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މިނިސްޓްރީ ޕްރި ފިނޭންސް
މިނިސްޓްރީގެ ޖެނެރަލް އޮފީސް، ލަވިންދޯ، ޖުމްހޫރިއްޔާއި ދިވެހިރާއްޖޭގެ ޖުމްހޫރިއްޔާއި

CLARIFICATION 3

މަޢުލޫމާތު ވާޢަންދުވާ 3

ސަފުހާ ނަންބަރު No:	TES/2024/G-004		
ޕްރޮޖެކްޓް ނަންބަރު Project:	Installation of 15 MWp Grid-tied Solar Photovoltaic System at L. Hithadhoo, L. Kunahandhoo, L. Maabaidhoo, L. Maamendhoo, L. Maavah, L. Isdhoo, L. Kalaidhoo, L. Fonadhoo, L. Gan, L. Dhanbidhoo, Lh. Naifaru, Ga. Villingili and Sh. Funadhoo under Design, Build, Finance, Own, Operate and Transfer (DBFOOT) Basis		
ޕްރޮޖެކްޓް ނަންބަރު Issued Date:	14 th November 2024		
ސަފުހާ ނަންބަރު ދަށުން No. of Pages: - 13	ބީޕީޕީ ނަންބަރު BoQ: -00	ނޯޕްރަޓްސް ނަންބަރު Drawings: -00	

Please include this clarification when submitting the bid . ފަންދުވާ ފުރުޞަތު ބޭނުންކުރާ ވަނީ މި ވާޢަންދުވާ ފުރުޞަތު ބޭނުންކުރުމަށް ޖެނެރަލް އޮފީހުގައި ފޮނުވާލެވިފައިވާ ގޮތުގައެވެ.

➤ **Answers for the queries are attached with this Clarification.**



ނަންބަރު
Name: Fathimath Rishfa Ahmed

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Signature:

Sl. No.	Reference	Bidder's Clarification	Response
1		<p>Bid Security in Euros: As indicated in section 7 of the tender, the bid security requirements are stated in USD (Lot 1: USD 20,000, Lot 2: USD 160,000). We would like to inquire whether it is possible to submit this security in Euros instead, and if so, which exchange rate or conversion method would apply.</p>	<p>Bidders are requested to refer to BDS of ITB 19.1.</p>
2		<p>Ground Foundations for PV Systems: The Environmental and Social Screening Report (ESSR) specifies the use of concrete foundations for the PV installations. We would like to ask whether standard ground-mounted PV structures, which are typically installed by piling or screwing directly into the ground, may also be considered for this project. This installation approach may offer both ecological and economic benefits. We would appreciate your feedback on whether this installation method could be permissible under the project's guidelines.</p>	<p>Screw pile or any appropriate foundations may be proposed, as part of the site due diligence and detailed design stage. Screw piles are being used to support PV structures in some Maldives PV projects.</p>
3		<p>Please clarify whether the fixed tariff to be filled in Letter of Bid-Financial Part shall include additional GST.</p>	<p>Bidder's quoted tariff should be all inclusive fixed tariff for the PPA period, including taxes, as applicable. Bidders are requested to refer to ITB 14. However, please note that all imported items under the contract for this tender under the ARISE project will be eligible for duty exemption except administrative fees, taxes associated with import, logistics, installation, etc. Further, successful bidders can register with the Utility Regulatory Authority for an IPP license to be eligible for GST exemption. Bidders are requested to refer to the Maldives Customs Services and Utility Regulatory Authority website for further details.</p>
4		<p>Does DG Synchronisation required</p>	<p>No. The PV developer must provide PV system with control interface as per Part D. The PV plant will be controlled by and EMS installed at the diesel engine power house.</p>



5	Is BESS will be implemented in this project as it is a PPA project.	BESS will be implemented on all islands, but is clearly stated as being implemented by "other contractors". PV IPP is not responsible for BESS.
6	Up gradation of existing LV-LDB & LT feeders will be taken care by FENEKA or?	Upgrading to feeders depends on the island. in some cases, it is done by FENAKA, in other cases it is to be done by PV developer. This is specified in the data room Masterlist and GU plus feeders.
7	SLD of each Island is required	Refer to Data room. SLD are provided for all islands, and examples were shown in the pre-bid.
8	Water availability for module cleaning system	Developer is required to supply their own water for module clearing if required.
9	Tariff Buy down payment will made after completing the project as per project timelines.	Yes, 100% of the Tariff Buydown Payment shall be payable to the Winning Bidder on Commercial Operation Date. Bidders are requested to refer to clause 5.2 (b) of the Implementation Agreement. Further, condition stated in clause 5.2 (b) (vii) is optional and will be applicable at the sole discretion of the World Bank and the Ministry of Climate Change, Environment and Energy (MCCEE), Government of Maldives.
10	Can we have cloud monitoring instead of SCADA network	Connection and fibre interface as per Part D, (D.6) is required for EMS to control and/or curtail the PV plant, and for EMS to remotely program the PV plan for network stability - this is a non-negotiable requirement. in addition, PV Developer may use his own cloud-based monitoring to monitor his own PV plant.
11	installing of Revenue meters at all LT connections will increase the project cost	Location of revenue meters is specified in data room Master list and GU plus feeders.
12	Per square meter annual rental charges can be reduced as mostly it is government land, specifically in roads, medians of the local council is where the installation is going to happen	No change. Rental charges for sites are kept nominal for contract enforceability. This will be a fixed amount as per the License Agreement
13	Weather monitoring for the projects can be installed at one location per island.	As per Part D.7, weather station are to be installed for all plant > 175kWp.
14	Who will be responsible for trimming of trees during the 20 years of operation & The council should not encourage growing trees above the installation perimeter which may affect the generation of the solar plant.	This will be in general winning bidder's responsibility. Bidder is required to assess the effort needed based on the site information provided. Generally, this is fairly simple task.



15		As we are Investors cum developers for this proposed project, Onus of generation of power through solar lies on us, Hence we request that design of project & selection of material for the structure should be decided by the developer for optimisation of generation.	"PV array structures shall be installed in publically accessible areas and recreational spaces. Therefore, the design guidelines shall be followed, and community engagement requirement adhered to. This is non negotiable. Bidders may exceed these requirements with innovative or improved structure designs, and these shall be assessed during the bidding stage using the ""Rated Criteria"". Design is flexible within the design constraints specified for each site.
16	Volume 1, Section IV, Bid Forms, Technical Proposal, Form Tech-2 to 6: DC kWp capacity proposed per site, meeting the requirement stated in this RFP	Actually the system will be designed in the DC capacity and in the Reference sheet you have proposed KWp of installation and the AC capacity will be lesser than the DC capacity by considering the Degradation factor, Kindly confirm.	DC/AC ratio can be decided by bidder. The maximum DC capacity is stated, and the maximum AC capacity is the same numeric value as the maximum DC capacity.



17	<p>2. Evaluation of Technical Proposal (Technical Proposal Scoring and Methodology) o The Degradation Factor (proposed) should not be more than 2.5% in the first year following Commercial Operation Date, and 0.5% for years thereafter. Nevertheless, in the event that the CUF is determined as per the aforementioned criteria (derived CUF), the proposed Degradation Factor may be adjusted accordingly (revised Degradation factor) , as long as the Energy (in kWh) output for the subsequent years (year 2 onwards) remains within the prescribed threshold of Fixed Energy for first year</p>	<p>Does the bidder has to maintain the RFP Indicated Fixed Energy for 1st year (kWh) through the 20 years PPA or It can vary as per the SPV module degradation characteristics.</p>	<p>RFB indicated Fixed Energy for 1st year (kWh) is only applicable for the first year. The Fixed Energy for 1st year is set based on the load limitation of the particular Island as per conditions prevailing today. This is done to ensure that the PPA is contracted with the right combination of DC capacity and CUF ensuring that the contract energy is within load limits for the subsequent years, while making the best utilization of the available land.</p> <p>In the subsequent years, Fixed Energy shall be equal to the Fixed Energy of the previous year adjusted for Annual Degradation stated for Year 2 to 20 of the PPA. Bidder is requested to refer to Notes of the Form Tech-1: Basic Data of the RFB and Cl. C.1 of Section VII - Technical Requirements of the RFB for more details.</p>
18	<p>For Submission of FORM TECH – 5</p>	<p>We request you to kindly share the existing SLD of the locations along with the MAP where the DB is located for better understanding, As</p>	<p>SLDs and DB numbers are already provided. Please refer to Data Room</p>



		most of location DB numbers are not there and local Discomm representatives are unaware of the terminology.	
19	Array Structures	As you have provided some structural designs along with the tender document, Is it mandatory to follow those designs or as a developer we can design the system as per the site requirements.	"PV array structures shall be installed in publically accessible areas and recreational spaces. Therefore, the design guidelines shall be followed, and community engagement requirement adhered to. This is non-negotiable. Bidders may exceed these requirements with innovative or improved structure designs, and these shall be assessed during the bidding stage using the ""Rated Criteria"". Design is flexible within the design constraints specified for each site.
20	B.3.2. Capacity Utilization Factor and Performance Ratio	Kindly confirm the formulae calculated for establishing the CUF & let us know CUF is calculated for AC capacity or DC capacity.	AS per definition of CUF in Part B.3.2, it is based on the DC nameplate capacity (Wp)
21	Selection of Inverters	Kindly let us know can the developer can decide AC:DC ratio, as as per the bid document the project proposed capacities are mentioned in DC capacity ie, KWp. Example: Proposed site DC capacity is 100 KWp then the AC capacity will be 70 KW.	DC/AC ratio can be decided by bidder. The maximum DC capacity is stated, and the maximum AC capacity is the same numeric value as the maximum DC capacity.
22	B.7.3. PV inverters	As per document it is mentioned as Grid Tie inverters, actually at all sites there are existing Diesel Generators are available and through it the LV loads are managed. Does the developer has to provide DG-synchronisation device for synchronisation of Solar power with Diesel Generators.	No. The PV developer must provide PV system with control inferace as per Part D. The PV plant will be controlled by and EMS installed at the diesel engine power house, which is outside the scope of the PV developer.
23	D.3.1.1. Connection to the grid	Some Project locations the Power from the Grid tie Inverters are connected to the local Local Distribution Boxes and some locations it will be directly connected to the Sub Station. There is no availability of Spare feeder and if any upgradation is required will it be done by FENEKA or it has to be done by the Developer.	Upgrading to feeders depends on the island. in some cases it is done by FENAKA, in other cases it is to be done by PV developer. This is specified in the data room Masterlist and GU plus feeders.



24	<p>D.4.2. LV metering LV sites will be fitted with metering as described in section D.3.4 above. LV sites of less than 175kW installed PV capacity will not be required to fit a separate Power Quality Meter. The Revenue Meter may be used to provide required PQM data. LV sites of greater than or equal to 175kW installed PV capacity will be required to fit a separate Power Quality Meter in addition to the Revenue meter as described in section D.3.4 above</p>	<p>We request you to provide LV Box Details of Islands with their SLD and location details for prebid engineering activity, so we can know how many PQM and Revenue meter is required.</p>	<p>Bidder is requested to refer to the file " Masterlist and GU plus feeders" and other files provided in the data room. This also includes SLDs and interconnection points. Any finer details can be determined during detailed site surveys of the winning bidder.</p>
25	<p>D.7. WEATHER STATION A solar PV plant (or local cluster of plants) with capacity >175kW must include a weather station and integrate the weather station output seamlessly</p>	<p>Kindly confirm the bidder has to consider One weather station per Island or Per installation of solar plants. Example: There are two installations, One car port of capacity- 75 KWp in harbour west area & One road canopy of 100 KWp in Secretariat in this case we have to install 1 no of weather station of 2 nos of weather station</p>	<p>As per Part D.7, weather stations are to be installed for all plant greater than 175kWp.</p>



	with the solar PV plant data available to the grid.		
26	<p>ARTICLE 4 CONSIDERATION</p> <p>4.1 In consideration of the grant of the License over the Site(s) to develop the Project and the grant of Access Rights, the Licensee shall pay to the Licensor, an annual fee at the rate of Rufiyaa Eight (MVR 8) per square meter (of the area of the Site(s)) per year (“Fee”). The Fee shall be paid on or before the [●] day of [●] of each year during the License Term.</p>	<p>We request you to provide the clarity regarding the License fee for grant of Access rights to Land, is applicable for all locations of installations (Like elevated arrays, Road canopy & other installations) or only for installations done in private lands.</p>	<p>The Licensee fee for the grant of Access rights shall be applicable individually for all the sites, signed with each site owner.</p>



27	<p>D.3.4. Metering All MV sites shall have installed a revenue meter and Power Quality Meter on each feeder at the point of connection to the network. Revenue Meters and Power Quality Meters shall be fed from separate CT cores. Revenue Meters and Power Quality Meters may share VT secondary supplies.</p>	<p>We need to install Revenue Meters in accordance with Figure 8: LV Plant Connection Options. On one of the islands, there are three to four LV feeders where we will inject power from the solar generation units. This means we are required to install Revenue Meters at each point of injection before the LV feeders.</p>	<p>This is correct. A physical Revenue meter is required, with registers for generation and consumption, so that net energy generated can be measured. Virtual revenue meters are not acceptable for billing purposes.</p>
28	<p>LV Feeders</p>	<p>At the site, the LV feeders are either overloaded, or the breaker capacity is insufficient to handle the required current from the solar power injected into the grid. Will the necessary upgrades be managed by FENEKA, or will it fall under the developer's scope of work?</p>	<p>Upgrading to feeders depends on the island. In some cases, it is done by FENAKA, in other cases it is to be done by PV developer. This is specified in the data room Masterlist and GU plus feeders.</p>
29		<p>Should we base our measurements on single lines or on Google Earth? There are multiple connection boxes for each location on single lines and it is unknown whether they exist or not, these boxes are not in Google Earth files. To what extent are we responsible for these boxes? Or are we only responsible for the meters to the distribution boxes shown on Google Earth?</p>	<p>SLD provides the cable run distances for existing and new LV cables and distribution boxes. These will be also applicable for LV cable upgrades needed. LVDB connection boxes (Downstream of transformers) marked on SLD's exist. The LVDB's identified for LV connections are as marked in SLD and also specified in "Master List and GU plus feeders". There are no multiple connection boxes For each site the connection characteristic is specified: i.e. the type of connection (LV, MV), meter location, and extent of cabling (LV to</p>



			Distribution, LV feeder to Tx Busbar, LV to DB with shared LV feeder upgrade etc.), is defined.
30		The old versions of the new power house single-line diagrams have been shared, so they need to be updated. Are all of these within our scope? If they are within our scope, will the distribution boxes labeled as "DISTRIBUTION BOX" also be renewed? If the entire scope is our responsibility, we will need the new single-line diagrams and power ratings of the distribution boxes.	No new powerhouse busbars are required for LV or MV connections. In some cases of connection to an existing substation, a transformer LV busbar upgrade may be required. This is specified in the data room Master list and GU plus feeders .
31		A connection from 11kV MV has been requested. Will the MV part of this project be completely within our scope or will it still be within the scope of FENAKA?	Upgrading to feeders depends on the island. in some cases, it is done by FENAKA, in other cases it is to be done by PV developer. This is specified in the data room Master list and GU plus feeders .
32		Is the New Power house busbar board within our scope? Is this board within our scope or are we responsible up to the feeder inputs?	No new powerhouse busbars are required for LV or MV connections. In some cases of connection to an existing substation, a transformer LV busbar upgrade may be required. This is specified in the data room Master list and GU plus feeders .
33		Lot 2 also has MV scopes. However, single line diagrams of some islands are not shared. How many kVA transformers need to be added? (ISdhoo, Kalaidho, Gan, Funadho)	Refer to Data room. SLD are provided for all islands.
34		Will we add additional MV cells (RMU) on the islands where transformer power will be increased?	Upgrading to transformers/feeders depends on the island. in some cases, it is done by FENAKA, in other cases it is to be done by PV developer. This is specified in the data room Masterlist and GU plus feeders .
35		It will be connected from MV at airports but there is no information. If there is a single line diagram, can it be shared?	Refer to Data room. SLD are provided for all islands.



36		Q1: The bid document specifies the use of 325-watt panels. Due to current market conditions and sourcing challenges, would it be permissible to use 550-watt or higher-capacity panels as an alternative? Kindly confirm if this substitution would be acceptable.	Module power rating is not specified. Bidder can choose the panel sizes and capacities. However, it is generally expected to optimize the space usage by use of efficient panels.
37		Q2: Regarding the walkways and road canopies:	
38		Is it required for the solar panels to be mounted on a full roof structure, or can they be directly integrated into the canopy structure without an additional roof layer?	Roof layers are not required. However, waterproofing or shading is expected, as required, on a case by case basis, to fulfil multiple functions such as vehicle parking, shaded walkways, community mass events, etc. all of which are indicated in the Site Requirements Summary file in the data room, , which also include other supplementing information. Even without roofing sheets, waterproofing can be done by filling gaps to ensure the structure can be used as shade in the rain as well. In such case, a gutter is also expected to be managed / direct water. During design stage, the PV developer can consult with the site owner for more clarity on the requirements.
39		In the designated installation areas, could the shading area be excluded, using only the supporting structure, or should a complete roof and structure be provided, with panel installations limited to essential sections?	Roof layers are not required. However, waterproofing is expected (by filling gaps) to ensure the structure can be used as shade also in the rain. A gutter is also expected to managed/direct water.
40		Page 19 – First paragraph – it mentions that orientation & angle of PV panels in some critical sites should be adjustable. couldn't find this information in detailed document, kindly specify the sites and the requirement	Please refer to page 125 of Part 2 - Employers Requirements E.2.1, which provides the location details and the angles expected. Bidder is expected to go through further related site-specific details in the Data Room as well.
41		Page 28 – B.7.6 - Weather stations – it's mentioned that weather stations are required for each site. But is likely one weather station for one island (not all 138 locations), please confirm	As per Part D.7, weather station is to be installed for all plant greater than 175kWp.
42		Page 42 – C.2.3 – Road based PV installations – for main islands, the layout drawings suggest that the AC power cables may need to cross the roads for grid-connection. Are there	Some roads may have while other may not. This is a detail that has to be determined during detailed survey and detailed design stage of winning bidder.



		underground pass tunnels available at regular intervals for running the AC cables?	
43		C.3 – Special Site Considerations – for all sites it’s mentioned that ‘Night time lighting to be provided under the array’ . Is there provision to obtain power supply from the main grid for such lighting? If not what arrangement is suggested?	General grid access can be made available. This is a detail that has to be determined during detailed survey and detailed design stage of winning bidder.
44		Page 74 & 83 – Transformer upgrades – Transformer upgrades are requested 5 sites at Gan & Villingili islands. What are the existing transformer capacities for each one of them?	Upgrading to feeders depends on the island. in some cases, it is done by FENAKA, in other cases it is to be done by PV developer. This is specified in the data room Masterlist and GU plus feeders.
45		Page 113 – last paragraph on MV cables – It is mentioned that water blocking shall be included in all 11 kV cables. What is the mechanism engaged by the utility for existing 11 kV UG cables ? Kindly provide an illustration diagram / methodology to consider	Question unclear. Bidder is suggested to refer to the data provided.
46		Page 117 – D.10.8 – Engineering studies – it’s required to carry out detailed studies for MV network modifications and for LV network (less stringent). Confirm that the existing systems’ details & parameters will be provided by the utility for such studies.	Upgrading to feeders/transformers/etc. depends on the island. in some cases, it is done by FENAKA, in other cases it is to be done by PV developer. This is specified in the data room Masterlist and GU plus feeders.



47		<p>C.3. SPECIAL SITE CONSIDERATIONS</p> <p>Further our team noted the following disparity of the sites declared in two tender volumes.</p> <p>Document 01 - Site requirement Summary Site Requirements Summary.xlsx</p> <p>Document 02 - Master list and GU Plus Feeders Masterlist and GU plus feeders.xlsx</p> <p>The name disparity is in the sites which are located in Fonadhoo & Villingili islands. Need to get clarity?</p>	<p>Unclear what the specific discrepancy is. Bidder is suggested to refer to the sheets again.</p>
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