

TERMS OF REFERENCE AND TECHNICAL SPECIFICATIONS

I. General information

Assignment title	Feasibility Study for 2 x 150 MW PPP wind power projects in Ethiopia
Beneficiary	Ethiopian Electric Power (EEP)
Country	Ethiopia
Max Amount	850 000 €
Implementation period	December 2021 – December 2022

II. Context and justification of the need

Energy context in Ethiopia - Ethiopia has vast and largely unharnessed clean energy resources. Domestic electricity demand is expected to continue growing driven by industrialization and a renewed focus on electrification.

While Ethiopia has an ambition of scaling-up its electricity generation portfolio, the domestic power generation mix is highly dependent on hydro resources, which are largely impacted by the varying patterns of rainfall. Ethiopian Electric Power (EEP) is therefore planning to diversify its power generation system by exploiting other renewable energy sources. Least-cost generation expansion plans for Ethiopia foresee substantial additions of solar and wind power projects to be commissioned by 2030, which would contribute to meeting domestic and export demand at low cost, while improving system resilience to droughts and climate change.

In front of such bold sector strategy, the power sector does not have the ability to continue self-financing its growth, as Ethiopia's traditional model of public financing for new investments in the power sector combined with exceptionally low tariffs has compromised the financial health

of the national utility particularly when significant capital investments are necessary. The Government of Ethiopia (GoE) is therefore transitioning from public generation investments to Public Private Partnership approaches, enabled by the landmark PPP Proclamation adopted in the recent years.

As part of this overall initiative the GoE has been scaling-up its efforts for exploitation of wind power potential in the country by assessing multiple sites for wind farm development through Public-Private Partnership models. Further to a pre-feasibility analysis of potential wind farm sites and the resulting approval of a suitable subset of candidates for proceeding to the appraisal phase by the PPP Board, Expertise France together with Agence Française du Développement have embarked on supporting the execution of dedicated feasibility studies for two specific wind farms to be located in the Eastern part of the country, each of approx. 150 MW capacity.

Framework Agreements Between France and the Ethiopian Government - On March 12th, 2019, a joint declaration of intent was signed between AFD and the Federal Democratic Republic of Ethiopia aimed at supporting economic reforms. The AFD support is composed of a Public Policy Loan coupled with a global technical assistance program.

Further on, AFD approved in May 2019 and signed in Addis Ababa in June 2019 agreements related to a budget support financing for the Federal and Democratic Republic of Ethiopia to support the implementation of the second Growth and Transformation Plan (GTP II).

The captioned financing was composed by a EUR 85 million Public Policy Loan (PPL) coupled with an up to EUR 15 million Technical Assistance Program (TA). EF will partially implement the TA, and has mobilized high level international expertise to support the Government of Ethiopia's (GOE) public economic reforms mainly the public private partnership (PPP) declaration and governance of state-owned enterprises (SOEs). The main beneficiary of economic reform implementation is the Ministry of Finance (MOF).

PPP reform in Ethiopia – The PPP initiative recognizes that the private sector is essential to support the country's economic growth and improve the quality of public services, particularly in infrastructure.

The GOE has approved the PPP Policy and PPP Proclamation in August, 2017 and February, 2018 respectively to establish the PPP Framework as a part of its actions to support the successful implementation of GTP II.

The proclamation has established the PPP Directorate General in MOF to manage the PPP framework in the Country. The PPP DG is mandated, among others to provide technical support to the PPP Board, the Ministry of Finance (MoF) and Contracting Authorities (CA) (including EEP) in designing and implementing PPP projects. A pipeline of PPP opportunities has been approved by the PPP Board and focuses mainly on energy and road projects.

Figure 1 below illustrates how the appraisal & preparation phase fits in the wider PPP project lifecycle and the centrality of the Feasibility Study in the associated workflow.

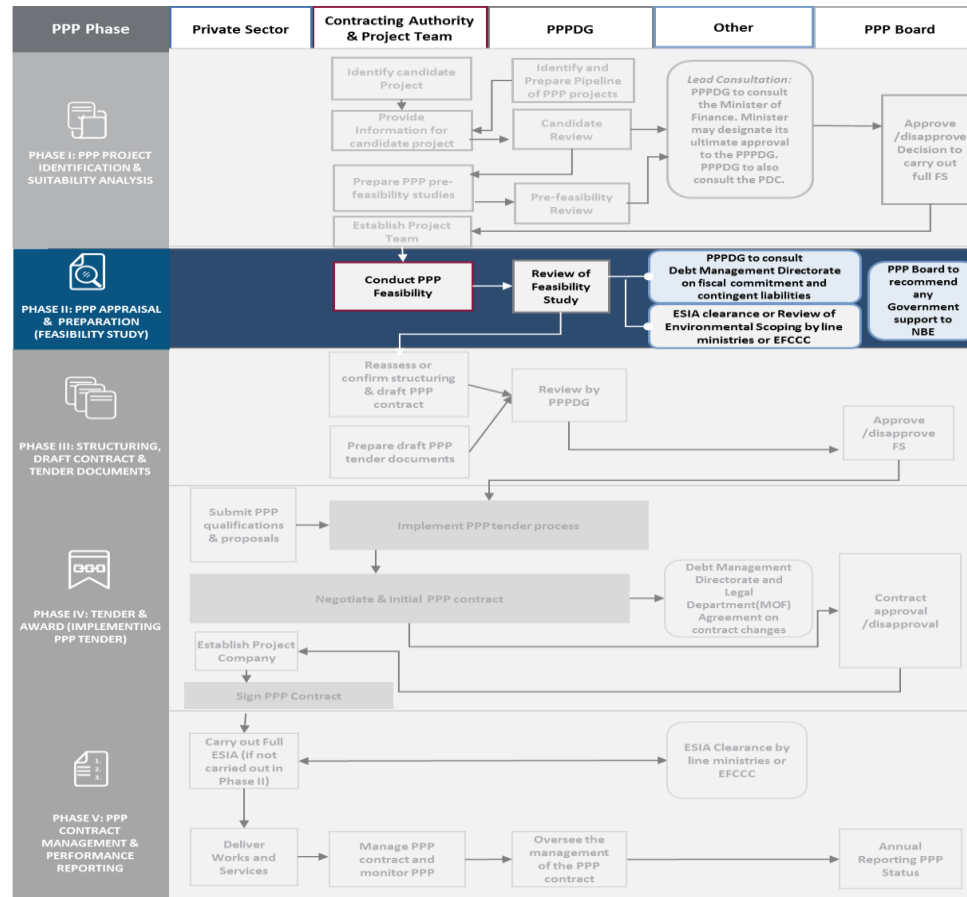


Figure 1- PPP Guidelines for Ethiopia

The feasibility study involves a rigorous process of identifying and gathering complete qualitative and quantitative information about the proposed PPP project. This information must be synthesized and analyzed to determine if the proposed PPP project is technically, economically and financial feasible and generates Value for Money for the Contracting Authority.

A well-developed feasibility study will not only illustrate the economic advantage of the project to the Contracting Authority, but it will also indicate of the project will present an attractive investment proposition to the Private Party.

The role of Ethiopian Electric Power (EEP) - The Ministry of Water, Irrigation and Electricity (MOWIE) is the head and governing institution of the power sector in Ethiopia.

Originally, the Ethiopian Electric Power Corporation (EEPCO) was the sole public utility responsible for generation, transmission and distribution of electric power throughout Ethiopia.

The Ethiopian Government unbundled EEPCO and established two new organizations, known as the Ethiopian Electric Power (EEP) and Ethiopian Electric Utility (EEU), both state owned enterprises administered and supervised by the MOWIE. The responsibilities of EEP, the contracting authority for the two selected sites for which the feasibility study is conducted, include undertaking feasibility studies, design and survey of electricity generation, transmission and substations; undertaking electricity generation, transmission and substation construction and upgrading; handling electricity generation and transmission operation and maintenance activities; leasing electricity transmission lines as required; purchasing and selling bulk electric power.

The Government of Ethiopia (GoE) aims to increase quantity and quality of domestic energy production by inviting the private sector to participate in the power generation segment through Independent Power Producers (IPPs), with the multiple objectives of bringing in commercial capital and sustainable financing structures, strengthening local know-how, and improving project implementation speed. A dedicated PPP/IPP unit has been established at Ethiopian Electric Power (EEP) as a Contracting Authority, in line with such vision.

Sites description – As part of its strategy for the energy sector, the Government of Ethiopia is keen on scaling-up the exploitation of wind resources, selecting several sites for wind IPP development.

The World Bank Group (WBG) and other development partners (e.g. Government of Denmark) have been providing technical assistance by assisting in the analysis and verification of wind measurements, as well as triggering a screening of potential wind farm sites to identify potential candidates for competitive auctions.

The two wind sites subject of the feasibility study have been approved by the PPP Board of the Government of Ethiopia to proceed to Appraisal & Preparation stage in light of the results of pre-feasibility investigations. The projects are part of the Accelerated Wind Power Program (AWPG), a World Bank partnership with national public sector institutions to enhance bankability of projects for achieving a feasible wind auction roadmap in Ethiopia.

Both sites are located in the Eastern part of the country, each of them featuring approximately 150 MW in terms of capacity.

III. Objectives and desired results

1) General objective

The purpose of the work is to determine if the PPP approach is the most economically advantageous solution for the Contracting Authority (in this case, Ethiopian Electric Power).

This is demonstrated when a project results technically and financially viable, ultimately resulting in Value for Money for the Government of Ethiopia and the country.

At the same time, the outcome of the work shall identify whether the project will present an attractive investment proposition to the Private Party. If and once the above objectives have been satisfied, the transactions will be deemed suitable and ready for procurement stage.

2) Specific objectives

1. Determine if there are significant public concerns that must be effectively resolved before the project can be considered viable as a PPP, highlighting the main obstacles for the project's implementation (both at technical level and in terms of delivery method as traditional vs PPP). Assess if and how such obstacles can be overcome in a cost effective manner.
2. Develop a reliable feasibility assessment (or "business case") that allows the government to make an informed and defensible decision towards moving forward (or rather aborting the project)
3. Assess whether the project is an affordable proposition for the government over its lifetime (in terms of end-user and fiscal dimensions)

4. Elaborate a demand forecasting for the farm to confirm what size or design capacity of the project should have in order to be economically sustainable (particularly in the context of the Least Cost Power Development Plan for the country) and which party is most suited to take on demand risk
5. Identify the key functional components of a project, assess the available technologies to meet the planned output specifications and evaluate the risks affecting the technical performance of the project
6. Evaluate the financial feasibility of the PPP by estimating the total costs of the project and identifying the tariff range that allows to recover such costs for the project
7. Carry out the Economic Feasibility Analysis for the project, by determining a likely range of required economic costs, net economic benefits, and Internal Rates of Return
8. Assess the existing legal framework affecting the project, by evaluating its adequacy for project viability and identifying specific legal and regulatory uncertainties that could lead to delays or cancellations.
9. Determine the overall environmental feasibility for the wind farm, and which environmental and social impact mitigation measures the project would require in light of the applicable regulations and standards.
10. Provide a comprehensive view of the risks affecting the projects, the allocation of such risks to the parties and the most appropriate mitigation measures.
11. Design the preliminary contract structure, including the essential aspects of revenue regime and the payment mechanism
12. Developed good indications that the project, implemented as a PPP, delivers Value for Money (VfM); over the traditional EPC procurement mechanism
13. Evaluate market potential for the project PPP model in terms of attractiveness to private sector investors and lenders
14. Provide a PPP Procurement Strategy for the project in terms of bid model, duration, templates for the relevant documentation and evaluation criteria

IV. Details of the assignment

1) Methodology of action

Scoping meeting - For each of the expected Components, a scoping meeting between the Consultant and the relevant focal point at EEP is organised. The objectives of the scoping meeting are:

- to delimit the major strategic angles of deliverables to be produced,
- to confirm the main elements to be included in the deliverables,
- to anticipate the main challenges in delivering the Feasibility Study
- to identify the main stakeholders involved
- to outline the main steps to be implemented
- to refine the timeline.

Site visit – Further to refining the indications for the Study through the Scoping Meeting and the review of the input documentation by the Consultant, a site visit shall be carried out by a joint team composed of members from the Consultant and the Project Management Team.

Preliminary report - For each of the expected deliverables, a preliminary report is drafted by the Consultant. This preliminary report shall precisely define the structure of the study that is conducted highlighting how to collect the information needed and main challenges.

Capacity building session on the Preliminary report - The preliminary report shall be presented to the relevant EEP's focal point during a capacity building session aiming at presenting the first assessment of the consultant and collecting observation on it. The session shall be conducted through a pedagogic method, aiming at presenting to the beneficiaries why this component of the study is conducted, how it is conducted and what shall appear in it. In addition, the objective of this session is to discuss the main strategic questions raised by the preliminary report and to resolve them.

Intermediary consultation of the EEP focal point – While conducting the studies, the Consultant is requested to organise intermediate consultations with the relevant EEP focal point to confirm their findings. The frequency of these consultations are defined during the validation of the preliminary report.

Capacity building session on the final version of each deliverable – Upon finalisation of each draft deliverable, the Consultant shall run a presentation to the Team Leader and the EEP focal point aiming at presenting the final results of the study and to collect final observation on it.

Final Validation of each deliverable – EEP team leader will validate each of the deliverables.

The various chapters set out below must appear in the feasibility study so that it is in line with the legal and regulatory framework of PPPs in Ethiopia.

	Chapter of the Feasibility study	Indicative phasing and expected deliverables
1.	Communication and stakeholder plan	
	<p>Identification of service output levels for PPP project</p> <p>Specify the project outcomes for delivery by the Private Partner. Proposed outcomes must be clear, measurable, and also provide a solid foundation for the viability analysis, preparation and risk-structuring of the project as a PPP</p>	<p>Step 1. Identify the major technical components, for the project.</p> <p>Step 2. Outline the output standards for the overall performance of the project</p> <ul style="list-style-type: none"> • Demand served • Energy output and design efficiency for the plant • Minimum operational parameters • Quality standards (engineering, construction) • Maintenance standards <p>Deliverable - PPP Project Outcomes Standards Report</p>
	<p>Stakeholders consultation plan</p> <p>Determine if there are significant public concerns, issues, or even opposition to a potential project that must be effectively resolved before the project can be considered viable as a PPP. The process shall include the participation of key stakeholders from the end user, labour, private sector, public sector, Non-Governmental, and other relevant groups.</p>	<p>Step 1. Identify the relevant stakeholder groups that would likely be affected by and interested in this project. It is also requested at this point to estimate each group’s probable concerns about and interests in the proposed PPP project.</p> <ul style="list-style-type: none"> • Prospective IPP developers • End Users & Consumer Associations • Commercial Users & Commercial Consumer Associations • Industrial/ High-Volume Users • Credit support and risk mitigation institutions (DFIs, MDBs, ECAs, political risk insurers) • Land-owners • Current providers of services within the sector

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		<p>Step 2. Design a PPP Stakeholder Consultation Plan: Based upon the completion of the above matrix, design a plan for communicating with and consulting each of relevant stakeholder groups:</p> <p>Step 3. Develop a PPP Project Stakeholder Consultation Plan, for each Step of the PPP project cycle, how and when each stakeholder group will be consulted on key options for structuring the project and on its current status.</p> <p>Step 4. Develop a Stakeholders’ Feedback Tracker Report. For each Step of the PPP project, this report will list and categorize comments from stakeholders and indicate how their feedback were incorporated in the preparation of the project.</p> <p>Deliverable - PPP Project Stakeholder Consultation Plan</p>
2.	Economic and financial appraisal	
	<p>Project affordability analysis</p> <p>Determine the maximum amount that users of the Public Service Activity (a public Contracting Authority, end-users, or a combination of both), can afford to pay for the PPP project’s services over the entire life of the contract.</p> <p>The resulting PPP Project Affordability Report provides the MOF Debt Management Directorate with sufficient information about the impacts of the PPP project (outlined above) to enable them to assess whether or not the project is an affordable proposition for the government over the duration of the complete project.</p>	<p>Step 1. Fiscal Affordability Analysis (inc. direct/indirect subsidies and plan for cost-reflective tariff)</p> <p>Interim deliverable - Fiscal Affordability report</p> <p>Step 2. End User Affordability Analysis</p> <p>Interim deliverable - End User Affordability report</p> <p>Step 3. Hybrid Affordability Analysis</p> <p>Interim deliverable - Hybrid Affordability report</p> <p>Deliverable - PPP Project Affordability Report</p>

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	<p>Project demand analysis</p> <p>Forecast the volume of service that the Contracting Authority or end users will need from the project over its life. This demand forecasts gives a very important indication of how large the project must be in terms of its design capacity, to adequately meet projected demand. The forecast will also indicate whether, when, and what size additional expansions to project's capacity should be made during the life of the project in order to adequately meet future demand.</p>	<p>Step 1. Define the methodology to be used</p> <p>Step 2. Estimate the demand in Base Case scenario and run additional relevant sensitivities, detailing the rationale behind all assumptions</p> <p>Step 3. Identify demand risks and the party best suited to manage each of them</p> <p>Deliverable - PPP Project Demand Analysis Report</p>
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	<p>Project financial feasibility analysis</p> <p>Estimate the total costs of the project and then identifies the likely range of tariff that will be required to recover all of these costs for the project to be financially viable as a PPP. These cost estimates must include a realistic, expected return on the Private Party' equity. Financial feasibility analysis differs from economic feasibility analysis, which estimates and includes the benefits and costs of the project for the economy.</p> <p>Financial feasibility analysis is required to estimate the size of the tariff that the Private Party would need to charge to recover the full costs of the project. These include operating and maintenance costs, regular debt service payment, and adequate returns on the investor's capital. This analysis is also needed to indicate opportunities for any changes in PPP prices over the life of the project.</p>	<p>Step 1. Designing the PPP Financial Feasibility model, including but not limited to:</p> <ul style="list-style-type: none"> • Key inputs and results • CAPEX • OPEX • Insurance costs (inc. required assessment/due diligence) • Total cost of ownership/life-cycle costs of plant • Levelised Cost of Energy (LCoE) • Financing structure • Taxation (inc. relevant assessment as needed) • Payment mechanism • Income statement • Cash Flow Analysis (inc. DSCR, PLCR, LLCR) • Return on Investment (ROI) and Equity (ROE) • Payback period • Energy tariff • Balance Sheet <p>Step 2. List required inputs, including:</p> <ul style="list-style-type: none"> • Technical data (e.g. Minimum performance standards, Demand and growth projections per user category...) • CAPEX and OPEX (construction, installation, start-up, O&M, asset depreciation...) • Financing data (debt and equity details) <p>Deliverable - Project Financial Feasibility Analysis Report, covering:</p> <ol style="list-style-type: none"> I. Description of model design II. Explanation of data sources III. Explanation of assumptions (inflation rate, discount rate, depreciation, tax and VAT etc.) IV. Description of any type of public sector support that may be needed by the project (subsidies, incentives etc.) 	
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		<p>V. Assessment of the financial management and accounting structures proposed to identify efficiency gains available through structural mechanisms, e.g. taxation of revenues and accounting methods for depreciation of assets</p>	
	<p>Project economic feasibility analysis</p> <p>This analysis will include both the direct and tangible, cash-based costs as well as the indirect and intangible costs, such as costs for mitigating negative environmental impacts, resettlement</p>	<p>Step 1. Calculate the value of project’s economic costs by multiplying the economic cost items - which have been selected from financial cost items - with relevant conversion factors appropriate for Ethiopia.</p>	

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	<p>costs, etc. The project's economic benefits, which are often a major source of justifying a long-term infrastructure project's potentially substantial investment requirements, will include direct as well as indirect benefits</p>	<p>Step 2. Identify the net economic benefits of the proposed PPP project, by quantifying them and then applying a monetary value to enable the measurement of the economic benefit.</p> <p>Step 3. Perform a sensitivity analysis to test the robustness of the Economic Analysis, given the high degree of assumptions in the process.</p> <p>Deliverables: PPP Project Economic Feasibility Analysis Report, including range of required economic costs, net economic benefits, and Economic Internal Rates of Return for the PPP Project</p>	
	<p>PPP Value for Money analysis/benefits</p> <p>Determine which procurement option (i.e. public sector procurement or PPP) for the delivery of a Public Service will result in higher net economic benefit for the government.</p> <p>VfM analysis should involve a combination of qualitative and quantitative approaches which will complement each other</p>	<p>Step 1. Conduct quantitative VfM analysis through comparing the life cycle costs of the project as delivered through traditional procurement versus with a PPP approach (Public Sector Comparator [PSC]), including NPV, EIRR, DSCR calculations</p> <p>Step 2. Conduct qualitative VfM analysis by assessing whether the project fits the PPP concept through delivering wider socio-economic benefits of a non-financial nature and potential challenges in the delivery of the project as a PPP.</p> <p>Deliverables: VfM worksheet including:</p> <ol style="list-style-type: none"> I. Estimate of public sector cost II. Risk-adjusted PSC, detailing risk allocation and transfer III. Estimate of Private Party's costs IV. Benefit analysis through comparing risk-adjusted PSC cash flow with PPP cash flow V. NPV recalculation to confirm project affordability 	
3.	Technical appraisal		
	<p>Project technical feasibility analysis</p> <p>Identify the key functional components of a project, the applicability of existing technologies</p>	<p>Step 1. Conceptual design</p> <ul style="list-style-type: none"> • Wind turbine technology • Civil design 	

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	<p>to meet the planned output specifications, as well as the size and probability of key risks to the technical performance of the project and its component parts. This procedure provides inputs for subsequent analysis that estimate the project’s capital and operating costs.</p>	<ul style="list-style-type: none"> • Electrical design <p>Step 2. Bankable energy yield assessment according to international industry standards (P50 – P90 calculation), based on wind measurement data provided by EEP</p> <p>Step 3. Grid stability review (static and dynamic) based on information provided by EEP such as:</p> <ul style="list-style-type: none"> • Generation portfolio data • Grid load data • Planned grid reinforcement works and installations; • Transmission technical specifications (substation and overhead lines) <p>Step 4. Harbour evaluation, transportation and access study, comprising:</p> <ul style="list-style-type: none"> • Description of the WTG component/transport sizes and weights • Description of the optimal harbours in the Project site’s surroundings, for the unloading and storage of the WTG components • Maps presenting the best harbour options and the optimal transport/access route • Coordinates and pictures of any locations for which works are required (e.g. roadworks) • Coordinates and pictures of any bridge or existing infrastructure • Exhaustive work descriptions with tentative bill of quantities and price • Identification of the transportation risks <p>Step 6. Site and ground investigations</p> <ul style="list-style-type: none"> • Topographical Study • Geotechnical study • Hydrological study <p>Step 7. Project implementation plan:</p> <ul style="list-style-type: none"> • EPC tender management 	
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		<ul style="list-style-type: none"> • Construction management • Commissioning and final Acceptance management • Project construction level-3 planning from the end of the feasibility stage to the commercial operations date and Project final acceptance. <p>Step 8. Preliminary O&M Strategy</p> <p>Step 9. Carbon Reduction Analysis</p> <p>Deliverable: Technical Feasibility Analysis report</p>	
	<p>Project environmental and social impact assessment</p> <p>Provide an overview of the environmental and social analysis needed for a proposed PPP project, which environmental permits will likely be required, how to determine the project’s overall environmental feasibility, and which additional environmental and social impact mitigation measures the project would require. The analysis will need to be driven by the associated national legal framework and satisfy the applicable international standards.</p>	<p>Step 1. Identifying required level of analysis through reference to applicable Ethiopian legal framework.</p> <p>Interim deliverable: ToR for ESIA</p> <p>Step 2. Conduct the Environmental and Social Impact Assessment, comprising of:</p> <ul style="list-style-type: none"> • Baseline information • Detailed description of potential project impacts • Mitigation actions against the above impacts, with associated costs and requirements • Identify and recommend the best solution to minimise environmental and social impacts of the project, including comprehensive cost & benefit analysis • Provisional management plan for design, construction and operation of the project <p>Deliverable: Environmental and Social Impact Assessment report</p>	

4.	<p>Legal and institutional appraisal</p>		
	<p>Legal and institutional feasibility analysis</p> <p>This procedure assesses the existing laws and regulations that are relevant to the specific project and determines whether or not these are adequate to make the project viable. This procedure also analyzes whether the existing public sector institutions have the capacity and resources to enforce these laws and regulations and to sustain all of the public sector’s roles and obligations throughout the term of the PPP contract.</p>	<p>Step 1. Legal and Regulatory Feasibility Analysis. Systematic review of all existing, relevant laws and regulations, with special attention to the consequences of risks and risk allocation options for PPPs, with special reference to:</p> <ul style="list-style-type: none"> • permission to own and operate a power generation business by private sector entities including use of natural resources • corporate laws that governs the organization of the Project Company and the relationship of the shareholders within (inc. foreign nationals) • permitting around land use, spatial planning, building and construction etc. • work permitting and employment rights (inc. for foreign nationals) • taxation, import/export • foreign investment and financing (inc. currency conversion, repatriation of profits, debt service payments) • dispute resolution • acknowledgement of lenders’ rights (inc. step-in rights, international insurance placement) <p>Deliverable: PPP Legal and Institutional Feasibility Analysis Report</p> <p>Step 2. Assess the existing public sector resources and the skills needed to oversee and to monitor the performance of the PPP contractor throughout the life of the contract (enforce compliance with the terms of the contract by end users/ other Government agencies/ private party), specifically:</p> <ol style="list-style-type: none"> i. Plans for establishing within the client Contracting Authority a Contract Management Team. ii. Any new laws, decrees, or regulations needed to establish and create a budget for a new organization or to give it legal authority to enforce the PPP contract 	

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		<p>iii. Technical skills, resources (e.g. information technology systems, monitoring equipment) and capacity of the Contracting Authority to carry- out the necessary monitoring functions (technological, financial, legal quality-of-service monitoring, etc.)?</p> <p>Deliverable: PPP Contract Monitoring Framework</p>	
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	<p>Legal and commercial design of the transaction</p> <p>Assessing Government role in the proposed IPP project, whether that role corresponds with the Government’s legal obligations, maintains sufficient power to protect the Government’s interests and corresponds to the proposed corporate structure of the project vehicle</p>	<p>Step 1. Develop a detailed legal architecture and design of the transaction, identifying:</p> <ul style="list-style-type: none"> • investment commitments required, their nature and management • type of public sector support required, including terms and conditions • corporate structure for the investment and commercial management, including nature of the SPV holding the contract • Government role in the project vehicle (e.g. voting rights, pre-emption rights, golden shares and the protection of minority shareholders) <p>Step 2. Confirm legality of budgeting assumptions and the management of revenue flows (e.g. are there restrictions on the use of money collected for use with public services).</p> <p>Step 3. Identify other contractual and commercial relationships in the sector or related to the sector and how those relationships will interface with the PPP project.</p> <p>Step 4. Recommend preferred PPP model configuration</p> <p>Deliverable: PPP transaction design document</p>	
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	<p>Market testing</p> <p>Determine if both the general nature of the given PPP project, and the proposed risk allocation structure is adequate to attract qualified private sector investors and financiers. A positive outcome of the testing would ensure that the project receives sufficient private sector interest to attract serious, good-quality bids if the project were approved to advance to PPP Tendering Implementation.</p>	<p>Step 1. Address a tailored checklist to evaluate whether the project risk analysis and allocation should be modified to attract private sector interest, covering:</p> <ul style="list-style-type: none">• Previous comparable PPP examples in-country or internationally• Local actors' resources and capacity• Any early interest expressed by local or international private sector• Risks for the Private Party that would make the project tariff unaffordable and associated sharing/mitigation instruments (guarantees, credit enhancement etc) <p>Deliverable: Private Sector Market Interest Assessment report (including revised risk analysis as required)</p>	
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	<p>PPP Procurement Strategy</p> <p>Ensure that the selection procedure does not result in an outcome that erodes the Value for Money in the PPP approach.</p> <p>The procurement strategy centers around two key tasks (i) Prequalification (ii) Request for Proposal</p>	<p>Step 1. Design the Procurement strategy document :</p> <ul style="list-style-type: none"> • Recommendation on the procurement process to be implemented • Indicative timeline and main steps <p>Step 2. Design the procurement documents:</p> <ul style="list-style-type: none"> • Request for qualification • Request for Proposal • Model of PPP contract <p>Deliverable: Procurement Strategy document, detailing</p> <ol style="list-style-type: none"> I. Procurement Strategy document II. Request for proposal III. Request for qualification IV. Model of contract 	
<p>5.</p>	<p>Risk analysis and management</p>		
	<p>Risk identification</p> <p>Determine which specific possible risk events are affecting whether the project will be viable as a PPP (financially in particular) or not.</p> <p>The process builds on the findings from project’s technical, financial, economic, legal, institutional, and environmental feasibility analyses some of the major risks, or unplanned</p>	<p>Step 1. Design the risk identification matrix covering items such as:</p> <ul style="list-style-type: none"> • Land • Environment • Climate • Health & Safety • Currency availability and transferability • Operating costs • Loan terms 	

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	<p>changes, that could threaten the viability of the project.</p>	<ul style="list-style-type: none"> • FX rate • Technical design and standards • Interconnection facilities • Market • Procurement • Construction • Operation and Maintenance • Regulation • Asset transfer • Political / Sovereign • Force Majeure <p>Deliverable: Risk Identification Report, including:</p> <ol style="list-style-type: none"> I. Risk Identification Matrix II. Explanations of the impacts of key risks and their importance for the project. 	
	<p>Risk Analysis, mitigation and allocation</p> <p>Estimate the size of the impact of each major risk to the PPP project as well as the probability that this specific risk event will occur, hence obtaining the total cost of the risk, in quantitative terms, to the proposed PPP project.</p> <p>Determine which parties to make responsible for bearing the impacts of and for managing and controlling each project risk. Each risk will be assigned to and made the responsibility of the party that is best able to manage, to control, and ultimately to minimize that risk.</p>	<p>Step 1. Consult experienced Contracting Authority and public sector management specialists to draw on experience and on historical data.</p> <p>Step 2. Using the risks identified through the previous procedure’s Risk Identification Matrix for each risk, estimate the most likely cost of each risk event happening as well as the most likely probability of the risk</p> <p>Step 3. Design a risk analysis matrix that proposes several scenarios for each risk event in terms of likelihood/impact, with proposed mitigation measures to lower the resulting risk ranking</p> <p>Step 4. Estimate the Probability-Weighted Cost of Each PPP Project Risk, both before and after mitigation interventions.</p> <p>Step 5. Develop a Risk Allocation Matrix as a guideline to analyze each identified, relevant project risk and to decide which party to allocate each risk: Government, Private, or Shared</p> <p>Deliverable: Risk Analysis and Allocation Report, including:</p>	

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		<ul style="list-style-type: none">I. Risk analysis, ranking and mitigation matrixII. Risk Allocation StructureIII. Rationale behind risk allocation choices <p>The Risk Allocation Structure will become the basis for the design and drafting of the PPP Contract.</p>	
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2) Minimal deadline for each deliverables

Preliminary deliverables	
Minimal deadline requirements	Deliverables
March 2021	Preliminary PPP Project Outcomes Standards Report
March 2021	Preliminary PPP Project Stakeholder Consultation Plan
May 2021	Fiscal Affordability report
May 2021	End User Affordability report
May 2021	Hybrid Affordability report
May 2021	Preliminary PPP Project Demand Analysis Report
May 2021	Preliminary Project Financial Feasibility Analysis Report
June 2021	Preliminary PPP Project Economic Feasibility Analysis Report,
June 2021	Preliminary VfM worksheet
July 2021	Preliminary Technical Feasibility Analysis report
September 2021	Preliminary ToR for ESIA
September 2021	Preliminary PPP Legal and Institutional Feasibility Analysis Report

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September 2021	Preliminary PPP Contract Monitoring Framework
September 2021	Preliminary PPP transaction design document
September 2021	Preliminary Private Sector Market Interest Assessment report
September 2021	Preliminary Procurement Strategy document
August 2021	Preliminary Risk Identification Report
August 2021	Preliminary Risk Analysis and Allocation Report
Final deliverables	
Item	Deliverable
July 2021	PPP Project Outcomes Standards Report
July 2021	PPP Project Stakeholder Consultation Plan
July 2021	PPP Project Affordability Report
July 2021	PPP Project Demand Analysis Report
July 2021	Project Financial Feasibility Analysis Report
July 2021	PPP Project Economic Feasibility Analysis Report,
July 2021	VfM worksheet
September 2021	Technical Feasibility Analysis report

TERMS OF REFERENCE / SPECIFICATIONS

September 2021	Environmental and Social Impact Assessment report
November 2021	PPP Legal and Institutional Feasibility Analysis Report
November 2021	PPP Contract Monitoring Framework
November 2021	PPP transaction design document
November 2021	Private Sector Market Interest Assessment report (including revised risk analysis as required)
November 2021	Procurement Strategy document
November 2021	Risk Identification Report
November 2021	Risk Analysis and Allocation Report
December 2022	Final feasibility study for Adigala
December 2022	Final feasibility study for Dire Dawa

Preliminary deliverables

Minimal deadline requirements	Deliverables
March 2021	Preliminary PPP Project Outcomes Standards Report
March 2021	Preliminary PPP Project Stakeholder Consultation Plan

TERMS OF REFERENCE / SPECIFICATIONS

May 2021	Fiscal Affordability report
May 2021	End User Affordability report
May 2021	Hybrid Affordability report
May 2021	Preliminary PPP Project Demand Analysis Report
May 2021	Preliminary Project Financial Feasibility Analysis Report
June 2021	Preliminary PPP Project Economic Feasibility Analysis Report,
June 2021	Preliminary VfM worksheet
July 2021	Preliminary Technical Feasibility Analysis report
September 2021	Preliminary ToR for ESIA
September 2021	Preliminary PPP Legal and Institutional Feasibility Analysis Report
September 2021	Preliminary PPP Contract Monitoring Framework
September 2021	Preliminary PPP transaction design document
September 2021	Preliminary Private Sector Market Interest Assessment report
September 2021	Preliminary Procurement Strategy document
August 2021	Preliminary Risk Identification Report
August 2021	Preliminary Risk Analysis and Allocation Report

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Final deliverables	
Item	Deliverable
July 2021	PPP Project Outcomes Standards Report
July 2021	PPP Project Stakeholder Consultation Plan
July 2021	PPP Project Affordability Report
July 2021	PPP Project Demand Analysis Report
July 2021	Project Financial Feasibility Analysis Report
July 2021	PPP Project Economic Feasibility Analysis Report,
July 2021	VfM worksheet
September 2021	Technical Feasibility Analysis report
September 2021	Environmental and Social Impact Assessment report
November 2021	PPP Legal and Institutional Feasibility Analysis Report
November 2021	PPP Contract Monitoring Framework
November 2021	PPP transaction design document
November 2021	Private Sector Market Interest Assessment report (including revised risk analysis as required)

TERMS OF REFERENCE / SPECIFICATIONS

November 2021	Procurement Strategy document
November 2021	Risk Identification Report
November 2021	Risk Analysis and Allocation Report
December 2022	Final feasibility study for Adigala
December 2022	Final feasibility study for Dire Dawa

3) Capacity building component

The Consultant will work closely with EEP teams in a skill transfer orientation, in a tight collaboration on decision-making. All major decisions related to the feasibility study shall be taken in collaboration with the Team Leader at EEP.

The Consultant shall design and deliver capacity building session for the beneficiary for each deliverable:

- On the preliminary report of each deliverable, the session will aim at presenting the first result of the report, collecting comments while discussing preliminary assessments and the methodology used. The session shall be conducted through a pedagogic method, aiming at presenting to the beneficiaries why this component of the study is conducted, how it is conducted and what shall appear in it.
- On the final version of the deliverable to collect final comments and observation.

4) Coordination

The service provider shall designate a single contact person for project implementation purposes.

Nastasia POUSSE (Program Coordinator) and Stefano Scapolla (Resident Advisor at EEP) will be the service provider's sole contact persons for Expertise France:

Tel: +251 993531385

e-mail: nastasia.pousse@expertisefrance.fr

Tel: +251 944338236

email : stefano.scapolla@expertisefrance.fr

Close collaboration must take place with EEP Project Management Team personnel from assignment preparation up to completion. Furthermore, regular exchanges must take place with Expertise France Resident Advisor at EEP on assignment progress and any difficulties that may be encountered.

V. Schedule

The provisional programme for assignment implementation is shown in the attached provisional schedule.

VI. Required expertise and profile

A detailed organigram presenting the Consultant's team members and their assigned Work Packages shall be prepared as part of the bid.

It is expected that the team will be managed in duo by a seasoned Project Director and an experienced Project Risk Manager who will act as coordinator, both being the main points of contact for EEP all along the assignment.

The work effort for every expert in total Person-Months shall be proposed by the bidder to adequately cover the anticipated duration and scope of services.

Any change in Project Manager/Project Director requires the prior approval from EEP.

The expected team qualifications are listed in the following table. All the professionals must have university level academic background in a relevant discipline, plus excellent report writing, teamwork and communication skills, with fluency in English mandatory in all cases. All expected experience listed in the below table shall be supported by details on project, client, power capacity, year of start/end of the assignment ad a short description.

Expert	Expected experience
Project Director	<ul style="list-style-type: none">• Minimum 5 years' experience as Project Director or equivalent• Minimum 10 years of experience in the wind energy sector• Involved in minimum 3 PPP feasibility studies with the same scope of work.• Minimum 2 projects in East Africa• Mandatory fluent in English
Project Risk Manager	<ul style="list-style-type: none">• Minimum 10 years' experience in project risk assessment and management

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	<ul style="list-style-type: none"> • Minimum 5 years' experience as coordinator of complex, large scale infrastructure PPP projects, with exposure to energy sector • Minimum 5 years of experience in emerging markets, • Involved PPP feasibility studies with the same scope of work. • Mandatory fluent in English
Communication and stakeholder engagement Specialist	<ul style="list-style-type: none"> • Minimum 10 years' experience in stakeholder management roles, particularly facilitation, training, partnership building • Demonstrated experience with large infrastructure projects • Experience in at least 3 similar assignments in Africa. • Experience in Ethiopia in the same scope of work • At least one experience on an energy project. • Mandatory fluency in English
Component 1 – Economic and financial appraisal	
Economic and financial Specialist	<ul style="list-style-type: none"> • Minimum 8 years' experience in the role of economist and financial specialist or equivalent • Demonstrated professional experience in PPPs and project finance with a proven track record in financial evaluation and financial modelling of PPP projects including value for money, PSC analysis, affordability and fiscal impact assessment. • Demonstrated experience in dealing with project finance structures and products and experience in financially closing of PPP projects. • Knowledge of the power sector and experience in financial structuring of projects in the sector. • Experience in at least 3 similar economic and financial feasibility studies for multi-MW power generation projects in Africa. • At least one experience on a wind project. • Mandatory fluent in English
Component 2 – Technical appraisal	
Wind Engineer	<ul style="list-style-type: none"> • Minimum 8 years' experience as measurement and energy yield assessment and design specialist

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	<ul style="list-style-type: none"> • Involved in minimum 3 feasibility studies with the same scope of work. • Experience in project in East Africa • Mandatory fluent in English
Environmental Specialist (with Bat and Bird Survey expertise)	<ul style="list-style-type: none"> • Minimum 10 years' experience as EIA specialist in the energy industry • Experience in EIA studies in Africa in the energy industry • Experience in EIA studies with the same scope of work for a wind project • Experience in applying the standards and evaluation benchmarks of the World Bank Group. Knowledge of Ethiopian legislation and experience with Ethiopian authorities will be an advantage. • Mandatory fluent in English
Social Specialist	<ul style="list-style-type: none"> • 8 years of experience in social impact assessments • Experience in social impact assessment in the energy industry, including gender analysis • Experience in the application of development partnerships in Social Management Framework on Safeguards Policy Statement (involuntary resettlement safeguards, indigenous people safeguards, Physical Cultural Resources, etc.) • Experience in applying the standards and evaluation benchmarks of the World Bank Group. • Fluency in English is required.
Electrical (Grid) Engineer	<ul style="list-style-type: none"> • Minimum 5 years' experience as electrical grid consultant for feasibility studies • Involved in minimum 2 wind project's connection studies with the same scope of work. • Experience in project in East Africa, experience in Ethiopia will be an advantage • Mandatory fluent in English

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Civil Engineer	<ul style="list-style-type: none"> • Minimum 5 years' experience as Civil Work specialist for wind projects • Involved in minimum 3 feasibility studies with the same scope of work • Mandatory fluent in English
Geotechnical Engineer	<ul style="list-style-type: none"> • Minimum of 5 years of experience • Experience in applying the standards and evaluation benchmarks of the World Bank Group. • Involved in minimum 3 feasibility studies with the same scope of work • Knowledge of Ethiopian legislation will be an advantage. • Mandatory fluent in English
Transportation and Logistics Engineer	<ul style="list-style-type: none"> • Minimum 5 years' experience as logistical expert for wind projects • Minimum 3 similar studies with the same scope of work • Experience in project in East Africa mandatory, experience in Ethiopia will be an advantage • Mandatory fluent in English
Land Acquisition and Resettlement Specialist	<ul style="list-style-type: none"> • Minimum 10 years' experience as Land acquisition and resettlement expert • Experience in Land acquisition and resettlement process in Ethiopia • Experience in applying the standards and evaluation benchmarks of the World Bank Group. Knowledge of Ethiopian legislation and experience with Ethiopian authorities will be an advantage. • Fluency in English required
Component 3 – Legal and institutional appraisal	
Legal and regulation analyst	<ul style="list-style-type: none"> • Familiarity with electrical power and environmental regulations • Minimum 10 years' demonstrated international and regional experience in PPPs and related legal and

	<p>contractual matters, and policy and institutional assessments.</p> <ul style="list-style-type: none"> • Demonstrated professional experience and knowledge of the legal (commercial and contract law), regulatory and institutional framework for PPPs in Ethiopia • High proficiency in written and spoken English,
Procurement specialist	<ul style="list-style-type: none"> • Minimum 8 years' demonstrated international and regional experience with procurement processes for large-scale energy projects • Solid knowledge of scoring models for bid evaluation and preparation of tender documentation • Exposure to at least 3 comparable PPP projects adopting Value-for-Money approaches • High proficiency in written and spoken English,

VII. Assignment reports

The Final Report, comprising all the deliverables listed in section IV.2), shall be compiled in a single report in Word format with relevant annexes, and delivered as both electronic and hard copy documents. All models shall be in Excel format, and must clearly set out all assumptions; sensitivity analyses carried out; and model outputs. The models must be sufficiently adaptable for use by the client at later stages. The Final Report shall include a thorough executive summary and be accompanied by a PowerPoint presentation that encapsulates all the key features of the study. The executive summary and PowerPoint presentation shall be compiled in such a manner appropriate to be utilized by an audience of senior government officials for decision-making purposes.

Draft Report shall be submitted to EEP PPP/IPP Directorate for comments. The Consultant may be required to make a presentation of Draft Report to selected stakeholders, including EEP management committee and EEP IPP/PPP business unit.

Final Report will be submitted after addressing satisfactorily two rounds of comments from stakeholders.