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SUNRIZE SOLAR POWER AND ELECTRIC VEHICLE COMPANY

Mangal Arcade, Opp. Hotel Panchshil, Mohannagar, Chinchwad Pune-411019 (Mob-9175213232)

Techno-commercial Offer for Grid-Tied Solar Photovoltaic Power System To

Capacity: 50 kW (AC) /55 kW (DC) With Net Metering

(without Battery Backup)

SSPEVC Proposal Details

Date – 27/12/2021

Sunrise Solar Power and Electric Vehicle Company

Chinchwad, Pune- 411019

Email- sunrizesolarpower@gmail.com

GSTIN-27ACNPS70576121

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Our Ref: SSPEVC/21-22/PV/ 017

Date: 27/12/2021

Kind Attn : ^{Vishal} Mr. Bhagwat Soat Patil

Shivmalhar Agro Producer Company Ltd,
Tandulwadi Dist Latur

Subject:

**Techno Commercial Offer for Design, Supply, Installation, Testing, and Commissioning
50 kWp Grid Tied Rooftop Solar PV System through Net Metering arrangement (without
Battery Backup).**

Dear Sir,

We thankfully acknowledge the receipt of your inquiry for the above subject requirement and referring your discussion regarding your **Rooftop Solar PV System** requirement, based on the data/information and documents shared during the discussion, we are pleased to submit our offer for above-mentioned details.

We sincerely trust that you will find the offer in line with your requirement. We will be more than glad to provide any clarification you may require in connection with the said offer.

We would therefore sincerely request you to kindly give us an opportunity to work with your esteemed organization.

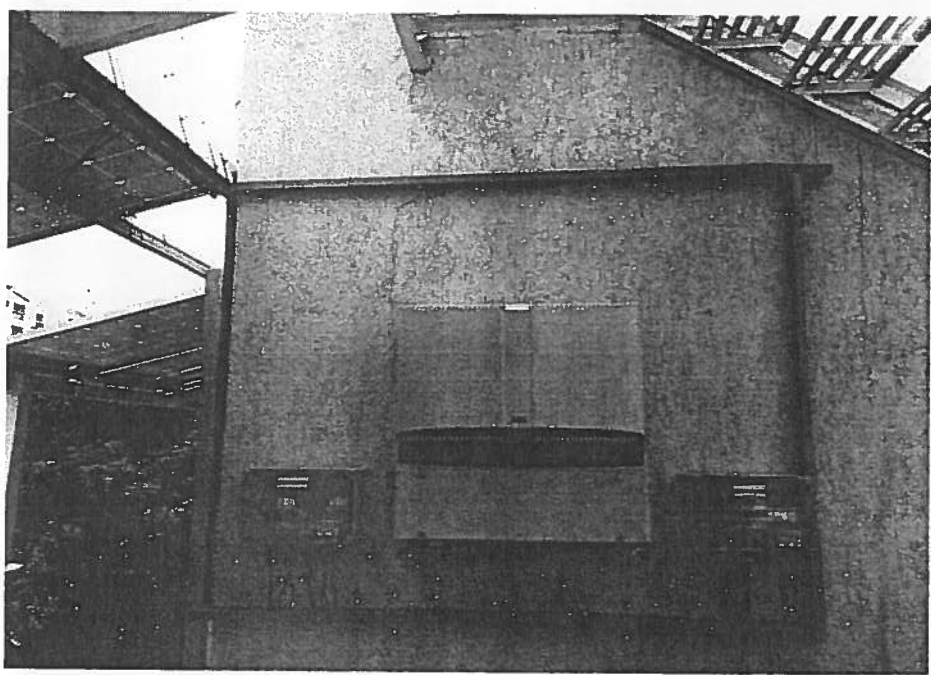
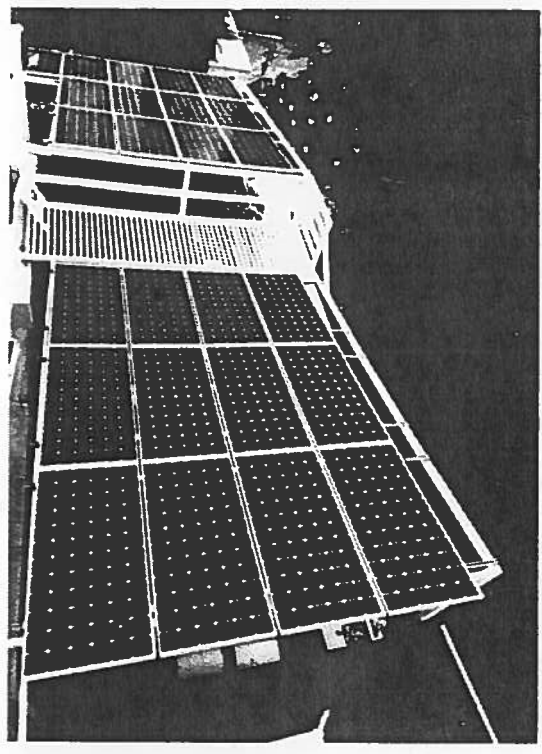
Thanking you and assuring you of our best services.

Best Regards,

Sunrise Solar Power and Electric Vehicle Company.

SSPEVC Key differentiators

- ***Safety, health, and environment-friendly***
- ***Design, engineering and quality expertise***
- ***Timely delivery***
- ***Robust installation and maintenance***
- ***Ongoing service and support***
- ***Guaranteed performance***
- ***Transparent operation***



Points which Differentiate us from others.

1. ***Check out your consumption in Executive Summary.***
 2. ***Capacity require for the Project is 50kWAC capacity.***
 3. ***Check out Estimated first-year Generation.***
 4. ***Check Tier One Mono-crystalline Panels with 19% efficiency.***
 5. ***Tier one INVERTER Brand.***
 6. ***Providing Lightning Arrestor system for protection From Lightning Strikes.***
 7. ***1-year free technical service warranty excluding spares.***
 8. ***Offering Performance Guarantee: 78% in the first year.***
 9. ***Check Generation, Payback, and Cost of solar electricity.***
 10. ***We are guided by experts from their vast experience and learning.***
 11. ***Free consultation online call weekly for lifetime.***
 12. ***Free On-site Module Inspection (Visual Inspection as per manufacturer criteria).***
 13. ***FTR from module manufacturer.***
 14. ***Free Module cleaning training.***
 15. ***Free training on how to keep track on your generation***
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Executive summary

Parameter	Description/Value
Plant Size	50 kW
Approx. utilizable area	500 m ²
Estimated first-year Generation	79200 kWh (units)
Solar PV Modules	Waaree/ Jinko / Vikram /Renewsys/eqvt.
Inverters	Sungrow /ABB/Solis /eqvt.
Power Evacuation	LT grid, 50Hz, 3 Phase
Net Metering	LT grid, 50Hz, 3 Phase
Installation and Commissioning	15-18 weeks from the date of commercial order with advance
ROI	4.1 Years.
Total Cost	28.53 lakhs

Project Description

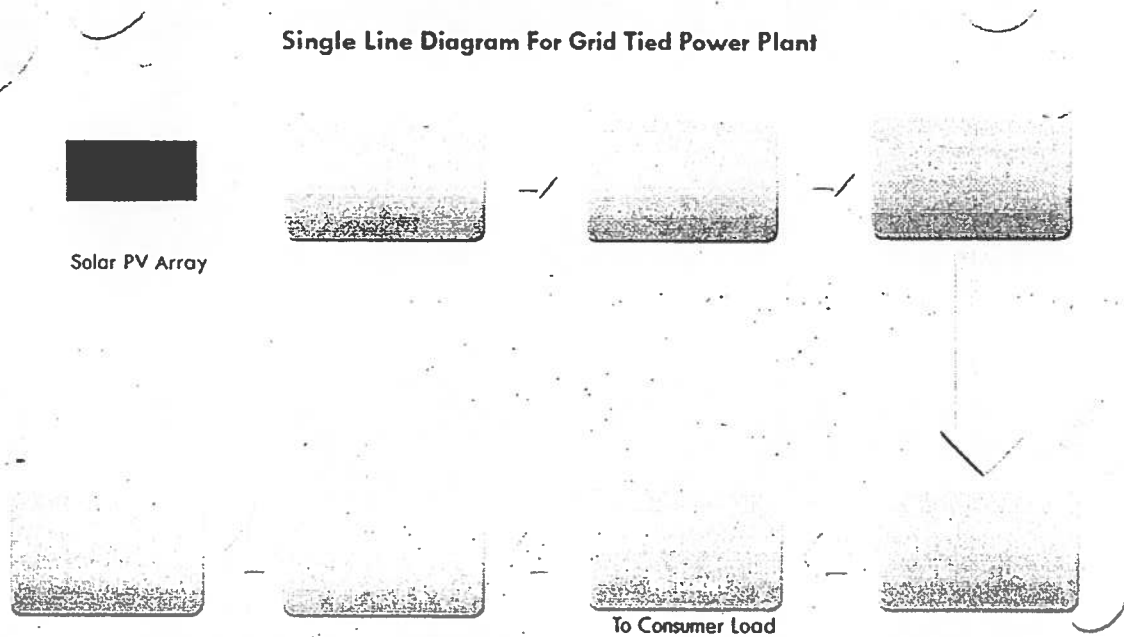
Note on plant operation

The Solar PV Plant setup for your Captive Electricity Consumption would be highly economic and the Power generated by the plant shall be utilized in the facility itself thereby saving on the electricity cost from the transmission line.

through Net Metering arrangement (without Battery Backup).

- Solar PV plant AC output connected to the electricity supply grid on LT/HT side.
- Captive use during daytime to save up to 90% of the electricity bill.
- Net metering to get the benefit of up to 10% of net export of energy.
- No Battery Backup is required due to the net metering arrangement.
- Fixed Solar PV Module Array and Inverters installed on Flat Terrace.
- Operating life of the plant is 20-25 years.
- Maintenance required is weekly cleaning of PV modules to obtain max. generation.

Single Line Diagram For Grid Tied Power Plant



Scope of work

- Our scope of work would include, Turnkey EPC up to final synchronization with the existing power supply, comprising of design and engineering, supply of all materials, installation, testing, commissioning and Operation & Maintenance of PV Solar Power System.
- Site Survey and Analysis to determine solar potential, compute plant performance ratio, estimate energy generation and design equipment to ensure the long operating life of the plant.
- Systems Design and Engineering using advanced software (PVsyst and StaadPro) to select and integrate plant components, maintain quality and integrity of the plant, meet regulatory and safety standards and ensure optimum performance.
- Detailed Design and Engineering, BoM and BOQ, installation and test schedules to ensure reliable installation and long-term performance.
- Plant installation, testing and commissioning using project management tools (PERT/CPM) and following quality assurance protocols (QAP).
- Operation and Maintenance using web-based monitoring system, periodic inspection schedule, and module cleaning routine to ensure high uptime and optimized plant performance over the operating life of the plant (20-25 years).

Scope of contract

- The turnkey scope of supply covers Design, Engineering, Procurement, Construction and Commissioning of 50kW roof-top Solar PV power plants. The comprehensive scope includes supply, transportation, loading and unloading at the site, installation, testing and integration of following plant components/services.

Project schedule

- Components Supply in 4-7 weeks from the date of receipt of purchase order along with advance. Installation & Commissioning within 8-14weeks following supply of components based on site readiness. Project completion within 14 to 18 weeks.

Scope of supply

Item No.	Item/Service Description
1	Tier 1 Mono-crystalline silicon Solar PV Modules
2	HDGI/ Aluminium /Eqvt Module Mounting Structures
3	DC protection and switchgear
4	Tier 1 Inverters
5	AC protection and switchgear
6	PV Generation Meter
7	LT AC Power Evacuation Equipment
8	DC and AC Cables
9	Earthing Equipment
10	Net Energy Meter for LT/HT Grid
11	Lightning Protection
12	Plant Monitoring and Communication Equipment
13	Component Spares for the first year
14	Design, Engineering, Project Management, Procurement, Installation, Testing and Commissioning of Plant

- Price Offer For 50 kW GRID-TIED SOLAR POWER PLANT, At- Shivmalhar Agra Producer Company Ltd, Tadulwadi, Latur

Sr no	DESCRIPTION	Qty	AMOUNT
1	Solar Panel (335Wp) (Waaree /Vikram / Renewsys or equivalent)	164	28,53,468.00
2	Grid Tied inverter 50 kW 3 phase, 50 hz (Sungrow or equivalent)	3	
3	HDGI Structure /Equivalent for Panel mounting	For 50 kW	
4	Walkways		
5	AC cable (Polycab/equivalent), DC cable (Apar/equivalent)	LSM	
6	Net meter/Generation meter (3 phase, Secure/equivalent)	1	
7	Protection (Earthing), LA, Misc (cable ties, fasteners, connectors, ACDB, DCDB)	1 set	
8	On site Pre-commissioning inspection of the solar PV module	Sampling basis	
9	Fire extinguisher, Sand buckets, Rubber Matt, First Aid Kit	1 set	
10	Liaisoning	LSM	
11	Supply, Installation, Commissioning, Design		
	Subtotal (₹)		28,53,468.00
	GST (8.9%)		At Actual
	Freight		Nil
	TOTAL		28,53,468.00

Commercial TERMS AND CONDITIONS

- 10% advance for Statutory approvals favor in of ' Sunrise solar power and Electric Vehicle Company '. 60 % after MSEDCL Sanction. 20% after delivery of Panels and Inverter. 5% after successful installation. Balance after commissioning.
- The validity of quotation 7 days.
- 1-year free technical service warranty including spares
- Annual Maintenance Contract (AMC) from second year onwards @ 1.5% (Check feasibility) of project cost and 6% escalation per year
- Training provided for PV array cleaning by the client.
- GST rate subject to prevailing Govt. ruling
- If custom duty will applicable modules rates can be varying accordingly.
- Net-metring process is in SSPEVC scope.

- *DG integration with PV plant will be at additional cost.*
- *Panel cleaning equipment will be at additional cost.*
- *Panel cleaning will be in client scope.*
- *If any reason client wants to cancel the order after purchase order /advance client has to pay 10 % amount as per purchase order or the final quotation. (No advance return policy)*
- *Note: For Net metering, there will be an agreement for a period of 20 years between client and MSEDCCL.*

Warranties and Guaranties

- *Solar Panels: back-to-back manufacturer warranty of 25 years*. (* 5 years Limited Product Warranty, 25 years Limited Power Output Warranty: Minimum 90% at the end of 10 years, o Minimum 80% at the end of 25 years.)*
- *Grid Tied Inverter (IEC approved): - 5 Year back-to-back manufacturer Warranty.*
- *Plant Installation- 1 year inclusive of spares.*
- *Performance Guarantee: 78% in the first year.*

The Warranty shall not apply to defects resulting from:

1. **Wilful damage or negligence, normal wear, and tear.**
2. **Misuse or abuse of equipment.**
3. **Damage or defect caused by force majeure including fire, earthquake, flood or other similar natural disasters.**

Generation, Payback, and cost of solar electricity

Capacity	55	kWp
Insolation	1800	kWh/m²/year
Year 1 PR	78	%
Year 1 Generation	79200	kWh/year
Year 1 CUF	16.0	%
Plant Cost	79200	Rs
Tariff	9	Rs/kWh
Simple Payback	4.1	Years

Thank You for Your Business!

132 KV Line End Bay Cable Laying Details at Niwali Ss								
Sr.No.	From	To	2Cx2.5Sq. mm	4Cx2.5 Sq.mm	5Cx2.5Sq .mm	7Cx2.5Sq. mm	12Cx2.5Sq .mm	19Cx2.5S q.mm
	Equipment	Equipment	Cable Length (Mtr)					
1	R Phase CT	CTMB		65				
2	Y Phase CT	CTMB		75				
3	B Phase CT	CTMB		85				
4	89A Isolator	Isolator MB	28	28		28	28	
5	89C Isolator	Isolator MB		35		35	35	
6	89D Isolator	Isolator MB		25		25	25	
7	89E Isolator	Isolator MB					12	
8	CTMB	Isolator MB	30					
9	CB	Isolator MB	16					
10	CB	Control room (IRL)		225			456	225
11	Isolator MB	Control room		242	250		242	242
12	CTMB	Control room		1070				
13	IRL2	TBC1	18	18				
14	IRL2	TBC2	18	18				
15	IRL2	Bus Bar Panel	31	31				31
16	IRL2	Bus Bar Panel		87				
17	IRL2	PLCC					44	
18	IRL2	ACDB	39					
19	IRL2	DC	78					
Total Length (In Mtrs.)			258	2004	250	88	842	498

Cable Laying Details at AUSA Road TSS								
Sr.No.	From	To	2Cx2.5Sq. mm	4Cx2.5 Sq.mm	5Cx2.5Sq .mm	7Cx2.5Sq. mm	12Cx2.5Sq .mm	19Cx2.5S q.mm
	Equipment	Equipment	Cable Length (Mtr)					
1	R Phase metering CT	Meter panel		22				
2	Y Phase metering CT	Meter panel		28				
3	B Phase metering CT	Meter panel		32				
4	R Phase metering PT	Meter panel		22				
5	Y Phase metering PT	Meter panel		28				
6	B Phase metering PT	Meter panel		32				
Total Length (In Mtrs.)				164				

132kV AUSA Road TSS and Line End Bay at Niwali Ss			
Sr. No.	Cable Details	Total length in (Mtrs.)	Termination kit (Nos.)
1	2Cx2.5sqmm	258	28
2	4Cx2.5sqmm	2168	80
3	5Cx2.5sqmm	250	2
4	7Cx2.5sqmm	88	6
5	12Cx2.5sqmm	842	16
6	19Cx2.5sqmm	498	6

132 KV Line End Bay Cable Laying Details at Niwali Ss								
Sr.No.	From	To	2Cx2.5Sq. mm	4Cx2.5 Sq.mm	5Cx2.5Sq .mm	7Cx2.5Sq. mm	12Cx2.5Sq .mm	19Cx2.5S q.mm
	Equipment	Equipment	Cable Length (Mtr)					
1	R Phase CT	CTMB		65				
2	Y Phase CT	CTMB		75				
3	B Phase CT	CTMB		85				
4	89A Isolator	Isolator MB	28	28		28	28	
5	89C Isolator	Isolator MB		35		35	35	
6	89D Isolator	Isolator MB		25		25	25	
7	89E Isolator	Isolator MB					12	
8	CTMB	Isolator MB	30					
9	CB	Isolator MB	16					
10	CB	Control room (IRL)		225			456	225
11	Isolator MB	Control room		242	250		242	242
12	CTMB	Control room		1070				
13	IRL2	TBC1	18	18				
14	IRL2	TBC2	18	18				
15	IRL2	Bus Bar Panel	31	31				31
16	IRL2	Bus Bar Panel		87				
17	IRL2	PLCC					44	
18	IRL2	ACDB	39					
19	IRL2	DC	78					
Total Length (In Mtrs.)			258	2004	250	88	842	498

Cable Laying Details at Ausa Road TSS								
Sr.No.	From	To	2Cx2.5Sq. mm	4Cx2.5 Sq.mm	5Cx2.5Sq .mm	7Cx2.5Sq. mm	12Cx2.5Sq .mm	19Cx2.5S q.mm
	Equipment	Equipment	Cable Length (Mtr)					
1	R Phase metering CT	Meter panel		22				
2	Y Phase metering CT	Meter panel		28				
3	B Phase metering CT	Meter panel		32				
4	R Phase metering PT	Meter panel		22				
5	Y Phase metering PT	Meter panel		28				
6	B Phase metering PT	Meter panel		32				
Total Length (In Mtrs.)				164				

132kV Ausa Road TSS and Line End Bay at Niwali Ss			
Sr. No.	Cable Details	Total length in (Mtrs.)	Termination kit (Nos.)
1	2Cx2.5sqmm	258	28
2	4Cx2.5sqmm	2168	80
3	5Cx2.5sqmm	250	2
4	7Cx2.5sqmm	88	6
5	12Cx2.5sqmm	842	16
6	19Cx2.5sqmm	498	6

Joint Measurement Sheet (Erection Work)						
132kV AUSA Road TSS and Line End Bay at Niwali Ss						
Name of Work: Work for Construction work of 132kV SCDC Niwali Ss to 132kV Proposed AUSA Road TSS Line and End Bay along with supply, erection, testing, commissioning & related Civil Works						
LOA No.: SE/EHV/CCA/Tech/TC-50/0534 Dated 27/02/2020						
FO No. 2100001172						
JMC No. 2			Date: 28.12.2021			
Sr. No.	Item Description	Unit	Work Order Quantity	Previous Executed Qty.	Current Executed Quantity	Remarks
1	ETC-145kV 2000A 40kA/3s 3Ø CB	EA	1	1.00		
2	ETC-145kV 1250A 40kA/3s Isolator wt E/S	EA	2	2.00		
3	ETC-145kV 1250A 40kA/3s Isolator w/o E/S	EA	4	4.00		
4	ETC- 145kV CT 800-400/1A 5C Erection, testing & commissioning of 145kV 800-400/1A 5 Cores Current# Transformer	EA	6	6.00		
5	ERECTION 145KV 132/√3KV/110/√3V 3C PT	EA	3	3.00		
6	Erection 132kV Bus Post Insulator	EA	5	4.00		
7	ETC-132kV 10kA Surge Arrester	EA	6	6.00		
8	ETC-132kV Feeder Relay Panel wt BCU	EA	1	1.00		
9	132-100kV Jumpering work	EA	90	33.00		
10	Stringing Earthwire	km	0.75	0.700		
11	Excavation of Trench for Earthmat Excavation of trench up to 600 mm depth, laying of earthmat, welding and# backfilling complete job.	RMT	250	563.90		
12	Erection Eqpt/Gantry/Suprt Str Earthing Erection of 220kV/132-110-110 kV/33-22 kV Equipment/Gantry/Support# Structure Earthing including excavation and backfilling, cutting bending# & drilling of MS/GI flat & welding one end to earthmat and other end to# equipment etc.	EA	33	33.00		
13	Erection CI Pipe Earthing Set wt E Mtrls	EA	12	12.00		
14	Fixing 80x20mm GI Perforated Cable Tray	RMT	300	20.00	20.00	
15	Fixing 200x20mm GI Perforated Cable Tray	RMT	250	20.00	160.00	
16	ETC- Marshalling Kiosk	EA	5	2.00		
17	ETC- Grouting of Marshalling Box Grouting of Marshalling Box	CuM	2	0.820		
18	Laying PVC Pipe Laying of PVC Pipe	RMT	200		110.00	
19	LAYING LT XLPE 2CX2.5 CU AR CABLE Laying of 2 Core 2.5mm ² Copper Armored XLPE FRLS Cable	RMT	300		258.00	
20	LAYING LT XLPE FR 4CX2.5 CU AR CABLE 1.1KV Grade Control Cable	RMT	200		2,168.00	
21	Laying LT XLPE FR 5Cx2.5 Cu Ar Cable 1.1KV Grade Control Cable	KM	0.100		0.250	
22	LAYING LT XLPE FR 7CX2.5 CU AR CABLE 1.1KV Grade Control Cable	RMT	1200		88.00	
23	LAYING LT XLPE FR 12CX2.5 CU AR CABLE 1.1KV Grade Control Cable	RMT	1000		842.00	
24	LAYING LT XLPE FR 19CX2.5 CU AR CABLE 1.1KV Grade Control Cable	RMT	1000		498.00	
25	TERMINATION OF 2CX2.5MM ² CU AR CABLE Termination of 2Cx2.5mm ² Copper Armored Control Cable at both ends# (inclusive of glands, lugs, ferruls etc.)	EA	40		28.00	
26	Termination of 4Cx2.5mm ² Cu Ar Cable Termination of 4Cx2.5mm ² Copper Armored Control Cable at both ends# (inclusive of glands, lugs, ferruls etc.)	EA	10		80.00	
27	Termination of 5Cx2.5mm ² Cu Ar Cable Termination of 5Cx2.5mm ² Copper Armored Control Cable at both ends# (inclusive of glands, lugs, ferruls etc.)	EA	60		2.00	
28	Termination of 7Cx2.5mm ² Cu Ar Cable Termination of 7Cx2.5mm ² Copper Armored Control Cable at both ends# (inclusive of glands, lugs, ferruls etc.)	EA	10		6.00	
29	Termination of 12Cx2.5mm ² Cu Ar Cable Termination of 12Cx2.5mm ² Copper Armored Control Cable at both ends# (inclusive of glands, lugs, ferruls etc.)	EA	50		16.00	
30	Termination of 19Cx2.5mm ² Cu Ar Cable Termination of 19Cx2.5mm ² Copper Armored Control Cable at both ends# (inclusive of glands, lugs, ferruls etc.)	EA	6		6.00	
31	Erection 132kV Gantry Str wt F/B	MT	21.50	7.104		
32	Erection Suprt Str	MT	1.20	1.200		

For MSETCL

For BNCPL

Authorized Signatory

Authorized Signatory

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Joint Measurement Sheet (Erection Work)

132kV AUSA ROAD TSS and Line End Bay at Niwali Ss

Name of Work: Work for Construction work of 132kV SCDC Niwali Ss to 132kV Proposed AUSA ROAD TSS Line and End Bay along with supply, erection, testing, commissioning & related Civil Works
 LOA No.: SE/EHV/CCA/Tech/TG-50/0534 Dated 27/02/2020
 PO No. 2100001172

JMC No. 2

Date: 28.12.2021

Sr. No.	Item Description	Unit	Work Order Quantity	Previous Executed Qty.	Current Executed Quantity	Remarks
1	ETC-145kV 2000A 40kA/3s 3Ø CB	EA	1	1.00		
2	ETC-145kV 1250A 40kA/3s Isolator wt E/S	EA	2	2.00		
3	ETC-145kV 1250A 40kA/3s Isolator w/o E/S	EA	4	4.00		
4	ETC- 145kV CT 800-400/1A 5C Erection, testing & commissioning of 145kV 800-400/1A 5 Cores Current# Transformer	EA	6	6.00		
5	ERECTION 145KV 132/√3KV/110/√3V 3C PT	EA	3	3.00		
6	Erection 132kV Bus Post Insulator	EA	5	4.00		
7	ETC-132kV 10kA Surge Arrester	EA	6	6.00		
8	ETC-132kV Feeder Relay Panel wt BCU	EA	1	1.00		
9	132-100kV Jumpering work	EA	90	33.00		
10	Stringing Earthwire	km	0.75	0.700		
11	Excavation of Trench for Earthmat Excavation of trench up to 600 mm depth, laying of earthmat, welding and# backfilling complete job.	RMT	250	563.90		
12	Erection Eqt/ Gantry/Suprt Str Earthing Erection of 220kV/132-110-110 kV/33-22 kV Equipment/ Gantry/Support# Structure Earthing including excavation and backfilling, cutting bending# & drilling of MS/GI flat & welding one end to earthmat and other end to# equipment etc.	EA	33	33.00		
13	Erection CI Pipe Earthing Set wt E Mtrls	EA	12	12.00		
14	Fixing 80x20mm GI Perforated Cable Tray	RMT	300	20.00	20.00	
15	Fixing 200x20mm GI Perforated Cable Tray	RMT	250	20.00	160.00	
16	ETC- Marshalling Kiosk	EA	5	2.00		
17	ETC- Grouting of Marshalling Box Grouting of Marshalling Box	CuM	2	0.820		
18	Laying PVC Pipe Laying of PVC Pipe	RMT	200		110.00	
19	LAYING LT XLPE 2CX2.5 CU AR CABLE Laying of 2 Core 2.5mm ² Copper Armored XLPE FRLS Cable	RMT	300		250.00	
20	LAYING LT XLPE FR 4CX2.5 CU AR CABLE 1.1KV Grade Control Cable	RMT	200		2,160.00	
21	Laying LT XLPE FR 5Cx2.5 Cu Ar Cable 1.1KV Grade Control Cable	KM	0.100		9.250	
22	LAYING LT XLPE FR 7CX2.5 CU AR CABLE 1.1KV Grade Control Cable	RMT	1200		88.00	
23	LAYING LT XLPE FR 12CX2.5 CU AR CABLE 1.1KV Grade Control Cable	RMT	1000		342.00	
24	LAYING LT XLPE FR 19CX2.5 CU AR CABLE 1.1KV Grade Control Cable	RMT	1000		490.00	
25	TERMINATION OF 2CX2.5MM ² CU AR CABLE Termination of 2Cx2.5mm ² Copper Armored Control Cable at both ends# (inclusive of glands, lugs, ferruls etc.)	EA	40		28.00	
26	Termination of 4Cx2.5mm ² Cu Ar Cable Termination of 4Cx2.5mm ² Copper Armored Control Cable at both ends# (inclusive of glands, lugs, ferruls etc.)	EA	10		80.00	
27	Termination of 5Cx2.5mm ² Cu Ar Cable Termination of 5Cx2.5mm ² Copper Armored Control Cable at both ends# (inclusive of glands, lugs, ferruls etc.)	EA	60		2.00	
28	Termination of 7Cx2.5mm ² Cu Ar Cable Termination of 7Cx2.5mm ² Copper Armored Control Cable at both ends# (inclusive of glands, lugs, ferruls etc.)	EA	10		8.00	
29	Termination of 12Cx2.5mm ² Cu Ar Cable Termination of 12Cx2.5mm ² Copper Armored Control Cable at both ends# (inclusive of glands, lugs, ferruls etc.)	EA	50		16.00	
30	Termination of 19Cx2.5mm ² Cu Ar Cable Termination of 19Cx2.5mm ² Copper Armored Control Cable at both ends# (inclusive of glands, lugs, ferruls etc.)	EA	6		6.00	
31	Erection 132kV Gantry Str wt F/B	MT	21.50	7.104		
32	Erection Suprt Str	MT	1.20	1.200		

For MSETCL

For BNCPL

Authorized Signatory

Authorized Signatory