

REPUBLIC OF TÜRKİYE
SUSTAINABLE CITIES II ADDITIONAL FINANCING
SUPERVISION SERVICES CONSULTANT
TERMS OF REFERENCE

**Consultancy Services for Construction Supervision Services for Kemerhisar
Municipality Solar Power Plant (SPP) Project**

1 Introduction and Background

With the increase in the world population and the expansion of the industry, the demand for energy is increasing day by day. Türkiye is one of the countries that imports the fossil fuels that it needs for its energy production. Energy demand is constantly increasing, resulting in an increase in fossil fuel imports and an increase in the current account deficit of the Türkiye. Further, the increased production of energy from fossil fuels results in increasing environmental damage.

A number of steps have been taken by the Turkish government to meet the growing energy demand, reduce importing expenditures, prepare the country for the future of energy production, and take advantage of the potential of energy sources. Türkiye has taken several steps to facilitate renewable energy production, including developing a legal basis as well as financial support programs. Another step is to establish targets for the production and consumption of clean energy through participation in international agreements.

Local governments play an irreducible role in achieving Türkiye's economic and ecological sustainability goals. According to the 2021 data of the Turkish Statistical Institute, it is known that 93.2% of the population lives in provincial and district centers. In densely populated areas, economic mobility has resulted in an increase in the level of development, as well as new needs in a variety of areas such as transportation, water and food security, waste management, energy, the environment, and climate change mitigation. Therefore, municipalities play a vital role in the management of cities.

Municipalities sometimes have difficulties developing projects on the aforementioned issues, finding adequate financing for the projects and implementing the projects. ILBANK as a financial institution provides financial and technical support for many projects in line with its sustainability goals, in order to improve water and wastewater services, cost-effective and accessible public transportation, sustainable, safe, and environmental solid waste management, reduce greenhouse gas emissions, build resilience against disasters and climate effects through investments in municipalities, improve the environment and reduce pollution in municipalities, develop institutional capacity at the municipal level for sustainable development investments and increase efficiency.

With the project ILBANK aims to assist in reducing air pollution, environmental impact, and greenhouse gas emissions, supporting qualified employment, promoting modern, healthy, and self-sufficient energy production, as well as increasing economic effects and investment by providing support to municipalities and provincial special administrations lacking sufficient budgetary resources, limited technical and application capabilities with projects currently being developed.

Sub-loans are provided to municipalities for SPP projects to facilitate their acquisition of knowledge and experience in the planning and implementation of renewable energy projects so that they will be able to provide for their energy needs in a sustainable manner. With the implementation of renewable energy installations, public facilities including administrative buildings, community sport and cultural centers, water supply and water treatment facilities, and public lighting will be able to offset their dependence on grid electricity. Unlicensed renewable energy regulations will allow municipalities to reduce electricity costs significantly and will result in a decrease in greenhouse gas emissions, as well as improved adaptation and disaster resilience.

The solar energy projects to be established within the scope of SCP II AF will contribute to the sustainable energy production of the province. In addition, this program will raise awareness about clean energy and provide experience for municipal employees and private sector participants regarding the design and implementation of solar power plants.

1.1 Project Description

The energy projects under SCP II-AF are a response to ongoing technical and financial assistance for sustainable urban development and capital investment. This exceptional demand includes identification of investments to improve public transport, water and sanitation, solid waste management, energy, environment, disaster and climate resilience and social infrastructure.

The AF allows ILBANK to support municipalities in financing SPP projects to facilitate their acquisition of knowledge and experience in the planning and implementation of renewable energy projects. It also supports ILBANK, the Government of Türkiye, the World Bank to expand the sustainable cities approach both sectoral, and spatially which will increase Program's impact and development effectiveness.

The SCP II AF specifically aims to enhance project approaches on city resilience to disasters and climate change mitigation and risks. The AF provides the means to invest in mitigation and strengthening a range of such climate adaptation measures in cities, which are increasingly susceptible to climate change risks.

The AF supports the following components: Municipal Investments (Component A) and Project Management (Component B), as described below.

Component A - Municipal Investments (EUR496 million): This component has been scaled up to finance demand-driven municipal infrastructure investments to improve access to quality, sustainable and resilient public transport, water and wastewater, solid waste management, disaster risk management, energy efficiency and renewable energy, and improve the urban environment, municipal firefighting services, and social infrastructure and services.

Component B - Project Management (EUR 4 million): This component has financed goods, consulting services related to day-to-day Program/project management, reporting, monitoring and evaluation (M&E), supervision and project communications.

1.2 Institutional Roles:

The World Bank, as the financier, will provide regular supervision and implementation support to ILBANK, as stipulated in the Loan Agreement.

ILBANK as a financial institution provides financial and technical support for many projects in line with its sustainability goals, in order to improve water and wastewater services, cost-effective and

accessible public transportation, sustainable, safe, and environmental solid waste management, reduce greenhouse gas emissions, build resilience against disasters and climate effects through investments in municipalities, improve the environment and reduce pollution in municipalities, develop institutional capacity at the municipal level for sustainable development investments and increase efficiency.

ILBANK is responsible for monitoring the implementation of the Project activities, including overseeing the execution of these activities and ensuring the achievement of desired results.

ILBANK ensures that the project complies with the World Bank's environmental and social standards, as well as procurement regulations. ILBANK will provide additional support for require procurement, implementation, and supervision to the municipalities.

Kemerhisar Municipality is the contracting authority (the 'Client') responsible for procuring design, supply, and installation (DSI) services from a contractor ('DSI contractor'), as well as consultancy services for supervision from a consulting firm (the 'Consultant'). The consulting services are the subject of this Terms of Reference and the assignment in question. Kemerhisar(Niğde) Municipality shall establish a project implementation unit (PIU) at local level to ensure effective project implementation.

1.3 Sub-Project Area and Description:

The scope of this Contract covers Solar Power Plant (SPP) Project in Kemerhisar(Niğde) as detailed in this Terms of Reference. The following figures Show Kemerhisar(Niğde) District and the satellite image showing the location of the project area.



Figure 1. Location of Niğde Province

The project is located in the Kemerhisar District, which is 25 km away from centrum of Niğde Province. The land ownership belongs to the Municipality of Kemerhisar, which is the sole owner of the land.

According to the Project Identification Document (PID), the project area has been analyzed for potential risks and hazards. It has been determined that the area has a low earthquake risk, which is a

positive factor for the project. Moreover, the analyses that were conducted to assess the risk of flooding or a flood in the area have shown that there is no immediate danger to the project site.



Figure 2. Kemerhisar Municipality Solar Power Plant Project Area

According to the observations; the average temperature for many years is 11.2 °C. In terms of average temperature, the hottest month is August (29.6 °C) and the coldest month is January (-4.6 °C). During the same observation period, the maximum temperature was determined as 38.5. °C and the minimum temperature as -25.6 °C. Besides, annually average sunshine duration is 7.4 hours a day and total duration is 2.701 hours in a year.

Table 1. Climate Data of Kemerhisar Province

| | January | February | March | April | May | June | July | August | September | October | November | December |
|--------------------------------|---------|----------|-------|-------|------|------|------|--------|-----------|---------|----------|----------|
| Period (-) | | | | | | | | | | | | |
| Average Temperature (° C) | -0,3 | 1,2 | 5,0 | 10,6 | 15,2 | 19,2 | 22,5 | 22,4 | 18,1 | 12,5 | 6,5 | 1,9 |
| Average Min. Temperature (° C) | -4,6 | -3,4 | -0,2 | 4,4 | 8,4 | 11,9 | 14,8 | 14,5 | 10,4 | 6,0 | 1,2 | -2,5 |

| | | | | | | | | | | | | |
|-----------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Average Max. Temperature (° C) | 4,8 | 6,5 | 10,9 | 16,8 | 21,5 | 25,8 | 29,4 | 29,6 | 25,7 | 19,7 | 13,0 | 7,1 |
| Average Sunshine Duration (hours) | 3,7 | 4,9 | 5,7 | 6,9 | 8,4 | 10,3 | 11,5 | 11,1 | 9,9 | 7,3 | 5,4 | 3,7 |
| Average Precipitation (mm) | 35,7 | 33,1 | 36,0 | 40,9 | 48,4 | 28,5 | 5,1 | 6,7 | 10,6 | 26,0 | 31,3 | 41,0 |

Within the scope of this procurement, there exist two distinct subprojects that are to be constructed on the same site.

The Kemerhisar Sub-project 1 is for an unlicensed solar power plant project with an installed capacity of 830 kW-AC/986kW-DC), which is given in Connection Agreement, belonging to Kemerhisar Municipality. The Kemerhisar Sub-project 2 is for an unlicensed solar power plant project with an installed capacity of 190 kW-AC/225.0 kW-DC), which is given in Connection Agreement, belonging to Kemerhisar Municipality. These projects will be regulated under Regulation on Unlicensed Electricity Generation.

The forecasted energy production of the first plant with 986kW-DC /830 kW-AC (DC:AC ratio of 1,187), producing energy of 1.570.393kWh per year.

The forecasted energy production of the second plant with 225.0 kW-DC /190 kW-AC (DC:AC ratio of 1,184), producing energy of 357,913 kWh per year.

Table 2. Location and Connection Power Information of the Planned Plant

| No | Plant Name | Connection Power | District | Block/Parcel |
|----|---------------------------------------|------------------|-----------------|--------------|
| 1 | Kemerhisar Municipality SPP Project 1 | 830 kW-AC | Kemerhisar/Tepe | 515/386 |
| 1 | Kemerhisar Municipality SPP Project 2 | 190 kW-AC | Kemerhisar/Tepe | 28/20 |

As part of the implementation strategy for works under SCP II AF Energy Projects, a Design, Supply, and Installation (DSI) approach is utilized in order to prevent discrepancies between the design phase and the construction phase. In addition, the consultancy services under this ToR will review design (screening) prepared by the DSI Contractor and supervise the implementation period in order to ensure the successful implementation of the project.

The sub-project has its own Project Information Document (PID) and has sketches and/or drawings. PID contains more details regarding the technical, economic, social, and environmental aspects of the sub-project. Both PID and existing sketches and/or drawings will be provided to the Consultant in the Request for Proposals (RfP).

2 Objectives of the Assignment

The main objectives of the assignment are to provide design review (screening) of the project design prepared by the DSI Contractor, carry out construction supervision services, and supervise the remedial works to rectify defects that arise during the Defect Liability Period (DLP).

It is crucial that the designs shall be safe and sustainable for the best results and delivered in line with international best practices by the design, supply & installation (DSI) Contractor and further screened by the Supervision Consultants to achieve the desired outcome.

Further details of the Scope of Services will be outlined in the following Sections of this Terms of Reference.

2.1. Information/Data to be provided to the Consultant

Kemerhisar Municipality SPP Project has its own Project Information Document (PID) and have full set of drawings and the Simplified Environmental and Social Management Plan (ESMP). PID, existing designs, drawings and Simplified ESMP will be provided to the Consultant as part of Request for Proposals in electronic format.

As a part of the Environmental and Social Assessment, Simplified ESMP of the sub-project has been prepared according to project specifications in full compliance with the World Bank (WB) Safeguard Policies, including Operational Policies (OPs) (i.e., OP 4.01 - Environmental Assessment and WB's 2010 Policy on Access to Information.

3 Scope of the Services:

The scope of Services of the Consultant under this contract is as follows:

TASK 1: TO CARRY OUT THE DESIGN REVIEW (SCREENING) DURING THE CONSTRUCTION STAGE

The Consultant shall review the completed design (civil, mechanical, electrical, infrastructure drawings including all lines, grid connections, all related auxiliary works, and all related structures etc.) carried out by DSI Contractor including all required calculations, sketches and/or drawings, details and specifications of the project components, and prepare report/s on whether the designs are technically sound or need improvements to become so, how they can be optimized to achieve the best results out of the investment and submit its recommendations to the Client. In addition to this, if there is any non-compliance of the project with the legislations, the Consultant shall also inform the Client about the situation. As a result of the Consultant's review of the existing designs (calculations, drawings), re-design will be done by the DSI Contractor (if needed) at no cost (as to be provided by the DSI Contract). The Consultant is supposed to be in strong liaison with the Client and provide economical, efficient solutions. After completion of final designs, all required approvals from official institutions will be taken by Kemerhisar Municipality. At this stage, all the necessary support to Kemerhisar Municipality will be provided by the Consultant. Subsequent to the approval of the design, the DSI Contractor will initiate the supply and installation phases of the project.

The selected Consultant will perform the following tasks but not limited to:

- a. The Consultant shall check/review all the design details.
- b. The Consultant will verify the compliance of the designs and construction documents with binding legislations and regulations. The Consultant shall also make sure the compliance with the good international practice and WB Environmental and Social Safeguard Policies and World Bank Group's (WBG) General and Sector Specific Environmental, Health, and Safety (EHS) Guidelines.
- c. The design review will also aim to enhance the resilience of the proposed infrastructure, as appropriate, to climate change-exacerbated risks such as droughts, floods, and geotechnical conditions, as well as to earthquake risks.

- d. The Consultant shall check that the materials described in the Drawings or Technical Specifications are not single source materials, but rather provide for reasonable competition and are suitable for the Project.
- e. Latest specific requirements and specifications shall be considered, and the designs shall be checked whether these criteria are used in the designs.
- f. The Consultant shall confirm and support the Client to obtain, as needed pursuant to the legislations/regulations, the consent or approval of relevant Authorities and/or their local branches to the designs before they are deemed final.
- g. The Consultant will assist and provide necessary technical information about the project to the Client/ILBANK for their assessing the energy efficiency and Greenhouse Gas (GHG) Emissions and Calculations if requested by the Client/ILBANK.

The Liability of the Consultant is described in General Conditions of Contract (GCC) 23.1 for the Bank's standard Request for Proposal and in any Specific Conditions of Contract (SCC). The Consultant, through their review of the DSI Contractor's designs, shall be liable for the technical viability, accuracy and content of the design drawings and documents including but not limited to all required calculations, drawings, details, analysis and specifications of the project components. The Consultant shall be responsible to ensure that the DSI Contractor provides a complete set of technical documents to achieve successful contract implementation as further detailed in the following sections of this ToR.

TASK 2: TO PROVIDE SUPERVISION SERVICES DURING THE CONSTRUCTION STAGE AND DEFECTS LIABILITY PERIOD

The Consultant shall be responsible to carry out all the duties and responsibilities attributed to the "Project Manager" or "Engineer" in the General Conditions of Contract (GCC), Particular Conditions of Contract and Part 2 – Work's Requirements Sections of the World Bank's Standard Procurement Document - **Request for Bids Plant without Prequalification**. The Supervision responsibility of the Consultant shall be for the DSI Contract signed as a result of the bidding processes concluded under this Contract and shall continue until the expiration of the Defects Liability Period/Warranty Period. Significant issues shall be subject to approval of the Client as indicated in the terms and conditions of the General Conditions of Contract (GCC) and Specific Conditions of Contract (SCC) of the respective works contract.

As an addition to these tasks as the Project Manager, the Consultant shall perform but not limited to:

- a. Follow-up and inform the Client about progress of the work and activities, attend any meetings reasonably convened by the Client and provide any information or evidence reasonably required by the Client at any public meetings or inquiries that might be held in connection with the Project.
- b. Follow-up and inform the Client about the cost and time impact and any other consequences of any sort of his proposals (such as revisions, recommendations, etc.). In case of an arbitration in the relevant DSI Contract, to assist the Client in the preparation of the documents needed by the Client.
- c. As in compliance with the format and ingredients determined by the Client, prepare monthly progress reports in comparative with DSI Contractor's original (initial) work schedule and inform the Client in written for delays.
- d. Based on the approved work schedule and cash flows of the DSI Contractor; monitor the progress compared to the initially envisaged plan and inform the Client about the failures in advance and propose mitigation measures to prevent further failures.

- e. During all kinds of material approval process; establishment and acceptance of factory and material acceptances, determination and approval of the institutions or organizations (laboratories, universities, etc.) where the tests are to be conducted, approval or rejection of the materials, manage the use of approved materials at site and removal of unauthorized materials from the site and follow.
- f. To check materials whether they are conformed to the requirements of material specifications described in project details without waiting the written mandate of the Client.
- g. To keep accurate and detailed site records.
- h. For construction works, conduct conformity monitoring of Environmental and Social liabilities including Occupational Health and Safety (OHS) issues mentioned in the Simplified Environmental and Social Management Plan (ESMP). All regular reporting obligations mentioned in these documents shall be followed for the construction activities.
- i. Ensure implementation of Simplified ESMP as required, in a manner acceptable to the Bank and make sure that no construction activity shall commence before the land acquisition process completed for the privately owned land and permits/licenses received to use/transfer rights of public lands.
- j. Following up the grievance mechanism mentioned in Sustainable Cities Project II - Additional Financing Environmental and Social Management Framework (ESMF). The management of grievances should also be included in the progress report to be prepared.

The Services will be carried out under the following Parts:

Part 1. Tasks prior to start of construction works will include but not be limited to:

- a. Review the qualifications of the proposed key management personnel of the Contractor and make appropriate recommendations to the Client;
- b. Ensuring submission of the Quality Assurance/Quality Control (QA/QC) Plan submitted by the Contractor, checking and approving its compliance with the contract requirements
- c. Receive from the Contractor, check for compliance with contract requirements and advise the Client on all performance certificates, insurance certificates or policies and guarantees relating to the contract before submitting to the Client for acceptance;
- d. Before the start of the works and during the works, facilitate any communication and attend any meeting between Contractor and the owners/management of facilities (water, telephone, electricity, gas) sharing the road right-of-way; in particular, give advice on proposed modifications by the owners/management of facilities;
- e. Before the start of works, review and approval of mobilization plan,
- f. Before the start of works, review and approval of construction methodology and material procurement schedule
- g. Before the start of works, review and approval of Contractor's Health & Safety Plan
- h. Ensure that Environmental and Social (ES) provisions set out in the contract documents are respected;
- i. Ensure that traffic operational safety is met before commencing the works and issue any work plan or drawing in that respect;
- j. Check correctness of coordinates and levels of all survey reference markers and require the Contractor/s to make an independent check;
- k. Check the Contractor's setting out and levels of the designed works;
- l. Verify estimated quantities in the Price Schedules and promptly advise the Client of any prospective Time and Cost effects and make appropriate recommendations;

- m. Measures for the proper implementation of Simplified ESMP including the grievance mechanism

Part 2: Tasks during construction will include but not be limited to:

2.1 Supervision tasks

The responsibility of the Consultant shall include, but not limited to, the following tasks:

- a. Approve and monitor the Contractor/s' work program and the source of materials;
- b. Approve and monitor the implementation of the Contractor's Quality Assurance/Quality Control (QA/QC) Plan;
- c. Approve and monitor the implementation of the Contractor's Method of Statement for commencing the work.
- d. Approve and monitor the implementation of the DSI Contractor's Health & Safety Plan;
- e. Explain and/or adjust ambiguities and/or discrepancies in the Contract Documents in advance in order to avoid any dispute;
- f. Inspect for approval all shop drawings and as-built drawings prepared by the DSI Contractor;
- g. Supervise inspection and testing of materials and works to ensure compliance with specifications, and/or removal and substitution of improper materials and/or work as required;
- h. Ensure the DSI Contractor's compliance with the agreed Environmental and Social Management Plan; to control and appraise the progress of the works, to order suspension of works and to authorize, with the Client's approval, extensions of the period for completion of the works; The Consultant shall take necessary measures for the Contractor to implement all environmental, social, and occupational health and safety aspects with regards to the Construction Works at site. In this context the most recent Turkish environmental and safety regulations as well as the Client and WB Environmental and Social Safeguard Policies and WBG's General and Sector Specific EHS Guidelines, Environment, Social, Health and Safety (ESHS) policies are required to be taken into consideration particularly during the supervision of the construction works. Within this scope, the Consultant shall also be responsible for the supervision of the Contractor's environmental and social management practices/plans (grievance mechanism, stakeholder engagement, waste management, noise, resettlement plan etc.) and ESHS obligations and have the DSI Contractor to comply with the same and/or take necessary measures as in the signed contracts until they are adopted by the DSI Contractor as per the signed Contract, its annexes and or relevant regulations as applicable and report to the Client in his monthly progress reports. The details of the Environmental, Social, Health and Safety (ESHS) Management and the responsibilities of the "Consultant" shall also be detailed in the DSI Contractor's contract. The Consultant shall have the responsibility for relevant supervision, oversight and instruction of the applications to the DSI Contractor.
- i. Provide assistance in administering and resolving grievances;
- j. Issue interim certificates for payment to the Contractor on the basis of measured work items or to certify the completion of the works or parts thereof;
- k. Carry out generally all the duties of the Project Manager as specified in the Contract, within the limitations specified therein;
- l. Advise the Client on all matters relating to compensation events and claims reported by the DSI Contractor and make recommendations thereon;
- m. Attend to the work inspections carried out by the State Authorities in accordance with the Turkish Law;

- n. Supervise preparation and execution of completion procedures including performance testing and programming and issuance of performance certificates, and submit all supervision documents to the committee responsible for handover of the facility from the DSI Contractor to the Client, according to the Applicable Law;
- o. Ensure that Certificates of Completion of the Works and Operational Acceptance Certificates are issued by the relevant authority;
- p. Assist the Client in taking over the site of the works.
- q. The Consultant will assist and provide the necessary technical information about the project to the Client/ILBANK for their assessing the energy efficiency and Greenhouse Gas (GHG) Emissions and Calculations if requested by the Client/ILBANK

2.2 Administration of the Civil Works Contracts

The responsibility of the Consultant shall include, but not limited to, the following tasks:

- a. Financial management of the DSI Contract. Based on (i) the DSI Contractor's programme of works and cash-flow predictions which shall be revised at required time intervals and, (ii) upon own judgement, the Project Manager shall prepare monthly, as part of monthly reports, disbursement tables showing the status of previous disbursements and a tentative prediction of future disbursements on a monthly basis;
- b. Monitor validity of the DSI Contractor's insurance policies and guarantees and timely advice the Client on their expiry dates, necessity to request the extensions of the validity and where necessary change the amount of the insurance policies and guarantees;
- c. Provision and administration of the Project Management Information System (PMIS) for management of project correspondence and documents in accordance with the approved PMIS plan and procedures, and timely updates of the records and reports thereof; Continuous follow-up of the Contractor work programmes and monitoring cash-flow in relation to the planned schedules and alert immediately the Client if any change occurs in the progress of disbursements;
- d. Day-to-day measurement and recording of quantities of works carried out by DSI Contractor;
- e. Daily recording of work site events in a work site logbook;
- f. Recapitulation of quantities of work carried out monthly for each contractual item of work;
- g. Monthly comparison of actual progress against progress as scheduled;
- h. Review DSI Contractor's Monthly Statements and issue the corresponding Payment Certificates as appropriate;
- i. Attendance at periodic site meetings and monthly progress meetings and ensuring minutes signed by all parties are recorded.

The required procedures to carry out the site supervision and contract administration tasks shall be prepared by the Consultant and submitted for the approval of the Client in a Consultant's Site Supervision Procedures Manual.

Administration of Environmental, Social, Health and Safety (ESHS)

The Consultant shall ensure that the DSI Contractor's ES (Environmental and Social) performance is in accordance with good international industry practice and delivers the DSI Contractor's ES obligations.

The ES related services include those of the Project Manager's as referred in the World Bank's **Standard Procurement Document (SPD Request for Bids / Plant without Prequalification)** and its revisions introduced in Section IX. Particular Conditions of Contract. Services to be provided by the Consultant will include but are not limited to the following:

- a. review the ES (Environmental & Social) documents, including all updates and revisions (not less than once every month);
- b. review and approve ES provisions of method statements plans, proposals, schedules and all relevant DSI Contractor's documents;
- c. review and advise the relevant person (of the Consultant) on the ES risks and impacts of any design change proposals and the implications for compliance with Simplified ESMP, Resettlement Plan/Ex-Post Social Audit (if any), GRM, consent/permits and other relevant project requirements;
- d. undertake audits, supervisions and/or inspections of any sites where the DSI Contractor is undertaking activities related to the Works, to verify the DSI Contractor's compliance with ES requirements, with and without DSI Contractor and/or Client relevant representatives, as necessary, and report the findings to the Client at monthly basis;
- e. undertake audits and inspections of DSI Contractor's accident logs, stakeholder engagement activities carried, community liaison records including all grievances received and resolved, monitoring findings and other ESHS related documentation, as necessary, to confirm the DSI Contractor's compliance with ESHS requirements, and report the findings to the Client at monthly basis;

The duties and responsibilities of the consultant regarding OHS management will include the following:

- a. Checking the compliance of the DSI Contractor's OHS documents and the OHS legislation and requirements within the framework of the Simplified ESMP on a daily basis, informing the DSI Contractor and the Employer in case of non-compliance,
- b. Ensuring that workers' health reports and personal files are complete and all relevant OHS trainings are completed, emergency drills are conducted, restricting workers' access to the field in case of detecting inappropriate working environments,
- c. Presence of an OHS specialist in areas where high-risk work is carried out (e.g., excavation, indoor work, crane work, etc.),
- d. Ensuring that the construction machinery and equipment used are in compliance with the legal legislation and preventing their use in case of non-compliance
- e. Notifying the Employer within 48 hours of any damage or accident related to the Project, including serious health injury, loss of limb or life, and safety injuries and road accidents, that has or may have a serious adverse impact on the safety, environment, affected communities, the public or employees, and provide adequate information on the relevant and immediate measures and measures to be taken and providing support for the root cause analysis in case of serious damages or accidents
- f. Participating in regular OHS meetings of the DSI Contractor and contributing when necessary
- g. Agree remedial action/s and their timeframe for implementation in the event of a noncompliance with the DSI Contractor's ES obligations;
- h. Attend meetings including site meetings, progress meetings to discuss and agree appropriate actions to ensure compliance with ES obligations;
- i. Check that the DSI Contractor's actual reporting (content and timeliness) is in accordance with the DSI Contractor's contractual obligations;
- j. Review and critique, in a timely manner, the DSI Contractor's ES documentation (including regular reports and incident reports) submitted to Project Manager and to provide advice to ensure the accuracy and efficacy of the documentation
- k. Undertake liaison, from time to time and as necessary, with project stakeholders to identify and discuss any actual or potential ES issues, and report to the Client;

- I. Prepare a brief monthly report that describes the work that the Project Manager's ES Key Expert/s have undertaken, the issues (including any DSI Contractor's ES noncompliance) identified and the actions planned or taken to address the issues.

Limitations of the Consultant's Authority

- A. The Consultant shall have no authority to relieve the DSI Contractor of any of its duties and obligations under the DSI Contract. The Consultant shall note that the Client is under obligation to seek ILBANK's concurrence before agreeing to or implementing any modification or waiver of the terms and conditions of the Contracts including granting an extension of the stipulated time for performance.
- B. The Consultant will seek prior written approval of the Client for the following:
 - a. issuing/approving any Payment Certificates (PC) for the DSI Contractor's Payments;
 - b. agreeing/instructing any changes in the project design;
 - c. approving or issuing of any Contract Variation, except in an emergency situation as determined by "Project Manager" in accordance with the Conditions of Contract;
 - d. in the event of additional work, the Consultant shall report on the relative merits of tendering vis-a-vis issuing a variation for such additional works;
 - e. approving a proposal for Variation submitted by the DSI Contractor;
 - f. making variations in work quantities which bring the total cost in excess of the value of the Contract Price specified in the relevant contract provisions;
 - g. determining any new rate or price with respect to any Variation;
 - h. approving any extension of the Intended Completion Date;
 - i. approving any compensation event for any additional cost including any cost associated with extension of the Intended Completion Date;
 - j. suspending the Works in accordance with the Conditions of Contract;
 - k. approval of the subcontracting of any part of the works;
 - l. approval of equipment and material manufacturers and models to be used within the scope of work.

Any response by the Project Manager which requires the Client's approval, except as otherwise expressly specified, shall be notified in writing to the DSI Contractor within maximum 21 days of receipt. (7 days for the Project Manager, 7 days for the Client, then 7 days for the Project Manager to consider Client's comments).

2.3. Supervision during the Commissioning and Defects Liability Period:

- a. The Consultant shall continue to be responsible for the supervision and inspection of the construction and completion of the Works during the Defects Liability Period as defined in the DSI Contract. The level of supervision shall be appropriate to the scale of the works being carried out. These inspections and supervision are to ensure that works, agreed to be carried out during the Defects Liability Period, are properly carried out and have been completed and that any failure of any part of the Works has been rectified. If any defect is discovered, during this period, the Consultant shall promptly investigate the reason for it, report to the Client and take required actions to rectify the defect.
- b. A report of these inspections shall be submitted to the Client, which shall include all details of any defects, faults, accidents or breakdowns, which have occurred together with the estimated costs of repair and the time scales within which they will be completed. Moreover, the Consultant shall submit quarterly report/s summarizing all the activities during subject quarter of Defects Liability. A final report shall be submitted at the end of the Defects Liability Period giving full details of all works carried out during that period. This report shall be submitted by

the Consultant to the Client at least 30 days prior to the expiration of Defects Liability Period/extended Period for the completed Works. The Consultant will provide minimum number of technical staff acceptable to the Client during the Defects Liability Period. Defects are expected to be minimum for a competent Consultant Firm during defects liability period.

- c. The Consultant is required to provide perfect supervision/inspection services during the period, to preparation of defect lists and monitor correction of defects. If required, Consultant will instruct the DSI Contractor and closely inspect the repair of works in the Defects Liability Period. Until finishing of Defects Liability Period, the Consultant shall execute all interim controls, inspections. In demand of Client, the Consultant shall deal with determined defect or failure. The Consultant will inform the Client and DSI Contractor in case of finding defects in interim audit/controls.
- d. The Consultant shall review all information about the “as-built-conditions” including calculations, drawings, specifications, final cost analysis etc. and advise to the DSI Contractor for revisions before they are submitted to the Client for approval.
- e. The Consultant is responsible for ensuring that the demobilization of the DSI Contractor is carried out in accordance with the mobilization plan, and that the entire process is closely supervised and monitored to ensure its smooth execution.

4 Time Schedule:

During the course of the services, the Consultant shall note that all designs/details/calculations/reports/specifications and other documents submitted to the Client for approval will be reviewed by the Client and approved or returned for revision and/or resubmission in 14 business days, which in turn as part of the relevant tasks of the Consultant, it needs to do the same review before this period expires and the Client has time to review and analyze the Consultant’s findings and consolidate with its own findings .

The Consultant shall submit all the documents in a timely manner to complete the services on time without any delay. The Consultant shall also take the approval process into account for submission of the documents. Time schedule for the completion of the Consultant’s services for the various parts of the work as mentioned below shall be submitted to the Client.

All activities under the Scope of Services shall be completed within 17 (eighteen) months from the consultancy contract signing date.

Project Completion Schedule is drafted in the following table.

5 Timetable

| Activity | Month 1 | Month 2 | Month 3 | Month 4 | Month 5 | Month 6 | Month 7 | Month 8 | Month 9 | Month 10 | Month 11 | Month 12 | Month 13 | Month 14 | Month 15 | Month 16 | Month 17 | Month 18 | Month 19 | Month 20 | Month 21 | Month 22 | Month 23 | Month 24 |
|---|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Procurement of Supervision Consultant for Kemerhisar SPP Project | | | | | | | | | | | | | | | | | | | | | | | | |
| Procurement of Design Supply and Installation Contractor for Kemerhisar SPP Project | | | | | | | | | | | | | | | | | | | | | | | | |
| Implementation Period | | | | | | | | | | | | | | | | | | | | | | | | |
| DLP Period | | | | | | | | | | | | | | | | | | | | | | | | |

Contract Type

The contract shall be time-based for the activities under this ToR.

6 Change in The Scope of Consultant's Services:

The construction and relevant supervision activity commencement dates for Works packages may vary due to the unexpected reasons. If no further input is required by the Client for rebidding of the respective tender, the Consultant shall not request any payment or compensation for the tender in question.

7 Team Composition & Qualification Requirements for the Key Experts:

The Consultant shall typically comprise a firm with experience in carrying out similar renewable energy projects, specifically to include the following minimum qualifications;

- a. Experience as Consultancy Company in the last 10 years, preferably in projects financed by international financing institutions
- b. Experience in the supervision consultancy services that are similar to the required services in size, similarity and complexity in the last 10 years, preferably in solar power plant (SPP) projects.

The Consultant's team shall include at least the following suitably qualified engineers and other professionals who are competent to carry out the duties described within this document. The number of staff will be determined by the Consultant Firm and also approved by ILBANK to comply with the strict duration limitation of the contract. The Consultant is free to propose additional professional experts as deemed necessary for successful completion of the assignment. The Consultant shall provide adequate staff in terms of expertise and time allocation, as well as needed equipment in order to complete the activities required under the scope of work and to finally achieve the objectives of the project in terms of time, costs and quality.

The minimum required number and experience of proposed professional staff is:

| KEY STAFF | Professional Experience (Years) | Specific Experience on the Related Assignment (Years) |
|-----------------------------|---------------------------------|---|
| Supervision Project Manager | > 10 | > 5 |
| Electrical Engineer | > 5 | > 3 |
| Survey Engineer | > 5 | > 3 |
| OHS Expert | > 5 | > 3 |
| Environmental Specialist | > 5 | > 3 |
| Social Specialist | > 5 | >3 |

Supervision Project Manager

The Supervision Project Manager is responsible for overseeing and coordinating the consultancy team, as well as maintaining effective communication with the Kemerhisar Municipality as being the Client and also ILBANK PMU as and when needed. In addition to their managerial role, the Supervision Project

Manager provides important technical inputs, ensures quality assurance, maintains consistency across tasks, and serves as the main point of contact and accountable party for the Employer regarding the tasks outlined in this Terms of Reference.

Ideal candidate shall meet the following qualifications:

- University degree in relevant Engineering Departments (BS or above), preferably in Electrical Engineering/ Electrical&Electronics Engineering/ Energy Systems Engineering or Civil Engineering.
- Has a minimum of 10 years of overall professional experience with a specific focus on serving as a Project Manager for the past 5 years, preferably in similar renewable energy projects,
- Possess a strong understanding of the design and technical documentation requirements for projects tendered preferably under international financial institutions (IFIs), the World Bank in particular,
- Have a good knowledge of requirements of Turkish legislation concerning designs, construction, engineering, environmental and social issues,
- Proven successful experience in collaboration with government institutions including municipalities and international financial institutions,
- Preferably, fluent in both written and spoken English.

Electrical Engineer

Electrical Engineer's primary responsibility is to offer valuable recommendations for the implementation of renewable energy systems.

- A bachelor's degree in Electrical Engineering, Electrical&Electronics Engineering or Energy Systems Engineering or master degree in renewable energy, or a related field with a focus on solar energy,
- Has a minimum of 5 years of professional experience in electrical engineering field,
- Has a minimum 3-year a proven record of accomplishment of successfully designing and overseeing the installation of electrical systems in renewable energy projects,
- Experienced in conducting electrical assessments, evaluating system performance, and ensuring compliance with safety and quality standards,
- Having a comprehensive understanding of electrical engineering principles as applied to renewable energy systems. Possesses extensive knowledge of electrical components, power distribution, control systems, and energy storage technologies,
- Familiarity with relevant industry standards and regulations,
- Preferably have a specialization in renewable energy systems,
- Proven successful experience in collaboration with government institutions including municipalities and/or international financial institutions is desirable,
- Preferably, fluent in written and spoken English.

Survey Engineer

Responsible for providing specialized expertise in the implementation of ground based solar power plants. Working closely with the Supervision Project Manager and other team members.

- Holds a graduate degree in survey engineering and other relevant departments,
- A minimum of 5 years of professional survey engineering experience after graduation,

- Has minimum 3-year proven record of successfully supervising the construction of solar power plants. Experienced in evaluating site suitability, and ensuring compliance with safety and quality standards,
- Demonstrates a strong understanding of survey engineering principles and practices. Possesses in-depth knowledge of relevant codes, regulations, and industry standards,
- Proven successful experience in collaboration with government institutions including municipalities and/or international financial institutions is desirable,
- Preferably, fluent in written and spoken English.

OHS Expert

Holding a undergraduate degree (BSc or above) and have at least 5 years professional experience after graduation. S/he shall have minimum 3 years of specific experience in Supervision services as Occupational Health and Safety (OHS) Expert or equivalent position in the Supervision stage of preferably solar power plant projects. Capable of providing recommendations to ensure compliance with relevant regulations, standards, and best practices. Familiarity with integrating environmental and social considerations into project identification and implementation processes.

Preferably have specialized knowledge and expertise in environmental and social safeguard policies, including the World Bank's Environmental and Social Standards (ESS) and General and Sector Specific Environmental, Health, and Safety (EHS) Guidelines. His/her main responsibility is to ensure compliance with these policies and integrate OHS considerations into the DSI Contract.

Language Proficiency: Preferably, fluent in written and spoken English.

Environmental Specialist

Holding a suitable graduate degree (BS or above / preferably Environmental Engineer) and have at least 5 years' professional experience after graduation. S/he shall have minimum 3 years of specific experience in supervising environmental investments, preferably the solar power plants project or equivalent position from an environmental and social perspective. Capable of providing recommendations to ensure compliance with relevant regulations, standards, and best practices. Familiarity with integrating environmental and social considerations into project identification and implementation processes.

Shall have specialized knowledge and expertise in environmental and social safeguard policies, including preferably the World Bank's Environmental and Social Standards (ESS) and General and Sector Specific Environmental, Health, and Safety (EHS) Guidelines. His/her main responsibility is to ensure compliance with these policies and integrate environmental and social considerations into the project design documents and their implementation.

Educational Background: Holds a suitable graduate degree in environmental engineering, or a related field. A strong understanding of environmental and social sciences, as well as sustainability principles, is essential.

Professional Experience: Demonstrates a minimum of 5 years of professional experience after graduation, with expertise in environmental and social aspects of project design and implementation.

World Bank Environmental and Social Safeguard Policies, or another international financing institution (IFI), like IFC, EIB, EBRD, CEB, ADB or similar: Possesses practical knowledge of World Bank's (or other IFIs) ESS and EHS Guidelines. Demonstrated practical experience in conducting environmental and

social impact assessments, identifying potential risks and impacts, and developing mitigation measures in line with these policies.

Stakeholder Engagement: Practical experience in stakeholder engagement and consultation, including local communities, governmental bodies, and relevant social and environmental organizations. Ability to facilitate dialogue, address concerns, and incorporate stakeholder feedback into project identification.

Language Proficiency: Preferably, fluent in written and spoken English.

Social Specialist

Holding a suitable graduate degree (BS or above / preferably Social Science) and have at least 5 years' professional experience after graduation. S/he shall have minimum 3 years of specific experience in supervising the solar power plants project or equivalent position from social perspective. Capable of providing recommendations to ensure compliance with relevant regulations, standards, and best practices. Familiarity with integrating social considerations into project identification and implementation processes.

Shall have specialized knowledge and expertise in environmental and social safeguard policies, including preferably the World Bank's Environmental and Social Standards (ESS) and General and Sector Specific Environmental, Health, and Safety (EHS) Guidelines. His/her main responsibility is to ensure compliance with these policies and integrate environmental and social considerations into the project design documents and their implementation.

Practical experience in stakeholder engagement and consultation, including local communities, governmental bodies, and relevant social and environmental organizations. Ability to facilitate dialogue, address concerns, and incorporate stakeholder feedback into project identification.

Language Proficiency: Preferably, fluent in written and spoken English.

8 Reporting Requirements and Time Schedule for Deliverables:

Reports

The Consultant shall prepare and submit a design review report about design carried out by DSI Contractor to the Client in 20 business days after taking project documents including all required calculations, sketches and/or drawings, details and specifications of the project components. In the design review report the Consultant will submit findings in the drawings, deficiencies and all other details.

The Consultant shall prepare and submit to the Client monthly reports including progress charts and photographs in color giving all information regarding the progress of the Works, actual extent and nature of the Works completed as well as details of any delay in the works, reason and remedial of the delay, any other problems relating to the Works and substantiating documentation if required. The Consultant shall also clearly indicate in the report whether the delay (if any) of any part of the Works will cause any delay in the completion of the whole Works. The Consultant shall prepare an Inception Report including but limited with the Consultant's Site Supervision Procedures Manual within 3 weeks at the beginning of the project.

The monthly report/s shall include the percentages of the Work items completed and planned, and also the actual and planned cash-flows for each work item as of the reporting period prepared in the project planning tools (such as MS Project, Primavera, etc.) accepted by the Client.

The monthly report/s shall also include records of materials, equipment and plant tested with copies of the test results and, statistical evaluation of the test results in table or graphical form. Action taken with regard to poor results shall be stated.

The said report shall give a detailed review of the Works to be performed during the following month and a general listing of the works to be performed during the following one month.

The report shall also give information about personnel employment status of the Consultant.

The report shall also include environmental and social and OHS management practices followed for mitigation of environmental and social impacts of the works.

The report shall be submitted to the Client by the tenth day of following each month. Any comment by the Client on the report shall be reviewed and the report shall be modified and re-submitted to the Client within a week.

Due to the urgent nature of the project and short construction time, the Consultant shall also prepare a report in table form showing summary of cumulative progress in main work activities on weekly basis.

In addition, the Consultant shall record views from at least 5 different points for the construction site, on a weekly basis, showing the progress on the site with dates and record them with acceptable format on CD and submit to the Client.

The requirements for the submission of reports, drawings and other documentation are given below. Reports shall be prepared in Turkish; upon request of İLBANK, English version may be asked. The metric system of weights and measures shall be used.

Submission shall be as follows:

Format of Reports: A4 or A3, including where appropriate drawings reduced to A3 size.

Format of Drawings: A1 and/or A0 size.

A draft copy of all reports in Turkish shall be firstly submitted to the Client for discussion purposes following which the Consultant shall be required to prepare the final copy, incorporating any amendments arising from such discussions.

Construction Supervision & Completion and Defects Liability Stages Reporting Requirements

1. The Consultant shall prepare minutes of meetings, reports, documents, and several documents for the activities of the project. Aim of these documents is to record the important milestones and activities of the project. These documents will be used to support reports for the Client.
2. Below documents shall be prepared:
 - a) Monthly report/s (contains summaries for the activities of construction site, including but not limited to physical progress, financial progress).
 - b) Monthly reports for summarizing activities, including but not limited to project plan, cash-flow information in the previous months period.
 - c) Monthly progress reports to summarize previous months covering the status of ES performance of project and RP/Ex-Post implementation (for the subproject/s including land acquisition and having a RP).
 - d) Support the preparation of the monthly progress reports by Municipality's Project Implementation Unit (PIU) for the relevant sub-project site and monitor quality of reporting throughout the duration of works.

- e) Construction Completion Reports as described in the DSI Contract.
- f) Final Completion of Contract Report that combines sections of contract completion report in a single report also including additional information for completion of construction works.

The Consultant shall submit his reports in compliance with the below table;

| No | Report | Last Submission Date | English | Turkish |
|----|------------------------------------|--|---------|---------|
| 1 | Design Review Report | Within 20 business days after receiving final design drawings (prepared by DSI Contractor) and relevant project documents. | 1 | 3 |
| 2 | Inception Report | Three weeks after signing of the Contract | 1 | 3 |
| 3 | Monthly Reports | Ten days after completion of each month | 1 | 3 |
| 4 | Construction Completion Report | Four weeks upon the issue of the Completion Certificate and Operational Acceptance Certificate of DSI contract. | 1 | 3 |
| 5 | Interim Inspection Reports | Two weeks following up of each interim audit in Defects Liability Period of DSI contract | 1 | 3 |
| 6 | Contract (Final) Completion Report | 4 (four) weeks upon the issue of a Final Acceptance (Performance) Certificate of DSI contract which is expected to be issued after DLP | 1 | 3 |

NOTE: English version of reports will be asked only upon request of İLBANK.

The Consultant shall prepare and submit to the Client various reports, drawings and document that are specified in or that are implied from these Terms of Reference in respect of various components of the Projects as described in the Terms of Reference.

The requirements for the submission of reports, drawings and other documentation are given below. Reports shall be prepared in both Turkish and English languages. The metric system of weights and measures shall be used.

Submission shall be as follows:

Format of Reports: A4 or A3, including where appropriate drawings reduced to A3 size.

Format of Drawings: A1 and/or A0 size.

A draft copy of all reports shall firstly be submitted to the Client for discussion purposes following which the Consultant shall be required to prepare the final copy, incorporating any amendments arising from such discussions.

9 Client's Input and Counterpart Personnel:

The Client will timely provide to the Consultant the inputs and facilities, assist the firm in obtaining licenses and permits needed to carry out the services, and make available relevant project data and reports.

The following items shall be provided free of charge by the Client to the Consultant: The existing designs and/or sketches, information and documents regarding the location and ownership of the land or facility (maps, topographic plans, analysis reports etc.) where the Project will be carried out, as well as necessary permits and documents required by national regulations prior to the connection agreement and connection agreement itself, electricity consumption data and reports of the design drawings and calculation etc. The Consultant shall return all such drawings and documents received to the Client upon the completion of services. In addition, the Client shall, where possible, assist the Consultant in obtaining approvals, permissions from the Municipalities and other State Authorities in respect of the Services to be performed.

As a part of the Environmental and Social Assessment, Simplified Environmental and Social Management Plan (ESMP) of sub-project have been prepared according to project specifications in full compliance with the World Bank (WB) Safeguard Policies, including Operational Policies (OPs) (i.e., OP 4.01 - Environmental Assessment and WB's 2010 Policy on Access to Information) and World Bank Environmental and Social Framework (ESF).

The Consultant will be fully responsible for providing their own office. The office shall be furnished and equipped by the Consultant. All sort of running expenses shall be under the Consultant's responsibility. The Consultant shall be required to deliver any equipment and materials provided by the reimbursable expenses and which have been used for the Services to the Client.