Green University Project Committee
Aligarh Muslim University (AMU)
Corrigendum - I
Request for Proposal (RfP)

This is with reference to the RfP No. SPV-16, Dated 09/02/2016
Aligarh Muslim University (AMU) has invited RfP from interested Bidders/Applicants with relevant experience and expertise for Design, Engineering, Supply, Construction, Erection, Testing, Commissioning and O&M of 3MW (AC) Solar PV Power Plant at Aligarh Muslim University through competitive bidding.

A Pre-Bid meeting was held on 29/02/2016 at the office of Convener, Green University Project Committee Aligarh Muslim University, Aligarh.

The Last Date & Time for submission of Bid has been extended up to 21/03/2016 16:00 hrs (IST).

The authority reply to the queries pertaining to this RfP is hereby attached.

Convener
Green University Project Committee
Aligarh Muslim University

Response to Queries - RFP for Design, Engineering, Supply, Construction, Erection, Testing, Commissioning and O&M of 3MW (AC) Solar PV Power Plant at Aligarh Muslim University						
1. Date Extension						
S. No.	**Section**	**Clause No.**	**Page No.**	**Existing Clause**	**Query**	**Response on Query**
1	I & II	3.2 & 1.2.3	3 & 9	Last Date & Time of Bid Receipt : Up to 09/03/2016 16:00 hrs (IST) Last date and time for submission of Bids 09/03/2016 at 16:00 hrs	Bidders has requested for extension of last date for submission of Bids	The Last Date & Time of Bid Receipt : Up to 21/03/2016 16:00 hrs (IST)date
2	I & II	3.2 & 1.2.4	4 & 9	Bid Opening Date & Time: 09/03/2016 16:30 hrs (IST) Date of opening of Techno-commercial Bid 09/03/2016 at 16:30 hrs at AMU, Aligarh, Uttar Pradesh	-	Date of opening of Techno-commercial Bid 21/03/2016 at 16:30 hrs at AMU, Aligarh, Uttar Pradesh

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2. Eligibility						
S. No.	**Section**	**Clause No.**	**Page No.**	**Existing Clause**	**Query**	**Response on Query**
1	I	4.2.1	4	The bidder should have designed, supplied, erected/ supervised erection and commissioned/ supervised commissioning of Solar Photo Voltaic (SPV) based grid connected power plant(s) of cumulative installed capacity of 15MWp or above, out of which at least one plant should have been of 3MWp capacity or above, out of which at least one project should be ground mounted. The reference plant of 3MWp or above capacity must have been in successful operation for at least One (1) year prior to the date of techno-commercial bid opening	(a) The bidder should have executed in the last ten(10) years an industrial project in the area of power generation I power transmission {220kV or above voltage level)/ steel / oil and gas / petrochemical / fertilizer and/or any other process industry, of a value of Rs. 275 crore or more in a single project or work and the same should be in successful operation for at least one (1) year prior to the scheduled date of tech no-commercial bid opening. AND (b) The bidder should have executed at least one {1) substation of 33kV or above voltage level, consisting of equipment such as 33kV or above voltage level circuit breaker, HT cables and terminations and power transformer, either as a developer or as EPC Contractor which should be in successful operation for at least one (1) year prior to the scheduled date of techno-commercial bid opening. The work referred to at clause 4.2.3 (a) & 4.2.3 (b) can be same or for different projects.	Original Bid Conditions will prevail
					The bidder should hove designed, supplied, erected/ supervised erection and commissioned/ supervised commissioning of ground mounted Solar Photo Voltaic (SPV) or Renewable Energy (Excluding Small Hydro) based grid connected power plant(s) of cumulative installed capacity of 15MW or above, out of which at least one plant should hove been of 3MW capacity or above. The reference plant of 3MW or above capacity must have been in successful operation for at least One (1) year prior to the date of techno-commercial bid opening	
					We have installed 10MW solar power plant under IPP and exporting to TANGEDCO apart from other installations. Can we add the above 10MW for meeting this eligibility criteria	If this project has been designed, supplied, erected/ supervised erection and commissioned/ supervised commissioning by the bidder itself, then it can be considered for meeting the technical qualification

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3. Commercial						
S. No.	**Section**	**Clause No.**	**Page No.**	**Existing Clause**	**Query**	**Response on Query**
1	II	1.2.3	9	The Contractor shall furnish within 14 days from the date of issue of Operational Acceptance, an unconditional and irrevocable bank guarantee for due Performance as per Format attached and which shall be for 5% of the total Contract Value (i.e., total sum of all the supply contract, erection contract and civil works contract) and valid for 120 months from the date of Operational Acceptance.	The value of O&M BG is equivalent to 5% of the Contract Value which will be kept with AMU for 10 years. We requests AMU to keep the O&M BG as 5% of the O&M Charges quoted with a revolving BG for 5years+5years.	The Clause shall be read as: The Contractor shall furnish within 14 days from the date of issue of Operational Acceptance, an unconditional and irrevocable bank guarantee for due Performance as per Format attached and which shall be for 3% of the total Contract Value (i.e., total sum of all the supply contract, erection contract and civil works contract) and valid for 120 months from the date of Operational Acceptance.
2	II	1.2.3	9	The Contractor shall furnish within 14 days from the date of issue of Letter of Intent (LOI), an unconditional and irrevocable bank guarantee for due Performance as per Format attached and which shall be for 10% of the total Contract Value (i.e., total sum of all the supply contract, erection contract and civil works contract) and valid for 12 months from the date of LOI. The Contractor shall furnish within 14 days from the date of issue of Operational Acceptance, an unconditional and irrevocable bank guarantee for due Performance as per Format attached and which shall be for 5% of the total Contract Value (i.e., total sum of all the supply contract, erection contract and civil works contract) and valid for 120 months from the date of Operational Acceptance.	We requests AMU to release the Performance BG on submission of the O&M BG. Kindly amend the clause mentioning the same.	Accepted A Clause shall be added as 12.2.4 under Section - III at Page no. 37 of RfP document as: The Performance Bank Guarantee during EPC for 10% of the total Contract Value (i.e., total sum of all the supply contract, erection contract and civil works contract) shall be released on bidders' request after 2 months of demonstration of the Performance Test (PR test) and Operational Acceptance by the contractor.

S. No.	Section	Clause No.	Page No.	Existing Clause	Query	Response on Query
3	III	34.2	51	In case the Contractor fails to achieve successful commissioning of plant by the scheduled date indicated in Project Timelines as mentioned in SCC Clause 8, the Employer shall levy Liquidated Damages on the Contractor in the following lines:1. For first 45 days: @ 0.10% of the Contract Value of the remaining work per day of delay, as assessed in accordance with the certified payments subtracted from the total contract value.	As most of the government entities like NTPC and SECI, LD's for delay are 0.1% of the Contract value of the remaining work per week of delay. SPWL requests AMU to amend the clause accordingly.	Original Bid Conditions will prevail
4	IV	14.1	66	14.1.1.For Supply of Plant and Equipment including PV Modules, Inverter and BOS up to site (FOR basis) including transportation and insurance along with mandatory spares (iii) 10% of the total price of supplies of Plant and Equipment shall be paid on demonstration of CUF for the successful first year of operation. (iii) 10% of the total price of Erection, Testing and Commissioning shall be paid on demonstration of CUF for the successful first year of operation. 14.1.3. For Civil and Allied Works (iii) 10% of the total price of Civil Works shall be paid on demonstration of CUF for the successful first year of operation.	The 10% of the supply, ETC & Civil Works price shall be retained till the end of 1 year post commissioning. We requests AMU to release the amount on submission of a BG for the equivalent amount.	Original Bid Conditions will prevail
5	IV	7.7	64	During the O&M period, the bidders need to maintain 99% uptime of the plant to achieve the proposed CUF at the end of each year. Any repair, replacement, overhauling, etc. are to be performed during night times so that no generation loss will be there in day time.	We requests AMU to kindly specify the implications if in case the uptime for the plant is not 99%.	Refer Clause 24 & 25 of Section IV on page no. 71 of RfP document
6	III	1	26	“Effective Date” means the date of issue of LOI/ RfP/ Date mentioned in contract agreement from which the Time for Completion shall be determined	The definition is not clear as the date of issuance of RFP cannot be the Effective Date. Kindly provide the clarity on the same.	The Clause shall be read as: “Effective Date” means the date of issue of LOI / Date mentioned in contract agreement from which the Time for Completion shall be determined

S. No.	Section	Clause No.	Page No.	Existing Clause	Query	Response on Query
7	III	9.1		The Employer shall be responsible for acquiring and providing legal and physical possession of the Site thereto required for the proper execution of the Contract. The Employer shall give full possession or phased possession of site and accord all rights of access thereto on or before the date(s) of LOI/ NTP or as agreed in contract agreement.	We requests AMU to kindly specify the duration by which the entire land will be handed over to the contractor. We also requests AMU to amend the clause providing consideration of compensation for the cost and time in case of delay.	The land is already in possession of AMU and the land will be handed over to the contractor from the date of issue of the LoI for development and operation and maintenance of the project duration.
8	II & III &	1.2.3 & 12.3.1	9 & 37	The Contractor shall furnish within 14 days from the date of issue of Operational Acceptance, an unconditional and irrevocable bank guarantee for due Performance as per Format attached and which shall be for 5% of the total Contract Value (i.e., total sum of all the supply contract, erection contract and civil works contract) and valid for 120 months from the date of Operational Acceptance. The contractor shall, at the time of Operational Acceptance and at the end of fifth year of O&M, provide Bank Guarantee for the due performance under the Operation and Maintenance of the plant. The value and validity of the O&M Bank Guarantee shall be as per ITB Clause 1.2.3. The Bank Guarantee must be submitted in the "Appendix 13(c): Format of Bank Guarantee for Performance during O&M" specified under Section VI: Forms and Formats	The two statements are contradictory and We requests AMU to kindly provide clarity on the validity of the O&M BG.	The Clause 12.3.1 of Section II on page 37 of RfP document shall be read as: The contractor shall, at the time of Operational Acceptance, provide Bank Guarantee for the due performance under the Operation and Maintenance of the plant. The value and validity of the O&M Bank Guarantee shall be as per ITB Clause 1.2.3. The Bank Guarantee must be submitted in the "Appendix 13(c): Format of Bank Guarantee for Performance during O&M" specified under Section VI: Forms and Formats Also Read in relation to the S.No. 1 of the Response on Commecrial Queries
9	III	27.4.5	50	The O&M contract period may further be extended for minimum period of 5 years as per mutually agreed terms and conditions. The contractor is allowed to submit his intent at the time of Final acceptance	We requests AMU to kindly provide the clarity of the total O&M duration.	The O&M contract period if for 10 years and it can be extended to additional minimum period 5 years s per mutually agreed terms and conditions. Original Bid Conditions will prevail

S. No.	Section	Clause No.	Page No.	Existing Clause	Query	Response on Query
10	III	34	51	Liquidated Damages	We requests AMU to provide a clause mentioning the case if the Project is delayed for reasons not attributable to the Contractor, Employer shall extend the completion duration by granting of extension of time (without LD) and compensate the Contractor adequately. Kindly accept the same.	Please refer Clause 38 of Section III of RfP document at Page no. 54
11	III	34	51	The Defect Liability Period shall be of twelve (12) months from the date of completion of the Facilities, during which the Contractor must repair any defect identified by the Project Manager / EIC after commissioning of the plant. All the expenses to repair the defects shall be borne by the contractor and no additional cost charged to the Employer ("Defects Liability Period")	We requests AMU of provide a clause mentioning "Contractor shall not be liable for any defects arising from any acts of the Employer and its agents."	Please refer Clause 1 of Section III of RfP document at Page no. 27. The defect liability is for manufacturing / design / construction / operation etc. by contractor. Any defect arises due to the steps taken up by employer does not comes under defect liability Original Bid Conditions will prevail

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4. Technical						
S. No.	**Section**	**Clause No.**	**Page No.**	**Existing Clause**	**Query**	**Response on Query**
1	IV	7.2	64	The minimum acceptable PR of the plant is 0.79 and CUF shall be 18% against installed rated DC capacity at STC.	As per the specified AC & DC capacity requirement, the expected PR will not be achieved that is of 0.79 by considering all the system losses. Kindly amend the PR criteria to minimum 75%. Please accept. The calculated CUF at the end of 1st year is 17.9% and estimated PR at S/S end is 79.1% using PVSyst which brings the bidder under risk. SWPL requests AMU to kindly bring the PR and CUF to a lower value.	The minimum acceptable PR of the plant is 0.75 and CUF shall be 17% against installed rated DC capacity at STC.
2	V	2.1.11	76	Very fast responsive microprocessor based Directional and Reverse power flow protection should be provided to ensure isolation of the solar power plant from the grid at the time of any fault or/and any additional suitable protection	Reverse power flow will not be applicable as per the project requirement. Please accept. AND As there shall be bidirectional flow of Power hence Reverse Power Protection is not required. We requests AMU to amend the clause accordingly.	The reverse power flow protection is required to protect the solar PV system from surges that may come from the grid. The same can also be referred as Surge Protection Relay. Original Bid Conditions will prevail
3	V	3.2.10	79	33kV indoor/ outdoor panels having incoming and outgoing feeders with VCBs, CTs, PTs, Bus bars, cables terminals kits and Bus coupler having Main and transfer Bus	In case indoor HT panel is consider, transfer bus may not be applicable. Please clarify.	The specification in the RfP are for reference only. The bidder shall quote according to the appropriate design requirement for least maintenance and maximum generation.

S. No.	Section	Clause No.	Page No.	Existing Clause	Query	Response on Query
4	V	5.10 & 5.21	79	Modules shall perform satisfactorily in relative humidity up to 95% and temperature between -10°C and 85°C (module temperature) Module shall perform satisfactorily in relative humidity up to 95% with ambient temperature between -10°C to +50°C	As per IEC 61215 & IEC 61730, the module relative humidity must be upto 85% for temperature between -10°C and 85°C and not 95%. Please confirm.	Original Bid Conditions will prevail
5	V	6.1.10	91	Two numbers of anti-theft fasteners of stainless steel on two diagonally opposite corners for each module shall be provided. All the fasteners and washers for Module Mounting Structures and modules, shall be adequately protected from atmosphere and weather prevailing in the area	As per the industry practice GI fasteners are acceptable except for PV modules which is SS304, we therefore request you to limit SS304 for module and rest of GI bolts. We suggests that use of SS304 fasteners would suffice the purpose of module mounting. Kindly consider 5.6 grade HDG bolts to be used for mounting structure. Kindly confirm.	Original Bid Conditions will prevail
6	V	6.2.7	92	If the solar PV module is not equipped with reverse blocking diode and Schottky bypass diodes, than each Array Junction Box will have suitable Reverse Blocking Diodes of maximum DC blocking voltage of 1000V with suitable arrangement for its connecting. The bypass & reverse blocking diodes should work for temperature extremes and should have efficiency of 99.98%, confirmed by appropriate IEC standards.	Use of reverse blocking diodes will cause voltage drop in each string which affect the overall efficiency of the system and also the heat produced by diodes deteriorate the performance of other item used in the junction box. Please accept the design of string combiner box with reverse blocking fuses. Please confirm.	The system design with string combiner box with reverse blocking fuses is accepted.

S. No.	Section	Clause No.	Page No.	Existing Clause	Query	Response on Query
7	V	6.7.4	97	Wires with sufficient ampere capacity and parameters shall be designed and used so that maximum voltage-drop at full power from the PV modules to inverter should be less than 1.5% (including diode voltage drop). Successful Bidder shall provide voltage drop calculations in excel sheet	As per standard solar power plant application, DC voltage drop from the module upto inverter DC side should be limited to 2%. Please accept.	DC voltage drop from the module upto inverter DC side should be limited to 2%, but in this case the bidder has to be design the appropriate capacity on DC side to fulfil the solar PV power plant capacity of 3MW (AC) requirement
8	V	6.11.4	100	All the transformers shall be suitable for outdoor installation with 3 phase 50Hz in which the neutral is effectively earthed	Vector group and neutral earthing on the inverter side will be as per the inverter manufacturer recommendation. Please accept.	The bidder can quote for an appropriate design but has to adhere the standards of the state DISCOM (DVVNL) requirements.
9	V	6.13	102	Ratings and specifications (415V / 33kV Transformer) - Step-up transformer	Inverter side AC voltage of the inverter will vary between 380V-400V from manufacturer to manufacturer. Please accept.	The bidder can design the transformer according the requirement of the inverter design, but the bidder has to make sure the spares availability for the proposed rating of transformer.
10	V	6.40.3	127	DC Batteries the batteries will have the following specifications: Type : VRLA/ MF Stationary, sealed type, storage battery	Nickel Cadmium cell shall be used as per solar standard. Please accept.	The bidder can quote for an appropriate design for batteries of Nickel Cadmium cell also, but the operational system requirement should not be effected.

S. No.	Section	Clause No.	Page No.	Existing Clause	Query	Response on Query
11	V	6.7.3 & 6.41.3	97 & 128	DC cables used from solar modules to array junction box shall be solar grade copper (Cu) with XLPO insulation and rated for 1.1kV only. The cables used from array junction box to inverter shall be solar grade copper (Cu) with XLPO insulation and rated for 1.1kV only as per relevant standards. Bidder shall provide the type test report for each type of cable used before dispatch of the cable. PV Modules should be connected with USE-2/RHW-2 cables array to junction box conductors and junction box to photovoltaic dis-connector with the THHN/THWN-2 sunlight resistant with 90°C wet rated insulation cable. 1. Cable from String to Combiner Box - 1.8kV, Copper, XLPO, TUV approved cables 2. Cable from Combiner box to Inverters and to Transformers- 1.1kV, XLPE, Aluminum, Armored Cable 3. Cable from transformer to HT Panel, 33kV, XLPE, aluminum, Armored Cable	Consider XLPE insulated Al DC cables of 1.1 kV grade from combiner box to inverter and to transformer as per standard practice. As per standard solar application TUV certified XLPO insulated Copper solar cable will be provided for the interconnection of modules with SMU. As the XLPO insulation will be able to withstand harsh UV radiation condition. As the cable after SMU will be buried inside ground 1.1kVAC grade Aluminum cable suitable for 1.5kVDC applications will be used for the interconnection of SMU to inverter, inverter to transformer and for further LT application. Please accept.	The Clause 6.7.3 and 6.41.3 shall be read as: The cables for connecting system shall be as follows: 1. Cable from String to Combiner Box - 1.1kV, Copper, XLPO, TUV approved cables 2. Cable from Combiner box to Inverters and to Transformers- 1.1kV, XLPE, Aluminum, DC Cable 3. Cable from transformer to HT Panel, 33kV, XLPE, Aluminum, Armored Cable.
12	V	8.9.3	142	The Bidder shall estimate the water requirements for cleaning the photovoltaic modules at least once in every week or as per the soiling conditions prevailing at site, in order to operate the plant at its guaranteed plant performance. Also, bidder is required to plan the water storage accordingly	Period of cleaning of module will be done at an interval of 7/15 days to keep the PR of the plant within range depending on the soiling condition present at site. Please accept.	Accepted, the contractor schedule the interval for washing the module and has to maintain the required PR and CUF for the project

S. No.	Section	Clause No.	Page No.	Existing Clause	Query	Response on Query
13	V	2.2.7	77	Flat plate SPV arrays which are held fixed at an optimum tilted angle and face towards the equator, are most common. The angle of tilt should be approximately equal to the angle of latitude for the site. A steeper angle increases the output in winter; while a shallower angle more output in summer. It should be arranged in such a manner that optimum generation is achieved	Kindly confirm to use type of module mounting structure so as to achieve maximum energy. We requests AMU to clarify whether the clause mentioned refers to a fixed tilt system or a seasonal tilt system.	Fixed tilted system has to be considered.
14	Annexure - 1	4.ii	202	For connecting project with 33kV substation the transmission line has to cross a railway track which is 50 meters away from the site, and National Highway 93 which is adjacent to the university.	Kindly clarify the construction concept to be adopted for the transmission line to be required over the railways tracks from the solar PV plant to existing substation. Kindly elaborate the process involved in getting clearance from Railways and NH authority. Elaborate the Scope of Customer and bidder in getting above approvals. Also confirm the cable routing should be Underground or Overhead while crossing Railway line and NH.	AMU has already initiated the process for getting clearance from Railways for crossing the track, the part of the road which has to be crossed if required AMU will assist the contractor is getting clearance. The part of the transmission line at railway crossing has to be Underground and at NH it has to be over head. Remaining transmission line has to be over head transmission line. The voltage level for transmission line has to be 33kV.

S. No.	Section	Clause No.	Page No.	Existing Clause	Query	Response on Query
15	I & V	2.2.5 & 3.2.24	2 & 80		Kindly provide the distance of transmission line to be taken to the substation.	Kindly Refer the Clause 2.2.5 (Section I) and Clause 3.2.24 (Section V) The distance for transmission line is 3km The bidders are free to measure and evaluate by any means such as; walk through survey for 3kms can be done by the interested bidder, he can be assisted by AMU with prior intimation.
16					Kindly clarify the type of cell and module to be considered for solar PV plant.	The Bidder can quote for any proven technology out of multi-crystalline and mono-crystalline silicon based modules
17					Kindly clarify the scope of SLDC to be provided for the solar PV plant.	At this stage there is no role of SLDC, but the system should have the provision so that it can pump power into the grid so in that case SLDC will come into picture
18	V	3.2.6	78	33kV / 415V auxiliary transformer (s)	We recommends to consider outdoor type ONAN Aux Transformer of Voltage ratio: (Inverter LV)/ 415 V at inverter room and at Main control room shall be 33kV/415 V. Kindly accept our proposal.	Accepted, the auxiliary transformer (s) is for the auxiliary supply for the power plant.

S. No.	Section	Clause No.	Page No.	Existing Clause	Query	Response on Query
19	V	6.41.4	128	Only terminal cable joints shall be accepted. No cable joint to join two cable ends shall be accepted. All cable/wires shall be marked with good quality letter and number ferrules of proper sizes so that the cables can be identified easily. The ferrules used must be UV resistant. However, for HT cables, embossed ferrules can be used	We requests to consider Straight through joints in MV Cable (33 kV Cable) as per length of cable drum. Kindly accept our proposal.	Only terminal cable joints shall be accepted. No cable joint to join two cable ends shall be accepted. If a condition arrives where the laying length is greater than the drum length and in case of faults at the site actual conditions, the same may be accepted after due assessment by Employer and the joint kit shall be of repute make and to be installed by the certified cable jointer. All cable/wires shall be marked with good quality letter and number ferrules of proper sizes so that the cables can be identified easily. The ferrules used must be UV resistant. However, for HT cables, embossed ferrules can be used
20	V	6.17.4	106	CT ratio & Rated VA Burden, short time thermal rating ,class of accuracy : Minimum burden required (as per design): 1. Metering core – 40 VA 2. Protection core – 10 VA	The VA burden for CT as 10 VA will suffice the purpose for metering and protection. We requests to consider the same.	The rating provided in the RfP is for reference the actual burden must be calculated as per the design.
21	V	6.19.17	109	Rated output (VA burden) 30 VA per phase	We requests to consider 20 VA per phase as this will suffice the purpose.	The rating provided in the RfP is for reference the actual burden must be calculated as per the design.

S. No.	Section	Clause No.	Page No.	Existing Clause	Query	Response on Query
22	V	6.22.3	113	33 kV isolator Impulse withstand voltage with 1.2/50 micro sec. wave : 325kVp to earth 195kVp across isolating distance One minute power frequency withstand Voltage : 140 kV (rms) to earth & 150 kV (rms) across isolating distance	These written parameters are designed for 66 kV not for 33 kV. As per 33 kV the impulse Impulse withstand voltage with 1.2/50 micro sec. wave is 170kV & one minute power frequency withstand voltage is 70 kV. The Short Circuit fault level should also be 25 kA instead of 40 kA	The parameters can be as per the design for 33kV system
23	V	6.24.7	114	Surge arrestor Impulse withstand voltage with 1.2/50 micro sec. wave 325kVp One minute power frequency withstand Voltage of arrestor housing (dry and wet)	These written parameters are designed for 66 kV not for 33 kV. As per 33 kV the impulse Impulse withstand voltage with 1.2/50 micro sec. wave is 170kV & one minute power frequency withstand voltage is 70 kV	The parameters can be as per the design for 33kV system
24	V	6.39.16 & 6.39.17	127	SCADA Server PC shall be of industrial type Printer shall be of industrial type	Generally non industrial grade is preferred as SCADA Room will be air-conditioned with controlled atmosphere, We requests to consider the same	Accepted

S. No.	Section	Clause No.	Page No.	Existing Clause	Query	Response on Query
25	V	5.1	88	The solar photovoltaic modules with efficiency more than 16% for multi-crystalline, 18% for mono-crystalline silicon based modules with positive tolerance only.	The module manufactures mention a efficiency of 15-16% for multi crystalline and 16-18% for mono crystalline. We requests AMU to amend the clause accordingly. For Multi-crystalline modules efficiency level available in market is upto 16% and for Mono-crystalline less than 18%. Hence requesting to kindly relax this clause.	Accepted Clause 2.1.1, Section V of RfP Document at Page no. 76 shall be read as: Technology: Solar PV Mono/ multi-crystalline modules (15-16% Multi, 16-18% mono) of high efficiency and the cells/ modules. Clause 5.1, Section V of RfP Document at Page no. 88 shall be read as: The solar photovoltaic modules with efficiency ranging 15-16% for multi-crystalline, 16-18% for mono-crystalline silicon based modules with positive tolerance only.
26	V	5.7	89	The crystalline silicon based modules supplied should be of Potential Induced Degradation (PID) free modules and the test certificate from third party lab complying with the same shall be provided	Modules are Indian make or can be imported	Bidder can opt for Indian or Imported modules, it is at the discretion of the Bidder

S. No.	Section	Clause No.	Page No.	Existing Clause	Query	Response on Query
27	III & V	48.1, 48.2 & 12.1, 12.2	58 & 145	PV modules used in grid connected solar power plants must be warranted for peak output wattage, which should not be less than 90% at the end of 10 years and 80% at the end of 25 years. The modules shall be warranted for at least 10 years for failures due to material defects and workmanship. Solar PV Modules: Modules shall be warranted for a minimum period of 25 years in the Bidder's detailed Warranty / Guarantee certificate.	As per MNRE, the standard warranty for solar panels is 5 years against Manufacturing defects. The performance warranty 90% at the end of 10 years and 80% at the end of 25 years. Kindly confirm can we proceed as per the above MNRE clause. If not, please clarify the ambiguity between clauses 12.1, 12.2 and 12.5.	The modules should have performance warranty as follows: PV modules used in grid connected solar power plants must be warranted for peak output wattage, which should not be less than 90% at the end of 10 years and 80% at the end of 25 years. In addition The modules shall be warranted for at least 10 years for failures due to material defects and workmanship.
28	Annexure - 1	1	202	The nearest urban area from the site is Kasargod at a distance of 30km and Mangalore at a distance of 76km.		Clause has been Deleted

S. No.	Section	Clause No.	Page No.	Existing Clause	Query	Response on Query
29	V	2.4, 2.5 & 5	77 & 88	The minimum array capacity at STC shall be determined to have 3.3MWp output at the time of installation. If the Contractor request the employer for allocation of additional land for installation of DC Capacity beyond 3.3 MW, the Employer will not have any obligation to allocate additional land unless otherwise agreed and subject to availability of additional land Total capacity of PV Modules to be supplied for the 3MW (AC) project is minimum of 3.3MWp which is the cumulative rated capacity of all solar PV module under supply as per relevant IEC standards under Standard Temperature Condition (STC)		The minimum array capacity at STC shall be determined to have 3.3MWp output at the time of installation, but for generation of 3MW(AC) power if higher capacity is required on DC side then bidder has to quote accordingly

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5. Civil						
S. No.	**Section**	**Clause No.**	**Page No.**	**Existing Clause**	**Query**	**Response on Query**
1	V	3.7.6	81	Construction of internal roads 3.5m wide with 0.5m wide well compacted shoulders on each side with WBM base to carry safe and easy transportation of equipment and material at the project site during and after construction. Construction of Main Gate to Control room road of 3.5m wide with 0.5m wide well compacted shoulders on each side with bitumen base for easy approach to control room	Approach road to Control room from Main Gate shall be also of WBM road of 3.5M wide with 0.5M wide shoulder on either side. Please accept.	Original Bid Conditions will prevail
2	V	8.8.1	139	All RCC works shall be as per IS 456 and the materials used viz. Cement, reinforcement steel etc. shall be as per relevant standards	Grade of concrete shall be adopted as M20 (1:1.5:3) as per provision in IS:456. Please accept.	Accepted, Grade of concrete for Buildings shall be adopted as M20 (1:1.5:3) as per provision in IS:456.
3	V	8.8	140	Buildings are required to be constructed for housing the electrical equipment/ panel and central control room with office cum store building for the operation & maintenance of Solar Photovoltaic Power Plant. Security houses/ cabins shall also be required at strategic locations to secure the plant from any theft/ burglary. The building shall be constructed with conventional RCC framed structure with brick partition walls. Equipment room shall be designed as per the OEM recommendations to ensure desired life of equipment	We suggests to consider the use of pre-fabricated structures for Control Room and inverter room as these have easier & time effective installations.	Original Bid Conditions will prevail

S. No.	Section	Clause No.	Page No.	Existing Clause	Query	Response on Query
4	V	3.7.3 & 8.11.1	81	Construction and erection of 6 feet stone boundary wall with fence and concertina coil on GI angle of Y shape on the top in perimeter of Solar PV (SPV) Project with main / security gate(s) for entire area. The objective is to provide a boundary wall (Stone wall 6ft height above the ground with fence and concertina coil on GI angle of Y shape on the top) is to demarcate the boundary and to keep away the unauthorized access to plant.	Taking the project timeline into consideration We requests AMU to consider pre casted RCC slabs for the boundary.	Original Bid Conditions will prevail, with small change in design and work as follows: Construction and erection of total 9 feet high and 14 inches width stone masonry boundary wall with 6 feet wall and 3 feet fence & concertina coil on GI angle of Y shape on the top in perimeter of Solar PV (SPV) Project with main / security gate(s) for entire area. Also Read in relation to the Annexure A (Boundery wall Drawing of the existing boundary wall) attached. a) From reference point 1 to 3: to demolish existing old brick wall in super structure and construct the same stretch with 9 feet high stone masonry wall (specifications as mentioned above) the existing foundation which is 2 feet high can be utilized for construction of new wall, the recoverable material from the existing wall shall be utilized for construction of new wall. b) From reference point 3 to 5, 5 to 8, 8 to 11, 11 to 13 and 13 to 1: Construct new boundary wall with 9 feet high stone masonry wall (specifications as mentioned above) leaving the existing wall as it is and maintaining the appropriate distance from the present wall and minimizing the loss of land due to new construction.
5					We requests AMU to provide bidders with the AutoCAD drawing of the Site & its vicinity. Please provide the AutoCAD layout of the lands.	It is not available with AMU
6					Route survey map needed for the laying transmission line	It is not available with AMU, but walk through survey for 3kms can be done by the interested bidder, he can be assisted by AMU with prior intimation.
7					Please confirm the availability of spare bay in the sub-station. If not, kindly confirm when will the spare Bay extension facility will be provided	The space is available at the 33/11 kV university substation, the contractor has to make necessary arrangements for connectivity at the 33kV side and to build the bay as required

Annexure A:

Boundary wall for the proposed site for 3MW(AC) Grid Cnnect Solar PV Project at AMU.