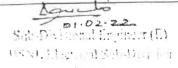
Project Inspection Report under RfS No: SECI/C&P/RfS/MNRE/97.5MW GCRT/R1/IND/082019

Dated: 29/08/2019 (Achievement Linked Incentive Scheme)

Date of Inspection: Name of the Successful Bidder: M/s SunSource Energy Pvt, Ltd. Δ Name of the Building Department / Organisation: DVC- Raghunathpur Thermal Power В Station, Project-1 Name of the Ministry: Ministry of Power C Address of SPV power plant installed: DVC-Raghunathpur Thermal Power Station, D Dundumi, Purulio, West Bengal Meter Consumer Number: DVC Undertaking attached E Page No. Details Component S. No Installed Project capacity in (kWp) 489 1 kWo 1 Whether the system is installed in shadow free area or not? If not YES 2 mention the details. YES 1- Attached Undertaking form manufactures with Serial No. 2- Attached Undertaking from bidders with Serial No. PV modules are made in India 3- Attached Invoice copy 3 of modules 4- Attached Delivery 3 challan of modules Whether all major components YES 4 (except inverters) are made in India Type, Make and year of Poly crystalline Si, Waaree, manufacturing of Modules 5 2021 Flash Test Report for all modules YES (rated output power of any supplied 4-36 6 (Documents attached) module shall have positive tolerance in range of 5 watt)



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| 7 | PV module qualification test standard (IEC 61215/IS14286 / IEC 61730 / IEC 61701/IS 61701 (for highly corrosive atmosphere) | 8IS certificate attached Certificate Number: R- 72002038 Certificate issued by: BIS Certificate issued on: 30.12,2020 Certificate valid up to:21.02,2023 | 37 |
|----|--------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 8 | Wattage of each module and Total No. of modules | 335 Wp, 1460 Nos. | |
| 9 | Integrated bypass diodes | YES | <u> </u> |
| 10 | Representative I-V curve of modules @STC | Documents attached | 38 |
| 11 | Module RF identification tag (Inside /outside lamination) | YES | |
| 12 | Whether the modules contain information about company name, serial no and year manufacturing etc. | YES (REID information attached) | 39 |
| 13 | Warranty Certificates (Material Warranty/ Performance Warranty) signed and stamped by bidders | Signed and Stamped by bidder - attached 40- | |
| 14 | Protection class of Junction box of modules (IP- 65) | YES, IP-65 | 38 |
| | ARRAY ST | RUCTURE | |
| 15 | Material of structure | Hot dip gafvanized MS / Steel (iS 2062: 1992.) / Aluminium Al Material test report attached | |
| 16 | Galvanisation of mounting structure as per IS 4759 | NR Test report as per IS attached | |
| 17 | Galvanisation thickness of mounting structure | 1. 80 mm 2. Galvanisation test report as per IS – NR | |
| 18 | Wind load calculation sheet for wind zone of the location | Designed to sustain wind speed up to 170 kmph Calculation sheet attached 48 - 50 | |
| 19 | MMS Design certified by a recognized Lab/ Institution | 1. YES 2. Attach Document 51-53 | |
| 20 | Material of fasteners (Stainless steel) | YES | |
| 21 | Load bearing capacity of the roof | OK (visual observation) | _ |
| 22 | Minimum clearance of the structure from the roof | 600 mm | |
| | | 11000 | |

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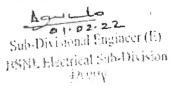
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Sub-Distributed Lagrange (1)
Light Hamiltonia de Sala San

| | PCU/ Inv | erter | |
|----|---------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| 23 | Guaranteed Technical Particulars for PCU/ Inverter as per RfS | YES Test certificate attached | 54 -36 |
| 24 | Make, rating of each inverter & No. of Inverters (AC capacity of inverter) | Solis; 30kW (01no.), 80kW (02nos.), 100kW (03nos.) | p |
| 25 | Combined Rated wattage of all inverters in Plant (Total AC rating) | 490 kW | ~ |
| 26 | MPPT is integrated in the PCU/inverter | YES | |
| 27 | Year(s) of manufacturing of inverters | 2021 | _ |
| 28 | Switching devices, inverter data sheet as per RfS | YES Data sheet attached | 57-59 |
| 29 | Protection of Enclosure (IP) and Location of Inverters (outdoor/indoor) | IP-65/Outdoor type 57 | |
| 30 | Phase of inverter | 3 phase | |
| 31 | Whether solar PV plant is synchronized with grid | YES IEC Certificates attached | - |
| 32 | Inverter standard codes IEC 61683/IS 61683, IEC 60068- 2(1, 2, 14, 30) /Equivalent BIS Std. | Certificate Number: AK 50442845 0001/AK 50456359 0001/AK 50469617 0001 Certificate issued by: TUVRheinland/TUVRheinland/ TUVRheinland Certificate issued on: 03.09.2019/31.12.2019/29.05 .2020 Certificate valid up to: NA IEC Certificates attached | 60-65 |
| 33 | Anti- Islanding (IEEE 1547/UL1741/IEC 62116) | Certificate Number: AK 50442843 0001/ AK 50456354 0001/AK 50469622 0001 Certificate issued by: TUVRheinland/TUVRheinland/Certificate issued on: 23.08.2019/31.12.2019/29.05 .2020 Certificate valid up to: NA | 60-65 |
| 34 | Serial Numbers of installed inverters | 110212216030103 (100kW) 110D12208030002 (30kW) | |



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| | | 110BE2218090029 (80kW) | |
|----|------------------------------------------------------------------------------------------------------------------------|--------------------------|---------|
| | DCDB /Junction Boxes (if requ | uired) (NOT APPLICABLE) | |
| 35 | GTP of JB as per RfS (duly signed by bidder and manufacturer) | NA | |
| 36 | IP protection level | NA | - |
| 37 | Bus bar material of DCDB | NA | <u></u> |
| 38 | MCB/MCCB installed | NA | |
| 39 | Surge arrester, SPDS | NA | |
| 40 | Material of sheet and thickness | NA | |
| 41 | Test report of DCDB | NA | |
| 42 | Height of junction box | NA | |
| 43 | Glands type | NA | |
| 44 | JB Earthing provision | NA | |
| | AC DISTRIBUTION PA | NEL BOARD/ LT Panel | |
| 45 | All switches and the circuit breakers, connectors standards IEC 60947, part I, II and III/ IS60947 part I, II and III/ | YES, (document attached) | 66 |
| 46 | 1P protection (Minimum 54 or better) | YES | - |
| 47 | Material of LT panel and its details | Detail BOM attached. | 67-69 |
| 48 | Change over switch | YES | |
| 49 | Proper Earthing of ACDB (As per IS 3043-1987) | YES | - |
| 50 | Surge protections | (Data sheet attached) | 70-7 |
| 51 | Height of LT panel form ground | Min. 600 mm | 77.2 — |
| 52 | | YES - document attached | 72- |
| | | ng arrester | |
| 53 | Proper Lighting arrester installed (As per NFC 17-102/2011/ IEC 6256) | YES Document attached | 73 - 7 |
| | | ables | |
| | C | YES, document attached | 75-7 |



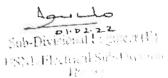
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Sub-Divination Unpacer (Li BSIst, Floring at Sub-Division 168007

| | applicable) | Certificate Number: Certificate issued by: Certificate issued on: Certificate valid up to: | |
|----|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| 55 | Cable dimension and Material 1- Modules to inverters, 2- Inverter to LT panels, | 1- 1C x 4 sqmm, Material – Copper (All buildings) 2a- 4Cx16 sqmm & 4Cx70 sqmm, Material- Copper (Admin. Bldg.) 2b- 4Cx50 sqmm & 4Cx70, Material- Copper (Store Bldg.) | |
| 56 | Voltage drop in DC cable (Modules to inverters) | 2 % | _ |
| 57 | Voltage drop in AC cable (inverter to LT panel or T/F) | 2 % | Na. |
| 58 | Cable Routing/ Marking (Cloable tray and suitable tagged and | | |
| | Solar Plant N | Monitoring | |
| 59 | Solar Irradiance sensor mounted on Plane of the array. | YES | N |
| 60 | Document attach Certificate Numb Certificate issued | | 78 |
| 61 | Temperature sensor | YES | 79-80 |
| 62 | Online Monitoring mechanism for the installed system | YES | 81 |
| | Transformer | (If required) | |
| 63 | Transformer rating, Type etc. | Not Applicable | ,— |
| | Miscel | laneous | |
| 64 | Earthing and protections (Array Structure, PCU, ACDB and DCDB) IS:3043-1987 | ок | - |
| 65 | Earthing Resistance less than 5 ohm | Sheet attached | 82 |
| 61 | and synchronization of SPV plant | | - |
| 6 | Ridirectional meters installed (for ne | t Under Process | |
| - | 8 Accuracy and burden of Meters | 0.58 | |



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| 59 | Danger boards and signages | YES | - |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 70 | Fire extinguishers & Sand Buckets | YES | |
| 71 | Tools & Tackles and spares | YES | |
| 72 | O&M manual available at site | YES | American Company of the Company of t |
| 73 | Display Board | YES | |
| | Drawings | at Site | |
| 74 | Layout of solar Power Array As built drawing (A3 Sheet) | Attached | 83-84 |
| 75 | Shadow analysis of the roof | Attached | 83-84 |
| 76 | Single line diagram of plant (SLD) A 3 sheet) | Attached | 85-86 |
| 77 | Structural drawing along with foundation details for the structure (A3 Sheet) | Attached | 87-88 |
| 78 | Itemized bill of material for complete SPV plant covering all the components and associated accessories. The country of manufacturing needs to be mentioned for all major components like modules, inverters, cables, mounting structure, switchgear, SCADA system etc. | Attached | 89-91 |
| 79 | Soft copy in CD of final drawing | Attached | - |
| 80 | Photo Graphs of sites | Attached | |
| 81 | Any specific problem(s) | None | , |
| 82 | Recommendations | | |

Format for Performance Ratio (PR)

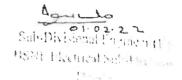
"Performance Ratio" (PR) means the ratio of plant output versus installed plant capacity at any instance with respect to the radiation measured.

PR = Measured Output in kW Installed capacity in kW×Measured radiation intensity in kW/m2 × 100

| Parameters | Input value | Remarks, if any |
|----------------------------------|---------------|-----------------|
| Date and Time for PR measurement | Dali-01-02-22 | Two - 21.00 Pm |



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Scanned with CamScanner

| A) Installed Plant Capacity in kW | 482.1 |
|-----------------------------------------------------|------------------------|
| B) Measured output in kW | 285.14 |
| C) Measured radiation intensity in W/m ² | 7.2 |
| Performance Ratio (%) | = 255.44 x 1000 |
| $(\frac{B*1000}{A\times C}\times 100)$ | 713 x 489 1 = \$1.76 / |

Declaration:

- It is to certify that all the information given above is true and correct to best of our knowledge. The plant is found to be installed as per the technical specifications mentioned in SECI's RfS No.: SECI/C&P/RfS/MNRE/97.5MW GCRT/R1/IND/082019 dated: 29/08/2019.
- 2. The Bidder declares that they including their Affiliate/Group company will not claim any subsidy/incentive using this project under any other schemes of Central/State Govt./Public sector Undertaking.

Signature of Inspecting Officer, Date & Name

Name - Azimal Paakash Yadaw

Signature of moduling

Signature of Representative of Bidder,

ment Building Representative, Date & Seal

Signature of Government Building Representative, Date & Seal - Conforming installation of rooftop solar plant at their building and its satisfactory operation

धर्मेन्द्र शर्मा/Dharmendra Sharma उप मुख्य अभियंता/Dy. Chief Engineer अक्षय कर्जा और कर्जा दक्षताRenewable Energy & Energy Efficiency दामोदर घाटी निगम/Demodar Valley Corporation राजीव खान/Rajib Khan विष्ट मंडलीय अभियंता (वि)/Sr. Divisional Engineer (E) अक्षय ऊर्जा और ऊर्जा दक्षता/Renewable Energy & Energy Efficiency टामोटर घाटी निगम/Damodar Valley Corporation