

## Environmental and Social Data Sheet

### Overview

Project Name: *NEPCO GREEN CORRIDOR*

Project Number: *20090711*

Country: *Jordan*

Project Description: The project is a multi-component program to reinforce Jordan high voltage electricity backbone network to integrate more renewable generation capacity and improve reliability of supply. It consists of building two new transmission lines (400 kV/140 km and 132 kV/60 km), and constructing one new electricity substation (400/132 kV, 800 MVA) and enlarging two existing substations. The investments are reinforcing the network in the central Jordan desert area, where opportunities for renewable generation are most favourable.

EIA required: *yes*

The EIA/ESIAs have not been prepared. This is a multi-component program and disbursements for each component are subject to receipt of acceptable ESIA and environmental permit for the relevant component.

Project included in Carbon Footprint Exercise: *yes*

(details for projects included are provided in section: "EIB Carbon Footprint Exercise")

### Summary of Environmental and Social Assessment, including key issues and overall conclusion and recommendation

Due to the size and technical characteristics the program components, if located within the EU, would fall under Annex I or II of Directive 2011/92/EU, requiring respectively a full EIA or screening decision of competent authority. The environmental and social studies (ESIAs, RAPs and ESAPs), with support of NIF, were done for earlier part of the overall program, (Amman Ring – section) but have not yet been carried out for any of the components of this project. The financiers (AFD and EIB) environmental procedures and national legislation will require full EIAs to be implemented for all components, and disclosed them to the public. The EIAs are expected to include social assessments, and to form Environmental and Social Impact Assessments (ESIA). The environmental permits have not yet been issued. Detailed Environmental and Social Management Plan (ESMP) and final Resettlement Action Plan (RAP), which is needed for transmission lines only, are yet to be prepared. Based on the available information on preliminary line routings and substation siting, both in mid-Jordanian desert, the impacts are expected to be mitigated through adequate measures. Most significant impacts are expected to be to migrating avifauna, and the visual impact on open desert terrain. The Finance Contract will contain appropriate conditions stipulating a follow up for the completion of the ESIA process to the satisfaction of the Bank. With these safeguards, the Bank considers the program acceptable under its guidelines.

The program transmission lines are situated mainly (over 95%) on flat, desert, where the environmental or social concerns are limited. In the areas close to Quatrania and Queen Alia airport the line crosses slightly more populated areas. There the social impact of the line corridor acquisition (impact on livelihoods of affected people) needs to be mitigated. These mitigation measures will be established in RAP, and adherence to these plans is established as appropriate contractual conditions to Finance Contract. Security plan is required as part of contractual conditions.

### Environmental and Social Assessment

#### Environmental Assessment

The national legislation regarding environmental requires an environmental impact assessment for transmission lines, done according to the ToRs accepted by the competent authority, and by a consultant accredited by the competent authority. Under these legislations the competent authority issues environmental permits and sets out environmental conditions for transmission projects.

The main negative environmental impacts of high voltage transmission lines and substations are typically the visual impact of the towers and conductors, collisions of avifauna. The mitigating measures include line visibility mapping, bird diverters and line routing changes.

The project is strengthening renewable wind and solar generation plants connections to the network and reducing transmission losses. Project is enabling the increasing consumption to be supplied from sustainable sources.

### **EIB Carbon Footprint Exercise**

- The project enables renewable electricity production that replaces electricity presently produced from fossil fuels with natural gas operating combined cycle gas turbine plants. Estimated emissions savings of this overall renewable program are 580 kilotons of CO<sub>2</sub> equivalent per year. The pro-rata share of this investment is 5% of the program, resulting to emission reduction share of this operation to be 29 kilotons/a.
- For the annual accounting purposes of the EIB Carbon Footprint, the project emissions will be prorated according to the EIB lending amount signed in that year, as a proportion of project cost.

### **Social Assessment**

The first component of the project (substation) is constructed on government-owned desert land and is not expected to require any acquisition of private land. It requires ESIA's and ESMPs to be prepared, but its impacts are localized. The later components of the project (132 and 400 kV transmission lines) will require, RAPs to be prepared in addition to ESIA's and ESMPs, and will affect larger area of 200 km of length.

The land acquisition procedures for the transmission line corridors (right-of-way) according to Jordan's legislation allow the construction to start with very short notice to the affected people (15 days) and compensation is paid only after line energization or after court decisions. These mechanisms are not in line with financiers' requirements and safeguard structures requiring the Promoter to follow acceptable practices in right-of-way acquisition will be introduced as disbursement conditions. The expropriation of the land will be done prior to the start of the works following the identification of the households that would be carried out as part of the line route identification. It is expected that the construction in the right-of-way could allow the affected people to remain on their land and the houses would be re-built outside of the right-of-way. However, detailed routing of the line has not yet been done and necessity to re-build houses will be determined as part of the routing task. Right-of-way is normally 40 m by width.

The land affected is mostly desert terrain where impacts are expected to be low and could be mitigated with line routing. Some impacts, potentially physical replacement, are expected on commercial areas near Queen Alia airport, and near Quatrana village. Different studies and management plans such as ESIA, ESMP and RAP, including public consultation and compensation measures, will be required to be completed prior to the start of the works and disbursements related to these components. Typical impacts are construction nuisance, dust and damage to the crops (in addition of line route acquisition).

Jordan is close to the conflict areas of Syria, Iraq and Sinai, where security incidents are possible and need to be taken into account in project preparation and implementation. Security management plans will therefore be required as part of project implementation plan as a mitigation.

### **Public Consultation and Stakeholder Engagement, where required**

- Consultation will be carried out under the EIA process.
- The present Nepco practice of late compensation is presenting a risk for project acceptance with local population and does not comply with the Bank's social standards. The better practice needs to be enforced as per Finance Contract conditions, as outlined earlier.

### **Other Environmental and Social Aspects**

Luxembourg, 12<sup>th</sup> June 2015

The ESIA of this project is expected to be prepared by international consultants, with national accredited consultant as subcontractor. Another consultant, as Owners Engineer, will assist the promoter in implementing the E&S safeguards. The financing of these studies is expected to be from NIF, arranged and managed by the Bank.