

**ODISHA ELECTRICITY REGULATORY COMMISSION**  
**BIDYUT NIYAMAK BHAVAN, UNIT – VIII**  
**BHUBANESWAR – 751 012**  
**PBX : (0674) 2393097, 2396117**  
**FAX : (0674) 2395781, 2393306**  
**E-mail : [oriarc@rediffmail.com](mailto:oriarc@rediffmail.com)**  
**Website : [www.oriarc.org](http://www.oriarc.org)**

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**Changes and Clarifications to the Tender Document for**  
**Design, Supply, Installation (Erection), Testing, Commissioning, including Warranty**  
**and Operation & Maintenance for a period of 5 years for 25 KWp Solar Photovoltaic**  
**Power Plant Systems dt.27.06.2015**

After carefully analysing and considering the queries/points raised by the parties during the pre-bid meeting of “Installation of a Solar Power Plant of 25 KWp” held on 14.07.2015 and also, the e-mails/letters in the matter received till 15.07.2015(5 p.m.), the Commission is pleased to effect the modifications in the tender document of 27.06.15 as given below. The following table containing the changes and clarifications will form a part of the tender document for Design, Supply, Installation (Erection), Testing, Commissioning, including Warranty and Operation & Maintenance for a period of 5 years for 25 KWp Solar Photovoltaic Power Plant Systems dt.27.06.2015.

Sl. No	Topic/Issue	<b><u>Clause/Para in the Tender Document of 27.06.2015</u></b> <b>(Red and Underlined portion below is/are changed / clarified)</b>	<b><u>Changes / Clarifications</u></b> <b>(Green and Underlined portion below represent the final / clarified version after change / clarification)</b>
1	Check list & Index of documents to be submitted	5. Copy of audited balance sheet and profit and loss account for last three years.	“5. Copy of audited balance sheet and profit and loss account for last three years. <b><u>Provisional may be provided, if not audited.</u></b> ”
2.	GI or Aluminium	“2.2 Structural material of GI or Aluminium <b><u>(to be quoted separately,</u></b> if quoting for both GI & Aluminium) shall be corrosion resistant and electrolytically compatible with	“2.2 Structural material of GI or Aluminium <b><u>(one of the two may be included in the price bid and the differential amount for the other may be put as a note at the end of price bid)</u></b> shall be

		the materials used in the module frame, its fasteners, nuts and bolts. Galvanizing should meet ASTM A-123 hot dipped galvanizing or equivalent which provides at least spraying thickness of 70 microns on steel as per IS5905, if steel fasteners and nuts and bolts are used. Structures shall be supplied complete with all members to be compatible for allowing easy installation at the rooftop site.	corrosion resistant and electrolytically compatible with the materials used in the module frame, its fasteners, nuts and bolts. Galvanizing should meet ASTM A-123 hot dipped galvanizing or equivalent which provides at least spraying thickness of 70 microns on steel as per IS5905, if steel fasteners and nuts and bolts are used. Structures shall be supplied complete with all members to be compatible for allowing easy installation at the rooftop site.”
3	Power Conditioning Unit (PCU)	“3. Overloading capacity (10 sec) should be <b>200%</b> continuous rating.”	“3. Over load capacity (for 10 sec) should be <b>150%</b> of continuous rating.”
4	Emergency Off button for PCU	“3.16 The PCU shall include an easily accessible emergency OFF button located at an appropriate position <b>on the unit.</b> ”	“3.16 The PCU shall include an easily accessible emergency OFF button located at an appropriate position.”
5	Energy Meter	3.24(a) PV array energy production: Digital Meters to log the actual value of <u>AC/DC Voltage, Current &amp; Energy generated by the PV system shall have to be provided. <b>Two way LT 415V energy meter (Import - Export metering) shall be incorporated in the system on the main LT AC Grid supply confirming to the stipulations as mentioned in the order dated 26.11.2014 of OERC and amendments, if any, thereto on net metering.</b></u>	“3.24(a) PV array energy production: Digital Meter <b>of reputed manufacturer</b> to log the actual value of voltage, current & energy generated by the PV system shall have to be provided.”
6	Solar Irradiance & an integrating pyranometer	3.24 (b) Solar Irradiance: <b><u>An integrating pyranometer (Class II or better) should be provided with the sensor mounted in the plane of the array. Readout should be integrated with data logging system.</u></b>	3.24 (b) Solar Irradiance: <b><u>Irradiance sensors should be integrated with data logging system.</u></b>
7	Computer	“3.24(e) A suitable Computer: <b><u>i3/i5 with 500 GB HDD, 4 GB RAM, 2 Parallel &amp; 2 Serial</u></b>	“3.23(e)A suitable Computer: <b><u>i5 with min. 500 GB HDD, 4 GB RAM, 2 Parallel &amp; 1 Serial Port,</u></b>



9	Only FRLS copper wires	9.2 “Wires: <b>Only</b> FRLS copper wires of appropriate size and of reputed make with IS mark shall have to be used.”	9.2 “Wires: <b>Preferably</b> FRLS copper wires of appropriate size and of reputed make with IS mark may be used.”
10	Tools, Tackles & Spares	13. <u>Para-2</u> “A list of requisite spares in case of PCU <b>comprising of a set of control logic cards, IGBT driver cards etc. Junction Boxes. Fuses, MCCBs etc along with spare set of PV modules and batteries (if required) be indicated, which shall be supplied along with the equipment. A minimum set of spares shall be maintained in the plant itself</b> for the entire period of warranty and Operation & Maintenance which upon its use shall be replenished.”	13. <u>Para-2</u> “A list of requisite <b>and recommended</b> spares in case of PCU <b>e.g. control logic cards, IGBT driver cards etc. along with the technical specification may be provided. A minimum set of fuses, transfer switches and printed Circuit Boards required for power plant may be maintained at site</b> for the entire period of warranty and operation & maintenance which upon its use shall be replenished.”
11	Bi-directional meter with export reading	<u>Annexure-A (Technical Bid)</u> 8. <b><u>3 Phase 415 Volt Bi-directional Meter with Import &amp; Export Readings interfacing with Distribution Supply; Compliant with OERC’s Net Metering Order dt.26.11.14.</u></b>	<u>Annexure-A (Technical Bid)</u> 8. <b><u>Solar generation meter (DLMS compliant, 0.5S class with LT CT arrangement ) may be provided.</u></b>
12	Removal of Fault – Time stipulation & penalty thereof.	<u>Annexure-C</u> Last para of 8.3 • “In case of any fault, the fault must be removed within <b><u>24 hours failing which a penalty of Rs.1,000/- per day shall be charged. In case of any part to be imported the maximum period for repair should not be more than 15 days. However, under Force Majure circumstances penalty can be waived off.</u></b> ”	<u>Annexure-C (Last para of 8.3)</u> • “In case of any fault, the fault must be removed within <b><u>48 hours and in case of any part to be imported, the minimum period for repair should not be more than 30 days, failing which a penalty of Rs.1000/- per day shall be charged. However, under Force Majure circumstances, waiver of penalty may be considered. Any fault, which requires more than 48 hours for rectification must be informed to OERC.</u></b> ”