



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

Concept Stage | Date Prepared/Updated: 17-Oct-2017 | Report No: PIDISDSC21808



BASIC INFORMATION

A. Basic Project Data

Country Iraq	Project ID P162454	Parent Project ID (if any)	Project Name Iraq Electricity Services Reconstruction and Enhancement Project (P162454)
Region MIDDLE EAST AND NORTH AFRICA	Estimated Appraisal Date Jan 22, 2018	Estimated Board Date May 21, 2018	Practice Area (Lead) Energy & Extractives
Financing Instrument Investment Project Financing	Borrower(s) Basra Governorate, Ministry Finance	Implementing Agency Ministry of Electricity	

Proposed Development Objective(s)

To improve the reliability and enhance the operational and commercial efficiency of electricity services in the Basra Governorate.

Financing (in USD Million)

Financing Source	Amount
International Bank for Reconstruction and Development	200.00
Total Project Cost	200.00

Environmental Assessment Category B-Partial Assessment	Concept Review Decision Track II-The review did authorize the preparation to continue
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Other Decision (as needed)

B. Introduction and Context

Country Context

- Iraq's key priorities are to restore stability and security.** The Strategic Priorities in Ministries: 2014-18 Action Plan lays out these six priorities: (1) a secure and stable Iraq, (2) upgrading services to and the standard of living of citizens, (3) encouraging a shift towards the private sector, (4) increasing oil and gas production to improve the financial sustainability, (5) administrative and financial reform of government institutions; and (6) improving federal-



local relations. Despite the rise of ISIS and the loss of control over land to the north and west of Baghdad in 2014, the dominant commercial areas of Iraq, from Baghdad through to Basra in the south remained relatively secure. In these areas, the government still faces the challenge of providing and improving basic services, and addressing unemployment and poverty, at a time of significant fiscal pressure due to the drop in the price of oil. Mass demonstrations against corruption and weak public service delivery that started in August 2015 and in early 2016 saw demonstrators enter Parliament inside the International Zone in Baghdad. These persistent challenges and discontent underscore the urgency of delivering on significant reforms and social services; a task that is complicated by an ongoing political crisis. The attempts by the Prime Minister to reshuffle his cabinet in 2016 by appointing technocrats were halted by Parliament, which through a series of no-confidence votes forced out key ministers, including the Minister of Finance. The unrelenting deterrence to carry out critical reforms are threatening the very foundation of the Iraqi state, as fragmentation across different groups and regions grow.

2. **Economic growth has decelerated sharply over the past two years.** The ongoing war against ISIS and the steep drop in oil prices led growth to sharply decelerate in 2014-2015. Following the strong growth in the four years prior to 2013 (averaging 8 percent), Iraq's economy decelerated to 0.1 percent in 2014 and grew at 4.8 percent in 2015 on the back of an 18.4 percent increase in oil production. Real GDP increased by 11 percent in 2016 owing to a 25 percent increase in oil production, which was little affected by the conflict with ISIS. Average consumer price inflation was only 0.4 percent in 2016 in the areas not occupied by ISIS (where 80 percent of the population lived before the ISIS occupation). In January 2017, the Consumer Price Index descended to minus 0.9 percent year-on-year [IMF Staff Report, March 2017]. Poverty, as estimated by the Iraqi government reached 22.5 percent in 2014 nationwide, and in the ISIS-affected governorates, the direct impact of economic, social and security disruptions is estimated to have doubled poverty rates to 44 percent. The growing inflow of Internally Displaced Persons (IDPs) and Syrian refugees into the Kurdistan Region of Iraq (KRI), have quadrupled poverty rate into 12.5 percent in 2014, imposing additional strains on the budget and service delivery. In the South, where poverty rates have always been high, the macro level shocks have increased estimated poverty rates to above 30 percent.
3. **Iraq's energy sector is its most significant economic sector - with the oil sub-sector accounting for over 65% of GDP and more than 90% of annual government revenue and 98 percent of the country's exports.** Iraq, as many countries in MENA region, relies heavily on energy subsidies as a main tool to provide social protection and share hydrocarbon wealth. Subsidies are estimated to sum to 9 percent of GDP annually, of which 1.8 percent on food, 3.4 percent on electricity, and 3.6 percent on fuels according to the IMF. In the electricity sector, significant subsidies exist, both in the electricity tariff and in the fuel used for generators. These subsidies represent a significant burden on Iraq's budget and consume a major portion of the government revenues. According to latest data available from IMF, the cost of electricity subsidy almost tripled from 2011-2013, reaching 3.4 percent of GDP and 8 percent of the total budget expenditure in 2014. The authorities recognize the heavy burden of these subsidies on the budget, and plan to reform electricity tariffs, by implementing a progressive tariff increase to improve revenues and reduce subsidy. Supported by the IMF under the Rapid Financing Instrument and the World Bank under the Development Policy Financing (DPF) operation programs, GoI is implementing structural reforms to increase non-oil revenue, control the wage bill and non-contributory pension expenditure. Effective January 2016, GoI increased electricity tariffs four-fold to reduce subsidies and later adopted a strategy to reduce operational losses and increase tariff collection. However, one of the barriers is that politically vocal groups that benefit from subsidies can block reforms. Further on November 1, 2016 Iraq endorsed the World Bank's "Zero Routine Flaring by 2030" Initiative; and under the DPF has committed to reduce gas flaring associated to oil extraction and increase gas capturing. The value of gas currently flared represents an annual economic loss approximately equivalent to US\$2.5 billion. The wasted volumes would be sufficient to meet most of Iraq's unmet needs for gas-based power generation and could generate savings linked to the use of expensive (and for some parts imported) fuel, which costs the country an estimated US\$6 billion to US\$8 billion per year.



- 4. Regional Context-Basra Governorate.** Basra, one of the fifteen (15) governorates of Iraq is geographically situated in the South of Iraq and borders with Iran, Saudi Arabia and Kuwait. The governorate of Basra is subdivided into seven districts: Abu Al-Khaseeb, Al-Midaina, Al-Qurna, Al-Zubair, Basra, Fao, and Shatt Al-Arab. The city of Basra, the governorate's capital, is Iraq's third largest urban center. The governorate population is estimated at about 2.65 million of the country's total population of about 33.80 million. During the last decades, Basra was a battleground: the Iran-Iraq war, the two Gulf Wars, the Shiite uprisings against Saddam Hussain and the post-2003 insurgency all took their toll on the governorate. The dilapidated infrastructure, among others, is hampering the governorate's economic prosperity. The receding level of the Tigris and Euphrates rivers, increased salinization and insufficient waste water treatment capacity hamper agriculture in the governorate. The governorate of Basra has remained relatively stable and secure since the 2008. Basra's relative safety and stability make it an attractive location for IDPs fleeing the violence that swept northwestern Iraq in 2014. Basra's location with its vast oil reserves make it one of the economically most important governorates of the country, producing approximately two thirds of the country's oil output. The port of Basra and the port of Um Qasr, Iraq's only deep water port, are both located in the governorate, which makes the governorate a center for trade, transportation and storage. Albeit Basra's natural resource endowment and its national strategic importance, the region remains one of the poorest in the country.

Sectoral and Institutional Context

- 5. Iraq's energy sector has suffered from more than a decade of conflict and sanctions that have left its institutions weakened and have resulted in under-investment and chronic deterioration in energy infrastructure.** Although Iraq has made significant progress in improving its power generation, and increasing oil production, its energy sector continues to face serious issues, including high demand growth of over 10 percent per annum, chronic electricity shortages with grid supply availability of less than 15 hours per day, and an inability to supply natural gas as fuel for power generation , alongside increasing levels of associated gas flaring at over 60 percent of the total associated gas produced in 2016 . In the context of a reduced oil-price and consequent budgetary pressures, the electricity sector represents increasing fiscal pressure on Iraq's public resources – particularly due to high losses, lower than cost-recovery tariffs, and poor revenue collection.
- 6. The electricity sector in Iraq suffers from a series of simultaneous and compounding challenges resulting in a broken business model unable to generate adequate revenue to sustain itself nor to offer value to its consumers.** Years of neglect have led to a dilapidated grid infrastructure with low operational efficiency and high levels of theft where over 50 percent of electricity is lost before it is actually billed. Adding to this burden, due to lack of effective metering, billing, and commercial management systems, only about 50 percent of the energy billed is collected; leaving the actual electricity paid at less than 30 percent of the total electricity generated.
- 7. As tariffs do not reflect true cost of generation, the less than 30 percent of energy paid represents only about 10 percent of the operational cost, generating a perpetual negative spiral of under recovery and under investment, including a high perception risk for commercial financing and deteriorating services.** According to the Investment Climate Assessment (ICA) 2012 Survey, 73 percent of the firms operating in Iraq identified the lack of sufficient electricity supply as a "very severe obstacle" to productivity, and the most significant issue affecting private sector development and job creation. The GoI has initiated actions to improve the sector's financial performance and sustainability by implementing a fourfold increase in tariffs effective January 2016 and later adopted a strategy to reduce operational losses and increase electricity sales collections. Unfortunately, over-all revenue did not improve despite of the price increase as collections declined underlining the difficulty in addressing the revenue gap through pricing and policy actions alone without addressing the poor service quality and commercial systems that is the



direct interface with the clients. The underpricing has led to high average consumption of approximately 600 KWh/Household compared to an average of less than 250KWh/Household in Jordan and Egypt. Demand is also increasing at an unsustainable pace (10% per annum) putting great strains on energy subsidy provisions and pace of sector expansion.

8. **Iraq's Vision for the Electricity Sector – Decentralized Service Delivery and Private Sector Participation:** To address the dismal technical and commercial performance of the electricity sector, the GoI has initiated actions to restructure tariffs, and progressively move towards achievement of full cost-recovery, whilst ensuring sufficient protection for poor and vulnerable consumers. The policies are founded in the sector strategy, the Iraq Integrated Energy Strategy (INES), adopted by the Cabinet in 2014, and enshrined in the recently passed law, the Electricity Law No. (53) of 2017. The Minister of Electricity (MoE) has outlined a broad plan to unbundle the sector, improve its financial position, decrease its reliance on government budgetary transfers and subsidies, and increase the efficiency and reliability of electricity supply by (i) Increasing private sector participation in electricity generation; (ii) Introducing private sector participation in electricity distribution and retail, initially through services contracts limited to revenue and customer management services; and (iii) Accelerating the development of a Domestic Gas Market to catalyze private sector investment in all stages of the gas to power value chain.
9. **Rationale for the Basra Governorate Focus.** IBRD resources are proposed to support the reconstruction and enhancement of the electricity services in the region of the Basra governorate, whose economic infrastructure including electricity services were destroyed by various wars and conflicts during the period 1980-2008. In addition, the proposed approach to focus on the Basra governorate supports three major GoI initiatives: (i) Decentralized services delivery, increased private sector participation and (iii) operationalization of the new electricity law.

Relationship to CPF

10. **The Government of Iraq has detailed a reform plan that delivers better services to the public.** These reform plans will not only address the shortage of services provided in response to Iraq's current crises, but will also provide the fundamental building blocks for longer-term employment growth and prosperity with a gradual transition from a centralized economy to a market based economy.
11. **The proposed project will contribute to the World Bank's twin goals –alleviating poverty and promoting shared prosperity.** By improving power supply to private sector and the poorer residential areas, the project will improve quality of life and enhance the disposable incomes of consumers. Given the breadth and nature of the distribution work involved in the project, it will also create considerable employment opportunities throughout its implementation.
12. **The project also supports the MNA Regional Strategy** through contributing to a number of its pillars, including: (i) Reconstruction and Recovery: by supporting the reconstruction of a network that is severely deteriorated as a result of regional neglect, conflict and instability; and (ii) Renewing the social contract: by supporting the electricity sector in early steps towards longer term reform, restructuring and eventual privatization of its public enterprises, in addition to supporting increased financial performance concomitant with improved services and demonstrating a willingness to pay for them.
13. **The project is fully aligned with the World Bank's Country Partnership Framework (CPF) for Iraq FY18-FY23 strategic focus areas, which are“(1) to address and help manage the critical fiscal situation; through supporting reforms that will have direct impact on the fiscal deficit; (2) to improve delivery of basic services with priority to areas**



where the security threat has diminished (Liberated Areas) and sub national governorates; and (3) to strengthen private and financial sector development”.

14. **The project is aligned with the Cascade theme of “mainstream the upstream” by addressing the sector’s fiscal sustainability so as to enable crowding in commercial financing in the electricity value chain related to gas-to-power.** Improved revenue management in the distribution sub-sector will foster the upstream IPPs as it would provide predictable revenues required under the off-taker arrangements (Power Purchase Agreements). This, coupled with the proposed reforms in the gas sector and the resultant potential IPP gas supply agreements, provide incentives for further investments in the upstream gas capture and processing especially noting the emerging technologies with regard to onsite gas-to-power conversion.

C. Proposed Development Objective(s)

To improve the reliability and enhance the operational and commercial efficiency of electrical services in the Basra Governorate.

Key Results (From PCN)

15. The following key indicators will be measured to demonstrate the achievements of the PDO:

- (a) Improve the reliability of electricity service delivery: Increased efficiency of distribution infrastructure (reduction in unserved energy due to unplanned outages, MWh/year).
- (b) Enhance the operational efficiency of electricity services: Reduction in technical losses (Technical Loss reduction, MWh/year).
- (c) Improve Commercial operations: Increase in collections/billed (Percentage increase in collections/billed energy).

D. Concept Description

16. **The total cost of the proposed project is estimated at US\$ 200 million.** The project will consist of the following three (3) main components:
17. **Component 1. Transmission Network Reinforcement (US\$100 million).** The component is proposed to finance activities aimed at increasing the transmission network capacity to the Basra region in order to: (i) address network capacity limitations to meet existing electricity power demand; (ii) meet expected future load growth; (iii) provide operation flexibility and hence improved electricity supply reliability; and (iv) reduce transmission network technical losses. The proposed activities include: (i) 132/33/11KV substations rehabilitation and upgrades; (ii) 132KV transmission network reinforcement; and (iii) supply and installation of 132/33/11KV mobile substations. The proposed scope is expected to increase the transmission network capacity by about 1.10GW. As of 2016, the network was able to transmit a peak capacity of 2.8GW compared to a system peak demand of about 3.2GW.
18. **Component 2. Distribution Network Reconstruction and Operational and Commercial Efficiency Enhancement (US\$ 85 million).** The investments are proposed to include activities related to: (a) distribution network rehabilitation and reinforcement to meet both current and future electricity demand, reduce technical losses and increase operations flexibility; and (b) Design, supply, install and commission of an Integrated Management Information System (MIS) covering electricity distribution core business functions namely; network operations and



maintenance, commercial, and management of corporate resources. The MIS will have several modules including but not limited to (i) Distribution Management System (DMS) and System Control and Data Acquisition (SCADA) to support network operations and maintenance functions for improved reliability and operating efficiency, including an incident management system to track, among others, response to consumers and service quality; (ii) Commercial Management System (CMS) including a geo-referenced customer database and revenue cycle management; and (iii) Enterprise Resource Planning (ERP) System covering corporate functions such as human resources, finance and accounting, asset register and procurement to support the distribution directorate to better plan and manage all of its resources and (c) a Revenue Protection Program(RPP), initially covering the high value customers.

19. **Component 3. Institutional Capacity Strengthening and Project Implementation Support (US\$ 15.0 million).** This component aims at supporting the decentralized electricity services and operationalization of the electricity law with regard to the corporatization of the South Electricity Distribution Directorate. The component activities will support to strengthen the capacity of the directorate in key electricity distribution service functions, namely, operations and commercial services through developing and implementing a Business Improvement Plan (BIP) including a “smart management” change process. The change process will be tailored to uniquely respond to the country’s fragility and governance challenges associated with the informal sectarian/party “quota system” of inclusivity with regard to public sector jobs¹. The BIP is proposed to include but not limited to: (i) coaching, mentoring, and enhancing the capacity of the directorate staff; (ii) developing and documentation functional processes and operational procedures; (iii) MIS Implementation (to be financed under component 2); and (iv) Baseline data collection and performance benchmarking including setting of key performance improvement targets.
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¹ Recruitment for public sector jobs based on political basis/through political parties and government employment overstaffing if not addressed could deter the personnel changes that may be required for a culture change for a customer oriented business.



SAFEGUARDS

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

The exact locations of the project interventions are still not defined. However, it is determined to implement the project within the boundaries of Basra Governorate which is bounded on the north by the Governorate of Maysan, on the East by Iran, and on the West by the Western Desert. Basra is an administrative and commercial center for Iraq, with a population of 1.3 million (according to a 2002 estimate). It is linked to Baghdad, the capital of Iraq, by highways, railroad and direct domestic flights. Basra Basra has a desert climate with great temperature variations between day and night, summer and winter. The high temperature reaches 106°F (50°C); the low is above frost. Annual relative humidity is 44 to 59 percent; annual rainfall ranges between 2 and 8 inches (50–200 mm). Winters are warm, with temperatures above freezing. With its multitude of waterways, the incoming and outgoing tides of some 635 rivers and channels that water approximately 14 million palm trees make the region one of the world's most fertile.

An Environmental and Social Management Framework (ESMF) including Environmental and Social Management Plans (ESMPs) will be completed prior to project appraisal and will identify all salient physical characteristics relevant to the safeguards analysis.

In addition, a Resettlement Policy Framework will be prepared as the main safeguards instrument to be used as the guiding and reference documents. Site specific Resettlement Action Plans (RAP) (in case of land take) will be prepared prior to any construction activities.

B. Borrower’s Institutional Capacity for Safeguard Policies

The Governorate of Basra has a dedicated environmental directorate which is legally mandated to manage environmental affairs in Basra. The capacity of this directorate has not been assessed yet but it is expected that they will not be familiar with the Bank’s safeguard policies. It was conceptually proposed that a PMT at the Governorate level, comprising of officials nominated from the Governorate and the respective Electricity Directorates, would assume the leading role in the project coordination. As such, it is recommended that the PMT includes a qualified person who will be responsible for the environmental and social safeguards management. The PMT will be supported by an Owner's Engineer who will be required to provide staff with experience in World Bank safeguard policies.

C. Environmental and Social Safeguards Specialists on the Team

Ehab Mohamed Mohamed Shaalan, Environmental Safeguards Specialist
Ibrahim Ismail Mohammed Basalamah, Social Safeguards Specialist

D. Policies that might apply

Safeguard Policies	Triggered?	Explanation (Optional)
Environmental Assessment OP/BP 4.01	Yes	The project will include the procurement and installation of high voltage overhead transmission lines, substations, low voltage distribution network and distribution transformers. Civil works such as shallow excavations, laying concrete foundations,



		erection of towers and poles as well as stringing of cables and wires will take place. Air emissions, noise, water pollution and generation of solid wastes are expected. Therefore, OP4.01 is triggered. Prior to appraisal, a project ESMF and site specific ESMPs for the first year works and/or any sites known will be prepared.
Natural Habitats OP/BP 4.04	No	The project interventions are not expected to take place in areas of ecological importance. Transmission lines will be erected along already existing energy corridors passing through desert land.
Forests OP/BP 4.36	No	No forests are existing within the project boundaries.
Pest Management OP 4.09	No	No pests or agriculture related activities will take place.
Physical Cultural Resources OP/BP 4.11	TBD	It is not expected that the Transmission lines or the distribution networks will pass through site of cultural importance. However this is yet to be confirmed.
Indigenous Peoples OP/BP 4.10	No	No indigenous people exist within the project boundaries.
Involuntary Resettlement OP/BP 4.12	Yes	<p>Since the location of all subprojects are not known during the preparation stage, an RPF will need to be prepared for the project to provide guidelines to handle resettlement requirements and compensation procedures during preparation and implementation.</p> <p>In addition, during the lifespan of the project, there might be a need for either fixed or mobile substations to be implemented which may require private land, then OP 4.12 will be triggered.</p> <p>If any first year works and/or any known sites are determined to require physical displacement, land acquisition, or loss of income, then the corresponding RAPs or ARAP will be prepared before appraisal.</p>
Safety of Dams OP/BP 4.37	No	No dams will be affected by the project.
Projects on International Waterways OP/BP 7.50	No	No activities will take place on international waterways.
Projects in Disputed Areas OP/BP 7.60	No	No activities will take place in any Disputed Areas.

E. Safeguard Preparation Plan

Tentative target date for preparing the Appraisal Stage PID/ISDS

Jan 11, 2018



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

Two safeguard instruments that will be prepared prior to Appraisal will be the ESMF and RPF. Prior to Appraisal, Site specific ESMPs will be prepared for the first year works and RAPs where identified as needed. Subsequently, ESMPs will be prepared prior to any construction activities in addition to RAPs when determined as needed..

CONTACT POINT

World Bank

Paul Baringanire, Mohammed Wafaa Al-Ani
Senior Energy Specialist

Borrower/Client/Recipient

Basra Governorate
Walaa Obaid
Head of Planning and Development Department
walaalsalim@gmail.com

Ministry Finance

Implementing Agencies

Ministry of Electricity
H.E. Abdulhamza Hadi Abbood Al-Jasim
Deputy Minister
dist.undersecretary@yahoo.com

FOR MORE INFORMATION CONTACT

The World Bank
1818 H Street, NW
Washington, D.C. 20433
Telephone: (202) 473-1000
Web: <http://www.worldbank.org/projects>



APPROVAL

Task Team Leader(s):	Paul Baringanire, Mohammed Wafaa Al-Ani
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Approved By

Safeguards Advisor:	Nina Chee	03-Sep-2017
Practice Manager/Manager:	Erik Magnus Fernstrom	03-Sep-2017
Country Director:	Yara Salem	19-Oct-2017

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 expected project benefits during the works construction and operation phases are:

During the construction phase, in the vicinity of the sites:

- income generation through the creation of temporary jobs;
- development of small businesses (food, clothing, etc.); and
- increased income through the procurement of local and imported materials sold on the domestic market.

After the project implementation, the following positive impact is expected:

- improved quality of life through the possibility of using electrical appliances and lighting of homes;
- improved security, due to public lighting;
- increased economic activities stemming from the development of businesses, mechanization and electrification of stores and workshops;
- access to information services (new technology, TV, etc.); and
- improved performance of administrative and social services as well as economic operators based in the project area (better working conditions, possibility of IT equipment, communication facilities).

The following safeguard issues and potential negative impacts associated with the project. All the impacts listed below are largely of moderate significance. The anticipated impacts are limited to the specific routes and sites, associate are localized, reversible and time limited and therefore can be mitigated with simple measures. The impacts can be rated to be of low to moderate significance. However, with mitigation measures in place, the impacts will be either neutralized or decreased to the minimum. None of the listed impacts is considered irreversible or of potential large scale as described below.

During Construction (Overhead transmission lines, low voltage distribution networks, substations and transformer rooms)

- Air emissions from heavy machinery and generators;
- Dust generation from excavation activities and open storage of materials and excavated soils;
- Noise emissions from heavy machinery used in general construction activities;
- Improper management of solid, liquid, and hazardous wastes and contamination of soils;



- Water consumption in construction activities;
- Improper disposal of wastewater from site offices;
- Dewatering of subsurface waters and improper disposal of the resulting wastewater;
- Potential impacts on culturally valuable sites and antiquities due to excavation activities;
- Traffic congestion and blockage of access due to excavation and installation works;
- Damage of crops and negative impacts on livelihoods due to installing overhead transmission and distribution power lines especially in privately owned agricultural lands;
- Permeant land requirements to establish permanent substations;
- Temporary land requirements for mobilization of machinery and other construction works processes;
- Impact on the illegal occupants and the commercial activities going on along the ROW of the network;
- Risk of damage/breakage of underground utility lines and piping (drinking water, wastewater, electricity cables, telephone lines) during excavations especially inside urban areas;
- Worker health and safety concerns especially if local subcontractors are utilized in some construction activities entailing construction related safety risks. Local subcontractors generally don't have the culture of using personal protection equipment or maintaining good worker health and safety procedures or practices.

During Operation

High voltage overhead transmission lines:

once they are constructed the main impacts that arise from their physical presence are the Electromagnetic Field (EMF) together with noise created by the Corona effect. In addition, physical presence creates a visual impact and a threat to birds which may collide with the wires.

Electromagnetic Fields (EMF)

The size of the Right of Way and the protection zone is largely determined by EMF. The EMF for 400 kV lines at a distance of 25 m from the footprint of the line is < 5 kV/m, which is in conformance with stipulated standard for limitless exposure. Therefore, a "Protection Zone" along the line should be at least 20 m from both of each side of the line corridor.

Noise

HV Transmission lines produce noise through the Corona effect and noise levels can be significant, especially in foggy, damp, or rainy weather conditions, when power lines can create a subtle crackling sound due to the small amount of the electric current ionizing the moist air near the wires. The Corona effect can produce ozone and oxides of nitrogen in the air surrounding the conductor, especially in humid conditions. Corona consists of the ionization of air within a few centimeters immediately surrounding conductors. Ozone is a reactive form of oxygen and combines readily with other elements and compounds in the atmosphere.

Aesthetics

The HV transmission lines will be permanent structures crossing wide areas of deserts which may disturb the natural aesthetic value of these desert landscapes. However, since Basra is famous for oil fields and flares in many parts of the desert, the natural aesthetic value of the desert has been significantly disturbed by the oil production sites. Therefore, the transmission lines and towers are expected to have a minor impact on the aesthetic value of the desert landscape in Basra.

Low voltage distribution network



It is planned that the low voltage distribution networks will be installed using posts and overhead wires. Routine maintenance of such networks may require cutting some trees or blocking access to some roads. In Basra, the planned interventions will be mainly replacing damaged or stolen parts of the networks. Any new additions to the network will be in urban settings. Cutting trees which already exist in the city for landscape purposes should be avoided as much as possible otherwise replantation of trees should take place instead of any ones which are necessary to cut for technical unavoidable reasons.

Substations

Many high-voltage circuit breakers, switches, and other pieces of equipment used in the transmission and distribution system are insulated with sulfur hexafluoride, which is a potent greenhouse gas. This gas can leak into the atmosphere from aging equipment or during maintenance and servicing.

Installation of transformer substations and/or switching substations

The installation of new transformer or switching substations in brickwork cabins will involve the performance of civil works and the use of common construction methods and materials. These cabins are normally in urban areas. There are no plans to open access paths specifically to them.

Rehabilitation of transformer substations and/or switching substations

Removal of obsolete equipment produces metal materials that may be recycled (steel and copper, in particular). However, some transformers may contain oils that are contaminated with polychlorinated biphenyls (PCBs). If it turns out that some transformers actually contain PCBs, special measures should be taken for their packaging and ultimate removal to prevent environmental and public health risks.

Procurement of land for the installation of infrastructure:

The installation of secondary stations and poles require that land be acquired or that compensation be paid for any land occupied by formal or informal dwellers.

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

- When operating at a maximum 400 kV, the lines affected by the project will produce electromagnetic fields (EMF) which has some public health impacts especially when passing too close to residential homes, schools or hospitals. Since these lines will pass across the desert, no long term impacts are expected.
- Transformers, most of which are placed in closed brickwork cabins, emit low levels of noise.
- The presence of live lines and equipment will always entail electrical hazards.

On the positive side, the operation and maintenance of the infrastructure inevitably calls for the presence of a few people for routine checks and maintenance or repairs. One of the project objectives is precisely to improve network reliability and reduce the number (and duration) of power failures. In addition, the project aims to reduce the energy loss currently observed, as well as electrify areas that are not yet served by the power grid.

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

Routing alternatives apply to transmission mains, distribution mains and connection mains. Deciding on routing alternatives for the distribution and connection network is premature at this stage. However, selecting optimum routes for these networks is crucial to avoid as much environmental and social impacts as possible. It is very important to avoid as many sensitive sites as possible to minimize environmental and social impacts. The routes of the proposed transmission lines will be selected in such a way to avoid passing through any ecologically or culturally sensitive areas.



In addition, all lands which will be acquired by the project will be state owned land. All measures shall be taken to avoid temporary or permanent land acquisition. In the unlikely situations where resettlement may be required, fair compensations will be provided to the affected people according to the criteria which will be developed in the RPF document.

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.

Given that routing of the transmission and distribution networks as well as the exact locations of the substations and transformer rooms lines are not known with certainty neither at the appraisal time of this project, an Environmental and Social Management Framework (ESMF) and Resettlement Policy Framework (RPF) were selected to be the safeguard instruments used to address the safeguards policies which need to be triggered. Whenever a specific site or route is identified, an Environmental and Social Management Plan (ESMP) and a Resettlement Action Plan (RAP), if necessary, will be prepared. The site specific ESMPs will be prepared following the principles and procedures set forth in the ESMF. Clear measures for handling health and safety issues, managing the impacts of labor influx and compensating resettlement impacts will be set forth clearly in the ESMPs or further associated tool (e.g. the RAPs). The site specific ESMPs and RAPs will be prepared, cleared and disclosed prior to the commencement of any construction works.

The borrower will recruit a qualified consultant to prepare the ESMF, with support from the Bank safeguards task team. Site specific ESMPs (and RAPs if needed) will be commissioned to a consultancy firm or institution with the required qualifications. All prepared safeguard documents will be reviewed by the Bank safeguards task team before final review and clearance by the Bank RSA.

In terms of implementation of environmental and social mitigation measures, all contracts for construction will include site specific ESMPs which will be mandatory to implement. The implementing agency will have to appoint environmental and social officers to ensure the implementation of the ESMP requirements. In addition, Bank supervision missions will ensure compliance with the ESMP measures.

In terms of borrower/implementing agency capacity to implement ESMPs, it is evident that there is no minimum environmental or social capacity sufficient to implement or supervise ESMPs. Therefore, it will be required to hire external consultants to work closely with the borrower/implementing agency to ensure the ESMP requirements are adequately implemented. The environmental and social consultants will be hired to work with the PMU to review the prepared ESMPs/RAPs and monitor the overall implementation of the ESMPs. In case of recruiting a Project Engineering Consulting firm for the purpose of design and supervision, it will be required to provide environmental and social expertise to prepare the safeguards documents and perform site supervision of the ESMPs.

In addition, the client will ensure, through its contractual arrangements with the contactors, that all ESMP/RAP requirements will be embedded in construction contracts and will be binding for all contractors.

5. Identify the key stakeholders and describe the mechanisms for consultation and disclosure on safeguard policies, with an emphasis on potentially affected people.

Key stakeholders are the officials of the Governorate of Basra, the Ministry of Electricity officials, staff of both Distribution and Transmission Departments, NGOs and the project affected people (PAPs). The appropriate mechanism for carrying out public consultation and participation is to take place through local meetings. The public consultation must take into account low literacy levels prevalent in rural communities.

The purpose of the consultations sessions is to present the overall project design; explain to attendees its broader



benefits at the national level; and begin to outline some of the anticipated adverse environmental and social impacts expected to result from project activities, and to enable the stakeholders to understand the project and its activities, as well as to ensure that their concerns and issues are considered during all phases of the project, including at the planning phase.

The findings of the public consultations should be disclosed at Governorate of Basra website, Distribution and Transmission entities website and distributed at the local level. All project affected people should be aware and can provide feedback if needed.

Consultations should be carried out as part of the RPF preparation process and also the environment assessment framework development process.

GRIEVANCE REDRESS MECHANISM

The Bank’s OP 4.12 on *Involuntary Land Acquisition and Resettlement* requires that affordable and accessible procedures for third party settlement of disputes arising from resettlement (i.e., grievance redress mechanisms) would be available. This GRM should take into account the availability of judicial recourse as well as traditional and community dispute resolution mechanisms.

In addition to the official channel, it is encouraged to establish a Grievance Redress Mechanism at the project level to ensure any grievance can be addressed in an amicable manner. Resolving complaints at community level is always encouraged as it could address the problem of distance and cost the PAP may have to face in pursuing grievance redress.

B. Disclosure Requirements

Environmental Assessment/Audit/Management Plan/Other	
Date of receipt by the Bank	
Date of submission to InfoShop	
For category A projects, date of distributing the Executive Summary of the EA to the Executive Directors	
"In country" Disclosure	
<i>Comments:</i> The link to the website is	
Resettlement Action Plan/Framework/Policy Process	
Date of receipt by the Bank	
Date of submission to InfoShop	
"In country" Disclosure	
<i>Comments:</i> The link to the website is:	
If the project triggers the Pest Management and/or Physical Cultural Resources policies, 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:	