**Terms of Reference**[1]

**Owner Engineer Services for Support with Implementation Supervision to the Public Establishment for Transmission and Distribution of Electricity - Syria**

**Syria Electricity Emergency Project - P511407**

## A. Background

The Public Establishment for Transmission and Distribution of Electricity (PETDE) serves as the state-owned transmission and distribution system owner, operator and single buyer of electricity, tasked with purchasing electricity from both state-owned and private generation, planning and operating the system, and managing cross-border trade and interconnections. PETDE directly sells electricity to high-voltage consumers, and indirectly to end users through its 14 subsidiary distribution companies across the governates in Syria. PETDE operates under the administrative oversight of the Ministry of Energy (MOE) and the financial oversight of the Ministry of Finance (MOF), though overall responsibility for the sector. PETDE owns and operates approximately 13000 km of high voltage transmission lines, and more than 20000 MVA of transformation capacity across Syria, comprising voltage levels of 400, 230, 66, and 20 kV –Figure 1.

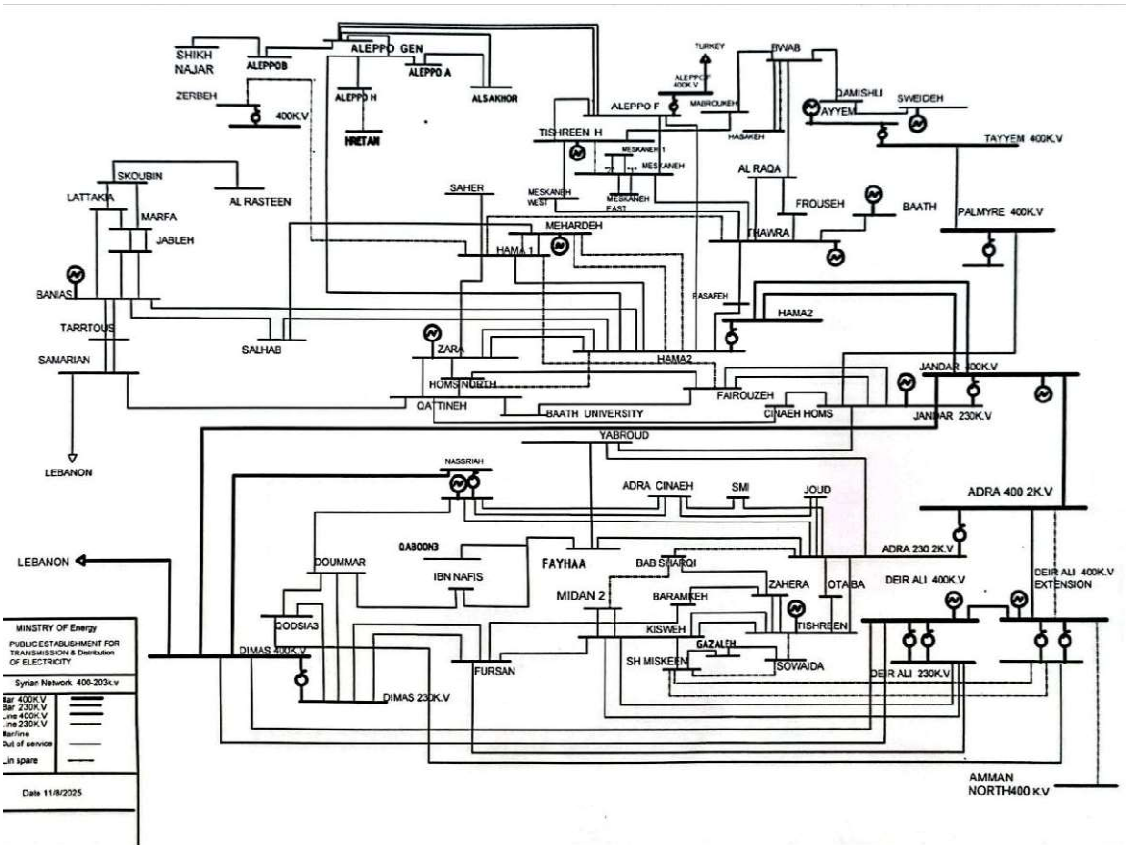



*Figure 1 PETDE Transmission Grid Map*

[1] *Firms may note that the contract packages, the selection methods, market approaches and uses of appropriate Standard Procurement Documents will be further refined and appropriately reflected in the Terms of Reference at time of issuance of Request for Proposal to the shortlisted firms*

## B. Project Overview

The International Development Association (IDA) /World Bank is financing the Syria Electricity Emergency Project (SEEP) (the "Project") which aims to enable improved electricity supply and enhance the capacity of electricity sector institutions in Syria. It addresses the urgent need for rehabilitating Syria's critically damaged electricity transmission infrastructure, which has been severely impacted by the conflict and lack of investment.

The Project, funded by the World Bank and implemented by PETDE following the World Bank Procurement Regulations dated February 2025 and the World Bank Environmental and Social Framework and Standards, focuses on four main activities: (a) the rehabilitation of selected high-voltage transmission lines; (b) the restoration of selected high-voltage transformer substations; (c) the provision of technical assistance for sector development and institutional capacity building; and (d) project implementation support. The Project implementation support involves hiring an international consulting firm to provide Owner's Engineer (OE) services for PETDE for project management, including supervision and management of the construction activities and technical features of the project, as well as supervision and management of environmental and social (E&S) impact of the project and health and safety risks, to ensure contractors' compliance with the World Bank's E&S requirements set forth in the project contracts, the environmental and social commitment plan (ESCP), and other E&S instruments. The Project also emphasizes capacity building for the Public Establishment for Transmission and Distribution of Electricity (PETDE) and the Ministry of Energy (MoE), aiming to enhance their technical, operational, and financial performance.

The following Project investment activities are envisioned:

a. **Activity 1: Rehabilitation of Damaged High-Voltage Interconnection Transmission Lines.**
This activity will focus on rehabilitating damaged high-voltage transmission lines including the two critical 400 kV high-voltage interconnector transmission lines (inside Syrian territory) connecting Syria to Jordan and Türkiye, respectively as follows:

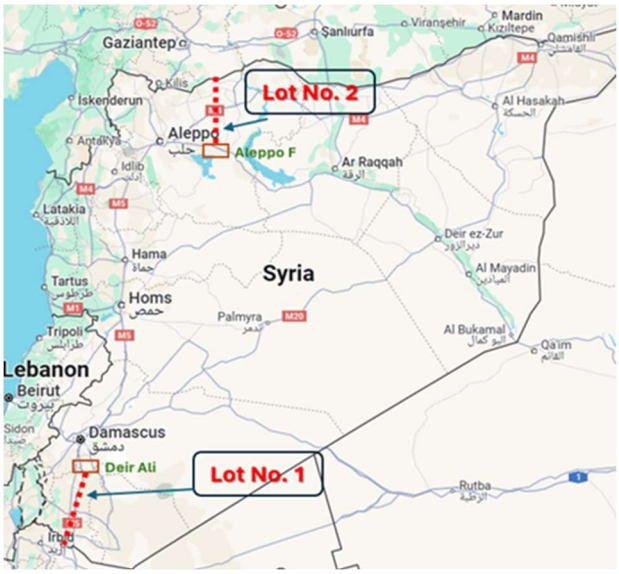
- 400kv high-voltage interconnector transmission line between Syria and Jordan (South Syria- Deir Ali S/S till the Border),
  The total length of the line inside Syria territory is approximately 86.4 km.
  The scope includes supply and installation/rehabilitation of damaged towers, civil works, replacement of conductors, insulators, optical ground wires, and other required equipment and materials. It is expected that this activity will cover the replacement/rehabilitation of one damaged 400 kV single circuit Y-type lattice steel tower (type: suspension 4SL), total of approx. 1002 tons of 550/70 sq mm ACSR conductor (twin conductor per phase) or equivalent (ACCC) type, total of approx. 95 km of OPGW conductors, total of approx. 63 tons of 105/75 sq mm grounding ACSR conductors and necessary insulators and accessories across the line.

- 400kv high-voltage interconnector transmission line between Syria and Türkiye (North Syria- Aleppo F S/S till the Border),
  The total length of the line inside Syria territory is approximately 53 km.
  The scope includes supply and installation/rehabilitation of damaged towers, civil works, replacement of conductors, insulators, optical ground wires, and other required equipment and materials. It is expected that this activity will cover the replacement/rehabilitation of approximately 3 damaged 400 kV single circuit Y-type lattice steel towers (type: suspension 4SL), total of approx. 630 tons of 550/70 sq mm ACSR conductor (twin conductor per phase) , total of approx. 60 km of OPGW conductors, total of approx. 45 tons of 105/75 sq mm grounding ACSR conductors and necessary insulators and accessories across the line.

This activity will be executed through a procurement package titled "***Supply and Installation of Two 400 kV High-Voltage Interconnector Transmission Lines, Including the Supply of Necessary Spare Parts,"*** within Syria. The package will comprise two separate lots as detailed below:

- **Lot/Contract No. 1 (**Supply and installation**):** Rehabilitation of damaged 400kv high-voltage interconnector transmission line between Syria and Jordan (South Syria- Deir Ali till the Border), including the supply of necessary spare parts. Total length of the line inside Syria is approximately 86.4 km.

- **Lot/Contract No. 2: (**Supply and installation**):** Rehabilitation of 400kv high-voltage interconnector transmission line between Syria and Türkiye (North Syria-Aleppo till the Border), including the supply of necessary spare parts. Total length of the line inside Syria is approximately 53 km.




Construction work is scheduled to begin in April 2026, with the contract completion period set for 12 -18 months (indicative).

**b. Activity 2: Rehabilitation of Damaged High-Voltage Substations.** This activity will focus on rehabilitation of damaged high-voltage transformer substations of critical importance, along with the provision of spare parts and maintenance equipment. This component is expected to rehabilitate at least eight substations, including rehabilitation of high voltage and auxiliary transformers, replacement of switchgear, busbars, disconnecting switches, capacitor banks and the secondary equipment and other elements of the substations, along with the required civil works. The list of substations is as follows:

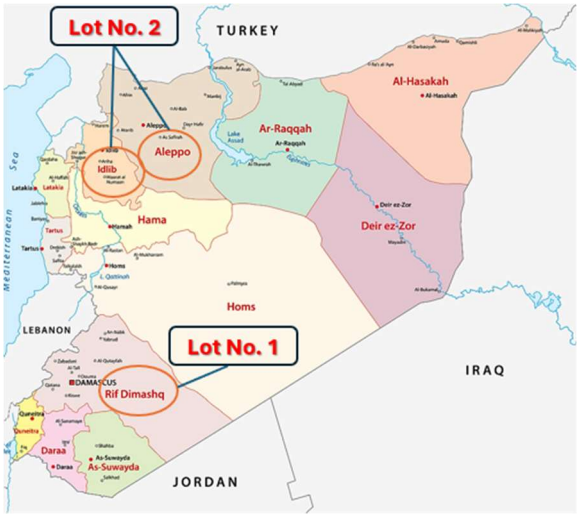
**Table 1: List of Substations Included in the Project**

| Substation for Rehabilitation under the Project | Governorate | District | Sub-district |
|---|---|---|---|
| Aleppo F 400/230/66/20 kV Bulk Substation (Air Insulated Substation (AIS)) – 3x300 MVA on 400/230 kV, | Aleppo | Jebel Samaan | Al Sfira |
| Aleppo D 230/66/20 kV Substation (Gas Insulated Substation (GIS)) – 3x125 MVA 230/66 kV + 3x30 MVA 66/20 kV | Aleppo | Jebel Samaan | Aleppo Center |
| Dahia 230/66/20 kV (AIS) Substation -4x125 MVA 230/66 kV,3x30 MVA 66/20 kV | Aleppo | Jebel Samaan | Aleppo Center |
| Erm Goz 66/20 KV (AIS) Substation 2x30 MVA 66/20 kV | Aleppo | Atarib District | Orm AL-Sougra |

| | | | |
|---|---|---|---|
| Sarakeb 66/20 KV Substation 2x30 MVA 66/20 kV | Idlib | Idlib | Saraqeb |
| Ottaya 230/66/20 kV (AIS) Substation - 2x125 MVA 230/66 kV + 2x30 MVA 66/20 kV | Rural Damascus | Douma | Nashabiah |
| Nashabia 66/20 kV Substation 2x30 MVA 66/20 kV | Rural Damascus | R. Damascus Center | Kafr Batna |
| AL-HAJAR ALASWAD (AIS) 66/20 kV Substation 3x30 MVA 66/20 kV | Rural Damascus | Douma | Nashabiah |

**Note: light green – the north area (Lot 2); light blue: the south Area (Lot 1)**

Rehabilitation of the substations will be executed through a procurement package titled ***"Design Supply and Installation of High Voltage Transformer Substations (3x300 MVA 400/230 kV, 9x125 MVA 230/66 kV, 17x30 MVA 66/20 kV of Combined Transformation Capacity), Including the Supply of Necessary Spare Parts"***. The package will comprise two separate lots as detailed below:




- **Lot No. 1:** Design, Supply and Installation of five high-voltage transformer substations in North Syria (Aleppo and Idleb governorates), including the supply of necessary spare parts.
- **Lot No. 2:** Design, Supply and Installation of three high-voltage transformer substations in south Syria (Rural Damascus governorate), including the supply of necessary spare parts.

Construction work is scheduled to begin in April 2026, with the contract completion period set for 24 -30 months (indicative).

## C. Objectives of the OE Consultancy Services

PETDE (the "Employer") will hire an OE for assistance with the management and supervision of the Project during construction (approximately 30 months) as well as during the defect liability period ( around 12 months). The key objectives of the OE assistance include:

- Ensuring that the Project is designed and constructed according to the contracts in terms of the scope, functionality, technical performance, quality, safety, environmental and social impact, and within the agreed budget and schedule;
- Attending factory and site testing, type tests (if needed), commissioning of the facilities including erection activities, functional and performance tests, final inspection, and handover of the facilities and complete project documentation needed for operation and maintenance of the facilities;
- Ensuring that the Project meets all applicable technical and quality standards, as well as the environmental and social policies of the World Bank (the Project financier) and the Employer's country (Syria);
- Managing project risks during construction;
- Ensuring proper communications with the contractors and other stakeholders;
- Providing comprehensive contract management, including – but not limited to – invoice checking, verification and approval; change orders; contractors' claims; dispute resolution; etc.;

- Contributing to the capacity building of the Employer in project management, and maintenance and operation of the facilities constructed under the project;
- Support the PETDE in monitoring and supervising the project's Environmental and Social (E&S) contractors' performance.
- Monitor and supervise contractor compliance with E&S requirements as per the project's E&S instruments including the ESCP, ESIA/ESMPs, and all other plans and measures developed for the project;
- Report back to PETDE and relevant staff on E&S performance of contractors
- Support PETDE and E&S Focal Points in reviewing contractors' reporting and E&S requirements.
- Contribute to the capacity building of PETDE relevant staff on E&S requirements and performance

## D. Scope of Work for the Consultancy Services

The OE Consultancy Services are organized into two phases as described below:

- Phase I: Project Construction; and
- Phase II: Defects Liability Period

**Phase I: Project Implementation Period**

**Task 1: Design reviews**

- Review contractor's initial design for compliance with the Employer's requirements. Review all design documents (calculations, drawings, etc.) to ensure that they meet technical specifications and standards and are consistent with the best industry practices.
- Review and approve all design changes to ensure that they are justified and properly documented and comment on all aspects of design, standards, and deviations proposed by the Contractor.
- Review and approve the results of ground investigations and land surveys done by the Contractor.
- Ensure that design-related environmental and social mitigation measures are adequately incorporated into the designs, technical specifications, and bill of quantities.
- Review final design, submitted by the Contractor, and provide recommendations to PETDE regarding its approval.
- Attend all design reviews and progress meetings (as required by the Employer).
- Update the Employer promptly on any design changes.

**Task 2 - Construction Supervision, Quality Assurance and Inspection**

- Monitor and inspect site activities to ensure compliance with project schedule, design, applicable technical specifications, safety and health procedures and standards, and environmental and social requirements.

- Review all engineering documents relevant for construction prepared by the Contractors, including (but not limited to) the final working drawings prepared by the Contractors and manufacturers, equipment and material technical specifications,
- Review and approve method statements, applications for work (AFW), and construction and installation procedures.
- Attend all testing activities for the equipment and materials throughout the implementation of the Project, including Factory and Site Acceptance tests (FATs and SATs), type tests, and other tests, as needed, to ensure that they meet all applicable specifications and standards.
- Ensure that detailed specifications, quality and quantity of all equipment are consistent with those specified in the Contracts.
- Monitor construction progress of all project activities in line with approved project schedules and pursue corrective actions with the Contractors, in coordination with the Employer. Hold weekly planning and progress review meetings.
- In case of project delays, agree with the contractors – in close coordination with the Employer -- on remedial actions.
- Monitor and enforce Contractors' compliance with the quality assurance of the Project and all its components.
- Review Contractors' staffing and team composition, qualification of key staff, and their adequacy for the project.
- Review contractors' overall project implementation arrangements, equipment and material management, to ensure their adequacy for the project.
- Proactively identify, monitor, manage, and document project risks; develop contingency plans, and pursue mitigation measures with the Contractors, in cooperation with the Employer, as needed and appropriate.
- Organize and coordinate meetings and ensure proper communication with contractors, the Employer, and other stakeholders.
- Prepare a detailed Project Control Program using MS Project (or Primavera P6) to provide charts, curves and detailed reports of critical activities, percentage completion, interface points, etc. for design, procurement, installation, and commissioning.
- Prepare monthly progress reports and more comprehensive quarterly progress reports and send them to PETDE no later than two weeks after completion of each month/quarter.
- Identify and provide training on project and contract management to the Employer's personnel.

**Task 3 - Supervision of Contractors' Compliance with E&S Requirements**

- Ensure adherence of the Contractor's performance with the Employer and project's Environmental & Social Management instruments including the Environmental and Social Management Plans (ESMPs), LMP, SEP, Security Management Plan (SMP), OHS Plan, SEA/SH Prevention and Response Action Plan, the Code of Conduct of Contractors, and others.
- Receive, review, and advise the Employer on acceptance/approval Contractor's ESMP (C-ESMP).
- Receive, review, and advise the Employer on acceptance/approval Contractor's OHS Risk Assessment.

- Undertake environmental and social monitoring of the Contractor's performance according to the Employer's ESMPs, LMP, SEP, C-ESMP, SMP, SEA/SH Plan, the OHS Risk Assessment, and all other applicable E&S instruments.
- Identify any unexpected environmental, social and health & safety issues that had not been covered by the project E&S instruments , and notify the Employer about them in a timely manner, and propose proportionate mitigation measures.
- Ensure that all Environmental and Social deliverables meet the World Bank relevant environmental and social standards (ESSs), requirements of the project's main environmental and social instruments, World Bank General Environmental, Health & Safety Guidelines (EHSG) World Bank Environmental, Health & Safety Guidelines for Electric Power Transmission and Distribution (2007).
- Supervise the contractors' performance to ensure that safety rules and procedures, environmental and social measures on project sites (including workers' camps, workers transports to and from the project sites, etc.) are in accordance with the Contractor's ESMP (C-ESMP) as approved by the Employer and cleared by the World Bank (as appropriate).
- Identify cases of environmental, social, and health & safety non-compliances, if any, and assess the nature and extent of the impact or damage caused.
- Recommend and agree on corrective actions with the Employer and follow up on their implementation by the Contractor.
- Support stakeholder engagement by facilitating consultations during implementation and the update of the ESMPs and ensuring that feedback from affected communities and relevant stakeholders is documented and reflected in the revised instruments. The OE will also advise on engagement strategies and coordinate with the PMT and PETDE to promote inclusive, transparent, and culturally appropriate communication throughout project implementation.
- The Construction Contractor shall appoint a qualified Community Liaison Officers (CLOs) for the duration of the works to engage with local stakeholders, facilitate timely information sharing, support grievance handling, and ensure community concerns are addressed. PETDE, through its PIU, will supervise and coordinate the work of CLOs to ensure alignment with the SEP. The OE shall verify the presence and performance of CLOs and report on community engagement outcomes as part of E&S monitoring.
- Integrate Grievance Mechanism (GM) obligations into contractor bidding documents and C-ESMP. The OE will support monitoring the GM functionality throughout implementation, report on grievance trends and resolution status, and support capacity building for PMT and PETDE focal points to ensure effective grievance handling aligned with ESF standards.
- Ensure that the Contractors establish and maintain the Workers' Grievance Mechanism (GM) and include respective information in the progress reports.
- Ensure that the Contractor complies with the project Labor Management Plan (LMP), including provisions on Occupational Health and Safety (OHS) and Code of Conduct. Report any non-compliance with LMP to the Employer and oversee implementation of corrective measures.
- Support the PMT and E&S Focal Points in reviewing contractors reports including E&S aspects, and provide
- Review and verify contractors' training records to ensure that all personnel have received appropriate and up-to-date training on environmental, social, and occupational health and safety (OHS) requirements, in line with project commitments and applicable standards.
- Identify E&S training needs and deliver targeted training sessions for the PMT and PETDE focal

points to strengthen institutional capacity for monitoring E&S requirements.

- Promptly report any project-related incidents and accidents to the Employer.
- Include E&S and HSE issues in the monthly/quarterly reports (could be separate from the construction progress reports).

**Task 4 - Contract Management**

- Review and evaluate any variation of project cost and implementation time from the agreed price and schedule and agree on remedial measures with the Contractors.
- Review and agree on contractual variation orders and contract amendments.
- Evaluate contractual claims for validity and provide recommendations to the Employer.
- Assist the Employer in managing contractual disputes.
- Review and clear invoices submitted by the Contractor after appropriate verification of the activities covered by the invoices in terms of the quantity and quality of deliverables and activities covered by the invoices, and advise PETDE PMT on approval and payment of those invoices.
- Review the Contractors' Monthly Statements and supporting documents. This process entails comparing the reported work progression against the actual work executed on-site, as well as correlating the claimed charges with the contract rates. The OE shall verify the accuracy of the invoiced quantities, ensuring that they coincide with the work accomplished during the corresponding period.
- Upon satisfactory verification of the Monthly Statements, the OE shall issue Interim Payment Certificates or Notices of the amount considered due, depending on the conditions of the construction contracts, allowing the Contractors to receive payments from the Client. The OE shall ensure that these certificates or notices accurately represent the work completed to date and are in line with the contract's terms and conditions, including compliance with E&S requirements.
- At the completion of the works, the OE shall review the Contractors' Draft Final Statements and Final Statements, which represent the total amount due to the Contractors for the entire contracts, and shall issue the Final Payment Certificates or the Notices of the amount considered finally due, depending on the conditions of the construction contracts. This includes verifying the final measurements and quantities, ensuring that all contractual obligations have been fulfilled, and confirming the final value of any adjustments, claims, or variations. The OE shall also ensure that all necessary contractual certificates, including the Defects Liability Certificate, have been issued before final payment.
- The OE shall provide the Client with regular reports on the financial status of the contracts. These reports shall include details of payments made, pending payments, anticipated final cost forecasts, and any other financial matters related to the contracts.
- As part of project management and supervision, the OE will keep the daily records of the project sites in the form of a simple daily logs.

**Task 5 – Project Closing and Handover**

- Review project testing and commissioning plans.
- Compile punch list and ensure that all the punch list items are completed before handover of the facilities.

- Witness final testing (including the performance guarantee tests) and commissioning, and confirm that the facilities constructed under the Project meet performance guarantees before handover, and that all test results are properly documented.
- Ensure that project documentation is complete and accurate, including as-built drawings, the operation and maintenance manuals, and other documents as per the contractual requirements.
- Prepare the Certificate of Construction Completion (CCC) and the Certificate of Operational Acceptance (COA).

**Phase II: Defects Liability Period**

- Support the Employer during the defects liability period to ensure that any defects in the functioning of equipment or materials or in workmanship are identified and promptly addressed.
- At the end of defects liability period, deliver to the Employer a project close out report describing achievements, outlining problems encountered and measures adopted and incorporating expenditures incurred on the project, explaining any variances concerning the original concept of the project and lessons learnt that the Employer may take into account in the execution of similar projects in future.

The OE contract will be time-based, meaning that the services are provided based on agreed daily rates (or hourly or monthly where appropriate), with payments made based on the actual time spent.

## E. Qualifications

**General Experience of the OE firm:** having been in business for at least 15 years with international experience in management and supervision of energy and infrastructure projects, with substantial experience in developing countries. Experience in the Middle East and/or Africa region is desirable.

**Specific Experience of the OE firm:**(i) At least 15 years experience in the construction supervision of high voltage transmission lines and substations with successful completion of at least three (3) projects relevant to these assignments (high voltage transmission line and related substations project at 66-400 kV and above) in the last 10 years; (ii) Presence of skills in the areas of High voltage substation construction supervision, High voltage transmission line construction supervision, and (iii) Preparation and Management of Environmental and Social Safeguards related to high voltage transmission line and substation projects. Similarity is based on size, complexity, and technology of the introduced activities/projects, .

The Consultant shall be responsible for providing all the necessary facilities to undertake the assignment including -- but not limited to -- the office space and office furniture and facilities, transport and accommodation for its entire staff. The Consultant shall make arrangements for personnel accommodation in Syria. *The Consultant shall include the cost for the above responsibilities and facilities in the proposed price.*

The consultant is required to thoroughly appraise themselves of the legal and institutional framework governing the electricity sector in Syria. This includes understanding the regulatory environment, key policies, and institutional arrangements that impact the operation and management of electricity transmission and distribution. The consultant shall familiarize themselves with the roles and responsibilities of the PETDE, as well as other relevant governmental and non-governmental entities involved in the sector. Additionally, the consultant must ensure compliance with local laws and regulations, including

environmental and social safeguards, to effectively support the rehabilitation and implementation activities under the Syria Electricity Emergency Project. This comprehensive understanding will enable the consultant to navigate the complexities of the Syrian legal landscape and contribute to the project's success while ensuring alignment with national priorities and international best practices.

## F. Experience of Key Staff

The Consultant's team will include a number of key staff as indicated in Table 2 (home office-based staff) and Table 3 (Field Office-based staff). The home office-based staff are expected to travel to the field as necessary to carry out the assignment. The field-based staff are suggested to be divided into two teams, one in charge of the projects in the South area and the other in charge of the projects in the North area. Both teams are expected to cover the transmission lines and the substations in their respective areas.

The Key Staff that should meet the specified requirements related to qualifications and experience. For all Key Staff in the field offices, excellent knowledge of Arabic is required (speaking, writing) and proficiency in English language is highly desirable. For the home-based Key Staff, fluency in English is required (speaking, writing) and the ability to speak and write in Arabic is highly desirable. There must be sufficient bilingual capabilities in the team to effectively communicate internally, and with the Employer, contractors, and the funding agency. Professional English/Arabic interpreters should be included in the OE team (ateach OE field office) if the OE key field staff are not proficient Arabic communicators (speaking and writing). The consultant may combine one or more of the key staff among different project activities but has to show that the productivity and efficiency will increase by doing so.

**Table 2: Key Staff of the OE team**

**(Home Office based, with travel to the field as needed; at least one person per position)**

| Key Staff (Key Experts) | Qualification and Experience Requirements |
|---|---|
| **Project Director** | • At least B.Sc. Degree in electrical or construction engineering.<br>• At least 12 years of relevant international experience in managing multi-disciplined owner engineering teams for projects involving high voltage transmission lines and Substations (GIS and AIS, 66-400 kV)<br>• It is envisaged that the Project Director will be present on site for at least 70% of the relevant construction period. During his absence he shall be deputized. |
| **Senior Substation Electrical Engineer** | • The Senior Substation Electrical Engineer should be a professional electrical engineer, at least B.Sc. Degree in electrical engineering, with relevant working experience of not less than 10 years in planning, designing, managing and supervising substation works and related facilities of 66-400 kV<br>• The person shall have experience in similar project work in developing countries, preferably in the region.<br>• This position can be combined with the position of Senior Transmission Line Electrical Engineer, with adequate education and experience in both high voltage transmission lines and substations. |
| **Senior Transmission Line Electrical Engineer** | • The Senior Transmission Line Engineer should be a professional electrical engineer, at least B.Sc. Degree in electrical engineering ., with relevant working experience of not less than 10 years in planning, designing, managing and supervising works on transmission lines and related facilities of 66-400 kV. |

| Key Staff (Key Experts) | Qualification and Experience Requirements |
|---|---|
| | • The person shall have experience in similar project work in developing countries, preferably in the region.<br>• This position can be combined with the position of Senior Substation Electrical Engineer, with adequate education and experience in both high voltage transmission lines and substations. |
| **Structural/Civil Engineer** | • The Structural/Civil Engineer should be a professional engineer, at least B.Sc. Degree in civil engineering, with at least 10 years relevant experience covering steel structure design, quality control, full scale structure testing, design of tower foundations and electrical apparatus foundations, and other civil works related to high voltage (66-400 kV) transmission lines and substations. The candidates shall be able to use PLS Tower design software. |
| **Control and Protection Engineer** | • The Control and Protection Electrical Engineer should be a professional electrical engineer, at least B.Sc. Degree in Electrical Engineering, with relevant working experience of not less than 10 years in transmission systems control and protection of 66-400 kV.<br>• The person shall have experience in similar project work in developing countries, preferably in the region.<br>• |
| **Telecommunication Engineer** | • The Telecommunication Engineer should be a professional telecommunication/electrical engineer, at least B.Sc. Degree in Electrical Engineering, with relevant working experience of not less than 10 years in telecommunication systems for the high voltage transmission systems (66-400 kV).<br>• The person shall have experience in similar project work in developing countries, preferably in the region. |
| **Contract Management and Procurement Specialist** | • The Specialist should preferably be a professional engineer, commercial specialist, or a legal specialist, with at least B.Sc. degree in relevant field, and who possess experience of not less than 7 years in procurement and managing international turn-key contracts in the power sector. The specialist shall have a good understanding of the World Bank standard bidding procedures and documents and be familiar with FIDIC regulations and the various types of standard bidding documents offered by the World Bank or other Funding Agencies with similar requirements. |
| **Environmental Specialist** | • At least Bachelor's degree or equivalent in environmental science, environmental engineering, environmental planning, and/or another relevant disciplines.<br>• At least 10 years of experience of successful preparation and implementation of assessments, management plans for utility projects financed by IFIS. Strong working knowledge in Env and Social standards of international financial institutions is also required. |
| **Social Specialist** | • Advanced degree (Master's degree) in social science and/or another relevant disciplines. |

| Key Staff (Key Experts) | Qualification and Experience Requirements |
|---|---|
| | • At least 15 years of demonstrated experience in implementation of social standards preferably by IFIs, including preparation and implementation of environmental & social impact assessment and management plans, livelihood restoration and resettlement plans, community health and safety, gender and GBV issues, etc. |
| **Gender Specialist** | • A bachelor's or higher degree in social sciences, gender studies, development studies, or a related field.<br>• Minimum 7–10 years of experience in social risk management in infrastructure or energy projects, including at least 3 years of direct experience in GBV/SEA/SH risk mitigation.<br>• Proven knowledge of World Bank Environmental and Social Framework (ESF) or similar international frameworks.<br>• Demonstrated experience in fragile or conflict-affected settings is highly desirable.<br>• Strong familiarity with local, national, and international environmental regulations and policies related to biodiversity conservation and management.<br>• Strong skills in stakeholder engagement, community-based approaches, and survivor-centered practices. |

**Table 3: Key Staff of the OE team**

**(Field Office based, full time)**

| Key Staff (Key Experts) | Qualification and Experience Requirements |
|---|---|
| **Construction Manager (two positions)** | • The construction manager should be an electrical or civil engineer (at least B.Sc. Degree supported by relevant qualification certification) and should have a minimum of 12 years experience in planning, managing and supervising works related to 66-400 kV and higher transmission voltages. The Task Leader should present evidence of having managed and coordinated successfully at least 3 (three) projects of similar nature as international EPC or Turnkey contracts funded by international development financing institutions.<br>• The Construction Manager should be an individual with good communication skills in the Arabic and English language, both written and verbal and a high sense of organization and responsibility.<br>• The Construction Manager should have experience in similar project coordination in developing countries, preferably in Arabic or African countries. He/She shall execute overseeing responsibilities and may be in charge of one of the technical subjects. |

| | |
|---|---|
| **Transmission Lines Electrical Engineers (two positions)** | • The Transmission Line Electrical Engineer should be a professional electrical engineer, at least B.Sc. Degree in Electrical Engineering, with relevant working experience of not less than 10 years in planning, designing, managing and supervising substation works and related facilities of 66-400kV.<br>• The person shall have experience in similar project work in developing countries, preferably in the region. |
| **Substations Electrical Engineer (two positions)** | • The Substation Electrical Engineer should be a professional electrical engineer, at least B.Sc. Degree in Electrical Engineering, with relevant working experience of not less than 10 years in planning, designing, managing and supervising substation works and related facilities of 66-400 kV.<br>• The person shall have experience in similar project work in developing countries, preferably in the region. |
| **Occupational Health & Safety Specialist (two positions)** | • Must be internationally acknowledged OHS certified specialists<br>• At least 12 years of experience of successful preparation and implementation of OHS systems, OHS plans, risk assessments, OHS training, and accident investigations applying root cause analysis (RCA) techniques and approaches.<br>• Strong familiarity with local and international safety standards, including electrical safety, fall protection, and labour regulations.<br>• Strong ability to assess and mitigate hazards related to electrical systems, falls, machinery, hazardous materials, and other job and site-related hazards.<br>• Competency in handling hazards, implementing lockout/tagout (LOTO) systems, and managing fire safety on-site.<br>• Strong OHS leadership and training skills.<br>• Ability to lead emergency response plans, provide first aid, and deliver safety training and toolbox talks.<br>• Strong communication skills with all work levels. |

The OE Team should include additional non-key experts and administrative staff sufficient to carry out the assignment effectively and successfully. The OE Consulting Team is expected to be present throughout the Construction period and – in reduced size – throughout Defect Liability Period.

The estimated duration of the contract is 42 months including the defect liability period.

The estimated indicative level of effort for the key experts is 340 person-months in total.

### G. Reporting, Deliverables and Deadlines

The Consultant is expected to present reports, elaborate and submit deliverables as required. In addition, project deliverables are also covered in this section. The reporting schedule stated below reveals the reporting obligations. The reports prepared by the Consultant shall comply in content and form with the requirements to allow Employer to comment and forward them to the financiers to satisfy their obligations. The Employer may require special reporting formats, which will be discussed during the Kick-off meeting. In addition to the progress reporting stated above, the Consultant shall report on all circumstances that

might jeopardize the achievement of the overall objective, the Project purpose, and the results. In particular, the Consultant shall notify Employer and the financiers promptly of any event concerning environmental and social issues as well as on adjacent populations:

- That has direct or potential material adverse effects.
- That has attracted substantial adverse attention from outside parties or created substantial adverse press reports;
- Gives rise to material potential liabilities.

The Consultant shall also inform the Employer of any measures taken to mitigate or remedy the effects or cause of such events.

The Consultant shall prepare various reports/documents at the time and with a pertinent number of copies for printed versions as indicated below and shall deliver them to the Employer. The Consultant will prepare all reports in the English and Arabic languages. During the Kick-off meeting, details of the reporting format shall be discussed and determined.

| Report/Document | Number of copies | Deliverable |
|---|---|---|
| Detailed (master) Implementation Schedule | 2 hard copies in English and Arabic, duly signed by the Project Director, and electronic version (in PDF and workable format) to the Employer. | The Consultant is responsible for the preparation and continuously updating a detailed (master) implementation schedule for each of the project's activities using a commercially accepted project scheduling software. |
| Monthly Report | 2 hard copies in English and Arabic, duly signed by the Project Director, and electronic version (in PDF and workable format) to the Employer. | Every month after the effective date of the Contract, within 10 working days from the end of the month. |
| Quarterly Report | 2 hard copies in English and Arabic duly signed by the Project Director, and electronic version (in PDF and workable format) to the Employer. | Every three months after the effective date of the contract, within 15 working days from the end of each quarter. Georgian version, in 30 days from the end of each quarter. |
| Final Project Report | 3 hard copies in English and Arabic, duly signed by the Team Leader, 3 (three) CD ROMs and electronic version (in PDF and workable format) to the Employer. | 4 weeks after the completion of the Project. |
| Factory Acceptance Testing Reports (prepared by the related contractor/manufacturer) | 2 hard copies in English and Arabic, and electronic version (in PDF format) to the Employer. | Within 2 weeks of testing. |

| Report/Document | Number of copies | Deliverable |
|---|---|---|
| Site Acceptance Test | 2 hard copies in English and Arabic, and electronic version (in PDF format) to the Employer. | Within 2 weeks of testing. |
| Minutes of Monthly Progress Meetings | Scanned copy of the Minutes in English and Arabic signed by the parties to the Employer. | Within 5 working days from each progress meeting. |
| Minutes of Weekly Site Meeting | Scanned copy of the Minutes in English and Arabic, signed by the parties to Employer. | Within 5 working days from each Site meeting. |
| Incident/Accident Reports (including Root Cause Analysis for fatality and severe accidents). | 2 hard copies in English and Arabic, duly signed by the Project Director, and electronic version (in PDF and workable format) to the Employer. | • Regular with monthly and quarterly reports.<br>• Immediate (24 hours from occurrence of a fatality and severe incident/accident) |

For each project Activity, the detailed contents of the reports on the status of project implementation will be discussed and agreed with the Employer. It is proposed that monthly reports cover the following.

Monthly Reports:

- Description of works performed during the reporting period (contractors' monthly progress reports).
- Activities planned for the next month (contractors' monthly progress reports).

– Regularity of meetings between Consultant, contractor and the Employer key staff to discuss pending issues; the report shall include a copy of Minutes of Progress Meetings.
  - Actual status of deliveries/works in percentages.

– Actual status of implementation of the Employer's ESMP and C-ESMP.
  - Status of compliance with the Code of Conduct and the Labor Management Procedure.
  - Status of Stakeholder Engagement Plan (SEP) implementation.
  - Record of onsite occupational accidents and near-miss incidents.
  - Records of grievances from workers and communities.
  - Identification of problematic areas.

– Any deviations from required and referenced plans and procedures, as well as respective remedial actions recommended by the Consultant and the Employer; description of application of previously recommended remedial actions by the Contractor (how they were applied, what results they had).

Quarterly Reports:

- Summary of main issues and obstacles, including recommended corrective action.
- Project Description including time schedule and project value.

- Progress and activities of the Contractor.
- Progress of manufacturing.
- Progress of deliveries.
- Progress of construction versus original schedule.
- Actual status of deliveries/works in percentages.
- Planned activities for the next reporting period.
- Changes in the scope of the Project and scope of services, including the list of issued change orders, if any.
- Contractor's site office activities and works accomplished.
- List of invoices issued by the Contractor and their status.
- Progress of contractors' design, preparation of drawings, calculations and documents received by the Consultant and their status of approval.

– Actual status of implementation of the Employer's ESMP and C-ESMP.
  - In quarterly perspective: status of grievance resolution (as per agreed grievance log).
  - In quarterly perspective: status of compliance with the Code of Conduct and the Labor Management Procedure.
  - Record of onsite occupational accidents and near-miss incidents.
  - Record of stakeholder engagement activities, grievances from workers and communities.
– Status of physical disbursements of payment to the Contractor.
– Reconciliation of financial progress vs. Physical progress, and explanation of gaps.
  - Annexes (plans, schedules, progress photographs).

All quarterly reports shall include the status of Project performance against the results indicators to be specified by the Employer.

Final Project Reports:

- Executive Summary
- Project description comprising:
  - Objectives
  - Activities of Project and scope with the name and address of individual contractor/sub-contractor
  - Implementation method
  - Project history
  - Changes in scope-change orders issues
- Project execution comprising:
  - Comparison of planned and actual time-schedules
  - Comparison of planned and actual costs

- Discrepancies in procurement of material and equipment
- Findings during construction
- Justification and explanation of changes in time-schedule
- Justification and explanation of changes in Project costs
- Reconciliation of Financial progress vs. Physical progress with gap analysis.
- Performance of Contractors, including environmental, social, health & safety compliance
- Additional works performed
- Experience with shut-down procedures
- Test protocols/test results
- Taking over certificates
- Overall environmental and social performance of the Project: assessment of adherence of Contractor(s) to the ESMP, LMP, SEP, C-ESMP and the Code of Conduct, main challenges faced, main types of remedial actions undertaken, analysis of residual environmental and social factors and respective aspects to be monitored during commissioning of the facilities, post construction activities, and contractor demobilization E&S activities.
- Record of occurrences of occupational health and safety accidents/incidents
- Record of stakeholder engagement activities, grievances from workers and communities.
- Experience gained during project implementation
- Illustrations with photographs
- Final Training Report.

The Final Project Report shall include the Project performance against the parameters as set out in the Results Framework to be specified by the Employer, including baseline data and benchmarks, to monitor progress. The final content will be defined in agreement with the Employer.

## H. Roles of The Employer

The Employer shall have the following obligations:

- Ensure access to the project sites and all available relevant information (project agreement, appraisal document, copies of all relevant reports prepared to date); and,
- Provide all available relevant reports and other information needed by the OE for conducting their activities (project agreements, appraisal document, copies of all relevant reports prepared to date, project activities impacting those for which the OE is responsible), while the consultant (OE) shall ensure keep all Confidential Information strictly confidential and not disclose it to any third party without the prior explicit written consent.
- Ensure availability of PETDE counterpart staff – beyond PMT staff, which should be available by default -- on a need basis. The counterpart staff shall be paid by the Employer and the work of the counterpart staff shall be the responsibility of the Employer.
- The Employer, in collaboration with MOE shall provide general security for the site offices and escort services where deemed imperative in accordance with the overall country security

provisions and guarantees. The consultant shall budget for and include in the proposal additional security costs that they consider necessary to undertake their services.

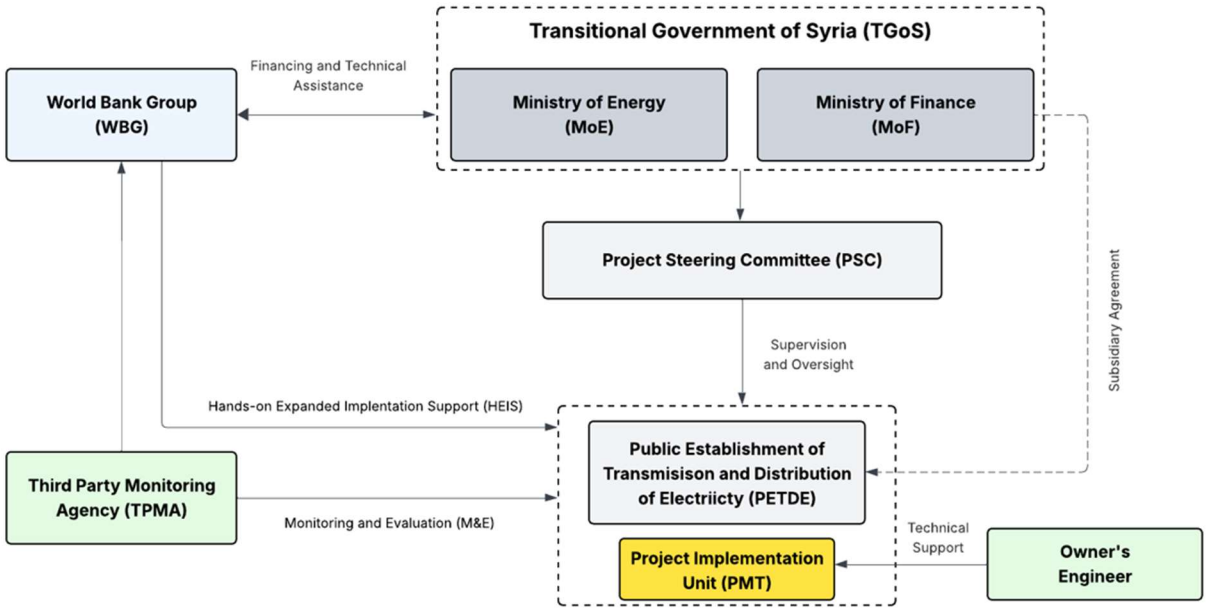
- The consultant shall abide by the specifications provided in the Security Management Plan and other applicable documents as well as operate within the guidelines of the Syrian Authorities.
- Provide support letters to the Consultant for their engagements with stakeholders when necessary.
- Participate in review reports submitted by the Consultant
- Participate in Factory Acceptance Tests and Site Acceptance Tests, as well as in other project management and supervision activities, as appropriate,

## I. Coordination with the Employer (PETDE)

PETDE will serve as the implementation entity for the proposed Project, supported by its Owner Engineer (OE), and will report to a Project Steering Committee (PSC). The OE will be hired before awarding contracts under Activities 1 and 2. The MoE will be responsible for overseeing project progress while PETDE will be responsible for overall implementation, including procurement, FM, monitoring and evaluation (M&E).

Figure 2 describes the implementation arrangement for the Project, including the Owner Engineer's role.

*Figure 2 Implementation Arrangement for the Project*




A dedicated Project Management Team (PMT) has been established within PETDE and will comprise PETDE staff who are appointed to be fully dedicated to overseeing the day-to-day implementation of the Project. The PMT is composed of a Senior Project Manager in charge. Other staff are resourced from the

corporate structure. The PMT is composed of at least five (5) full-time staff and supporting staff delegated to the PMT as required covering all disciplines to help with smooth management of the project. Professional staff seconded to the PMT shall be on the payroll of PETDE to ensure capacity building aspects. On site, local Transmission/Site/Civil/Telecom/Substation/Protection and Control Engineers and Clerk of Works shall act as counterpart staff to the Consultant during the project implementation as decided during the Kick-Off meeting or at a later stage. The Consultant will support the PMT. The consultant shall report to the PMT Senior Manager and this shall be confirmed during the inception meeting.

For reasons of ownership, the specific tasks of the PMT Senior Manager with support from the Consultant, will essentially address the following tasks:

- Monitor the progress of implementation and review reports submitted by the consultant;
- Control the disbursement of the project funds;
- Submit reports to the relevant government departments and the World Bank team information and review, as appropriate;
- Liaise between the Consultant and the relevant Parties;
- Discuss project issues with Authorities, Stakeholders, etc., as they arise and as appropriate
- Report to the World Bank as required by the Rules and Guidelines for Procurement and as required under the IDA Grant Financing Agreement.

The PMT Senior Manager serves as a liaison between the Consultant, the various agencies and Government departments associated with or interested in the project. The Consultant shall be given unhindered access to the relevant agencies and territories to carry out the assignment. The Consultant shall, however, be fully responsible for collecting data and information from these agencies after paying the necessary charges. PETDE shall provide the Consultant with copies of all data, including reports on previous studies, including the relevant environmental and social studies, and any other type of reports as or if available, which it considers relevant for the execution of the Consultant's work.

Annex 1: Abbreviations and Acronyms

| | |
|---|---|
| C-ESMP | Contractor's Environmental and Social Management Plan |
| EPC | Engineering, Procurement, and Construction |
| E&S | Environmental and Social |
| ESHS | Environmental, Social, Health, and Safety |
| ESIA | Environmental and Social Impact Assessment |
| FAT | Factory Acceptance Tests |
| FM | Financial Management |
| GBV | Gender-based Violence |
| GM | Grievance Mechanism |
| GRS | Grievance Redress Service |
| HSE | Health, Safety, and Environment |
| HV | High Voltage |
| IBRD | International Bank for Reconstruction and Development |
| IDA | International Development Association |
| km | kilometer(s) |
| kV | kilovolt |
| kWh | kilowatt-hour(s) |
| LMP | Labor Management Plan |
| M&E | Monitoring and Evaluation |
| MENA | Middle East and North Africa |
| MoE | Ministry of Electricity |
| MVA | Mega volt-ampere(s) |
| MW | megawatt(s) |
| OE | Owner’s Engineer |
| OHS | Occupational Health and Safety |
| PETDE | Public Establishment for Transmission and Distribution of Electricity |
| PMT | Project Management Team |
| PSC | Project Steering Committee |
| SEEP | Syria Electricity Emergency Project |
| SEP | Stakeholder Engagement Plan |
| SEA/SH | Sexual Exploitation and Abuse/Sexual Harassment |
| SAT | Site Acceptance Test |
| TOR | Terms of Reference |
| TWh | Tera watt-hour(s) |