

**INTEGRATED SAFEGUARDS DATASHEET
APPRAISAL STAGE**

I. Basic Information

Date prepared/updated: 07/13/2009

Report No.: AC4217

1. Basic Project Data

Country: Jordan		Project ID: P108850	
Project Name: Al-Qatrana Power			
Task Team Leader: Vladislav Vucetic			
Estimated Appraisal Date: March 25, 2009		Estimated Board Date: July 30, 2009	
Managing Unit: MNSSD		Lending Instrument:	
Sector: Power (100%)			
Theme: Infrastructure services for private sector development (67%); Regulation and competition policy (33%)			
IBRD Amount (US\$m.):	0.00		
IDA Amount (US\$m.):	0.00		
GEF Amount (US\$m.):	0.00		
PCF Amount (US\$m.):	0.00		
Other financing amounts by source:			
Borrower		10.00	
IBRD Guarantee		50.00	
<u>Foreign Private Commercial Sources (unidentified)</u>		<u>406.00</u>	
		466.00	
Environmental Category: A - Full Assessment			
Simplified Processing		Simple <input type="checkbox"/>	Repeater <input type="checkbox"/>
Is this project processed under OP 8.50 (Emergency Recovery) or OP 8.00 (Rapid Response to Crises and Emergencies)		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

2. Project Objectives

The Al Qatrana project will provide a reliable, secure, and efficient electricity supply that is critical to sustaining economic growth and social development in Jordan. Jordan clearly needs the projects capacity as the existing generation capacity of about 2,500 MW is at the level of the current (and growing) peak demand, leaving the system without adequate reserve margin, which is normally required to be about 10-15 percent of peak demand.

3. Project Description

The project includes development, construction, ownership, and operation and maintenance of a new 373-MW combined-cycle gas turbine (CCGT) power plant by Qatrana Electric Power Company, a single-purpose joint company owned by subsidiaries of Korea Electric Power Corporation (KEPCO) and Xenel Industries Limited, a Saudi Arabian investor. The power station will be constructed on a site located at Al Qatrana, about 90 kilometers south of Amman and 250 km north of Aqaba. The plant will use as primary fuel natural gas imported from Egypt through the Arab Gas Transmission Pipeline (AGTP) and distillate fuel oil as a back-up. The National Electric Power

Company (NEPCO) will be responsible for purchasing and supplying natural gas and distillate fuel oil to the power plant and will purchase all of its electrical output through a 25-year power purchase agreement. The plant will be of a traditional design with two gas turbines (Siemens-supplied STG-2000E GT with rated capacity of 168 MW), two heat recovery steam generators, one steam generator (130 MW, supplied by Skoda), an air-cooled condenser, and other associated equipment and structures. Operation of the plant will be subcontracted to the Korea Southern Power Company, Ltd., a wholly owned subsidiary of KEPCO. The maintenance services will be subcontracted for the first 6 years of operation to Korea Plant Services & Engineering Co., 80-percent owned subsidiary of KEPCO. NEPCO will connect the plant to the power system through a 500-meters long 132-kV electrical transmission line. Two options are considered for connecting the plant to the AGTP: (i) #hot-tapping# into the AGTP next to the power plant site, which would involve installing a new valve in the AGTP and connecting the power plant through a short new pipeline of few hundred meters that would go through government-owned land; or (ii) construction of a new 12-inch pipeline that would run in parallel to the AGTP to the already built-in AGTP connection station in Al Sultani area, about 22 km south of the power plant site. Final decision on which option to choose is expected to be made in the Summer 2009. NEPCO will finance gas connection, including the cost of the 22-km gas pipeline, which # if that option is selected -- will be constructed by Fajr, the gas company operating the AGTP in Jordan. Water will be supplied by Water Authority of Jordan (WAJ), which will construct and own an approximately two-kilometer long water pipeline from a pumping station on the water main line to the delivery point at the project site.

4. Project Location and salient physical characteristics relevant to the safeguard analysis

The Al Qatrana project site enjoys a number of strategic advantages due to its proximity to main road, substation, gas connection, water connection, and absence of any encroacher/squatter on or near the site. The site is an uneven and a barren land with no evidence of any past or current residential, agriculture, or commercial activities to indicate any major environment contamination or social issue. The nearest habitation is about two kilometers away which extends into the town of Al Qatrana, about three kilometers from the site. The proposed power plant will not generate major quantities of solid wastes. Small quantities of non-toxic solid waste, when generated, will be recycled, reused, or disposed through a licensed contractor in a scientific manner in an authorized landfill. The plant will be constructed in conformance with Jordanian building and architectural codes. Given the site layout, the building structures are designed to minimize adverse visual impacts. The site management will have an emergency management plan, which will outline the preparedness and response in case of environmental emergencies or fire accidents due to operation or site storage of flammable material. There is no evidence of any cultural properties or structures of archeological importance within 5 km of the site, or along the gas pipeline route, but project implementation arrangements will include chance finds protocol.

5. Environmental and Social Safeguards Specialists

Ms Julie G. Vilorio-Williams (SASDA)

Mr Sanjay Srivastava (SARDE)

6. Safeguard Policies Triggered	Yes	No
Environmental Assessment (OP/BP 4.01)	X	
Natural Habitats (OP/BP 4.04)		X
Forests (OP/BP 4.36)		X
Pest Management (OP 4.09)		X
Physical Cultural Resources (OP/BP 4.11)		X
Indigenous Peoples (OP/BP 4.10)		X
Involuntary Resettlement (OP/BP 4.12)	X	
Safety of Dams (OP/BP 4.37)		X
Projects on International Waterways (OP/BP 7.50)		X
Projects in Disputed Areas (OP/BP 7.60)		X

II. Key Safeguard Policy Issues and Their Management

A. Summary of Key Safeguard Issues

1. Describe any safeguard issues and impacts associated with the proposed project. Identify and describe any potential large scale, significant and/or irreversible impacts: The Environmental and Social Impact Assessment (ESIA) indicates that the project activities are not likely to result in adverse impacts that are significant, cumulative, or irreversible. The environment and social impacts due to power evacuation will be minimal as the evacuation of electric power generated at the power station will be through a 400/132 kV substation located adjacent to the site along the southern boundary, owned and operated by NEPCO. The existing substation does not use transformer oil or condensers containing polychlorinated biphenyl (PCB, a known carcinogen); does not need to replace batteries or transformer oil; has a proper spill management and fire emergency management system; and does not house non-operational staff at the site. The environmental impact of construction of approximately 22-km gas pipeline -- if this gas connection option is selected -- and 2-km water pipeline connections will be managed by implementation of occupational health and safety measures outlined in the Environmental Management Plan (EMP). The social impact resulting from the limited land acquisitions for gas pipeline construction will be mitigated through implementation of an Abbreviated Resettlement Action Plan (ARAP), to be prepared if the pipeline is to be built.

The dispersion modeling exercise shows that the emission levels will be within the Jordanian and World Bank limits. The maximum predicted NO_x concentration (of 0.207 ppm with distillate fuel oil or 0.2058 ppm with gas) will be lower than Jordanian standard (of 0.210 ppm). This also conforms to the World Bank ambient air quality standards. The maximum predicted SO₂ concentration (0.04012 ppm with gas) will be lower than Jordanian standard (of 0.300 ppm) and the World Bank ambient air quality standards. Monitoring results indicate that H₂S levels exceeds Jordanian standards by 12.9 percent (of 24-hour average) and by 1.2 percent (hourly average), indicating noncompliance with the local laws. Since the project will not emit any H₂S and the World Bank does not have guidelines/standards on H₂S levels in the ambient air, the city government will be responsible to identify the source and prepare a plan to mitigate its adverse impact.

Relative to dust levels, TSP levels exceed the Jordanian limits (daily limit 260 ug/m³). These higher levels of TSP and PM₁₀ are reportedly due higher level of ambient dust in the area, which is characterized by a desert like landscape and vulnerable to dust storms. CO levels were observed to be below the Jordanian standards (9 ppm 8-hour average and 26 ppm 1-hour average). The noise model shows for a worst case scenario (with all power turbines operational) that night time noise levels from the power plant could be exceeded by about 1 dB(A).

2. Describe any potential indirect and/or long term impacts due to anticipated future activities in the project area:

The project will not involve the displacement of local people. However, OP 4.12 Involuntary Resettlement is triggered due to the possible construction of a new twenty-two-kilometer underground gas connection pipeline linked to the gas delivery junction. A Resettlement Policy Framework (RPF) has been prepared and disclosed that would guide the preparation of an ARAP, once decision on gas connection option is made. A draft Environmental and Social Impact Assessment for the prospective 22-km gas pipeline has been completed, but some additional work will be needed to determine the exact routing of the gas pipeline, which would allow ARAP to be finalized and disclosed if the pipeline is to be constructed.

3. Describe any project alternatives (if relevant) considered to help avoid or minimize adverse impacts.

The site selection was made on the basis of power system configuration considerations (the need to add generation support between Aqaba and Amman), the vicinity of the necessary infrastructure: electricity and gas networks, water supply, and road access, and the limited environmental and social impacts. The site does not have a history of any past or current residential, agriculture, or commercial activities to indicate any major environment contamination or social issue.

4. Describe measures taken by the borrower to address safeguard policy issues. Provide an assessment of borrower capacity to plan and implement the measures described.

The responsibility for implementing the mitigation measures for the power plant will be with Qatrana Electric Power Company, while NEPCO will be responsible for the electricity transmission, water, and gas connections. NEPCO will assign staff for this purpose, including for implementation of an agreed RPF and ARAP. Qatrana Electric Power Company, represented by its project manager, will be responsible for implementation of EMP and RPF aspects through its contractors, consultants, and other specialists during construction, operation, and decommissioning. NEPCO will coordinate with other entities within Jordan, including Ministry of Energy and Mineral Resources, the Ministry of Environment, the Water Authority of Jordan, and the gas company. Overall coordination of project activities over the life of the project will be the responsibility of a Joint Coordinating Committee, comprising Qatrana Electric Power Company and NEPCO staff, as provided for in the Power Purchase Agreement. The committees responsibilities will include ensuring that the EMPs, RPF, and ARAP for the proposed project and the associated infrastructure are implemented in a coordinated manner.

5. Identify the key stakeholders and describe the mechanisms for consultation and disclosure on safeguard policies, with an emphasis on potentially affected people. The stakeholders consultation was held both during the project scoping and after finalizing the key findings and EMP. The consultation endorsed that the key social impacts of the project are likely to be positive and will include: (i) continued good quality of electricity supply through the provision of adequate generation capacity from an efficient source; (ii) increased jobs and employment opportunities to the communities around the project area as well as skilled staff in other parts of the country, both during the construction period and during operation; (iii) improved social services due to better access to electricity leading, in turn, to better community education, health, and other community facilities; and (iv) confirmed changes in the community and local government attitude toward partnership and collaboration with Qatrana Electric Power Company through carrying out a corporate social responsibility program, which should integrate social and environmental concerns in their business and emphasize interaction with the community.

The ESIA report has been disclosed locally on NEPCOs website and is easily accessible. It has also been disclosed through the World Bank InfoShop.

B. Disclosure Requirements Date

Environmental Assessment/Audit/Management Plan/Other:

Was the document disclosed prior to appraisal?	Yes
Date of receipt by the Bank	03/19/2009
Date of "in-country" disclosure	03/19/2009
Date of submission to InfoShop	03/19/2009
For category A projects, date of distributing the Executive Summary of the EA to the Executive Directors	03/19/2009

Resettlement Action Plan/Framework/Policy Process:

Was the document disclosed prior to appraisal?	Yes
Date of receipt by the Bank	03/19/2009
Date of "in-country" disclosure	03/19/2009
Date of submission to InfoShop	03/19/2009

Indigenous Peoples Plan/Planning Framework:

Was the document disclosed prior to appraisal?	
Date of receipt by the Bank	
Date of "in-country" disclosure	
Date of submission to InfoShop	

Pest Management Plan:

Was the document disclosed prior to appraisal?	
Date of receipt by the Bank	
Date of "in-country" disclosure	
Date of submission to InfoShop	

*** If the project triggers the Pest Management and/or Physical Cultural Resources, the respective issues are to be addressed and disclosed as part of the Environmental Assessment/Audit/or EMP.**

If in-country disclosure of any of the above documents is not expected, please explain why:

N/A

C. Compliance Monitoring Indicators at the Corporate Level (to be filled in when the ISDS is finalized by the project decision meeting)

OP/BP/GP 4.01 - Environment Assessment

Does the project require a stand-alone EA (including EMP) report?	Yes
If yes, then did the Regional Environment Unit or Sector Manager (SM) review and approve the EA report?	Yes
Are the cost and the accountabilities for the EMP incorporated in the credit/loan?	Yes

OP/BP 4.12 - Involuntary Resettlement

Has a resettlement plan/abbreviated plan/policy framework/process framework (as appropriate) been prepared?	Yes
If yes, then did the Regional unit responsible for safeguards or Sector Manager review the plan?	Yes

The World Bank Policy on Disclosure of Information

Have relevant safeguard policies documents been sent to the World Bank's Infoshop?	Yes
Have relevant documents been disclosed in-country in a public place in a form and language that are understandable and accessible to project-affected groups and local NGOs?	Yes

All Safeguard Policies

Have satisfactory calendar, budget and clear institutional responsibilities been prepared for the implementation of measures related to safeguard policies?	Yes
Have costs related to safeguard policy measures been included in the project cost?	Yes
Does the Monitoring and Evaluation system of the project include the monitoring of safeguard impacts and measures related to safeguard policies?	Yes
Have satisfactory implementation arrangements been agreed with the borrower and the same been adequately reflected in the project legal documents?	Yes

D. Approvals

<i>Signed and submitted by:</i>	<i>Name</i>	<i>Date</i>
Task Team Leader:	Mr Vladislav Vucetic	07/09/2009
Environmental Specialist:	Mr Hocine Chalal	07/09/2009
Social Development Specialist	Mr Colin S. Scott	07/09/2009
Additional Environmental and/or Social Development Specialist(s):		
<i>Approved by:</i>		
Regional Safeguards Coordinator:	Mr Hocine Chalal	07/09/2009
Comments:		
Sector Manager:	Mr Jonathan D. Walters	07/09/2009
Comments:		