



# Project Information Document/ Integrated Safeguards Data Sheet (PID/ISDS)

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Concept Stage | Date Prepared/Updated: 19-Jan-2019 | Report No: PIDISDSC25303



**BASIC INFORMATION**

**A. Basic Project Data**

Country Tunisia	Project ID P168273	Parent Project ID (if any)	Project Name Energy Sector Performance Improvement Project (P168273)
Region MIDDLE EAST AND NORTH AFRICA	Estimated Appraisal Date Mar 19, 2019	Estimated Board Date May 14, 2019	Practice Area (Lead) Energy & Extractives
Financing Instrument Investment Project Financing	Borrower(s) Ministry of Finance	Implementing Agency STEG	

**Proposed Development Objective(s)**

The Project Development Objective (PDO) is to improve STEG’s commercial performance and enable the integration of privately-generated renewable energy into STEG’s power system.

**PROJECT FINANCING DATA (US\$, Millions)**

**SUMMARY**

<b>Total Project Cost</b>	140.00
<b>Total Financing</b>	140.00
<b>of which IBRD/IDA</b>	140.00
<b>Financing Gap</b>	0.00

**DETAILS**

**World Bank Group Financing**

International Bank for Reconstruction and Development (IBRD)	140.00
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Environmental Assessment Category  
B - Partial Assessment

Concept Review Decision  
Track II-The review did authorize the preparation to continue



## B. Introduction and Context

### Country Context

1. **A sustained transition to democracy and an ambitious reform agenda have marked Tunisia's path since the 2011 revolution.** With a population of 11.6 million and a GDP of US\$40.3 billion (2018), Tunisia is a lower middle-income country. Often hailed as the only success case of the Arab Spring, the country made great strides towards establishing the fundamentals of democracy and reforming its economy following the 2011 revolution, including easing restrictions on civil society organizations, improving economic governance, revising the investment code, reforming tax system, and trying to increase competition. The establishment of the National Dialogue Quartet in 2013, which represent workers, employers, human rights activists and lawyers and served as a mediator to advance peaceful democratic development, showcases the vibrancy of the civil society in Tunisia.<sup>1</sup> In 2014, a new constitution was adopted, and parliamentary and presidential elections held. The new Government of Tunisia (GoT) adopted a Five-Year Development Plan 2016-2020 (FYDP) and an Economic and Social Roadmap (2018-2020), whose pillars include macroeconomic and fiscal stabilization; modernization of social safety nets (SSN); and focus on increasing private investment, competitiveness, and productivity. The first free and fair municipal elections were held on May 6, 2018, further anchoring the democratic culture and laying the groundwork for decentralization.

2. **Structural challenges, a growing fiscal deficit and socio-political tensions pose an ongoing threat to economic and social development.** The increased instability in the aftermath of the revolution due to political unrest and terrorist attacks severely affected economic sectors that are engines of growth and sources of foreign exchange receipts such as tourism, and endangered investment climate in Tunisia. To counter social tensions, the GoT embraced expansionary fiscal policies, including public sector hiring and wage increase, which, combined with transfers to cover the large contingent liabilities of state-owned enterprises (SOEs), have impaired public finances. Fiscal deficit and public debt respectively reached 6.1 and 71 percent of GDP in 2017. Since 2016, growth has rebound because of the improved domestic security and a stronger performance of the agriculture, services and export-oriented manufacture sectors, reaching 2.5 percent of GDP in the first quarter of 2018. However, progress in terms of poverty reduction and shared prosperity has been slow. The government's focus on increasing current expenditures has left little room for growth-enhancing investment. The high unemployment (15.5 percent in 2017) impacts predominantly youth, women and people living in the inland regions. Female labor force participation is especially low (28 percent). The poverty headcount ratio stood at 15 percent in 2015, and disparities among regions and age groups have persisted or widened. A large part of the population remains just above the poverty threshold and is therefore vulnerable to exogenous shocks. This has exacerbated social and economic conditions especially in lagging regions, already benefiting less from post-revolution reforms.

3. **Structural reforms are most needed to put Tunisia on a more inclusive and sustainable growth path.** The country's large fiscal imbalance threatens to set back hard-earned social and economic development gains. While most of

<sup>1</sup> The National Dialogue Quartet is comprised of four key organizations in Tunisian civil society: the Tunisian General Labour Union (UGTT, Union Générale Tunisienne du Travail), the Tunisian Confederation of Industry, Trade and Handicrafts (UTICA, Union Tunisienne de l'Industrie, du Commerce et de l'Artisanat), the Tunisian Human Rights League (LTDH, La Ligue Tunisienne pour la Défense des Droits de l'Homme), and the Tunisian Order of Lawyers (Ordre National des Avocats de Tunisie). It received the Nobel Peace Prize in 2015 for its decisive contribution to the building of a pluralistic democracy in Tunisia in the wake of the revolution of 2011.



public resources have been so far absorbed by impending needs of the post-revolution context, going forward Tunisia needs to renew its social contract that hinges upon the Government's commitment to broad-based growth. Therefore, the focus must be on concrete actions to consolidate the country macroeconomic and fiscal situation and liberate resources to boost private investment, trade and entrepreneurship. Equally important is to strengthen governance and provide equal opportunities to all. To this extent, the FYDP delineates an ambitious program along five axes: (i) increasing resources for the economy; (ii) fiscal consolidation; (iii) human capital development; (iv) redesign of the social security system; and (v) improving business climate and increasing private investment. In 2016, the International Monetary Fund (IMF) approved a four-year Extended Fund Facility (EFF) of US\$2.9 billion geared towards supporting fiscal consolidation and private sector development, with actions including, among others, reduction of distortive subsidies, expansion of social protection and financial sector reform. In May 2018, the World Bank also approved a US\$500 million Investment, Competitiveness and Inclusion Development Policy Financing Project (DPF), a standalone single-tranche operation with financing linked to critical reforms including: (i) removing barriers to investment, trade and entrepreneurship; (ii) improving the financial viability and efficiency of the energy sector; and (iii) promoting greater economic and social inclusion. Tunisia's development agenda is equally focused on ensuring spatially balanced growth as well as environmental sustainability. Green growth and climate change goals are an integral part of such agenda, as also reflected in the FYDP.

#### Sectoral and Institutional Context

4. **The new social contract is translated into higher citizen expectations of Government's service quality, including in energy.** While the provision of energy services has been reliable, there is increasing demand for more transparent and better management of energy resources. Furthermore, despite the low economic growth, primary energy demand has increased steadily since the revolution, with gas demand quadrupling compared to 1990 levels. Electricity consumption also increased at a high pace (3.6 percent annually), with peak demand growth reaching 3.9 percent per year. This puts tremendous pressure on the Government to not only increase investments to ensure quality of service, but also optimize the efficiency of such investments. The sector, however, has been plagued with multiple challenges, including dwindling supply capacity and a lack of funds to be spent on distortive subsidies.

5. **Overreliance on imported hydrocarbons has made the sector, and its customers, vulnerable to price fluctuations.** Natural gas and petroleum respectively account for 55 and 44 percent of Tunisia's energy supply. In terms of electricity generation; 85 percent of the installed capacity derives from open and combined cycles gas turbines, 12 percent from dual fuel steam units (natural gas and heavy fuel oil) and 3 percent from renewables<sup>2</sup>. Once a net exporter of oil and gas, the country has become heavily dependent on external supply to meet its energy needs, especially for electricity generation. Exploration of upstream oil and gas largely declined in the recent years and protest movements also disrupted production and transport of fuels. As result, overall dependency on energy imports reached 49 percent in 2017 (compared with 15 percent in 2010)<sup>3</sup> and will likely continue to increase in the future, reducing Tunisia's energy security. Projections anticipate a shortage of primary energy, particularly natural gas, starting in 2020. Although there are opportunities for developing new gas fields domestically, reserves are limited and uncertain. With rising international prices and a depreciated currency, this import dependence put tremendous pressure on domestic prices, which the Government has tried to alleviate through subsidies.

<sup>2</sup> Observatoire National de l'Énergie et des Mines. 2018. Conjoncture Énergétique. Ministère de l'Énergie, des Mines et des Énergies Renouvelables.

<sup>3</sup> Ministère de l'Énergie, des mines, et des Énergies Renouvelables, Conjoncture Énergétique, Rapport Mensuel, Décembre 2017. Version du 6 Février 2018.



6. **The high subsidization of the energy sector not only poses critical risks to macro-fiscal stability but also diverts precious public resources away from welfare-enhancing investments.** All energy products, including oil products, LPG, natural gas and electricity<sup>4</sup>, are subsidized. Subsidies in 2017 were estimated to be around 2.3 percent of GDP<sup>5</sup>, which accounted for more than one-third of the fiscal deficit. Since indirect subsidies on oil and gas inputs for refining and power generation were removed in 2016, the national power and gas company (*Société Tunisienne d'Electricité et de Gaz - STEG*), has begun to buy hydrocarbons at international prices and production costs have increased well above the average tariff. In 2016, with US\$136 million of financial losses at the current exchange rate, STEG was the largest loss maker among Tunisia's 20 biggest SOEs. Besides imposing a heavy burden on public finances and impairing the financial viability of the energy sector as a whole, subsidies are regressive. Fuel subsidies, with exception of LPG, disproportionately benefit wealthier customers and more than half of subsidies for natural gas and electricity accrue to industrial and commercial customers. Lifting subsidies will not only allow for resources to be directed toward those most in need, for example through social safety nets, but also encourage more efficient consumption of energy.

7. **In response to these challenges, the GoT has embraced a transformational reform program, targeting energy transition, improved sector viability and better governance.** The program is headed by the Ministry of Industry and Energy, responsible for sector policy and oversight following the recent cabinet restructuring that merged the former Ministry of Energy and Mines with the Ministry of Industry. A key pillar of this program is the diversification of the electricity generation mix through a significant scale up of renewables-based generation capacity, which would critically help counter the erosion of the country's energy independence as well as reduce the carbon footprint of power production. A second pillar is the subsidy reform, which is material to bring Tunisia's power sector on a more sustainable financial footing and a key element of the fiscal consolidation axis in the FYDP. The GoT has begun enforcing electricity and gas tariff increases with the ultimate objective to eliminate energy subsidies by 2022. A roadmap to gradually remove subsidies, mitigate social impacts and moderate demand through energy efficiency is defined in the Policy Note<sup>6</sup> adopted by the GoT May 2018<sup>7</sup>. However, price adjustments have not yet caught up with rising international fuel prices and the depreciation of the domestic currency. Reforming energy subsidies requires continued commitment to regular price adjustments in line with fluctuations of international oil and gas prices and exchange rates, accompanied by mitigation measures to reduce the negative impact on firms and households. The GoT also recognizes the need to strengthen the regulatory framework, currently lacking an independent regulation body, in order to move towards a well-functioning, transparent and financially sustainable electricity and gas market

8. **The energy transition can only be delivered in partnership with the private sector.** Under the recently approved Tunisian Renewable Plan (TRP), the GoT is committed to increase the share of renewables in the energy mix to 30 percent by 2030, to be achieved in three phases. Specifically, TRP envisages the commissioning of 1.68 GW of wind and solar capacity by 2020, an additional 1.25 GW during the period between 2021 and 2025, and another 1.25 GW between 2026 and 2030. The GoT recognizes that private sector investment is key to achieve this scale. In fact, two-thirds of the

<sup>4</sup> Subsidies are mostly allocated to electricity (34%), LPG (25%), diesel (19%), and natural gas (12%). LPG remains the most heavily subsidized product, with its price covering only 34% of the cost.

<sup>5</sup> The subsidy estimate uses the price-gap methodology which defines energy subsidies as the difference between the domestic market price and the total cost of supply, including production, transport, and distribution costs and taxes, multiplied by domestic consumption. The production cost is based on the price of Brent.

<sup>6</sup> Note de Cadrage de la Politique de Réforme des Subventions Energétiques 2018-2022.

<sup>7</sup> This is aligned with the IMF's EFF and the World Bank's DPF.



renewable energy (RE) capacity is meant to be developed by the private sector under three schemes: (i) concessions for large-scale projects (a competitive selection process for investors in a total capacity of 1000 MW is underway); (ii) authorization for small-scale projects; and (iii) self-generation for industrial users. STEG is expected to develop the remaining RE generation additions. Furthermore, the GoT plans to develop two new gas-fired power plants (Skhira 1 and 2) of 450 MW each, one of which will be an independent power project (IPP). These added capacities are critical to meet the demand growth, replace decommissioned capacity, and diversify the energy sources. Integration to regional markets is also critical to support the energy transition. In particular, the construction of the Tunisia-Italy Power Interconnector (Elmed Project), by connecting Tunisia's small and constrained power system with the larger European one, will enable the accommodation of more intermittent RE in Tunisia's energy matrix.

9. **Improving regulation is also material to the GoT's agenda to strengthen governance and attract private investment for green energy.** Private sector interest is very much driven by the investment climate, which is underpinned by adequate regulation. In a nascent RE market such as Tunisia, regulation is also needed to balance the interests of key market stakeholders (government, STEG as the single buyer, and operators/suppliers which include IPPs, firms, and the consumers themselves). In this context, the GoT has decided to set up a Regulatory Authority responsible for regulating requirements for power grid connection and granting third-party access to electricity and gas networks, with the ultimate objective to guarantee a level playing field for all generators. The role of the Authority may well be expanded to regulation of the gas market; energy tariff setting; as well as monitoring the performance of sector operators, to provide more transparency to the sector management and ensure that inefficiencies are not passed on to consumers.

10. **STEG is in a critical position to drive efficiency in the energy sector and provide high quality services in line with the increasing needs of Tunisia's people and economy.** As "single buyer" in Tunisia's electricity and natural gas market, and vertically integrated public utility, STEG lies right at the center of the country's energy sector. The company is responsible for electricity service throughout the value chain; for transmission and distribution of natural gas; and, since 2015, for gas imports from Algeria. In 1996, the generation segment was opened to independent power producers (IPPs), which can produce and sell electricity to STEG. Currently, 20 percent of electricity supply is provided by one IPP; 78 percent is generated by STEG and the rest through industrial self-generation. Transmission and distribution remain under STEG's monopoly. It caters to almost 4 million customers (representing almost universal access) in electricity and 850,000 customers in natural gas. STEG's performance is therefore key to the sector's ability to achieve higher efficiency and sustainability, attract private investment and deliver economic and social growth. Private participation in Tunisia's power sector is very much conditional upon STEG being perceived as a credible off-taker of renewable and conventional energy produced by IPPs. STEG's improved performance vis-à-vis customers is especially important to strengthen the newly established social contract in the post-revolution context. Furthermore, as quality of service improves, STEG customers will be more willing to pay for service and eventually absorb price increases as tariffs are adjusted in line with international oil and gas prices. Finally, reducing STEG's inefficiencies will critically complement effort towards ending power sector's dependence on government subsidies.

11. **It is therefore important to address key issues undermining STEG's performance.** Although it has been able to guarantee reliable electricity supply, STEG's commercial and financial performance has been steadily declining in recent years. Tariffs well below cost-recovery levels make STEG heavily dependent on government's subsidies. Furthermore, the company struggles with technical and commercial losses, which reached 18 percent in 2017, mainly due to increased



electricity theft and unpaid bills. As result, payment arrears currently stand above 20 percent. Overall, STEG’s finances are under strain, and the company has suffered from negative net profit since 2010 (table 1).

With the goal to improve its technical, commercial and financial performance, STEG signed a performance contract with the GoT for the 2016-2020 period, with clear quantitative annual targets for the following areas: (i) increased electricity generation from

Table 1: STEG’s technical and financial performance indicators				
	2014	2015	2016	2017 (preliminary)
Energy (system) losses	16.1%	15.6%	16.4%	18%
Bill payment arrears	16%	19%	24%	21%
Net profit (million TD)	-2	-24	-354	-510
Net profit (% total cost)	0.03%	0.54%	10.6%	10.1%

RE and conventional power plants; (ii) expansion and upgrade of the electricity network; (iii) expansion of consumers’ connections to the natural gas network; (iv) reduction of technical and commercial losses; (v) implementation of energy efficiency; (vi) deployment of smart meters; (vii) recovery of unpaid bills from public and private customers; and (viii) enhanced corporate governance.

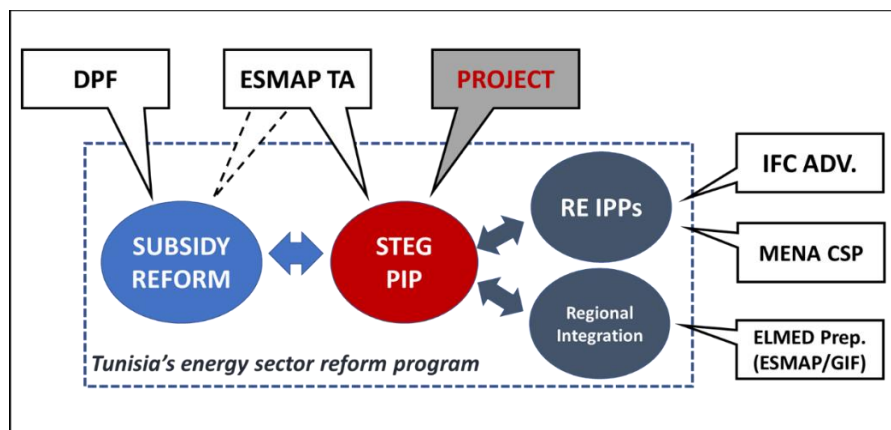
12. **The World Bank Group (WBG) has established a diversified and integrated program to help Tunisia address the most impending challenges and transformational opportunities facing the energy sector.** The World Bank, in collaboration with IFC, is providing an articulated menu of assistance, including policy dialogue, technical assistance (TA) and analysis, advisory services and selected investment financing, to support Tunisia’s energy sector reform process along all its key dimensions (figure 1). Policy dialogue and collaboration with the GoT on the subsidy reform is mainstreamed through the DPF, which includes three energy sector-related prior actions, including, in addition to progressive subsidy removal, STEG’s performance improvement and advancement of the renewables IPP program. A key component of the Bank’s program is the extensive analysis and technical assistance, targeting STEG and sector governance, being provided through the ESMAP-funded *Technical Support to Improve Performance and Enhance Financial Viability of the Tunisian Energy Sector*. This activity also complements efforts towards subsidy reform by supporting the identification of a clear strategy to phase out subsidies in a socially acceptable manner.<sup>8</sup> The Bank raised US\$13 million of grant financing from ESMAP and the Global Infrastructure Facility (GIF) to provide TA for advancing the preparation of the Elmed project. On the renewables front, IFC Advisory is providing technical support to the Ministry of Industry and Energy and STEG for the concession scheme and may provide advisory services for the preparation of the future gas-fired IPP. Finally, the Bank is providing TA services to the GoT for the development of concentrated solar power (CSP) generation capacity under the MENA CSP Knowledge and Innovation Program (MENA CSP KIP) funded by the Clean Technology Fund (CTF).

<sup>8</sup> The support includes macro and micro impact analyses, design of mitigation measures to help firms and households adapt to the new price environment, and implementation of a national communication campaign to build consensus around reform.





Figure 1: WBG's support program



13. **The Technical Support to Improve Performance and Enhance Financial Viability of the Tunisian Energy Sector is helping define a detailed *performance improvement plan (PIP)* to operationalize STEG's performance contract.** The TA is supporting the Government and STEG to improve the financial, technical, and commercial performance of STEG by (i) undertaking an operational and management diagnosis of the utility; and (ii) designing a detailed plan for STEG to carry out necessary investments and reforms to meet the targets of its performance contract. Taking place at the mid-point of the contract, the diagnosis will also help STEG evaluate its progress toward the indicators laid out in the contract, adjust the targets if necessary, and prepare the framework for the next performance contract starting in 2020.

14. **In parallel, the French Development Agency (Afd) is helping STEG implement a dedicated program to improve its commercial performance.** Under the *Smart Grid Project*, Afd will finance the installation of 400,000 smart meters for all medium-voltage (MV) and high-voltage (HV) clients, as well as low-voltage (LV) clients in a pilot region. The new infrastructure will target high-value customers with the objective to protect revenues from this segment, which accounts for 57 percent of electricity sales in Tunisia. Furthermore, the project envisages a complete overhaul of STEG's commercial management system (CMS), leading to more efficient and transparent processes in metering, billing, collection, recovery of nonpayment and customer service.

15. **In this context, the proposed *Energy Sector Performance Improvement Project (the Project)* is intended to deliver the most impending actions to improve STEG's performance.** Upon GoT's request, the Project will provide investment financing and TA focusing on key measures to lift STEG's technical and commercial performance. The Project complements Afd's-funded program and includes measures identified under the PIP as the 'lowest hanging fruits' to bring STEG on a stronger financial footing and prepare the utility to operate in the new context and adapt to its changing role.

### C. Proposed Development Objective(s)

16. The Project Development Objective (PDO) is to improve the technical, commercial and financial performance of STEG.

#### Key Results (From PCN)

17. The ultimate goal of the Project is to enable the development of private sector-led renewable energy projects, which requires efficient and sustainable performance of STEG. Under the Project, STEG's revenue collection and overall





commercial performance will be improved and transmission will be expanded. As result, technical and commercial losses that currently affect STEG’s revenue basis will be significantly reduced; the power system will be able to accommodate new generation sources, mostly from renewable IPPs; and the company will strengthen its relations with customers. Overall, STEG’s performance improvements, as promoted under the Project and parallel assistance deployed by other development partners, will help lift the financial and operational viability of the energy sector as a whole, reducing dependence on government subsidies, and lowering the pressure on price increases for end users.

18. The achievement of the PDO will be measured through the following PDO level results indicators:

- Increase in cash recovery index<sup>9</sup> (percent)
- Reduction of total system losses (percent);
- Increase in transmission capacity to the national grid (MW).

19. Intermediate results indicators will include:

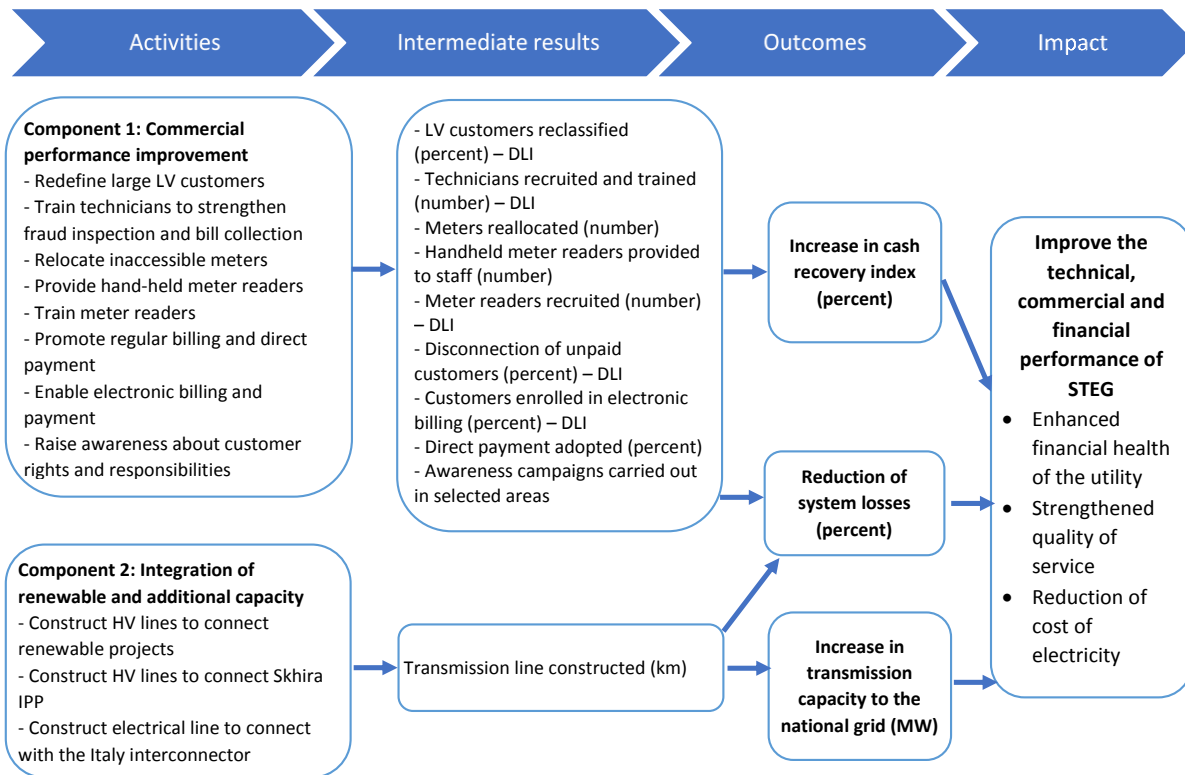
- Meters relocated to be accessible to meter readers (number)
- Handheld meter readers provided to staff (number)
- Direct payment through payment terminals or mobile payment (percent of customers)
- Awareness campaigns carried out in selected communities with high prevalence of fraud and nonpayment (number)
- Transmission lines constructed under the project (km)

20. In addition to the PDO level and intermediate results indicators, the Project has been designed to link disbursements to defined results through disbursement linked indicators (DLIs). They are broadly described below and will be refined on the basis of the Performance Diagnosis and Improvement Plan that will be conducted under ongoing Bank-implemented TA, and after discussion with STEG and the GoT. They will be phased along the five years of project implementation and serve as a way to align the Project outcomes with Project expenditures:

DLI	Baseline (2018)	Annual targets				
		2019	2020	2021	2022	2023
1. Percent of large LV consumers (consuming 2500 kWh or more a month) converted to monthly billing	0%	50%	100%			
2. Number of technicians recruited and trained to enhance fraud inspection and strengthen collection	0	200				
3. Number of meter readers/ bill distributors recruited to improve the quality and increase the frequency of meter reading and bill delivery	0	173				
4. Percent of optimized disconnection orders (excluding poor customers)	5%	10%	20%	25%	30%	35%
5. Percent of clients enrolled in SMS/email billing service	30%	40%	50%	60%	70%	75%

21. The theory of change underpinning the proposed program is captured in the figure below.

<sup>9</sup> The cash recovery index is defined as the billing efficiency (ratio of energy billed over energy consumed) multiplied by the collection efficiency (ratio of consumer bills paid over total consumer bills).



### D. Concept Description

22. As part of the integrated support program being implemented by the Bank, the proposed *Energy Sector Performance Improvement Project* will primarily target STEG, as it is the central conduit between the Government and citizens. Its strengthened performance is a condition for the sector sustainability and for attracting private investment in power generation, which is a showcase of how the Government can efficiently manage public resources, deliver quality services to the Tunisian population, and create an enabling environment for the private sector.

23. Component 1 is designed in complementarity with the AfD-financed Smart Grid Project, and altogether the 2 projects constitute an overall program geared towards turning around STEG’s commercial capacity and customer service. While STEG’s has sound technical competences, these areas need attention for STEG to be able to operate successfully in Tunisia’s changing energy market and higher customer expectation. Furthermore, by making STEG more commercially sound, the 2 projects will raise STEG’s revenue, hence improving its financial bottom-line. Activities include the installation of smart meters and the associated information system (advanced metering infrastructure – AMI) as well as of a commercial management system; the reinforcement of anti-fraud mechanisms; and the optimization of billing and payment processes. Besides the use of new infrastructure and technologies, the program aims for a more profound realignment of commercial practices, functions and competencies, providing STEG with a commercial management capacity on the par with well-performing utilities worldwide. The upgraded commercial management system will also allow STEG to better understand its customers, respond to service demand, complaints, and enhance the accuracy and transparency of the billing service. The bulk of the effort is undertaken under AfD’s project, complemented by the activities included under component 1 of the proposed Project.



24. The investments in transmission network infrastructure of Component 2 are meant to diversify sources of electricity away from imported hydrocarbons and connect to lower-cost sources by enabling the integration of new privately-generated power capacity. Discussions are ongoing with the European Investment Bank (EIB) to support STEG's investments in rehabilitating and extending the distribution network as well.

25. In this context, the proposed Project (up to US\$ 140 million) will comprise of the following components:

**Component 1: Commercial performance improvement (US\$15 million):** This is a DLI-based component, and financing is linked to the accomplishment of agreed DLIs. Activities include:

- (i) Redefinition of LV customers with a consumption above 2500 kWh, who will be moved to the large-customer category, which will be billed monthly and managed by the revenue protection team;
- (ii) Training of 50 technicians and purchase of 25 vehicles to reinforce the of fraud inspection teams, which are responsible for inspecting cases of potential fraud (detected through monitoring anomalies in customer consumption) and fixing meters/lines that have been tampered with;
- (iii) Relocation of inaccessible meters to allow for systematic meter reading and prevent fraud (around 150,000 meters);
- (iv) Provision of hand-held devices to meter readers to ensure accurate and timely reporting as well as to detect customers with irregular monthly consumption (currently, meter readings are transcribed and then entered manually at the end of the day);
- (v) Training of 173 meter-readers/bill-distributors to meet the increase in the number of electricity and gas meters and to potentially increase the frequency of meter reading and bill delivery (currently, the meters for LV customers are read on a quarterly basis and the bills are estimated and delivered on a bimonthly basis);
- (vi) Training of 150 technicians and purchase of 75 vehicles to strengthen the bill collection team;
- (vii) Promotion of regular (monthly) billing and direct payment (banking or postal payment);
- (viii) Enabling billing through email and SMS;
- (ix) Adoption of mobile payment and similar technologies; and
- (x) Design and implementation of a gender-sensitive communication campaign highlighting the efforts made by STEG to improve the quality of services and encouraging customers to report theft and pay their bills.

A gender assessment will be conducted to identify gender gaps, concerns and needs raised by customers with a focus on female-headed households and women-led small and medium enterprises related to the quality of electricity and gas services, including reliability of supply, billing, collection, and customer service. Based on the assessment results, gender-related actions to be included in the Project will be identified.

### **Component 2 - Development of the electricity transmission network infrastructure (US\$125 million)**

Expand and reinforce STEG's transmission network in order to evacuate future renewable power generation from the south where the resources are located to the north where most demand is located, and future gas-fired power generation from the Skhira area. This will include:

- (a) An 192 km 400 kV transmission line from Skhira to Kondar;
- (b) An 85 km 225 kV transmission line from Skhira to Thyna;
- (c) Associated conversion sub-stations at Kondar and Thyna; and
- (d) HV electrical lines and trunk lines (ranging from 1.5 to 100 km) to connect 5 solar photovoltaic plants, to be awarded under the concession framework, to the grid.



Transmission lines under (d) will enable the following power plants to be developed by private investors by 2023 and connected to the STEG network:

Location	Technology	Capacity of plant (MW)	Length of line (km)
Metbasta (Kairouan)	PV	100	8
Mezzouna 2 (Sidi Bouzid)	PV	50	1.5
Sagdoud (Gafsa)	PV	100	30
Tozeur 2 (Tozeur)	PV	50	2.5
Borj Bourguiba (Tataouine)	PV	200	100

The Ministry of Industry is leading the structuring of the renewable energy program and the selection private investors with technical assistance from the German technical assistance agency (GIZ), the European Bank for Reconstruction and Development (EBRD) and the IFC. EBRD is funding the environmental and social impact assessment (ESIA) studies for these plants. Transmission line under (a) and (b) will further enable power from the solar and wind power plants to be transmitted to the north of the grid and to the Sfax area where the bulk of demand is located; beyond 2025, they will also enable power from a future private gas-fired power plant in Skhira to be transmitted towards the north.

## SAFEGUARDS

### A. Project location and salient physical characteristics relevant to the safeguard analysis (if known)

The project area influence is characterized by an arid climate, with an average annual rainfall of 100 to 300 mm and the presence of wetlands. The predominant use of the land in the project area is agriculture (arboriculture, olive trees) and pastures. The project will be localized in 7 governorates (Sousse, Sfax, Kairouan, Sidi Bouzid, Gafsa, Tozeur and Tataouine). For the most part, the transmission lines will be located outside urban areas, but will pass close to the communities of Kondar, Skhira, Bouficha, Tyna, Oueslatia, Msaken, Meknassi, Tozeur, Metaloui, Remada and Mezzouna. As for the five renewable power plants associated with this project, they are in the towns of Borj Bourguiba (Tataouine governorate), Metbasta (Kairouan governorate), Mezzouna (Sidi Bouzid governorate), Tozeur (Tozeur governorate), and Sagdoud (Gafsa governorate), spread across South-West, North-Central, Central and Southern Tunisia.

### B. Borrower's Institutional Capacity for Safeguard Policies

STEG has a department that deals with Environmental issues. STEG is used to working with international financial institutions and donors. The Department of Environment has good experience in the preparation of Environmental Assessment and the implementation of Environmental Management Plan.

Land acquisition capacity exists at the national and regional level. STEG, however, is not fully familiar with the World Bank requirements of OP 4.12. STEG's safeguard implementation capacity, safeguard support capacity and training requirements will be assessed during project preparation.

### C. Environmental and Social Safeguards Specialists on the Team

Antoine V. Lema, Social Specialist

Eloise Sophie Fluet, Social Specialist



Mohamed Adnene Bezzaouia, Environmental Specialist

D. Policies that might apply

Safeguard Policies	Triggered?	Explanation (Optional)
Environmental Assessment OP/BP 4.01	Yes	<p>This project consists of 2 components associated with potential environmental impacts, with activities classified as a Category B project. This policy is therefore triggered.</p> <p>Relocation of inaccessible meters to allow for systematic meter reading and prevent fraud (around 150,000 meters) under Component 1 will present some Risks/Impacts mostly linked to Occupational Health and Safety and Community Health and Safety during works and operation phases.</p> <p>Component 2 - Development of the electricity transmission network infrastructure will fund the construction of 2 new HV transmission lines with 2 new conversion substations and new HV trunk lines to connect the future 5 renewable IPPs. The design, construction and operation phases of the transmission HV lines will generate adverse negative impacts if they are not mitigated correctly. These potential negative impacts are linked to construction sites; Occupational and Community Health and Safety, waste generation management, soil erosion and sediment control from materials sourcing areas and site preparation activities, fugitive dust and other emissions, noise from heavy equipment and truck traffic and potential for hazardous materials and oil spills associated with heavy equipment operation and fueling activities. Other negative environmental impacts may include terrestrial and aquatic habitat alteration especially bird life, electric and magnetic fields generation and management of hazardous materials. Positive impacts are mainly related to reducing greenhouse gas (GHG) emissions by increasing energy efficiency and using of renewable energy.</p> <p>Based on the above description of the project components and given that the final route of HV lines has not yet been decided precisely and the relocation of inaccessible meters in the distribution networks to</p>



be rehabilitated are not known, an ESMF will be prepared for the two components.  
 The ESMF will incorporate results from a scoping study developing a description of the projected HV transmission lines and the associated 5 PV renewable future power plants. The scoping study will describe the general Natural, Physical and Socio economical Environment that could be impacted based on the information currently available to STEG.

The ESMF will provide main Risks and Impacts and will develop safeguard screening mechanism and Environmental Assessment to be prepared (ESIAs/ESMPs) during project implementation. The ESMF will provide input to ESIAs/ESMPs that will be prepared by EBRD for the 5 associated PV power plants. The ESMF will be reviewed, approved and disclosed in country and on the World Bank external website before appraisal.

Performance Standards for Private Sector Activities OP/BP 4.03	No	The project will not involve financing private sector.
Natural Habitats OP/BP 4.04	No	Activities would not be carried out within protected areas or landscapes, so impacts on critical habitats are not foreseen.  The ESMF will screen out all activities potentially affecting natural habitats.
Forests OP/BP 4.36	No	The ESMF will screen out all activities potentially impacting the health and quality of forest and rangelands.
Pest Management OP 4.09	No	The project will not support the use or involve investments in Pesticides or other related products.
Physical Cultural Resources OP/BP 4.11	No	The project is not expected to pose risks of damaging on the existing community cultural property. No Risks/impacts are anticipated at this time. A chance find procedure will be prepared and annexed to the ESMF and other ESIAs/ESMPs to be prepared and to be used during civil works.
Indigenous Peoples OP/BP 4.10	No	The project will cover investments at the national and regional levels. No populations qualifying as Indigenous Peoples under OP 4.10 are expected to be amid project beneficiaries or project affected people.
Involuntary Resettlement OP/BP 4.12	Yes	The project will finance construction of transmission lines connecting 5 solar PV sites to be constructed by private investors, to the national STEG grid. The construction will require permanent land acquisition



for the footprint of the pylons, and permanent and temporary land acquisition for access roads and other installations, during construction and operation. As the corridors will not be known by appraisal, the project will prepare a Resettlement Planning Framework to guide the future preparation of Resettlement Action Plans as required for each of the corridors/sites. The RPF will ensure no civil works are undertaken prior to full compensation of all affected persons. The RPF will be reviewed, approved and disclosed in Country and on the World Bank external website before appraisal, as will be subsequent RAPs prepared during project implementation.

Safety of Dams OP/BP 4.37	No	The project will not construct or rely on dams.
Projects on International Waterways OP/BP 7.50	No	The project will not affect international waterways.
Projects in Disputed Areas OP/BP 7.60	No	The project is not located in a disputed area.

**E. Safeguard Preparation Plan**

Tentative target date for preparing the Appraisal Stage PID/ISDS

Mar 01, 2019

Time frame for launching and completing the safeguard-related studies that may be needed. The specific studies and their timing should be specified in the Appraisal Stage PID/ISDS

ESMF and RPF, as well as other mitigation measures if needed, should be ready by appraisal.

**CONTACT POINT**

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### APPROVAL

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