Clarifications to Queries raised during Pre-Bid Meeting on 31.08.2018

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RfB No: SECI/C&P/RfB/2018/160MWH/WB/01

Sl. No.	Section	Page No.	Clause	Description as per Bidding Document	Queries	Category	Clarifications
1	Employer's Requirement Annexure-A Part II	348	2.2	The Contractor shall demonstrate minimum guaranteed annual generation from Part 1: Solar Plant of the Plant Facilities year-on-year as measured on the Energy metered at the 33kV incoming feeder(s) of the solar plant as per below table:	Bidder proposes Metering to be done at final outgoing feeder from Solar Plant to Client 33kV/220kV Substation. Please confirm.	Technical	Kindly refer S.No.10 of Amendment-1.
2	Employer's Requirement Annexure-A Part II	372	2.2.3	Every SMU input shall be provided with fuses on both positive and negative side.	Bidder propses fuses on positive side only. Please confirm	Technical	Kindly refer S.No.16 of Amendment-1.
3	Employer's Requirement Annexure-A Part II	372	2.2.9	Suitable communication interface shall be provided to communicate the data to SCADA. The following parameters shall be measured/ monitored and made available at SCADA. (i) String current (ii) Bus voltage (iii) Output current (iv) Cabinet temperature (v) DC disconnector switch ON/OFF status (vi) SPD operating status	Bidder proposes Zone monitoring to be considered at Inverter Level as a cost effective solution. Also if String monitoring is required, same shall be done after Y Connector. Individual String shall not be monitored. Please confirm.	Technical	The terms and conditions of the Bidding Document prevail.
4	Employer's Requirement Annexure-A Part II	374	3.5(ii)	The average voltage drop in the cables (Modules to Inverter) shall be limited to 1.5 % of the rated voltage. Contractor shall provide voltage drop calculations in excel sheet.	Bidder requests to confirm whether 1.5% DC Ohmic Loss is required at STC or it shall be the GHI corrected loss as as obtained in PVSyst waterfall diagram.	Technical	This is related to voltage drop calculation only. The terms and conditions of the Bidding Document prevail.
5	Employer's Requirement Annexure-A Part II	377	4.3.2	Every DC input terminal of PCU shall be provided with fuse of appropriate rating.	We propose Fuse at Positive Side only as negative side shall be grounded. Please confirm.	Technical	Please refer S.No. 2 above.
6	Employer's Requirement Annexure-A Part II	379	4.6.1	The PCU shall be able to limit the active power exported to the grid based on the set point provided through PCU front control panel. The PCU shall also be able to automatically the limit the active power after an increase in grid frequency above a preset value. The ramp rate shall be adjustable during operation and start-up after fault. The applicability of the requirement shall be as per CEA regulation and compliance.	Bidder seeks clarification that for frequency control, active power shall be dropped. However is there any requirement for reactive power control as well? Bidder proposes dip in active power while supporting the reactive power from 0.95 lead to 0.95 lag.	Technical	The PCU shall have provision for providing reactive power support as per the prevailing regulations in this regard.
7	Employer's Requirement Annexure-A Part II	382	5.2	HV side –36 kV porcelain bushings	Please note that Auxiliary Transformers located in Inverter Station shall be fed from the Inverter output. Hence, Voltage Rating of HV Side Bushing shall not be 36kV. Please confirm.	Technical	In case Auxiliary Transformer is fed from Inverter output, the bushings shall be of 1.1 kV epoxy bushings. The terms and conditions of the Bidding Document prevail.
8	Employer's Requirement Annexure-A Part II	384	5.3.14	LV and HV cable box shall be provided with disconnecting chamber to facilitate the movement of transformer without disturbing cable box and termination.	Please note that as per clause 5.2, HV Side shall be provided with 36kV Porcelain Bushings, so Cable Box is not applicable for HV Side. Please confirm.	Technical	The terms and conditions of the Bidding Document prevail.
9	Employer's Requirement Annexure-A Part II	394	6.9.3	Measuring instruments shall have provision to display the following parameters. (i) Line and phase voltages (ii) Line and phase currents (iii) Active power, Reactive power, Apparent power (iv) Frequency (v) Power factor (vi) Total Harmonic Distortion (THD)	Please note that THD measurement at HT Switchgear is not available in standard manufacturer design. Please reconsider this requirement.	Technical	The terms and conditions of the Bidding Document prevail.
10	Employer's Requirement Annexure-A Part II	398	7.5(iii)	Short circuit withstand capability as per design for 1s.	Bidder proposes Short Circuit Withstand timey for cable shall be selected as per relay coordination subjected to min of 0.3 sec. However for final power evacuation feeder same shall be 1 Sec. Please confirm.	Technical	The terms and conditions of the Bidding Document prevail.
11	Employer's Requirement Annexure-A Part II	399	7.9.2	LT cable (from inverter to inverter transformer) shall laid through RCC cable trench with supports.	Bidder proposes that Cables between Inverter and Inverter Transformer be laid in Cable Trays. Same is also mentioned in Clause 5.1.8 of Annexure – A PART IV. Please confirm.	Technical	The terms and conditions of the Bidding Document prevail.
12	Employer's Requirement Annexure-A Part II	404	10.3.1(ii)	Battery system for 2 hours Input Voltage 415 V ± 10% AC	Please note that for UPS located in Inverter Stations, we propose autonomy time of 30 minutes and Input voltage shall be three phase / single as per selected Design. Please confirm.	Technical	The terms and conditions of the Bidding Document prevail.
13	Employer's Requirement Annexure-A Part II	406	11.2.1	Earthing system shall be designed based on system fault current and soil resistivity value obtained from geo-technical investigation report.	Client is requested to confirm the system fault withstand time to be considered for Earthing Design. Also please provide reference value of soil resistivity to be considered for evaluating earthing quantity.	Technical	Soil resistivity test shall be conducted by the successful bidder. System fault withstand time shall be determined during detailed design stage. The terms and conditions of the Bidding Document prevail.
14	Employer's Requirement Annexure-A Part II	407	11.3.2	Each PV Module frame shall be earthed using copper wire of sufficient cross section. The copper wire shall be connected to the earth hole provided in the module frame using suitable arrangement in line with the manufacturer recommendation. The earthing arrangement shall use stainless washers to prevent galvanic corrosion between aluminium frame and copper wire. In order to achieve effective earthing, serrated washers shall be employed to penetrate the anodization layer of the module frame.	We propose Module shall be bonded to Structure through Serrated Washers without any additonal copper wires inline with module manufacturer recommendation. Client is requested to accept same.	Technical	The terms and conditions of the Bidding Document prevail.
15	Employer's Requirement Annexure-A Part II	409	12.2	Protection Level for the entire plant shall be level – I.	Bidder request to consider protection level IV instead of level I as per NFC code which is standard for PV Plants. Protection Level-I shall lead to significant increase in number of ESE terminals required. Please confirm.	Technical	The terms and conditions of the Bidding Document prevail.
16	Employer's Requirement Annexure-A Part II	412	16.1	The average LUX level of 10 lm is to be maintained in switchyard. However, a lux level of 20 lm ((10+10) additional switchable on requirement only) is to be maintained in switchyard on transformer.	Bidder understands that lm is to be read as lux. Please confirm.	Technical	Kindly refer S.No.21 of Amendment-1.

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17	Employer's Requirement Annexure-A Part II	417	18.1	CCTV Camera (i) Main entry: Covering all the entry/exit 24 hours (ii) Along the Plant Perimeter: Covering complete perimeter of Plant Area to capture all possible intrusion (iii) Control Rooms: Covering Entry/Exit and activities within Control Rooms (iv) The Contractor has to propose the locations and number of cameras required for the Plant during bidding, however Employer's decision on number of cameras shall be final.	As cost optimization point, Bidder proposes CCTV not to be provided at perimeter, since plant shall be protected by fence and security rooms to prevent any intrusion. Please confirm.	Technical	The terms and conditions of the Bidding Document prevail.
18	Employer's Requirement Annexure-A Part II	537	78.3	The Contractor shall estimate the water requirements for cleaning the photovoltaic modules at least once in two week or at closer frequency as per the soiling conditions prevailing at site, in order to operate the plant at its guaranteed plant performance. Also, the contractor is required to plan the water storage accordingly with provision of a tank of suitable capacity for this purpose. However, min. consumption of 2 Ltr / Sqm of surface area of SPV module shall be considered in estimation of required quantity of water storage.	Please note that Cleaning cycle frequency shall be selected so as to maintain desired soiling loss. Also, please note that as per our O&M experience in various plants, 2 ltrs of water per module is sufficient for Cleaning Purpose. Client is requested to accept same.	Technical	The terms and conditions of the Bidding Document prevail.
19	Employer's Requirement Annexure-A Part IV	568	1	Substation Details - 33 kV/220 kV proposed sub-station, Ramagiri Distance to connecting substation - Within the identified land	Client is requested to provide Plant Boundary details in Autocad Format / KMZ file. Also please confirm whether Solar Power and Wind power shall be combined at the MCR or individually evacuated to 33/220kV Substation from the common MCR.	Technical	Kindly refer S.No.35 of Amendment-1.
20				-	We propose daisy chain method for power evacuation upto the MCR. Please confirm.	Technical	The bidder is free to follow any topology.
21	Employer's Requirement Annexure-A Part II	415	17.1.3	Each instrument shall be supplied with necessary cables. Calibration certificate with calibration traceability to World Radiation Reference (WRR) or World Radiation Centre (WRC) shall be furnished along with the equipment. The signal cable length shall not exceed 20m.	Please note that Pyranometer will going to direct Communicate with PLC, to mount the pyranometer in correct direction for better irradiation 20 mtr is not sufficent, the bidder suggests for 50 mtr cable of pyranometer(SMP-10) to communicate directly through PLC. Kindly confirm.	Technical	The Bidder may use the RS485 which does not have any cable length restriction.
22	Employer's Requirement Annexure-A Part II	416	17.4.1(v)	RS485 MODBUS interface for data collection and storage on SCADA	The Bidder suggests for TCP/IP protocol for better communication with data logger to PLC. Kindly confirm.	Technical	The terms and conditions of the Bidding Document prevail.
23	Employer's Requirement Annexure-A Part II	488	38.6	Contractor shall employ redundant fiber optic backbone for data communication between remotely located equipments and main control room.	Please note that we shall consider OFC Ring topology to achive redundancy. Kindly confirm.	Technical	The terms and conditions of the Bidding Document prevail.
24	Employer's Requirement Annexure-A Part II	343	2.1.1	Tavg_mod,k Average PV Module temperature measured at the commencement of time interval ' ' (°C) τk	The bidder requests to consider insolation wieghted avergae module temperature, measured at back-side of modules as per IEC 61724.	Technical	The terms and conditions of the Bidding Document prevail.
25	Employer's Requirement Annexure-A Part II	343	2.1.1	Tref PV Module temperature at which Po is determined, i.e. 25°C	The bidder understands that temperature correction with STC temperature 25 deg C does not give correct interpretation of module performance at site conditions and thus PR values may be exaggerated. Hence, as per IEC 61724 guidance, the bidder requests to consider insolation weighted hourly average module temperature, ,calculated over the test period from the hourly PVSYST weather file for the project.	Technical	The terms and conditions of the Bidding Document prevail.
26	Employer's Requirement Annexure-A Part II	345	2.1.3.5	This test verifies that strings are properly connected (module and string polarity) and that all modules are producing the expected voltage according to the module data sheet.	The bidder request to consider that all modules shall produce voltage within +/- 5% of the expected voltage at STC as per IEC 62446.	Technical	Kindly refer S.No.9 of Amendment-1.
27	Employer's Requirement Annexure-A Part II	348	2.2	The Contractor shall demonstrate minimum guaranteed annual generation from Part 1: Solar Plant of the Plant Facilities year-on-year as measured on the Energy metered at the 33kV incoming feeder(s) of the solar plant as per below table:	Please provide the formula and conditions for evaluation of annual generation. Besides, the bidder requuests to consider PR as guarantees for verification of annual performance of the Solar PV plant.	Technical	Kindly refer S.No.10 of Amendment-1.
28	Employer's Requirement Annexure-A Part II	347	2.1.4.3(2)	Radiation Criteria – Radiation on Plane of Array (POA) less than 200 W/m2	The bidder requests to clarify if periods of average insolation less than 200W/m2 are to be deleted from PR test calculations, If yes, please consider 100W/m2 as minimum average irradiance in calculation of PR.	Technical	The terms and conditions of the Bidding Document prevail.
29	Employer's Requirement Annexure-A Part II	367	1.3.1	a) For PV Modules with backsheet, toughened low iron glass with minimum thickness of 4.0 mm for 72 cell module and 3.2 mm for 60 cell module for Multi or mono-crystalline Modules	Please consider glass thickness to be 3.2 mm for 72 cell module as industry standard for major module manufacturers.	Technical	The terms and conditions of the Bidding Document prevail.
30	Employer's Requirement Annexure-A Part II	368	1.3.3	No yellowing of the encapsulant with prolonged exposure shall occur.	Please note that any power degradation arising out of yellowing of the encapsulant if observed at site, shall be covered under module warranty.	Technical	Not acceptable. The terms and conditions of the Bidding Document prevail.
31	Employer's Requirement Annexure-A Part II	368	1.3.5	The module frame shall be made of anodized Aluminium, which shall be electrically & chemically compatible with the structural material used for mounting the modules. It is required to have provision for earthing to connect it to the earthing grid. The anodization thickness shall not be less than 15 micron.	Please consider that frame anodization thickness to be 10 um, which is standard followed by major module manufacturers, which can meet requirements.	Technical	The terms and conditions of the Bidding Document prevail.
32	Employer's Requirement Annexure-A Part II	369	1.4.1	PV modules must be warranted with linear degradation rate of power output except for first year (maximum 2.5% including LID) and shall guarantee minimum 80% of the initial rated power output at the end of 25 years.	Please note that in case of monocrystalline modules, maximum degradation including LID is 3% as guaranteed by module manufacturers.	Technical	Kindly refer S.No.15 of Amendment-1.

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33	Employer's Requirement Annexure-A Part II	512	52.2	1) The Approach road connecting nearest public road and the Main gate shall be of 5m wide carriage way with 0.5m wide shoulders on either side.The access roadconnecting Main gate and MCR and internal access road(s) connecting MCR to various facilities/ buildings shall be of 3.5m wide carriage way with 0.5m wide shoulders on either side while the peripheral road shall be of 2.5m wide carriage way with 0.5m shoulders on either side. The top of road (TOR) elevation shall be minimum 200 mm above FGL to avoid flooding of roads during rains. 2) The roads shall be provided with alongside drains as per design requirements of drainage system to avoid flow of storm water over the road. 3) The roads shall be designed and constructed as per IRC SP-20 corresponding to design vehicular traffic of minimum - 150 Commercial vehicles per day and critical field CBR value of the subgrade. 4) Shoulder shall be of min. 150mm thickness.	1) The Bidder Proposes the width of the approch road to be 4m instead of 5m. 2) Drain will be provided where ever required but not completely along the road. 3)Computation of design traffic Shall be as per design calculations instead of considering it as 150 CVPD. 4) CBR Value shall be as per the Geotech report. 5) The Bidder Proposes the shoulder should be 100mm instead of 150mm.	Technical	The terms and conditions of the Bidding Document prevail.
34	Employer's Requirement Annexure-A Part II	545	87.3.5	Backfilling of foundation shall be carried out as shown on the drawings or directed by the engineer with suitable materials. Filling materials shall be spread, levelled and thoroughly compacted in layers not more than 200 mm thick or as directed by Engineer. Each layer shall be separately compacted to achieve the required state of compaction	Design of foundations on backfilled soil to be as per the soil properties and bearing to be considered as per actual site conditions.Backfilling, if required, shall be done with proper compaction to achieve high bearing capacity.	Technical	The present clause pertains to backfilling around foundations and not w.r.t. providing foundations on filled up soil. Terms and conditions of the Bidding Document prevail.
35	Employer's Requirement Annexure-A Part II	514	53.4	The coefficient of run-off for estimation of design discharge shall be considered as per catchment characteristics, however it shall not be less than 0.6.	The Bidder Proposes that the coefficent of run-off shall be as per IRC / hydrology report recommendation.	Technical	The terms and conditions of the Bidding Document prevail.
36	Employer's Requirement Annexure-A Part II	514	53.5	The drainage scheme shall be designed considering the plant plot area and the surrounding catchment area contributing to the plant area drainage as per the topography.	Kindly provide the percent of catchment area to be considered.	Technical	It is the responsibility of the successful bidder to assess the surrounding catchment area during the detailed design.
37	Employer's Requirement Annexure-A Part II	514	53.7	Suitable size plant peripheral drain as per design (min. bottom width x depth: 500mm x 500mm) along inside of plant boundary wall/ fence shall be provided for smooth channelization of outside storm water and to avoid flooding in the plant. The size of all internal and road side drains shall not be less than 450mm (bottom width) x 500mm (depth).	The Bidder proposes that drain will be provided where ever required but not all along the periphery of site.	Technical	The terms and conditions of the Bidding Document prevail.
38	Employer's Requirement Annexure-A Part II	515	53.8	All trapezoidal drains shall be lined with either brick or RR masonry/ concrete or stone slabs as suitable to the site conditions. The min. Thickness of the lining shall be 115mm for brick masonry, 75mm for concrete slabs, 150mm for RR masonry and 100mm for stone slabs. The lining shall be in CM (1:4) and the joints shall be raked and pointed with CM (1:3), however, the joints in lining of plant peripheral drain may be left without pointing.	The Bidder Proposes the thickness of the stone slab lining shall be 40mm instead of 100mm due to market availabilty.	Technical	The terms and conditions of the Bidding Document prevail.
39	Employer's Requirement Annexure-A Part II	515	53.11	The drain outfall shall be connected to the nearest existing natural drain(s)/ water body outside plant premises and it shall be ensured that the drainage water shall not re-enter the plant nor encroach/ flood in the adjacent property/ plot.	Please Provide the availability of the Existing Natural drains/ water Body outside the Plant and its distance from the plant.	Technical	Suitable existing natural drain outside plant boundary shall be identified by the Bidder in consultation with local authorities for approval to discharge the plant area run-off. The terms and conditions of the Bidding Document prevail.
40	Employer's Requirement Annexure-A Part II	516	54.2.1	The fencing shall be of Chain link (GI or poly coat GI as applicable) mesh fabric with internal, corner and stay posts of RCC (min 200mm x 200mm size, M30 grade) or GI angle (min. ISA 75x75x6 mm), as applicable, along with 150mm height 230 thick brick/ 300 thick RR masonry toe wall, with 100mm thick PCC (1:3:6) foundation.	The Bidder proposes that the GI angle shall be 60X60X5mm, and the Grade of concrete shall be M25 Instead of M30. Kindly Confirm.	Technical	The terms and conditions of the Bidding Document prevail.
41	Employer's Requirement Annexure-A Part II	516	54.2.2	The brick masonry toe wall shall be plastered with 15thick CM (1:4) plaster on both faces and shall have min. 50 thick PCC (1:2:4) coping finished smooth and projecting 25mm on either side of the wall with top sloping inwards. The depth (below NGL) and width of toe wall foundation shall not be less than 450mm and 500mm respectively.	The Bidder proposes that no toe wall will be provided on the boundary fence,where as it is provided for the switchyard fence.	Technical	The terms and conditions of the Bidding Document prevail.
42	Employer's Requirement Annexure-A Part II	516	54.2.3	Spacing of intermediate posts shall not be more than 2.5m. Every 10th intermediate post shall be provided with a stay post while every corner post shall be provided with two stay posts.	The Bidder proposes that on every 15th intermediate post shall be provided with stay post instead of every 10th post.	Technical	The terms and conditions of the Bidding Document prevail.
43	Employer's Requirement Annexure-A Part II	516	54.2.6	All MS sections shall be painted with 2 coats of epoxy paint over 2 coats of suitable primer	The Bidder proposes one coat red oxide and primer 2 coats of enamel each of 40micron, one coat at factory and one at site is to be done.	Technical	The terms and conditions of the Bidding Document prevail.
44	Employer's Requirement Annexure-A Part II	518	56	Design Loads	The Bidder proposes that the Imposed (Live) loads are to be considered as per IS 875 (Part-II) instead of the mentioned imposed loads.	Technical	The terms and conditions of the Bidding Document prevail.
45	Employer's Requirement Annexure-A Part II	519	56.4	To calculate the design wind speed (Vz), the factors K1 (probability factor or risk coefficient), K2 (terrain roughness and height factor) and K3 (topography factor) shall be considered as per IS 875 (Part-3) (However, minimum values for K1, K2 and K3 shall be 1.0, 1.05 and 1.0 respectively)	The Bidder Proposes that wind load perameters are as per IS 875 (part-3), instead of taking the values for K1, K2 and K3 shall be 1.0, 1.05 and 1.0.	Technical	The terms and conditions of the Bidding Document prevail.
46	Employer's Requirement Annexure-A Part II	525	59.4	The structure shall be designed to allow easy replacement of any module and shall be in line with site requirements.	Please specify the excact requirement of this arrangenment (or the bidder going to use models from different manufacturers)	Technical	The terms and conditions of the Bidding Document prevail.

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47	Employer's Requirement Annexure-A Part II	525	59.7	The minimum thickness excluding anti corrosive treatment (BMT) of various elements of MMS structure shall be as following: • Stub/ column – 3.15mm, • Rafter – 2.5mm & • Purlin & other members – 2.0mm	The Bidder proposes the minimum thickness of various elements of MMS Structure shall be 1. Stub/ column – 2mm, 2) Rafter & Bracing – 1.2mm 3) Purlin & Other members – 0.8mm	Technical	The terms and conditions of the Bidding Document prevail.
48	Employer's Requirement Annexure-A Part II	526	59.11	The purlins shall be provided with following min. 10mm dia. GI sag/ tie rods or 30x30x2 GI tie angles: • 1 no. tie rod in middle of each span • 1 no. diagonal tie rod at each corner in end spans	The Bidder suggests that in case of hat purlins, sag rod/angle is not required.	Technical	The terms and conditions of the Bidding Document prevail.
49	Employer's Requirement Annexure-A Part II	526	59.13	The vertical diagonal bracing shall be provided in alternate spans of each unit (table) of MMS.	The Bidder suggests that vertical column to column bracing shall be provided if required, as per staad analysis and design.	Technical	The terms and conditions of the Bidding Document prevail.
50	Employer's Requirement Annexure-A Part II	526	59.16	MMS structure shall be hot dip galvanized with minimum GSM 610 kg/ sqm and/or minimum coating thickness of 80 microns for protection against corrosion. Galvanization shall conform to IS-2629, 4759 & 4736 as applicable.	The Bidder suggests that galvanization to be as per below : Leg - HDG Rafter & Purlin - Galvalume AZ-150 Bracings - Galvalume AZ-150	Technical	The terms and conditions of the Bidding Document prevail.
51	Employer's Requirement Annexure-A Part II	527	59.24	Min. diameter of bolt for MMS connections shall be 10mm except for column-rafter connection where it shall not be less than 12mm (not less than 16mm in case of single bolt connection)	The Bidder suggests that dia of bolt to be decided as per connection design through staad analysis.	Technical	The terms and conditions of the Bidding Document prevail.
52	Employer's Requirement Annexure-A Part II	527	59.27	In case the contractor proposes to extend the column leg to embed it in the pile as an alternate fixing arrangement, the column member shall be extended for full depth of the pile (100mm cover at tip of the pile) with an end plate of min. 4mm thickness to be fixed at the bottom of column leg. (However, for plants in coastal area or in case of marshy soil the column post shall be supported only with base secured to foundation through base plate and anchor bolt assembly and no embedment of column leg in foundation is permitted)	The Bidder suggests that concrete short pile with embedded leg to be provided and end plate is not required as per general industry practise. Cover at bottom shall be 100mm.	Technical	The terms and conditions of the Bidding Document prevail.
53	Employer's Requirement Annexure-A Part II	527	59.28	The area of c/s of embedded leg shall not be less than 0.8% of pile cross sectional area.	The Bidder proposes the area of c/s of embedded leg shall be 0.4% of the pile cross section as a normal practice	Technical	The terms and conditions of the Bidding Document prevail.
54	Employer's Requirement Annexure-A Part II	528	59.32	The length of one unit (Table) of MMS shall not generally be more than 20m.	The Bidder Proposes the length of the table shall be 31 mtr, Kindly confirm.	Technical	The terms and conditions of the Bidding Document prevail.
55	Employer's Requirement Annexure-A Part II	529	62.1.2	Unless otherwise specified elsewhere, all buildings except Security room/ cabin shall have RCC framed structure. The equipment area shall be designed with OEM requirements to ensure all satisfactory operations. The security room/ cabin(s) shall be of prefabricated structure.	The Bidder Proposes that the Inverter room shall be of Prefabricated unit instead of RCC Building.	Technical	The terms and conditions of the Bidding Document prevail.
56	Employer's Requirement Annexure-A Part II	530	62.1.6.1	Contractor shall provide required number of security cabins at strategic locations & at corners of the plot and 1 nos. security room at Main entry gate.	The Bidder proposes the security cabins on the corners of the plot and 1 at the main entry gate. Kindly confirm.	Technical	The terms and conditions of the Bidding Document prevail.
57	Employer's Requirement Annexure-A Part II	531	62.1.6.9	The Security Room shall be supported on RCC pedestal & foundations.	The Bidder Proposes that the security room shall be supported on Brick wall instead of RCC pedestal & foundations.	Technical	The terms and conditions of the Bidding Document prevail.
58	Employer's Requirement Annexure-A Part II	533	67	Plinth beam, when provided, shall be taken minimum 200mm below FGL. The plinth filling below Ground floor (GF) for all buildings shall be provided with following specifications; (i) Well compacted sub-grade (ii) Well compacted bounder soling with interstices filled with sand over compacted subgrade. (iii) 75mm thick PCC 1:3:6 over (ii) (iv) 100mm thick PCC 1:2:4 over (iii) (v) 40mm thick floor finish over (iv)	The Bidder Proposes that the filling will be 1) Well compacted subgrade. 2) 100mm thick PCC 1:3:6 over 3) 40mm thick floor finish 4) Plinth beam to be provided at level considering the HFL of site. Kindly confirm.	Technical	The terms and conditions of the Bidding Document prevail.
59	Employer's Requirement Annexure-A Part II			General Requirements	- Pease provide Contour/ topograpical and hydrology survey reprorts in CAD format along with plot boundary. - Please provide geotechnical report of the site for the estimations at Prebid stage.	Technical	Kindly refer S.No.35 of Amendment-1. However the Employer is not responsible in case of any variation in topography observed by the contractor during detailed topographic survey (to be conducted by him during execution) and that shown in the attached drawing and no claim whats so ever shall be entertained on account of this.
60	Employer's Requirement Annexure-A Part II	357	4.6.1	MWHC is the MWH Capacity of the BESS system. It shall be 20 MWh for project. LDɳLoss shall be for one year as the efficiency measurement shall be done each year during O&M.	LDɳloss at the commissioning stage shall be calculated considering MWHC 20MWh while during annual verification, LDɳloss shall be calculated considering MWHC not be less than 16MWh (i.e. 80% of the rated capacity). Please confirm.	Technical	Yes. The terms and conditions of the Bidding Document prevail.
61	Employer's Requirement Annexure-A Part II	359	3	In the event of deviation from scheduled generation more than the allowed limit under the Regulation, the BESS can be used to reduce the gap to avoid the penalty for such deviations beyond allowed limit. This shall be demonstrated at site after commissioning of the BESS facility.	In order to mitigate the fluctuation in grid due to intermittent nature of generation from Wind and Solar, restriction on ramp rate shall be maintained at +/-10% per minute on the 33 kV AC bus bar subject to the maximum capacity of the BESS System. Kindly confirm, whether we can go beyond the mentioned ramp (±) rate to mitigate the DSM Penalty as per “APERC Forecasting, Scheduling and Deviation settlement of solar and wind generation Regulation, 2017”.	Technical	The BESS usage shall be in accordance with the defined use cases in the Bid Document, within the capacity limit of the BESS.

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62	Employer's Requirement Annexure-A Part II	454	30.1	The BESS shall be operated in a manner to minimise losses that could be incurred on account of anticipated generation Curtailment. In the event of requirement to reduce the export of energy to the grid, BESS shall be used for curtailment avoidance.	If the grid is down at night time & battery is fully charged with wind plant available, how BESS can handle the grid curtailment?	Technical	BESS shall handle the application up to the available capacity. If it is fully charged, curtailment may not be handled.
63	Employer's Requirement Annexure-A Part II	459	30.6.2	The Contractor shall provide the disposal plan of the battery which may be required after end of the battery life.	Please clarify the dismantling & removal of complete installed BESS at the end of life is in Bidder's or Customer's scope.	Technical	The bidder shall provide comprehensive plan for dismantling and disposal of the batteries considering the disposal of Batteries during the O&M phase, if required to be replaced prior to 10 year will be the responsibility of the bidders at their own cost. However at the end of 10 year of O&M period, SECI retains the right of disposal of batteries.
64	Employer's Requirement Annexure-A Part II	461	30.7.2	The Contractor shall provide a guarantee for the maximum length of time required for this type of maintenance operation.	Planned & un-planned maintenance of BESS shall be considered as outage for the purpose of calculation of Avg equipment availability.	Technical	The terms and conditions of the Bidding Document prevail.
65	Employer's Requirement Annexure-A Part II	465	30.11.4	The PCS transformer may include tertiary windings to supply BESS auxiliary power requirements. The transformer must be dry type. The PCS shall include provisions for disconnect on both its AC and DC terminals for maintenance work. Conductor separation must be clearly visible. The detailed maintenance procedure shall be addressed in the O&M manual.	Kindly allow Oil cooled transformer (ONAN type) also.	Technical	Kindly refer S.No.25 of Amendment-1.
66	Employer's Requirement Annexure-A Part II	465	30.11.4	BESS inverter shall also be capable to charge from the grid, if required.	BESS charged from grid will be metered or not?	Technical	Yes, it will be metered.
67	Employer's Requirement Annexure-A Part II	468	30.12.2	The auxiliary power system shall include separate potential transformers and current transformers, so that auxiliary power consumption can be measured and electronically recorded in real time, independently of operation of the PCS or of net power flows to and from the battery.	Noted. But separate Potential transformers is not required we can directly tap from line busbars for voltage sensing for Aux. power consumption. (LT Voltage system).	Technical	The terms and conditions of the Bidding Document prevail.
68	Employer's Requirement Annexure-A Part II	572	4.2.1	Only the makes and models approved under Revised List of Models and Manufacturers (RLLM List) of MNRE as on date of bid submission be offered.	To check weather SECI allows listing of new WTG Models that are currently under type testing to be included in RLLM up to commissioning date or else prior to commensement of WTG Supply.	Technical	The terms and conditions of the Bidding Document prevail.
69	Employer's Requirement Annexure-A Part II	439	24.3	Serial defect Liability period shall be as per GCC Clause 27.2 Serila defect shall mean occurrence of similar fault in at-least 10% of the WTG in given time interval. Under this serial defect liability , the bidder will be required to rectify or replace all such serial defects in all WTGs of the project.	The Industry standard Limit for this is 25% and to be proposed.	Technical	The terms and conditions of the Bidding Document prevail.
70	Employer's Requirement Annexure-A Part II	434	23.10.3	The Local control system shall be designed for automatic operation with minimum attendance .Power Back up for at least 72 hours opertion shall be included.	In wind turbine LCS (PLC) the backup is Max 30.min. After Grid Failure the WTG completely stops within 5 to 10 sec. max(Including complete pitch out of blade) and within 10 seconds the complete system backup is taken in No-Volatile system.	Technical	advance BG shall be of the amount equivalent to 110% of the advance amount.
71	Employer's Requirement Annexure-A Part II	491	44.2(b)	Data transmission between LCS and SCADA shall be serial interface,20mA Current loop or standard RS-232. Contactors may specify in tender the method of interfacing between LCS and SCADA	The PLC of Wind turbine and (LCS) and SCADA interface will be Ethernet TCP/IP (OLE Server data)	Technical	Kindly refer S. No.27 of Amendment-I.
72	Employer's Requirement Annexure-A Part II	491	44.3(b)	(iv) Change alarm limits	Password protected and must be done in consultation with WTG manufacturer.	Technical	Kindly refer S. No.27 of Amendment-I.
73	Employer's Requirement Annexure-A Part IV	574	4.4.4 & 4.4.5	CL.4.4.4 CCTV Cameras and CL.4.4.5 Fire detection and Protection system	In 4.4 General …Does this applicable for WTGs also ? Please clarify. For Solar this clause is relevent.	Technical	Cl 4.4.4: CCTV for WTG locations not applicable. Cl 4.4.5: Fire Detection and Protection System shall be applicable for WTGs also.
74	General			General Query	NIWE certification of Generation is approximately 4 weeks/1 month as per it's quotation to WTG OEM. This time line to be discussed with respect to NIWE work and possible extension to be sought for bid submission on account of the same.	Technical	The terms and conditions of the Bidding Document prevail.
75	General			General Query	SECI/NIWE installed wind mast (100 m.) at site for getting data for generation certification (recorded wind data availability of approx. 5 to 6 months. This information to be confirmed during site visit.	Technical	SECI Mast data is not used for Energy Yield Assessment by NIWE, however the quarterly report of SECI mast data is uploaded for bidders information only.
76	General			General Query	To check whether Wind sector management is to be done if the locations given by SECI cannot be changed and suitability of offered WTG model shall be checked for impact of the same on the annual generation.	Technical	This assessment is the responsibility of the bidder only.
77	General			General Query	Pre-bidding meeting SLD and Load flow analysis for proposed 220/33 KV Pooling SS to be requested along with clarification of Battery point / PCC and metering system for 33KV system, short circuit/ fault current limits for 33KV system which is not given in Bid document. This information is required for conductor sizing and 33 KV equipment sizing and down the line system design for Solar and Wind and BESS.	Technical	Kindly refer S.No.35 of Amendment-1.
78	General			General Query	From the bid document it is understood that separate metering is required for Wind power, Solar Power & battery Power but it is not mentioned explicitly. Please confirm the same	Technical	Please refer S.No. 2 above.

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79	General			General Query	It is not clear whether APTransco shall be doing the metering yard inside the substation or whether the contractor/bidder has to construct the metering arrangement outside the Pooling substation. Metering arrangement comprises of metering CTs, PTs & meter for Main as well as for Check meter. Please confirm - Even if there is separate metering for each source (Wind/Solar /Battery), it is quite likely that there shall be one more metering arrangement required by SECI or APTransco for forecasting /scheduling of combined hybrid power from the plant. Such meter can be installed immediately on the 33kV bus made after 33 kV side of the Power Transformer installed in the substation or can be on the 220kV side of each Power Transformer or can be on the outgoing 220 kV side of the substation. A confirmation / clarification is required that this arrangement shall be done by APTransco.	Technical	Kindly refer S.No.35 of Amendment-1.
80	General			SLDC	We have following queries with regard to the SLDC - How shall the data be transmitted to SLDC, whether it shall be individual source wise (Wind/Solar /Battery) or whether it shall be from a combined hybrid power? - Where is the SLDC located & whether the data is to be directly send to SLDC or to the nearest 220 kV substation. - What shall be the infrastructure required for sending data to SLDC /nearest substation & whether any infrastructure (related to RTU, data integration etc.) has to be provided at SLDC/nearest substation.	Technical	Data to SLDC will be as combined Hybrid Power. Data to the SLDC is to be sent over telemetry system through the 220 kV substation as per SLDC requirements. It shall be the responsibility of the Contractor to set up the required infrastructure for transmitting data.
81	Employer's Requirement Annexure-A Part IV	574	5.1.10	Laying of AC HT cables underground/along cable trays from HT switchgear panel at solar PV field to HT switchgear panel at pooling sub-station including right of way (ROW) along with termination at both the ends	Since the Land in consideration for the tender is taken care by SECI, we would request that the RoW for this project should also be taken care by SECI. Pls Confirm	Technical	Please refer GCC clause 10.2 & 10.3 for the same. The terms & conditions of the Bidding Document will prevail.
82	Employer's Requirement Annexure-A Part IV	575	5.2.5	Installation, Testing and Commissioning of grid interfacing equipment including transformers, 33 kV feeders from WTGs up to the Point of Common Coupling, panels, kiosks, protection equipment, metering equipment for evacuation of power from the wind power plant to the Pooling sub-station including right of way (ROW)		Technical	
83	III Evaluation & Qualification criteria	77	3.3 Financial Resources	The Bidder must demonstrate access to, or availability of, financial resources such as liquid assets & lines of credit, other than any contractual advance payments to meet: (i) the following cash-flow requirement: INR 165 Crores (Indian Rupees One hundred & sixty- Five Crores)	we would request more clarity on this clause. Whether it is closing balance/liquid assets? If it is liquid assets, what would be the definition of Liquid Asset. Please clarify	Finance	Liquid Asset balance would be verified from the Annual accounts of last Financial year/Calendar year and would mean Working Capital (Current Assets-Current Liabilities), alternatively liquid assets may be demonstrated in the form of sanction letter for Line of Credit/Working Capital of the mentioned amount from any Bank/Financial institution with the validity period for at least 01 year.
84	III Evaluation & Qualification criteria	79,80,81	4.2 (a),(b), (c) Specific Experience	4.2(a) Specific Experience: For Solar Participation as contractor, joint venture member, management contractor, or subcontractor 4.2(b) Specific Experience: For Wind Participation as contractor, joint venture member, management contractor, or subcontractor 4.2(b) Specific Experience: For BESS Participation as contractor, joint venture member, management contractor, or subcontractor	As the given Clause, mentiones that for all the three sources, Solar/Wind/BESS the participation can be in the form of Contractor,JV member, management contractor or Subcontracor. However the terms & conditions are only defined for the BESS supplier to be a subcontractor. Pls confirm if Solar & Wind suppliers can also be subcontractors for this job. If yes, what are the terms & conditions for the same.	Contractual	This statement of the QR stipulates that the Bidder who is participating must have worked as a contractor, joint venture member, management contractor, or subcontractor in past & accordingly, the credentials of such participation in past will stand valid for this bidding process. Solar & Wind suppliers can not be taken as the subcontractor. This subcontracting provision is available only for the BESS suppliers. Solar & Wind suppliers can participate as JV in line with the terms and conditions of the Bidding Document.
85	III Evaluation & Qualification criteria	81	4.2 (c) Specific Experience	(A) Must have experience of having successfully completed Design, Engineering, Procurement, Construction, Installation, Testing and Commissioning of Grid Connected Battery Energy Storage System (BESS) of at least 03 (Three) Grid connected BESS Plants of each having an individual capacity of 05 MWh (Five Mega Watt Hour) or above in last Five years as on last date of bid submission. However, such BESS Plant capacity must have been in satisfactory operation for at least 12 (Twelve) months from the date of commissioning.	We would like to submit that given PQ for BESS is very stringent & most of the Storage players do not have experience of three projects of 5 MW capacity. We would request you to kindly dilute the given parameter to single project of 5 MW capacity as PQ for this project. this would allow a greater participation from the battery suppliers globally & ensure best battery design be provided for this project.	Contractual	The terms & conditions of the Bidding Document will prevail.
86	III Evaluation & Qualification criteria	81	Note to the Specific Experience	If the BESS provider is participating as a subcontractor to the bidder then the Bidder shall submit the list of proposed BESS makes they intend to provide along with the submission of Technical documents, also with the credentials for all those makes and all such mentioned makes shall satisfy the Qualification requirements mentioned in the bidding document. During the execution of the Project, the supplied make of the BESS by the bidder shall have to be mandatorily among the list of makes submitted by the bidder during the Techno commercial stage.	this clause would restrict the Contractors from their choice of Battery vendor & Better technologies. We would request SECI to kindly Dilute the given clause & kindly allow the bidders to introduce new battery vendors, if required, after the award of contract or during the execution stage, provided that they fulfill all the required techno-commercial Terms & conditions required by SECI.	Contractual	The terms & conditions of the Bidding Document will prevail.
87	III Evaluation & Qualification criteria	83	2.7	Failure to comply with this requirement will result in rejection of the subcontractor. The bidder will replace the subcontractor with a subcontractor meeting the above qualifying requirements."	Please provide clarity for the following points - - is the battery subcontractor is rejected, will the bidder has to replace the battery subcontractor from the list provided in the bid or he can introduce a new vendor. - since, at the time of bidding bidders can propose as many battery vendors as they can. during the execution, would there be any cap on the number of replacements allowed for bidders to change the battery vendor	Contractual	If any of the BESS subcontractor is rejected during the Techno Commercial evaluation, then the other BESS subcontractors submitted will only be evaluated and considered. No subcontractor for BESS can be added/Deleted after the bids have been submitted by the bidder. So, all probable & qualifying makes are to be provided along with the submission of the Techno Commercial Bids only.
88	X Contract Forms	300	Terms of Payment Schedule No. 1. Plant and Equipment Supplied from Abroad	"Ten percent (10%) of the total amount (of Schedule No. 1) as an advance payment against receipt of Proforma invoice and an irrevocable advance payment security for the 110% amount made out in favor of the Employer"	Please confirm if the Advance BG shall of value 110% of the advance amount or 10% of the CV as it is not very clear from the language written in the clause.	Finance	Advance BG shall be of the amount equivalent to 110% of the advance amount.

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89	X Contract Forms	281	PCC 13 Securities	First Stage: The value of the Contract Performance Security shall be 10% (Ten) of the Contract Value {i.e. total sum of the Supply (Abroad & Employer's country), Service (Freight, Design, Installation & Civil Works) & absolute value of O&M contract} and will remain valid for 90 (Ninety) days beyond the Operational Acceptance of the Plant Facilities	As the two clause for the Performance Security Validity are in a mismatch. The first clause mentions the PBG of 10% to be vlaid for a period upto Operational Acceptance. The second clause from the PBG format given in the tender document mentions some additional amount for a priod of DLP of the project. Please clarify which is the cottect condition	Contractual	Please refer Amendment 1, Sr No 4 for the same.
90	X Contract Forms	320	Performance Security Form	By this letter we, the undersigned, [name of Bank], a Bank (or company) organized under the laws of _____ and having its registered/principal office at _____, do hereby jointly and severally with the Contractor irrevocably guarantee payment owed to you by the Contractor, pursuant to the Contract, up to the sum of _____, equivalent to _____ percent (%) of the Contract Price until the date of the Operational Acceptance Certificate and thereafter up to a sum of _____, equivalent to_____ percent (%) of the Contract Price, until twelve (12) months after the date of Operational Acceptance, or eighteen (18) months after Completion of the Facilities, whichever comes first.			
91	VIII General conditions of contract	188	10.3	The Employer shall be responsible for acquiring and providing legal and physical possession of the Site and access thereto, and for providing possession of and access to all other areas reasonably required for the proper execution of the Contract, including all requisite rights of way, as specified in the Appendix to the Contract Agreement titled Scope of Works and Supply by the Employer. The Employer shall give full possession of and accord all rights of access thereto on or before the date(s) specified in that Appendix. The Employer shall acquire and pay for all permits, approvals and/or licenses from all local, state or national government authorities or public service undertakings in the country where the Site is located which (a) such authorities or undertakings equire the Employer to obtain in the Employer's name, (b) are necessary for the execution of the Contract, including those required for the performance by both the Contractor and the Employer of their respective obligations under the Contract, and (c) are specified in the Appendix (Scope of Works and Supply by the Employer).	as the mentioned clause defines the Client's responsibility, we would like to understand the case if the employer fails to obtain or delayed in obtaining the permission as well as acqusitin. Will it lead to EOT? Whether the contract price will be modified in the event of EOT? Please clarify	Contractual	Kindly refer GCC clause 35 & 40 for the same. The terms & conditions of the Bidding Document will prevail.
92	VIII General conditions of contract	210	22.5	Opportunities for Other Contractors	As the given clause defines the responsbility of the contractor towards other contractor. We would like to understand a case where there is a damage to the plant due to activities carried out by other Contractors in the same premise. In such case, who will be responsible for the damage done & what would be the process for fixing responsibilities. Please clarify	Contractual	Kindly refer GCC sub clause 22.5.2 for the same. The terms & conditions of the Bidding Document will prevail.
93	VIII General conditions of contract	233	36.1	If, after the date twenty-eight (28) days prior to the date of Bid submission, in the country where the Site is located, any law, egulation, ordinance, order or by-law having the force of law is enacted, promulgated, abrogated or changed which shall be deemed to include any change in interpretation or application by the competent authorities, that subsequently affects the costs nd expenses of the Contractor and/or the Time for Completion, the Contract Price shall be correspondingly increased or ecreased, and/or the Time for Completion shall be reasonably adjusted to the extent that the Contractor has thereby been affected in the performance of any of its obligations under the Contract. Notwithstanding the foregoing, such additional or reduced costs shall not be separately paid or credited if the same has already been accounted for in the price adjustment provisions where applicable, in accordance with the PCC pursuant to GCC Sub-Clause 11.2.	We understand that change in law also apply for any change in tax or change in tax slabs for the said timeline & bontractor shall be allowed to very the Contract prices accordingly? Pls confirm.	Contractual	The terms & conditions of the Bidding Document will prevail.
94	General			Wind Data	Request SECI to share Wind data	Technical	The data for few months from SECI 100 m mast at site is uploaded in SECI website. However as mentioned in the bid document, the data being used by NIWE for Energy Yield Assessment of WPP is not sharable.
95	Section II - Bid Data Sheet	54	17.5(f)	The Energy Generation for 10 years period for the Plant facility in KWh is to be quoted in Schedule No 6/Schedule of Generation (SOG). The yearly Energy generation & thereby the total Energy generation for 10 years for the Solar Plant is already mentioned under SOG & bidders are required to provide the yearly Energy generation & thereby the total Energy generation for 10 years for the Wind Plant as verified by NIWE.	Request SECI to allow some tolerance in the committed figures, since wind is variable.	Technical	The terms and conditions of the Bidding Document prevail.
96	General			All clauses referencing IEC 61400-12-1 (related to Wind turbine PCGT; especially: Annex A Part II, section 3	Please change edition of IEC 61400-12-1 standard to be utilised to 2005 instead of 2017.	Technical	The terms and conditions of the Bidding Document prevail.
97	Employer's Requirement Annexure-A Part II	349	3.1.1	The final recommendation on the selection of the turbine among the suitable turbines for PCGT must be given by the Owner	Selection of test turbine has commercial implications and must be mutually agreed. Decision cannot be unilateral.	Technical	The terms and conditions of the Bidding Document prevail.
98	Employer's Requirement Annexure-A Part II	351	3.1.7	If VPC is greater than or equal to 98% then the Power Curve Guarantee Test is considered to be passed.	Not acceptable. Request SECI to please ammend to "If VPC is greater than or equal to (100% minus uncertainity) OR 96%.	Technical	The terms and conditions of the Bidding Document prevail.
99	Employer's Requirement Annexure-A Part II	355	3.3.4	LD for reactive Power (KVARh) drawl	1) Request SECI to please move this LD from being a part of Wind section only to general comment for entire project. Right now, this seems like KVAR drawl will be measured only for wind. 2) Please clarify where will reactive power be measured i.e. at WTG terminals or 33KV end at PCC or at GCC.	Technical	The Reactive power Warrantee is considered at present for Wind Only. The metering of reactive power shall be done at each 33 kV feeder level at Pooling Substation.
100	Employer's Requirement Annexure-A Part II	423	21.1	Only the makes and models approved under Revised List of Models and Manufacturers (RLMM list) of MNRE as on the date of bid submission should be offered	We request SECI to consider models approved under RLMM as on the date of bid SCOD, in order to accommodate new technology. However if required we shall provide Power Curve for Guarantee/Warantee purposes.	Technical	The terms and conditions of the Bidding Document prevail.

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101	Employer's Requirement Annexure-A Part II	423	21.3	Design, engineering, manufacture and supply at site of wind farm internal electrical system including the Equipment at Unit Substation of each WTG, materials for 33 kV Overhead Transmission lines.	Please delete words 'Manufacture'. OEM's may do the engineering design for USAGE but not for MANUFACTURE. Suggest to ony retain the word 'Supply'.	Technical	The terms and conditions of the Bidding Document prevail.
102	Employer's Requirement Annexure-A Part II	423	21.4	Design, engineering, manufacture and supply at site of Grid interfacing equipment including transformers, HT lines, panels, kiosks, protection equipment, metering equipment for evacuation of power from the wind power plant to the grid sub-station	Please delete words 'Manufacture'. OEM's may do the engineering design for USAGE but not for MANUFACTURE. Suggest to ony retain the word 'Supply'.	Technical	The terms and conditions of the Bidding Document prevail.
103	Employer's Requirement Annexure-A Part II	423	21.5	Design, engineering, manufacture and supply of tri-vector type energy meter(s) for recording data regarding export and import of power to/from grid on real time basis.	Please delete words 'Design', 'engineering' & 'Manufacture'. OEM's may do the engineering design for USAGE but not for MANUFACTURE. Suggest to ony retain the word 'Supply'.	Technical	The terms and conditions of the Bidding Document prevail.
104	Employer's Requirement Annexure-A Part II	423	21.6	Design, engineering, manufacture and supply of VAR drawl compensation system, if required.	Please delete words 'Design', 'engineering' & 'Manufacture'. OEM's may do the engineering design for USAGE but not for MANUFACTURE. Suggest to ony retain the word 'Supply'.	Technical	The terms and conditions of the Bidding Document prevail.
105	Employer's Requirement Annexure-A Part II	425	21.13.1	4. Contour plan for the land area. 5. Micrositing plan & wind farm layout with consideration to shadow effect on Solar PV arrays also to be specified.	Please delete. Site is being provided by SECI. All site data, incl WTG layout is available with SECI only.	Technical	The terms and conditions of the Bidding Document prevail.
106	Employer's Requirement Annexure-A Part II	425	21.13.1	9. Copies of WTG type test certificates and certified Power Curve Test certificates, 10. WTG Design assessment certificates with all annexures, along with test reports	Request SECI to please allow WTGs listed using provisional TC.	Technical	The terms and conditions of the Bidding Document prevail.
107	Employer's Requirement Annexure-A Part II	425	21.13.1	12. Site Suitability assessment report: Bidder shall carry out the Site Suitability Assessment study including the Mechanical Load Assessment for the offered WTG w.r.t. the WTG micrositing as given in Annexure ------. Bidder shall submit the detailed Site Suitability assessment report for the offered WTG along with the bid document. All the assessment under the site suitability assessment study shall genuinely assess the WTG suitability for the given micrositing, and the Bidder shall not offer any of the WTG model which are not found suitable for the given micrositing and are having any of the site suitability issue which may impact its design life and performance etc.	This requires mast data (raw wind data, sensor calibration & inspection reports). Without mast data, it is not possible for OEM to conduct loads analysis. Request SECI to please provide.	Technical	Data from SECI 100m mast for few months is uploaded in SECI website. No other raw wind data is available for sharing. Site suitability report prepared on the basis of the same co-related with long term MERRA2 data shall be acceptable.
108	Employer's Requirement Annexure-A Part II	425	21.13.2	The Bidders shall restrict themselves to the already given micrositing only and there shall not be any modification in the micrositing. Any such concern related to non-ability to provide any functional or technical guarantee for the offered WTG due to any limitation of the given micrositing, shall be communicated to Employer during the Pre-bid itself.	Same as above. Not possible to provide without wind & site data	Technical	Data from SECI 100m mast for few months is uploaded in SECI website. No other raw wind data is available for sharing. Site suitability report prepared on the basis of the same co-related with long term MERRA2 data shall be acceptable. Locations have been provided in the bid document. Collection of necessary site data shall be responsibility of the bidder.
109	Employer's Requirement Annexure-A Part II	442	SHEET-5	Bidders will not be allowed to receive the raw wind data used by NIWE, however they may be allowed to verify the same with NIWE as per the NIWE policy of interacting with the client for any such independent energy yield assessment.	Same as above	Technical	The terms and conditions of the Bidding Document prevail.
110	General			All clauses specifying usage of IS (Indian Standards) ONLY for civil work; especially, Annex A; Part III, subpart II: CIVIL; part B WTGs Foundation and Other Civil Works	Please also allow Eurocode & other relevant international standards .	Technical	The terms and conditions of the Bidding Document prevail.
111	Employer's Requirement Annexure-A Part II	541	83.2	The contractor has to conduct Geo-technical investigation and decide on the various design parameters he proposes to adopt for foundation design. No commercial implications for any variations in this regard during execution shall be entertained.	We can accomodate this request. However, the budgeting for the same may not be economical for SECI's purposes since OEMs will be forced to build in additional costs due to data uncertainty. Instead, we request SECI to conduct the geotech survey and make the data available to all bidders in order to optimise the budgeting & consequent bid submission.	Technical	Not available. The terms and conditions of the Bidding Document prevail.
112	Employer's Requirement Annexure-A Part II	541	84.1	All materials which may be used in the work shall be of standard quality manufactured by renowned concerns conforming to Indian Standards or equivalent shall have IS mark as far as possible, unless otherwise approved by Engineer, the contractor shall get all the materials approved by Engineer prior to procurement and use.	Request SECI to please modify to : ".....or equivalent shall have IS mark OR relevant international marks e.g. CE etc. as far as possible....." Alternately, request SECI to please provide the specific material requirement from & the associated IS std.	Technical	The terms and conditions of the Bidding Document prevail.
113	Employer's Requirement Annexure-A Part II	542	85.1	The contractor shall also be responsible for detailed soil investigation at all WTG locations to provide adequate information on subsurface and surface conditions for the foundations and other sub-structures for the proposed wind project, leading to their economical and safe foundation design.	As requested before, request this to be done by SECI for proper design of foundation & budgeting by bidders BEFORE bid submission as is required by SECI.	Technical	Not available. The terms and conditions of the Bidding Document prevail.
114	General			All clauses specifying Cross Hole Test in soil exploration for civil work; especially, Annex A; Part III, subpart II: CIVIL; part B WTGs Foundation and Other Civil Works	Cross Hole test is a very expensive test as well as time consuming. We suggest that the required dynamic properties can be derived (calculated) from the other soil data.	Technical	The terms and conditions of the Bidding Document prevail.
115	Employer's Requirement Annexure-A Part II	542	85.3	Drilling and sampling in boreholes up to 20 / 30 m depth each in case of soil or coring to maximum 10 m into rock, whichever is shallower.	20/30m seems quite high. We request SECI to let this depend upon site specific requirement as per geotech consultant. Generally, 10-15m is sufficient for standard gravity foundation of the WTG itself. PSS, roads & other structures may not require even this depth.	Technical	The terms and conditions of the Bidding Document prevail. Min. depth of Borehole shall be 20m.
116	Employer's Requirement Annexure-A Part II	543	85.5	In case of ordinary soil three borehole have to be located evenly radial distributed around the borehole to carry out SPT test radial distributed around the borehole	1) Not clear. Request SECI to please specify meaning of 'Ordinary soil' 2) Request SECI to please clarify reason for 3 boreholes. Also, we suggest to let that decision be on the geotech expert, in agreement with SECI Engineer-in-Charge.	Technical	The terms and conditions of the Bidding Document prevail.
117	Employer's Requirement Annexure-A Part II	543	87.1.3	The contractor shall furnish the safe bearing capacity of soil, design data and detailed construction drawing for the foundation for the WTGs to Engineer for approval before proceeding with the work.	1) As requested before, request SECI to provide this data before bid submission to enable proper foundation design. 2) Request Engineer approval to be time bound, and clearly specified in contracts. Otherwise, it may impact project schedule.	Technical	The terms and conditions of the Bidding Document prevail.

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118	Employer's Requirement Annexure-A Part II	544	87.2	7. Fatigue load	Details of this load may not be covered in IS codes. Hence, request to please allow other relevant international codes.	Technical	The terms and conditions of the Bidding Document prevail.
119	Employer's Requirement Annexure-A Part II	544	87.2.3	2.. The foundation should maintain 100% contact (positive soil pressure) under normal operating condition.	100% contact should be considered only for gapping joint load case as available in IEC / DNV-GL guidelines. If done for other load cases, the foundation design may be oversized and uneconomical.	Technical	The terms and conditions of the Bidding Document prevail.
120	Employer's Requirement Annexure-A Part II	545	87.4.3	Reinforcement steel shall be of high strength TMT bars of grade Fe500 D or higher	Request SECI to please clarify requirement of Fe500D as minimum. If not necessitated as per foundation design, request to please allow to use Fe500 as base case.	Technical	The terms and conditions of the Bidding Document prevail.
121	X Contract Forms	282	PCC 13 Securities	Contract Performance Security shall be 5% (Five) of the Contract Value…… valid till the end of 10th year of the O&M period	Request SECI to consider 5% of the OPEX value	Contractual	The terms & conditions of the Bidding Document will prevail.
122	X Contract Forms	300	Terms of Payment Schedule No. 1. Plant and Equipment Supplied from Abroad	Ten percent (10 %) of the total or pro rata amount (of Schedule No. 1) within forty-five (45) days of receipt of invoice after final acceptance of the Plant facilities or completion of First year of O&M of Plant, whichever is later	Request SECI to consider 10% of the OPEX value	Contractual	The terms & conditions of the Bidding Document will prevail.
123	Employer's Requirement Annexure-A Part II	343	2.1.1	Performance Ratio Formula	The PR formula given in the formula given in the tender has the power rating temperature adjustment factor. However, in the temperature correction formula the coefficient of temperature is added to 1, where as it should be subtracted to one in PR calculation	Technical	The coefficient of temperature is with a negative sign.
124	Section III - Evaluation and Qualification Criteria	71	1.1B(ii)	The value of Wind Energy Generation in kWh for 10 years for 40 MW (+10%) Wind Power Plant	for 50MW (+25%) to allow a max WTG capacity of 2.5MW each	Technical	The terms and conditions of the Bidding Document prevail.
125	Employer's Requirement Annexure-A Part II	423	21.1	with minimum rating of 2MW and total capacity 40 MW (may be up to 50 MW but not less than 40 MW)	If first point is not taken then total wind capacity should be changed to 44MW not 50MW	Technical	Kindly refer S.No.23 of Amendment-1.
126	Section III - Evaluation and Qualification Criteria	75	1.2(c)	1. Minimum value of Guaranteed Solar Energy Generation in kWh for 10 years period - 2,241,135,154 KWh	WTG and BESS is accepted for efficiency of the systems, i.e. PR curve and roundtrip efficiency respectively. Similar approach should be followed for Solar PV which is PR test report from third party	Technical	The terms and conditions of the Bidding Document prevail.
127	Employer's Requirement Annexure-A Part II	348	2.3.1	For every 0.01 shortfall in PR below 0.78 by the Contractor, a penalty of 0.5% of the Solar Plant	Double LD is accounted for same unit drop which should be revised. The same point was raised in previous pre-tender meeting. In this clause, If there's a drop in PR test, first LD applicable. Same unit drop will reflect in unit guarantee,second LD applicable based on clause 2.3.2. Eventually one will pay penalty + PPA charges which is huge	Technical	The terms and conditions of the Bidding Document prevail.
128	Employer's Requirement Annexure-A Part II	348	2.3.1	If the Contractor fails to achieve the Annual CUF Guarantee at the end of such respective year, then the Contractor will pay compensation to Owner for an amount equal to the revenue loss @ Tariff rate as er PPA			
129	General			Pooling substation	This should be under the scope of EPC	Technical	Kindly refer S.No.35 of Amendment-1.
130	Employer's Requirement Annexure-A Part II	403	10	Uninterrupted Power Supply	This unit can be removed as BESS shall take care of this	Technical	The terms and conditions of the Bidding Document prevail.
131	Employer's Requirement Annexure-A Part II	452	29.7	Transportable, containerized energy storage system based on commercially available electrochemical storage solutions	BESS part should be open to housing not limited to container	Technical	BESS may be housed in a Building. Kindly refer S.No.34 of Amendment-1.
132	Employer's Requirement Annexure-A Part II	454	30.1	5000 cycles at rated energy capacity at 80% Depth of Discharge (DoD) at 25°C	Battery Comes with limited life of x000 cycles	Technical	The terms and conditions of the Bidding Document prevail.
133	Employer's Requirement Annexure-A Part II	359	1	Ramp Rate control	Usually ramp rate of 160MW will be 30% of capacity i.e. 50MW. ±10% shall be 10MW but BESS will undergo 20-30 cycles	Technical	The terms and conditions of the Bidding Document prevail.
134	Employer's Requirement Annexure-A Part II	359	2	Curtailment Mitigation	Only 4 months will have high wind, curtailment happens subject to Evacuation capacity	Technical	The terms and conditions of the Bidding Document prevail.
135	Employer's Requirement Annexure-A Part II	359	3	DSM Penalty Mitigation	Forecast & Scheduling will be a good case to show but 40MW + 120MW solar PV will require at least 40MWh	Technical	The terms and conditions of the Bidding Document prevail.
136	General			Plant Aux Power supply	Proposed Hybrid plant will have an aux requirement of 1000 kWh per day at INR 11.77 to be charged by SLDC while export power is sold at INR 2.44.	Technical	Irrelevant to the Contractor.

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Clarifications to Queries raised during Pre-Bid Meeting on 31.08.2018

137	Section X - Contract Forms	324	BESS SUBCONTRACTING AGREEMENT	AND WHEREAS “A” in addition to ……..MW ……Generator is desirous of setting up …….MWh energy storage system requirements, in Collaboration with manufacturers of such Battery Energy Storage System suppliers, of proven credentials suitable for the Technical requirements for the specific ambient conditions of RfB (refer SECI RfB No RfB No. SECI/C&P/RfB/2018/160MWH/WB/01) which are annexed herewith. AND Whereas ‘B’ having the requisite wherewithal, technical knowhow and past experience of execution of such …….. MWh BESS and operating in such ambient conditions, have expressed their interested to participate and contribute to the Project in a subcontracting manner with A’. All	AND WHEREAS “A” in addition to ……..MW ……Generator is desirous of setting up …….MW energy storage system requirements, in Collaboration with manufacturers of such Battery Energy Storage System suppliers, of proven credentials suitable for the Technical requirements for the specific ambient conditions of RfB (refer SECI RfB No RfB No. SECI/C&P/RfB/2018/160MWH/WB/01) which are annexed herewith. AND Whereas ‘B’ having the requisite wherewithal, technical knowhow and past experience of execution of such …….. MW BESS and operating in such ambient conditions, have expressed their interested to participate and contribute to the Project in a subcontracting manner with A’. All	Technical	The terms and conditions of the Bidding Document prevail.
138	III Evaluation & Qualification criteria	81	4.2 (c) Specific Experience	(A) Must have experience of having successfully completed Design, Engineering, Procurement, Construction, Installation, Testing and Commissioning of Grid Connected Battery Energy Storage System (BESS) of at least 03 (Three) Grid connected BESS Plants of each having an individual capacity of 05 MWh (Five Mega Watt Hour) or above in last Five years as on last date of bid submission. However, such BESS Plant capacity must have been in satisfactory operation for at least 12 (Twelve) months from the date of commissioning	(A) Must have experience of having successfully completed Design, Engineering, Procurement, Construction, Installation, Testing and Commissioning of Grid Connected Battery Energy Storage System (BESS) of at least 03 (Three) Grid connected BESS Plants of each having an individual capacity of 05 MW (Five Mega Watt) or above in last Five years as on last date of bid submission. However, such BESS Plant capacity must have been in satisfactory operation for at least 6 (Months) months from the date of commissioning	Contractual	The terms & conditions of the Bidding Document will prevail.
139	III Evaluation & Qualification criteria	81	Note to the Specific Experience	3. Except BESS, A job executed by a Bidder for its own plant/ projects cannot be considered as experience for the purpose of meeting the Eligibility Conditions of the Bidding documents. Also,------ the jobs executed for Subsidiary/ Fellow subsidiary/ Affiliate/ Holding company will not be considered as experience for the purpose of meeting Eligibility Conditions.	3. Except BESS, A job executed by a Bidder for its own plant/ projects cannot be considered as experience for the purpose of meeting the Eligibility Conditions of the Bidding documents. Also Except for BESS, the jobs executed for Subsidiary/ Fellow subsidiary/ Affiliate/ Holding company will not be considered as experience for the purpose of meeting Eligibility Conditions.	Contractual	Except BESS, "**A job executed by a Bidder for its own plant/ projects cannot be considered as experience for the purpose of meeting the Eligibility Conditions of the Bidding documents. Also, the jobs executed for Subsidiary/ Fellow subsidiary/ Affiliate/ Holding company will not be considered as experience for the purpose of meeting Eligibility Conditions**" This "Except" condition is applicable for the complete BESS supplies. However, this is to be clarified that in line with the BESS QR : must have experience of having successfully completed Design, Engineering, Procurement, Construction, Installation, Testing and Commissioning of Grid Connected Battery Energy Storage System (BESS) of at least 03 (Three) Grid connected BESS Plants of each having an individual capacity of 05 MWh (Five Mega Watt Hour) or above in last Five years as on last date of bid submission. However, such BESS Plant capacity must have been in satisfactory operation for at least 12 (Twelve) months from the date of commissioning. "**Any such BESS Qualifying requirements of achieving 03 Projects of 05 MWh each has to be sufficed by a single competent supplier/Subcontractor/Bidder only".**
140	General			Guaranteed energy generation and PR	Would the BESS Round Trip efficiency be measured independently? Or would the Total plant generation be measured along with the BESS? Can we have some clarity on this?	Technical	BESS Round Trip Efficiency shall be measured independently. Please refer the Annexure A Part II: Clause 4.2
141	General			Economic Evaluation/Financial Evaluation	Is BSS Energy supply/consumption is considered to arrive at this evaluation? If yes please clarify	Technical	No, it will not be considered.
142	General			Round Trip Efficiency	Please consider higher round trip efficiency. A % between 85 to 90% will be met by world class technolgies. Also recent tenders have asked RT of 85% and above level	Technical	Please refer to methodology for measurement of BESS Round Trip Efficiency as defined in Annexure A Part II: Clause 4.2. The terms and conditions of the Bidding Document prevail.
143	General			EQUIPMENT AVAILABILITY	The availability nos are are compare to general offered in BESS tenders. We recommend to decrease to 95% as per the method mentioned in the tender	Technical	The terms and conditions of the Bidding Document prevail.
144	Employer's Requirement Annexure-A Part II	456	30.2	System Parameters	All paramteres shalle be achieable over the End Of life. As per our understanding the life of BESS to be considered as 10 years and with 365 Cycles/year	Technical	Please refer to BESS End of Life definition in Clause 30.6.1
145	Employer's Requirement Annexure-A Part II	458	30.4	Containerization and transportability	Is it compulsory to offer containerized solution? Can BSS be offered with Building solution (Civil/PEB)?	Technical	BESS may be housed in a Building. Kindly refer S.No.34 of Amendment-1.
146	I Instructions to Bidders	9	4.1	Section I, 4.1 - Eligible Bidders: A Bidder may be a firm that is a private entity, a state-owned enterprise or institution subject to ITB 4.6, or any combination of such entities in the form of a joint venture (JV) under an existing agreement or with the intent to enter into such an agreement supported by a letter of intent.	We infer that a bidder, eligible as a single entity and meeting the General Experience Criteria, can participate by providing a list of sub-contractors for Wind meeting the specific experience requirements. Please confirm.	Contractual	Solar & Wind suppliers can not be taken as the subcontractor. This subcontracting provision is available only for the BESS suppliers. Solar & Wind suppliers can participate as JV in line with the terms and conditions of the Bidding Document.
147	III Evaluation & Qualification criteria	78	4.1 General Experience	Section III, 4.1 : General Experience - Experience in Renewable Energy under contracts in the role of contractor, subcontractor, or management contractor for at least the last 03 (Three) years.	We infer that a bidder, eligible as a single entity and meeting the General Experience Criteria, can participate by providing a list of sub-contractors for Wind meeting the specific experience requirements. Please confirm.	Contractual	Please refer Point No 146 for the same. The terms & conditions of the Bidding Document will prevail.
148	III Evaluation & Qualification criteria	80	4.2 (b) Specific Experience	Section III, 4.2(b) : Specific Experience For Wind: Participation as contractor, joint venture member, management contractor, or subcontractor:	We infer that a bidder, eligible as a single entity and meeting the General Experience Criteria, can participate by providing a list of sub-contractors for Wind meeting the specific experience requirements. Please confirm.	Contractual	Please refer Point No 146 for the same. The terms & conditions of the Bidding Document will prevail.

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Clarifications to Queries raised during Pre-Bid Meeting on 31.08.2018

149	III Evaluation & Qualification criteria	81	Note to the Specific Experience	If the BESS provider is participating as a subcontractor to the bidder then the Bidder shall submit the list of proposed BESS makes they intend to provide along with the submission of Technical documents, also with the credentials for all those makes and all such mentioned makes shall satisfy the Qualification requirements mentioned in the bidding document. During the execution of the Project, the supplied make of the BESS by the bidder shall have to be mandatorily among the list of makes submitted by the bidder during the Techno commercial stage.	We being Central PSU, shall select the subcontractor through open tender during detailed engineering stage, after the award of project. List of subcontractors meeting the qualifying requirements may please be accepted during detailed engineering.	Contractual	The terms & conditions of the Bidding Document will prevail.
150	Section III - Evaluation and Qualification Criteria	85	4.2(c)	The Performance Certificate must be issued minimum 12 (Twelve) months from the date of commissioning. The Performance Certificate/Joint meter reading (JMR) reports shall be issued from any state/ central owned agencies or state power departments or authorized representative of Power off taker (Discom/Private Power purchaser).	Performance Certificate issued by end customers/Independent Service Providers/ISOs may also please be accepted.	Technical	The terms and conditions of the Bidding Document prevail.
151	X Contract Forms	285	PCC 26 Completion time guarantee	Maximum deduction for liquidated damages: 5%	We understand that Maximum deduction for liquidated damages is 5% of (price of the part of the Facilities, as quoted in the Price Schedule, for that part for which the Contractor fails to achieve Completion within the schedule Time for Completion)	Contractual	Kindly refer GCC subclause 26.2 for more clarity of the Liquidated Damages pursuant to Delayed completion. The terms & conditions of the Bidding Document will prevail.
152	X Contract Forms	283	PCC 14.2 Taxes & Duties	Any statutory variation applicable in respect of the items/services procurement between third party/ subcontractor and the Contractor would not be reimbursed by SECI.	The clause may please be amended to be in line with GCC, Clause 14.4, Pg 196 wherein it holds that statutory variation is admissible during the performance of the contract	Contractual	The terms & conditions of the Bidding Document will prevail.
153	X Contract Forms	300	Terms of Payment Schedule No. 1. Plant and Equipment Supplied from Abroad	Terms of Payment for Supplies (Schedule No. 1 and 2)	2nd payment milestone may please be amended to be due upon delivery to the destination, on MRC.	Contractual	The terms & conditions of the Bidding Document will prevail.
154	X Contract Forms	302	Terms of Payment Schedule No. 4. Installation and other Services	Terms of payment: last payment milestone - "……after final acceptance of the Plant facilities or completion of First year of O&M of Plant, whichever is later……"	The clause may please be amended so that the payment is due on final acceptance of the plant facilities only.	Contractual	The terms & conditions of the Bidding Document will prevail.
155	Employer's Requirement Annexure-A Part II	348	2.2	Annual Generation Guarantee : Solar Plant	It has been observed that 0.7% degradation is considered until the 10th year. In the PV industry it is very well known fact there will be degradation of 2 to 2.5% in the first two years and later 0.7% is acceptable. Please ammend accordingly inorder to capture the practical scenario so that all bidders will be having a equal chance in quoting DC value required. The above request is also in line with Cl 1.4.1 referenced here.	Technical	Kindly refer S.No.10 of Amendment-1.
156	Employer's Requirement Annexure-A Part II	369	1.4.1	PV modules must be warranted with linear degradation rate of power output except for first year (maximum 2.5% including LID) and shall guarantee minimum 80% of the initial rated power output at the end of 25 years.	It has been observed that 0.7% degradation is considered until the 10th year. In the PV industry it is very well known fact there will be degradation of 2 to 2.5% in the first two years and later 0.7% is acceptable. Please ammend accordingly inorder to capture the practical scenario so that all bidders will be having a equal chance in quoting DC value required. The above request is also in line with Cl 1.4.1 referenced here.	Technical	Kindly refer S.No.15 of Amendment-1.
157	General			General : Annual Generation Guarantee for Solar Plant	Please provide the reference radiation corresponding to the generation requirement specified for Solar plant. SECI may please consider variation of energy generation with respect to the reference radiation and temperature as actual generation is highly dependent on actual radiation and temperature. This is a standard Industry practice, as well as followed by SECI in its earlier tenders.	Technical	Kindly refer S.No.10 of Amendment-1.
158	Employer's Requirement Annexure-A Part II	369	1.4.3	The above warranties shall be backed by third party insurance.	SECI may consider providing an alternate option of submitting a PV Module Bank Guarantee against material warranty and performance warranty of PV modules.	Technical	The terms and conditions of the Bidding Document prevail.
159	General			General : SLD of the plant	Please provide indicative SLD with following information: 1) No., of feeders from the Solar plant, wind plant and BESS 2) Intergration of Solar plant , wind plant and BESS at 33 kV or 220 kV	Technical	Kindly refer S.No.35 of Amendment-1.
160	General			General : Drawings	Please provide ACAD drawings of the site	Technical	Kindly refer S.No.35 of Amendment-1.
161	III Evaluation & Qualification criteria	43	ITB 20.1	General : Bid security	We being a Central Public Sector Enterprise, may please be exempted from submission of EMD.	Contractual	The terms & conditions of the Bidding Document will prevail.
162	General			General: Incentive for excess generation	If generation is over-achieved in one year, SECI may please consider compensating it for shortfall in generation in subsequent year.	Technical	Kindly refer S.No.12 of Amendment-1.

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Clarifications to Queries raised during Pre-Bid Meeting on 31.08.2018

163	X Contract Forms	281	PCC 13 Securities	Performance Security : First stage - The value of the Contract Performance Security shall be 10% (Ten) of the Contract Value {i.e. total sum of the Supply (Abroad & Employer's country), Service (Freight,Design, Installation & Civil Works) & absolute value of O&M contract} and will remain valid for 90 (Ninety) days beyond the Operational Acceptance of the Plant Facilities.	We request that Performance Security - First Stage shoulf be 10% of the Contract Value excluding O&M price, as the same is valid only upto 90 days of Operational Acceptance, given that O&M period starts after Operational Acceptance of the plant.	Contractual	The terms & conditions of the Bidding Document will prevail.
164	General			Right of Way	Right of Way for the entire project, if any, may please be in SECI's scope.	Technical	SECI is providing Land, and will try to ensure through the land allocator that there shall not be any RoW issues for those lands. However, the bidders would be required to secure RoWs for evacuation of power from WTGs where the land acquisition is on footprint basis.
165	General			Land Area	Please provide the land area (in acres) available for the project	Technical	Approx 900 acres are available -including for Solar, Wind (@4.5 acres per WTG) and BESS
166	General			Location of Interconnection Point	kindly provide the location of the interconnection point of BESS and Solar PP & Wind PP.	Technical	Kindly refer S.No.35 of Amendment-1.
167	I Instructions to Bidders	29	34.1 Margin of Preference	No margin of domestic preference shall apply	As per DIPP's directive vide circular P-45021/02/2017-PP(BE II) dated 20.07.18, the purchase preference clause for local content in line with GOI's vision of Make in India may please be considered. Kindly review.	Contractual	Bidders are required to go through the "THE WORLD BANK Procurement Regulations for IPF Borrowers, Procurement in Investment Project Financing Goods, Works, Non-Consulting and Consulting Services, July 2016 Revised November 2017 in respect of Plants, wherein No Domestic Preference is applicable. Please refer clause No 5.52 of the Regulation. The terms & conditions of the Bidding Document will prevail.
168	I Instructions to Bidders	9	4.1 Eligible Bidders	Eligible Bidders: A Bidder may be a firm that is a private entity, a state-owned enterprise or institution subject to ITB 4.6, or any combination of such entities in the form of a joint venture (JV) under an existing agreement or with the intent to enter into such an agreement supported by a letter of intent.	Following may also be considered: (i) Consortium (ii) MoU between two parties jointly meeting the specific requirement for Solar and Wind (iii) Special Purpose Vehicle/Entity	Contractual	No. Please refer Amendment 1, Sr No 2 for the same.
169	Employer's Requirement Annexure-A Part II	452	29.7	Transportable, containerized energy storage system based on commercially available electrochemical storage solutions, capable of receiving, storing and delivering electrical energy at specified rate(s) suitable for the application laid out in the specifications herein	Please allow non transportable/Non containerized BESS solutions also. As the MWh is high no of containers will be more	Technical	BESS may be housed in a Building. Kindly refer S.No.34 of Amendment-1.
170	Employer's Requirement Annexure-A Part II	351	3.1.7	If VPC is greater than or equal to 98% then the Power Curve Guarantee Test is considered to be passed. If the VPC is lesser than 98% then the Liquidated Damages as per the conditions given in SCC shall be applicable	If VPC is greater than or equal to 100% - Uncertainities determined in accordance with IEC-61400-12-1 then the Power Curve Guarantee Test is considered to be passed. If the VPC is lesser than 100% - Uncertainities determined in accordance with IEC-61400-12-1 then the Liquidated Damages as per the conditions given in SCC shall be applicable	Technical	The terms and conditions of the Bidding Document prevail.
171	Employer's Requirement Annexure-A Part II	352	3.2	During the test the Wind Turbine shall achieve atleast 98% of Machine Availability. If any turbine has not achieved the Machine Availability of 98% during the test period, then the test can be re-conducted for that specific wind turbine.	During the test the Wind Turbine shall achieve atleast 95% of Machine Availability. If any turbine has not achieved the Machine Availability of 95% during the test period, then the test can be re-conducted for that specific wind turbine.	Technical	The terms and conditions of the Bidding Document prevail.
172	Employer's Requirement Annexure-A Part II	352	3.2.1	Contractor shall keep Six-month average minimum Machine Availability of not less than (i) 98% during the high wind season i.e. May to October after Stabilization period, and (ii) Minimum average wind farm availability of not less than 96% during low wind period i.e. during the months of November to April.	Contractor shall keep Six-month average minimum Machine Availability of not less than (i) 97% during the high wind season i.e. May to October after Stabilization period, and (ii) Minimum average wind farm availability of not less than 95% during low wind period i.e. during the months of November to April.	Technical	The terms and conditions of the Bidding Document prevail.
173	Employer's Requirement Annexure-A Part II	353	3.3.1	If the Contractor fails to satisfy the STPT of a WTG within 120 (one hundred and twenty) days from the Commissioning Date of the relevant WTG even after repeated tests, then Owner will have the right to reject the WTG and obtain a refund.	If the Contractor fails to satisfy the STPT of a WTG within 240 (two hundred and forty) days from the Commissioning Date of the relevant WTG even after repeated tests, then Owner will have the right to reject the WTG and obtain a refund.	Technical	The terms and conditions of the Bidding Document prevail.
174	Employer's Requirement Annexure-A Part II	353	3.3.1	Further, Owner will pay to Contractor, an amount equivalent to 50% of the amounts received from Discom or as any other benefit against generation from the rejected WTG(s).	Further, Owner will pay to Contractor, an amount equivalent to 100% of the amounts received from Discom or as any other benefit against generation from the rejected WTG(s).	Technical	The terms and conditions of the Bidding Document prevail.
175	Employer's Requirement Annexure-A Part II	353	3.3.1	Further Owner will pay to Contractor, an amount equivalent to 50% of the amounts received from Discom or as any other benefit against generation from the rejected WTG(s)	Further, Owner will pay to Contractor, an amount equivalent to 100% of the amounts received from Discom or as any other benefit against generation from the rejected WTG(s).	Technical	The terms and conditions of the Bidding Document prevail.
176	Employer's Requirement Annexure-A Part II	354	3.3.3(a)	COM = {((98 - MAF)/MAF) x C x E} COM = {((96 - MAF)/MAF) x C x E}	COM = {((98 - MAF)/98) x C x E} COM = {((96 - MAF)/96) x C x E}	Technical	The terms and conditions of the Bidding Document prevail.
177	Employer's Requirement Annexure-A Part II	423	21.1	WTGs shall have the LVRT and HVRT capability including all other functional capabilities as per the requirement under the CEA Regulations for Grid connectivity	WTG will comply with existing CEA Regulations where HVRT is not a requirement. However, requirements of CEA Regulations 2016 should be treated as Change in Law since the Regulations is still in draft stage	Technical	The terms and conditions of the Bidding Document prevail.
178	Employer's Requirement Annexure-A Part II	428	22.3.4(e)	Internal Grid Availability during the year External Grid Availability during the year	What are the boundary limits for internal grid and external grid?	Technical	Kindly refer S.No.35 of Amendment-1.
179	Employer's Requirement Annexure-A Part II	439	24.3	Serial Defect Liability Period shall be as per the GCC clause 27.2. Serial Defect shall mean occurrence of the similar faults in at-least 10% of the WTGs in a given time interval. Under this Serial Defect Liability, the Bidder will be required to rectify or replace all such serial defects in all the WTGs of the Project.	Serial Defect Liability Period shall be as per the GCC clause 27.2. Serial Defect shall mean occurrence of the similar faults in at-least 25% of the WTGs in a given time interval. Under this Serial Defect Liability, the Bidder will be required to rectify or replace all such serial defects in all the WTGs of the Project.	Technical	The terms and conditions of the Bidding Document prevail.

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180	Employer's Requirement Annexure-A Part II	452	29.7	PCC – Point of common coupling, the electrical boundary between the Solar PV/Wind Power Plant and the electrical network. The Point of common coupling shall be at incoming feeder of 33kV Main Switchgear located in Pooling Substation	Where is the Pooling Substation located? We assume that the construction and commissioning of the Pooling Substation is with the Owner? Please share SLD of the Pooling Substation along with detailed specifications of the major components	Technical	Kindly refer S.No.35 of Amendment-1.
181	I Instructions to Bidders	81	4.2 (a) Specific Experience	(A) Must have experience in development of Grid connected Ground mounted Solar Projects on Turnkey basis including Design, Engineering, Procurement, Construction, Installation, Testing and Commissioning of Solar PV Power Plant and Solar Systems of cumulative Capacity not less than 96 MW (Ninety-Six Mega Watt) (AC) or above in last Five years as on last date of bid submission. However, such Grid connected Ground mounted Solar PV Power Plant and Solar Systems capacity must have been in satisfactory operation for at least 12 (Twelve) months from the date of commissioning.	Requesting SECI to accept projects which have been under operation for at least 6 months from the date of commissioning.	Contractual	The terms & conditions of the Bidding Document will prevail.
182	Annexure-C	642	I.1.B	The Contractor guarantees that the CUF shall be hundred percent (100%) of the total generated CUF for every Production Period ("Annual CUF Guarantee"). In the event the CUF is less than the Guaranteed CUF, the Contractor shall immediately upon demand, indemnify the Employer, as liquidated damages and not as penalty, amounts equivalent to remuneration of the equivalent Energy, subject to a maximum of hundred (100%) percent of the Total Annual O&M Price	Requesting to keep the Annual CUF Guarantee capped to maximum of 10% of the total contract value.	Technical	Kindly refer S.No.33 of Amendment-1.
183	Employer's Requirement Annexure-A Part II	348	2.3.1	Any shortfall in the Performance Ratio (PR) as determined through the PR Test shall attract imposition of penalty. For every 0.01 shortfall in PR below 0.78 by the Contractor, a penalty of 0.5% of the Solar Plant Contract Value (i.e., total sum of all the Supply, Service Contract and absolute value of O & M Contract) shall be levied. In case, the Plant PR result is 0.05 below 0.78, i.e., 0.73 or lower, the total Contract Performance Security submitted by the Contractor will be forfeited.	We understood that the maximum LD for PR test will be the toal Contract performance Security	Technical	Yes. The terms and conditions of the Bidding Document prevail.
184	Employer's Requirement Annexure-A Part II	376	4.1	IEC 61727:2004 Ed. 2-Photovoltaic (PV) systems - Characteristics of the utility interface	requesting to remove this requirement	Technical	The terms and conditions of the Bidding Document prevail.
185	Employer's Requirement Annexure-A Part II	432	23.5	Adequate capacitor shall be provided so that the reactive power consumption is minimum. But, in no case over compensation is solicited.	The DFIG WEG with back to back converter circuit with its inbuilt technology can control the reactive power and maintain power factor within 0.95 cap-1-0.95 ind	Technical	The terms and conditions of the Bidding Document prevail.
186	Employer's Requirement Annexure-A Part II	434	23.10.3(11)	Status of Capacitor bank connection	Status of capacitor bank is not required as there is no separate capacitor bank connected in WEG	Technical	The terms and conditions of the Bidding Document prevail.
187	Employer's Requirement Annexure-A Part II	436	23.11.1	Earthlings (or grounding) of WTGs and all related electrical installations shall be under the scope of bidder. All electrical frames shall be effectively connected to earth at least at two points. Material required for earth electrode as well as earth current conductor shall be supplied by the bidder. Combined earth resistance at each WTG shall be less than two Ohm.	Earthlings (or grounding) of WTGs and all related electrical installations shall be under the scope of bidder. All electrical frames shall be effectively connected to earth at one point. Material required for earth electrode as well as earth current conductor shall be supplied by the bidder. Combined earth resistance at each WTG shall be less than two Ohm.	Technical	The terms and conditions of the Bidding Document prevail.
188	Employer's Requirement Annexure-A Part II	350	3.1.4	The duration of the data measurement period shall be minimum 3 months	As per IEC 61400-12-1 standards, once the required wind speed bins are completed, the test shall be complete.	Technical	The terms and conditions of the Bidding Document prevail.
189	Employer's Requirement Annexure-A Part II	351	3.1.5	Signals required - grid frequency, RPM, blade pitch angle, nacelle wind speed and yaw angle	As per IEC 61400-12-1 for the calculation of AEP for the PCVT the mentioned signals are not required. All the signals required like Machine Availability, Grid status etc would be provided. However, these signals can be obtained from the SCADA.	Technical	The terms and conditions of the Bidding Document prevail.
190	Employer's Requirement Annexure-A Part II	354	3.3.2(b)	If the repeated (after failure of the first test) PCGT is below 93%, then the contractor will plan to improve the machine along with the third party.	If the repeated PCGT is less than 90%, then the Contractor will plan to improve the machine along with the third party.	Technical	The terms and conditions of the Bidding Document prevail.
191	Employer's Requirement Annexure-A Part II	383	5.3.7	Transformer shall have 150 mm dial type Oil Temperature Indicator (OTI) and Winding Temperature Indicator (WTI) with alarm and trip contacts. All indicators shall have accuracy of 1.5%. For inverter transformers, WTI shall be provided for all the windings.	Transformer shall have 150 mm dial type Oil Temperature Indicator (OTI) and Winding Temperature Indicator (WTI) with alarm and trip contacts. All indicators shall have accuracy of 1.5%. For inverter transformers, WTI shall be provided for HV windings.	Technical	The terms and conditions of the Bidding Document prevail.
192	Employer's Requirement Annexure-A Part II	383	5.3.8	The radiators shall be detachable type, mounted on the tank with shut off valve at each point of connection to the tank, lifts, along with drain plug/ valve at the bottom and air release plug at the top.	The radiators shall be detachable type, mounted on the tank with butterfly valve at each point of connection to the tank, lifts, along with drain plug/ valve at the bottom and air release plug at the top.	Technical	The terms and conditions of the Bidding Document prevail.
193	General			Scope of Statutory Approvals such as CEIG/CEA/Utility/DISCOM has mentioned for Wind and Solar	Please let us know the same for BESS also	Technical	The same shall be obtained for BESS as per prevailing regulations.
194	Employer's Requirement Annexure-A Part II	410	13.1.1	Optic Fibre cable shall be 4/8/12 core, galvanized corrugated steel taped armoured, fully water blocked with dielectric central member for outdoor/ indoor application so as to prevent any physical damage.	Unarmored OFC will be used in Wind Farm 33kV OH Line instead of armoured OFC	Technical	The terms and conditions of the Bidding Document prevail.

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195	Employer's Requirement Annexure-A Part II	487	36	Industry standard operating system like WINDOWS (latest version) etc. to ensure openness and connectivity with other system in industry shall be provided. SCADA system shall support following standard protocols (included but not limited to) to communicate with different sub system/Devices: (i) Modbus (TCP/IP, RTU, ASCII) (ii) Sub Station Protocol like IEC-61850 (iii) IEC 60870 – 5 – 101/ 104 (iv) Any other protocol on which the offered equipment (by Contractor) will communicate with SCADA.	Hybrid SCADA system shall support for Power curtailment to achieve setpoint. This system communicate with Invertor, WTG, WMS & Wind mast only and Control Panel SCADA system will control all relay through IEC 60870-5-101/104, 61850, Modbus, MFM, SLD, Invertor Tranformer & MV Switchgear	Technical	Kindly refer S.No.27 of Amendment-1.
196	Employer's Requirement Annexure-A Part II	490	42	The Contractor shall provide software license for all software being used in Contractor's System. The software licenses shall be provided for the project and shall not be hardware/machine-specific.	OPC Software License can be provided but Hybrid SCADA software can not be shared . Please accept	Technical	Kindly refer S.No.27 of Amendment-1.
197	Employer's Requirement Annexure-A Part II	490	42	Contractor shall provide Minimum 4 nos of licenses for remote monitoring (Concurrent viewing of data at 4 different locations authorized with user ID/ Password) of the essential parameters of solar plant on the web using popular web browser without requirement of additional software. User ID and password for remote view can only be changed by SCADA Administrator.	Hybrid SCADA web remote monitoring will be provide with 4 No's of web licenses through CISCO VPN client software only without any additional cost	Technical	Kindly refer S.No.27 of Amendment-1.
198	Employer's Requirement Annexure-A Part II	490	43	Solar Plant SCADA minimum Requirements: - The Contractor shall provide control and monitoring of all the equipment including String Monitoring, Inverter, Transformers, MV Switchgears etc	Hybrid SCADA system will control & monitoring can be done for the equipments like SMU, Invertor, Weather Monitoring System & Wind Turbiune Generator and Control Panel SCADA System will control & monitor can be done for the equipments line Transformer, MV Switch gear etc.,	Technical	Kindly refer S.No.27 of Amendment-1.
199	Employer's Requirement Annexure-A Part II	490	43.1	Programmable Logic based control system at Main Control Room	Hybrid SCADA system will control & monitoring can be done for the equipments like SMU, Invertor, Weather Monitoring System & Wind Turbiune Generator and Control Panel SCADA System will control & monitor can be done for the equipments line Transformer, MV Switch gear etc.,	Technical	Kindly refer S.No.27 of Amendment-1.
200	Employer's Requirement Annexure-A Part II	490	43.2	Bidder shall provide PLC based SCADA at Main Control Room. For other locations such as Inverter room, Sub Pooling Switchgear Room (if applicable) bidder may offer IO modules/ RTU/ PLC for completeness of SCADA.	In main control room will provide two types of SCADA System 1. Hybrid SCADA System which will control & monitor the equipments of Invertor, WTG, WMS & Wind Mast 2. Control Panel SCADA System which will control & monitor the Fire Alarm System, Invertor Tranformer & MV Switchgear	Technical	Kindly refer S.No.27 of Amendment-1.
201	Employer's Requirement Annexure-A Part II	491	44.2(b)	Data transmission between LCS and SCADA shall be serial interface, 20mA current loop or standard RS-232C. Contractors may specify in the Tender the method of interfacing between LCS and SCADA.	LCS to SCADA will be communicated - 4 Pair Twisted Cable with TCP/IP communication instead of serial interface	Technical	Kindly refer S.No.27 of Amendment-1.
202	Employer's Requirement Annexure-A Part II	491	44.3(b)	Change the alarm limit.	We don't have option to change the alarm limit	Technical	The terms and conditions of the Bidding Document prevail.
203	Employer's Requirement Annexure-A Part II	491	44.3(c)	After certain faults as per LCS settings, the WTGs are restarted automatically. To avoid excess voltage drops, the SCADA must inhibit start of more than one WTG at a time. The time between start of WTGs must be adjustable in the range 0 to 60 sec. All alarms must be reported immediately to SCADA. All alarms must be reported in written format (emails or Print out) in clear text, describing the kind of alarms, where the alarm occurred and the time of initiation of the alarm. Resetting of alarms is to be reported in written format (emails or Print out) in the same Form. It must be possible to specify maximum and minimum limits for all alarms.	Alarm reports can be generated manually by soft or hard copies instead of automatic email trigger	Technical	The terms and conditions of the Bidding Document prevail.
204	Employer's Requirement Annexure-A Part IV	571	4.1.13	Uninterrupted Power Supply (UPS) with battery bank of sufficient capacity for critical loads	List required on Battery backup AC power supply to SCADA system for remote monitoring/control of plant facilities along with communication cables	Technical	The terms and conditions of the Bidding Document prevail.
205	Employer's Requirement Annexure-A Part II	455	30.1	5000 cycles at rated energy capacity at 80% Depth of Discharge (DoD) at 25 degree C and upto 0.5C Rate of Discharge	5000 cycles at rated energy capacity at 25 degree C and upto 0.5C Rate of Discharge	Technical	The terms and conditions of the Bidding Document prevail.
206	I Instructions to Bidders	15	11 Documents comprising the Bid	Written confirmation authorizing the signatory of the Bid to commit the Bidder, in accordance with ITB 21.3/Power of Attorney & copy of Board Resolution for such authorization	Can we provide power of attorney as per our own format.Kindly confirm.	Contractual	No. The terms & conditions of the Bidding Document will prevail.
207	III Evaluation & Qualification criteria	42	ITB 19.3(a)	The bid price shall be adjusted by the following factor: 0.13% (zero-point one three percent) per week of the bid price for delay in award of contract	As per our understanding,incase of delay in award of contract for a week. Bid price shall be adjusted by increasing the bid price by 0.13% of Bid Price/Contract Price.Kindly confirm.	Contractual	The given clause provides ample clarity for the query being asked. The terms & conditions of the Bidding Document will prevail.
208	Section IX - Particular Conditions of Contract	283	PCC 8	Operation & Maintenance (O&M) of the Plant facility for a period of 10 (Ten) years from the date of Operational acceptance of the Plant Facilities	O&M activities need to be started from the date of Commissioning for hurdle free operation. So we request SECI to revise the clause as below, Operation & Maintenance (O&M) of the Plant facility for a period of 10 (Ten) years from the date of Commissioning of the Plant Facilities	Technical	The terms and conditions of the Bidding Document prevail.
209	X Contract Forms	279	PCC 8. Time for Commencement and Completion	The Time for Completion of the whole of the Plant Facilities shall be 18 (Eighteen) Months till commissioning from the Effective Date as described in the Contract Agreement	Kindly clarify,From the effective date, Within how many days, land will be handed over to contractor for execution of plant facilities.	Contractual	The terms & conditions of the Bidding Document will prevail.

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210	X Contract Forms	286	PCC 31.1 Transfer of Ownership	Ownership of the Plant (including spare parts) to be imported into the country where the Site is located shall be transferred to the Employer when the Plant are brought on to the Site. Ownership of the Plant (including spare parts) procured in the country where the Site is located shall be transferred to the Employer when the Plant are brought on to the Site.	Request SECI to revise the clause as below, Ownership of the Plant (including spare parts) to be imported into the country where the Site is located shall be transferred to the Employer when the Plant are brought on to the site or 100% payment made by emplyoyer to Contractor for the plant,whichever is later. Ownership of the Plant (including spare parts) procured in the country where the Site is located shall be transferred to the Employer when the Plant are brought on to the Site. or 100% payment made by emplyoyer to Contractor for the plant,whichever is later.	Contractual	The terms & conditions of the Bidding Document will prevail.
211	X Contract Forms	300	Terms of Payment Schedule No. 1. Plant and Equipment Supplied from Abroad	Ten percent (10%) of the total amount (of Schedule No. 1) as an advance payment against receipt of Proforma invoice and an irrevocable advance payment security for the 110% amount made out in favor of the Employer. The advance payment security may be reduced in proportion to the value of the 10% advance payment adjusted against plant and equipment delivered to the site, as evidenced by shipping and delivery documents. Seventy percent (70%) of the total or pro rata amount (of Schedule No. 1), upon delivery to the destination within forty-five (45) days after receipt of materials and relevant documents. Ten percent (10%) of the total or pro rata amount (of Schedule No. 1), upon successful erection, testing and commissioning of materials at site and Operational Acceptance of the plant pursuant to successful functional Guarantee Tests. Ten percent (10 %) of the total or pro rata amount (of Schedule No. 1) within forty-five (45) days of receipt of invoice after final acceptance of the Plant facilities or completion of First year of O&M of Plant, whichever is later, pursuant to submission of all requisite documentation including submission of all as-built drawings and documents	Payment terms proposed by SECI will affect our cash flow and Working Capital.We request SECI to revise the payment terms as below, Ten percent (10%) of the total amount (of Schedule No. 1) as an advance payment against receipt of Proforma invoice and an irrevocable advance payment security for the 110% amount made out in favor of the Employer. The advance payment security may be reduced in proportion to the value of the 10% advance payment adjusted against plant and equipment delivered to the site, as evidenced by shipping and delivery documents. Seventy percent (70%) of the total or pro rata amount (of Schedule No. 1), upon delivery to the destination within forty-five (45) days after receipt of materials and relevant documents. Ten percent (10%) of the total or pro rata amount (of Schedule No. 1), upon successful erection, testing and commissioning of materials at site. Ten percent (10 %) of the total or pro rata amount (of Schedule No. 1) within forty-five (45) days of receipt of invoice after Operational Acceptance of the plant pursuant to successful functional Guarantee Tests.	Contractual	The terms & conditions of the Bidding Document will prevail.
212	X Contract Forms	301	Terms of Payment Schedule No. 2. Plant and Equipment Supplied from within the Employer's country	Ten percent (10%) of the total amount (of Schedule No. 2) as an advance payment against receipt of invoice and an irrevocable advance payment security for the 100% amount made out in favor of the Employer. The advance payment security may be reduced in proportion to the value of the 10% advance payment adjusted against plant and equipment delivered to the site, as evidenced by shipping and delivery documents. Seventy percent (70%) of the total or pro rata amount (of Schedule No. 2), upon delivery to the destination within forty-five (45) days after receipt of materials and relevant documents. Ten percent (10%) of the total or pro rata amount (of Schedule No. 2), upon successful erection, testing and commissioning of materials at site and Operational Acceptance of the plant pursuant to successful functional Guarantee Tests. Ten percent (10 %) of the total or pro rata amount (of Schedule No. 2) within forty-five (45) days of receipt of invoice after final acceptance of the Plant facilities or completion of First year of O&M of Plant, whichever is later, pursuant to submission of all requisite documentation including submission of all as-built drawings and documents.	Payment terms proposed by SECI will affect our cash flow and Working Capital.We request SECI to revise the payment terms as below, Ten percent (10%) of the total amount (of Schedule No. 2) as an advance payment against receipt of invoice and an irrevocable advance payment security for the 100% amount made out in favor of the Employer. The advance payment security may be reduced in proportion to the value of the 10% advance payment adjusted against plant and equipment delivered to the site, as evidenced by shipping and delivery documents. Seventy percent (70%) of the total or pro rata amount (of Schedule No. 2), upon delivery to the destination within forty-five (45) days after receipt of materials and relevant documents. Ten percent (10%) of the total or pro rata amount (of Schedule No. 2), upon successful erection, testing and commissioning of materials at site. Ten percent (10 %) of the total or pro rata amount (of Schedule No. 2) within forty-five (45) days of receipt of invoice after Operational Acceptance of the plant pursuant to successful functional Guarantee Tests.	Contractual	The terms & conditions of the Bidding Document will prevail.

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213	X Contract Forms	302	Terms of Payment Schedule No. 4. Installation and other Services	Ten percent (10%) of the total installation and other services amount (of Schedule No. 4) as an advance payment against receipt of invoice, and an irrevocable advance payment security for the 110% amount made out in favor of the Employer. The advance payment security may be reduced in proportion to the value of 10% advance payment adjusted against work performed by the Contractor as evidenced by the invoices for installation and other services. Eighty percent (80%) of the measured value of work performed by the Contractor, as identified in the said Program of Performance, during the preceding month, as evidenced by the Employer's authorization of the Contractor's application, will be made monthly within forty-five (45) days after receipt of invoice. Five percent (5%) of the total or pro rata value of installation and other services (of Schedule No. 4) within forty-five (45) days of Operational Acceptance of the plant pursuant to successful integration with existing internal grid system & functional Guarantee Tests and completion of all the civil works including finishing and debris removal. Five percent (5%) of the total or pro rata value of installation and services (of Schedule No. 4) within forty-five (45) days after receipt of invoice after final acceptance of the Plant facilities or completion of First year of O&M of Plant, whichever is later, pursuant to submission of all requisite documentation including submission of all as-built drawings and documents.	Payment terms proposed by SECI will affect our cash flow and Working Capital.We request SECI to revise the payment terms as below, Ten percent (10%) of the total installation and other services amount (of Schedule No. 4) as an advance payment against receipt of invoice, and an irrevocable advance payment security for the 110% amount made out in favor of the Employer. The advance payment security may be reduced in proportion to the value of 10% advance payment adjusted against work performed by the Contractor as evidenced by the invoices for installation and other services. Eighty percent (80%) of the measured value of work performed by the Contractor, as identified in the said Program of Performance, during the preceding month, as evidenced by the Employer's authorization of the Contractor's application, will be made monthly within forty-five (45) days after receipt of invoice. Five percent (5%) of the total or pro rata value of installation and other services (of Schedule No. 4) within forty-five (45) days pursuant to successful integration with existing internal grid system. Five percent (5%) of the total or pro rata value of installation and services (of Schedule No. 4) within forty-five (45) days after receipt of invoice after Succesful functional Guarantee Tests and completion of all the civil works including finishing and debris removal.	Contractual	The terms & conditions of the Bidding Document will prevail.
214	X Contract Forms	300	Terms of Payment Schedule No. 1. Plant and Equipment Supplied from Abroad	Seventy percent (70%) of the total or pro rata amount (of Schedule No. 1), upon delivery to the destination within forty-five (45) days after receipt of materials and relevant documents..	As per Terms of Payment, Schedule No.1,2 & 3. Payment shall be made within 45 Days. As per Clause "Method of Payment",Employer shall make payment within 30 days. Both the above clauses are contradicting. Kindly confirm Payment Credit period is 30 Days or 45 Days.	Contractual	Please refer Amendment 1, Sr No 3 for the same.
215	X Contract Forms	303	Payment Procedures Methods of Payment (f)	The Employer shall make payments promptly within thirty (30) days of submission of an invoice/claim by the Contractor, complete in all respects and supported by the requisite documents and fulfillment of stipulated conditions, if any. All the payment shall be released to the Contractor directly	As per Terms of Payment, Schedule No.1,2 & 3. Payment shall be made within 45 Days. As per Clause "Method of Payment",Employer shall make payment within 30 days. Both the above clauses are contradicting. Kindly confirm Payment Credit period is 30 Days or 45 Days.	Contractual	The terms & conditions of the Bidding Document will prevail.
216	Section VIII - General Conditions of Contract	201	19.1	The Appendix to the Contract Agreement titled List of Major Items of Plant and Installation Services and List of Approved Subcontractors, specifies major items of supply or services and a list of approved Subcontractors against each item, including manufacturers	Tender doesn't contains list of Subcontractors/Vendors.Can we propose our own vendor/subcontractor List? Kindly confirm. Whether our proposed vendor list shall be final list considered for execution? Kindly confirm.	Technical	Yes. The Contractor shall propose the vendor sub-contractor list who mee the Qualifying criteria and shall select any one from the proposed list.
217	VIII General conditions of contract	233	36.1	Change in Laws and Regulations 36.1 If, after the date twenty-eight (28) days prior to the date of Bid submission, in the country where the Site is located, any law, regulation, ordinance, order or by-law having the force of law is enacted, promulgated, abrogated or changed which shall be deemed to include any change in interpretation or application by the competent authorities, that subsequently affects the costs and expenses of the Contractor and/or the Time for Completion, the Contract Price shall be correspondingly increased or decreased, and/or the Time for Completion shall be reasonably adjusted to the extent that the Contractor has thereby been affected in the performance of any of its obligations under the Contract. Notwithstanding the foregoing, such additional or reduced costs shall not be separately paid or credited if the same has already been accounted for in the price adjustment provisions where applicable, in accordance with the PCC pursuant to GCC Sub-Clause 11.2.	Kindly confirm,whether price adjustment is applicable on Contract Price,incase of change in taxes after the date twenty-eight (28) days prior to the date of Bid submission.	Contractual	The terms & conditions of the Bidding Document will prevail.
218	X Contract Forms	312	3. Functional Guarantees	Functional Guarantees 3.1 Production Capacity 3.2 Raw Materials and Utilities Consumption	Function gauarntees provided in appendix 8 is not relevant to solar,wind & BESS project.same need to be removed	Contractual	This is a generic format & the bidder may mention "Not Applicable" wherever any such item is not relevant. The terms & conditions of the Bidding Document will prevail.
219	X Contract Forms	312	4.1 Functional Guarantees	Failure in Guarantees and Liquidated Damages Failure to Attain Guaranteed Production Capacity 4.2 Raw Materials and Utilities Consumption in Excess of Guaranteed Level	Liquidated damages for Failure to Attain Guaranteed Production Capacity & Raw Materials and Utilities Consumption in Excess of Guaranteed Level is not relevant to solar,wind & BESS project,Same need to be removed.	Contractual	Please refer Point No 218 for the same. The terms & conditions of the Bidding Document will prevail.
220	Specific Procurement Notice	2	5	Aspiring bidders who have not obtained the user ID and password for participating in e-procurement in this Project, may obtain the same from the website: https://www.tcil-india-electronictender.com. (Bidders are required to refer the TCIL website). A non-refundable fee of INR 5400/- (Indian Rupees Fifty Four hundred only) or USD 100 (100 US Dollars only) (Inclusive of GST/Taxes) or equivalent amount in a freely convertible, is required to be paid. The method of payment will be Demand Draft / Banker's Cheque or through online payment gateway (As mentioned in the TCIL website). Payment documents are to be submitted subsequently as per the procedure described in paragraph 8 below	We already have user ID and Password of TCIL Website.Kindly confirm whether we need to pay Rs.5400/-?	Contractual	In case, a bidder is already registered with the e-tender platform, i.e TCIL, then same ID & Password, if active, may be used for the purpose of bidding. The terms & conditions of the Bidding Document will prevail.

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221	Employer's Requirement Annexure-A Part II	423	21.1	Only the makes and models approved under Revised List of Models and Manufacturers (RLMM list) of MNRE as on the date of bid submission should be offered.	We request SECI to consider Makes and WTG Models approved under Revised List of Models and Manufacturers (RLMM list) on ore before the date of installation at site instead of date of Submission.This will ensure deployment of the latest technology	Technical	The terms and conditions of the Bidding Document prevail.
222	Section III - Evaluation and Qualification Criteria	72	1.1(B)	Bidders have to provide a Guaranteed Solar Energy Generation of 2,241,135,154 KWh @ Solar CUF(Capacity Utilization Factor) 22% for 10 years. Year — Guaranteed Solar Energy generation (KWh) 1 — 231264000 2 — 229645152 3 — 228037636 4 — 226441372 5 — 224856283 6 — 223282289 7 — 221719313 8 — 220167278 9 — 218626107 10 — 217095724 Total Generation for 10 years — 2,241,135,154	Kindly note CUF 22% is applicable for Year 1 Guaranteed Solar Energy generation (KWh), for remaining years (Year 2 to year 10), CUF will be lesser than 22% as per Guaranteed Solar Energy generation (KWh) values indicated in the tender. Please revise the clause as below, "Bidders have to provide a Guaranteed Solar Energy Generation of 2,241,135,154 KWh for 10 Year and Solar CUF(Capacity Utilization Factor) 22% for 1st year."	Technical	Kindly refer S.No.10 of Amendment-1.
223	Section III - Evaluation and Qualification Criteria	75	1.2(c)	Minimum value of Guaranteed Solar Energy Generation in kWh for 10 years period - 2,241,135,154 KWh	As per Appendix to technical part - Function Guarantees,Guarantee to be provided terms interms of Generation figures for 10 Years period.(i.e 2,241,135,154 KWh) Whereas Annexure 2 - Functional Guarantee describes about annual CUF gauarntee. Request to remove annual CUF Guarantee clauses from Annexure 2	Technical	Kindly refer S.No.33 of Amendment-1.
224	Annexure-C	642	I.1.B	The Contractor guarantees that the CUF shall be hundred percent (100%) of the total generated CUF for every Production Period (“Annual CUF Guarantee”). In the event the CUF is less than the Guaranteed CUF, the Contractor shall immediately upon demand, indemnify the Employer, as liquidated damages and not as penalty, amounts equivalent to remuneration of the equivalent Energy, subject to a maximum of hundred (100%) percent of the Total Annual O&M Price .	As per Appendix to technical part - Function Guarantees,Guarantee to be provided terms interms of Generation figures for 10 Years period.(i.e 2,241,135,154 KWh) Whereas Annexure 2 - Functional Guarantee describes about annual CUF gauarntee. Request to remove annual CUF Guarantee clauses from Annexure 2	Technical	Kindly refer S.No.33 of Amendment-1.
225	Annexure-C	642	I.1.D(i)	If the Contractor fails to achieve the Annual CUF Guarantee at the end of such respective year, then the Contractor will pay compensation to Owner for an amount equal to the revenue loss @ Tariff rate as per PPA, for the difference of energy corresponding to the Annual Guaranteed CUF and the actual energy for the respective year.	SECI need to revise the same for Annual Generation Guarantee as per clause 2.2 Guaranteed generation to be corrected for actual radiation,actual temperature and grid unavailability measured at site. Please accept.	Technical	Kindly refer S.No.33 of Amendment-1.
226	Employer's Requirement Annexure-A Part II	348	2.3.1	Any shortfall in the Performance Ratio (PR) as determined through the PR Test shall attract imposition of penalty. For every 0.01 shortfall in PR below 0.78 by the Contractor, a penalty of 0.5% of the Solar Plant Contract Value (i.e., total sum of all the Supply, Service Contract and absolute value of O & M Contract) shall be levied. In case, the Plant PR result is 0.05 below 0.78, i.e., 0.73 or lower, the total Contract Performance Security submitted by the Contractor will be forfeited. In case, the Contract Performance Security has already been encashed on account of delays, the due amount will be recovered from the remaining Instalments of the payable at the end of the first year (as per the Terms and procedures of payments)If the Contractor fails to achieve the Annual CUF Guarantee at the end of such respective year, then the Contractor will pay compensation to Owner for an amount equal to the revenue loss @ Tariff rate as per PPA, for the difference of energy corresponding to the Annual Guaranteed CUF and the actual energy for the respective year.	As per Clause 2.2 in Employers Requirements Annexure A,Part II, PG Test Procedure, Annual Generation Guarantee to provided for 10 years.Annual CUF Guarantee is not appicable.Request SECI to replace the word Annual CUF Guarantee with Annual Generation Guarantee in the clause 2.3.1.	Technical	Kindly refer S.No.11 of Amendment-1.

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227	Annexure-C	642	I.1.D(ii)	If the Contractor fails to achieve the Annual CUF Guarantee at the end of 10th year, then the Contractor will pay compensation to Owner for an amount equal to the Net Present Value (NPV) of the revenue loss for 10th to 25th year calculated as below: a. % CUF drop i.e. [(Guaranteed CUF of 10th year - Actual CUF of 10th year) / Guaranteed CUF of 10th year] in the 10th year shall be considered as the representative CUF drop in each subsequent years starting from 11th to 25th year. b. Actual estimated revenue loss @ Tariff rate of PPA for each subsequent year will be calculated based on % CUF drop multiplied by the respective year estimated CUF. c. The Net Present Value (NPV) of the revenue loss for 10th to 25th year will be considered as the LD payable by the Contractor. d. Discounting Rate for NPV calculation is considered as 9.08%	Since already PR Guarantee provided by the Bidder to prove the capacity of the project.Request SECI to remove this clause.	Technical	The terms and conditions of the Bidding Document prevail. Please refer S.No.33 of Amendment-I.
228	General			General	We request SECI to share the Soil Investigation Report,Contour data and AutoCAD Layout with boundary of the proposed site for Solar,Wind & BESS.Part	Technical	Soil investigation report is not available. Land layout and Contour map are attached. Kindly refer S.No.35 of Amendment-1.
229	Employer's Requirement Annexure-A Part IV	568	1	Site location and land details - Latitude - 14°21’29.7” N,Longitude - 77°31’18.9” E	Kindly clarify,Whether Proposed land area for WTG Locations is part of Land proposed for Solar Plant or Outside the land proposed for Solar Plant ?	Technical	Kindly refer S.No.35 of Amendment-1 for land layout.
230	Employer's Requirement Annexure-A Part II	575	5.2.9	The proposed land area for each WTG locations is about 135mx135m and location coordinates of each WTG’s along with tentative elevation is given below	Location coordinates of each WTG’s is not in GPS Coordinate format. Kindly share the cooordinates of each WTG's in GPS Coordinate format.	Technical	Projection System used is 4386
231	Employer's Requirement Annexure-A Part IV	568	1	Project particulars: Substation Details - 33 kV/220 kV proposed sub-station, Ramagiri	At what evacuation voltage, Plant Facility to be connected to 33/220 Kv Substation ? 33 Kv or 220 Kv. If 220 Kv, Whether 220 Kv Switchyard and 220 Kv Transmission Line is whose scope? What is the length of Transmission Line from Plant to 33/220 kV Substation? Whether any bay extension works to be done in the 33/220 Kv Substation?	Technical	Kindly refer S.No.35 of Amendment-1.
232	Employer's Requirement Annexure-A Part IV	568	1	Type of land	We request M/S SECI to provide Autocad copy of land boundary	Technical	Kindly refer S.No.35 of Amendment-1.
233	Employer's Requirement Annexure-A Part II	367	1.3.1	For PV Modules with backsheet, toughened low iron glass with minimum thickness of 4.0 mm for 72 cell module and 3.2 mm for 60 cell module for Multi or mono-crystalline Modules	Offered PV modules will be IEC approved with 3.2mm thick glass for 72 cell configuration. This module, during IEC certification, Module will passed through Hail impact test and static wind load test of 5400 Pa. Hence please allow 3.2mm thick top glass for 72 cell configuration	Technical	The terms and conditions of Bidding Document will prevail.
234	Employer's Requirement Annexure-A Part II	372	2.2.3	Every SMU input shall be provided with fuses on both positive and negative side.The rating of the fuses shall be selected such that it protects the modules from reverse current overload	Since Inverter is grounded on -ve side we request to accept fuses for positive side only.	Technical	The terms and conditions of Bidding Document will prevail.
235	Employer's Requirement Annexure-A Part II	373	3.3	DC cables shall be single core, armoured, Flame Retardant Low smoke (FRLS), PVC outer sheath conforming to IS 7098-I. DC cable with positive polarity should have marking of red line on black outer sheath.	We recommend IS 7098 Part-II for 1500V DC Cable. Pl. Clarify	Technical	Kindly refer S.No.17 of Amendment-1.
236	Employer's Requirement Annexure-A Part II	374	3.7.2(ii)	DC cable type test certificate as per IS 7098-1	We recommend IS 7098 Part-II for 1500V DC Cable. Pl. Clarify	Technical	Kindly refer S.No.17 of Amendment-1.
237	Employer's Requirement Annexure-A Part II	374	3.8	Routine test and acceptance tests requirements shall be as per IEC 62930/EN 50618for solar cables and IS 7098-1 for DC cables	We recommend IS 7098 Part-II for 1500V DC Cable. Pl. Clarify	Technical	Kindly refer S.No.17 of Amendment-1.
238	Employer's Requirement Annexure-A Part II	376	4.2.1	The rated/ name plate AC capacity of the PCU shall be AC power output of the PCU at 50°C.	We assume Inverter (PCU) name plate rating at 50°C at unity Power factor. Pl. clarify	Technical	Yes. The terms and conditions of Bidding Document will prevail.
239	Employer's Requirement Annexure-A Part II	409	12.2	Protection Level for the entire plant shall be level – I.	Based on the low risk of site for lightning prone conditions, we suggest level IV protection for entire plant. Request you to Pls accept level IV protection.	Technical	The terms and conditions of Bidding Document will prevail.
240	Employer's Requirement Annexure-A Part II	348	2.2	Annual Generation Guarantee	We request M/S SECI to correct Annual energy generation similat to PR test mentioned in clause 2.1.4.3 i.e. actual generation Guarantee corrction with respect to actual radiation, grid interruptions, Force majeure conditions, shutdown explicitly demanded by the Owner/DISCOM/STU and as per the hindrance record maintained at site	Technical	No radiation correction shall be considered. Kindly refer S.No.10 of Amendment-1.
241	Section III - Evaluation and Qualification Criteria	72	1.1(B)	Guaranteed Solar Energy generation of 10 years on Annual basis.	We request M/S SECI to provide base radiation and temperature data for the generation indicated in the tender.	Technical	Will not be provided. Bidder must make own estimations to meet the guaranteed generation.
242	Employer's Requirement Annexure-A Part II	382	5.2	* Single Line Diagram (SLD) will be finalized during detailed engineering.	Bidder request SECI to provide the detailed AC power evacuation SLD indicating the protection and metering requirements to analyse the scheme of evacuation.	Technical	Kindly refer S.No.35 of Amendment-1.

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Clarifications to Queries raised during Pre-Bid Meeting on 31.08.2018

243	Employer's Requirement Annexure-A Part II	382	5.2	Bushing rating, Insulation class (Winding & bushing) HV side - 36 kV porcelain bushings LV side – 1.1 kV epoxy bushings	Insulation class (Winding & bushing) of LV side of the Inverter Transformer depends on the dV/dt of the Inverter, So bidder to select the Insulation class of LV side of the Inverter Transformer inline with the actual selected Inverter manufacturer recommendation during the detailed engineering. SECI to confirm.	Technical	Yes, will be decided during detailed engineering stage.
244	General			Technical Requirements	Bidder request SECI to specify to requirement of differential protection for Inverter transformer.	Technical	Differential protection to be provided for transformers of rating more than 5 MVA used in the project.
245	General			Technical Requirements	Bidder request SECI to specify to requirement of NIFPS/ any other fire protection system for Inverter transformer.	Technical	Fire protection for transformers shall be given as per CEA regulations.
246	General			Technical Requirements	Bidder propose that the Auxiliary transformer in the Inverter room to be tapped from the LV side of the Inverter transformer. SECI to confirm the same.	Technical	Agreed, subject to Inverter OEM approval.
247	Employer's Requirement Annexure-A Part II	386	6	HT Switchgear	Bidder request SECI to allow for outdoor type HT panels and the panels will be procured from the Channel partners of the Original Equipment manufacturers. SECI to confirm the same.	Technical	Kindly refer S.No.18 of Amendment-1.
248	Employer's Requirement Annexure-A Part II	390	6.5	1) numerical relay in main outgoing feeder shall have three no. of voltage inputs for Under Voltage/Over Voltage protection. 2) All numerical relays shall have provision for measurement and storage of electrical parameters such as voltage, current, frequency, active power, reactive power etc.	The clauses are contradictory. - Bidder propose numerical relays in incomer feeders to have measurement and storage of Current parameter alone. SECI to confirm the same.	Technical	The terms and conditions of Bidding Document will prevail.
249	Employer's Requirement Annexure-A Part II	404	10.3.1(ii)	Uninterrupted Power Supply: (ii) Battery system for 2 hours	Bidder propose the below battery backup time for the UPS: 1) For Control room : 2Hr 2) For Inverter room : 1Hr SECI to confirm	Technical	The terms and conditions of Bidding Document will prevail.
250	General			General	Bidder request SECI to specify the battery charger requirements in the Inverter room and the Control room.	Technical	It is part of the UPS specifications. Kindly refer Clause 10 of TS.
251	General			General	Bidder understand the following requirement for Auxiliary Supply System for Inverter room and control room: 1) 1x100% Auxiliary transformer 2) 1x100% UPS SECI to confirm the understanding.	Technical	Shall be confirmed during detailed engineering.
252	General			General	Bidder request SECI to provide the scheme of evacuation for the combined Solar Plant + Wind Plant + BESS.	Technical	Kindly refer S.No.35 of Amendment-1.
253	General			General	Bidder request to provide the specification for the below: 1) For Switchyard 2) Battery Charger	Technical	Kindly refer S.No.35 of Amendment-1 for interconnection to the grid is at 33kV level. For Switchgear, the panel specifications provided for 33kV panels shall be followed.
254	General			General	Bidder request to provide the indicative room layout for the Inverter room and the Control room. And request to specify the room area requirement.	Technical	Minimum area requirements are already provided. Actual layout can be decided during detailed engineering.
255	General			General	Kindly provide the Scope battery limit for EPC Contractor. What is the length of Transmission Line 33 Kv and 220 Kv Transmission Line?	Technical	Kindly refer S.No.35 of Amendment-1 for SLD attached. The interconnection point is adjacent to the plant area only. Refer area layout.
256	Employer's Requirement Annexure-A Part II	507	49.3	There shall be minimum 1 nos. of Borehole per 5 acres of the area (However, total number of boreholes shall not be less than 5), 3 nos. of Trial pits, 5 nos. of CBR test & ERT, 5 nos. of Ground water samples for laboratory investigations.	EPC proposes one bore hole for every 12.5 acres of land. The depth of bore hole shall be min. 5m and results shall be mentioned for intervals of 1.5m (starting from 0.5m , 2m, 3.5m and 5m respectively). 500mm upto 2.5 meters, after that any interval Kindly Confirm	Technical	Please refer S.No.34 of Amendment-I.
257	Employer's Requirement Annexure-A Part II	510	51.1	1) The Finished Grade Level (FGL) of the proposed plant shall be fixed with reference to the highest flood level (HFL) and surrounding ground profile at proposed site to avoid flooding of plant site.	We propose finished floor level 750 mm from finished ground level.	Technical	Shall be decided during detailed engineering. The terms and conditions of Bidding Document will prevail.
258	Employer's Requirement Annexure-A Part II	512	52.3	1) Approach road from nearest existing Public road to Main Gate, Access road from Main Gate to MCR building and Internal roads connecting MCR building with LCR building and other facilities: (viii) Topping: wearing course of 20 mm thick pre-mix carpet or surface dressing,compacted 75mm thick, with murrum blended with WBM Grade-III, as applicable. (ix) WBM (CBR>100%): compacted 75mm thick, Grade III (x) WBM (CBR>100%): compacted 100 mm thick, Grade II (xi) Granular sub-base (CBR>15%): compacted 200 mm thick in two layers of 100mm thickness each, (xii) Compacted subgrade: top 300mm thick, compacted up to 98% of standard proctor density (xiii) Shoulders: compacted 150mm thick, murrum blended with WBM Grade-III 2) Peripheral Road: (xiv) Topping: surface dressing, compacted 75 mm thick, murrum blended with WBM Grade -III (xv) WBM (CBR>100%): compacted 75 mm thick, Grade III (xvi) WBM (CBR>100%): compacted 75 mm thick, Grade II (xvii) Granular sub-base (CBR>15%): compacted 150 mm thick in two layers of 75mm thickness each, (xviii) Compacted subgrade: top 300mm thick, compacted up to 98% of standard proctordensity (xix) Shoulders: compacted 150mm thick, murrum blended with WBM Grade-III	EPC proposes that subgrade, base course and top layer thickness shall be based on CBR test value. Kindly confirm.	Technical	The terms and conditions of Bidding Document will prevail.

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Clarifications to Queries raised during Pre-Bid Meeting on 31.08.2018

259	Employer's Requirement Annexure-A Part II	514	53.7	Suitable size plant peripheral drain as per design (min. bottom width x depth: 500mm x500mm) along inside of plant boundary wall/ fence shall be provided for smooth channelization of outside storm water and to avoid flooding in the plant. The size of all internal and road side drains shall not be less than 450mm (bottom width) x 500mm (depth).	Suitable size drain shall be provided on one side of road as per contour map and flow direction of storm water. Suitable design checks shall be made during detailed engineering.	Technical	The terms and conditions of Bidding Document will prevail.
260	Employer's Requirement Annexure-A Part II	519	56.4	To calculate the design wind speed (Vz), the factors K1 (probability factor or risk coefficient),K2 (terrain roughness and height factor) and K3 (topography factor) shall be considered a per IS 875 (Part-3) (However, minimum values for K1, K2 and K3 shall be 1.0, 1.05 and 1.0 respectively)	We propose K1=0.9, K2=1, and K3=1, as per IS 875-2015. Kindly Confirm.	Technical	The terms and conditions of Bidding Document will prevail.
261	Employer's Requirement Annexure-A Part II	525	59.5	The MMS stub/ column, rafter, purlin, ties and bracing members shall conform to following Indian standards. • IS: 2062 – Hot rolled Medium and High tensile structural steel • IS: 811 – Cold formed light gauge structural steel sections • IS: 1161 – Steel tubes for structural purposes • IS: 4923 – Hollow steel sections for structural use • Minimum grade of steel for sections conforming to IS: 811 & IS: 4923 shall be E350 conforming to IS: 2062 and YSt 310 conforming to IS: 1608 respectively.	we propose galvalume steel sections as per IS:15961-2011. The galvanization for the galvalume steel sections shall be AZ 150 (150 GSM on both sides) as per IS:15961-2011. Galvalume Section shall be considered for Purlin,Rails, Rafter & Bracing as per IS 15961.Thickness of Purlin shall be 1mm and Rafter & Bracing shall be 1.2mm considering Galvalume Material.Yield Strength of Galvalume Material shall be 550 MPA. For Column/Stub Section,Either Hot dip galvanized or POSMAC Section shall be considered. Galvanization for POSMAC Section shall be considered 300 GSM.	Technical	The terms and conditions of Bidding Document will prevail.
262	Employer's Requirement Annexure-A Part II	526	59.16	The MMS structure shall be hot dip galvanized with minimum GSM 610 kg/ sqm and/or minimum coating thickness of 80 microns for protection against corrosion. Galvanization shall conform to IS-2629, 4759 & 4736 as applicable.	we propose galvalume steel sections as per IS:15961-2011. The galvanization for the galvalume steel sections shall be AZ 150 (150 GSM on both sides) as per IS:15961-2011. For POSMAC Section,Galvanization shall be 300 GSM.	Technical	The terms and conditions of Bidding Document will prevail.
263	Employer's Requirement Annexure-A Part II	525	59.7	The minimum thickness excluding anti corrosive treatment (BMT) of various elements of MMS structure shall be as following: Stub/column-3.15mm Rafter-2.5mm Purlin & Other members-2.0 mm	We propose the structural members with below member thickness: Stub/column-2.5mm Rafter & Bracing -1.2mm Purlin & Other members-0.9 mm	Technical	The terms and conditions of Bidding Document will prevail.
264	Employer's Requirement Annexure-A Part II	527	59.9	The maximum permissible deflection/ side sway limits for various elements of MMS under serviceability conditions shall be as following: • Lateral deflection/ side sway for Column – Span/ 240 • Vertical deflection for Rafter and Purlin – Span/ 180 • Lateral deflection for Purlin – Span/240	EPC suggests maximum permissible deflection/ side sway limits for various elements of MMS as per IS 800-2007 • Lateral deflection/ side sway for Column – Span/ 150 • Vertical deflection for Rafter and Purlin – Span/ 180 • Lateral deflection for Purlin – Span/180	Technical	The terms and conditions of Bidding Document will prevail.
265	Employer's Requirement Annexure-A Part II	527	59.24	Min. diameter of bolt for MMS connections shall be 10mm except for column-rafter connection where it shall not be less than 12mm (not less than 16mm in case of single bolt connection)	Min. diameter of bolt for MMS connections shall be provided as per the design requirement of the structure	Technical	The terms and conditions of Bidding Document will prevail.
266	Employer's Requirement Annexure-A Part II	528	59.31	The minimum clearance between the lower edge of the module and the finished grade shall be the higher of (i) Highest flood level + 100mm and (ii) 500 mm, as applicable	EPC suggests minimum clearance between the lower edge of the module and the finished grade shall be the higher of (i) Highest flood level + 100mm and (ii) 400 mm, as applicable. Kindly provide the HFL of the site.	Technical	The terms and conditions of Bidding Document will prevail. Study of HFL shall be in the scope of the bidder
267	Employer's Requirement Annexure-A Part II	528	59.32	The length of one unit(Table) of MMS shall not generally be more than 20m	The length of one unit(Table) of MMS shall be decided based on the requirements of the power generation, site layout, Structure configuration and DC System Voltage (1500V or 1000V). Strcuture length shall be decided based on design requirements. Kindly Confirm	Technical	This is a general requirement in view of undulations in the land. However, during the design, if requirement arises to increase the table length to match 1500 V system, the same can be considered.
268	Employer's Requirement Annexure-A Part II	533	67	Plinth filling for buildings Plinth beam, when provided, shall be taken minimum 200mm below FGL. The plinth filling below Ground floor (GF) for all buildings shall be provided with following specifications. (xxvii) Well compacted sub-grade (xxviii) Well compacted bounder soling with interstices filled with sand over compacted sub-grade. (xxix) 75mm thick PCC 1:3:6 over (ii) (xxx) 100mm thick PCC 1:2:4 over (iii) (xxxi) 40mm thick floor finish over (iv)	We propose statement for plinth filling for building below Ground floor (GF). Plinth beam, when provided, shall be taken 750mm below FGL. i) Brick wall 230mm thk shall be provided and same shall be extensed 300mm below FGL. ii) 75mm thick PCC(1:3:6). kindly Confirm.	Technical	The terms and conditions of Bidding Document will prevail.
269	Employer's Requirement Annexure-A Part II	375	3.9.7	A.C and D.C cables shall be kept in separate trenches. The horizontal and vertical clearances between power and communication cable shall not be less than 300mm	Noted that Power and communication cables (RS 485 cable, Sensor cables & Instrumentation cables) shall be laid with 300 mm clearance. However, the OFC (Optical Fiber cable) shall be laid together / max. 100 mm clearance with Power cable, as OFC cables have nil interference with power cables. Kindly confirm.	Technical	The terms and conditions of Bidding Document will prevail.
270	Employer's Requirement Annexure-A Part II	405	10.3.2	Monitoring and communication SCADA communications - RS-232 & RS-485 Interface Port	UPS shall communicate with SCADA over RS 485 Interface Port, As RS 232 port interfacing is not a standard practise for SCADA interface. Kindly confirm.	Technical	The terms and conditions of Bidding Document will prevail.
271	Employer's Requirement Annexure-A Part II	411	13.2.3	13. Communication Cables (Modbus) Communication cable shall be laid through underground with suitable HDPE ducts	Kindly note that, RS 485 cables shall be designed with Armouring protection such that RS 485 cables shall be laid directly underground without HDPE ducts. OFC cables also have armoured & UV resist property (for outdoor application) .The same shall be laid directly without HDPE ducts. Kindly confirm.	Technical	The terms and conditions of Bidding Document will prevail.

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Clarifications to Queries raised during Pre-Bid Meeting on 31.08.2018

272	Employer's Requirement Annexure-A Part II	414	17.1.1	17.1 Pyranometer The Contractor shall provide minimum 8 (eight) number of secondary standard pyranometers (ISO 9060 classification) along with necessary accessories for measuring the incidental solar radiation at horizontal and inclined plane of array. The location(s) shall be decided as per the Owner.	Noted. 4 nos. of Pyranometers for measuring the incidental solar radiation at horizontal plane and 4 nos. of Pyranometers for measuring the incidental solar radiation at inclined plane of array. Total 8 nos. of Pyranometers shall be considered. kindly confirm	Technical	The terms and conditions of Bidding Document will prevail.
273	Employer's Requirement Annexure-A Part II	415	17.1.2	17.1 Pyranometer 17.1.2 Specification of the pyranometer shall be as follows. Output - Analog output: 4 -20 mA, Serial Output: RS485	Noted. Kindly note that, Pyranometers also have Voltage output. Voltage output type Pyranometer also gives better for design of Weather station Datalogger. Kindly confirm that can we consider voltage output.	Technical	The terms and conditions of Bidding Document will prevail.
274	Employer's Requirement Annexure-A Part II	415	17.2	17.2 Temperature Sensor (for ambient temperature measurement and for module temperature measurement) The temperature sensor shall be Resistance Temperature Detector (RTD)/ Semiconductor type with measurement range of 0 deg.C to 80 deg.C	Kindly note that, Ambient temperature sensors for solar application (from Industry Standard makes) has measuring range till 70 deg. C. Kindly confirm range till 70 deg. C for Air temperature sensor.	Technical	The terms and conditions of Bidding Document will prevail.
275	Employer's Requirement Annexure-A Part II	416	17.4	17.4 Data logger and Data Acquisition System 17.4.1 Provision for analog, digital and counter type inputs for interfacing with various type of sensors (i) Analog Input - Adequate nos. for all analog sensors with redundancy (ix) Protection level: IP65	(i) The Datalogger shall have min. 2 nos of spare Analog input ports for future expansion/use, thereby redundancy of analog input ports are ensured. Kindly confirm. (ix) Protection level: IP65 shall be achieved for Enclosure box, inside which the Datalogger is mounted.	Technical	The terms and conditions of Bidding Document will prevail.
276	Employer's Requirement Annexure-A Part II	417	18.1	18 CCTV Camera 18.1 (iv) The Contractor has to propose the locations and number of cameras required for the Plant during bidding, however Employer's decision on number of cameras shall be final.	Kindly confirm the minimum number of Fixed and PTZ camera's to be considered such that, bidder quantities of Camera and Employer decision of camera quantities are inline.	Technical	Kindly refer S.No.22 of Amendment-1.
277	Employer's Requirement Annexure-A Part II	428	22.3.3	Employer shall be given online access to the real time SCADA Data at its head office so as to visualise the plant operation and performance status on real-time basis.	Noted. SCADA shall be provided with remote monitoring license which enables online monitoring (via Internet) of Real time SCADA data anywhere globally. However, Internet connection at Head office shall be considered by Employer	Technical	The terms and conditions of Bidding Document will prevail.
278	Employer's Requirement Annexure-A Part II	488	38.6	38. Data Communication System (DCS) 38.6 Contractor shall employ redundant fiber optic backbone for data communication between remotely located equipments and main control room.	The fiber optic backbone shall be established in single ring network between remote locations and Main control room thereby offering redundancy in communication, In case of cable fault at 1 end. Kindly confirm.	Technical	Shall be decided during detailed engineering.
279	Employer's Requirement Annexure-A Part II	438	23.15	At the project site CMCS with proper software such as SCADA shall be provided. SCADA System for Plant Facility	The Bidder understands that CMCS (central monitoring and control station) at MCR room is having the Common SCADA system of monitoring & control the solar PV system, Wind power system & BESS system. All the workstations will be at MCR room only. All three system (solar PV,Wind & BESS) will have the dedicated control panel (inverter level / BESS level / wind level) based on the system requirements and interfaced with common SCADA system. We have not envisaged separate SCADA system for individual system. Kindly confirm.	Technical	Shall be decided during detailed engineering.
280	Employer's Requirement Annexure-A Part II	454	29.8	IEC 61850/ DNP3 - Communications networks and management systems. (It shall be ensured that Plant SCADA and the BESS control system communicate with each other over the protocol and the combined parameters are accessible over a common HMI.)	We are recommending to include the Modbus TCP/IP protocol for achieving the communication between Plant common SCADA (CMCS) and the BESS control system . Kindly consider.	Technical	The terms and conditions of Bidding Document will prevail.
281	Employer's Requirement Annexure-A Part II	491	44.2(b)	Data transmission between LCS and SCADA shall be serial interface, 20mA current loop or standard RS-232C. Contractors may specify in the Tender the method of interfacing between LCS and SCADA.	We are recommending to include the Modbus TCP/IP protocol for achieving the communication between Plant common SCADA (CMCS) and WTG LCS. Kindly consider.	Technical	Kindly refer S.No.27 of Amendment-1.
282	Employer's Requirement Annexure-A Part II	485	35.6	The Control system shall be designed to operate in non-air-conditioned area	We are recommending the AC environmental for SCADA system. Please consider.	Technical	Kindly refer S.No.27 of Amendment-1.
283	Employer's Requirement Annexure-A Part II	485	35.5	It shall be possible to remove/ replace redundant controller from its slot for maintenance purpose without switching off power supply	We are considering redundant controller at CMCS SCADA system only. Kindly confirm.	Technical	Kindly refer S.No.27 of Amendment-1.
284	Employer's Requirement Annexure-A Part II	450	29.2	Dedicated Containers for the batteries, with required fire protection as well as the required auxiliary (HVAC, lighting, etc…) Dedicated containers for the PCS with required auxiliaries as well as the required auxiliary (HVAC, lighting, etc)	We request to allow the bidder to design the equipment inside the container such that optimum size and space complying the safety requirements can be provided	Technical	Kindly refer S.No.34 of Amendment-1.
285	Employer's Requirement Annexure-A Part II	453	29.8	IEC 62935 - Planning and Installation of Electrical Energy Storage System	IEC-62935 indicates Measurement Methods - High dynamic range video. Request to Clarify.	Technical	It shall be read IEC 62933. Please refer S.No.24 of Amendment-1.

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286	Employer's Requirement Annexure-A Part II	454	29.8	IEC 62485-2 : Safety requirements for secondaty batteries and battery installations - to meet requirements on safety aspects associated with the erection, use, inspection, maintenance and disposal: Non-chemistry Specific (applicable to all secondary battery types)	This standard applies to stationary secondary batteries and battery installation with maximum voltage of DC 1500V (nominal) and covers Lead-acid and Nicd/NiMH batteries only. Request to accept the equivalent safety standard for other technologies	Technical	This standard is applicable for lead acid and Ni-Cd technologies. For other chemistries, applicable international standards shall be followed.
287	Employer's Requirement Annexure-A Part II	454	29.8	IEE 375: IEEE Guide for Protection of Stationary Battery Systems	We understand it is IEEE 1375 as there is a typing error indicating IEC 375. Request to confirm Bidder's understanding is IEEE 1375 provides only guidance only and does not set requirements rather presents a number of options to the DC system designer of the different types of stationary battery system protection available. The standard also useful for Lead acid and Nicd batteries only. Hence request to allow bidder to design the DC system as per the overall requirements of the tender	Technical	Relevant international standards may be followed.
288	Employer's Requirement Annexure-A Part II	454	29.8	IEEE 491 : IEEE Guide for selection and Use of Battery Monitoring Equipment in Stationary Applications	We understand it is IEEE 1491 as there is a typing error indicating IEC 491. Request to confirm Bidder's understanding is IEEE 1491 provides recommendations for selection and application of parameters for monitoring VRLA, VLA, Ni-Cd battery systems in stationary applications. The monitoring of battery systems utilizing emergy energy storage technologies such as lithium, sodium, flow batteries etc, are beyond the scope of this recommended practice. Hence request to allow bidder to design the BMS as per the requirements of the battery system	Technical	Relevant international standards may be followed.
289	Employer's Requirement Annexure-A Part II	454	29.8	IEC 0076 : Power transformers	Please clarify the standard requirement	Technical	Kindly refer S.No.24 of Amendment-1.
290	Employer's Requirement Annexure-A Part II	454	29.8	IEC 62933 Electrical Energy Storage (EES) System	Request to provide the specific part no of the standard to refer for.	Technical	All applicable parts of IEC 62933 shall be followed.
291	Employer's Requirement Annexure-A Part II	453	29.8	IEC 0947 : Low-voltage switchgear and control gear IEC 1439 : Low-voltage switchgear and control gear assemblies IEC 2620: (2014) - Secondary cells and batteries containing alkaline or other non-acid electrolytes - Large format secondary lithium cells and batteries for use in industrial applications	We understand there are typographical errors in these codes and request to correct them to IEC 60947, IEC 61439 and IEC 62620 (2014)	Technical	Kindly refer S.No.24 of Amendment-1.
292	Employer's Requirement Annexure-A Part II	455	30.1	Use case requirements 1. Ramp rate: BESS shall demonstrate Ramp rate control of generated power. The ramp rate of +/- 10% per minute shall be considered for wind and solar plant subject to the maximum capacity of the BESS system	In general ramp rate is defined as either MW/min or % nameplate power/min. In this case request to clarify which nameplate capacity should be considered for ramp rate management.	Technical	160 MW
293	Employer's Requirement Annexure-A Part II	359	1	In order to mitigate the fluctuation in grid due to intermittent nature of generation from wind and solar, restrictiction of ramprate shall be done by BESS. The BESS shall be operated so as to maintain a Ramp Rate +/- 10% per minute on the 33kV AC bus bar subject to the maximum capacity of the BESS system	In general ramp rate is defined as either MW/min or % nameplate power/min. In this case request to clarify which nameplate capacity should be considered for ramp rate management.	Technical	160 MW
294	Employer's Requirement Annexure-A Part II	455	30.1	Use case requirements 2. Curtailment Mitigation: The BESS shall be operated in a manner to minimize losss that could be incurred on account of anticipated generation curtailment. In the event of requirement to reduce the export of energy to the grid, BESS shall be used for curtailment avoidance	We understood that BESS shall be used during curtailment mitigation only upto the maximum capacity of the BESS system. Please confirm	Technical	Yes
295	Employer's Requirement Annexure-A Part II	359	2	Curtailment Mitigation: BESS shall be operated in a manner such that potential energy loss due to curtailment can be minimized up to the extent possible. In this use case, the contractor shall rely on weather forecasting tools and coordination with utility/SLDC for operation	We understood that BESS shall be used during curtailment mitigation only upto the maximum capacity of the BESS system. Please confirm	Technical	Yes
296	Employer's Requirement Annexure-A Part II	456	30.1	BESS Response Time: Shall be less than 500 milliseconds	For the application use cases requirements, the response time for the BESS as per well accepted Sandia protocol for duty cycle requirements for BESS is 1 second. We request to accept the same as the BESS response time.	Technical	The terms and conditions of Bidding Document will prevail.
297	Annexure-C	645	III.1(A)	The contractor shall maintain all BESS equipments to ensure Annual Equipment Availability not less than 99%.	Request to Accept annual availability of BESS equipments to be 95%	Technical	The terms and conditions of Bidding Document will prevail.

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298	Annexure-C	645	III.1(D)	D. Liquidated Damages for shortfall in Equipment Availability COM = ((99 - EA) / EA) X C X E	1. The LD should be applicable for the unavailiability of BESS and should not be calculated based on the already given energy output during respective year. 2. Since it is a percentage the base should be 100 rather than the PAF 3. Request to accpet the annual availiability of BESS equipment to be 95% We propose Ldav = ((95-PAF)/100) X PPA Tariff X Battery utilization factor X Rated kWh Capacity of BESS X 365 Typical Battery utilization factor could be between 0.6 to 0.8. Rated MWh capacity of the BESS for the specific year shall be considered after considering the degradation factor	Technical	The terms and conditions of Bidding Document will prevail.
299	Employer's Requirement Annexure-A Part II	358	4.6.2	Ldav = (99-PAF)/PAF X PPA Tariff X Energy output from BESS during respective year	1. The LD should be applicable for the unavailiability of BESS and should not be calculated based on the already given energy output during respective year. 2. Since it is a percentage the base should be 100 rather than the PAF 3. Request to accpet the annual availiability of BESS equipment to be 95% We propose Ldav = ((95-PAF)/100) X PPA Tariff X Battery utilization factor X Rated kWh Capacity of BESS X 365 Typical Battery utilization factor could be between 0.6 to 0.8. Rated MWh capacity of the BESS for the specific year shall be considered after considering the degradation factor	Technical	The terms and conditions of Bidding Document will prevail.
300	Employer's Requirement Annexure-A Part II	357	4.6.1	LD for shortfall in efficiency of BESS Gloss = MWHC X 1000 X 365 X BUF (1/effmeasured - 1/effdeclared) X 100 kWH MWHC is the MWHC pf the BESS System. It shall be 20MWH for project BUF is the battery utilization factor and is taken as 1 Ldeffloss = Gloss X Applicable tariff as per PPA	As the Loss in BESS is due to auxiliary and charge/discharge loss in BESS, the given formula does not justify this loss calculation. We propose the LD for shortfall in efficiency of BESS as Ldeffloss = Gloss X Applicable tariff as per PPA Gloss = Gactualloss - Gdesignloss (KWH) Gdesignloss = MWHC X 1000 X 365 X BUF X (1/effdeclared - 1) (KWH) Gactualloss = Gin-Gout (KWH) MWHC is the rated MWH capacity after considering the degradation effdeclared is the declared year wise BESS AC/AC round trip efficiency Gin and Gout are the BESS annual total cumulative incoming and outgoing energy measured at PCC (BESS interconnection poiint)	Technical	The terms and conditions of Bidding Document will prevail.
301	Employer's Requirement Annexure-A Part II	465	30.11.4	The PCS transformer may include tertiary windings to supply BESS auxiliary power requirements. The transformer must be dry type. The PCS shall include provisions for disconnect on both its AC and DC terminals for maintenance work. Conductor separation must be clearly visible. The detailed maintenance procedure shall be addressed in the O&M manual.	We propose to have oil-type transformer instead of dry-type transformers. Pls. accept.	Technical	Please refer S.No.65 above.
302	Employer's Requirement Annexure-A Part II	519	56.2	Primary Loads Snow Load (SnL)	We proceed for design of all structures and foundations to resist dead, live, wind, and seismic loads only.	Technical	Kindly refer S.No.34 of Amendment-1.
303	Employer's Requirement Annexure-A Part II	551	94.5	All structures and foundations shall be designed to resist dead, live, wind, and seismic loads.	-	Technical	Kindly refer S.No.34 of Amendment-1.
304	Employer's Requirement Annexure-A Part II	536	76.7	The trench bed shall have a slope of approx. 1(V):250(H) along and 1(V):50(H) across the length of the trench.	The slope of drain along and across drain are contradicting. Kindly confirm.	Technical	The terms and conditions of Bidding Document will prevail.
305	Employer's Requirement Annexure-A Part II	552	95.5	The trench bed shall have a slope of approx. 1/500 along the run & 1/250 perpendicular to the run.	-	Technical	The terms and conditions of Bidding Document will prevail.
306	Employer's Requirement Annexure-A Part II	512	52.3	* WBM (CBR>100%): compacted 75mm thick, Grade III * WBM (CBR>100%): compacted 100 mm thick, Grade II	We found for the CBR value greater than 100, two different WBM thickness are specified for road. Kindly clarify.	Technical	Kindly refer S.No.34 of Amendment-1.
307	Employer's Requirement Annexure-A Part II	455	30.1	Nameplate Watt-Hour Rating, AC (B), 20MWH at 10MW net AC Output at the beginning of life and not less than 80% of this capacity at any point of time up to End of Battery Life	As there are three different use case requirements, 1. Ramp Rate, 2. Curtailment Mitigation & 3. DSM Penalty Mitigation, Please clarify the priority level for these use cases for design at any point of time.	Technical	BESS priority shall be in the following order: 1. Curtailment Mitigation. 2. DSM Penalty Mitigation. 3. Ramp Rate Control. However, it shall be ensured that the BESS is operated in a manner to ensure continuous utilization subject to 1. Energy and Capacity Ratings (10MW/20Mwh dispatchable) 2. At least 365 cycles in a year and overall 5000 cycles over a period of 10 years.
308	Employer's Requirement Annexure-A Part II	455	30.1	Use case requirements: Curtailment Mitigation: The BESS shall be operated in a manner to minimise losses that could be incurred on account of anticipated generation curtailment. In the event of requirement to reduce the export of energy to the grid, BESS shall be used for curtailment avoidance	Please clarify the anticipated levels and duration of curtailment in the proposed application as it rrelates to the battery sizing design	Technical	Data not available with SECI. However, for the purpose of operation of BESS the following preference order: 1. Curtailment Mitigation. 2. DSM Penalty Mitigation. 3. Ramp Rate Control. However, it shall be ensured that the BESS is operated in a manner to ensure continuous utilization subject to 1. Energy and Capacity Ratings (10MW/20Mwh dispatchable) 2. At least 365 cycles in a year and overall 5000 cycles over a period of 10 years.

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309	Employer's Requirement Annexure-A Part II	357	4.4	No. of Cycles: The contractor shall demonstrate minimum 365 cycles of operation of BESS every year for any or all of the use cases as described below. All possible modes of operation/use cases shall be demonstrated as requirement for provisional Acceptance of the Plant Facilities	Minimum 365 cycles per day operation depends on load profile of BESS and is not in control of the contractor and hence request to provide more clarity on this clause	Technical	The terms and conditions of Bidding Document will prevail.
310	III Evaluation & Qualification criteria	76	3.2 Financial Capabilitie	Qualifying Requirements	Consider MAAT Should be 50% of the Estimated value	Contractual	The terms & conditions of the Bidding Document will prevail.
311	III Evaluation & Qualification criteria	79,80,81	4.2 (a),(b),(c) Specific Experience	Qualifying Requirements	Consider 6 months satisfactory operation	Contractual	The terms & conditions of the Bidding Document will prevail.
312	General			Qualifying Requirements	As most of the Qualified BESS manufacturer(s) / Contractor(s) have done projects in foreign. In foreign most of the grids or customers are private clients only. Therefore performace certificates issused by such clients/customers shall be considered.	Technical	Please refer Point No 139 for the same. The terms & conditions of the Bidding Document will prevail.
313	III Evaluation & Qualification criteria	43	ITB 20.1	7. All Bids must be accompanied by a Bid Security of the INR 10 Crs (Indian Rupees Ten Crores only) or USD 1.5 M (US Dollars One point Five Million only) as specified for the contract in the table below in case of a Bid Security.	We are registered with Udyog Aadhaar as MSE. Kindly Confirm that, you will provide all benefits for MSE registered members as per law including price preference policy	Contractual	The terms & conditions of the Bidding Document will prevail.
314	I Instructions to Bidders	9	4.1 Eligible Bidders	4.1 A Bidder may be a firm that is a private entity, a state-owned enterprise or institution subject to ITB 4.6, or any combination of such entities in the form of a joint venture (JV) under an existing agreement or with the intent to enter into such an agreement supported by a letter of intent.	If we quote with intended JV, is it essential to register JV after winning of Bid. If yes, can it be done under international law.	Contractual	Yes, it is essential to register a JV agreement after the winning of Bid, if participated with the intent to form a JV during the bidding process and it will as per the governing law of India.
315	Employer's Requirement Annexure-A Part II	369	1.4	1.4 Warranty	Warranty/Guarantee period for all equipment's shall be as per the OEM's recommendations.	Technical	The terms and conditions of Bidding Document will prevail.
316	III Evaluation & Qualification criteria	76	3.2 Financial Capabilitie	3.2 Average Annual Turnover	For Each member:- Must meet 10% (Ten Percent) of the requirement.At least one member:- Must meet 50 (Fifty) percent (%) of the requirement.(JV member will select Lead Member irrespective of MAAT)	Contractual	The terms & conditions of the Bidding Document will prevail.
317	III Evaluation & Qualification criteria	77	3.3 Financial Capabilitie	3.3 Financial Resources, The Bidder must demonstrate access to, or availability of, financial resources such as liquid assets & lines of credit, other than any contractual advance payments to meet: (i) the following cash-flow requirement: INR 165 Crores (Indian Rupees One hundred & sixty- Five Crores) or USD 25 M (US Dollars Twenty-Five Million only)	Confirm that, Sanction of limit is sufficient. It is not necessary to have open limit as on bidding date.	Finance	Kindly refer point No 83 for the same.
318	III Evaluation & Qualification criteria	79	4.2 (a) Specific Experience	4.2(a) Specific Experience For Solar:Participation as contractor, joint venture member, management contractor, or subcontractor: (A) Must have experience in development of Grid connected Ground mounted Solar Projects on Turnkey basis including Design, Engineering, Procurement, Construction, Installation, Testing and Commissioning of Solar PV Power Plant and Solar Systems of cumulative Capacity not less than 96 MW (Ninety-Six Mega Watt) (AC) or above in last Five years as on last date of bid submission. However, such Grid connected Ground mounted Solar PV Power Plant and Solar Systems capacity must have been in satisfactory operation for at least 12 (Twelve) months from the date of commissioning.Such cumulative capacity of 96 MW (Ninety-Six Mega Watt) (AC) as mentioned above should have been achieved with the minimum individual Project capacities of 15 MW (Fifteen Mega Watt) (AC) each or above	(A) Must have experience in development of Grid connected Ground mounted Solar Projects on Turnkey basis including Design, Engineering, Procurement, Construction, Installation, Testing and Commissioning of Solar PV Power Plant and Solar Systems of cumulative Capacity not less than 96 MW (Ninety-Six Mega Watt) (AC) or above in last Five years as on last date of bid submission. However, such Grid connected Ground mounted Solar PV Power Plant and Solar Systems capacity must have been in satisfactory operation for at least 12 (Twelve) months from the date of commissioning.Such cumulative capacity of 96 MW (Ninety-Six Mega Watt) (AC) as mentioned above should have been achieved with at least 2 Nos. individual Project capacities of minimum 15 MW (Fifteen Mega Watt) (AC) each or above.Project completion Certificate from owner of the project or respective utility shall be acceptable. The certificate should not be older more than 3 years as on bid submission date.Current JMR should be furnished to prove the plant in operation	Contractual	The terms & conditions of the Bidding Document will prevail.
319	III Evaluation & Qualification criteria	81	4.2 (c) Specific Experience	For BESS, Participation as contractor, joint venture member, management contractor, or subcontractor:(A) Must have experience of having successfully completed Design, Engineering, Procurement, Construction, Installation, Testing and Commissioning of Grid Connected Battery Energy Storage System (BESS) of at least 03 (Three) Grid connected BESS Plants of each having an individual capacity of 05 MWh (Five Mega Watt Hour) or above in last Five years as on last date of bid submission. However, such BESS Plant capacity must have been in satisfactory operation for at least 12 (Twelve) months from the date of commissioning	(A) Must have experience of having successfully completed Design, Engineering, Procurement, Construction, Installation, Testing and Commissioning of Grid Connected Battery Energy Storage System (BESS) plat of cumulative capacity 7MWh (Seven Mega Watt Hour) Out of which at least 01 (One) Grid connected BESS Plant having capacity of 05 MWh (Five Mega Watt Hour) or above in last Five years as on last date of bid submission. However, such BESS Plant capacity must have been in satisfactory operation for at least 6 (Six) months from the date of commissioning	Contractual	The terms & conditions of the Bidding Document will prevail.
320	X Contract Forms	281	PCC 13 Securities	PCC 13. Securities	Please confirm that, Performance security in the form of multiple Bank Guarantee from individual JV partner is acceptable	Finance	No.
321	X Contract Forms	305	Appendix 3 Insurance Requirements	34. Insurance	As per norms & rules,During construction period all insurances shall be borne by bidder, During O&M period all insurances shall be borne by you/Owner as per the IRDA rule	Contractual	The terms & conditions of the Bidding Document will prevail.
322	X Contract Forms	285	PCC 26 Completion time guarantee	Completion Time Guarantee Applicable rate for liquidated damages: 0.5% per Week	We understand that, applicable rate of LD against delay in commissioning will be 0.5% per week of undelivered portion or part thereof	Contractual	Kindly refer GCC subclause 26.2 for more clarity of the Liquidated Damages pursuant to Delayed completion. The terms & conditions of the Bidding Document will prevail.

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323	Employer's Requirement Annexure-A Part II	423	21.1	21.1 Only the makes and models approved under Revised List of Models and Manufacturers (RLMM list) of MNRE as on the date of bid submission should be offered.	An accredited certification body has carried out measurements on a different WTG model (but electrically similar) and the measurements could be transferred to the model going to be bid and applied for RLMM. It is decided that such models can be included in RLMM list conditionally as per an OFFICE MEMORANDUM No. 293/10/2017-Wind of Ministry of New and Renewable Energy/Wind Energy Division dated on 7 August, 2018 signed by Dr. Rahul Rawat	Technical	The terms and conditions of Bidding Document will prevail.
324	Employer's Requirement Annexure-A Part II	442	SHEET-5	Bidders will not be allowed to receive the raw wind data used by NIWE	A wind raw data is normally used for yield assessment to mitigate uncertainties.	Technical	Bidders shall approach NIWE for energy yield assessment. However, the raw wind data used by NIWE for energy yield assessment will not be shared with the Bidders.
325	Employer's Requirement Annexure-A Part II	455	30.1	30.1 Use case requirements 1. Ramp Rate BESS shall demonstrate Ramp Rate control of generated power . The ramp rate pf +/-10% per minute shall be considered for wind and solar plant subject to the maximum capacity of the BESS System	To limit the power ramp rate of the entire 160 MW plant to +- 10% with a 10 MW BESS would sparingly be able to support the overall system. Consider raising the power rating of the BESS to at-least 40 MW whilst retaining the same energy capacity of 20 MWh, effectively a storage of 0.5 hrs.	Technical	The terms and conditions of Bidding Document will prevail.
326	X Contract Forms	300	Terms of Payment Schedule No. 1. Plant and Equipment Supplied from Abroad	TERMS OF PAYMENT	Request to consider the release of payment directly to the sub-contractor & JV partner proportionately against their scope of work respectively.	Contractual	The terms & conditions of the Bidding Document will prevail.
327	III Evaluation & Qualification criteria	81	4.2 (c) Specific Experience	1.1 Economic Evaluation/Financial Evaluation:	Request to include the criteria for BESS part also in bid evaluation. Since as per tender, Bid evaluation based on "EBV, GW and GS". No where the evaluation of BESS part is specified .kindly rectify	Contractual	The terms & conditions of the Bidding Document will prevail.
328	III Evaluation & Qualification criteria	53	ITB 23. Deadline for Submission of Bids	Bid submission Due date	Kindly extend bid submission due date by 6 weeks from the date of uploading of latest corrigendum/amendment/bid clarifications on E-portal.	Contractual	The terms & conditions of the Bidding Document will prevail.
329	Employer's Requirement Annexure-A Part II	352	3.2.1	EMPLOYER'S REQUIREMENT Annexure – A PART II (3.2.1 Machine Availability)	Are these in consideration of Maintenance time or shall be net thereof?	Technical	Please refer to the Formula for calculation of Machine Availability as defined in this Clause
330	III Evaluation & Qualification criteria	79	4.2 (a) Specific Experience	Section III - Evaluation and Qualification Criteria (4.2(a) Specific Experience for Solar)	(a) Please clarify what Solar Project on Turnkey Basis means? (b) Since for large size Solar Projects, Developers mostly free issue the Solar Panels (as Panels are as such a bought-out item for most Solar EPC Companies), it is requested that an experience of turnkey execution of BoS for Solar Plant may also be considered.	Contractual	The terms & conditions of the Bidding Document will prevail.
331	III Evaluation & Qualification criteria	80	4.2 (b) Specific Experience	Section III - Evaluation and Qualification Criteria (4.2(b) Specific Experience For Wind)	Please confirm turnkey in this regard excludes purchasing land, taking hold of permits etc.	Contractual	The terms & conditions of the Bidding Document will prevail.
332	III Evaluation & Qualification criteria	81	4.2 (c) Specific Experience	Section III - Evaluation and Qualification Criteria (4.2(c) Specific Experience For BESS)	we have successfully completed Design, Engineering, Procurement, Construction, Installation, Testing and Commissioning of Grid Connected BESS of at least three Grid connected BESS Plants of each having an individual capacity of 05 MWh or above in last Five years as on last date of bid submission. However, these Projects have been executed by different GE Entities. Please confirm Bidders are allowed to use reference cases from companies that have a common parent company with the bidder to satisfy the QR Requirement	Contractual	Please refer Point No 139 for the same. The terms & conditions of the Bidding Document will prevail.
333	III Evaluation & Qualification criteria	81	Note to the Specific Experience	Section III - Evaluation and Qualification Note: The Performance Certificate/Joint meter reading (JMR) reports shall be issued from any state/ central owned agencies or state power departments or authorized representative of Power off taker (Discom/Private Power Purchaser).	(a) Please clarify does this apply only for BESS or also Wind and Solar (b) Request to please consider Performance Certificates issued by Customers for BESS References as these are all Projects outside India and JMRs, Discoms are not applicable/ relevant	Contractual	Please refer Point No 139 for the same. The terms & conditions of the Bidding Document will prevail.
334	III Evaluation & Qualification criteria	81	Note to the Specific Experience	Section III - Evaluation and Qualification	As allowed for BESS component of the hybrid Project, please allow WTG supplier to participate as a subcontractor to the bidder subject to such WTG Supplier satisfying the Qualification Criteria	Contractual	The terms & conditions of the Bidding Document will prevail.
335	III Evaluation & Qualification criteria	67	B.i	Section III – Evaluation and Qualification Criteria The Bidders shall get the Wind Energy Generation in kWh for 10 years certified by NIWE prior to submission of bid.	Please confirm that NIWE will handle requests for wind generation validation with priority so that bidders can provide NIWE validated wind generation in line with tender requirement and on time for bid submission on October 1, 2018	Contractual	SECI has sent written communication to facilitate such data validation from their end.
336	Employer's Requirement Annexure-A Part II	431	23.1.3	EMPLOYER'S REQUIREMENT Annexure – A PART III (23.1.3- The Offered WTG model should be listed in the Revised List of Models and Manufacturers (RLMM list) of MNRE as on the date of bid submission should be offered. Any WTG model not listed in RLMM as on the date of last date of bid submission shall not be considered for evaluation.)	In order to ensure only quality systems are installed, and in order to bring-in advantage of latest Product Development/Models, we request that the type-certified wind turbine models listed in Revised List of Models and Manufactures (RLMM) issued by MNRE as updated until the Scheduled Commissioning Date of the projects will be allowed for deployment under the Tender. This would also be in the spirit of using most technologically advanced technology for this innovative project.	Technical	The terms and conditions of Bidding Document will prevail.

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337	Employer's Requirement Annexure-A Part II	432	23.2.1	EMPLOYER'S REQUIREMENT Annexure – A PART III (23.2.1 -Tubular tower or Hybrid (Tubular plus Lattice) Tower giving a minimum hub height of 100 mts and above…)	Please consider minimum hub height of 90 mts.	Technical	The terms and conditions of Bidding Document will prevail.
338	I Instructions to Bidders	9	4.1 Eligible Bidders	Section I – Instructions to Bidders (ITB) 4. Eligible Bidders	Please confirm that a Joint Venture Structure as well as a Bidding Consortium with one of the Companies as Lead member are allowed to participate in the tender subject to the members of Consortium jointly satisfying the QR. In case of success in the bid the Lead Member shall be liable to SECI for execution of the entire Contract and place sub-contract on the other Consortium Members	Contractual	Consortiums are not allowed under this Bidding Process. The terms & conditions of the Bidding Document will prevail.
339	Section III - Evaluation and Qualification Criteria	72	1.1(B)	Section III – Evaluation and Qualification Criteria Bidders have to provide a Guaranteed Solar Energy Generation of 2,241,135,154 KWh @ Solar CUF(Capacity Utilization Factor) 22% for 10 years.	a) Please confirm Bidder can quote any DC Capacity i.e. DC Capacity of Solar Plant is not restricted b) As per Industry Practice, EPC Contractor guarantees the PR and not generation. It is requested that the clause may please be reviewed, or corrections allowed for irradiation, temperature and grid outages which are factors beyond the control of the Contractor c) Request to please clarify if shortfall in generation in one year can be compensated by higher than guaranteed generation in another year as the guaranteed generation has been asked for a cumulative period of 10 years. d) Please consider incentives for achieving higher than guaranteed generation	Technical	a) Kindly refer S.No.14 of Amendment-1. b) Kindly refer S.No.10 of Amendment-1. c) Kindly refer S.No.12 of Amendment-1. d) The terms and conditions of the bidding document prevail.
340	VIII General conditions of contract	188	10.2, 10.3	Section VIII – General Conditions of Contract 9.3 The Contractor shall acquire and pay for all permits, approvals and/or licenses from all local, state or national government authorities or public service undertakings in the country where the Site is located which such authorities or undertakings require the Contractor to obtain in its name and which are necessary for the performance of the Contract… 10.2 The Employer shall be responsible for acquiring and providing legal and physical possession of the Site and access thereto, and for providing possession of and access to all other areas reasonably required for the proper execution of the Contract, including all requisite rights of way… 10.3 The Employer shall acquire and pay for all permits, approvals and/or licenses from all local, state or national government authorities or public service undertakings in the country where the Site is located which (a) such authorities or undertakings require the Employer to obtain in the Employer's name…	a) Please confirm any land related approvals/ permits/licenses including all RoW approvals will be in SECI's scope. b) Please confirm all the approvals/ permits/licenses in SECI's name will be in SECI's scope and in Bidder/ Contractor's name will be in Contractor's scope. c) We request if a detailed responsibility matrix of approval/ permits may be provided for better clarity.	Contractual	Please refer GCC clause 10.2 & 10.3 for the same. The terms & conditions of the Bidding Document will prevail.
341	-	-	-	Contract Structure	Please clarify if SECI shall place a single order for the complete scope including supply, services, O&M or separate orders.	Contractual	It will be a single contract comprising Supply, Services & O&M. The format of such Contract is also attached in the Bidding Document.
342	X Contract Forms	300	Terms of Payment Schedule No. 1. Plant and Equipment Supplied from Abroad	Section X – Contract Forms, Appendix 1. Terms and Procedures of Payment	a) As per the payment terms in tender document, there is 20% retention of payment for supply of equipment (both local and imported) with 10% paid on COD and last 10% on completion of first year of O&M. We request SECI to please review and consider total 10% retention, 5% paid on COD and 5% on final acceptance of Plant b) We request 100% taxes to be paid on delivery of equipment and only %age of base cost may be the retention amount c) Please clarify how is the Contractor's payment protected in case of delay in COD due to reasons not attributable to the Contractor for e.g. delay in 220 kV Substation readiness.	Contractual	The terms & conditions of the Bidding Document will prevail.
343	General			BESS	What is the Power factor to be considered for BESS sizing?	Technical	Unity Power factor may be considered for BESS Sizing.
345	Employer's Requirement Annexure-A Part II	459	30.6.1	EMPLOYER'S REQUIREMENT Annexure – A PART III 30.6.1 Battery End of life shall be not less than 10 years from the date of Commissioning.	Please clarify if Augmentation plan for 10 years is to be provided	Technical	The Contractor shall provide augmentation plan at the time of detailed engineering
346	Section I – Instructions to Bidders (ITB)	20	13.3	Section I – Instructions to Bidders (ITB) 13.3 Except as provided under ITB 13.4 below, Bidders wishing to offer technical alternatives to the Employer's requirements as described in the bidding document must also provide: (i) a price at which they are prepared to offer a Plant meeting the Employer's requirements; and (ii) all information necessary for a complete evaluation of the alternatives by the Employer, including drawings, design calculations, technical specifications, breakdown of prices, and proposed installation methodology and other relevant details. Only the technical alternatives, if any, of the Bidder with the Most Advantageous Bid conforming to the basic technical requirements shall be considered by the Employer.	As long as the dispatchability requirement are met, will a BESS with slight different ratings considered an alternative offer?	Technical	No
347	General			BESS Sizing and Augmentation	what is the preferred scenario: 80% EOL or Augmentation to keep 20MWh for 10 years?	Technical	The terms and conditions of Bidding Document will prevail.
348	General			BESS Chemistry	Is the tender open to all kind of chemistries? Or only Lithium Ion technology?	Technical	The tender is open to all chemistries.
349	Employer's Requirement Annexure-A Part II	457	30.3.1	EMPLOYER'S REQUIREMENT Annexure – A PART III 30.3.1 The Contractor shall ensure BESS compatibility with more than one battery unit makes/models to enable replenishment, if and when required over the Project Life.	We request SECI to elaborate on this requirement. What is the exact flexibility SECI is looking for?	Technical	It is required that the BESS does not depend on a single supplier for battery units in case augmentation over the project life (up to the Battery End of Life or even subsequently) is necessary. Therefore, the BESS should be compatible with more than one makes/models so that supply is not a constraint, especially in light of rapidly changing technology
350	Employer's Requirement Annexure-A Part II	458	30.4.1	EMPLOYER'S REQUIREMENT Annexure – A PART III 30.4.1 The container or containers shall be designed to be drop-shipped onto a properly prepared pad or foundation	Please confirm if in this transportability requirement, batteries are included or not?	Technical	The BESS may be housed in a building. Kindly refer S.No.34 of Amendment-1.

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351	Employer's Requirement Annexure-A Part II	459	30.6.2	EMPLOYER'S REQUIREMENT Annexure – A PART III 30.6.2 Disposal Plan – The Contractor shall provide the disposal plan of the battery which may be required after end of the battery life.	Please confirm that Bidder has to ONLY provide the Disposal Plan and the Disposal of Batteries will NOT be the responsibility of the Bidder.	Technical	The Bidder is responsible for disposal of the battery in accordance with the proposal and conforming to the extant regulations applicable.
352	Employer's Requirement Annexure-A Part II	359	1	EMPLOYER'S REQUIREMENT Annexure – A PART II – BESS Use Cases The BESS shall be operated so as to maintain a Ramp Rate +/-10% per minute on the 33 kV AC bus bar subject to the maximum capacity of the BESS System. In this use case, the Contractor shall rely on weather forecasting mechanism as well as a planned/programmed Energy Management System to operate the BESS so as to achieve the desired ramp rates.	The accuracy of the weather forecasting system and Energy Management system will also impact the BESS use case. Any limits of performance that are set on these? Please provide the following data: 1. Total Reactive Power compensation required at grid connection point 2. Load curves of past one year at the interconnecting grid substation	Technical	Forecasting and Scheduling is in the scope of the Contractor to meet the APERC regulations and to avoid DSM Penalties. Contractor has to manage both Forecasting and BESS to avoid penalties. The relevant data shall be collected by the Contractor.
353	Employer's Requirement Annexure-A Part II	359	2	EMPLOYER'S REQUIREMENT Annexure – A PART II – BESS Use Cases BESS shall be operated in a manner such that potential energy loss due to curtailment can be minimised up to the extent possible	Please elaborate what optimization the BESS should provide on curtailment? We request SECI to suggest any Curtailment scheme to follow?	Technical	For curtailment avoidance, the BESS shall be operated in a manner to mitigate the losses that the project shall incur in case of grid outages. This shall entail BESS operation in co-ordination with communication from the grid operator in this regard as well as Forecast schedule. The detailed operation mechanism shall be determined in consultation with the Owner. It is understood that the operation of BESS shall not avoid 100 % curtailment losses on account of BESS rating. However, BESS availability in the event of demand for such application shall be assessed.
354	Employer's Requirement Annexure-A Part II	359	3	EMPLOYER'S REQUIREMENT Annexure – A PART II – BESS Use Cases "APERC Forecasting, Scheduling and Deviation settlement of solar and wind generation Regulation, 2017". In the event of deviation from scheduled generation more than the allowed limit under the Regulation, the BESS can be used to reduce the gap to avoid the penalty for such deviations beyond allowed limit	This seems like a ramp firming usage case. What is going to be the main usage case among the three use cases mentioned and how do we need to manage partition of power? Based on the arrangement/partition of these three use cases, it may result to have a different BESS rating, if the bidder will get a different result, will such solution be considered an alternative solution? OR service has to be tailored on the 10MW /20MWh rating?	Technical	BESS priority shall be in the following order: 1. Curtailment Mitigation. 2. DSM Penalty Mitigation. 3. Ramp Rate Control. However, it shall be ensured that the BESS is operated in a manner to ensure continuous utilization subject to 1. Energy and Capacity Ratings (10MW/20Mwh dispatchable) 2. Atleast 365 cycles in a year and overall 5000 cycles over a period of 10 years. BESS shall be sized at 10 MW/20 MWh rating as per the specifications defined in the tender document.
355	Employer's Requirement Annexure-A Part II	359		EMPLOYER'S REQUIREMENT Annexure – A PART II – BESS Use Cases	As discussed in the pre-bid meeting, the life of the batteries will depend on how the BESS is used for the different use cases mentioned in the tender document. Please confirm that the Bidder can limit the BESS use for max 1 cycle/ day and also provide the order of priority of the use cases to be considered	Technical	BESS priority shall be in the following order: 1. Curtailment Mitigation. 2. DSM Penalty Mitigation. 3. Ramp Rate Control. However, it shall be ensured that the BESS is operated in a manner to ensure continuous utilization subject to 1. Energy and Capacity Ratings (10MW/20Mwh dispatchable) 2. Atleast 365 cycles in a year and overall 5000 cycles over a period of 10 years.
356	Employer's Requirement Annexure-A Part II	372	2.2.3	EMPLOYER'S REQUIREMENT Annexure – A PART III 2.2.3 Every SMU input shall be provided with fuses on both positive and negative side. The rating of the fuses shall be selected such that it protects the modules from reverse current overload. The fuses shall be 'gPV' type conforming to IEC 60269-6.	Since proposed Inverters are negative grounded type, Please consider allowing fuse at Positive side with in SMU.	Technical	Kindly refer S.No.2 above.
357	Employer's Requirement Annexure-A Part II	373	3.3	EMPLOYER'S REQUIREMENT Annexure – A PART III 3.3 DC cables shall be single core, armoured, Flame Retardant Low smoke (FRLS), PVC outer sheath conforming to IS 7098-I. DC cable with positive polarity should have marking of red line on black outer sheath.	Please consider allowing non-FRLS cables	Technical	The terms and conditions of Bidding Document will prevail.
358	Employer's Requirement Annexure-A Part II	375	4.1	EMPLOYER'S REQUIREMENT Annexure – A PART III 4. PCU – Standards and Codes IEC 61683 Ed.1	Please consider the latest standard reference EN 50530	Technical	The terms and conditions of Bidding Document will prevail.
359	Employer's Requirement Annexure-A Part II	386	6.3	EMPLOYER'S REQUIREMENT Annexure – A PART III 6.3 Switchgear Panel	Please confirm that outdoor type Switchgear is acceptable	Technical	Yes. Kindly refer S.No.18 of Amendment-1.
360	Employer's Requirement Annexure-A Part II	525	59.1	59.1 The module mounting structure design shall generally follow the existing land profile. The top of the table shall be in one plane.	We understand MMS will follow the existing land profile/contour.	Technical	The terms and conditions of Bidding Document will prevail.
361	Employer's Requirement Annexure-A Part II	525	59.5	59.5 Minimum grade of steel for sections conforming to IS: 811 & IS: 4923 shall be E350 conforming to IS: 2062 and YSt 310 conforming to IS: 1608 respectively.	We understands that maximum grade of steel that can be used is 550 Mpa (POSMAC) and minimum grade of steel is 350 Mpa .	Technical	The terms and conditions of Bidding Document will prevail.
362	Employer's Requirement Annexure-A Part II	525	59.7	59.7 Stub/ column – 3.15mm, Rafter – 2.5mm & Purlin & other members – 2.0mm	We propose column to be 2 or 2.5mm thick, rafter to be minimum 1.6mm thick and purlin to be 1mm thick in case of hat sections , bracings to be minimum 1.2 mm thick since , the wind speed in the zone as per IS 875 Part-3 , 2015 is 33 m/s .	Technical	The terms and conditions of Bidding Document will prevail.
363	Employer's Requirement Annexure-A Part II	526	59.11	59.11 The purlins shall be provided with following min. 10mm dia. GI sag/ tie rods: • 1 no. tie rod in middle of each span • 1 no. diagonal tie rod at each corner in end spans	We understand tie rods/ sag rods is required for C or Z purlins, but this is not required in case of hat purlins since hat purlin is the most stable form of purlin.	Technical	The terms and conditions of Bidding Document will prevail.
364	Employer's Requirement Annexure-A Part II	526	59.13	59.13 The vertical diagonal bracing shall be provided in alternate spans of each unit (table) of MMS.	We propose vertical diagonal bracing shall be as per provided based on the design since it is required to control overall deflection of the structure within permissible limits and it also depends upon table configuration which will be finalized during detailed design.	Technical	The terms and conditions of Bidding Document will prevail.
365	Employer's Requirement Annexure-A Part II	526	59.16	59.16 The MMS structure shall be hot dip galvanized with minimum GSM 610 kg/ sqm and/or minimum coating thickness of 80 microns for protection against corrosion. Galvanization shall conform to IS-2629, 4759 & 4736 as applicable.	We propose MMS column, rafter, bracing and cleats to be POSMAC and Purlin to be Galvalume which is majorly used in solar industry.	Technical	The terms and conditions of Bidding Document will prevail.

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Clarifications to Queries raised during Pre-Bid Meeting on 31.08.2018

366	Employer's Requirement Annexure-A Part II	527	59.23	59.23 Fasteners and washers to be used for erection of mounting structures and those for fixing Module over MMS shall be of stainless steel grade SS 304 & SS 316 with property class A2-50 and A2-70 respectively conforming to relevant ISO standard and must sustain the adverse climatic conditions to ensure the life of the structure for 25 years.	We propose modules to be fastened with SS 304 fasteners and balance structure to be fastened with HDG 8.8 fasteners.	Technical	The terms and conditions of Bidding Document will prevail.
367	Employer's Requirement Annexure-A Part II	527	59.24	59.24 Min. diameter of bolt for MMS connections shall be 10mm except for column-rafter connection where it shall not be less than 12mm (not less than 16mm in case of single bolt connection)	We propose minimum dia. of bolts to be 8mm or as per design since the wind speed at project site is 33 m/s.	Technical	The terms and conditions of Bidding Document will prevail.
368	Employer's Requirement Annexure-A Part II	527	59.27	59.27 In case the contractor proposes to extend the column leg to embed it in the pile as an alternate fixing arrangement, the column member shall be extended for full depth of the pile (100mm cover at tip of the pile) with an end plate of min. 4mm thickness to be fixed at the bottom of column leg. (However, for plants in coastal area or in case of marshy soil the column post shall be supported only with base secured to foundation through base plate and anchor bolt assembly and no embedment of column leg in foundation is permitted)	We propose extension leg in case of undulated area shall be one section smaller to designed column section with the same thickness as per the above designed column section.	Technical	The terms and conditions of Bidding Document will prevail.
369	Employer's Requirement Annexure-A Part II	528	59.32	59.32 The length of one unit (Table) of MMS shall not generally be more than 20m.	We propose for a table configuration of 2Px30, length of minimum 31m shall be permitted with overlapping of Hat purlin sections.	Technical	The terms and conditions of Bidding Document will prevail.
370	Employer's Requirement Annexure-A Part II	520	56.8.2	56.8.2 Following load combinations shall be considered in design: (v) DL+LL ; (vi) DL+LL ± WLx (vii) DL +LL± WLz ; (viii) DL+LL ± ELx (ix) DL+LL ± ELz; (x) DL+SnL ± WLx (xi) DL +SnL± WLz; (xii) DL+SnL ± ELx (xiii) DL+SnL ± Elz	We propose load combination with snow and earthquake shall not be considered, Since weather data reflects that snow has never occurred in Ananthpur and either earthquake or wind shall be considered for design of structures as per IS codes. Since MMS is a light weight structure only wind loading is recommended.	Technical	Kindly refer S.No.34 of Amendment-1.
371	Employer's Requirement Annexure-A Part II	521	58.1.1	58.1.1 In case the contractor proposes to provide concrete pile; the type, dia. and length of pile shall be as per recommendations of Geotechnical investigation report corresponding to prevalent soil characteristics at site. However, the min. dia. and depth of the pile shall be 300mm and 1800mm respectively except when very hard strata/ rock (N>100) is encountered at a higher level, the pile shall be extended in to the hard strata minimum 1.0 times the diameter of the pile with total depth of the pile not less than 1200mm below cut-off level.	We propose pile depth to be as per geotechnical report only.	Technical	The terms and conditions of Bidding Document will prevail.
372	Employer's Requirement Annexure-A Part II	518	56.2	56.2 Primary Loads (xx) Dead Load (DL) (xxi) Live Load (LL) (xxii) Snow Load (SnL) (xxiii) Wind Load (WL) – Both along X & Z horizontal direction (xxiv) Seismic Load (EL) – Both along X & Z horizontal direction	We propose snow load and earthquake load shall not be considered since wind loading is the worst load case for light weight and close to ground Module mounting structures.	Technical	Kindly refer S.No.34 of Amendment-1.
373	Employer's Requirement Annexure-A Part II	519	56.3	56.3 Basic wind speed (Vb) at project site shall be taken as per IS 875 (part-3) unless otherwise specified elsewhere.	We understand that as per IS 875 part 3 : 2015 , 33 m/s wind speed shall be considered for the project site.	Technical	The terms and conditions of Bidding Document will prevail.
374	Employer's Requirement Annexure-A Part II	519	56.4	56.4 To calculate the design wind speed (Vz), the factors K1 (probability factor or risk coefficient), K2 (terrain roughness and height factor) and K3 (topography factor) shall be considered as per IS 875 (Part-3) (However, minimum values for K1, K2 and K3 shall be 1.0, 1.05 and 1.0 respectively)	We propose wind coefficient K1 = 0.92 , K2= 1 which is as per IS code.	Technical	The terms and conditions of Bidding Document will prevail.
375	Employer's Requirement Annexure-A Part II	519	56.8	56.8 The Snow Load shall be considered as per IS:875 (Part-4).	We recommend snow load shall not be considered since the project site has never experienced snow.	Technical	Kindly refer S.No.34 of Amendment-1.
376	Employer's Requirement Annexure-A Part II	516	54.2.5	54.2.5 The GI chain link mesh fabric (40x40 mm with min. wire gauge 3.15mm, both ends twisted) and fencing shall conform to IS: 2721. Poly coat GI chain link mesh (50x50mm) shall conform to ASTM 668 and fencing shall conform to ASTM 567.	We propose 75x75mm chain link mesh in place of 50x50mm.	Technical	The terms and conditions of Bidding Document will prevail.
377	Employer's Requirement Annexure-A Part II	516	54.2.1	54.2.1 The fencing shall be of Chain link (GI or poly coat GI as applicable) mesh fabric with internal, corner and stay posts of RCC (min 200mm x 200mm size, M30 grade) or GI angle (min. ISA 75x75x6 mm), as applicable, along with 150mm height 230 thick brick/ 300 thick RR masonry toe wall, with 100mm thick PCC (1:3:6) foundation.	We propose GI angle size to be 65x65x6 mm.	Technical	The terms and conditions of Bidding Document will prevail.
378	Employer's Requirement Annexure-A Part II	514	53.7	53.7 Suitable size plant peripheral drain as per design (min. bottom width x depth: 500mm x 500mm) along inside of plant boundary wall/ fence shall be provided for smooth channelization of outside storm water and to avoid flooding in the plant. The size of all internal and road side drains shall not be less than 450mm (bottom width) x 500mm (depth).	We propose drain size and design of drain sections shall be as per the hydrology study	Technical	The terms and conditions of Bidding Document will prevail.
379	Employer's Requirement Annexure-A Part II	513	52.3	Peripheral Road: (xiv) Topping: surface dressing, compacted 75 mm thick, murrum blended with WBM Grade -III (xv) WBM (CBR>100%): compacted 75 mm thick, Grade III (xvi) WBM (CBR>100%): compacted 75 mm thick, Grade II (xvii) Granular sub-base (CBR>15%): compacted 150 mm thick in two layers of 75mm thickness each, (xviii) Compacted subgrade: top 300mm thick, compacted up to 98% of standard proctor density (xix) Shoulders: compacted 150mm thick, murrum blended with WBM Grade-III	We propose peripheral road to be 150mm thick, 2.5m wide murrom road without shoulder as per the site conditions.	Technical	The terms and conditions of Bidding Document will prevail.

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Clarifications to Queries raised during Pre-Bid Meeting on 31.08.2018

380	III Evaluation & Qualification criteria	81	4.2 (c) Specific Experience	Qualifying Requirements	Request SECI to clarify that the individual capacity required is 3 projects of 5MW instead of 5MWh. Request SECI to clarify that for BESS projects the experience certificate can be a project completion certificate issued by the developer or utility agency in the respective country. The joint meter reading as sought by SECI in the RFP will not be applicable for BESS projects.	Contractual	The terms & conditions of the Bidding Document will prevail.
381	Employer's Requirement Annexure-A Part II	355	4.1	Technical Requirements	Section 4.1 Functional Guarantee tests for BESS SECI to clarify that BESS energy capacity for verification at the end of 10 years (end of life) along in line with the hybrid project.	Technical	80% of the initial capacity i.e. 16MWh dispatchable.
382	Employer's Requirement Annexure-A Part II	357	4.4	Technical Requirements	Section 4.4 No of cycles and use cases SECI to clarify that the BESS will operate only for a single cycle every day irrespective of the use case. If there is a priority of use cases, the same should be clarified.	Technical	BESS priority shall be in the following order: 1. Curtailment Mitigation. 2. DSM Penalty Mitigation. 3. Ramp Rate Control. However, it shall be ensured that the BESS is operated in a manner to ensure continuous utilization subject to 1. Energy and Capacity Ratings (10MW/20Mwh dispatchable) 2. At least 365 cycles in a year and overall 5000 cycles over a period of 10 years.
383	Employer's Requirement Annexure-A Part II	456	30.1	Technical Requirements	Section 30 BESS response time SECI to clarify that the BESS response time is 1 sec as intimated in the pre-bid meeting.	Technical	The terms and conditions of Bidding Document will prevail.
384	I Instructions to Bidders	22	20.8	The Bid Security or the Bid-Securing Declaration of a JV shall be in the name of the JV that submits the Bid. If the JV has not been legally constituted into a legally enforceable JV at the time of bidding, the Bid Security or the Bid Securing Declaration shall be in the names of all future members as named in the letter of intent referred to in ITB 4.1 and ITB 11.2.	In the case of JV or Letter of Intent to sign JV, can JV members submit the bank guarantees separately in the mutually agreed proportion, so that the cumulative Bid Security is Rs. 10 crore. Please clarify.	Contractual	Please refer clause 20.8 of Section I – Instructions to Bidders for the same
385	III Evaluation & Qualification criteria	81	4.2 (c) Specific Experience	A) Must have experience of having successfully completed Design, Engineering, Procurement, …… Battery Energy Storage System (BESS) of at least 03 (Three) Grid connected BESS Plants of each having an individual capacity of 05 MWh or above in last Five years as on last date of bid submission. However, such BESS Plant capacity must have been in satisfactory operation for at least 12 (Twelve) months from the date of commissioning	There are very few suppliers of BESS system who have executed the BESS plants of 5MWh. In order to have more participation of BESS suppliers and get better offers, the criteria should be relaxed to upto1MWh.	Contractual	The terms & conditions of the Bidding Document will prevail.
386	VIII General conditions of contract	187	10.2 Employer's Responsibility	The Employer shall be responsible for acquiring and providing legal and physical possession of the Site and access thereto, and for providing possession of and access to all other areas reasonably required for the proper execution of the Contract, including all requisite rights of way, as specified in the Appendix to the Contract Agreement titled Scope of Works and Supply by the Employer. The Employer shall give full possession of and accord all rights of access There to on or before the date(s) specified in that Appendix.	We understand that SECI will provide the land required for the Storage facilities during the project execution and internal/external roads, including ROW, if any. Please confirm.	Contractual	The land allocated for the Project is all inclusive for all the facilities to be executed including Solar, Wind & BESS.
387	VIII General conditions of contract	190	13.3.3	The Defect Liability Period shall be five hundred and forty (540) days from the date of Completion of the Facilities (or any part thereof) or one year from the date of Operational Acceptance of the Facilities (or any part thereof), whichever first occurs, unless specified otherwise in the PCC pursuant to GCC Sub-Clause 27.10.	Nowhere in any PSU/ Corporation tender such DLP has been asked you are requested to kindly amend the clause as follows; The Defect Liability Period shall be 365 days from the date of commercial operation of the plant as certified by state utility.	Contractual	This being a Multilateral Funding Project by World Bank & it's a standard DLP clause as per the Standard Procurement Document (SPD) of WB. Accordingly, The terms & conditions of the Bidding Document will prevail.
388	X Contract Forms	279	PCC 8. Time for Commencement and Completion	The Time for Completion of the whole of the Plant Facilities shall be 18 (Eighteen) Months till commissioning from the Effective Date as described in the Contract Agreement.	We understand that the pooling substation is being developed by ATRANSCO. In the event our plant facility is ready for commissioning and pooling SS is not ready, then Hybrid plant capacity shall be considered deemed commissioned. Kindly add such clause in the RfB.	Contractual	The terms & conditions of the Bidding Document will prevail.
389	X Contract Forms	281	PCC 13 Securities	PCC 13.3.1 The amount of Performance Security, as a percentage of the Contract Price for the Plant Facility, shall be in following stages: • First Stage: The value of the Contract Performance Security shall be 10% (Ten) of the Contract Value {i.e. total sum of the Supply (Abroad & Employer's country), Service (Freight, Design, Installation & Civil Works) & absolute value of O&M contract} and will remain valid for 90 (Ninety) days beyond the Operational Acceptance of the Plant Facilities. Second Stage: The value of the Contract Performance Security shall be 5% (Five) of the Contract Value {i.e. total sum of the Supply (Abroad & Employer's country), Service (Freight, Design, Installation & Civil Works) & absolute value of O&M contract} starting from the Operational Acceptance of the Plant Facilities, valid till the end of 10th year of the O&M period. Contractor needs to furnish the revised Contract Performance Security in the Second Stage amounting to 5% of the total Contract Value as mentioned above within the validity period of the Contract Performance Security submitted at First Stage.	Under the clause the desired bank guarantee towards performance security is too high and unprecedented. We request to kindly amend the clause as follows in line with general industry practice. First Stage: The value of the Contract Performance Security shall be 10% of the Contract Value {i.e. total sum of the Supply (Abroad & Employer's country), Service (Freight, Design, Installation & Civil Works) and will remain valid for 90 (Ninety) days beyond the O&M start date. Second Stage: The value of the Contract Performance Security shall be 10% of the annual Contract Value of O&M contract} starting from the O&M start date, valid for one year. Every year either new BG shall be submitted or same BG may be extended with amended value for 10% of the annual O&M price for that year.	Contractual	The terms & conditions of the Bidding Document will prevail.
390	X Contract Forms	285	PCC 26 Completion time guarantee	Applicable rate for liquidated damages: 0.5% per Week There shall not be any intermediate LDs for the delays in commissioning of the individual plant (Solar, Wind, BESS & Common Infrastructure). The LD for delay is applicable only if the entire plant facility is not commissioned by the Schedule Date of Completion/Contract Period as mentioned in the bidding document. The above rate applies to the price of the part of the Facilities, as quoted in the Price Schedule, for that part for which the Contractor fails to achieve Completion within the schedule Time for Completion. Maximum deduction for liquidated damages: 5%.	Please note that the LD @0.5% per week of the contract price (i.e. Total Sum of Price Schedule 1+2+3+4+5) is unprecedented and is never asked by any Public Sector Enterprise and is discouraging in the given competitive environment. SECI shouldn't ask the LD amount for the value of work (O&M) which even is not due till commissioning of the plant. It is requested that the liquidated damages shall be limited to 0.5% of the Contract price excluding O&M price of the plant. Please amend the clause accordingly.	Contractual	The terms & conditions of the Bidding Document will prevail.

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Clarifications to Queries raised during Pre-Bid Meeting on 31.08.2018

391	X Contract Forms	297	Article 2. Contract Price and Terms of Payment	The Employer hereby agrees to pay to the Contractor the Contract Price in consideration of the performance by the Contractor of its obligations hereunder. The Contract Price shall be the aggregate of: _____, _____ as specified in Price Schedule No. 5 (Grand Summary), and_____, _____, or such other sums as may be determined in accordance with the terms and conditions of the Contract.	It is requested to have two separate contract for Project execution and O&M part to avoid the complexity. All central PSU's executes three separate contracts (i) Supply of major Equipment (ii) For Erection, Testing & Commissioning of the equipment including land & PE and (iii) For the O&M part of the Project.	Contractual	The terms & conditions of the Bidding Document will prevail.
392	X Contract Forms	297	Article 3. Effective Date	The Effective Date from which the Time for Completion of the Facilities shall be counted is the date when all of the following conditions have been fulfilled: (a) This Contract Agreement has been duly executed for and on behalf of the Employer and the Contractor; (b) The Contractor has submitted to the Employer the Performance Security and the advance payment guarantee;	Since land for the project is being provided by SECI, it is requested that in addition to given conditions (a) & (b) following condition should also be incorporated; (c) Handing over of the possession of the land to contractor by SECI.	Contractual	The terms & conditions of the Bidding Document will prevail.
393	X Contract Forms	300	Terms of Payment Schedule No. 1. Plant and Equipment Supplied from Abroad	Schedule No. 1. Plant and Equipment Supplied from Abroad • Ten percent (10%) of the total or pro rata amount (of Schedule No. 1), upon successful erection, testing and commissioning of materials at site and Operational Acceptance of the plant pursuant to successful functional Guarantee Tests. • Ten percent (10%) of the total or pro rata amount (of Schedule No. 1) within 45 days of receipt of invoice after final acceptance of the Plant facilities or completion of First year of O&M of Plant, whichever is later, pursuant to submission of all requisite documentation including submission of all as-built drawings and documents. Schedule No. 2. Plant and Equipment Supplied from within the Employer's Country • Ten percent (10%) of the total or pro rata amount (of Schedule No. 2), upon successful erection, testing and commissioning of materials at site and Operational Acceptance of the plant pursuant to successful functional Guarantee Tests. • Ten percent (10 %) of the total or pro rata amount (of Schedule No. 2) within forty-five (45) days of receipt of invoice after final acceptance of the Plant facilities or completion of First year of O&M of Plant, whichever is later, pursuant to submission of all requisite documentation including submission of all as-built drawings and documents. Schedule No. 4. Installation and other Services • Five percent (5%) of the total or pro rata value of installation and other services (of Schedule No. 4) within 45 days of Operational Acceptance of the plant pursuant to successful integration with existing internal grid system & functional Guarantee Tests and completion of all the civil works including finishing and debris removal. • Five percent (5%) of the total or pro rata value of installation and services (of Schedule No. 4) within 45 days after receipt of invoice after final acceptance of the Plant facilities or completion of First year of O&M of Plant, whichever is later, pursuant to submission of all requisite documentation including submission of all as-built drawings and documents.	We understand that the payment term defined under Schedule-1,2,3 & 4 will be released on prorata basis for each facility i.e. Wind , Solar & Battery Separately. Please confirm. Also, in order to maintain the cash flow, you are requested to amend the payment terms as follows; Schedule No. 1. Plant and Equipment Supplied from Abroad • Ten percent (10%) of the total or pro rata amount (of Schedule No. 1), upon successful erection, testing and commissioning of materials at site and commissioning certificate issued by state utilities for respective plant facility. • Ten percent (10 %) of the total or pro rata amount (of Schedule No. 1) within 30 days of receipt of invoice after Operational Acceptance of the plant pursuant to successful functional Guarantee Tests, pursuant to submission of all requisite documentation including submission of all as-built drawings and documents. Schedule No. 2. Plant and Equipment Supplied from within the Employer's Country • Ten percent (10%) of the total or pro rata amount (of Schedule No. 2), upon successful erection, testing and commissioning of materials at site and commissioning certificate issued by state utilities for respective plant facility. • Ten percent (10 %) of the total or pro rata amount (of Schedule No. 2) within 30 days of receipt of invoice after Operational Acceptance of the plant pursuant to successful functional Guarantee Tests, pursuant to submission of all requisite documentation including submission of all as-built drawings and documents.	Contractual	The terms & conditions of the Bidding Document will prevail.
394	Employer's Requirement Annexure-A Part I	332	5 & 6	5. Scope of Inspection: 6. Sampling Process:	Every OEM has their own QAP, which we shall submit along with our offer, which shall be followed for inspection part. Kindly accept.	Technical	The terms and conditions of Bidding Document will prevail.
395	Employer's Requirement Annexure-A Part II	349	3.1	Test can be conducted by a mutually agreed and appointed MEASNET accredited Consultant for the Power Curve Verification of the Wind Turbines.	You are requested to kindly amend the clause as follows; "Test can be conducted by a mutually agreed and appointed accredited Consultant for the Power Curve Verification of the Wind Turbines". Filtering criteria for PCT shall be used as per the attached	Technical	The terms and conditions of Bidding Document will prevail.
396	Employer's Requirement Annexure-A Part II	349	3.1	The Power Curve Guarantee Test shall be conducted during first high wind season after completion of stabilization period of 60 days from the commissioning. The duration of the data measurement period shall be minimum 3 months and shall be continued till the time the desired completeness of the datasets as stipulated in the IEC standard is achieved.	As per the IEC procedure no such period of 3 months is defined to carry out the test. As per IEC, test duration shall be till measurement bin fulfilment. It can be achieved within 15 days also subject to substantial bin data is achieved. However, it is requested to amend the duration of the test for one month, in line with the industry practice. There is a possibility that site calibration may require at this site for conducting the test, then it shall be performed as per IEC criteria and 3 month duration of test may not be applicable	Technical	The terms and conditions of Bidding Document will prevail.
397	Employer's Requirement Annexure-A Part II	351	3.1.7	If VPC is greater than or equal to 98% then the Power Curve Guarantee Test is considered to be passed.	Kindly note that power curve test is to be carried out at site conditions, wherein uncertainties are high therefore, VPC shall be 95% minimum. Kindly amend the clause accordingly.	Technical	The terms and conditions of Bidding Document will prevail.
398	Employer's Requirement Annexure-A Part II	352	3.2.1	Contractor shall keep Six-month average minimum Machine Availability (for the wind farm) of not less than (i) 98% during the high wind season i.e. May to October after Stabilization period, and (ii) Minimum average wind farm availability of not less than 96% during low wind period i.e. during the months of November to April. GF is Grid Failure hours, For more clarification this includes the hours of grid failure beyond PSS interconnection point.	You are requested to amend the clause in line with the industry practice as follows; Contractor shall keep Six-month average minimum Machine Availability (for the wind farm) of not less than (i) 96% during the high wind season i.e. May to October after Stabilization period, and (ii) Minimum average wind farm availability of not less than 95% during low wind period i.e. during the months of November to April. Kindly define the interconnection point clearly.	Technical	The terms and conditions of Bidding Document will prevail. Kindly refer S.No.35 of Amendment-1 for clarity on Interconnection point.

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399	Employer's Requirement Annexure-A Part II	353	3.3.1	If the Contractor fails to satisfy the STPT of a WTG within 120 (one hundred and twenty) days from the Commissioning Date of the relevant WTG even after repeated tests, then Owner will have the right to reject the WTG and obtain a refund. Contractor will refund all amounts paid by Owner for that WTG along with interest cost (@13% (thirteen percent) per annum) from the date of payments made for WTG including Advance Payment. Further, Owner will pay to Contractor, an amount equivalent to 50% of the amounts received from Discom or as any other benefit against generation from the rejected WTG(s). Said rejected WTG shall not be considered for Availability calculation.	In such event the payment shall be released for WTGs on prorate basis, where STPT test has been completed successfully.	Technical	The terms and conditions of Bidding Document will prevail.
400	Employer's Requirement Annexure-A Part II	353	3.3.2	LD for Power Curve Warrantee Failure a. Compensation to Owner of an amount equal to the estimated loss for the Project life. This shall be calculated as the NPV of annual loss for 25 years. Annual loss of revenue will be estimated based on the actual electricity sale tariff for the power generated from the Project and estimated annual generation loss due to shortfall in power curve performance. For more clarification the formula to be used for estimated annual revenue loss from the Wind Power Plant is Estimated Annual Revenue Loss due to shortfall in PCW = %Shortfall in PCW * Project Capacity (kW) * Estimated Annual CUF *PPA Tariff. b. If the repeated PCGT is below 93% then Contractor will provide technical plan to improve the Power Curve. Contractor shall hire an internationally reputable third-party agency in consultation with Owner for the purpose of analyzing and reporting the reasons for not achieving the PCW and Contractor shall follow the advice of such agency to improve the Power Curve and such advice to be implemented at the Contractor's cost to ensure that the power curve performance is not less than 98 % of warranted. After that the PCGT shall be conducted again. If still the PCGT fails and is below 93% then the Owner will have the right to reject the WTG and obtain a refund. In case of rejection the Contractor will be required to refund entire amount paid by the Owner to the Contractor with respect to the wind plant including supply and services as per the breakup given in the contract. Contractor will refund all amounts paid by Owner for the wind plant along with interest cost (@13% (thirteen percent) per annum) from the date of payments made for WTG including Advance Payment. Further Owner will pay to Contractor, an amount equivalent to 50% of the amounts received from Discom or as any other benefit against generation from the rejected WTG(s).	As per the clause penalty is too detrimental. You are requested to kindly amend the same as follows in line with industry practice. (a) Compensation to Owner of an amount equal to 0.5% of the Contract value of Wind part (Total of Schedule 2+3+4) for each 1% loss in PCGT guaranteed value. (b) If the repeated PCGT is below 90% then Contractor will provide technical plan to improve the Power Curve. The bidder shall rectify the defects in all WTGs, as the case may be, & do the test again, in the manner that power generation is not less than 95%. In this case, the Contractor will also compensate the owner for the actual revenue loss during the period when generation was lower due to performance of the WTGs.	Technical	The terms and conditions of Bidding Document will prevail.
401	Employer's Requirement Annexure-A Part II	354	3.3.3	LD for Machine Availability Shortfall a. For Machine Availability of complete wind farm below 98% during high wind season: MAF is Machine Availability Factor as calculated under Clause 5.2 b. For Machine Availability of complete wind farm below 96% during low wind season	We request to amend the clause as follows; A & B: for every shortfall of 1% in annual average MA of Wind farm less than guaranteed MA, 2% of annual O&M charges shall be payable. MAF is Machine Availability Factor as calculated under Clause 3.2.1.	Technical	For LD calculation, the terms and conditions of the bidding document prevail. Kindly refer S.No.13 of Amendment-1 for MAF calculation reference clause.
402	X Contract Forms	313	4.4	Limitation of Liability: Subject to the above requirements and provisions, the Contractor's Aggregate liability to pay liquidated damages for failure to attain the functional guarantees shall not exceed ten percent (10%) of the Contract price.	We understand that since the every facility has different functional guarantees, limitation of liability will be limited to 10% of the contract value of respective facility. (i.e. total of Schedule 2+3+4 of respective facility). Please confirm.	Contractual	The terms & conditions of the Bidding Document will prevail.
403	Employer's Requirement Annexure-A Part II	359		1. Ramp Rate Control 2. Curtailment Mitigation 3. DSM Penalty Mitigation	Please provide the relevant CEA regulation for Hybrid Plant to be followed	Technical	The applicable regulations at the time of detailed engineering shall govern.
404	Employer's Requirement Annexure-A Part II	375	4.1	CEA Technical Standards for Connectivity to the Grid Regulations 2007 with 2013 Amendment and further notifications in due course.	As on date only the 2013 amendment stands for wind and solar separately. Further amendments are only in the draft stage and cannot be complied with as there could be several changes and they cannot be captured at this juncture to provide an offer. Further, Hybrid needs separate regulations and these are yet to be discussed. Please amend the clause accordingly	Technical	The applicable regulations at the time of detailed engineering shall govern.
405	Employer's Requirement Annexure-A Part II	379	4.6.1	The PCU shall be able to limit the active power exported to the grid based on the set point provided through PCU front control panel. The PCU shall also be able to automatically the limit the active power after an increase in grid frequency above a pre-set value. The ramp rate shall be adjustable during operation and start-up after fault. The applicability of the requirement shall be as per CEA regulation and compliance.	Please provide the relevant CEA regulation for active power regulation for Solar and success criteria to adhere to the active power regulation for Solar Power Plant and Hybrid Power Plant.	Technical	The applicable regulations at the time of detailed engineering shall govern.
406	Employer's Requirement Annexure-A Part II	379	4.6.3	Voltage Ride Through	Please provide the relevant CEA regulation for Solar and success criteria to adhere to the voltage ride through for Solar Power Plant and Hybrid Power Plant.	Technical	The applicable regulations at the time of detailed engineering shall govern.
407	Employer's Requirement Annexure-A Part II	423	21.4	Design, engineering, manufacture and supply at site of Grid interfacing equipment including transformers, HT lines, panels, kiosks, protection equipment, metering equipment for evacuation of power from the wind power plant to the grid sub-station.	We understand that 33/220kV pooling substation is being developed by APTRANSCO at site and contractor scope is limited to connected 33kV line from project to incoming bay of that pooling substation. Please confirm.	Technical	Kindly refer S.No.35 of Amendment-1.
408	VII Employer's Requirement Technical Specifications	64 of 206	21.12.1	This shall include all required data loggers, sensors etc. capable of recording data for a minimum of 10-minute average intervals to ensure correct and reliable data collection and its computation for analysis, for verification of generation with reference to the actual wind conditions at Hub height. N.B.: The bidder must quote this item separately in the price bid.	We understand that under the clause, SECI is desired price of the wind mast along with the equipment for power curve testing purpose. Please note that there is no provision under the format for Schedule of Rates to quote the price for Mast & power curve testing. SOR format may be revised accordingly.	Contractual	Kindly refer S.No.32 of Amendment-1.

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409	Employer's Requirement Annexure-A Part II	425	21.13.1(6)	Schematic diagram for entire evacuation system and transmission loss calculations.	Kindly inform the location / coordinates of the pooling substation along with SLD, being developed by APTRANSCO, enabling us to work out transmission loss calculations.	Technical	Kindly refer S.No.35 of Amendment-1.
410	Employer's Requirement Annexure-A Part II	425	21.13.1(12)	Site Suitability assessment report: Bidder shall carry out the Site Suitability Assessment …… …… WTG model which are not found suitable for the given micrositing and are having any of the site suitability issue which may impact its design life and performance etc.	We understand that bidder can used his own mast data installed at the site for site suitability analysis. Please confirm.	Technical	3 month SECI 100m mast data is uploaded in SECI website. No other raw wind data is available for sharing. Site suitability report prepared on the basis of the same co-related with long term MERRA2 data shall be acceptable.
411	Employer's Requirement Annexure-A Part IV	575	5.2.5	Installation, testing and commissioning of Grid interfacing equipment including transformers, 33 kV feeders from WTGs up to the Point of Common Coupling, panels, kiosks, protection Equipment, metering equipment for evacuation of power from the wind power plant to the Pooling sub-station.	Please define the interconnection point clearly in the RFB where Wind-Solar has to be connected by contractor.	Technical	Kindly refer S.No.35 of Amendment-1.
412	Employer's Requirement Annexure-A Part IV	575	5.2.6	Installation, testing and commissioning of tri-vector type energy meter(s) for recording data regarding export and import of power to/from grid on real time basis.	We understand that there will be single metering for Hybrid plant in Pooling SS and separate metering will be required for Solar/ wind / BESS part, before pooling SS. Please confirm.	Technical	Kindly refer S.No.35 of Amendment-1.
413	Employer's Requirement Annexure-A Part II	428	22.3.4	Quarterly and Annual performance Reports covering monthly performance details based on the following parameters shall …… (e) Internal Grid Availability during the year	Machine Availability as defined under the clause 3.2.1 of Part-II of Annexure-A, already covers the internal grid availability up to 33kV interconnection point at pooling SS. Therefore, requirement of "Internal grid availability during the year" may be deleted from reporting.	Technical	The terms and conditions of Bidding Document will prevail.
414	Employer's Requirement Annexure-A Part II	432	23.2.1	Tubular tower or Hybrid (Tubular plus Lattice) Tower giving a …… ……. withstand environmental impact for at least 25 years. Tower should be painted with anti-corrosion paint in accordance with EN-ISO 12944 (Part-4).	Kindly add Tubular plus Concrete also in the Hybrid type of Tower. As per industrial practice, Lattice tower portion is being galvanized and not painted. Kindly amend the requirement accordingly.	Technical	The terms and conditions of Bidding Document will prevail.
415	Employer's Requirement Annexure-A Part II	434	23.10.3	The local control system shall be designed for automatic operation with minimum of attendance. Power back-up system for at-least 72 hours operation shall be included. 2. Brake position, Suitable independent earthling system shall be provided for protection of blades, nacelle, and tower against any lightning surge. Effective earth resistance on individual electrodes shall be less than 3 Ohm (three Ohm) and the combined earth resistance shall be less than 2 (two) Ohm.	Purpose of power back up is to save the data in the event of power failure and power back up of 4-5 min are enough to save the data. Therefore, only 30 min Power back up is enough to meet the requirement. Kindly amend the clause accordingly. Display for Brake position is not required, therefore kindly delete the requirement. Blade, Nacelle & tower earthing shall be connected directly to the integrated earthing grid of 33KV HT yard. As a giid industry practice, the effective earth resistance is being maintained as per the requirement of state utility. Kindly accept and amend the clause accordingly.	Technical	The terms and conditions of Bidding Document will prevail.
416	Employer's Requirement Annexure-A Part II	437	23.13.1	Each WTG will be connected to grid through unit transformer of suitable capacity and voltage ratio, internal 33 kV overhead line, common control & metering station(s), if required / common EHV sub-station(s) at wind farm up to grid interconnection point. External overhead line up to the specified sub-station, complete with all associated switch gears and materials shall be provided.	As explained above, we understand that 33/220kV pooling substation is being developed by APTRANSCO at site and contractor scope is limited to connected 33kV line from project to incoming bay of that pooling substation. Therefore, it is requested to delete the requirement of common EHV substation / External overhead line and associated material from contractor's scope	Technical	Kindly refer S.No.35 of Amendment-1.
417	Employer's Requirement Annexure-A Part II	439	24.3	Serial Defect Liability Period shall be as per the GCC clause 27.2. Serial Defect shall mean occurrence of the similar faults in at-least 10% of the WTGs in a given time interval. Under this Serial Defect Liability, the Bidder will be required to rectify or replace all such serial defects in all the WTGs of the Project.	Limit of serial defect for 10% is too stringent, we request to amend the clause as follows; Serial Defect shall mean occurrence of the similar faults in at-least 25% of the WTGs in a given time interval.	Technical	The terms and conditions of Bidding Document will prevail.
418	Employer's Requirement Annexure-A Part II	439	25.1	All major/critical items (towers, rotor blades, nacelle assembly, generators, transformers, and control panels) shall be inspected and tested through third party inspection agency during manufacture and in assembled condition prior to dispatch in accordance with the standard practice/ QAP of the manufacturer and applicable Standards at no cost to Employer. Copies of test certificates for such inspections in triplicate shall be supplied before dispatch of the equipment.	Since WEG is type tested, it is recommended to inspect the equipment by third party inspection agency in assembled condition only. And generator being part of Nacelle Assembly, separate inspection of Generator is not required. Kindly delete the requirement.	Technical	The terms and conditions of Bidding Document will prevail.
419	Employer's Requirement Annexure-A Part II	439	25.3	The bidder shall also furnish a schedule of inspection / testing so that Employer may associate is representative to witness the tests.	If SECI wish to witness the test, it shall be limited to 10% of the ordered quantity of WEGs.	Technical	The Inspection plan shall be submitted by the Contractor during detailed engineering.
420	Employer's Requirement Annexure-A Part II	491	44.2(b)	Data transmission between LCS and SCADA shall be serial interface, 20mA current loop or standard RS-232C. Contractors may specify in the Tender the method of interfacing between LCS and SCADA.	Now a days advance technology of TCP/IP Network Interface available between LCS and SCADA. Kindly amend the clause accordingly.	Technical	Kindly refer S.No.27 of Amendment-1.

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421	Employer's Requirement Annexure-A Part II	500	46.1.2	Load Flow Study The Contractor shall perform the Load flow study of the internal electrical distribution system of the Plant Facility.	We request you to provide us following for carrying out load flow study. 1. Pooling Substation SLD 2. EHV Line configuration details from proposed Pooling Substation of APTRANSCO to Grid Substation of APTRANSCO/CTU 3. Grid Substation Voltage Profile 4. 2 Years data of Line Loadings	Technical	The clause is for internal Load flow study for which data sought is not required.
422	Employer's Requirement Annexure-A Part II	448	SHEET-10	Sample Quarterly Performance Report for Wind Plant	It is requested to delete the requirement of P(99) from the format. We couldn't understand," Weighted average monthly sales price" under the format. Kindly elaborate.	Technical	The sample report is representative and not Final. The final reporting format shall be determined in consultation with the Owner.
423	General			Technical Specification of Battery Energy Storage System	It is requested to kindly intimate NIWE to share hourly / 15 min Time series data of Generation (P50,P75 & P90) for 8760 hrs (for Wind), required for designing the battery at site.	Technical	The BESS size is already defined in the Technical specifications.
424	Employer's Requirement Annexure-A Part II	496	45.3	EMS functionality for the Plant Control:	Please define the criteria for Plant level EMS Like - limits, ramp rates, accuracy, dead band, droop, control ranges etc. for various operation modes of plant.	Technical	The detailed criteria shall be determined during detailed engineering.
425	Employer's Requirement Annexure-A Part II	499	46	Power System Study:	Please share the SLD of the pooling substation, enabling us to carry out the study desired under the clause.	Technical	Kindly refer S.No.35 of Amendment-1.
426	Employer's Requirement Annexure-A Part II	503	47.2	This excludes design, supply and installation of Galvanised 220 kV and 132 kV Transmission Line towers, Tower extensions & accessories and 11 kV, 22 kV, 22kV & 33 kV transmission poles & accessories which shall be designed following latest guidelines of respective SEB (State electricity board)/ STU (State transmission utility) and got approved from them before execution. In absence of SEB/ STU guidelines REC (Rural electrification corporation) standards may be followed. Support at corner with angle > 100 shall be provided with 4-pole structure or lattice tower. Use of PCC spun poles is not acceptable. Approved copies of these designs & drawings shall be submitted to the employer forreference and record.	Please note that spun poles are being accepted by state utility and drawings are being approved by them accordingly. SECI is requested to accept the state utility practices and amend the clause accordingly.	Technical	The terms and conditions of Bidding Document will prevail.
427	Employer's Requirement Annexure-A Part II	512	52.2	The Approach road connecting nearest public road and the Main gate shall be of 5m wide carriage way with 0.5m wide shoulders on either side. The access road connecting Main gate and MCR and internal access road(s) connecting MCR to various facilities/ buildings shall be of 3.5m wide carriage way with 0.5m wide shoulders on either side while the peripheral road shall be of 2.5m wide carriage way with 0.5m shoulders on either side. The top of road (TOR) elevation shall be minimum 200 mm above FGL to avoid flooding of roads during rains. The roads shall be provided with alongside drains as per design requirements of drainage system to avoid flow of storm water over the road. The roads shall be designed and constructed as per IRC SP-20 corresponding to design vehicular traffic of minimum - 150 Commercial vehicles per day and critical field CBR value of the subgrade. Shoulder shall be of min. 150mm thickness.	For delivery of WEG equipment site, as per the industry practice earthen roads are constructed for the ODC and heavy consignment. SECI is requested to accept the same. And amend the clause accordingly. We shall submit the drawing of the road along with offer.	Technical	The terms and conditions of Bidding Document will prevail.
428	Employer's Requirement Annexure-A Part II	542	85.1	A detailed contour survey with minimum 2 m contour interval of the identified land shall be carried out and drawings prepared by the contractor. Contour …….. subsurface and surface conditions for the foundations and other sub-structures for the proposed wind project, leading to their economical and safe foundation design.	As per industrial practice and worldwide acceptance GIS or SRTM contour map is being used at site for wind power practice for available contour interval. No separate survey is conducted. Kindly amend the clause accordingly.	Technical	The terms and conditions of Bidding Document will prevail.
429	Employer's Requirement Annexure-A Part II	506	49	Geotechnical Investigation.	You are requested to accept the geotechnical investigation as per the developer practice.	Technical	The terms and conditions of Bidding Document will prevail.
430	Employer's Requirement Annexure-A Part II	528	60.3	Reinforcement steel shall be of high strength TMT bars of grade Fe500 D or higher conforming to IS: 1786. The contractor shall furnish test documents of steel reinforcements to be used in the works or get required tests done at an accredited approved laboratory.	As per the foundation design we are using Fe500 grade reinforcement steel. SECI is requested to allow contractor to use steel as per the design approved by accredited test agencies.	Technical	The terms and conditions of Bidding Document will prevail.
431	Employer's Requirement Annexure-A Part II	547	87.7	P.V.C tubing for laying of cables shall be provided, as per diameters shown on the drawings. P.V.C tubing shall be, of Class-3 and suitable for a working pressure of 6kg/cm2. The P.V.C tubing shall comply IS:4985 and IS:7834. Solvent cement shall be used for jointing of P.V.C. tubing. Switch yard – Fencing.	Every developer has their own design for cable laying / Switch yard, therefore, it is requested that SECI shall allow developers for laying the cable / switch yard as per their design. Kindly amend the clause accordingly.	Technical	The terms and conditions of Bidding Document will prevail.

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432	Employer's Requirement Annexure-A Part IV	569	2	Scope of Supply …….. and 10 (ten) years comprehensive operation and Maintenance from the date of Operational Acceptance.	As per the “Form of Operational Acceptance Certificate” operational acceptance will be completed only after achieving Functional Guarantees of the plant facility. Functional Guarantees defined under Annexure –A , Part-II are as under; 1. Performance Ratio Guarantee Test for solar PV as per clause 2 of Annexure-A, Part-II. 2. Annual Generation Guarantee up to a period of 10 years as per clause 2 of Annexure-A, Part-II, which is ongoing process during O&M period. 3. Power Curve Guarantee Test for WEG as per clause 3.1 of Annexure-A, Part-II. As per the clause this test has to be carried out during high wind season after 60 day stabilization period. 4. Short Term Performance Test for WEG. 5. Machine availability Guarantee during O&M period. 6. Functional Guarantee Tests for BESS as per clause 4 of Annexure-A, Part-II. You will appreciate that such test will take time to perform and will delay the start of O&M period even after commissioning of the plant facility and delay the revenue realization to SECI. Therefore, it is proposed to start the O&M period from the date of Commercial Operation as certified by state utilities. Kindly amend the clause accordingly	Technical	The terms and conditions of Bidding Document will prevail.
433	Employer's Requirement Annexure-A Part IV	570	4	Supply	We understand that SECI will issue e-way bills for supply of material from manufacturer’s works to site, wherever required. Please confirm.	Technical	Yes.
434	Employer's Requirement Annexure-A Part IV	572	4.2.11	Wind Monitoring Mast: The bid should include supply, installation and maintenance of one …… correct and reliable data collection and its computation for analysis, for verification of generation with reference to the actual wind conditions at hub height.	Since, land for the project is being provided by SECI. Land for installation of the mast for power curve testing purpose shall also be arranged by SECI. Please confirm.	Technical	Yes
435	Employer's Requirement Annexure-A Part IV	574	4.4.4	CCTV cameras with monitoring station along with mounting poles, power supply cables, communication cables, conduits, fittings, etc.	We understand that CCTV is required for Solar & Battery part only. CCTV is not required nor is being practiced for Wind Power project. Please confirm.	Technical	CCTV for WTG locations not applicable.
436	Employer's Requirement Annexure-A Part IV	574	4.4.5	Fire detection and fire protection system in buildings, transformer yard and switchyard.	As per the industry practice fire detection system are not installed in WEGs or Wind Farm. Hence, we understand the requirement of fire detection system is limited to Solar & Battery part only.	Technical	Fire Detection and Protection System shall be applicable for WTGs also.
437	Employer's Requirement Annexure-A Part IV	575	5.2.5	Installation, Testing and Commissioning of grid …… metering equipment for evacuation of power from the wind power plant to the Pooling sub-station including right of way (ROW)	Since land is being provided by SECI, ROW shall also be arranged by SECI. Please confirm.	Technical	SECI is providing Land, and will try to ensure through the land allocator that there shall not be any RoW issues for those lands. However, the bidders would be required to secure RoWs for evacuation of power from WTGs where the land acquisition is on footprint basis.
438	Employer's Requirement Annexure-A Part IV	575	5.2.9	The proposed land area for each WTG locations is about 135mx135m and location coordinates of each WTG’s along with tentative elevation is given below :	Necessary area required for crane assembly & crane movement shall be arranged by SECI. Please confirm.	Technical	No. The same shall be the responsibility of the Contractor.
439	Employer's Requirement Annexure-A Part IV	579	8	Operation & Maintenance	We understand that Statutory charges levied by various state utilities on the project during O&M period will be paid by SECI to them directly. Please confirm.	Technical	Yes
440	Annexure-C	612	1.14	The EMS and SCADA system shall be connected with the Plant and the Contractor shall make arrangements to provide monthly reports from the SCADA system. The Contractor shall arrange to connect the Plant to the SCADA system operating at the Site enabling the remote operation of the Plant by the Contractor and to provide access to information pertaining to the Plant to the Employer’s Representative at Site and SLDC. The Employer may collect the data generated by the SCADA system in respect of the Plant from the Contractor. And the Employer will facilitate such data transfer by installing an OPC server at site.	We understand that the data should be linked up to the Pooling substation’s telemetry system which is in APTRANSCO Scope. Further communication with SLDC shall be in APTRANSCO’s scope. Otherwise, please provide the system architecture to obtain the information on how the Solar and Wind plant generation data will be sent to SLDC.	Technical	Data to SLDC will be as combined Hybrid Power. Data to the SLDC is to be sent through telemetry system to the Ramagiri 220kV substation as per SLDC requirements.
441	Employer's Requirement Annexure-A Part II	423	21.1	Horizontal axis, 3-blade, upwind/downwind Wind Turbine Generators (WTGs) with …… …… power factor conforming to the requirement of state grid. WTGs shall have the LVRT and HVRT capability including all other functional capabilities as per the requirement under the CEA Regulations for grid connectivity	There is no requirement for HVRT compliance in current CEA regulation. Therefore, kindly delete the requirement of HVRT.	Technical	The applicable regulations at the time of detailed engineering shall govern.
442	Annexure C O&M	4	2.2.4	During Defect Liability Period if any repair and replacement are done, then the warrantee of the equipment shall be extended from the date of such repair and replacement to the period of original equipment warrantee w.r.t. that replaced component.	This clause is unprecedented. Kindly delete the required. Defect liability of any equipment can be provided as per manufacturer warranty and can’t be extended after repair / replacement.	Contractual	The terms & conditions of the Bidding Document will prevail.
443	Annexure C O&M	4	2.2.5	Any latent defect which may not come to knowledge or discovered in the course of normal inspection/operation during two years from the operational acceptance but, may arise within a period of 5(five) years from expiry of warranty period of two years, shall be under warranty by free replacement/rectification.	Defect liability period shall be 1 year from the Commercial operation date of the plant as certified by state utility. No other Defect liability is acceptable. Kindly amend the clause.	Contractual	The terms & conditions of the Bidding Document will prevail.

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444	Annexure C O&M	23	25.1.a)	a) Covering physical loss or damage to the all plant facilities at the Site, with an extended maintenance coverage for the Contractor's liability in respect of any loss or damage for the entire term of the contract. e) All other insurance like in-transit insurance (Marine/ Cargo/others as applicable) Contractor All Risk, Erection All Risk, work men compensation, third party liability, Insurance against theft, fire, act of God, and other required for O&M of the plant to indemnify the Employer/equipment/material and resources shall be borne by the contractor.	As per the industry practice, SECI being owner of the plant shall take these insurance policies.	Contractual	The terms & conditions of the Bidding Document will prevail.
445	Annexure C O&M	24	25.2	Contractor's Insurance for the Plant Facility	Being plant owner, SECI need to take the property (WTG / Solar/ Battery) insurance policy during O & M phase.	Contractual	The terms & conditions of the Bidding Document will prevail.
446	Annexure-C	642	I.1.D(i)	Liquidated Damages for Shortfall in Annual CUF for Solar PV Plant (i) If the Contractor fails to achieve guaranteed annual CUF, then the Contractor shall pay compensation to the Employer an amount equal to the difference in units derived from guaranteed CUF and achieved CUF multiplied by the tariff of Rs.5 per unit.	It is unjustified to levy compensation @Rs.5 per unit, wherein tariff of PSA between SECI and AP DISCOM is not declared. Kindly revise the clause accordingly.	Technical	Kindly refer S.No.33 of Amendment-1.

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