Shri Vithal Education & Research Institute's
COLLEGE OF ENGINEERING, PANDHARPUR
P.B.No.54, Gopalpur - Ranjani Road, Gopalpur, Pandharpur - 413304, District: Solapur (Maharashtra)
Tel.: (02186) 216063, 9503103757, Toll Free No.: 1800-3000-4131 e-mail.: coe@sveri.ac.in
Website.: www.sveri.ac.in (Approved by A.I.C.T.E., New Delhi and Affiliated to Solapur University, Solapur)
NBA Accredited all eligible UG Programmes, NAAC Accreditated Institute,ISO 9001:2015 Certified Institute.
Accredited by The Institution of Engineers (India), Kolkata and TCS, Pune.

Ref.:- Date:-

7.1.2

Purchase cum Work Order for Solar Photo Voltaic (SPV) Grid connected Rooftop System on -Grid.

Shri.Vithal Education & Research Institute, Pandharpur
(Regd.No.:Maharashtra/5131/94/Solapur [1860(21)] dated 28/12/94, F-4371Solapur (1950 Mumbai-29) dated 06/03/95)
Gopalpur-Ranjani Road, P.B. No. 54. Gopalpur, Tal. Pandharpur- 413 304, Dist. Solapur (Maharashtra)
Tel.:(02186)225083,Tel./Fax:(02186)225082, Email:coe_pan@rediffmail.com, Website: sveripandharpur.ac.in

Ref. No. SVERI/2015-16/Elect/139 Date. 05/02/2016

To,
Span Pumps Pvt. Ltd.,
Office No. 1001, Tower 2, 10th Floor,
Montreal Business Centre,
Baner Road, Baner,
Pune-411 045, Maharashtra.

Sub.:- Purchase cum Work Order for Solar Photo Voltaic (SPV) Grid connected Rooftop System on –Grid.

Ref. :- Your tender quotation dated 05/12/2015 and further negotiation.

Dear Sir,

With above reference, we are pleased to place the Purchase cum Work Order for 250 kWp (At Distribution side) Solar Photo Voltaic (SPV) Grid connected Rooftop System (on-Grid) with Net metering facility as per the specifications and details given in Annexure-I attached herewith.

Terms and Conditions:

1. Acceptance of material is subject to prior inspection and approval from our side.
2. Prices are inclusive of all duties, taxes, packing, forwarding, transportation up to our Institute, installation, commissioning and satisfactory demonstration.
3. Work to be completed within 3 months from the date of receipt of this order.
4. Comprehensive Onsite Warranty for the period of 05 years from the date of submission of one month successful performance report of the system (satisfactory generation). During warranty period, your representative shall visit our premises once in every three months for routine / preventive maintenance/servicing. In addition, your person shall visit as and when required and called accordingly. However, regular cleaning of panels shall be taken care of by us as per your instructions.
5. Span Pumps shall submit performance Bank Guarantee of Rs.14,00,000/-(Rs.in words. Fourteen lakh only.) from any Nationalized Bank for the Comprehensive Onsite Warranty period of 05 years.
6. It is mandatory to complete the work as per the specifications mentioned in Annexure-I.
7. Separate Comprehensive Annual Maintenance Contract Agreement for the period of 6 to 10 years be signed at the time of issue of this order.
8. CCTV Camera set up be provided and installed by Span Pumps for all systems as per the requirement.
9. Span Pumps shall provide SCADA BASED system.

B-Range

10. GUARANTED GENERATION: The Span Pumps shall give a guaranted on an average generation of minimum 5 units (kWh) at distribution side, per kW per day from the system (SPV Power Plant) during 300 days in a year during comprehensive onsite warranty period of five years. Otherwise, Span Pumps have to pay an amount of Rs. 5/- per unit as compensation for the number of units not supplied against the guaranted generation. The Span Pumps shall provide sealed and tested energy meters at generation side of the systems (SPV Power Plant).
11. There shall be generation guarantee for the period of 25 years as per the details given in the brochure of the Company Vikram Solar. Representative of Span Pumps shall put seal and signature on every page of this brochure.
12. Span Pumps shall train minimum two persons from our Institute for the period of minimum fifteen days for operation of the system and panel cleaning.
13. Payment:
    a) 50% against delivery of materials at our site (After receipt of 5% (on total contract value) Security Deposit including converting 2% EMD into Security Deposit).
    b) 20% after installation, successful commissioning and satisfactory demonstration of the systems.
    c) Balance 30% be released on submission of one month successful performance report of the system and submission of performance Bank Guarantee of Rs.14,00,000/-(Rs.in words. Fourteen lakh only.) from any Nationalize Bank for the period of 05 years subject to completion of Net metering work and approval from MSEDCL in every respect in this regard and submission of Subsidy approval letter from MNRE. However, Span Pumps may submit Bank Guarantees of 20% and 10% of total project cost from any Nationalized Bank for the period of three months in respect of Subsidy approval letter and Net metering work respectively and get the payment released. If any of these works are not completed during this period of three months, corresponding Bank Guarantee amount(s) shall be taken by our institute and kept with us till the completion of the work(s). Release of this 30% amount is also subject to fulfillment of other terms and conditions.
14. Out of 250 kWp (Distribution Side), 200 kWp (Distribution Side) be installed on rooftop of Engineering Main Building and 50 kWp (Distribution Side) be installed on rooftop of Pharmacy Main Building.
15. Other Terms and Conditions as mentioned in Annexure -II attached herewith.

Thank you,

Yours faithfully,

B. Ronge

(Dr. B. P. Ronge)
SECRETARY

Shri Vithal Education & Research Institute
Pandharpur

Received
Nilesh Natu.

SPAN PUMPS PVT. LTD.
INNOVATE DESIGN IMPLEMENT
PUNE (INDIA)

Shri Vithal Education and Research Institute, Pandharpur

Annexure -I

Ref. No. SVERI/2015-16/Elect./139 Date:-05/02/2016

Sr. No	Particular	Unit/Qty.	Amount Rs.for 100KwP	Amount Rs.for 250KwP
	Solar Photo Voltaic (SPV) Grid connected Rooftop system on-Grid consisting of	250 kWp at distribution side (840Nos panels of 310W each.)		
1	**SOLAR PANEL :-Vikram Solar ELDORA 310P** Panel :-310W,Nominal V:-38.11, Nominal Current(A):- 8.14, Open Circuit Voltage:-45.72 Short Circuit Current (A) :-8.81 Module Efficieny(%):-16.15, Maximum System(V):-1000V, Temperature Range:- -40 C to+85C, Application Class :- A (Safety Class II), Weight:-20.5 kg ,Cells:-Poly –Crystalline solar cells Performance Guarantee:- 25 Years (as per information Sheet) Other details as per company brochure attached . MNRE APPROVED ONLY.			
2	**String Inverter:- SMA Sunny Tripower 25 (German Make)** **Technical Data :** **Input (DC)** Max. DC power/DC rated power: 25550 W/25550 WMax. input voltage 1000 V MPP voltage range/rated input voltage: 390V – 800 V/600 V Min. input voltage/start input voltage: 150V/188 V Max. input current A /input B: 33 A / 33 A Number of independent MPP inputs / strings per MPP input 2/A:3;B:3 **Output (AC)** Rated power (at 230 V, 50 Hz) :25000 W ,Max. AC apparent power 25000 VA Nominal AC voltage 3 / N/PE;220/380 V; 3 / N/PE;230/400 V; 3 / N/PE;240/415 V AC voltage range 180V – 280 V,AC grid frequency / range: 50 Hz / 44 Hz…..55Hz ; 60 Hz / 54 Hz…..65Hz ; Rated power frequency / rated grid voltage 50 Hz / 230 V Max. output current/Rated output current: 36, 2 A/36, 2 A ,Power factor at rated power/displacement power factor adjustable 1 / 0 overexcited to 0 underexcited Feed-in phases / connection phases 3 / 3 **Efficiency** Max. Efficiency / European Efficiency: 98.3%/98.1% Protective devices DC-side disconnection device • Ground fault monitoring / grid monitoring • / • DC surge arrester / AC surge arrester Type II / Type II + III (combined) DC reverse polarity protection / AC short-circuit current capability / galvanically isolated • / •/ - All-pole sensitive residual-current monitoring unit • Protection class (as per IEC 61140) / overvoltage category (as per IEC 60664-1) I / AC: III; DC: II **General Data** Dimensions (W / H / D) / weight 661 / 682 / 264 mm (26.0 / 26.9 / 10.4 inch) / 61 kg (134.48 lbs) Operating temperature range -25°C to +60 °C (-13 °F ... +140°F) Noise emission, typical 51 dB(A) Self-consumption (at night) 1W Topology / cooling concept / degree of protection (IEC 60529/ UL50E) / climatic category (IEC 60721-3-4) Transformerless / Opticool Degree of protection (as per IEC 60529):IP65 ; Climate category (according to IEC 60721 – 3 – 4) 4K4H Max. permissible value for relative humidity (non-condensing) 100 % **Features** DC connection / AC connection SUNCLIX / spring-cage terminal Display - Interface: Speedwire/Webconnect ; Data interface: SMA Modbus/Sunspec Modbus ; Optitrack Global Peak/Integrated Plant Control/Q on Demand 24/7; Off-grid capable/SMA Fuel Save Controller compatible • Standard features ○ Optional features — Not available, Data at nominal conditionsSCADA BASED • You may use any combination of SMA (German Make) Invertors of 25, 60 KVA, etc. Giving total capacity of minimum 250 KVA. However, one Invertor with capacity shall not exceed 60 KVA. Technical details may change as per KVA (25,60) as mentioned in the brochure of SMA, which be duly sealed and signed from your side on every page. **WARRANTY** : Comprehensive onsite Warranty for the period of five years. Other details as per company brochure attached .	As per site requirement (25 KVA X 10) Total minimum 250KVA	**6800000.00**	**17000000.00**
3	Module Mounting Structure Flat Roof with Seasonal tilt facility as per std./ as per site requirement. The fabricated frames must be made hot dip Galvanized Iron , Stainless Steel (S.S.304) nut-bolts having brush / hairline finish quality. The Structure height shall be more than Column height.	Total Job as per the requirement		
4	**Cables:-** a) DC side: All copper cables of Apar make be used as per the requirement. b) AC side: POLYCAB Make 3.5 core /4 core Armed cables be used as per the requirement up to distribution panels as per std./as per site requirement (Total work).	Total Job as per the requirement		
5	**BoS Materials :-**1) MC-4 Connectors .2) ACBD 3) MCB 4) MCCB 5) ELCB/RCCB 6) MCCB Enclosure 7) SPD 8)Lan cable 9) Lan cable connector10)Cable Ties & other material as per site requirement of Seimens /L&T/Ligards /ABB make for 3 to 6, for 8 to 10 of reputed make, for 1 & 2 of Span make and for 7 of Mersen make.	Total Job as per the requirement		
6	**Hardware & Lugs:-** As per std. As per site requirement (Total Work).	Total Job		
7	**Earthing & LA:-** a) Earthing : 1) Earthing Strip 2) Earth Grounding rod 3)Coal 4)Salt 5) Earthing Plat 6) Earthing Cable7) Black soil. Minimum two Earthing per inverter, 1 for DC side and 1 for AC side. b) Lightening arrestor be provided as per the system requirement (Minimum 2 to 3).	Total Job as per the requirement		
8	**Safety & Name plates:-**1) Safety Instructions Board 2) Plant Details with nos 3) AC Inverter 4) DC String5) Line & other layout with AUTO CAD Drawing as per site requirement be provided by Span Pumps.	Total job		
9	Net Metering Liasoning charges included (without Govt. fees) Rs. Govt. fees as per receipts shall be paid by our Institute.	Total job		
10	Subsidies Liasoning charges included.	Total job	**Total Rs:-**	**17000000.00**

(Rs. in words :-One Crore Seventy Lakh Only)

Nmaty B.Range

Shri Vithal Education and Research Institute, Pandharpur
Annexure -II

Ref. No. SVERI/2015-16/Elect./139

Date:-05/02/2016

I)Terms and Conditions

The Span Pumps shall carry out following activities:

1.Design, manufacture, supply, installation and commissioning of suitable support for the PV panels and other components with the accessories.

2.Civil work (grouting) for PV structure. Also anti-corrosive material must be used for mounting structure for SPV plant.

3.The Solar Panel frame should be of Anodized Aluminum Alloy having suitable thickness according to requirement of the site conditions.

4.The fabricated frames must be made hot dip Galvanized Iron with MS, nut-bolts having brush / hairline finish quality.

5.SPV Power plant shall be installed as per the specifications provided in the technical offer.

6.Provide sealed & tested energy meter at generation side of SPV Power Plant.

7.Provide electrochemical marking (embossing) on each solar module frame which will shows name of manufacturer, year of installation and capacity of solar module.

8. It shall be the responsibility of the Span Pumps to provide AC Cable up to distribution panel .

9.Supply of manual for Operation and Maintenance of all the system in two languages i.e. in English and in Marathi to concern persons several of SHRI VITHAL EDUCATION and RESEARCH INSTITUTE, PANDHARPUR.

10.Supply and installation of control equipments required for the system.

11. Span Pumps shall provide of simple control rooms.

12.The installed & commissioned systems shall be handed over to SHRI VITHAL EDUCATION and RESEARCH INSTITUTE, PANDHARPUR. by the Span Pumps.

13.The Span Pumps shall provide the necessary training to identified representative approved SHRI VITHAL EDUCATION and RESEARCH INSTITUTE, PANDHARPUR. for proper daily operation and maintenance of installed system.

14.The Comprehensive site warranty shall be for 05 years from date of commissioning of system. The Span Pumps additional visit as and when required,and carry out regular servicing of installed systems and submit performance reports of installed system duly certified by SHRI VITHAL EDUCATION and RESEARCH INSTITUTE, PANDHARPUR.

B. Ronge

II).OTHER TERMS AND CONDITION

1. The material used for the work shall be new & best quality available and work should be carried out with best workmanship. The material used and works carried out shall be as per IS / IEC wherever applicable.
2. You shall be responsible for any damage occurred, if any, to other installations of the site during the course of work.
3. The Span Pumps should provide appropriate tools and equipment's to the workmen and ensure that those are in proper working condition and the workmen use the appropriate tools and take precaution "PLEASE NOTE THAT ANY ACCIDENT TO THE WORK MEN / PUBLIC / ANIMALS / PROPERTY BOTH MOVABLE AND IM-MOVABLE SHALL BE ENTIRE AND SOLE RESPONSIBILITY OF THE Span Pumps AND ANY PROCEEDING ARRISING OUT OF THE SAME SHALL BE AT THE Span Pumps RISK AND COST. SHRI VITHAL EDUCATION and RESEARCH INSTITUTE, PANDHARPUR. OR ITS EMPLOYEES WILL NOT BE RESPONSIBLE FOR ANY SUCH INCIDENT".
4. PLEASE NOTE THAT THE QUANTITY PROVIDED IN THE TENDER DOCUMENT ARE APPROXIMATE AND PROVIDED ONLY FOR THE GUIDELINES. HOWEVER THE Span Pumps SHALL VISIT THE PLACES OF INSTALLATIONS AND VERIFY EACH AND EVERY ITEM, SITE CONDITIONS, APPROCH ROAD, REQUIREMENT OF LAND, SOIL CONDITIONS & WATER AVAILIBILITY FOR SITE.
5. Span Pumps should provide necessary manufacture's test certificates for materials being used for the work. Span Pumps should provide facilities and bear the cost for the same. Power curve of all the panels erected by manufacturers shall be provided to the SHRI VITHAL EDUCATION and RESEARCH INSTITUTE, PANDHARPUR.
6. The Span Pumps are bound to work on the guideline provided by MEDA from time to time. Guidelines if issued in future by MEDA, the changes proposed will also be applicable without enhancement in project cost till the completion of 05 years period.
7. Span Pumps shall submit detail drawing of mounting structure with detail specifications includes size, materials used for mounting structure for installation of 250 kWp (ON-Grid) SPV power plants to be installed at SHRI VITHAL EDUCATION and RESEARCH INSTITUTE, PANDHARPUR. given in technical specifications of SPV power plants.
8. Please note that for any of the discrepancy observed during the period of installation and commissioning, conditions specified by SHRI VITHAL EDUCATION and RESEARCH INSTITUTE, PANDHARPUR.
9. Span Pumps shall comply with the provision of contract labour. (Regulation and Abolition) Act 1970, minimum wages Act. 1948, payment of the wages Act. 1963 Workmen's Compensation Act. 1961, the contract labour (Regulation and Abolition) Act, 1979 and all other related Acts and any modification thereof or any law relating there to and rules made there under from time to time.

Nmaty

B Range

10. TIME FRAME

The time frame for the completion of work is Three months from the date of issue of work order.

11.PENALTY

In case the Span Pumps fails to complete the work within the time period specified in the work order, a sum equivalent to 1% of the total contract value shall be deducted for each week of delay subject to a maximum deduction of 5% of the contract value

12. SECURITY DEPOSIT

1.Failure to comply with the terms of security deposit shall result into cancellation of work order without any further reference to the Span Pumps and the EMD shall be forfeited.

2.The security deposit shall be liable to be forfeited wholly or partly at the sole discretion of the SVERI, if the Span Pumps either fails to execute the work of above projects or fails to fulfil the contractual obligations or fails to settle in full his dues to the SVERI.

3.In case of premature termination of the contract, the security deposit will be forfeited and the SVERI will be at liberty to recover the loss suffered by it & if additional cost is to be paid, the same shall be recovered from the Span Pumps.

4.The SVERI is empowered to recover from the security deposit for any sum due and for any other sum that may be fixed by the SVERI as being the amount or loss or losses or damages suffered by it due to delay in performance and / or non-performance and / or partial performance of any of the conditions of the contract and / or non-performance of guarantee obligations.

5.The security deposit shall be released to the Span Pumps only after contract is completed to the satisfaction of the SVERI

13.JURISDICTION:

In case of any dispute, in the documentation and during implementation, commissioning, completion and

Comprehensive site warranty , all the matter will be resolve under PANDHARPUR Jurisdiction only.

B. Ronge

Amrata

III).TERMS AND CONDITION RELATED TO GENERAL TECHNICAL SPECIFICATIONS

1. PV MODULES

a) The PV modules must conform to the latest edition of any of the following / equivalent BIS Standards for PV module design qualification and type approval:

Crystalline Silicon Terrestrial PV Modules IEC 61215 / IS14286

b) In addition, the modules must conform to IEC 61730 Part 1-requirements for construction & Part 2 - requirements for testing, for safety qualification.

Identification and Traceability:

Each PV module must use a RF identification tag (RFID), which must contain the following information:

(i) Name of the manufacturer of PV Module
(ii) Name of the Manufacturer of Solar cells
(iii) Month and year of the manufacture (separately for solar cells and module)
(iv) Country of origin (separately for solar cells and module)
(v) I-V curve for the module
(vi) Peak Wattage, Im, Vm and FF for the module
(vii) Unique Serial No and Model No of the module
(viii) Date and year of obtaining IEC PV module qualification certificate
(ix) Name of the test lab issuing IEC certificate
(x) Other relevant information on traceability of solar cells and module as per ISO 9000 series.

2. Remote Monitoring Facilities

The Power Plants should have suitable inbuilt instrumentation for remote monitoring of its Real Time Status. Power Plants shall be capable of transmitting its monitor able parameters over GSM/CDMA/GPRS/ TCP IP Network and conform to respective standard protocols. The Power Plants shall also have suitable Data Logging & Storage capacity for at least 7 days event logs. The systems should also be able to be monitored in the internet at any time.

3. Maximum Power Point Tracker (MPPT)

Maximum power point tracker shall be integrated into the PCU to maximize energy drawn from the Solar PV array. The MPPT should be microprocessor / micro-controller based to minimize power losses. The details of working mechanism of MPPT shall be mentioned.

The efficiency of the Charge controller (MPPT based with data logger) shall not be less than 94% and shall be suitably designed to meet array capacity.

MPPT must conform IEC 62093, IEC 60068 as per specifications.

4. Junction Boxes

The junction boxes shall be dust, vermin and waterproof and made of FRP / Thermo Plastic. The terminals shall be connected to copper bus bar arrangement of proper sizes. The junction boxes shall have suitable cable entry points fitted with cable glands of appropriate sizes for both incoming and out going cables. Suitable markings shall be provided on the bus bar for easy identification and cable ferrules shall be fitted at the cable termination points for identification. Each main junction box shall be fitted with appropriate rating blocking diode. The junction boxes shall be of reputed make and should be as per IP 65 (for outdoor), IP 21 (for indoor) & as per IEC 62208.

The junction boxes shall have suitable arrangement for the Following:

- Combine groups of modules into independent charging sub-arrays that shall be wired to the controller.
- Provide arrangement for disconnection for each of the groups.
- Provide a test point for each sub-group for quick fault location.
- To provide group array isolation.
- The rating of the JB's shall be suitable with adequate safety factor to inter connect the Solar PV array.

5. Cables & Wirings:

- All cables shall be supplied conforming to IEC 60227/ IS 694 & IEC 60502/ IS 1554. Voltage rating: 1,100V AC, 1,500V DC
- For the DC cabling, Solar Cables, XLPE or XLPO insulated and sheathed, UV stabilized single core flexible copper cables shall be used. Multi-core cables shall not be used.
- For the AC cabling, PVC or XLPE insulated and PVC sheathed single or multi-core flexible copper cables shall be used. Outdoor AC cables shall have a UV-stabilized outer sheath.
- The DC cables from the SPV module array shall run through a UV stabilized PVC conduit pipe of adequate diameter with a minimum wall thickness of 1.5mm.
- Cables and wires used for the interconnection of solar PV modules shall be provided with solar PV connectors (MC4) and couplers.
- All cables and conduit pipes shall be clamped to the rooftop, walls and ceilings with thermo-plastic clamps at intervals not exceeding 50 cm. The minimum DC cable size shall be 4.0 mm^2 copper. The minimum AC cable size shall be 6.0 mm^2 copper. In three phase systems, the size of the neutral wire size shall be equal to the size of the phase wires. The following colour coding shall be used for cable wires:

  – DC positive: red (the outer PVC sheath can be black with a red line marking)
  – DC negative: black
  – AC single phase: Phase: red; neutral: black
  – AC three phase: Phases: red, yellow, blue; neutral: black
  – Earth wires: green

B. Range

- Cables and conduits that have to pass through walls or ceilings shall be taken through a PVC pipe sleeve.
- Cable conductors shall be terminated with tinned copper end-ferrules to prevent fraying and breaking of individual wire strands. The termination of the DC and AC cables at the Solar Grid Inverter shall be done as per instructions of the manufacturer, which in most cases will include the use of special connectors.
- All wiring in the control room shall be carried out with minimum four sq. mm. PVC insulated copper conductor in surface/recessed steel conduct in control room & solar hut. All wiring shall be done with an appropriate size Cu conductor as earth wire. All wirings whether it is indoors or outdoors are to be casing capping system. As and when required flexible pipe may be used.
- Buried underground cables shall be armored. Unarmored buried underground cables shall be enclosed with suitable conduits. Unless, otherwise, specified, all other interconnecting cables shall be armored.
- Cable/wire connections shall be soldered, crimp-on type or split bolt type. Wire nut connections shall not be used.
- All cables shall be adequately supported. Outside of the terminals/panels/enclosures shall be protected by conduits. Cables shall be provided with dry type compression glands wherever they enter junction boxes/panels/enclosures.
- The wiring must be carried out in casing capping only.

6. Distribution System

- Single line diagram of the AC Distribution line shall be attached along with general point wiring diagram of simple room with the Technical details.

7. Earthing and lightning protection

- Earthing is essential for the protection of the equipment & manpower. Two main grounds used in the power equipments are:
  - System earth
  - Equipment earth
- System earth is earth, which is used to ground one leg of the circuit. For example, in AC circuits, the Neutral is earthed while in DC supply +ve is earthed.
- In case of equipment earth all the non-current carrying metal parts are bonded together and connected to earth to prevent shock to the man power & also the protection of the equipment in case of any accidental contact.

B Range

Dtambole

Nmath

- To prevent the damage due to lightning the one terminal of the lightning protection arrangement is also earthed. The provision for lightning & surge protection of the SPV power source is required to be made.

- In case the SPV Array can not be installed close to the equipment to be powered & a separate earth has been provided for SPV System, it shall be ensured that all the earths are bonded together to prevent the development of potential difference between ant two earths.

- Earth resistance shall not be more than 5 ohms. It shall be ensured that all the earths are bonded together to make them at the same potential.

- The earthing conductor shall be rated for the maximum short circuit current & shall be 1.56 times the short circuit current. The area of cross-section shall not be less than 1.6 sq mm in any case.

- The array structure of the PV modules shall be grounded properly using adequate numbers of earthing pits. All metal casing/ shielding of the plant shall be thoroughly grounded to ensure safety of the power plant.

- The Earthing for array and distribution system & Power plant equipment shall be made with GI pipe, 4.5 m long 10 mm diameter including accessories and providing masonry enclosures with cast iron cover plate having locking arrangement, watering pipe using charcoal or coke and salt as required as per provisions of IS:3043. Necessary provision shall be made for bolted isolating joints of each Earthing pit for periodic checking of earth resistance.

- Each array structure of the SPV yard shall be grounded properly. The array structures and the lightning conductors are to be connected to earth through 25 mm X 5mm GI strip.

- The inverters and all equipment inside the control room to be connected to earth through 25 mm X 5mm tinned copper strip including supplying of material and soldering. As earth bus is provided inside the control room with 25 mm X 5mm tinned copper strip.

- In compliance to Rule 61 of Indian Electricity Rules, 2004 (as amended up to date), all non-current carrying metal parts shall be earthed with two separate and distinct earth continuity conductors to an efficient earth electrode.

Lightning: The SPV Power Plant shall be provided with lightning & over voltage protection. The main aim in this protection shall be to reduce the over voltage to a tolerable value before it reaches the PV or other sub system components. The source of over voltage can be lightning, atmosphere disturbances etc.

Metal oxide variastors shall be provided inside the Array Junction Boxes. In addition, suitable MOV's also shall be provided in the Inverter to protect the inverter from over voltage.

8. **Lightning & Over Voltage Protection System**

- The SPV power plant should be provided with Lightning and over voltage protection. Connected with proper earth pits. The main aim of over voltage protection is to reduce the over voltage to a tolerable level before it reaches the PV or other sub-system components. The source of over voltage can be lightning or other atmospheric disturbance.
- The lightning Conductors shall be made of 25 mm diameter 1000 mm long GI spike as per provisions of IS 3070. Necessary concrete foundation for holding the lightning conductor in position to be made after giving due consideration to maximum wind speed and maintenance requirement at site in future. The lightning conductor shall be earthed through 20 mm X 3 mm thick GI flat earth pits/earth bus made with 25 mm X 5 mm GI flats.

Dambole. Ahrate B.Range

9. MAIN FEATURES & OPERATING MODE

PCU should gives preference to the solar power as the first input to load. In the absence of solar the power from grid will be feed to the load.

The PCU always gives preference to the solar power and will use Grid power only when the solar power is insufficient to meet the load requirement.

10. MODULE MOUNTING STRUCTURE

- Hot dip galvanized iron mounting structures may be used for mounting the modules/ panels/arrays. These mounting structures must be suitable to mount the SPV modules/panels/arrays on the roof top, on the ground or on the poles/masts, at an angle of tilt with the horizontal in accordance with the latitude of the place of installation.
- The Mounting structure shall be so designed to withstand the speed for the wind zone of the location where a PV system is proposed to be installed (wind speed of 150 km/ hour). It may be ensured that the design has been certified by a recognized Lab/ Institution in this regard.
- The mounting structure steel shall be as per latest IS 2062: 1992 and galvanization of the mounting structure shall be in compliance of latest IS 4759 with thickness of 80 microns as per IS 5905. All fasteners shall be of Stainless steel - SS 304.
- The foundation for Module Mounting structures shall be 1:2:4 PCC Construction. There shall be minimum necessary clearance between ground level and bottom edge of SPV modules.

11. ORIENTATION AND TILT OF PV MODULE

Modules alignment should be due south and tilt angle shall be 15 - 25 degrees with horizontal.

12. DC DISTRIBUTION BOARD (DCDB)

A DCDB shall be provided in between PCU and Solar Array. It shall have MCCB of Suitable rating for connection and disconnection of array section. It shall have meters for measuring Array voltage and Array current.

13. AC DISTRIBUTION LINE

The generated electricity from these Power Plants will be utilized for illumination of Streets/Indoor Lighting, Fans, Computers, Internet modem, Printer within allowable practice limit. Necessary electric cable/connection shall be supplied/made by the bidder for illumination of existing streetlights/indoor lights.

14. OPERATION MANUAL

An Operation, Instruction and Maintenance Manual, in English and the local language, should be provided with the Solar PV Power Plant and detail of Wiring and Connection Diagrams will also be provided with the manual.

B. Range

Dambdi.

Nmoty

15. TEST REPORTS

The test certificate of various components of the proposed SPV system should be in accordance with guidelines of MNRE for off grid Solar PV systems under Jawaharlal Nehru National Solar Mission (JNNSM) and related Addendums/ Minutes of meeting published on MNRE website. Test certificates from MNRE approved test centres shall also be considered valid.

16. OTHER FEATURES

(i) The supplier must fulfill all the technical & other requirements as per provisions under JNNSM, MNRE, GoI.

(ii) Only indigenously manufactured Solar PV Power Plant which fully conform to the MNRE specifications shall be procured. Fully imported Solar PV Power Plant shall not be procured. However, use of imported components of PV system would be permitted, subject to adequate disclosure and compliance to specified quality norms and standard. Only those bidders who manufacture at least one of the major items used in the Solar PV Power Plant i.e. PV modules or BOS and have adequate facilities for testing of Solar PV Power Plant would be allowed to participate.

(iii) A strip containing the following details should be laminated inside the module to be clearly visible from the front side:

a) Name of the Manufacturer or distinctive Logo
b) Model or Type No.
c) Serial No.
d) Year of make.

17. Danger plates:-

The span pumps shall provide at least 8 Danger Notice Plates of 200mm X 150 mm made of mild steel sheet, minimum 2mm thick and vitreous enameled white on both sides and with inscription in signal red color on front side as required. The inscription shall be in English and local language. Out of eight, four danger notice shall have to be provided at PV Yard & Four-danger notice at Control Room & Battery room.

18. Display Board:

The span pumps shall provide the display board of size 3 ft x 3 ft which gives detailed circuit diagram of the system with its description.

19. Installation and commissioning-

- Detailed project execution plan shall be submitted along with the offer.
- While quoting for power plant, the bidder shall quote for Installation and commissioning of power plants in the financial offer.
- The bidder is responsible for arranging all the accessories and measuring instruments required to smoothly commission the power plants.
- The plant shall be commissioned in the presence of SVERI authorized personnel or its nominated representative
- An acceptance report shall be prepared and signed by all participating parties.

Bambodi. Amrate B. Rouge

20. Packing, shipping and marking

The span pumps shall be responsible for assuring that all commodities shipped are properly packed and protected to prevent damage or deterioration during shipment. Packaging and shipping costs shall be borne by the supplier. Customs clearance and all costs and actions associated with import duties, taxes and processing of documents within India are borne by the span pumps.

21. Insurance:

The span pumps shall provide insurance coverage ex-factory until commissioning and acceptance for replacement or repair of any part of the consignment due to damage or loss.

22. Scope of Operation & Maintenance of SPV Power Plant for a period of 05 years from date of commissioning.

- Regular operation & maintenance of the SPV Power Plant for a period of 05 years after commissioning along with supply of consumable items as and when necessary and submission of daily performance data of the power plant shall come, under the operation & maintenance contract.
- The breakdown maintenance of the entire system including supply of necessary spare parts if any shall be for a period of 05 years from the date of commissioning of power plant. The operation and maintenance schedule of the SPV power plant during the 05 years contract period shall be as detailed below:
- 05 years operation and maintenance period shall begin on the date actual commissioning of the power plant. The requisite number of qualified and trained personnel is to be deputed by SHRI VITHAL EDUCATION & RESEARCH INSTITUTE.PANDHARPUR. round the clock from the very first day.
- The deputed personnel shall be qualified and well trained so that they can handle any type of operation hazard quickly and timely.
- The deputed personnel should keep daily log sheet for the power plant as per format to be supplied by SNA/Implementing Agency after commissioning of the power plant.
- The deputed personnel shall be in a position to check and test all the equipment regularly, so that preventive actions, if any, could be taken well in advance to save any equipment from damage. Any abnormal behavior of any equipment shall be brought to the notice of Implementing Agency immediately for appropriate action.
- The deputed personnel shall keep clean the power plant in all time. Cooking in the control room will not be allowed under any circumstances.
- Normal and preventive maintenance of the power plant such as cleaning of module surface, topping up of batteries, tightening of all electrical connections, changing of tilt angle of module mounting structure, cleaning etc. are also the duties of the deputed personnel.
- Under no circumstances the operator shall take such actions those are not damaging to the Power Plant. In case of non-availability of solar power suitable notice board may be displayed. In the notice board in front of the control room to avoid local problems.
- During operation and maintenance of period of Five years of the power plant, if there is any loss or damage of any component of the power plant due to miss management/miss handling or due to any other reasons pertaining to the deputed personnel, what-so-ever, the supplier shall be responsible for immediate replacement/rectification. The damaged component may be repaired or replaced by new component. It is understood after examination the performance of the component or the system shall not degrade.

Dambholi Nmaty B Range

SPAN PUMPS
PRIVATE LIMITED

REGD. OFFICE : 1001, TOWER No. 2, MONTREAL BUSINESS CENTRE, BANER ROAD, BANER, PUNE - 411045 (INDIA)
TEL.: +91-20-6600 0408 E-mail : info@spanpump.com website : www.spanpumpsindia.com

WORKS : 965/2, SANASWADI, TAL.: SHIRUR, DIST.: PUNE. PIN - 412 208. **CIN** - U29120MH1987PTC045367

To,

Date: 02/02/2016

Secretary,

Shri Vithal Education & Research Institutes.

Pandharpur

Sub: Manufacture, Supply, Installation, Commissioning Solar Rooftop Grid tied power generation system - 250kW.

Ref: Tender Call Notice No. 2015-16/12 dated 21/11/2015

Dear Sir,

We hereby authorize Mr.Nilesh Natu representative of our organization who can be identified with PAN Card No. AGTPN5196M to deal with Shri Vithal Education & Research Institutes, Pandharpur on our behalf as and when required.

Specimen signature of Mr. Nilesh Natu is attested herewith.

Thanking you,

Yours faithfully,

Nitin Muthiyan

Director

SPAN PUMPS PVT. LTD.

SPAN PUMPS PVT. LTD. PUNE (INDIA)

Registrar
for the needful.
B.Bange
05/02/16

Nmuthy

.....

(Specimen Signature of Mr. Nilesh Natu)

Attested By:

Nitin Muthiyan

Director

SPAN PUMPS PVT. LTD.

OIC

SHRI VITHAL EDUCATION & RESEARCH INSTITUTE, PANDHARPUR
(Regd.No.:Maharashtra/5131/94/Solapur[1860(21)]dated 28/12/94,F-4371 Solapur(1950 Mumbai-29)dated 06/03/95)

P.B..No.54, Gopalpur - Ranjani Road, Gopalpur, Pandharpur - 413 304,, Dist. Solapur (Maharashtra)
Tel. : 7755990201, **Toll Free No**. :- 1800-3000-4131 **E-mail** : coe@sveri.ac.in, **Website**: www.sveri.ac.in

Ref. NO. SVERI/2019-20/Solar/Elec./06 Date: 03/05/2019

To,
CHIRAYU POWER PVT. LTD.
C-1/1,M.I.D.C, Near Low College,
KHAMGAON-444303
Dist. Buldhana
Maharashtra.
M. NO. 8888383033.

Sub.:- Purchase cum Work Order for Solar Photo Voltaic (SPV) Grid connected Rooftop On-Grid System.

Ref. :- Your tender quotation dated 04/04/2019 and further negotiation.

Dear Sir,

With above reference, we are pleased to place the Purchase cum Work Order for 150 KW (At Distribution side) Solar Photo Voltaic (SPV) Grid connected Rooftop System (on-Grid) with Net metering facility as per the specifications and details given in Annexure-I (page no.4), Annexure-II (page no.5-6) and Annexure-III (page no.7-10) attached herewith.

The order is Subject to the following Terms and Conditions:

1. Acceptance of material is subject to prior inspection and approval from our side.
2. Prices are inclusive of all duties, taxes (Except GST, GST is shown separately), packing, forwarding, transportation up to our Institute, installation and commissioning.
3. The total work (installation and commissioning) shall be completed within 2 months from the date of receipt of this order.
4. **Warranty:**
   a) Entire System(Solar plant): Comprehensive Onsite Warranty for the period of 05 years.
   b) Inverter Systems : Comprehensive onsite Warranty for Solaredge Inverter systems including Optimizers for the period of 12 years.
   c) Solar Panels: There shall be generation guarantee for the period of 25 years for panel as per the details given in the company brochure.
   d) The warranty period will start from the date of submission of one month successful performance report of the system about satisfactory generation.

B. Ronge

e) During warranty period, your representative shall visit our premises once in every three months for routine / preventive maintenance/servicing. In addition, if any breakdown is there your person shall visit SVERI Campus within 48 hours. However, regular cleaning of panels shall be taken care of by us as per your instructions (once in every week).

f) GUARANTED GENERATION: The CHIRAYU POWER PVT. LTD shall ensure guaranteed on an average generation of minimum 5 units (kWh) at distribution side, per kW per day from the system (SPV Power Plant) at least 300 days in a year(Minimum 225000 units per year) during comprehensive onsite warranty period of five years. Otherwise, CHIRAYU POWER PVT. LTD have to pay an amount of Rs. 5/- per unit as compensation for the number of units not generated against the guaranteed generation. The CHIRAYU POWER PVT. LTD shall provide sealed and tested energy meters at generation side of the systems (SPV Power Plant).

g) CHIRAYU POWER PVT. LTD. shall submit performance Bank Guarantee of Rs.6,50,000/- (Rupees, Six lakh Fifty Thousand only) from any Nationalized Bank, against Comprehensive Onsite Warranty and guaranteed Generation, for the period of 05 years.

h) There shall be generation guarantee for the period of 25 years for panels as per the details given in the brochure of the Company Vikram /RenewSys Solar. Representative of CHIRAYU POWER PVT. LTD shall put seal and signature on every page of this brochure.

i) It is mandatory to complete the work as per the specifications mentioned in Annexure -I, II & III.

j) CHIRAYU POWER PVT. LTD shall train minimum two persons from our Institute for the period of minimum five days for operation of the system and panel cleaning.

k) Chirayu Power Pvt. Ltd. shall not be liable for any failure for the period that such failure is due to causes beyond its reasonable control, including but not limited to acts of God, war, strikes or labor disputes, embargoes, government orders or any other force majeure event.

B. Range

Shri Vithal Education & Research Institute Pandharpur

5. **Payment will be released as per the details given below:**
   a) 50% against delivery of materials at our site and after Depositing additional 2% towards Security Deposit on total contract value. EMD of 3% already with us will be treated as converted in to Security Deposit making Security Deposit as 5%.
   b) 20% after installation, successful commissioning and satisfactory demonstration of the systems.
   c) Balance 30% on submission of one month successful performance report of the system and submission of performance Bank Guarantee of Rs.6,50,000/- (Rupees Six lakh Fifty Thousand only) from any Nationalized Bank for the period of 05 years subject to completion of Net metering work and approval from MSEDCL in every respect in this regard and submission of Subsidy letter in MEDA. The release of this 30% amount is also subject to fulfillment of other terms and conditions in this order.
6) Out of 150 kWp (Distribution Side), approximately 100 kWp (Distribution Side) be installed on rooftop (Galvanized Sheet & RCC ROOF) of Engineering Main Building and approximately 50 kWp (Distribution Side) be installed on rooftop(Galvanized Sheet) of Indoor sports Complex shed near D. Pharmacy Building.
7) Module Mounting Structure: 100% 6061 Grade Vergin Aluminum Structure (Anodized) with SS Fastners and Aluminum Clips for perfect Strength along with walk way (FRP Coated, weather resistance with insulation) For safety purpose sheds wherever required as per our discussion be protected with the railing and also all sheds be protected with leakage proof solution. For RCC roof, hot dip galvanized structure shall be used for the stability as per our discussion.
8) The mounting structure shall be so designed to withstand the speed for the wind zone of the location where a PV system is proposed to be installed considering wind speed of 180 km/ hour. It may be ensured that the design has been certified by a recognized Lab/ Institution in this regard.
9) CHIRAYU POWER PVT. LTD. shall provide Fiber Brush with attachment and panel cleaning solution.
10) Other Terms and Conditions as mentioned in our Tender Copy will be applicable.

B. Ronge

(Dr. B. P. Ronge)
SECRETARY

Shri Vitthal Education & Research Institute's Pandharpur

Received order
08/07/19

CHIRAYU POWER PVT. LTD.

Shri Vithal Education and Research Institute, Pandharpur

Annexure –I

Ref.No.SVERI/2019-20/Solar/Elect./ 06 Date: 03/05/2019

Sr. No	Particular	Unit/Qty	Rate in Rs. Per KW	GST %	Rate in Rs. with GST	Total Kw	Amount in Rs.
A	**Material Price :**						
1	**SOLAR PANELS :-Vikram /RenewSay Solar** **RenewSay Solar :**Panel 3M6 :-325/330W, Norminal V:-37.62, Nominal Current(A):-8.78, Open Circuit Voltage:-46.24 Short Circuit Current (A) :-9.30 Module Efficieny(%):-17.03 Maximum System(V):-1000V, Temperature Range:- -40 C to+85C, Weight:-20.5 kg ,72Cells:-Poly Crystalline solar cells Performance Guarantee:- 25 Years (as per information Sheet) Other details as per company brochure attached(Annexure II) . MNRE APPROVED ONLY.	150 kWp at distribution side (470 panels of 330 W each.)					
2	**Inverter Systems :-** SOLAREDGE +Optimizers Inverter P700 SE17K x 01 No.. and SE27.6K x 05Nos.Total 155KVA/KW **Technical Data :** details as per company brochure attached . **WARRANTY** : Comprehensive onsite Warranty for the period of 12 years. Other details as per company brochure attached (Annexure III).	Total minimum 150KVA/ 150KW					
3	**Module Mounting Structure:** Aluminum Structure ,100% 6061 Grade Vergin Aluminum Structure(Anodised)with SS Fastners and Aluminum Clips for perfect Strength And walk way With FRP Coated Weather resistance with Insulated.Other as per Std	Total Job as per the requirement	**32139.8**	**5%**	**33746.79**	**150**	**5062018.5**
4	**Cables:- a) DC side: All copper cables of POLYCAB make be used as per the requirement.** **b) AC side: POLYCAB Make 3.5 core /4 core Armed cables be used as per the requirement up to distribution panels as per std./as per site requirement (Total work)**	Total Job as per the requirement					
5	**BoS Materials :-1) MC-4 Connectors .2) ACBD 3) MCB 4) MCCB 5) ELCB/RCCB 6) MCCB Enclosure 7) SPD 8)Lan cable 9) Lan cable connector10)Cable Ties & other material as per site requirement of Seimens /L&T/Ligards /ABB make for 3 to 6, for 8 to 10 of reputed**	Total Job as per the requirement					
6	**Hardware & Lugs:- As per std. As per site requirement**	Total Job					
7	**Earthing(6Nos) &LA(2 nos)** **1)Earthing Strip 2)Earth Grounding rod 3)Coal 4)Salt 5)Earthing Plat 6)Earthing Cable 7)Black soil** **OR. Chemical Earthing(Pipe in pipe Technology 10ft) GI/CU with complete work as per IEEE std.**	Total Job as per the requirement					
B	**Installation Price:**						
1	**Entire System(plant) installation and commissioning work.**	Total Job	**13774.2**	**18%**	**16253.55**	**150**	**2438032.5**
2	**Safety & Name plates:-1) Safety Instructions Board 2) Plant Details with nos 3) AC Inverter 4) DC String5) Line & other layout with AUTO CAD Drawing as per site requirement be provided by**	Total job					
3	Net Metering Liasoning charges included.	Total job					
4	Subsidies Liasoning charges included. Only submission of Subsidy letter/Application in MEDA/MNRE.	Total job					
						Sub Total Rs.	**7500051.00**
						R. off Rs.	**- 51.00**
						Total Rs.	**7500000.00**

(Rs in.words : Seventy Five Lakh only).

B. Ronge

(Dr. B. P. Ronge)
SECRETARY

Shri Vithal Education & Research Institute Pandharpur

Relival
08/05

Shri Vithal Education & Research Institute's
COLLEGE OF ENGINEERING, PANDHARPUR
P.B.No.54, Gopalpur - Ranjani Road, Gopalpur, Pandharpur - 413304, District: Solapur (Maharashtra)
Tel.: (02186) 216063, 9503103757, Toll Free No.: 1800-3000-4131 e-mail.: coe@sveri.ac.in
Website.: www.sveri.ac.in (Approved by A.I.C.T.E., New Delhi and Affiliated to Solapur University, Solapur)
NBA Accredited all eligible UG Programmes, NAAC Accreditated Institute,ISO 9001:2015 Certified Institute.
Accredited by The Institution of Engineers (India), Kolkata and TCS, Pune.

Ref.:- Date:-

7.1.2

Solar Plant Purchase Bill

Tax Invoice

Chirayu Power Pvt. Ltd., Khamgaon M.I.D.C., Khamgaon GSTIN/UIN: 27AAGCC3581P1Z3 State Name : Maharashtra, Code : 27 E-Mail : karan@chirayupower.com	Invoice No. **CPPL/19-20/17**	Dated **12-Jun-2019**
	Delivery Note **1126,1127,1128,1129**	Mode/Terms of Payment **Immediately**
	Supplier's Ref.	Other Reference(s) **As Per PO**
Consignee **Shri Vitthal Education and Research Institute** Pandharpur, Dist. Solapur State Name : Maharashtra, Code : 27	Buyer's Order No. **SVERI/2019-20/Solar/Elecr/03**	Dated **3-May-2019**
	Despatch Document No.	Delivery Note Date **12-Jun-2019**
	Despatched through **Raod**	Destination **Pandharpur**
	Bill of Lading/LR-RR No. **dt. 12-Jun-2019**	Motor Vehicle No. **MH28BB1033**
Buyer (if other than consignee) **Shri Vitthal Education and Research Institute** Pandharpur, Dist. Solapur State Name : Maharashtra, Code : 27	Terms of Delivery	

Sl No.	Description of Goods	HSN/SAC	Quantity	Rate	per	Amount
1	**150kw Solar Grid Tied System** *155KW Renewsys Poly Panels* *27.6kva x 5, 17kva x 1 Inverter* *Wires and Cable, Earthing, LA* *ACDB, DCDB, Etc*	85437092	**1 No.**	48,20,970.00	No.	**48,20,970.00**
	CGST					**1,20,524.25**
	SGST					**1,20,524.25**
	Less : ***Round Off***					**(-)0.50**
	Total		**1 No.**			**₹ 50,62,018.00**

E. & O.E

Amount Chargeable (in words)
Indian Rupees Fifty Lakh Sixty Two Thousand Eighteen Only

HSN/SAC	Taxable Value	Central Tax		State Tax		Total Tax Amount
		Rate	Amount	Rate	Amount	
85437092	48,20,970.00	2.50%	1,20,524.25	2.50%	1,20,524.25	2,41,048.50
Total	**48,20,970.00**		**1,20,524.25**		**1,20,524.25**	**2,41,048.50**

Tax Amount (in words) : **Indian Rupees Two Lakh Forty One Thousand Forty Eight and Fifty paise Only**

Company's PAN : **AAGCC3581P**

Declaration
We declare that this invoice shows the actual price of the goods described and that all particulars are true and correct.

for Chirayu Power Pvt. Ltd., Khamgaon

Authorised Signatory

This is a Computer Generated Invoice

Tax Invoice

(DUPLICATE FOR SUPPLIER)

hirayu Power Pvt. Ltd., Khamgaon M.I.D.C., Khamgaon GSTIN/UIN: 27AAGCC3581P1Z3 State Name : Maharashtra, Code : 27 E-Mail : karan@chirayupower.com	Invoice No. **CPPL/19-20/18**	Dated **12-Jun-2019**
	Delivery Note	Mode/Terms of Payment
	Supplier's Ref.	Other Reference(s)
Consignee **Shri Vitthal Education and Research Institute** Pandharpur, Dist. Solapur State Name : Maharashtra, Code : 27	Buyer's Order No.	Dated
	Despatch Document No.	Delivery Note Date
	Despatched through	Destination
Buyer (if other than consignee) **Shri Vitthal Education and Research Institute** Pandharpur, Dist. Solapur State Name : Maharashtra, Code : 27	Terms of Delivery	

Sl No.	Description of Services	HSN/SAC	Quantity	Rate	per	Amount
1	**Eraction and Comissioning** *Installation of 150kw Solar System*	9954				**20,66,129.00**
	CGST					**1,85,951.61**
	SGST					**1,85,951.61**
	Less : ***Round Off***					**(-)0.22**
	Total					**₹ 24,38,032.00**

E. & O.E

Amount Chargeable (in words)
Indian Rupees Twenty Four Lakh Thirty Eight Thousand Thirty Two Only

HSN/SAC	Taxable Value	Central Tax		State Tax		Total Tax Amount
		Rate	Amount	Rate	Amount	
9954	20,66,129.00	9%	1,85,951.61	9%	1,85,951.61	3,71,903.22
Total	**20,66,129.00**		**1,85,951.61**		**1,85,951.61**	**3,71,903.22**

Tax Amount (in words) : **Indian Rupees Three Lakh Seventy One Thousand Nine Hundred Three and Twenty Two paise Only**

Company's PAN : **AAGCC3581P**

Declaration
We declare that this invoice shows the actual price of the goods described and that all particulars are true and correct.

for Chirayu Power Pvt. Ltd., Khamgaon

Authorised Signatory

This is a Computer Generated Invoice

SPAN PUMPS
PRIVATE LIMITED

REGD. OFFICE : 1001, TOWER No. 2, MONTREAL BUSINESS CENTRE, BANER ROAD, BANER, PUNE - 411045 (INDIA)
TEL.: +91-20-6600 0408 E-mail : info@spanpump.com website : www.spanpumpsindia.com

WORKS · 965/2, SANASWADI TAL SHIRUR DIST PUNE PIN - 412 208 **CIN** - U29120MH1987PTC045367

SPPL/16-17/INV/SP/05/456

27th July, 2016

To,

The Secretary,
Shri Vithal Education & Research Institute,
Gopalpur-Ranjani Road, P.B.No.54,
Gopalpur, Taluka-Pandharpur-413 304,
Dist. Solapur

Re: Submission of Invoice

Ref.Supply of Solar Photo Voltaic (SPV) Grid connected Rooftop System on Grid against Purchase cum work Order No.SVERI/2015-16/Elect/139 dtd. 05.02.16

Dear Sir,

Please refer to your above referred Purchase cum Work Order.

In this connection, we would like to intimate you that we have supplied, integrated, installed and successfully commissioned the whole system and the system has started to produce the power generation work as per desire and up to the entire satisfaction of your officials. We have also given the demonstration of the system and thus the project ordered by the institute is completed by us in all respects.

Now we are pleased to enclose herewith our Invoice bearing No. SP/05 dtd. 26.07.16 for Rs.1,70,00,000/- in duplicate with a request to kindly release the 20% payment i.e. Rs.34,00,000/- upon receipt of the invoice as per the terms stipulated in payment clause No.3 (b) of your above referred Purchase Order.

Your co-operation in this matter will be highly appreciated.

Thanking you,

Yours faithfully,
For SPAN PUMPS PVT. LTD.,

Authorized Signatory

Encl : As above

sam/nsm

TAX INVOICE

(Sec-86, Rule-55)

ORIGINAL

Regd. Office: 301, Montreal Business Centre, Tower No.2, 10th Floor, Baner Road, Baner, Pune-411 045 (Maharashtra) (India)
Phone : 020-66000408
Works Phone: 965/2, Sanaswadi, tal- Shirur, Dist Pune Pin - 412208 02137-52412, 53461/53462

SPAN PUMPS PRIVATE LIMITED

SOLD TO,

Shri Vithal Education & Research Institute,
Gopalpur-Ranjani Road, P.B.No.54,
Gopalpur, Taluka-Pandharpur-413 304,
Dist. Solapur

INVOICE NO:	SP/05	DATE :	26.07.16
OUR DELIVERY CHALLAN NO :	SP/02A,B,C,D.E & SP/04	DATE :	
YOUR ORDER NO :	SVERI/2015-16/Elect./139	DATE :	05.02.16

SR.NO	DESCRIPTION	QUANTITY	RATE (Rs.) EACH / SET	AMOUNT (Rs.)
1	Solar Photo Voltaic (SPV) Grid connected Rooftop System on-Grid with net metering facility consisting of :- a) Solar Panels-Vikram Solar ELDORA 310P-840 Nos. b) String Inverter-SMA Sunny Tripower 25 (German make) c) Module Mounting Structure Flat Roof with seasonal tilt facility d) Cables-DC side-Apar make copper cables AC Side - Polycab make 3.5 core/4 core armed cables e) BoS Materials- MC4 Connectors, ACBD, MCB, MCCB, ELCB/RCCB, MCCB Enclosure, SPD, Lan Cable connector, Cable Ties f) Hardware & Lugs g) Earthing & LA- Earthing Strip, Earth grounding rod, coal, salt, earthing plat, earthing cable, black soil (minimum 2 h) Safety & Name Plates-as per the order **(full description as per annexure-I)**	250 kWp	64,200.00 per kWp	1,60,50,000.00
2	Installation, Commissioning & net metering charges for above			6,25,000.00
3	Annual Maintenance charges for 5 Years			3,25,000.00
			VAT Exempted	1,70,00,000.00

RUPEES : **One crore seventy Lacs only.**

TOTAL **1,70,00,000.00**

PAYMENT TERMS	L.R. NO	TRANSPORTER	CHECKED BY	PREPARED BY

Payment of this invoice be made either on demand Or on due date otherwise interest @ 24% per annum will be charged. Payment by Demand Draft is requested.

Sold under Sale Tax Declaration in From

I / We hereby certify that my/our registration certificate under the Maharashtra value Added Tax act, 2002 is in force on the date on which the sale of the goods specified in this " Tax Invoice" is made by me / us and that the trasaction of sale covered by this " Tax Invoice" has been effected by me / us. And it shall be accounted for in the turnover of sales while filling of return and the due tax, if any, payble on the sale has been paid or shall be paid.

VAT TIN : 27470340305 V. w.e.f. 1-4-06
CST TIN : 27470340305 V. w.e.f. 1-4-06

PAN No. AACCS - 5972L
CIN-U29120MH1987PTC045367

For Span Pumps Pvt. Ltd

Director/ Auth. Signatory

Subject to Pune city juridiction only.*

Shri Vithal Education & Research Institute's
COLLEGE OF ENGINEERING, PANDHARPUR
P.B.No.54, Gopalpur - Ranjani Road, Gopalpur, Pandharpur - 413304, **District**: Solapur (Maharashtra)
Tel.: (02186) 216063, 9503103757, **Toll Free No.**: 1800-3000-4131 **e-mail.**: coe@sveri.ac.in
Website.: www.sveri.ac.in (Approved by A.I.C.T.E., New Delhi and Affiliated to Solapur University, Solapur)
NBA Accredited all eligible UG Programmes, **NAAC** Accreditated Institute,ISO 9001:2015 Certified Institute.
Accredited by The Institution of Engineers (India), Kolkata and TCS, Pune.

Ref.:- Date:-

7.1.2

Bio-gas Purchase Order, Bills and Tender Documents

SHRI VITHAL EDUCATION & RESEARCH INSTITUTE'S
COLLEGE OF ENGINEERING, PANDHARPUR
Gopalpur -Ranjani Road, Gopalpur, P.B. No. 54, Tal - Pandharpur- 413 304,
Dist. - Solapur (Maharashtra) Ph.: (02186) 225083, Fax: (02186) 225082.
(Approved by AICTE, New Delhi and affiliated to Solapur University, Solapur)

Ref. No. COEPR/2012-2013/1712

Date: 07/03/2013

To,
DOOR'S WORLD,
5,Sindhunagar Complax,
Gandhi Nagar Chouk,
Hotgi Road, Solapur.

Sub: - Purchase order

Ref: - Your quotation dated on 19 Feb 2013

Dear Sir,

With the above cited subject, we are pleased to place the Purchase Order for **Solar System** as per details given below:

Sr. No.	Particulars	Rate in Rs.	Quantity	Amount in Rs.
1.	250 LPD Solar System	35,300/-	1 No.	35,300/-
			Total	**35,300/-**

(Rs. In Words: - Thirty Five Thousand Three Hundred Only.)

You are kindly requested to supply the material subject to following conditions:

1. System shall be for hard water, tank in tank (Special Jacketed type) PUF insulated hot water storage tank system with related piping of the system.
2. For 250 L.P.D. system, 250 ltrs. should be net usable water in the Hot water tank. Thus, it should be capacity of usable water of Hot Water Storage Tank, excluding that of D. M. water make up tank, jacket and collectors.
3. 250 L. P. D. System shall consist of 2 collectors with 9 copper tubes per collector having an area of 2 sq.m. per collector.
4. System Stands and accessories shall be provided from your side at no extra cost.
5. D. M. water make up tank be of minimum 10 ltrs. capacity. Collectors be made from 99.9% pure copper tubes.
6. Other specifications be as per Technical Specifications of Solar Water Heater provided by you alongwith the quotation.

Received By
Sunil Pandhare
6/3/2013

B. Ranje

.../2

SHRI VITHAL EDUCATION & RESEARCH INSTITUTE'S

COLLEGE OF ENGINEERING, PANDHARPUR

Gopalpur-Ranjani Road, Gopalpur, P.B. No. 54, Tq- Pandharpur-413 304
Dist:- Solapur(Maharastra) Ph:(02186) 225083, Fax:(02186) 225082
(Approved by AICTE, New Delhi and Affiliated to Solapur University, Solapur)
WebSite:www.sveri.ac.in. Email:-contact@sveri.ac.in

Ref: COEPR/2013-2014/1532 Date: 08/02/2014

To,
Energy Management Solution of India,
Jain Nakshatra,
Block no 10, TC,
Chinna Nolambur Union Road,
Maduravoyal, Chennai-600095.
Tamilnadu.

Sub.: - Purchase order for Biogas Balloon and Biogas Analyzer.

Ref.:- Your quotation received dated 03/12/2013 and further negotiation.

Dear Sir,

With above reference, we are pleased to place the order for purchase of **Biogas Balloon and Biogas Analyzer** for our Project **"Setting up RURAL HUMAN AND RESOURCE DEVELOPMENT FACILITY (RHRDF) with the Technical Guidance and Consultancy from BARC- DAE"**, sanctioned by Rajiv Gandhi Science & Technology Commission, Mumbai as per the details given in **ANNEXURE-I** attached herewith.

The order is subject to the following terms and conditions:

1. Acceptance of material is subject to prior inspection and approval from our side.
2. **Price:** Prices are inclusive of all taxes, duties, packing, forwarding, and transportation up to our Institute, installation, testing, commissioning and demonstration, unless specifically mentioned.
3. **Warranty:** Onsite comprehensive warranty of 12 months from the date of satisfactory demonstration. This warranty includes technical support and replacement of defective parts/ products free of charge.
4. **Delivery:** Within two weeks with manuals and warranty cards from the date of receipt of this purchase order.
5. **Payment terms**:
    a. 50% against delivery of material at our site.
    b. Balance 50% after successful installation and satisfactory demonstration.
6. **Visit Plan:**
    a. During work execution.
    b. In addition to above, your visits shall be made as per the requirement, as and when called, free of charge during warranty period.

Thanking you,

Yours faithfully,

B. Ronge

(Dr. B. P. Ronge)
PRINCIPAL

---/2

Shri Vithal Education & Research Institute, Pandharpur

Regd.No.: Maharashtra/5131/94/Solapur[1960(21)]dated 28/12/1994, F-4371Solapur (1950 Mumbai-29)dated 06/03/1995

Gopalpur -Ranjani Road, Gopalpur, P.B. No. 54, Gopalpur, Pandharpur- 413 304, Dist. Solapur (Maharashtra)

Tel : (02186) 225083, Fax: (02186) 225082, E-Mail : coe_pan@rediffmail.com, Website : www.sveri.ac.in

Ref.No.:SVERI/2011-2012/ 119 (B)

Date : 27/02/2012

To,

M/s. Samrudhi Enterprises,
Prof. Shri. Hari Arjun Kale
Gat No. 394, Pune-Pandharpur Highway,
Dhondewadi, Tal-Pandharpur,
Dist-Solapur.

Sub.:- Purchase Order and Work Order for NISARGRUNA – a biogas plant based on biodegradable waste material.

Ref. :- Your Quotation dated 22/02/2012 and further negotiation.

Dear Sir,

With above reference, we are pleased to place the Work Order for NISARGRUNA – a biogas plant as per the latest technology document from BARC, Mumbai. The details of the same are as given below:

Sr. No.	Particulars	Qty.	Rate in Rs.	Amount in Rs.
1	**Platform:** Size 3mtr x 3 mtr x 3 mtr Accommodate the mixer, air compressor and premix Tanks, suitable platform to receive the material ample space for manual segration.	1 per No.	100000.00 per no.	100000.00
2	**Premix Tanks:** 1.85x1.25x45 mtrs. 3 nos.	1 per No.	32000.00 per no.	32000.00
3	**Predigester Tank:** Pre-digester tank is an underground cylindrical tank having 1.5m ID & 3m height made up of bricks. RCC pipes provided on both sides of the tank for inlet and outlet of the slurry.	1 per No.	110000.00 per no.	110000.00
4	**Manure Tank:-** Pits are four in numbers underground tanks made up of brick.	1 per No.	180000.00 per no.	180000.00
5	Recycle Water Tank	1 per No.	40000.00 per no.	40000.00
6	Constructing wall around the digester for making plantation with filling murum and soil.	1 per No.	150000.00 per no.	150000.00
7	Providing and fixing welded mesh of 11 gauge wires having mesh size 50mm x 25mm including M.S. angle frame of size 35mmx35mmx35mm in position with oil painting 3 coats, etc. complete.	90 per Sq.ft.	1500.00 per Sq.ft.	135000.00
			Total:-	**747000.00**

The order is subject to following terms and conditions:

1. Prices are inclusive of all taxes.
2. Payment- After submitting bills of completed items.

Thank you,

Yours faithfully,

B. Ronge

(Dr.B.P.Ronge)
SECRETARY

SHRI VITHAL EDUCATION & RESEARCH INSTITUTE'S
COLLEGE OF ENGINEERING, PANDHARPUR
Gopalpur-Ranjani Road, Gopalpur, P.B. No. 54, Tal.:- Pandharpur-413 304
Dist:- Solapur (Maharashtra) Ph☎02186) 225083, Fax☎02186) 225082
(Approved by AICTE, New Delhi and Affiliated to Solapur University, Solapur)
Website: www.sveri.ac.in, Email:-contact@sveri.ac.in

Ref. No: COEPR/2015-2016/ 1152 Date: 23/10/2015

To,
Energy Management Solution of India,
Jain Nakshatra,
Block no 10, TC,
Chinna Nolambur Union Road,
Maduravoyal (Chennai), India 600095.

Subject: - Purchase order for **CO_2 Sensor of Biogas Analyzer**.

Dear Sir,
With above reference, we are pleased to place the order for purchase of **CO_2 Sensor of Biogas Analyzer** for our Project **"Setting up RURAL HUMAN AND RESOURCE DEVELOPMENT FACILITY (RHRDF) with the Technical Guidance and Consultancy from BARC- DAE"**, sanctioned by Rajiv Gandhi Science & Technology Commission, Mumbai in College of Engineering, Pandharpur as per the details given below:

Sr. No.	Particulars	Rate in Rs.	Qty.	Amount in Rs.
1	CO_2 Sensor of Biogas Analyzer	**26017.00**	01	**26017.00**
			Total	**26017.00**
In Words Rs. Twenty Six Thousand Seventeen Only.				

The order is subject to following terms and conditions:

1. Acceptance of material is subject to prior inspection and approval from our side.
2. **Price:** Prices are inclusive of all taxes, duties and packing up to our institute.
3. **Warranty:** One year on site, comprehensive warranty.
4. **Delivery:** Within **One Week** from date of release of purchase order.
5. **Payment:** Against delivery.

Thank you,
Yours Faithfully,

B-Ronge
(Dr. B. P. Ronge)
PRINCIPAL

SHRI VITHAL EDUCATION & RESEARCH INSTITUTE'S
COLLEGE OF ENGINEERING, PANDHARPUR
Gopalpur-Ranjani Road, Gopalpur, P.B. No. 54, Tal.:- Pandharpur-413 304
Dist:- Solapur (Maharashtra) Ph(02186) 225083, Fax(02186) 225082
(Approved by AICTE, New Delhi and Affiliated to Solapur University, Solapur)
Website: www.sveri.ac.in, Email:-contact@sveri.ac.in

Ref. No: COEPR/2014-2015/ 76 (A)

Date: 23/04/2014

To,
Siya Instruments,
S-17, Road No 2, Mewar Industrial Area,
Madari, Udaypur, Rajasthan,
India.

Sub.: Purchase Order for **Gas Meter.**

Ref.:-Your quotation dated 07/04/2014 and further negotiation.

Dear Sir,
With above reference, we are pleased to place the order for purchase of **Gas Meter** for our Project **"Setting up RURAL HUMAN AND RESOURCE DEVELOPMENT FACILITY (RHRDF) with the Technical Guidance and Consultancy from BARC- DAE"**, sanctioned by Rajiv Gandhi Science & Technology Commission, Mumbai in College of Engineering, Pandharpur as per the details given below:

Sr. No.	Particulars	Rate in Rs.	Qty.	Amount in Rs.
1	**Biogas Flow Accessories with Mechanical Totalizer:** **Type:** Dry **Max Operating Pressure:** 0.5 bar **Measuring Range:** 0.016 m^3/h	6,000.00	01	6,000.00
			Total	**6000.00**
In Word Rs. Six Thousand Only.				

The order is subject to following terms and conditions:

1. Acceptance of material is subject to prior inspection and approval from our side.
2. **Price:** Prices are inclusive of all taxes, duties, packing, forwarding and transportation up to our institute.
3. **Warranty:** One year on site, comprehensive warranty.
4. **Delivery:** Within Eight days from date of release of purchase order.
5. **Payment:** 100% after installation and successful demonstration.

Thank You,

Yours Faithfully,

(Dr. Prashant M. Pawar)
R&D Co-ordinator

Shri.Vithal Education & Research Institute, Pandharpur

(Regd.No.:Maharashtra/5131/94/Solapur [1860(21)] dated 28/12/94, F-4371Solapur (1950 Mumbai-29) dated 06/03/95)

Gopalpur-Ranjani Road, P.B. No. 54. Gopalpur, Tal. Pandharpur- 413 304, Dist. Solapur (Maharashtra)

Tel.:(02186)225083,Tel./Fax:(02186)225082, Email:coe_pan@rediffmail.com, Website: sveripandharpur.ac.in

Ref.No.:SVERI/2011-12/119 (A)

Date: 27/02/2012

To,
J. K. ENGINEERS,
S. No. 52/234,
Sanjay Park,
Airport Road,
Pune 32.

Sub: - Purchase and Work Order for NISARGRUNA – a bio gas plant based on biodegradable waste material.

Ref: - 1. Your quotation dated 17th November 2011.
2. Negotiation meeting held on 4th February 2012.

Dear Sir,

With above references we are pleased to place the order for NISARGRUNA- a bio gas plant as per the latest technology document from BARC, Mumbai. The details of the same are as follows:

Sr. No.	Particulars	Amount (Inclusive of all taxes)
1	**Mixer Assembly:** CI body (25mm thick), vertically mounted SS blades and shaft, 5HP Crompton Greaves 3 phase motor, Proper tray and feeding arrangement.	1,00,000/-
2	**Dome for Main Digester Tank:** MS plate of 4 mm thick with internal Epoxy paint and external 2 mm thick FRP coating with valves as per the specification from the BARC for 1 Tone Plant capacity.	1,50,000/-
3	**Recycle Pump:** 1 HP CRI make vertically mounted submersible pump with sensor type auto on-off, impeller non-clog with three valves.	45,000/-
4	**Air compressor:** Crompton Greaves make 90 liters tank capacity with auto on-off switch with panel board with 1 HP Crompton Greaves make single phase motor with aerobic piping with valves.	40,000/-

B. Ranjle

O/C

SHRI VITHAL EDUCATION & RESEARCH INSTITUTE'S
COLLEGE OF ENGINEERING, PANDHARPUR
Gopalpur-Ranjani Road, Gopalpur, P.B. No. 54, Tal.:- Pandharpur-413 304
Dist:- Solapur (Maharashtra) Ph:(02186) 225083, Fax:(02186) 225082
(Approved by AICTE, New Delhi and Affiliated to Solapur University, Solapur)
Website: www.sveri.ac.in, Email:-contact@sveri.ac.in

Ref. No: COEPR/2013-2014/279 Date: 15/05/2014

To,
Urja Bio Systems,
B-4, Sneh Complex, Behind Ankur Electronics,
Deep Banglow Chowk, Model Colony,
Shivaji Nagar, Pune-411 016.

Sub.: Purchase Order for **Sintex Floating Dome Biogas plant.**

Ref.:-Your quotation dated 11/04/2014 and further negotiation.

Dear Sir,
With above reference, we are pleased to place the order for purchase of **Sintex Floating Dome Biogas plant** for our Project **"Setting up RURAL HUMAN AND RESOURCE DEVELOPMENT FACILITY (RHRDF) with the Technical Guidance and Consultancy from BARC- DAE",** sanctioned by Rajiv Gandhi Science & Technology Commission, Mumbai in College of Engineering, Pandharpur as per the details given below:

Sr. No.	Particulars	Rate in Rs.	Qty.	Amount in Rs.
1	**2 Cubic meter Sintex Prefabricated Floating Dome Type Biogas Plant: Double Burner Gas Stove & Pipe (10 mtr), MS Frame, Feed Inlet Provision, Slurry Outlet Provision, Gas Outlet Valve.**	30,500.00	01	30,500.00
			TOTAL	30,500.00
In Word Rs. Thirty Thousand Five Hundred Only.				

The order is subject to following terms and conditions:

1. Acceptance of material is subject to prior inspection and approval from our side.
2. **Price:** Prices are inclusive of all taxes, duties, packing, forwarding and transportation up to our institute.
3. **Warranty:** Five years warranty against manufactures defect.
4. **Delivery:** Within Two Weeks from date of release of purchase order.
5. **Payment:** 100% after delivery and successful installation and demonstration.

Thanking You,

Yours Faithfully,

B P Ronge

(Dr. B. P. Ronge)
PRINCIPAL

ANNEXURE-I

Purchase order for Biogas Balloon and Bio-gas Analyzer.

Sr. No.	Particulars	Qty.	Rate in Rs.	Amount in Rs.
1.	**Gas Balloon:** 20 m^3 capacity. (For 1 ton bio-gas plant) **745 GSM** Grey Color Size: 3x3x2.5m 2" outlet/inlet line 1" dia. water drain	01	50,000/-	50,000/-
2.	**Biogas Analyzer:** For 4 gases **Methane** Smart Gas Transmitter with LCD/LED Display 0-100% v/v **H_2S** Smart Gas Transmitter with LCD/LED Display 0-5000 ppm **CO_2** analyzer with LCD/LED Display 0-50% **CO**- 0-2000ppm	01	2,10,000/-	2,10,000/-
			ADD: CST @ 2% on 2 above	4,200/-
			Total	**2,64,200/-**
In Words: Two Lakh Sixty Four Thousand Two Hundred only.				

B Ronge

(Dr. B. P. Ronge)
PRINCIPAL

SHRI VITHAL EDUCATION & RESEARCH INSTITUTE'S
COLLEGE OF ENGINEERING, PANDHARPUR
Gopalpur-Ranjani Road, Gopalpur, P.B. No. 54, Tal.:- Pandharpur-413 304
Dist:- Solapur (Maharashtra) Ph⊗02186) 225083, Fax⊗02186) 225082
(Approved by AICTE, New Delhi and Affiliated to Solapur University, Solapur)
Website: www.sveri.ac.in, Email:-contact@sveri.ac.in

Ref. No: COEPR/2015-2016/ 1152 Date: 23/10/2015

To,
Energy Management Solution of India,
Jain Nakshatra,
Block no 10, TC,
Chinna Nolambur Union Road,
Maduravoyal (Chennai), India 600095.

Subject: - Purchase order for **CO_2 Sensor of Biogas Analyzer**.

Dear Sir,
With above reference, we are pleased to place the order for purchase of **CO_2 Sensor of Biogas Analyzer** for our Project **"Setting up RURAL HUMAN AND RESOURCE DEVELOPMENT FACILITY (RHRDF) with the Technical Guidance and Consultancy from BARC- DAE"**, sanctioned by Rajiv Gandhi Science & Technology Commission, Mumbai in College of Engineering, Pandharpur as per the details given below:

Sr. No.	Particulars	Rate in Rs.	Qty.	Amount in Rs.
1	CO_2 Sensor of Biogas Analyzer	**26017.00**	01	**26017.00**
			Total	**26017.00**
In Words Rs. Twenty Six Thousand Seventeen Only.				

The order is subject to following terms and conditions:

1. Acceptance of material is subject to prior inspection and approval from our side.
2. **Price:** Prices are inclusive of all taxes, duties and packing up to our institute.
3. **Warranty:** One year on site, comprehensive warranty.
4. **Delivery:** Within **One Week** from date of release of purchase order.
5. **Payment:** Against delivery.

Thank you,
Yours Faithfully,

(Dr. B. P. Ronge)
PRINCIPAL

Sr. No.	Particulars	Amount (Inclusive of all taxes)
5	**Instruments and other equipments** **a) Temperature meter:** Digital type ISI mark **b) pH meter:** Digital type ISI mark **c) Pressure gauges:** Analog type ISI mark 3 in numbers as per the requirements **d) Methane Dehydration Unit.** **e) HDPV & PVC pipes, valves as per requirements.**	10,000/-
6	**Detailed drawings along with structural details with certification, Installation and Commissioning Charges.**	1,75,000/-
	TOTAL	**5,20,000/-**

The order is subject to following terms and conditions:

1) **Price:** Prices are inclusive of all the taxes, duties, packing, forwarding, transportation upto our Institute, installation, testing, commissioning, charges of visits and layout drawings.
2) **The visit plan shall be as follows:**
   i. For layout and site marking.
   ii. After completion of excavation work.
   iii. After PCC & RCC raft of main digester.
   iv. During work execution of beams.
   v. During work execution of circular beam.
   vi. During execution of water jacket work.
   vii. For Hydraulic test for leakage after black painting and water filling.
   viii. In addition to above, your visits shall be made as per the requirement as and when called by the us.
3) **Payment Terms:**

   A. For Materials and Equipments:
   i. 75% of the cost of material supplied against delivery.
   ii. 15% of the material cost after installation and testing for leakage.
   iii. 10% of the material cost after successful demonstration.

   B. Installation and Commissioning Charges:
   i. 25% after excavation.
   ii. 25% after completion of 50 % work of the digester.
   iii. 25% after installation and testing of the plant for leakage.
   iv. 25% after successful demonstration.
4) **Warranty:**
   i. 5 years on site comprehensive warranty for Dome of Main Digester from the date of satisfactory demonstration.
   ii. 1 year on site comprehensive warranty for the plant as whole except dome from the date of satisfactory demonstration.

B. Ronge

(Prof. Dr.B.P.Ronge)

Secretary,
Shri Vithal Education and
Research Institute, Pandharpur.

SHRI VITHAL EDUCATION & RESEARCH INSTITUTE'S

COLLEGE OF ENGINEERING, PANDHARPUR

Gopalpur-Ranjani Road, Gopalpur, P.B. No. 54, Tq- Pandharpur-413 304
Dist:- Solapur(Maharastra) Ph:(02185) 225083, Fax:(02186) 225082
(Approved by AICTE, New Delhi and Affiliated to Solapur University, Solapur)
WebSite:www.sveri.ac.in. Email:-contact@sveri.ac.in

Ref: COEPR/2013-2014/1531 Date: 08/02/2014

To,
Siya Instruments
S-17 Road No. 2,
Mewar Industrial Area, Madri,
Udaipur-313001.
Rajasthan, India.

Subject: - Purchase order for Gas Blower, Gas Meter and Mechanical Mixer.

Ref.:- Your quotation dated 27/11/2013 and further negotiation.

Dear Sir,

With above reference, we are pleased to place the order for purchase of Gas Blower, Gas Meter and Mechanical Mixer for our Project **"Setting up RURAL HUMAN AND RESOURCE DEVELOPMENT FACILITY (RHRDF) with the Technical Guidance and Consultancy from BARC- DAE",** sanctioned by Rajiv Gandhi Science & Technology Commission, Mumbai as per the details given in **ANNEXURE – I** attached herewith.

The order is subject to the following terms and conditions:

1. Acceptance of material is subject to prior inspection and approval from our side.
2. **Price:** Prices are inclusive of all taxes, duties, packing, forwarding, and transportation up to our Institute, installation, testing, commissioning and demonstration, unless specifically mentioned.
3. **Warranty:** Onsite comprehensive warranty of 12 months from the date of satisfactory demonstration. This warranty includes technical support and replacement of defective parts/ products free of charge.
4. **Delivery:** Within two weeks with manuals and warranty cards from the date of receipt of this purchase order.
5. **Visit Plan:**
    a. During work execution
    b. In addition to above, your visits shall be made as per the requirement, as and when called, free of charge during warranty period.
6. **Payment terms**:
    a. 50% against delivery of material at our site.
    b. Balance 50% after successful installation and satisfactory demonstration.

Thanking you,

Yours faithfully,

B-Ronge

(Dr. B. P. Ronge)
PRINCIPAL

N. Janardhan
B.E. (Mech.)
Mob. 9423784465
9822759065

J. K. Engineers

Bio-Gas Project
Sugar M/C Supplier & Erectors

Office : S.No. 52/234,
Sanjay Park,
Airport Road, Pune 32

Ref. No.

	masonery of size 3 mx3 mx1 mtr deep.made up by filter bed with suitable media	Date :	/	/200
7	Recycle water tank and pump	1		.50 lacs
8	Air compressor	1		.40 lacs
9	Solar water heater of cap.250 ltr as isi standard	1		.75 lacs
10	Inter connection with adding culture	1		.15lacs
11	Instruments to be required Temp.mtr Ph meter Pressure gauge	1 each		.10 lacs

Total cost:fifteen lacs ninety thousands only

Terms and conditions:

Advance:30% along with po

30 % after completion of main digestor

20% after total civil work

15% after complete supply if mech. Equipment
05% after satisfactory trials.

Completion : 3 months

Thanking you

Yours faithfully

For j.k.enggs

Prop.

COEPR/2013-2014/1531 dt. 08/02/2014

ANNEXURE – I

Purchase order for Gas Blower, Gas Meter and Mechanical Mixer.

Sr. No.	Particulars	Qty.	Rate in Rs.	Amount in Rs.
1.	**Gas Blower:** 8-10 m^3/hr **Power : 1 HP** Max 0.5 bar Pressure Blower with 300 ltr. Pressure regulating tank with FRP lining.	01	58,000/-	58,000/-
2.	**Gas Meter:** 6 m^3/hr Max operating Pressure: **0.5 bar** Q min: 0.04 m3/h Q max: 6 m3/h Cyclic Volume: 1.2dm^3, line size: 3/4'	01	13,500/-	13,500/-
3.	**Mechanical Mixer: 5 HP** Crompton Greaves 3 phase motor. With SS waste hopper stand made with CRCA steel sheet (cold rolled close annealed) **50mm outlet**	01	95,000/-	95,000/-
			Total	**1,66,500/-**
			Discount @7.5%	**12,487/-**
			New Amount	**1,54,012/-**
In words Rs.: One Lac Fifty Four Thousand Twelve only.				

B.Ronge

(Dr. B. P. Ronge)
PRINCIPAL

J. K. Engineers
Office : B-302, Vishaldeep, S.No.50/1-8, Chandannagar, Pune - 411014. Maharashtra. INDIA.
O : (020) 20271832 E: njanardan1@gmail.com
Works : Plot No.A-7, MIDC, Rahuri, Ahmednagar

Green Energy Solutions

To The college of engineering pandharpur	Qtn no: 143 date:2/5/2015

Sr.no.	Particulars	Amount
1	Supply of new co2 sensor of gas analyser note: above rates are inclusive of all taxes	Rs. 27000.00

Rupees: - twenty seven thousands only

Vat no: 27380410922V
Pan no: AARPN 1449H

for J.K. Enggs.
prop

i. 5 years on site comprehensive warranty for Dome of Main Digester from the date of satisfactory demonstration.

ii. 1 year on site comprehensive warranty for the plant as whole except dome from the date of satisfactory demonstration.

For ERA hydro biotech private limited

i. **Price:**-Includes sales tax, transportation till our premises.

ii. **Insurance:**-Included in the Rate.

iii. **Packing, Forwarding:**-Included in the Rate.

iv. **Payment Terms: -** 1. 20% Advance

2. 60% Against delivery of electromechanical equipment & instruments.

3. 10% After installation.

4. 10% After satisfactory demonstration of the plant.

5) **Warranty: -** 3 years for Dome & 1 year for other electromechanical material parts.

Remark: Rates agreed by J. K. Engineers, Pune are lowest and discussion is made about the reliability of the party with the NISARGRUNA export Dr. Sharad Kale from BARC Mumbai. Hence it is recommended to place the order with J. K. Engineers.

AN EXCLUSIVE DOORS SHOW ROOM

DOORS WORLD

TAX-INVOICE

Off. Ph. 2319092
Tel : 9422068843

5, Sindhu Complex, Gandhi Nagar Chowk, Hotgi Road, Solapur - 3.

AUTHORISED DEALER FOR : JAIN® Jain Irrigation Systems Ltd. *Small Ideas Big Revolutions*

Invoice Number - 20007899/12-13/	155
Date	18/03/2013
Customer PO No. / Reference Invoice No.	6000595674 / 2901413351

Customer Name & Address : Shri Vittal Education & Reserch Institue
Gopalpur - Rangari Road, Pandharpur.

Mobile Number :- 9545193434

JAIN SOLAR WATER HEATER SYSTEM Details	AMOUNT
Jain Solar Water Heater Capacity - 250 lpd SGCL - F.P.C	48,500/-
	—
Capital Subsidy under JNNSM scheme (LESS)	13,200/-
NET AMOUNT	35,300/-

AMOUNT IN WORDS : Thirty five thousand three hundred Rs only

Tank Serial Number :- 13042 - 6580

Collector / Manifold Sr. Number : 13071 - 21478, 13060 - 20459,

Number of ETC Tubes :

CUSTOMER SIGNATURE

For. Doors World

ATHORISED SIGNATORY

VAT TIN No of Dealer : 27170318936 V
PAN No of Dealer : AGRPM1684 P

I/we hereby certify that my/our registration certificate under the Maharashtra Value Added Tax 2002 is force on the date on which the sales of the goods specified in this TAX INVOICE is made by me/us and that the transaction of sale covered by this tax invoice has been effected by me/us it shall be accounted for in the turnover of sales while filling of return and the due tax, if any payable on the sale has been paid or shall be paid.

THIS SALE IS SUBJECT TO COMPANY'S GENERAL TERMA & CONDITIONS & STANDARD WARRANTY
(GOODS ONCE SOLD WILL NOT BE TAKEN BACK)

JAIN SOLAR - JOINT VENTURE WITH NATURE

Shri Vithal Education & Research Institute's
COLLEGE OF ENGINEERING, PANDHARPUR
P.B.No.54, Gopalpur - Ranjani Road, Gopalpur, Pandharpur - 413304, District: Solapur (Maharashtra)
Tel.: (02186) 216063, 9503103757, Toll Free No.: 1800-3000-4131 e-mail.: coe@sveri.ac.in
Website.: www.sveri.ac.in (Approved by A.I.C.T.E., New Delhi and Affiliated to Solapur University, Solapur)
NBA Accredited all eligible UG Programmes, NAAC Accreditated Institute,ISO 9001:2015 Certified Institute.
Accredited by The Institution of Engineers (India), Kolkata and TCS, Pune.

Ref.:- Date:-

7.1.2
Grid Connection Approval

MAHA VITARAN
Maharashtra State Electricity Distribution Co. Ltd.
A Govt. of Maharashtra Undertaking
CIN: U40109MH2005SGC153645

Maharashtra State Electricity Distribution Co. Ltd.
Office of the Superintending Engineer(SURC),Juni Mill Compound ,Opp. Super Market. SolapurTel: (O) Phone : 0217-2727124,25 Fax-2624161

No:- SE/SUR/Roof-top/HT/ No 58741 Date:- 10 AUG 2016

To.
Shri. Vithal Education & research Institute
Pandharpur-Gopalpur, Ranjani Road.
Gop[alpur-Pandharpur :- 413304.

Sub:- Permission for connectivity/ installation of roof-top solar PV system of 250 KW for net metering in r/o Shri.Vithal Education & Research Institute, Pandharpur, Goplapur-Ranjani Road, Gopalpur-Pandharpur-413304.

Ref:- 1) Your application for net metering dt.28.4.2016
2) Solar net metering guidelines by MSEDCL, circular No-258
3) SE/SURC/T/Rooftop/2604 dt.5.5.2016
4) EE/PPR/T/3147 dt.19.06.16
5) EET/SUR/Point of Supply/391 dt.26.5.16
6) T.O. Office Note dt.06.8.2016.
7) CE/Dist/T/24615 Dt. 03.8.2016.

Dear Sir,

In view of the Government of Maharashtra notification for new Renewable Policy dated 20.07.2015 and methodology for its implementation on dated 09.09.2015, MERC (Net Metering for Roof-top Solar Photo Voltaic Systems) regulations,2015 on 10th September, 2015 and circular 258 by MSEDCL for installation of Solar PV systems on Rooftop or any mounting structure by the existing/new consumers of MSEDCL in their premises for captive use so as to align the provisions as per the Regulations, 2014, the undersigned is pleased to permit for connectivity/ installation of roof-top solar PV system of 250 KW for net metering in r/o The M/s Shri Vithal Education & Research Institute, Pandharpur Dist Solapur- HT No 337019052100 at the address as mentioned above with the terms and conditions as below :-

Particulars	Connected Load (KW)	Contract Demand (KVA)
Existing Load	460.00	255
Roof-top solar PV system	**250**	

Terms and Conditions:

1. **VALIDITY:** The validity of this sanction is for a period of **6 (Six) months** from the date of issue of this letter and you will ensure to make the necessary payments within 1 (one) month and further ensure that you are ready o for connectivity/ installation of roof-top solar PV system within the period.
2. **PAYMENTS:**
As you have given consent for executing the works involved for releasing the power supply by paying 1.3 % supervision charges on the estimated cost to MSEDCL, hence permission is hereby granted to execute the works by engaging the Licensed Electrical Contractor (LEC) subject to the terms and conditions which are enclosed with the load sanction order.

In view of the above, you are requested to pay the following charges.

Sr. No.	Particulars	Amount in Rs.
a	Fixed Service connection charges	0.00
b	1.3% charges on estimated cost	1810.00
c	Security Deposit	NIL
d	Testing fee of T/F	Will be intimated by testing
	TOTAL Rs. :	**1810.00**

The Xerox copy of payment made may be submitted to this office and the concerned division office under a covering letter and acknowledgement of which may be obtained.

3. **Metering : as your load is** supplied at 11 kV Volts with HT Connection, Net meter will be installed on HT side of Transformer as per MSEDCL rules 7 regulation

4. **Installation:** Your installation arrangement/drawing should be as per letter at ref. no 5 & is required to be get approved from EE testing Solapur office and the Electrical Inspector.

5. **CLEARANCE:**
As per MSEDCL Rules and IE Standards

6. **Grid standards and safety:**

6.1 You can install a Rooftop Solar PV System with or without battery. However, if an eligible consumer opts for connectivity with the battery Back-up, the inverter should have separate back-up wiring to prevent the battery/decentralized generation power from flowing into the Grid.

6.2 The consumer shall be responsible for the safe operation, maintenance and rectification of any defect in the Rooftop Solar PV system up to the point of Net-meter.

6.3 The consumer shall provide appropriate protection for islanding of the Roof-top Solar PV System from the Network of Distribution Licensee in the event of Grid or supply failure of supply and the same shall be verified/ certified by Testing Division in consultation with concerned Sub-division/circle.

7. The Net Meter and the Solar Generation Meter shall be installed at such locations in the premises that MSEDCL should have easy access to the Meter for meter reading.

8. The unadjusted net credited Units of electricity as at the end of each financial year shall be purchased by MSEDCL at its Average Cost of Power Purchase as approved by the Commission for that year, within the first month of the following year, At the beginning of each Settlement Period, the cumulative quantum of injected electricity carried forward will be re-set to zero.

9. In case the Consumer is within the ambit of TOD tariff, the electricity consumption in any time block, i.e. peak hours, off-peak hours, etc., shall be first compensated with the quantum of electricity injected in the same time block. Any excess injection over and above the consumption in any other time block in a Billing Cycle shall be accounted as if the excess injection had occurred during off-peak hours.9.7 MSEDCL shall compute the amount payable to the Eligible Consumer for the excess solar energy purchased by it as specified in Regulation 9.5, and shall provide credit equivalent to the amount payable in the immediately succeeding Billing Cycle

10. The Consumer shall have recourse, in case of any dispute with MSEDCL regarding billing, to the mechanism specified by the Commission under Sections (5) to (7) of the Act for the re-dressal of grievances.

11. The Solar energy generated by Consumer in a Net Metering Arrangement under these Regulations shall not be eligible for REC.

12. The Solar generation data shall be monitored quarterly so as to ascertain whether the effluence of Solar plant is commensurate with the capacity utilization factor(CUF) determined by MERC from time to time.

13. Net metering Connection Agreement:

The consumer shall execute a Net metering Connection Agreement on Stamp Paper of Rs.200/-- with MSEDCL as per Regulation No. 9 of MERC(Net Metering for Roof-top Solar Photo Voltaic Systems) Regulations, 2015.A Copy of Net metering Connection Agreement is enclosed as Annexure-I.

14. **Incentives &. penalties:**

The consumer opts for Net metering by installation of Rooftop Solar PV system for his partial requirement of load, such consumer shall be eligible for incentives, which may be applicable as per MERC Tariff Order for MSEDCL consumer; only to the extent it uses MSEDCL supply.

The Eligible consumer shall be liable to pay the penalty charges which may be applicable as per MERC tariff order, amended from time to time, if the power factor is not maintained at required level as per State Grid Code.

In case of default in payment of any of the charges otherwise payable by a eligible consumer /person, MSEDCL shall have the right to dislocate the arrangement of net metering after giving an intimation of 24 hours to such consumer/ person and in such circumstances, MSEDCLs hall not be liable to pay any compensation to such consumer or person for the loss that such consumer or person may sustain on any account.

15. The connectivity of Rooftop solar PV installation net metering systems shall be governed by CEA(Technical Standard for Connectivity of the Distributed Generation Resources) Regulations, 2013, CEA (Measures relating to Safety and ElectriCity Supply), Regulations, 2010 and MERC state Grid code 2006 or as may be specified in future.

16. MSEDCL shall have the right to disconnect the Roof-top Solar PV System from its Network at any time in the event of any threat of accident or damage from such System to its distribution system so as to avoid any accident or damage to it. However, the Eligible Consumer may use his Roof-top Solar PV System in islanding mode for his own consumption.

17. The Roof-top Solar PV System meets the applicable norms for being integrated into the Distribution Network, and that the Eligible Consumer shall maintain the System accordingly for the duration of this Agreement.

18. Technical and Inter-connection Requirements:

The metering arrangement and the inter-connection of the Roof-top Solar PV System with the Network of the Licensee shall be as per the provisions of the Net Metering Regulations and the technical standards and norms specified by the Central Electricity Authority for connectivity of distributed generation resources and for the installation and operation of meters.

The Eligible Consumer agrees, that he shall install, prior to connection of the Roof-top Solar PV System to the Network of the Licensee, an isolation device (both automatic and in built within inverter and external manual relays); and the Licensee shall have access to it if required for the repair and maintenance of the Distribution Network.

The Eligible Consumer shall furnish all relevant data, such as voltage, frequency, circuit breaker, isolator position in his System, as and when required by the Licensee.

19. Safety:

The equipment connected to the Licensee's Distribution System shall be compliant with relevant International (IEEE/IEC) or Indian Standards (BIS), as the case may be, and the installation of electrical equipment shall comply with the requirements specified by the Central Electricity Authority regarding safety and electricity supply.

The design, installation, maintenance and operation of the Roof-top Solar PV System shall be undertaken in a manner conducive to the safety of the Roof-top Solar PV System as well as the Licensee's Network.

If, at any time, the Licensee determines that the Eligible Consumer's Roof-top Solar PV System is causing or may cause damage to and/or results in the Licensee's other consumers or its assets, the Eligible Consumer shall disconnect the Roof-top Solar PV System from the distribution Network upon direction from the Licensee, and shall undertake corrective measures at his own expense prior to re-connection.

The Licensee shall not be responsible for any accident resulting in injury to human beings or animals or damage to property that may occur due to back- feeding from the Roof-top Solar PV System when the grid supply is off. The Licensee may disconnect the installation at any time in the event of such exigencies to prevent such accident. The separate earthlings of solar roof-top PV project and safety should be as per CE/Dist/T/ 24615 Dt. 3.8.2016.

20. ***Other Clearances and Approvals:***

The Eligible Consumer shall obtain any statutory approvals and clearances that may be required, such as from the Electrical Inspector or the municipal or other authorities, before connecting the Roof-top Solar PV System to the distribution Network.

21. **Period of Agreement, and Termination:**

This Agreement shall be for a period for 20 years, but may be terminated prematurely by

(a) By mutual consent; or

(b) By the Eligible Consumer, by giving 30 days' notice to the Licensee;

(c) By the Licensee, by giving 30 days' notice, if the Eligible Consumer breaches any terms of this Agreement or the provisions of the Net Metering Regulations and does not remedy such breach within 30 days, or such other reasonable period as may be provided, of receiving notice of such breach, or for any other valid reason communicated by the Licensee in writing.

22. Access and Disconnection:

The Eligible Consumer shall provide access to the Licensee to the metering equipment and disconnecting devices of Roof-top Solar PV System, both automatic and manual, by the Eligible Consumer

If, in an emergent or outage situation, the Licensee cannot access the disconnecting devices of the Roof-top Solar PV System, both automatic and manual, it may disconnect power supply to the premises.

Upon termination of this Agreement under Clause 5, the Eligible Consumer shall disconnect the Roof-top Solar PV System forthwith from the Network of the Licensee.

23. **Liabilities:**

The Parties shall indemnify each other for damages or adverse effects of either Party's negligence or misconduct during the installation of the Roof-top Solar PV System, connectivity with the distribution Network and operation of the System.

The Parties shall not be liable to each other for any loss of profits or revenues, business interruption losses, loss of contract or goodwill, or for indirect, consequential, incidental or special damages including, but not limited to, punitive or exemplary damages, whether any of these liabilities, losses or damages arise in contract, or otherwise.

24. **Commercial Settlement:**

The commercial settlements under this Agreement shall be in accordance with the Net Metering Regulations. The Licensee shall not be liable to compensate the Eligible Consumer if his Rooftop Solar PV System is unable to inject surplus power generated into the Licensee's Network on account of failure of power supply in the grid/Network,

25. The existing metering System, if not in accordance with the Net Metering Regulations, shall be replaced by a bi-directional meter (whole current/CT operated) or a pair of meters (as per the definition of 'Net Meter' in the Regulations), and a separate generation meter may be provided to measure Solar power generation. The bi-directional meter (whole current/CT operated) or pair of meters shall be installed at the inter-connection point to the Licensee's Network for recording export and import of energy. The uni-directional and bi-directional or pair of meters shall be fixed in separate meter boxes in the same proximity.

26. The Licensee shall issue monthly electricity bill for the net metered energy on the scheduled date of meter reading. If the exported energy exceeds the imported energy, the Licensee shall show the net energy exported as credited Units of electricity as specified in the Net Metering Regulations, 2015. If the exported energy is less than the imported energy, the Eligible Consumer shall pay the Distribution Licensee for the net energy imported at the prevailing tariff approved by the Commission for the consumer category to which he belongs.

27. **Connection Costs:**

The Eligible Consumer shall bear all costs related to the setting up of the Roof-top Solar PV System, excluding the Net Metering Arrangement costs.

28. **Dispute Resolution:**

Any dispute arising under this Agreement shall be resolved promptly, in good faith and in an equitable manner by both the Parties. The Eligible Consumer shall have recourse to the concerned Consumer Grievance Redressal Forum constituted under the relevant Regulations in respect of any grievance regarding billing which has not been redressed by the Licensee.

29. All conditions as per MSEDCL 258 & MERC regulation regarding Roof Top solar net metering is binding on this sanction.

30 This is only Permission for installation of roof-top solar PV system of 151 KW for net metering, after the payment of all the arrears/recovery of the connection & completion of all formalities as above & MSEDCL rules & regulation 258 , release for for the connectivity (synchronization) of Roof top system with MSEDCL gird will be given.

31 **Hormonics Control/ Power factor:-**
As per condition of supply regulation 2005, (Clause No. 12.1, 12.2& 19.1& 19.3) the harmonics & power factor should be maintained by the generator

32. **Load Sanction Esti. No.:**
SE/SURC/T/HT/16-17 DDF / 219 , Dtd. 18.8.2016.

Thanking you

Encl:- Annexure 1, Agreement
Annexure 2 Circular 258

Yours faithfully

(D.R.Aundhekar)
Superintending Engineer Solapur

1 **Copy to:** The Executive Engineer, MSEDCL, O & M Division, Pandharpur Division,

... He is requested to submit WCR report along with J.V. No. after finalization of accounting of the material installed & the kiosk should be installed near Main gate.

1. The Executive Engineer (Solapur-Testing), MSEDCL, Testing Division, submit the pre-release report & test the meter as per MSEDCL Rules & regulation.
2. Manager (SURC-F&A), MSEDCL, Solapur.
3. The Addl. Executive Engineer, MSEDCL, O & M Sub-Division, Pandharpur U S/Dn Pandharpur

MAHAVITARAN
Maharashtra State Electricity Distribution Co. Ltd.

(A Govt.of Maharastra Undertaking)
CIN: U40109MH2005SGC153645

Office of the Superintending Engineer
Juni Mill Compound,Opp. Super Market,
Murajai Peth, Solapur- 413 001.
Phones: (0217) 2727124 , 25 Fax: 2624161
Email: sesolapur@mahadiscom.in
Website: www. mahadiscom.in.

Ref. No: SE / SURC /T/ HTPC-734 / 05823

Date: 10 AUG 2016

To,
The Executive Engineer
MSEDCL,O&M Dn,
Pandharpur

Sub: Estimate sanction for installation of roof –top solar PV system for net mettering of 250 KW in r/o. of Shri Vithal Education &Research Institute Pandharpur Con. No 337019052100

Ref: 1) Commercial circular No 258 date 25.01.2016 2
2) Consumer's application dt: 28.04.2016.
3) SE/SURC/Tech/HTPC-734/0381 dt: 27.01.2016.
4) EE/PPR O&M/T/AE1/NO 3147/Date 19.06.2016.
5) EE/Testing/Solapur/NET Meter 391 dt: 28.06.2016.
6) CE/Dist /T/24615 dt:03.08.2016

With reference to the above, this is an estimate for installation of roof –top solar PV system for net mettering of 250 KW in r/o. of Shri Vithal Education &Research Institute Pandharpur Con. No 337019052100, having a Connected Load 460.00 KW and Contract demand of 255.00 KVA as proposed by you vide letter under ref No 4 is administratively and technically sanctioned as per the powers delegated vide G.O.II, Section-II (Works) dtd. 01.08.2006, Clause No.I (E) Sr.No.V. & Circular No CE/Dist/D-III/16037 dt: 08.06.12.

1. Account Head	: **DDF/ 2016-17**
2. Name of Estimate	: Estimate sanction for installation of roof –top solar PV system for net mettering of 250 KW in r/o. of Shri Vithal Education &Research Institute Pandharpur Con. No 337019052100
3. Estimate prepared and recommended by	: The Executive Engineer, Pandharpur
4. Work involved	: As per Annexure-A
5. Amount of Estimate	: Rs. 1,38.930/-
6.1.3% Supervision charges	: **Rs 1810/-**
7. Tech. Sanction No.	: **SE/SURC/Tech/DDF/** 46 **/2016-17. dt:** 10/08/2016

Note :

1. The approval given is valid for a period of Six months from the date of issue of this letter. The approval is given subject to the technical limitations such as VR , loading of the feeders and Transformers etc.
2. The works should be taken in hand/allow to take up the work in hand by the consumer on receipt of payment of **Rs.1810/- (Rs.one thousand Eight Hundred ten Only)** towards 1.3 % Supervision charges.
3. If there are any arrears against the applicant, the works should not be allowed.
4. The copies of the receipts of materials purchased should be obtained from the consumer and kept in custody and the works should be carried out at Consumer's risk only & I.E. rules to be observed.
5. The works should be supervised by the representative of MSEDCL not below the rank of Executive Engineer/ Sub divisional officer Pandharpur Urban & the material account should be maintained at Division level.

6. The works should be carried out as per the requirement & specification of MSEDCL & as per approved drawings (as per MSEDCL's approved method of construction only) & the material to be used should be of good quality & having MSEDCL's specifications.
7. The works should be got executed through Licensed & experienced Electrical Contractor only.
8. The material to be used should be approved by you or your nominated representative before taking the same to the site by consumer.
9. At every stage of work the consumer should give prior intimation to your office. It should be ensured that the works as per estimate are completed and handed over to the MSEDCL before connectivity of solar roof top net meter.
10. Required NOC's should be obtained before release of connection.
11. After completion of works, the consumer will have to submit sketch along with bill of material used for above in three copies & permission for charging the line & equipment from Electrical Inspector.
12. You have to ensure and confirm any arrears HT/LT/Temporary connection etc, if any before release of the connection. If arrears exist, work should not be started & power supply should not be released.
13. Permission for connectivity/ installation of roof top solar PV system of 250 kw for net metering is sanctioned strictly as per the technical feasibility report submitted by Executive Engineer, O&M Dn., Pandharpur vide letter under reference 4.
14. The points mentioned in the letter under ref.No:5 by the Ex. Engineer, MSEDCL, Testing Div, Solapur may be observed.

15 The Solar roof top PV project should have independent earthling from grid as per IS 3043-1986

Encl : Annexture- A

D.R Aundhekar
Superintending Engineer(SURC)

Copy swrs to:
1. The Chief Engineer (BMTZ),MSEDCL,Zone Office, Baramati.

Copy to:-
1.The Executive Engineer, MSEDCL, Testing Dn., Solapur.
2.The Sub Divisional Officer , MSEDCL, S/Dn, Pandharpur Urban .
3.The Manager (F&A), MSEDCL Circle Office,Solapur.
4 Shri Vithal Education &Research Institute Pandharpur – Gopalpur Road Gopalpur Taluka Pandharour Dist Solapur con. No **337019052100**

MAHARASHTRA STATE ELECTRICITY DISTRIBUTION COMPANY LIMITED
Circle Office, Solapur.

Aannexture- A

Estimate for evacution of roof rop solar power from the proposed 250kw roof top solar generation project of i/r of Shri Vithal Education and Research institute Pandharpur Dist. Solapur.Con No 337019052100

Estimate

Sr.No.	Particulars	Unit	Qty	Rate	Amount
1	11 KV Metering KIOSK- **CTR :** 15/5A,Single Core,Single ratio, Accuracy Class 0.5S,VA Burden 10 VA and **PTR**: 11kv/√3/110v/√3, Single Core,Single ratio, Accuracy Class 0.5,VA Burden 50 VA. (**Ref**: EE/TESTING/solapur/ Net Meter/391 Date 26.05.2016.) **for Main meters.**	No.	1	82200.00	82200.00
2	11KV earthing for cubical with copper flat 25X3 mm	set	1	12100.00	12100.00
3	3 Phase CT/PT operatoed 0.5 s class -/5fully static AMR comptibal TOD TRI-VECTOR NET energy meter	No	1	22000.00	22000.00
3	Sundries	LS	1	10000.00	10000.00
				Sub Total Rs.	**126300.00**
				Additional Labour Charges 10.00 % on above	12630.00
				Total Estimated Cost	138930.00
				Total Estimated Cos Say Rs.	**138930.00**
				1.3% Supervision Charges on Normative Charges	1806.09
				1.3% Supervision Charges on Normative Charges - Say Rs.	**1810.00**

D. R. Aundhekar
Superintending Engineer (SURC)
MSEDCL, Solapur.

1 Estimate prepared as per revised cost data for works of 2012-13.
2 Supervision charges are as per cir. No.CE/DIST/D-III/MERC/SOC/39938 /03/11/2007
3 Work is to be executed by consumer under scheme 1.3% DDF.

महाराष्ट्र शासन
विद्युत निरीक्षक यांचे कार्यालय,
उद्योग ऊर्जा व कामगार विभाग,
बाळी बलांक सोलापूर

जा.क्रं.विनि/सोला/9666/२०१६ दिनांक :२५/९/२०१६	दूरध्वनी क्रमांक : (०२१७) २३१२६५१ email.ID:-eisolapur.nrg-mh@gov.in

प्रति,
Shri Vitthal Education & Researcation
& Research Institute Pandharpur Dist Solapur

विषय:- केंद्रीय विद्युत प्राधिकरण सुरक्षा विनियम २०१० नियम क्र४३ अन्वये विज संचमांडणी विद्युत भारित करण्याची कायमस्वरुपी परवानगी बाबत

संदर्भ :- 1) M/s Power Waves Govt.Reg.Electrcial Comtactor M.C.No..11298 यांचे पत्र क्र.16 दि.08/09/2016

2) नकाशा मंजूरी क्र.889 दि.08/06/2016 अधीक्षक अभियंता (विद्युत) पुणे याचे पत्र

उपरोक्त संदर्भीय पत्रानुसार कळविण्यात येते की,नवीन विद्युत संचमांडणी केंद्रीय विद्युत प्राधिकरण सुरक्षा विनियम २०१० नियम क्र४३ अन्वये उच्चदाब विज संचमांडणीस विद्युत भारीत करण्याची कायमस्वरुपी परवानगी देणेत येत आहे

मान्यता दिलेल्या विद्युत संचमांडणीमध्ये प्रामुख्याने खालील बाबीचा समावेश आहे.

संचमांडणीचे वर्णन	ठिकाण
1)11KV Metering Cubical 01 Nos	Shri Vitthal Education & Researcation & Research Institute Pandharpur Dist Solapur

2)11 KV Metering Loose CT Make Hupen Electromech Sr No H-1607240,41,42(CT Ratio 15/5A)
3)PT 11KV/ 110Volts Make Hupen Fabricators Sr No H-1607243,44,45

As Per Call letter under Ref.I

अटी :

१) M/s Power Waves Govt.Reg.Electrcial Comtactor M.C.No.11298 यांनी दिलेल्या चाचणी अहवालाचे सत्यतेची जबाबदारी सर्वथैव विद्युत ठेकेदारांची राहिल

२) प्रत्यक्ष जोडभार / वापरानुसार नियंत्रक स्विचगिअर फ्यूजेचे सेटिंग करुन घेणे बंधनकारक राहिल

३) केंद्रीय विद्युत प्राधिकरण सुरक्षा विनियम २०१० नियम क्र. १३, ३०, ३५ , ३९ नुसार वीज संचमांडणी सुस्थितीत राखणेची जबाबदारी संबंधित वीज ग्राहक पुरवठाकार यांचे राहिल

४) वीज संचमांडणीची उभारणी व देखभाल दुरुस्ती केंद्रीय विद्युत प्राधिकरण सुरक्षा विनियम २०१० नियम क्र.१९, चे अनुपालन करुन २९ नुसार प्राधिकृत व्यक्तीकडूनच करावी

५) संचमांडणीच्या जागेबाबतची संबंधित स्थानिक स्वराज्य संस्थेची मान्यता / ना हरकत इत्यादी बाबींची जबाबदारी संबंधित वीज ग्राहक / पुरवठाकार यांचे राहिल

६) केंद्रीय विद्युत प्राधिकरण सुरक्षा विनियम २०१० नियम क्र ७७ विज संचमांडणी विद्युत भारीत करणे पूर्वी म.रा.वि.वि.कं.लि यांनी पी.टी.सी.सी ची परवानगी घेणे बंधनकारक आहे..

७) संचमांडणीमधुन होणारा विजेचा वापर हा मंजूर प्रकारा करीताच करावा.

८) लघुदाबाकडील विद्युत जोडभार जोडण्यापूर्वी मान्यता प्राप्त विद्युत ठेकेदाराकडून समाधानकारक चाचणी अहवाल प्राप्त करुन घेणे बंधनकारक राहील व त्याचे या कार्यालयाकडून स्वतंत्र परवानगी घेण्यात यावी

९) वीज संचमांडणी विद्युत भारीत कार्यान्वित केलेबाबतचा दिनांक त्वरीत कळवावा तसेच विद्युत संचमांडणी ६ महिन्यात कार्यान्वित न केल्यास सदर परवानगी ग्राहय रहाणार नाही

१०) संचमांडणीत कोणताही बदल करु विद्युत निरीक्षकाच्या परवानगीशिवाय करु नये

विद्युत निरीक्षक
विद्युत निरीक्षण विभाग सोलापूर

प्रत कार्यकारी अभियंता म.रा.वि.वि.कं.लि,सोलापूर शहर यांना माहितीसाठी व पुढील कार्यवाहीसाठी

महाराष्ट्र शासन

अधीक्षक अभियंता यांचे कार्यालय,
उद्योग, उर्जा व कामगार विभाग, पुणे प्रादेशिक विद्युत निरीक्षण मंडल,
दाते बंगला,शासकीय दुध योजना आवार, खडकी, पुणे-३.

E- mail- sepune.nrg-mh@gov.in	फोन नं.०२०/२५८१२३३७ फॅक्स नं.-२५८१६०१०
जा.क्र.अ.अ./पुप्राविमं/तां.२/9324 /२०१६	दि. 29/9/2016

प्रति,

श्री. विठ्ठल एज्युकेशन अॅन्ड रिसर्च इनस्टीटयुट,
पंढरपूर जि.सोलापूर

विषय :- २५० किलोवॅट रुफ टॉप सोलर पॉवर प्रोजेक्ट कार्यान्वित करणेची परवानगी.
गोपाळपूर - रांजणी रोड, गोपाळपूर, पंढरपूर जि.सोलापूर
संदर्भ :- मे. पॉवर वेव्हज पुणे यांचे पत्र क्र. १४/२०१६-१७ दि.११.०८.२०१६.

आपल्या वरिल सौर ऊर्जा प्रकल्पाचे केंद्रीय विद्युत प्राधिकरण विनियम (सुरक्षा व वीजपुरवठा) २०१० मधील नियम क्र.३२ अनुसार या विभागामार्फत निरीक्षण करण्यात आले.सौर ऊर्जा प्रकल्पाची विद्युत संच उभारणी व इतर बाबी केंद्रीय विद्युत प्राधिकरण विनियम (सुरक्षा व वीजपुरवठा) २०१० मधील तरतुदीनुसार सर्व साधारणपणे योग्य आढळल्यामुळे ती कायमस्वरुपी कार्यान्वित करण्यासाठी मान्यता खालील अटीस अधिन राहून देण्यात येत आहे.

मंजूरी

अ) सौर ऊर्जा प्रकल्पधारकाचे नाव व पत्ता : श्री. विठ्ठल एज्युकेशन अॅन्ड रिसर्च इनस्टीटयुट, गोपाळपूर - रांजणी रोड, गोपाळपूर, पंढरपूर जि.सोलापूर

सौर ऊर्जा प्रकल्प प्रकार, वापर उद्देश :- रुफ टॉप, स्वःवापरासाठी

१) सौर ऊर्जा प्रकल्पाची माहिती :- २५० किलोवॅट.

सौर ऊर्जा प्रकल्प बसविण्यात आलेले ठिकाण	अनुक्रमांक	उभारणी क्षमता	एकूण क्षमता	सौर ऊर्जा प्रकल्प मांडणीचा प्रकार
गोपाळपूर - रांजणी रोड, गोपाळपूर, पंढरपूर जि.सोलापूर	Invertor Make - S M A Sr no. 1.1900744463 - 25 KW 2.1900755186 - 25 KW 3.1900744451 - 25 KW 4.1900756346 - 25 KW 5.1900755762 - 25 KW 6.1900756747 - 25 KW 7.1900755921 - 25 KW 8.1900757389 - 25 KW 9.1900755072 - 25 KW 10.1900755491 - 25 KW	250 KW	250 KW	Roof Top Solar P V Power Plant
उर्जामापी	१. बनावट- L&T, अ.क्र. १६०५००३३, सी.टी.रेशो- 150/5A, गुणक- ३०, रिडींग-११७८३ २. बनावट- L&T, अ.क्र. १६०५००२०, सी.टी.रेशो- 150/5A, गुणक- ३०, रिडींग-१३५८२ ३. बनावट- L&T, अ.क्र. १६०५००२६, सी.टी.रेशो- 150/5A, गुणक- ३०, रिडींग-९२४० ४. बनावट- L&T, अ.क्र. १६०४९९९०, सी.टी.रेशो- 150/5A, गुणक- ३०, रिडींग-१४७०३			

उपरोक्त परवानगी मे. पॉवर वेव्हज, पुणे म.ठे क्र.११२९८ यांचेकडून प्राप्त चाचणी अहवालास अनुसरुन देण्यात येत आहे.

अधीक्षक अभियंता
पुणे प्रादेशिक विद्युत निरीक्षण मंडळ,
पुणे-३.

प्रत :- मुख्य विद्युत निरीक्षक, चेंबूर, मुंबई यांचे माहितीसाठी सविनय सादर.

D:\Botake\Final Permission\Solar Permission\Solar permission pune.doc

MAHARASHTRA STATE ELECTRICITY DISTRIBUTION CO. LTD

MAHAVITARAN
Maharashtra State Electricity Distribution Co. Ltd.
A Government of Maharashtra Undertaking
CIN: U40109MH2005SGC153645

Office of the Superintending Engineer
Solapur Circle, Old Mill compound,Opp. Super market
E-mail : sesolapur@mahadiscom.in web:mahadiscom.in

No. SE/SURC/T/HTPC-399/solar-Roof top /19-20/ 9483 Date: 17 DEC 2019

Load Releaase Order for solar net metering

To,
The Executive Engineer
MSEDCL, O & M Division
Pandharpur

Sub: Release for installation of solar net metering for connectivity/ installation of roof-top solar PV system of additional 150 KW in addition to the existing 250KW (Making total 400 KW) for net metering in r/o M/s. M/S. Shree Vitthal Education & Research Institute Gat No. 200 Gopalpur-Pandharpur HTC: 337019052100

Ref:- 1)Your application for net metering No.Nil Dt 20.08.2019.
2)Solar net metering guidelines by MSEDCL(CE/Comm/Netmetering/15851 Dt. 29.6.2018
3)SE/SUR/T/Roof top/8221 Date . 13.11.2019
4)EE/SUR/T/812 Dt. 13.09.2019.
4) EE/PPR/T/4590 Dt. 03.12.2019..
5) CE/Dist/T/24915 Dt. 3.8.2016.
6) Agreement 26.12.2019.
7) Permission No. oSE526002711201901823 Dt. 27.11.2019.

With reference to the above, the consumer has completed the necessary conditions for installation of solar net metering for connectivity/ installation of roof-top solar PV system of additional 150 KW for net metering with existing 250 KW in r/o The M/s . Shree Vitthal Education & Research Institute Gat No. 200 Gopalpur-Pandharpur HTC: 337019052100 ,dist. Solapur under Public Services purpose. As below

Particulars	Connected Load (KW)	Contract Demand (KVA)
Existing Load	460	408
Roof-top solar PV system	**250 KW (existing) 150 KW proposed**	

The Consumer has completed the following formalities: -

1] PAYMENT:

Sr. No.	**Particulars**	**Amount in Rs.**
a	Fixed Service connection charges	0.00
b	1.3% charges on estimated cost	Nil
c	Security Deposit(ASD)	Nil
d	Testing fee of T/F	Will be intimated by testing
E	**Registration fee**	**1000.00 GST:- 180.00**
	TOTAL Rs. :	**1180.00**
		Paid Vide MRN: 05274704 24.11.2019.

2] CAPACITORS: N>A

3] TEST CERTIFICATE OF T/F CAPACITY: N.A.
4] METERING: Model/Type-, make secure sr. No existing –MCTR:- -/5A,MPTR:-11 kV/110 V net meter, connected CT/PT -/5A , 11 kV/110 V: Generation meter S/N: - make ,----- 100/5A CT operated to be installed at the time of release
The metering should be as & EE (Testing-Surc) letter No. 814 Dt 13.9.2019

HTPC-399

5] PERMISSION FROM ELECTRICAL INSPECTOR EI/SLD :- NA-oSE526002711201901823 submitted WCR /charging permission vide letter Dt. 27.11.2019: EET report be submitted to this office with Connection checking report.

6] TEST REPORT:

To be collected at your end prior to charging of connection.

7] AGREEMENT:

The Agreement for Contract Demand solar net metering for 150 kW has been executed on -26.12.2019.

8] Submit NSC Report to HT Billing section of SURC.Solapur

a. If there is an existing LT connection, the energy bill should be prepared on the same day and issued to the consumer. This new HT connection should be released only after disconnection of any other LT supply and recovery of the energy bill / arrears.

b. You are requested to observe the remaining formalities as per the letter from Executive Engineer (Testing-) and installed solar meter to HT supply under intimation to this office.

c. Please note that, metering is made strictly as per the provision indicate in Circular No. 104 dt. 3.2.88 from Technical Member, MSEDCL, Mumbai and Department / H. O. Circular (Com.) 484 from T.D. (Dist.) Mumbai & commercial circular no 258

9] Undertaking from the consumer should be obtained for readiness to wait to avail benefits of net metering only after receipt of necessary changes in the billing from corporate office MSEDCL Mumbai & will be abide to MSEDCL policy.

10] Any previous connection in the same premises should be permanently disconnected and arrears in this premises should be recovered before releasing the connection.

11] All points raised by E.E. Testing are to complied before the releasing.

12] Any type of recovery i.e. under sect.126, 135 should be recovered prior to release.

13) This release for installation of solar net metering only

14] Recovery of the Construction activity bill / bill must be checked before release.

15] Release order to No.SE/SURC/T/HT/Solar Roof-top/19-20/8221 dtd. 13.11.2019.

(D.H.Padalkar)
Superintending Engineer
Solapur Circle, Solapur

Copy to: M/s. Shree Vitthal Education & Research Institute Gat No. 200 Gopalpur-Pandharpur

-It is requested to submit the Undertaking for readiness to avail benefits of net metering only after receipt of necessary changes in the billing from corporate office MSEDCL Mumbai & as per MSEDCL policy.

Copy to: The. Manager (F&A) SURC. for necessary action for

The Executive Engineer, MSEDCL Testing Divn. (SURC) Solapur
----- It is requested to submit the connection report as soon as the meter is installed

Dy. Executive Engineer, O & M Sub-Division, € PPR RI
----- for information and submission of the NSC report immediately after commissioning

MF.

भारतीय गैर न्यायिक

एक सौ रुपये Rs. 100

रु. 100 ONE HUNDRED RUPEES

सत्यमेव जयते

भारत INDIA

INDIA NON JUDICIAL

महाराष्ट्र MAHARASHTRA © 2018 ©

UE 662928

12 APR 2019

उप कोषागार अधिकारी, पंढरपूर

पंढरपूर अ. न .....

श्री/श्रीमती .....

यांनी शासकीय चलन ..... रक्कम रुपये

त्याचे मजतीस ..... रु. पोटे दिले

ANNEXURE-3 बी. / पंढरपूर

Net Metering Connection Agreement

This Agreement is made and entered into at **SOLAPUR** on this **/12/2019** between the Eligible Consumer Name **SHRI VITHAL EDUCATION & RESEARCH INST.** having premises at **GOPALPUR RANJANI ROAD,GOPALPUR DIST: SOLAPUR-413304** and Consumer No. **337019052100** as the first Party,

AND

The Distribution Licensee **MAHARASHTRA STATE ELECTRICITY DISTRIBUTION CO. LTD** (hereinafter referred to as 'the Licensee') and having its Registered Office at, **PANDHARPUR.** as second Party of this Agreement;

Whereas, the Eligible Consumer has applied to the Licensee for approval of a Net Metering Arrangement under the provisions of the Maharashtra Electricity Regulatory Commission (Net Metering for Roof-top Solar Photo Voltaic Systems) Regulations, 2015 ('the Net Metering Regulations') and sought its connectivity to the Licensee's Distribution Network ;

B Range

सचिव
श्री विठ्ठल शिक्षण व संशोधन
संस्था, पंढरपुर

SHRI VITHAL EDUCATION & RESEARCH INSTITUTE

And whereas, the Licensee has agreed to provide Network connectivity to the Eligible Consumer for injection of electricity generated from its Roof-top Solar PV System of **150 kilowatt**;
Both Parties hereby agree as follows:-

1. Eligibility:
The Roof-top Solar PV System meets the applicable norms for being integrated into the Distribution Network, and that the Eligible Consumer shall maintain the System accordingly for the duration of this Agreement.

2. Technical and Inter-connection Requirements
2.1. The metering arrangement and the inter-connection of the Roof-top Solar PV System with the Network of the Licensee shall be as per the provisions of the Net Metering Regulations and the technical standards and norms specified by the Central Electricity Authority for connectivity of distributed generation resources and for the installation and operation of meters.
2.2. The Eligible Consumer agrees, that he shall install, prior to connection of the Roof-top Solar PV System to the Network of the Licensee, an isolation device (both automatic and in built within inverter and external manual relays); and the Licensee shall have access to it if required for the repair and maintenance of the Distribution Network.
2.3. The Licensee shall specify the interface/inter-connection point and metering point.
2.4. The Eligible Consumer shall furnish all relevant data, such as voltage, frequency, circuit breaker, isolator position in his System, as and when required by the Licensee.

B. Range

3. Safety:
3.1 The equipment connected to the Licensee's Distribution System shall be compliant with relevant International (IEEE/IEC) or Indian Standards (BIS), as the case may be, and the installation of electrical equipment shall comply with the requirements specified by the Central Electricity Authority regarding safety and electricity supply.
3.2 The design, installation, maintenance and operation of the Roof-top Solar PV System shall be undertaken in a manner conducive to the safety of the Roof-top Solar PV System as well as the Licensee's Network.
3.3 If, at any time, the Licensee determines that the Eligible Consumer's Roof-top Solar PV System is causing or may cause damage to and/or results in the Licensee's other consumers or its assets, the Eligible Consumer shall disconnect the Roof-top Solar PV System from the distribution Network upon direction from the Licensee, and shall undertake corrective measures at his own expense prior to re-connection.
3.4 The Licensee shall not be responsible for any accident resulting in injury to human beings or animals or damage to property that may occur due to back- feeding from the Roof-top Solar PV System when the grid supply is off. The Licensee may disconnect the installation at any time in the event of such exigencies to prevent such accident.

4. Other Clearances and Approvals:
The Eligible Consumer shall obtain any statutory approvals and clearances that may be required, such as from the Electrical Inspector or the municipal or other authorities, before connecting the Roof-top Solar PV System to the distribution Network.

5. Period of Agreement, and Termination:
This Agreement shall be for a period for 20 years, but may be terminated Prematurely
(a) By mutual consent; or
(b) By the Eligible Consumer, by giving 30 days' notice to the Licensee ;
(c) By the Licensee, by giving 30 days' notice, if the Eligible Consumer breaches any terms of this Agreement or the provisions of the Net Metering Regulations and does not remedy such breach within 30 days, or such other reasonable period as may be provided, of receiving notice of such breach, or for any other valid reason communicated by the Licensee in writing.

B. Range
सचिव
श्री. जिल्हा शिक्षण व संशोधन
संस्था, पंढरपुर

भारतीय गैर-न्यायिक

एक सौ रुपये

Rs. 100

ONE HUNDRED RUPEES

रु. 100

सत्यमेव जयते

भारत INDIA

INDIA NON JUDICIAL

महाराष्ट्र MAHARASHTRA

12 APR 2019

उप कोषागार अधिकारी, पंढरपूर

© 2018 ©

UE 662930

6. Access and Disconnection:

6.1. The Eligible Consumer shall provide access to the Licensee to the metering equipment and disconnecting devices of Roof-top Solar PV System, both automatic and manual, by the Eligible Consumer.

6.2. If, in an emergent or outage situation, the Licensee cannot access the disconnecting devices of the Roof-top Solar PV System, both automatic and manual, it may disconnect power supply to the premises.

6.3 Upon termination of this Agreement under Clause 5, the Eligible Consumer shall disconnect the Roof-top Solar PV System forthwith from the Network of the Licensee.

7. Liabilities:

7.1. The Parties shall indemnify each other for damages or adverse effects of either Party's negligence or misconduct during the installation of the Roof-top Solar PV System, connectivity with the distribution Network and operation of the System.

7.2. The Parties shall not be liable to each other for any loss of profits or revenues, business interruption losses, loss of contract or goodwill, or for indirect, consequential, incidental or special damages including, but not limited to, punitive or exemplary damages, whether any of these liabilities, losses or damages arise in contract, or otherwise.

B. Range

सचिव

श्री. विठ्ठल शिक्षण व संशोधन संस्था, पंढरपूर

8. Commercial Settlement:

8.1. The commercial settlements under this Agreement shall be in accordance with the Net Metering Regulations.

8.2. The Licensee shall not be liable to compensate the Eligible Consumer if his Rooftop Solar PV System is unable to inject surplus power generated into the Licensee's Network on account of failure of power supply in the grid/Network.

8.3. The existing metering System, if not in accordance with the Net Metering Regulations, shall be replaced by a bi-directional meter (whole current/CT operated) or a pair of meters (as per the definition of 'Net Meter' in the Regulations), and a separate generation meter may be provided to measure Solar power generation. The bi-directional meter (whole current/CT operated) or pair of meters shall be installed at the inter-connection point to the Licensee's Network for recording export and import of energy.

8.4. The uni-directional and bi-directional or pair of meters shall be fixed in separate meter boxes in the same proximity.

8.5. The Licensee shall issue monthly electricity bill for the net metered energy on the scheduled date of meter reading. If the exported energy exceeds the imported energy, the Licensee shall show the net energy exported as credited Units of electricity as specified in the Net Metering Regulations, 2015. If the exported energy is less than the imported energy, the Eligible Consumer shall pay the Distribution Licensee for the net energy imported at the prevailing tariff approved by the Commission for the consumer category to which he belongs.

9. Connection Costs:

The Eligible Consumer shall bear all costs related to the setting up of the Roof-top Solar PV System, excluding the Net Metering Arrangement costs.

10. Dispute Resolution:

10.1 Any dispute arising under this Agreement shall be resolved promptly, in good faith and in an equitable manner by both the Parties.

10.2 The Eligible Consumer shall have recourse to the concerned Consumer Grievance Redressal Forum constituted under the relevant Regulations in respect of any grievance regarding billing which has not been redressed by the Licensee.

In the witness where of ----------(name) for and on behalf of Eligible Consumer and Shri.---Shri. Vitthal Edu. & Research---(name) for and on behalf of MSEDCL agree to this agreement.

Shri---B. Range---
for and on behalf of Eligible Consumer

Shri.---D. H. Padalkar---
for and on behalf of MSEDCL

Witness 1: Mr. S. G. Jadhav

Witness 2: Mr. R. G. Zarkar

Witness 1:

Witness 2:

MAHA VITARAN
Maharashtra State Electricity Distribution Co. Ltd.

OFFICE OF THE SUPERINTENDING ENGINEER
MAHARASHTRA STATE ELECTRICITY DISTRIBUTION COMPANY LIMITED
Juni Mill Compound, Opp. Super Market, Solapur.
Phones :- (0217) 2727124, 25: Fax: - 2624161

Ref.No: SE/SURC/Roof-top/HTPC-399/ Date : 28 AUG 2019

To,
The Executive Engineer.
MSEDCL,O&M Division, Pandharpur **ID :**

Sub : Checking of feasibility for evacuation Solar power from Roof-top Solar power from the proposed : 150KW , in addition to existing 250KW (Total 400 KVA)Roof top solar generation Project in r/o M/s. Shree Vithal Education & Research Institute Gopalpur-Ranjani rd Gopalpur Con No...337019052100

Ref : 1) Letter No. CE(Comm)/Comm/CP/Solar-Net-metering/3051 Dt. 25.1.2016 Commercial-circularNo.258 .
2).Consumers application received Date:-28.08.2019

With reference to above subject, this office is in receipt of proposal from M/s. . Mantri Chandak Construction Pvt Ltd,for concrete feasibility of Roof top solar generation of 150 KW,(with Existing 250 KW)on LT grid circuit of DTC installed at HT connection of consumer The details are as below.

Name of the consumer:- M/s Shree Vithal Education & Research Institute
Connected Load:- 460 KW, **Contract Demand**:- 408 KVA.

Consumer No. 337019052100 **Tariff**:- HT-IX B

Capacity of proposed Roof-top:- 250+150=400 KW.

It is requested to examine the concrete feasibility for grid connectivity at the HT connection of consumer on LT, for evacuation of power from the said project.

(D.H. Padalkar)
Superintending Engineer (SURC)
Circle Office, Solapur.

Encl : As above

Copy to:- 1) The Executive Engineer Testing Solapur ...
2). The Add.Ex Executive Engineer-, PPR-U
Copy to : 1. M/s Shree Vithal Education & Research Inst :

MAHA VITARAN

Maharashtra State Electricity Distribution Co. Ltd.

A Govt. of Maharashtra Undertaking

CIN: U40109MH2005SGC153645

Maharashtra State Electricity Distribution Co. Ltd.

Office of the Superintending Engineer(SURC),Juni Mill Compound ,Opp. Super Market. SolapurTel: (O) Phone : 0217-2727124,25 Fax-2624161

No:- SE/SUR/Roof-top/HTPC-399 / No. 8221 Date:- 13 NOV 2019.

To
M/s. Shree Vitthal Education & Research Institute
Gat No. 200, Gopalpur Ranjani rd, Gopalpur Pandharpur
Solapur HTC 337019052100

Sub:- Permission for additional connectivity/ installation of roof-top solar PV system of Additional 150 KW with existing 250 KW (making total 400 KW) for net metering in r/o M/s. Shree Vitthal Education & Reaserch Institute Pandharpur

Ref:- 1) Circle registration no 21707433 dt.14.08.2019
2) application of consumer for net metering dt.20.08.2019.
3) Circular no 258 dt.25.01.16
4) EET/SUR/U/3624 dt.25.10.2019.
5) EE/SUR/Test/T/812 dt.13.09.2019.(0SE526000611201902290)
6) SE/SURC/6388 dt.26.08.2019
7) CE/Dist/T/24615 Dt. 03.8.2016.

Dear Sir,

In view of the Government of Maharashtra notification for new Renewable Policy dated 20.07.2015 and methodology for its implementation on dated 09.09.2015, MERC (Net Metering for Roof-top Solar Photo Voltaic Systems)' regulations,2015 on 10th September, 2015 and circular 258 by MSEDCL for installation of Solar PV systems on Rooftop or any mounting structure by the existing/new consumers of MSEDCL in their premises for captive use so as to align the provisions as per the Regulations, 2015, the undersigned is pleased to permit for connectivity/ installation of roof-top solar PV system of 50 KW for net metering in r/o M/s Shree Vitthal Education & Research Institute HT No-337019052100 at the address as mentioned above with the terms and conditions as below

Particulars	Connected Load (KW)	Contract Demand (KVA)
Existing Load	460	408
roof-top solar PV system	**250+150=400**	

Terms and Conditions:

1. **VALIDITY:** The validity of this sanction is for a period of **6 (Six) months** from the date of issue of this letter and you will ensure to make the necessary payments within 1 (one) month and further ensure that you are ready o for connectivity/ installation of roof-top solar PV system within the period.

2. **PAYMENTS:**

As you have given consent for executing the works involved for releasing the power supply by paying 1.3 % supervision charges on the estimated cost to MSEDCL, hence permission is hereby granted to execute the works by engaging the Licensed Electrical Contractor (LEC) subject to the terms and conditions which are enclosed with the load sanction order.

In view of the above, you are requested to pay the following charges.

Sr. No.	Particulars	Amount in Rs.
a	Fixed Service connection charges	0.00
b	1.3% charges on estimated cost	Nil GST: Nil
c	Security Deposit	NIL
C1	Processing fees	1000.00 GST :-180.00:
d	Testing fee of T/F	Will be intimated by testing
	TOTAL Rs. :	**1000.00 GST 180.00**

The Xerox copy of payment made may be submitted to this office and the concerned division office under a covering letter and acknowledgement of which may be obtained.

3. **Metering : as your load is** supplied at 11 kV Volts with HT Connection, Net meter will be installed on HT side of Transformer as per MSEDCL rules 7 regulation

4. **Installation:** Your installation arrangement/drawing should be as per letter at ref. no 5 & is required to be get approved from EE testing Solapur office and the Electrical Inspector.

5. **CLEARANCE:**
As per MSEDCL Rules and IE Standards: EI permission prior to release

6. **Grid standards and safety:**

6.1 You can install a Rooftop Solar PV System with or without battery. However, if an eligible consumer opts for connectivity with the battery Back-up, the inverter shouldl have separate back-up wiring to prevent the battery/decentralized generation power from flowing into the Grid.

6.2 The consumer shall be responsible for the safe operation, maintenance and rectification of any defect in the Rooftop Solar PV system up to the point of Net-meter.

6.3 The consumer shall provide appropriate protection for islanding of the Roof-top Solar PV System from the Network of Distribution Licensee in the event of Grid or supply failure of supply and the same shall be verified/ certified by Testing Division in consultation with concerned Sub-division/circle.

7.The Net Meter and the Solar Generation Meter shall be installed at such locations in the premises that MSEDCL should have easy access to the Meter for meter reading.

8.The unadjusted net credited Units of electricity as at the end of each financial year shall be purchased by MSEDCL at its Average Cost of Power Purchase as approved by the Commission for that year, within the first month of the following year, At the beginning of each Settlement Period, the cumulative quantum of injected electricity carried forward will be re-set to zero.

9. In case the Consumer is within the ambit of TOD tariff, the electricity consumption in any time block, i.e. peak hours, off-peak hours, etc., shall be first compensated with the quantum of electricity injected in the same time block. Any excess injection over and above the consumption in any other time block in a Billing Cycle shall be accounted as if the excess injection had occurred during off-peak hours.9.7 MSEDCL shall compute the amount payable to the Eligible Consumer for the excess solar energy purchased by it as

specified in Regulation 9.5, and shall provide credit equivalent to the amount payable in the immediately succeeding Billing Cycle

10. The Consumer shall have recourse, in case of any dispute with MSEDCL regarding billing, to the mechanism specified by the Commission under Sections (5) to (7) of the Act for the re-dressal of grievances.

11. The Solar energy generated by Consumer in a Net Metering Arrangement under these Regulations shall not be eligible for REC.

12. The Solar generation data shall be monitored quarterly so as to ascertain whether the effluence of Solar plant is commensurate with the capacity utilization factor(CUF) determined by MERC from time to time.

13. Net metering Connection Agreement:

The consumer shall execute a Net metering Connection Agreement on Stamp Paper of Rs.200/-- with MSEDCL as per Regulation No. 9 of MERC(Net Metering for Roof-top Solar Photo Voltaic Systems) Regulations, 2015.A Copy of Net metering Connection Agreement is enclosed as Annexure-I.

14. **Incentives &. penalties:**

The consumer opts for Net metering by installation of Rooftop Solar PV system for his partial requirement of load, such consumer shall be eligible for incentives, which may be applicable as per MERC Tariff Order for MSEDCL consumer; only to the extent it uses MSEDCL supply.

The Eligible consumer shall be liable to pay the penalty charges which may be applicable as per MERC tariff order, amended from time to time, if the power factor is not maintained at required level as per State Grid Code.

In case of default in payment of any of the charges otherwise payable by a eligible consumer /person, MSEDCL shall have the right to dislocate the arrangement of net metering after giving an intimation of 24 hours to such consumer/ person and in such circumstances, MSEDCLs hall not be liable to pay any compensation to such consumer or person for the loss that such consumer or person may sustain on any account.

15. The connectivity of Rooftop solar PV installation net metering systems shall be governed by CEA(Technical Standard for Connectivity of the Distributed Generation Resources) Regulations, 2013, CEA (Measures relating to Safety and ElectriCity Supply), Regulations, 2010 and MERC state Grid code 2006 or as may be specified in future.

16. MSEDCLshall have the right to disconnect the Roof-top Solar PVSystem from its Network at any time in the event of any threat of accident or damage from such System to its distribution system so as to avoid any accident or damage to it. However, the Eligible Consumer may use his Roof-top Solar PV System in islanding mode for his own consumption.

17. The Roof-top Solar PV System meets the applicable norms for being integrated into the Distribution Network, and that the Eligible Consumer shall maintain the System accordingly for the duration of this Agreement.

18. Technical and Inter-connection Requirements:

The metering arrangement and the inter-connection of the Roof-top Solar PV System with the Network of the Licensee shall be as per the provisions of the Net Metering Regulations and the technical standards and norms specified by the Central Electricity Authority for connectivity of distributed generation resources and for the installation and operation of meters.

The Eligible Consumer agrees, that he shall install, prior to connection of the

Roof-top Solar PV System to the Network of the Licensee, an isolation device (both automatic and in built within inverter and external manual relays); and the Licensee shall have access to it if required for the repair and maintenance of the Distribution Network.

The Eligible Consumer shall furnish all relevant data, such as voltage, frequency, circuit breaker, isolator position in his System, as and when required by the Licensee.

19. Safety:

The equipment connected to the Licensee's Distribution System shall be compliant with relevant International (IEEE/IEC) or Indian Standards (BIS), as the case may be, and the installation of electrical equipment shall comply with the requirements specified by the Central Electricity Authority regarding safety and electricity supply.

The design, installation, maintenance and operation of the Roof-top Solar PV System shall be undertaken in a manner conducive to the safety of the Roof-top Solar PV System as well as the Licensee's Network.

If, at any time, the Licensee determines that the Eligible Consumer's Roof-top Solar PV System is causing or may cause damage to and/or results in the Licensee's other consumers or its assets, the Eligible Consumer shall disconnect the Roof-top Solar PV System from the distribution Network upon direction from the Licensee, and shall undertake corrective measures at his own expense prior to re-connection.

The Licensee shall not be responsible for any accident resulting in injury to human beings or animals or damage to property that may occur due to back- feeding from the Roof-top Solar PV System when the grid supply is off. The Licensee may disconnect the installation at any time in the event of such exigencies to prevent such accident.

20. ***Other Clearances and Approvals:***

The Eligible Consumer shall obtain any statutory approvals and clearances that may be required, such as from the Electrical Inspector or the municipal or other authorities, before connecting the Roof-top Solar PV System to the distribution Network.

21. **Period of Agreement, and Termination:**

This Agreement shall be for a period for 20 years, but may be terminated prematurely by

(a) By mutual consent; or

(b) By the Eligible Consumer, by giving 30 days' notice to the Licensee;

(c) By the Licensee, by giving 30 days' notice, if the Eligible Consumer breaches any terms of this Agreement or the provisions of the Net Metering Regulations and does not remedy such breach within 30 days, or such other reasonable period as may be provided, of receiving notice of such breach, or for any other valid reason communicated by the Licensee in writing.

22. Access and Disconnection:

The Eligible Consumer shall provide access to the Licensee to the metering equipment and disconnecting devices of Roof-top Solar PV System, both automatic and manual, by the Eligible Consumer

If, in an emergent or outage situation, the Licensee cannot access the disconnecting devices of the Roof-top Solar PV System, both automatic and manual, it may disconnect power supply to the premises.

Upon termination of this Agreement under Clause 5, the Eligible Consumer shall disconnect the Roof-top Solar PV System forthwith from the Network of the Licensee.

23. **Liabilities:**

The Parties shall indemnify each other for damages or adverse effects of either Party's negligence or misconduct during the installation of the Roof-top Solar PV System, connectivity with the distribution Network and operation of the System.

The Parties shall not be liable to each other for any loss of profits or revenues, business interruption losses, loss of contract or goodwill, or for indirect, consequential, incidental or special damages including, but not limited to, punitive or exemplary damages, whether any of these liabilities, losses or damages arise in contract, or otherwise.

24. **Commercial Settlement:**

The commercial settlements under this Agreement shall be in accordance with the Net Metering Regulations. The Licensee shall not be liable to compensate the Eligible Consumer if his Rooftop Solar PV System is unable to inject surplus power generated into the Licensee's Network on account of failure of power supply in the grid/Network,

25. The existing metering System, if not in accordance with the Net Metering Regulations, shall be replaced by a bi-directional meter (whole current/CT operated) or a pair of meters (as per the definition of 'Net Meter' in the Regulations), and a separate generation meter may be provided to measure Solar power generation. The bi-directional meter (whole current/CT operated) or pair of meters shall be installed at the inter-connection point to the Licensee's Network for recording export and import of energy. The uni-directional and bi-directional or pair of meters shall be fixed in separate meter boxes in the same proximity.

26. The Licensee shall issue monthly electricity bill for the net metered energy on the scheduled date of meter reading. If the exported energy exceeds the imported energy, the Licensee shall show the net energy exported as credited Units of electricity as specified in the Net Metering Regulations, 2015. If the exported energy is less than the imported energy, the Eligible Consumer shall pay the Distribution Licensee for the net energy imported at the prevailing tariff approved by the Commission for the consumer category to which he belongs.

27. **Connection Costs:**

The Eligible Consumer shall bear all costs related to the setting up of the Roof-top Solar PV System, excluding the Net Metering Arrangement costs.

28. **Dispute Resolution:**

Any dispute arising under this Agreement shall be resolved promptly, in good faith and in an equitable manner by both the Parties. The Eligible Consumer shall have recourse to the concerned Consumer Grievance Redressal Forum constituted under the relevant Regulations in respect of any grievance regarding billing which has not been redressed by the Licensee.

29. All conditions as per MSEDCL 258 & MERC regulation regarding Roof Top solar net metering is binding on this sanction.

30. The Guidelines of refrence letter no.3,5,7 for installation of metering cubical should be fallowed & HT TOD meter -/5A,33 KV/110V,0.5s class (Bidirectional) Net meter alongwith CT meter 100/5A should be used for RPO , as per EET letter. in addition to the existing 200/5A

31. This is only Permission for installation of roof-top solar PV system of 400 KW for net metering, after the payment of all the arrears/recovery of the connection & completion of all formalities as above & MSEDCL rules & regulation 258 , release for the connectivity (synchronization) of Roof top system with MSEDCL gird will be given.
The Billing of Solar will be done as per directives from MERC guidelines /Corporate office in future , in case the concept of Gross metering implementation , the billing will be implemented as per guidelines from C.A & will be binding to you .
You have to submit the undertaking of all above conditions on Rs200/ Stamp , prior to release of this connection

32. Load Sanction Esti. No.:
SE/SURC/T/HT/19-20/1.3% Sup/Rooftop /Nil , Dtd. 13.11.2019

Thanking you

Encl:- Annexure 1, Agreement
Annexure 2 Circular 258

Yours faithfully

(D.H.Padalkar)
Superintending Engineer Solapur

Copy to:

1. The Executive Engineer, MSEDCL, O & M Division, Pandharpur Division,

... He is requested to submit WCR report to EET, with copy to this office along with J.V. No. after finalization of accounting of the material installed .

2. The Executive Engineer (Solapur-Testing), MSEDCL, Testing Division, submit the pre-release report & test the meter as per MSEDCL Rules & regulation.
3. Manager (SURC-F&A), MSEDCL, Solapur.
4. The Dy. Executive Engineer, MSEDCL, O & M Sub-Division, S/Dn R1-PPR