

Amendments in Section-II (INVITATION FOR BID)

Clause to be amended	Original Clause	Amended Clause
Clause 3.1 page 5 of 9	Last Date & Time of Bid Receipt	Up to 21/04/2016 1430 hrs (IST)
Clause 3.1 page 5 of 9	Opening of Techno-commercial Bid (Online & Physical)	21/04/2016 at 1530 hrs (IST)
Clause 4.2.1 page 6 of 9	Bidder shall submit, in support to the above, the list of projects commissioned along with their work order/ LOI and the commissioning certificates along with the Joint Meter report of the reference plant for preceding 3 months from date of opening of techno commercial bid opening	Bidder shall submit, in support to the above, the list of projects commissioned along with their work order/ LOI, Commissioning certificates and the letter from Client/Employer /Owner confirming satisfactory performance of the plant since last one year from 10/03/2016.

Amendments in Section-II (INSTRUCTION TO BIDDER)

Clause to be amended	Original Clause	Amended Clause
Clause 1.2.1, Page No 5 of 35	Tender Processing Fees: INR 2,00,000 + 15% ST i.e., INR 2, 30, 000 in favor of "Solar Energy Corporation of India Limited" payable at New Delhi".	Tender Processing Fees: INR 2,00,000 + 14.5% ST i.e., INR 2,29,000/- in favor of "Solar Energy Corporation of India Limited" payable at New Delhi".
Clause 2.10.1, Page No 5 of 35	Bidder shall be required to submit Bid Security as specified in the ITB Clause No. 1.2.1. The Bank Guarantee (s) shall be in favour of " Bharat Electronics Limited " payable at Bengaluru	Bidder shall be required to submit Bid Security as specified in the ITB Clause No. 1.2.1. The Bank Guarantee (s) shall be in favour of " Solar Energy Corporation of India Limited " payable at New Delhi .
Clause 2.10.6, Page No 13 of 35	The Employer shall, however, arrange to release the Bid Security in respect of unsuccessful Bidders, without any interest, only after issue of LOI to the successful bidder and their acknowledgement of the same	The Employer shall, however, arrange to release the Bid Security in respect of unsuccessful Bidders (except L-2 bidder) within 15 days of Reverse Auction, without any interest, Bid Security of L-2 bidder shall only be released after issue of LOI to the successful bidder and their acknowledgement of the same
Clause 3.4.2 (ii), Page No 18 of 35	Signed complete bid document including ITB along with amendments & corrigendum, if any.	Bidders need not submit hard copies of signed and stamped Tender documents along with its amendments, corrigendum & clarifications. However they must submit the digitally signed copies by their Authorized representative of the same on TCIL Portal.

Annexure-A

Clause 3.9.9 (i) b, Page No 21 of 35	NPV of annual O&M Price inclusive of taxes quoted for 10 (ten) years as given in Appendix 3: Bid Evaluation criteria.	NPV of annual O&M Price exclusive of taxes quoted for 10 (ten) years as given in Appendix 3: Bid Evaluation criteria.
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Amendments in Section-III (General Conditions of Contract)

Additional Clause
Insert New Clause 11.3: Employer shall make best efforts to release the payment in line with SCC Clause 14, within 15 calendar days of receiving invoices along with complete set of supporting & compliance documents from Contractor.
Insert new clause 13.8 Direct transaction shall mean those equipment/material which are dispatched from the Contractor's works to the Employer's stores/site. The prices of the bought out items i.e. those equipment/material which are dispatched from the subcontractor's works to the Employer's stores/site (Sale in transit) shall be quoted inclusive of excise duty and sales tax. No variation in ED and CST on bought out items shall be admissible. All other taxes such as Service tax, duties & levies including sale tax on work contract (applicable on erection as well as Civil & Allied works portion of the contract) and all taxes, duties including custom duty as applicable on the material used for such Erection as well as Civil & Allied works Packages of the contract shall be included in the bid prices and no separate claim in this regard will be entertained by the Employer. The contractor shall show the amount of service tax in the invoice and shall certify that the tax has been deposited with the appropriate authority

Amendments in Section-IV (Special Conditions of Contract)

Clause to be amended	Original Clause	Amended Clause
Clause 25.2, Page No 12 of 14	In case of any defect in the system after commissioning , the Contractor shall repair it within 24 hours. Otherwise LD shall be charged for shortfall in generated units	In case of any defect in the system after Operational Acceptance , the Contractor shall repair it within 24 hours. Otherwise LD shall be charged for shortfall in generated units
Clause 26.3, Page No 13 of 14	The Contractor will construct/ provide a temporary facility/ arrangement at site or otherwise for the office of Employer's employee/ consultant at the time of construction of the Solar Power Plant. All the temporary facilities constructed for the purpose of execution of the contract shall be removed after taking necessary permissions from the Employer immediately after Operational Acceptance	The Contractor will construct/ provide a separate temporary facility/ arrangement at site (including office furniture, computer, vehicle etc) for the office of Employer's employee/ consultant/SECI's employees at the time of construction of the Solar Power Plant. All the temporary facilities constructed for the purpose of execution of the contract shall be removed after taking necessary permissions from the Employer immediately after Operational Acceptance

Annexure-A

Clause 26, Page No 13 of 14	Schedule 1: List of Banks	Ratnakar Bank Limited is also included in the list
<p>Insert new clause 25.4: The Liquidated Damages specified on account of delays, as specified in GCC Clause 34 and LD specified on account of deviations in Functional Guarantees as specified in SCC Clause 25 above shall be assessed independent of each other.</p>		

Amendments in Section V (Technical Specification)

Clause to be amended	Original Clause	Amended Clause
Clause 3.2.11, Page No 10 of 111	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. Each bay shall consist of VCB, CT, Isolators with earth switch, LAs and PT's etc.	132 kV 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. Each bay shall consist of VCB, CT, Isolators with earth switch, LAs and PT's etc.
Clause 3.2.20, Page No 10 of 111	CCTV cameras at Main Entrance and at Main Control room	CCTV cameras at Main Entrance and at Control Rooms, Plant Area & Plant perimeter
Clause 3.13.9	GTP & G.A. drawings for all types of structures/ components, 33kV switchgears & other interfacing panels.	GTP & G.A. drawings for all types of structures/ components, 33 kV & 132 kV switchgears & other interfacing panels.
Clause 8.3.2, Page No 64 of 111	Approval on following drawings shall be obtained before manufacturing the Panels (iv) 33 kV Transmission Line	Clause 8.3.2 shall be considered as clause 9.29.35 (iv) 132 kV Transmission Line.
Clause 8.3.2 (v), Page No 64 of 111	Bidder shall provide 33kV transmission with bay and metering on Turnkey basis as per STATE DISCOM requirement.	Clause 8.3.2 (v) shall be considered as Clause 9.29.36 Bidder shall provide 132 kV transmission with bay and metering on Turnkey basis as per STATE DISCOM requirement. In case, the bidder is using bus duct at the.....
Clause 9.38.1, Page No 72 of 111	CCTV cameras must be installed minimum at main entry gate and control room. Bidder may propose other locations as required to provide security for the entire plant. Bidder has to propose the locations and number of cameras required for the plant during bidding. However, Employer will decision on number of cameras shall be final.	CCTV Cameras must be installed to have complete coverage of following areas; 1.Main entry: Covering all the entry/exit 24 hrs. 2. Along the Plant Perimeter: Covering complete perimeter of Plant Area to capture all possible intrusion. 3. Control Rooms: Covering Entry/Exit and activities within Control Rooms.

Clause 9.5, Page No 41 &42 of 111	Ratings and specifications (Transformer): The typical rating and electrical characteristics of the ONAN Outdoor type inverter duty transformer....	Ratings and specifications (Transformer): The typical rating and electrical characteristics of the ONAN Outdoor type Grid Tie, Inverter duty & Auxiliary transformer

Table given under Clause 9.5 to be replaced with Table-1 & 2 given as under;

Table-1		
Sl. No.	Parameters	Specification for Grid Tie Power Transformer
1	MVA Rating	16.5 MVA
2	Voltage Ratio (KV)	132 kV /33 kV
3	Winding	TWO
4	Frequency	50 Hz
5	Service & Duty	Outdoor & Continuous
6	Nos. of Phase	3 phase
7	Vector Group & Neutral earthing	As per system Requirement/ As per approved SLD
8	Cooling	ONAN (60%)/ ONAF (100%)
9	Tap Changer	OLTC,+/-10% @1.25%step on HV
10	Impedance at75 °C	
11	a) Principal Tap	As per system Requirement/ As per approved SLD
12	b) Other Taps	As per system Requirement/ As per approved SLD
13	Permissible Temperature rise over an ambient of 50 deg C (irrespective of tap)	
14	Top Oil	50°C
15	Winding	55°C
16	SC withstand time (thermal)	2 Sec
17	Fault Level & Bushing CT	As per system Requirement
18	Termination	As per system Requirement
19	Bushing rating, Insulation class (Winding & bushing)	As per relevant IS/IEC
20	Noise level	AS PER NEMA TR-1
21	Loading Capability	Continuous operation at rated MVA on any tap with voltage variation of +15 % & -10%, also transformer shall be capable of being loaded in accordance with IS:6600/IEC60076-7.
22	Flux density	Not to exceed 1.9 Wb/sq.m. at any tap position with +15 & -10% voltage variation

Annexure-A

		from voltage corresponding to the tap. Transformer shall also withstand following overfluxing conditions due to combined voltage and frequency fluctuations: a) 110% for continuous rating. b) 125% for at least one minute. c) 140% for at least five seconds. Bidder shall furnish overfluxing characteristic up to 150%
23	Air Clearance	As per CBIP
24	Only Type –Tested transformers shall be used	

Annexure-A

Table-2			
Sl. No.	Parameters	Specification for Inverter Transformer	Specification for Auxiliary Transformer
1	MVA Rating	As per System Requirement/ As per approved SLD	
2	Voltage Ratio (KV)	As per System Requirement/ As per approved SLD	
3	Duty, Service & Application	Continuous Solar Inverter application and converter duty (Outdoor)	Continuous application (Outdoor)
4	Winding	As per System Requirement	Two
5	Frequency	50 Hz	50 Hz
6	Nos. of Phase	3 phase	3 phase
7	Vector Group & Neutral earthing	As per system Requirement	As per system Requirement
8	Cooling	ONAN	ONAN
9	Tap Changer	As per system Requirement/ As per approved SLD	
10	Impedance at 75 °C		
11	a) Principal Tap	As per system Requirement/ As per approved SLD	
12	b) Other Taps	As per system Requirement/ As per approved SLD	
13	Permissible Temperature rise over an ambient of 50 deg C (irrespective of tap)		
14	Top Oil	50°C	50°C
15	Winding	55°C	55°C
16	SC withstand time (thermal)	2 Sec	2 Sec
17	Fault Level & Bushing CT	As per system Requirement/ As per approved SLD	
18	Termination	As per system Requirement/ As per approved SLD	
19	Bushing rating, Insulation class (Winding & bushing)	As per relevant IS/IEC (However Inverter Transformer LV side winding & bushing insulation class shall be of atleast 3.6 kV)	
20	Noise level	AS PER NEMA TR-1	
21	Loading Capability	Continuous operation at rated MVA on any tap with voltage variation of +15 % & -10%, also transformer shall be capable of being loaded in accordance with IS:6600/IEC60076-7.	

Annexure-A

22	Flux density	<p>Not to exceed 1.9 Wb/sq.m. at any tap position with +15 & -10% voltage variation from voltage corresponding to the tap. Transformer shall also withstand following over-fluxing conditions due to combined voltage and frequency fluctuations:</p> <p>a) 110% for continuous rating. b) 125% for at least one minute. c) 140% for at least five seconds. Bidder shall furnish over-fluxing characteristic up to 150%</p>
23	Air Clearance	As per CBIP
24	Only Type –Tested transformers shall be used	

Clause to be amended	Original Clause	Amended Clause
Clause 9.5.5, Page No 43 of 111	In case the equipment is not found as per the requirements of the purchase order	In case the equipment is not found as per the requirements of the Technical Specification of Tender Document.
Clause 9.5.3, 9.5.5, 9.5.7, 9.10.9 Page No 42, 44 & 48 of 111	Purchaser	wherever Purchaser is used in these clauses, shall be replaced with Employer
Clause 9.5.6, Page No 44 of 111	The highest system rated voltage shall be 36 kV.	The highest system rated voltage at HT side shall be 145 kV & 36 kV at LT side.
Clause 9.15.6, Page No 54 of 111	Technical requirements for metal oxide.....	Removed
Clause 9.16.1, Page No 54 of 111	The Solar PV system and the associated power evacuation system interconnections should be protected as per IEC 61727 Ed.2, norms. Over current relays, reverse power relays, differential protection relays and earth fault relays have to be essentially provided. All relay should be numerical type & should be remote operating and controlling facility from the control room	The Solar PV system and the associated power evacuation system interconnections should be protected as per IEC 61727 Ed.2, norms. Over current relays, differential protection relays (for grid tie power Transformer only) and earth fault relays have to be essentially provided. All relay should be numerical type & should also be remote operation and control enabled from the control room

Annexure-A

<p>Clause 11, Page No 79-80 of 111</p>	<p>Capacity Utilization Factor (CUF) shall be calculated as per the following formula: $CUF = \frac{EN \times CF}{(8760 \times Pnom)}$</p> <p>EN is number of units recorded at the ABT metre at 22 kV local bus bar in Plant Facilities after excluding auxiliary consumption Pnom- Installed DC capacity. CF - CUF Correction Factor</p> <p>The correction factor for CUF shall be calculated at the end of each year, by factoring module degradation and any shortfall in radiation as per the formula given below.</p> <p>$CF = \left(\frac{Reference\ Radiation}{Measured\ Radiation} \right) \times (1 - Module\ Degradation\ Factor \times No.\ of\ Years)$</p> <p>Reference radiation is 1862 kWh/m² as per NASA database.</p>	<p>Capacity utilization factor shall be calculated as per following formula.</p> <p>$CUF = \frac{EN}{(8760 \times Pnom \times CF)}$, where EN- number of units recorded at the ABT meter at 132 kV busbar in grid substation after excluding auxiliary consumption. Pnom- Installed DC capacity. CF - CUF Correction factor</p> <p>The correction factor for CUF shall be calculated at the end of each year, by factoring module degradation and any shortfall in radiation as per the formula given below.</p> <p>CUF correction factor (CF) = (measured radiation / reference radiation (i.e.1880 kWh/m²)) x (1- module Degradation factor x number of years of operation after final acceptance of the plant).</p> <p>CUF of 19 % is estimated a reference GHI 1880 kWh/m². Example for the purpose of illustration: At the end of third year of operation if it is observed that the annual radiation is 1750 kWh/m², the CUF correction factor is: $CUF\ correction\ factor = \left(\frac{1750}{1880} \right) \times (1 - 0.0075 \times 2) = 0.917$</p> <p>The measurement of solar radiation shall be based on the pyrometer data which are installed on horizontal plane at the site location.</p> <p>For redundancy two numbers of Pyranometers to be installed in distant locations in the plant premises.</p> <p>The radiation data output of the Pyranometres shall be compared with nearest Solar Radiation Resource Assessment (SRRRA) station data.</p> <p>The variation observed between the SRAA data and plant data shall be consistent and in case of any discrepancy (i.e. more than ± 5% variation or data missing) the SRRRA station data will be used for computation.</p> <p>Pyranometer has to be under CCTV coverage</p>
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Annexure-A

Clause 11.1, Page No 80 of 111	Capacity Utilization Factor (CUF) shall be calculated as per the following formula: $CUF = E_N / (8760 * P_{nom})$ E_N = No. of units recorded at the ABT meter excluding the auxiliary consumption P_{nom} = Installed DC capacity	This Clause is Removed
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Insert following sub-clauses under Clause 9.15.5 (Page No 54 of 111)

<u>Clause 9.15.5</u> (i)	Codes and Standard IS : 2309: Code of Practice for the protection of building and allied structures against lightning. NF C 17-102: Lightning Protection with Early Streamer Air Termination Rod
<u>Clause 9.15.5</u> (ii)	Complete Solar Array with associated structure shall be protected from Direct Lightning Stroke. Lightning Protection for solar array shall be achieved with any or both of the following two systems as per specification provided in the following section; (1) Single Rod Air Terminal (Faraday Rods), (2) Early Streamer Emission (ESE) Air Terminal. Suitable earthing and equipotential bonding shall be ensured for the air termination rods as per applicable standard/Equipment manufacturer guidelines. Current carrying parts and accessories such as clamps, fasteners, down conductor, Test links and earth termination etc. shall be preferably procured from OEM of Air Terminals if it is supplied by them as part of lighting protection system.
<u>Clause 9.15.5</u> (iii)	Lightning Protection System for solar array with single rod air terminal Solar array of plant shall be protected from direct lightning strike with straight or angled air termination rods of suitable class as per IS:2309 to be fixed with the module mounting structure (MMS). Air termination rods shall have minimum two clamps to be fixed with MMS and must be capable of carrying full lightning current. Contractor to ensure proper fixing of the clamps with MMS to allow lightning current to pass through the clamp without damage and to sustain the rods during high velocity wind. Contractor shall submit the calculation to determine the no. and location of air termination rods to be fixed on structure to provide the lightning protection to each solar module and structure. Earth riser shall be connected to that part/pole of MMS which is nearest to air termination rod.
<u>Clause 9.15.5</u> (iv)	Lightning Protection System for solar array with E.S.E air terminal Solar array shall be protected from direct lightning stroke with Early Streamer Emission air terminal in accordance to NF C 17-102 (Latest revision). Number and location of ESE air terminal shall be decided during detail engineering. For this purpose, design calculation and AutoCAD drawing of the layout of ESE terminal shall be submitted to Employer for approval. ESE air terminal shall be type tested in any national/international approved lab for advance triggering time (ΔT) and lightning Impulse current test and type test report shall be submitted to Employer for approval. (i) Each ESE air terminal shall be provided with separate earthing termination and test link for equipotential bonding of Lighting Protection System as per OEM guidelines/NFC 17 -102. Each ESE air terminal shall be equipped with lightning stroke counter to be fixed at suitable height in serial on the down conductor. (ii) ESE air terminal shall be erected on isolated foundation to be approved by Employer. If required, Suitable guy wire shall be used to support the mast of ESE terminal against the wind.

Annexure-A

Clause 9.15.5 (v)	Location and layout of ESE terminal shall be in such a manner that it cast no shadow on the PV Modules during 08:30 AM to 04:30 PM.
Clause 9.15.5 (vi)	Lightning Protection System for Inverter Room (LCR) and MCR Contractor needs to provide the Lightning Protection for each inverter, Switchyard building and Main Control Room building in accordance to IS:2309.

Amendments in Section VI (Forms & Formats)

Clause to be amended	Original Clause	Amended Clause
Appendix-1, Sl.No. 21, Page No. 6 of 67	We agree to guarantee following minimum Plant Performance parameters: Performance Ratio (PR) not less than 0.78 at the time of Operational Acceptance and plant Capacity Utilization Factor (CUF) not less than 19% at the end of first year from the date of Commissioning and further 0.75% degradation in module output for successive years form second year onwards for remaining O&M period.	We agree to guarantee following minimum Plant Performance parameters: Performance Ratio (PR) not less than 0.78 at the time of Operational Acceptance and plant Capacity Utilization Factor (CUF) not less than 19% at the end of first year from the date of Operational Acceptance and further up to 0.75% per year degradation in module output for successive years form second year onwards for remaining O&M period.
Appendix-3, Page 8 of 67	Net Present Value (NPV) of O&M Contract Price including taxes for ten years to be calculated at a Discount rate of 10.81 % p.a.	Net Present Value (NPV) of O&M Contract Price excluding taxes for ten years to be calculated at a Discount rate of 10.81 % p.a.
Appendix-4 Page 9 of 67	The Contractor shall demonstrate plant Capacity Utilization Factor (CUF) not less than 19% at the end of first year from the date of Operational Acceptance, and a linear degradation of 0.7% in module output from second year onwards for the remaining O&M period.	The Contractor shall demonstrate plant Capacity Utilization Factor (CUF) not less than 19% at the end of first year from the date of Operational Acceptance, and a linear degradation up to 0.75% per year in module output from second year onwards for the remaining O&M period.
Appendix-5, Notes Sl.No:2, Page No 13 of 67	Total evaluated price (sum of all work packages viz. Supply, Erection and Civil Works) shall be inclusive all taxes, duties and levies as prices quoted by the bidder. However, the award shall be placed without taxes, duties and levies	Total evaluated price (sum of all work packages viz. Supply, Erection and Civil & Allied Works) shall be inclusive all taxes, duties and levies except for O&M part , as prices quoted by the bidder. However, the award shall be placed without taxes, duties and levies for Supply Part (i.e. Part-A) and O&M Contract. Award of work for Erection and Civil & Allied Works Package shall be inclusive of tax .
Appendix-5B	Summary for Taxes and Duties,	Summary for Taxes and Duties for Appendix-5A needs to be submitted only for Part-A, as given in format below.
Table 5B: Summary of Taxes and Duties (Included in Table 5A, Part-A Supply Work Package)		
S. No.	Items No.	Total Price (INR)
1	TOTAL EXCISE DUTY	

	Total Excise Duty for Direct transaction between the contractor and the Employer (identified in Table 5A as 'Direct'), as applicable	
2	TOTAL SALES TAX	
	Total Sales tax for Direct transaction between the contractor and the Employer (identified in Table 5A as 'Direct'), as applicable	
3	TOTAL VAT	
	Total VAT for Direct transaction between the contractor and the Employer (identified in Table 5A as 'Direct'), as applicable	
4	TOTAL OCTROI	
	Total Octroi as applicable for destination site/ state on all items of supply on all items under BOQ of the scope of contract, as applicable	
5	TOTAL ENTRY TAX	
	Total Entry Tax as applicable for destination site/ state on all items of supply on all items of the BOQ under the scope of contract, as applicable	
6	TOTAL OTHER TAXES AND DUTY	
	*Total other levies payable in India (please specify) as applicable for the destination site/ state on all items of supply, as per the provisions of bidding documents, on all items of BOQ under the scope of contract, as applicable	
7	TOTAL CUSTOM DUTY	
	Total Custom Duty on all the imported items	
	GRAND TOTAL [1+2+3+7] (in Fig.) This total does not include Octroi, entry tax, other tax & duties quoted by bidder at S. No. 4, 5 & 6	
	(in Words)	
	GRAND TOTAL [4+5+6] (in Fig.) This total includes Octroi, entry tax, other tax & duties quoted by bidder at S. No. 4, 5 & 6	
	(in Words)	
Appendix-5C, Page 15 of 67	Total Price for O&M Contract (including taxes),	Total Price for O&M Contract (excluding taxes),
TABLE 5C: Total Price for O&M Contract (excluding taxes)		
Sr. No.	Item	Price (excluding service tax) (in INR)
1	Operation and Maintenance of the 15 MW (AC) PV Grid Interactive Power Plant including transmission & evacuation system for First YEAR	

Annexure-A

2	Operation and Maintenance of the 15 MW (AC) PV Grid Interactive Power Plant including transmission & evacuation system for SECOND YEAR	
3	Operation and Maintenance of the 15 MW (AC) PV Grid Interactive Power Plant including transmission & evacuation system for THIRD YEAR	
4	Operation and Maintenance of the 15 MW (AC) PV Grid Interactive Power Plant including transmission & evacuation system FOURTH YEAR	
5	Operation and Maintenance of the 15 MW (AC) PV Grid Interactive Power Plant including transmission & evacuation system for FIFTH YEAR	
6	Operation and Maintenance of the 15 MW (AC) PV Grid Interactive Power Plant including transmission & evacuation system for SIXTH YEAR	
7	Operation and Maintenance of the 15 MW (AC) PV Grid Interactive Power Plant including transmission & evacuation system for SEVENTH YEAR	
8	Operation and Maintenance of the 15 MW (AC) PV Grid Interactive Power Plant including transmission & evacuation system for EIGHTH YEAR	
9	Operation and Maintenance of the 15 MW (AC) PV Grid Interactive Power Plant including transmission & evacuation system for NINETH YEAR	
10	Operation and Maintenance of the 15 MW (AC) PV Grid Interactive Power Plant including transmission & evacuation system for TENTH YEAR	
Total O&M Contract Price excluding ST (in figures)		
Total O&M Contract Price excluding ST (in Words)		

Table 5A stands amended as

TABLE 5A: Total EPC Contract Price(including Taxes/Duties and other Levies)				
S. No.	Item	Final Price for 15 MW (AC) SPV Plant		Direct / Bought out
		(In Rs.)		(Mention)
Part - A: Supply Works package(upto site)		Base Price	Price Inclusive of tax	
1	PV Modules up to site (mention quantity & wattage)			
2	Mandatory Spares (0.25% of total supply of solar modules)			
3	Inverters up to site (mention Quantity and Capacity)			
4	Supply of Balance of System includes all equipment, materials, spares, accessories, MMS etc. excluding 1,2 & 3 above up to site			
5	transformer & switch yard including transmission line connecting to STU at 132 kV			
Part - B: Erection Works Package				
6	General works including erection, commissioning, testing etc. of entire plant including MMS erection, excluding 7 below			
Part - C: Civil and allied Works Package				
7	Civil and allied works including construction of buildings, MMS foundations, perimeter etc.			
8	Total (1+2+3+4+5+6+7) Including Taxes (In Figures)			
Total Contract Price, Including Taxes (in Words)				

Amended Appendix 1

Appendix 1: Performa for Bid Letter (on Bidders' letter head)

Date: --/--/----

To,

General Manager (C & P)

Solar Energy Corporation of India Limited

1st Floor, A Wing, Religare Building

D-3, District Centre, Saket, New Delhi - 110017

Subject: Submission of the bid (NIT No. SECI/SD/2/NIT/2016/BEL/OFM15) for Engineering, Procurement, Construction, Installation, Testing, Commissioning of 15 MW (DCR) (AC) Solar Photovoltaic Grid Connected Power Plant including associated power evacuation & transmission system on turnkey basis and O&M for 10 (ten) years at Ordnance Factory Medak's premises in the state of Telangana .

Dear Sir,

We, the undersigned, have considered and complied with the "Instructions to Bidders" and have accepted the terms stipulated in the NIT documents. The scope of work shall include but not be limited to Engineering, Procurement, Construction, Installation, Testing, Commissioning along with associated power evacuation & transmission system up to 132 kV of STU substation within Ordnance Factory Medak's premises including Right of Way (if required) as well as Operation and Maintenance for 10(ten) years from the date of operational acceptance after commissioning of 15 MW (AC) Solar Photovoltaic Grid Connected Power Plant on turnkey basis at Ordnance Factory Medak's premises in the state of Telangana being established by BEL. All the above shall be as per NIT Document No. SECI/SD/2/NIT/2016/BEL/OFM15 dated 10/03/2016.

Also we have familiarized ourselves with the land surface and subsurface, metrological, climatological and environmental conditions which may exist in the installations area. In full cognizance and compliance with these aforesaid conditions and the regulations of local government authorities, we the undersigned do hereby offer for the subject project using PV technology on a turnkey basis at Ordnance Factory Medak's premises in the state of Telangana, for which we have Bid. The work covered under the Bid shall be completed to the entire satisfaction of yourselves or your representative in conformity with the NIT documents at the prices accompanying this Bid.

It is a term of our Bid that the Project shall be handed over installed, interconnected, tested, commissioned and modified and shall achieve Commissioning not later than **(170) One hundred Seventy days** from the date of issue of LOI as per the completion schedule mentioned under SCC Clause 8. This shall be the essence of the Contract between us.

We further agree and stipulate as follows:

1. Until the final Contract Documents are prepared and executed, the NIT documents, with any modifications, additions, deletions agreed with the Employer and your written acceptance submitted in the form signed and stamped NIT documents along with its amendments (if any) by Authorized signatory of the contractor at the time of bidding, shall constitute a binding Contract between us, upon terms contained in aforesaid documents and the Financial Proposal accompanying the Bid.
2. That the Employer will not supply any men, material & logistics. In all respects we shall be fully self- sufficient in the Performance of the work.
3. I/ We understand that Employer is not bound to accept the lowest of the Bid you may receive.
4. I/ We shall make available to the Employer any additional information it may find necessary or require to supplement or authenticate the qualification statement.
5. I/ We acknowledge the right of the Employer to reject our Bid without assigning any reason or otherwise and hereby waive, to the fullest extent permitted by applicable law, our right to challenge the same on any account whatsoever.
6. I/ We understand that you may cancel the bidding process at any time and that you are neither bound to accept any Application that you may receive nor to invite the Applicants to Bid for the Project, without incurring any liability to the Applicants.
7. I/ We further certify that in regard to matters relating to security and integrity of the country, we or any of our Associates have not been charge-sheeted by any agency of the Government or convicted by a Court of Law.
8. I/ We further certify that no investigation by a regulatory authority is pending either against us or against our Associates or against our CEO or any of our directors/ managers/ employees.
9. I/ We undertake that in case due to any change in facts or circumstances during the bidding process, we are attracted by the provisions of disqualification in terms of the provisions of this NIT; we shall intimate the Employer of the same immediately.
10. We understand that the selected Bidder shall be an existing Company incorporated under the Indian Companies Act, 1956 or 2013 or JV of two or more bidders as per stipulated Qualifying requirement.
11. I/ We hereby irrevocably waive any right or remedy which we may have at any stage at law or howsoever otherwise arising to challenge or question any decision taken by the Employer in connection with the selection of Applicants, selection of the Bidder, or in

connection with the selection/ bidding process itself, in respect of the above mentioned Project and the terms and implementation thereof.

12. I/ We agree and undertake to abide by all the terms and conditions of the NIT document.
13. We agree to keep the bidding valid for acceptance for a period of 180 days from the date of floating the Bid (hereinafter referred to as validity period) and the Bid shall not be withdrawn on or after the opening of bidding till the expiration of the validity period or any extension thereof.
14. We also undertake not to vary/ modify the Bid during the validity period or any extension thereof.
15. We represent that we have fully satisfied ourselves as to the nature and location of the Project having in mind the general and local conditions and other factors incidental to the Performance of the works and the costs there of.
16. We further represent that from our own investigation of the Site of the Project we have fully satisfied ourselves as to the character, quality other soil conditions to be encountered in the Performance of the works and we understand and represent that any failure to acquaint ourselves in respect of these matters and the other factors and conditions as set forth shall not relieve us from any responsibility for estimating properly the difficulty and cost of successfully performing the works.
17. We also acknowledge and accept that you shall not pay for any discontinuance or low Performance rate resulting from malfunction of / or inadequacy of our equipment, instruments or personnel.
18. We agree to return to you all reports and technical data provided for our use in preparing this Bid and in the subsequent conduct of the works. We undertake that we will not use the same for any other work/purpose.
19. We further represent that we have familiarized ourselves with all the terms and provisions of the various parts of the bidding documents and that in making our Bid, we do not rely upon any representation made by any agent or employee of yourselves in respect of the terms of the bidding documents or the nature of the Performance of the works.
20. We submit this Bid with the full understanding that our Bid fully complies with all the terms and conditions of the NIT documents including Bid evaluation criteria and that no deviation/exception to the NIT documents have been taken by us. We also agree that in case we have taken any exceptions/ deviations to the NIT documents, the Employer will be free to reject our offer on account of such exceptions/deviations.
21. We agree to guarantee following minimum Plant Performance parameters: Performance Ratio (PR) not less than 0.78 at the time of Operational Acceptance and plant Capacity Utilization Factor (CUF) not less than 19% at the end of first year from the date of **Operational Acceptance** and further up to 0.75% per year of degradation

in module output for successive years form second year onwards for remaining O&M period.

Dated this _____ day of _____ 2016

Signature: _____

In the capacity of: _

Duly authorized to sign Tenders for and on behalf of (Name & Address)

—

—

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Witness

Amended Appendix 3

Appendix 3: Bid Evaluation Criteria (BEC)

1. Following factors shall be required for evaluation of Bid:
 - a) The Evaluated Bid Value (EBV) shall be calculated using the following method:
 1. Contract Value i.e., Total sum of the price mentioned under different work package heads viz. Supply, Erection and Civil works package including all taxes and duties as provided in the Table 5A and 5B of the financial proposal.
 2. Net Present Value (NPV) of O&M Contract Price **excluding taxes** for ten years to be calculated at a Discount rate of 10.81 % p.a.

Evaluated Bid value (EBV) = (1) EPC price + (2) NPV of O&M Contract Price

Note:

- Bidder with lowest EBV shall be L-1 and the next than that shall be the L-2 and so on.
- Present Value Factor for the mentioned Discount Rate will be considered up to 3 decimal places only.
- The evaluated price shall be inclusive of all taxes and duties as price quoted by the bidder **(except for O&M part)**. However, the award shall be placed excluding of taxes and duties. Bidder is required to ascertain correctness of applicable Taxes and Duties at the time of bid submission, as for the purpose of evaluation, the Taxes and Duties mentioned by bidder shall be considered. The same shall be paid/reimbursed based on the documentary evidence submitted by the bidder during execution, subject to the maximum limit, mentioned by the bidder and considered during evaluation.
- In case, any of the item/ component from the entire supplies is imported by the bidder than the price break up of those items shall be mentioned separately along with the applicable taxes and duties (bidder is required to ascertain correctness of taxes & duties as for the purpose of evaluation the Taxes and Duties mentioned by bidder shall be considered). Further in case, any concession/ exemption is desired to be availed by the bidder in accordance with provisions of GCC Clause 8.5, and as applicable by the permissible law/ rule/ regulations then the same shall be mentioned by the bidder.
- In Table 5B, Summary of Taxes and Duties, if bidder does not mention any tax amount against any type of tax and writes –Extra at actuals or leave blank or writes-NIL or writes any other comment, the same shall be considered as ZERO and it is presumed that bidder has incorporated effect of these Taxes somewhere else in the price bid.

Amended Appendix 4

Appendix 4: Power Plant Performance Guarantee Test for

- Performance Ratio as determined through the PR Test Procedure specified here should not be less than 0.78 for Operational Acceptance.
- The Contractor shall demonstrate plant Capacity Utilization Factor (CUF) not less than 19% at the end of first year from the date of Operational Acceptance, and a linear degradation of **0.75% per year** in module output from second year (**of O&M period**) onwards for the remaining O&M period.

Table 4A: Solar Plant Performance Parameters

Particulars	Proposal
Solar PV module Technology proposed	
DC installed Capacity Proposed (in kW)	16,500 kW (minimum)
Mounting structures proposed	Fixed tilt / Seasonal tilt
PR at the time of Operational Acceptance	0.78
Guaranteed CUF	19%

Note:

- CUF shall be demonstrated against the DC Capacity to be installed at STC
- PR shall be demonstrated against the installed DC Capacity.
- Subsequent to the Commissioning of the Plant, the Contractor shall notify the Employer a date for Commencement of PR Test Procedure within the specified timeline of contract. Contractor is also advised to conduct PR test well within time line, so that in case any correction, modification or remedy required in the system can be carried within time line.
- CUF will be calculated annually from the date of Operational Acceptance of the Facilities.
- PR should be determined as per the formula and procedure specified in Clause 7 of Section V: Technical Specifications.

Amended Appendix 12(a)

Appendix 12(a): Format of Bank Guarantee for Bid Bond

(BANK GUARANTEE ON NON-JUDICIAL STAMP PAPER OF Rs.100)

(To be on non-judicial stamp paper of appropriate value as per Stamp Act relevant to place of execution.)

Ref. _____ Bank Guarantee No. _____ Date: _____

BID BOND BANK GUARANTEE FORMAT FOR TENDER /NIT No.
SECI/SD/2/NIT/2016/BEL/OFM15

In consideration of the -----[Insert name of the Bidder] (hereinafter referred to as 'Bidder') submitting the response to NIT inter alia for (NIT No. SECI/SD/2/NIT/2016/BEL/OFM15) for Engineering, Procurement, Construction, Installation, Testing, Commissioning of 15 MW (DCR) (AC) Solar Photovoltaic Grid Connected Power Plant including associated power evacuation & transmission system on turnkey basis and O&M for 10 (ten) years at Ordnance Factory Medak's premises in the state of Telangana , in response to the NIT No. SECI/SD/2/NIT/2016/BEL/OFM15 dated 10/03/2016 issued by Solar Energy Corporation of India Limited (SECI) on behalf of Bharat Electronics Limited (BEL) considering such response to the NIT of [insert the name of the Bidder] as per the terms of the NIT, the _____ [insert name & address of bank] hereby agrees unequivocally, irrevocably and unconditionally to pay to SECI at [Insert Name of the Place from the address of SECI] forthwith on demand in writing from SECI or any Officer authorized by it in this behalf, any amount up to and not exceeding Rupees -----[Insert amount as per Clause 1.2.1 of Section II: ITB] only, on behalf of M/s. _____ [Insert name of the Bidder] .

This guarantee shall be valid and binding on this Bank up to and including _____ [insert date of validity in accordance with *Clause 1.2.1 of Section II: ITB* of this NIT] and shall not be terminable by notice or any change in the constitution of the Bank or the term of contract or by any other reasons whatsoever and our liability hereunder shall not be impaired or discharged by any extension of time or variations or alternations made, given, or agreed with or without our knowledge or consent, by or between parties to the respective agreement.

Our liability under this Guarantee is restricted to Rs. _____ (Rs. _____ only). Our Guarantee shall remain in force until

_____ [insert date of validity in accordance with Clause 1.2.1 of Section II: ITB of this NIT].

SECI shall be entitled to invoke this Guarantee till _____ [Insert date which is 30 days after the date in the preceding sentence].

The Guarantor Bank hereby agrees and acknowledges that the SECI shall have a right to invoke this BANK GUARANTEE in part or in full, as it may deem fit.

The Guarantor Bank hereby expressly agrees that it shall not require any proof in addition to the written demand by SECI, made in any format, raised at the above mentioned address of the Guarantor Bank, in order to make the said payment to SECI.

The Guarantor Bank shall make payment hereunder on first demand without restriction or conditions and notwithstanding any objection by ----- [Insert name of the selected Contractor] and/or any other person. The Guarantor Bank shall not require SECI to justify the invocation of this BANK GUARANTEE, nor shall the Guarantor Bank have any recourse against SECI in respect of any payment made hereunder

This BANK GUARANTEE shall be interpreted in accordance with the laws of India and the courts at **New Delhi** shall have exclusive jurisdiction.

The Guarantor Bank represents that this BANK GUARANTEE has been established in such form and with such content that it is fully enforceable in accordance with its terms as against the Guarantor Bank in the manner provided herein.

This BANK GUARANTEE shall not be affected in any manner by reason of merger, amalgamation, restructuring or any other change in the constitution of the Guarantor Bank.

This BANK GUARANTEE shall be a primary obligation of the Guarantor Bank and accordingly SECI shall not be obliged before enforcing this BANK GUARANTEE to take any action in any court or arbitral proceedings against the selected Contractor , to make any claim against or any demand on the selected Contractor or to give any notice to the selected Contractor or to enforce any security held by SECI or to exercise, levy or enforce any distress, diligence or other process against the selected Contractor.

The Guarantor Bank acknowledges that this BANK GUARANTEE is not personal to SECI and may be assigned, in whole or in part, (whether absolutely or by way of security) by SECI to any entity to whom SECI is entitled to assign its rights and obligations.

Notwithstanding anything contained hereinabove, our liability under this Guarantee is restricted to Rs. _____ (Rs. _____ only) and it shall remain in

force until We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only if SECI serves upon us a written claim or demand.

Signature _____

Name _____

Power of Attorney No. _____

For

_____ [Insert Name of the Bank] _____

Banker's Stamp and Full Address.

Dated this ____ day of ____, 20__

Witness:

1.

Signature

Name and Address

2.

Signature

Name and Address

INSTRUCTIONS FOR FURNISHING BANK GUARANTEE

- The Bank Guarantee by Bidders will be given on non-judicial stamp paper as per stamp duty applicable at the place where the tender has emanated. The non-judicial stamp paper should be in name of the issuing bank.
- The Bank Guarantee by Bidder will be given from bank as per Schedule 1: List of Banks only.
- This bank guarantee/ all further communication relating to the bank guarantee should be forwarded to GM (C&P), SECI's office address.
- The full address along with the Telex/Fax No. and email address of the issuing bank to be mentioned.
- The Bank Guarantee Checklist provided in Appendix 12(d): Bank Guarantee Verification, duly filled in, should be enclosed with The Bank Guarantee.

Note:

1. Non-submission of BID Security shall result into rejection of bid and no request from bidder, shall be entertained in this regard.
2. In case the bid is submitted by a Joint Venture, the bid security shall be in the name of the Joint Venture and not in the name of the Lead Partner or any other Partner(s) of the Joint Venture. Non-compliance of the same shall result into rejection of bid and no request from bidder, shall be entertained in this regard.