

DEENDAYAL PORT AUTHORITY ISO 9001-2008 & 14001:2004 Certified







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Sub: Design, Supply, Installation, Testing, Commissioning of 6.6 KWp \pm 10% Solar Rooftop Power Plant at Jeev Seva Samiti, Gandhidham.

Sir,

1 Designing of 6.6 KWp ± 10% Solar Rooftop Power Plant along with the work of taking approvals from concerned Government Departments and relevant Liaisoning works as per Technical Specification No. 1. 1 Complete 2 Supply, Installation, Testing, Commissioning of 6.6 KWp ± 10% Solar Rooftop Power Plant as per Technical Specification No. 2. 1 Complete	Production Production	Rate in Words	Unit	Rate	Qty.	Description	S/N
Testing, Commissioning of 6.6 KWp ± 10% Solar Rooftop Power Plant as per Technical Specification			The second secon		1	10% Solar Rooftop Power Plant along with the work of taking approvals from concerned Government Departments and relevant Liaisoning works as per Technical Specification No.	1
Job					1.	Testing, Commissioning of 6.6 KWp ± 10% Solar Rooftop Power Plant as per Technical Specification	2

(In words: Rupees)
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Note: The rates should be inclusive of all taxes, duties, fees, cess etc. and all incidental charges, but exclusive of GST.

Executive Engineer (E)
Deendayal Port Authority

Scope of work & Technical Specifications

The scope of the work includes Design, Supply, Installation, Testing, Commissioning of 6.6 KWp \pm 10% Solar Rooftop Power Plant at Jeev Seva Samiti, Gandhidham.

The General Scope of work includes:

- Designing of 6.6 KWp ± 10% Solar Rooftop Power Plant for Jeev Seva Samiti, Gandhidham along with the work of taking approvals/clearance from concern Government Departments and relevant Liaisoning works.
- II. The work also includes Supply, Installation, Testing & Commissioning of 6.6 KWp ± 10% Solar Rooftop Power Plant at Jeev Seva Samiti, Gandhidham after designing and approval of the same.
- III. Arrange appropriate incentives or subsidies from the concern authorities as per the latest schemes for Solar Power Plant, if applicable.

1. Technical Specification for Item No. 1.

The complete designing of 6.6 KWp \pm 10% Solar Rooftop Power Plant would be in the scope of the contractor and has to be finalized in consultation with the Engineer-In-Charge of Deendayal Port Authority and all the relevant documentation, drawing, Liaisoning work and all the necessary approvals from various Government Departments, Co-ordination and Approval work shall be completely in the scope of the contractor.

The designing of the Solar Power Plant should be such that the minimum height of lower side of the inclined Solar Power Panel shall be 5 feet over the RCC Roof. The GI framing of the Solar Panel has to be done with GI pipes of minimum 2mm thickness and minimum 40mm X 60mm size and minimum 80 microns of galvanization with excellent workmanship of GI structure fabrication. The designing should also include appropriately selected Mono Perc Half Cut solar panels, sizes and types of cabling, earthing, lightning arrestor, switchgears, AC Distribution box, DC Distribution box, Inverter(s) and other relevant accessories / devices / equipments. The design should also include base support civil work, if necessary and as directed by Engineer-In-Charge.

2. Technical Specification for Item No. 2.

This includes Supply, Installation, Testing & Commissioning of 6.6 KWp \pm 10% Solar Rooftop Power Plant at Jeev Seva Samiti, Gandhidham. The complete work will include supply of items at Jeev Seva Samiti, Gandhidham. This includes installation, testing & commissioning for successful operation of 6.6 KWp \pm 10% Solar Rooftop Power Plant, along with Civil Work, if any, treating it as a comprehensive work including manpower & materials along with other liasoning work.

Jeev Seva Samiti, Gandhidham already has a PGVCL Electrical connection and the 6.6 KWp \pm 10% Solar Rooftop Power Plant would be Grid Connected. Complete liasoning / coordination / approvals/ testing and Solar Power Plant related correspondence and/or approval related works with PGVCL / GETCO / Any other Government body/unit would be in the scope of the contractor.

Below are the basic details of some major items of the 6.6 KWp \pm 10% Solar Rooftop Power Plant:

Solar Panels:

Technology

: MONO PERC Half Cut

Each of Minimum

: 450 Wp or as per latest standard

Quantity

: As per design.

Inverter(s):

Output

: 6.6 KWp ± 10% kva AC as per latest standard

Cables:

DC Cables shall be of minimum 4 sq.mm size or higher as per design

■ AC Armoured Cables shall be of minimum 25 sq.mm or higher as per design

Earthing:

3 Sets or more as per standard practice in Solar Power Plant Installation.

· Lightning Arrester:

As per standard practice in Solar Panel Installation.

Switchgears:

 ACDB, DCDB, relevant accessories, MCBs, 5 KV Surge Protection Devices, etc. as per standard practice in Solar Power Plant Installation.

The Solar Power Plant should have complete system warranty if minimum 7 Years and individual Solar Panel warranty of minimum 25 Years. The Contractor is bound to provide onsite maintenance support on call/need within 1 days of any complaint during warranty period.

Commercial Condition

- 1. The completion period is 120 days from the date of issue of work order.
- 2. The Contactor shall carry out the solar panel supply, installation, testing, commissioning & liasioning with different authorities for the above work is under the scope of contractor. Apart from same, if any liasioning fees is to be paid, the same will be borne by the Contractor and the necessary drawings, if required to the authorities, will be submitted by the Contractor for which no extra amount will be paid by DPA.
- 3. The 70% of total quoted amount will be released based on the invoice after deduction of taxes at the applicable rates, after commissioning and acceptance of work by DPA. Remaining 30% of total quoted amount will be released after completion of formalities with the appropriate authorities for arranging appropriate incentives or subsidies from the concerned authorities as per the latest schemes for Solar Power Plant. The payment shall be released, subject to the condition that the documentary evidence (copy of paid challan in government treasury) of the welfare cess @ 1% and BOCW cess @ 1% will be deducted as per norms if applicable, similarly 10%Security deposit will be deducted till completion of Guarantee Period of work.
- 4. Rs. 500 + Rs. 90 (GST) Present rate of GST is 18 % through online transfer in PNB bank account no. 2177002100004628 Deendayal Port Authority (IFSC code PUNB0217700). Scanned copy of RTGS no. and date of transfer may be uploaded on (n) procure website with Quotation.
- 5. In case of Micro and Small Enterprise (MSEs) holding valid certificate issued by any agencies/organization under The Ministry of Micro, Small and Medium Enterprises indicating the list of activity related to the subject tender as per National Industrial Classification-2008 with the relevant code / clause & sub-code/clause of MSME.
- 6. EMD amount of Rs. 3,682/- will be deposited by the contractor being EMD amount in favour of Deendayal Port Authority, Gandhidham in the form of RTGS/NEFT. The Scanned copy to be uploaded on (n) procure website while uploading the bid.
- 7. GST will be reimbursed as per actual.
- 8. The contractor/service provider/supplier etc. has to ensure timely and proper filling of GSTR1 so that Deendayal Port Authority can avail input tax credit in timely manner. In case of DPA is not allowed input tax credit due to failure on the part of the contractor/service provider/supplier etc., it will be a financial loss to the DPA and therefore same shall be recovered from the payment/deposit of the contractor/service provider/supplier.

For any delay in completion of work, penalty at the rate of 0.05% per week or part thereof of the contract value subject to maximum of 10% of contract value will be imposed.

10. Taxes:

GST Clause:

The contractor shall quote the price exclusive of GST. The contractor shall quote prevailing GST rate separately, which shall be reimbursed by DPT after ascertaining necessary compliance as per Goods & Service Tax, 2017. All other duties, taxes, cesses applicable if any, shall be borne by the contractor.

Deduction of Income-Tax and GST:

Income-Tax deductions and surcharge and GST+TDS under GST Act as applicable thereon shall be made good while making payments due to the contractor for carrying out the work and only net amount shall be paid as directed by the Central Board of Direct Taxes, Ministry of Finance, Government of India.

Tax:

The rates quoted (except GST) by the contractor shall be deemed to be inclusive of the taxes, duties etc. which the contractor will have to pay for the performance of this contract. The employer will perform such duties in regard to the deduction of such taxes at sources as per applicable law.

11. Insurance:

The contract shall provide in the joint names of the employer and the contractor, insurance cover from the start date to the end of guarantee period for the following events which are due to the contractor risk:

- a) loss of or damage to the works, plan and materials
- b) loss of or damage to equipment
- c) loss of or damage of property (except the works, plant, materials equipment) in connection with contract, and
- d) personal injury or death

Policies and certificates for insurance shall be delivered by the contractor to the Engineer-In-Charge or his nominee before the commencement of work. All such insurances shall be provided for compensation to be payable to the types and proportions of currencies required to be rectified the loss or damage incurred.

Alterations to the terms of insurance shall not be made without the approval of the engineer in charge or his nominee,

All the materials shall stand insured from the time of arrival at site till commencement of erection against fire, pilferage, damage and against natural calamities for the value of 90% of each item.

During erection and till the work is completed and satisfactory taken over by the D.P.T after testing the materials shall stand covered by suitable erection insurance also for the value of 110% of the item. The charges for the insurance shall be borne by the Contractor.

- 12. The contractor shall supply the materials of only the particular bands/Make specified in the tender. If same are not available in the market he may take approval of EIC for all related project material prior to start of the work.
- 13. For any delay in completion of work, penalty at the rate of 0.5% per week or part thereof of the contract value subject to maximum of 10% of contract value will be imposed.

14. Performance Security

Security deposit shall consist of two parts; a) Performance Guarantee to be submitted after issue of LOI, and b) Retention money to be recovered from Running Bills-

- 1) Performance Guarantee shall be 10% of the contract price, of which 5% of contract price should be submitted as Performance Guarantee in form of Bank Guarantee, or Demand Draft within 21 days, on receipt of Letter of Intent and balance 5% to be recovered as Retention Money from Running Bills. Recovery of 5% Retention Money to commence from the First RA Bill onwards @ 5% of the Bill Value from each Bill. Retention Money will be refunded within 14 days from the date of payment of final bill. Balance SD will be refunded immediately not later than 14 days from completion of defect liability period.
- 2) Successful Bidder has to submit the Performance security @ 5% of Contract price within 21 days of receipt of Letter of Intent, failing which the work will not be awarded and the Bid Security i.e., EMD will be forfeited.
- 3) The Port Authority will also be at liberty to deduct from performance guarantee or from any sums of money due or that may become due under any contract with the contractor that may become due to the employer. This is without, prejudice to the rights of the employer under the terms of the contract. The Bank Guarantee is required to be dispatched by the issuing bank directly to The Employer by Registered AD Post.
- 4) The Port Authority may at their option forfeit the Performance Guarantee cum Security Deposit if the contractor fails to carry out the work or perform or observe the conditions of contract.
- 5) The balance Performance Guarantee cum Security Deposit will be released after successful completion of guarantee period.
- 6) If applicable, the documentary evidence (copy of paid challan in government treasury) of welfare cess @1% of work done or as amended by statutory authority

from time to time, paid on final bill shall be submitted before releasing the performance guarantee.

- 15. The entire work will be under guarantee for a period of 12 months from the date of completion of work.
- 16. All tools, plants, scaffolding ladder etc. and other machinery etc. required temporary for the purpose of execution of work will have to be arranged by the contractor at his own cost and storing of such tools, plants etc, will have to be made by him.
- 17. After completion of the work, the site should be neatly cleaned by the contractor.
- 18. All the works shall be carried out to the entire satisfaction of Engineer-in- Charge.

Signature & Seal of Contractor

Executive Engineer (E)
Deendayal Port Authority

Approved Make List for Electrical Items

Sr. No.	Description	Recommended Makes
1	HT VCB	SIEMENS / CROMPTON GREAVES/ABB/Schneider
1(a)	HV Gas Insulated Breakers	SIEMENS /Schneider/ABB
2	POWER TRANSFORMERS	VOLTAMP/CROMPTON GREAVES /BHARAT BIJLEE/ BHEL/ SIEMENS/ ABB/ Schneider/T&R
3	DISTRIBUTION TRANSFORMERS	EMCO/KIRLOSKAR/PATSON/VOLTAMP/ ABB / Schneider / T&R
4	RESIN CAST TRANSFORMERS	
	A) RESIN CAST IMPREGNATED	VOLTAMP / KIRLOSKAR / EMCO
	B) DRY CAST	VOLTAMP/KIRLOSKAR/EMCO
5	HT XLPE CABLES	POLYCAB/TORRENT/RPG ASIAN/ /GLOSTER/ UNISTAR/UNISTAR/KEI/FINOLEX/HAVELS
6	LT XLPE CABLES	POLYCAB/TORRENT/RPG ASIAN/ / RALLISON/PRIMECAB/ HAVELLS/ UNISTAR/AVOCAB / ADCAB
7	LT ACB	SIEMENS/L&T/SCHNEIDER/C&S
8	PROTECTION RELAYS	AREVA/L&T/SIEMENS/ABB/C&S
9	LT PANEL	CPRI APPROVED
10	CHANGE OVER SWITCH	SIEMENS/L&T/ABB/C&S/SCHNIDER/ LEGRAND / INDOASIAN
11	SFU FOR MAIN LT DISTRIBUTION PANELS	SIEMENS/L&T/ABB/C&S
12	SFU FOR DISTRIBUTION PANELS & FEEDER PILLERS	SIEMENS/L&T/ABB/C&S/ SCHNEIDER/ LEGRAND/ INDOASIAN/HAVELLS
13	MCCB FOR MAIN LT DISTRIBUTION PANELS	SIEMENS/L&T/ABB
14	MCCB FOR DISTRIBUTION PANELS AND FEEDER PILLERS	SIEMENS/L&T/ABB/C&S/ SCHNIDER/ LEGRAND/ INDOASIAN/HAVELLS
15	MCB/ELCB/RCCB/ RCCBO FOR MAIN LT DISTRIBUTION PANELS	SIEMENS/HAGER L&T/ABB
16	MCB FOR DISTRIBUTION PANELS AND FEEDER PILLERS	SIEMENS/L&T/ABB/C&S/ SCHNEIDER/ LEGRAND/ INDOASIAN/ HAVELLS/ STANDARD
17	MCB DISTRIBUTION BOARD	STANDARD / HENSEL/LEGRAND / INDOASIAN / HAVELLS

31a	LED LUMINARIES	Philips/Bajaj/Wipro/CG/Surya/Pyrotech/Syska/Nessa/C &S having surge Protection ≥10KV for fittings & interna Surge Protection for Driver of≥4KV, LED Chip only OSRAM/CREE/Philips Lumileds/Citizen/ with LM-79,80 CERTIFICATION
		OSRAM / SURYA ROSHNI / GE/C&S
31	LUMINARIES	PHILIPS / BAJAJ / WIPRO / CROMPTON GREAVES /
30	IGNITORS FOR HPSV, METAL HELIDE LAMPS	OSRAM / SURYA ROSHNI / GE
20	HELIDE LAMPS	OSRAM / SURYA ROSHNI / GE PHILIPS / BAJAJ / WIPRO / CROMPTON GREAVES /
29	HPSV, HPMV & METAL	PHILIPS / BAJAJ / WIPRO / CROMPTON GREAVES /
28	GLS LAMPS & FLUORESCENT LAMPS	PHILIPS / BAJAJ / WIPRO / CROMPTON GREAVES / OSRAM / SURYA ROSHNI / GE
27	PVC CONDUIT/OVAL CONDUIT & CASSING CAPPING AND ACCESSORIES	PRECISION/VULCAN/FINOLEX/ GARWARE/ RESTOPLAST/ SWASTIK / BPI
26	MODULAR SWITCHES, SOCKETS, PLATES & BOXES	ANCHOR / MK / NORTHWEST / LEGRAND /HAVELLs / INDOASIAN / SIMENS.
25	DOOR BELLS/CALL BELLS	ANCHOR/LEGEND/MK/NORTHWEST
24	FLUSH TYPE SWITCHES, SOCKETS, HOLDERS AND CEILING ROSES & ELECTRONIC REGULATORS	ANCHOR/MK/NORTHWEST/VINAY /PANAMA / HAVELLS
23	PVC WIRE WITH COPPER CONDUCTOR	RR KABEL / KEI / POLYCAB/MILEX/GUJCAB/ STANDARD / FINOLEX / ANCHOR
22	QUARTZ TIME CLOCK SWITCH	L&T/INDOASIAN/SIEMENS
21	POWER CONTACTOR & OVER LOAD RELAYS	L&T/SIEMENS/ABB
20	SLECTOR SWITCH FOR VOLTMETER/AMPARE METER	L&T/SIEMENS/C&S
19	ANALOG VOLT/AMPARE METER FOR DISTRIBUTION PANELS AND FEEDER PILLERS	RISHABH/AE/ENERCON/L&T
18	MULTI FUNCTION DIGITAL METER FOR MAIN LT DISTRIBUTION PANELS/DIGITAL KWH METERS	L&T/ENERCON/SECURE/L&G/ RISHABH

32	CEILING FANS	BAJAJ/ORIENT/USHA/CROMPTON GREAVES / ALMONARD/GEC		
33	WALL MOUNTING FANS	BAJAJ/ORIENT/USHA/CROMPTON GREAVES / ALMONARD/GEC		
34	EXHUAST FANS	BAJAJ/ORIENT/USHA/CROMPTON GREAVES / ALMONARD/GEC		
35	HEAVY DUTY INDUSTRIAL WALL MOUNTING FANS	BAJAJ/ORIENT/USHA/CROMPTON GREAVES / ALMONARD/GEC or its equivalent		
36	WATER COOLER	VOLTAS/SHRIRAM USHA/BLUE STAR		
37	AIR CONDITIONERS	VOLTAS/CARRIER/BLUESTAR/USHA/ HITACHI/LG/ SAMSUNG/ONIDA		
38	REFRIGERATORS	VOLTAS / CARRIER / BLUESTAR / USHA / HITACHI / LG / SAMSUNG / WHIRLPOOL		
39	VOLTAGE STABILIZER	VEELINE / CAPRI		
40	INVERTERS for General Purpose	LUMINOUS / MICROTEK /SUKAM		
41	D.G. SETS			
	A) ENGINE	CUMMINS/GREAVES/KIRLOSKAR/ CATERPILLAR /ASHOK LEYLAND /VOLVO		
	B) ALTERNATOR	STAMFORD/CROMPTON GREAVES /JYOTI/ KIRLOSKAR ELECTRIC		
42	ELECTRIC MOTOR	ALSTOM/CROMPTON GREAVES /SIEMENS/ KIRLOSKAR/ABB		
43	WATER PUMPS	SWASTIK / KSB		
44	WATER GEYSER	BAJAJ/USHA / CROMPTON GREAVES / SPHEREHOT / RACOLD		
45	LUGS & CABLE GLANDS	DOWELLS / JAINSON / BRACO		
46	Solar Panels	LONGI / TRINA / GOLDI / VIKRAM / REWNYSIS / RAYZON / WAAREE or equivalent subject to submission of relevant documents of successful operation in various Government Organisations.		
47	INVERTERS/CONVERTER for Solar Power Plant	LUMINOUS / MICROTEK /EVVO /LENTO/DELTA/ABB / HITACHI /HUAWEI / SUNGROW or equivalent subject to submission of relevant documents of successful operation in various Government Organisations.		

Executive Engineer (Electrical)
Deendayal Port Authority

In case of Micro and Small Enterprise (MSEs) holding valid certificate issued by any agencies/organization under The Ministry of Micro, Small & Medium Enterprises indicating the list of activity related to the subject tender as per National Industrial Classification-2008 mentioned in the table below only shall become eligible for exemption from payment of Tender Fee/EMD. Such bidder shall upload the scanned copy of valid certificate in preliminary bid stage.

NIC codes regarding related activity are mentioned below:

Level	Description				
Section - D	ELECTRICITY, AIRCONDITION	The second of the Second State of the Second	STEAM	AND	
Division – 35	ELECTRICITY, AIRCONDITION		STEAM	AND	
Group - 351	Electric power distribution	generation,	transmission	and	
Class - 3510	Electric power distribution	generation,	transmission	and	
Sub Class - 35105	Electric power of	generation using	g solar energy		