unresolved complaints if there is any

5. Deliverables
The required outputs of this consultancy will be as follows:

• An inception report, (maximum three pages) outlining the approach/methodology and execution program/timetable. This report should be submitted for review and approval by the World Bank not later than one week after signature of the contract and before commencement of the survey work.
• The final report, which shall be submitted no later than March 31, 2016, which shall include the (i) brief description of the associated facility, (ii) evaluation of the overall performance of the associated facility, (iii) key findings and recommendations and (iv) the raw data collected and supporting documents (official permits, copies of environmental records, photographs, videos…etc.) as an Annex.

6. Level of Effort
The estimated level of effort for this assignment is 30 man-days.

7. Required Independent Consultant competencies
Minimum of 10 years of professional experience working in environmental and/or social assessment of mega infrastructure projects, preferably in the power sector. The following areas of expertise are mandatory:

• Advanced degree in power or environmental engineering, environmental science or related discipline
• At least 10 years of experience in environmental auditing, evaluation of environmental projects, including experience in environmental impact assessments.
• Familiarity with the environmental laws of Egypt.
• Familiarity with the World Bank’s Safeguard Policies is preferable.
• Good communications skills, both oral and written, and ability to write well in English.