



# STEG Power Transmission Project Environmental and social assessment

NON-TECHNICAL SUMMARY

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Artelia Eau & Environnement

**RSE International**

Immeuble Le First  
2 avenue Lacassagne  
69 425 Lyon Cedex  
France

EBRD

# 1. PROJECT DESCRIPTION

## 1.1. INTRODUCTION

The Tunisian national energy company STEG (“Société Tunisienne d’Electricité et de Gaz”) is currently implementing the Power Transmission Program of its XII<sup>th</sup> National Plan (2011-2016).

Under this program, the EBRD (European Bank for Reconstruction and Development) and the EIB (European Investment Bank) are considering contributing to the financing of:

- a network of high voltage underground power lines in the Tunis-Ariana urban area ;
- two high-voltage power lines, one in the Nabeul region, the other in the Manouba region;
- the building or extension of associated electrical substations.

The project considered for EBRD/EIB financing consists of 3 sub-components, which are described below.

## 1.2. SUB-COMPONENT 1: UNDERGROUND POWER LINES IN TUNIS/ARIANA

This sub-component comprises a new electrical substation in Chotrana and a series of underground high-voltage power lines:

- two 225 kV cables, each 10 km in length, from Chotrana to Kram;
- one 225 kV cable of 12.8 km, from Chotrana to Mnhla;
- one 90 kV cable of 6.3 km, from “Centre Urbain Nord” substation to Chotrana substation;
- one 90 kV cable of 8.6 km from « Lac Ouest » substation to Chotrana substation;
- one 90 kV cable of 2 km from Barthou substation to « Lac Ouest » substation.

The roads along which the cables will be laid are shown on the map below. The white dotted lined show the links between substations in a schematic way. Two options still exist for the Chotrana-Mnhla cable: either northbound via Raoued (variant 1) or southbound over the RN8 highway and Chotrana avenue (variant 2).

**Fig. 1. Sub-component 1**



**Legend – Sub-component 1**

	Mostly wide, residential streets
	Densely populated streets
	RN8 highway
	Louis Braille avenue and X2 road
	Existing electrical substation
	Connection to existing cables
	New substation

### 1.3. SUB-COMPONENT 2: HIGH VOLTAGE POWER LINE IN THE NABEUL-HAMMAMET AREA

This subcomponent comprises the extension of Nabeul II electrical substation at Ain Kmicha and the construction of a 225 kV high voltage power line running between (i) the substation and (ii) connection to the Bou Ficha – Bou Argoub power line. The latter is under construction and will join the future Bou Argoub substation, yet to be built. The Bou Ficha – Bou Argoub power line and Bou Argoub substation are outside the scope of the project.

The sub-component is located near Nabeul and Hammamet in Nabeul governorate.

**Fig. 2. Sub-component 2**



**Legend – Sub-component 2**

	Projected power line
	Extension of Nabeul II substation
	Future Bou Argoub substation (not in project)

## 1.4. SUB-COMPONENT 3: MORNAGUIA-LAROUSSIA HIGH VOLTAGE POWER LINE

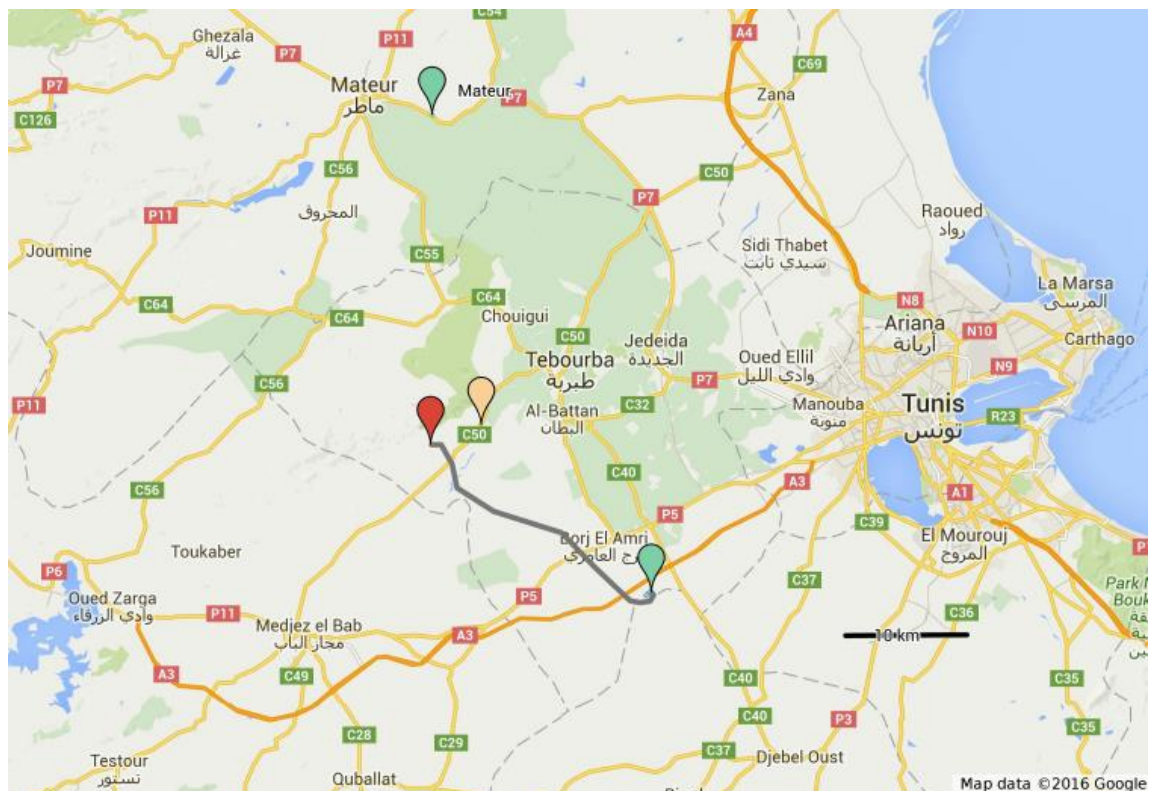
Sub-component 3 comprises the following:

- construction of an electrical substation in Laroussia;
- construction of a 225 kV power line from Mornaguia substation to Laroussia substation;
- dismantling of the existing Laroussia substation (near Laroussia reservoir);
- extension of Mornaguia and Mateur substations.





The sub-component is located in Manouba governorate.

*NB Laroussia can also be spelt El Aroussia or Aroussia.*

**Fig. 3. Sub-component 3**



### Legend – Sub-component 3

	Projected power line
	Substation extension
	Future substation
	Substation – to be dismantled

## **2. PROJECT IMPACT ASSESSMENT**

### **2.1. PROJECT JUSTIFICATION**

The project will reinforce Tunisia's national power grid and reduce power losses. The three sub-components will increase STEG's power transmission capacity and improve power distribution. They will contribute to the reduction of power blackouts. Laying the cables underground in the Tunis urban area will improve the urban landscape.

The three sub-components under consideration for EBRD/EIB financing have been chosen based on technical feasibility studies. Several alternatives have been considered. None of the chosen sub-components is located in or near an internationally protected area (such as Ramsar sites) or an Important Bird Area. STEG has a policy of not affecting any nature protected area. The national environmental authorities have been consulted about the project and have not identified any nature protected areas or sensitive habitats on the path of the future power lines.

### **2.2. IMPACT ON NEARBY RESIDENTS AND ON ECONOMIC ACTIVITIES**

Residents living nearby the future power lines and underground cables may experience some nuisance during the construction works. However, if the duration of the works is relatively long (1 to 2 years), the impacts are very localized, as the works are carried out little by little over short sections. The construction of underground cables is performed per 20 meter section, usually on the same day, sometimes the next day in case of special difficulty. The constructor excavates a 20-meter long trench, lays the concrete sheaths that will support the cables, and closes the trench again. The cables will be drawn through the concrete sheaths only at the end. This means that local disturbance is limited to one day (seldom two) in duration.

The towers (pylons) for the high-voltage power lines will be placed mostly in agricultural fields. STEG's policy is to avoid disturbing farmers' activities as much as possible. The towers are therefore built on State-owned land whenever possible. If towers still have to be placed on private land, the owners or users of the land receive a compensation for any damage to the crops, as required per the Tunisian legislation on electric power lines. STEG does everything possible to avoid having to fell trees.

### **2.3. OTHER POTENTIAL IMPACTS**

Other potential impacts of the power lines have been assessed for the project, such as the potential impacts on birds, and the electro-magnetic fields potentially generated. STEG has consulted with the relevant governorates, national administrations, agricultural organizations and NGOs for bird protection, in order to gain insight on possible issues regarding the project. Since power lines are mostly built by foreign companies (the constructor has to provide the cable and there is no Tunisian cable provider), the consulted persons have expressed the wish for the constructors to employ local personnel as much as possible. Each sub-component is expected to yield about 10 local jobs during the entire duration of construction.

### **3. ENVIRONMENTAL AND SOCIAL ACTION PLAN (ESAP)**

STEG is committed to implementing the project in conformity with good international environmental and social practice. This is also a requirement of the financing institutions. In line with their environmental and social policies, EBRD and EIB have requested the realization of detailed environmental and social studies in order to assess the project's potential impacts and define the actions that will be taken by STEG to avoid, mitigate or compensate any potential negative impacts.

These actions are described in an Environmental and Social Action Plan (ESAP) which will be implemented by STEG. The ESAP comprises several types of measures:

- measures to improve STEG's integrated quality management system;
- measures to improve environmental and social management during construction. STEG usually works in line with high-level standards for occupational health and safety, security and environmental management, especially for its high voltage works. It is now required to make sure that power line construction works, which are carried out under contract by other companies, follow these high standards as well;
- measures to protect birds from collision with power lines;
- STEG will lay the underground cables whenever possible at such distance from buildings that the exposure becomes zero (10 m in case of 225 kV cables).
- STEG will also inform stakeholders on the impacts of EMF, and measure EMF intensity on request.

With the help of the financing institutions, STEG has prepared a "Land Acquisition and Compensation Framework". The framework describes how STEG, under this project, will compensate affected persons for the occupation of land by construction works, by transmission towers, by substations and/or by access roads. STEG currently follows the Tunisian procedure for the compensation of power line construction works, which is appropriate. However, STEG is considering improving this procedure, and envisages for instance to compensate not only for damages to crops, but also for the loss of permanent access to land under the power towers.

EBRD and EIB have requested STEG to improve the existing procedure for the project, especially by implementing the compensation for permanent access to land, by better documenting and monitoring all activities, and by verifying that project-affected people do not lose in revenue due to the project. A grievance mechanism will also be set up for the project.

### **4. STAKEHOLDER ENGAGEMENT**

For power line projects, Tunisian legislation requires significant consultation with administrations. Further, it is usual practice in Tunisia to cooperate with local authorities when implementing infrastructure projects. Thereby, STEG already has some significant stakeholder engagement practice. EBRD and EIB guidelines require STEG to supplement this practice for the project by better informing and consulting affected persons, and the public more generally.

A Stakeholder Engagement Plan (SEP) has been prepared to define the information and communication actions which will be implemented by STEG during the different project phases. For instance, the SEP describes public information meetings and the project grievance mechanism.

STEG, EBRD and EIB are also disclosing the project's environmental and social documents for consultation. These documents will be made available on the internet and at STEG's and the delegations' offices. They include:

- the present non-technical summary;
- the Environmental and Social Action Plan ;
- the Stakeholder Engagement Plan;
- the Social impact assessment and Land Acquisition and Compensation Framework.

The documents are published in French and Arabic, and comments will be received by STEG or on the EBRD's website.

## **5. CONCLUSION**

By implementing the measures described in the documents listed above, STEG will build the power transmission infrastructure of the project in line with EBRD and EIB's environmental and social policies. STEG is also engaging into further improvements of its already appropriate environmental and social practice for future projects.