

### Bid Document

Bid Details	
Bid End Date/Time	27-07-2020 14:00:00
Bid Opening Date/Time	27-07-2020 14:30:00
Bid Life Cycle (From Publish Date)	90 (Days)
Bid Offer Validity (From End Date)	75 (Days)
Ministry/State Name	Ministry Of Railways
Department Name	Na
Organisation Name	N/a
Office Name	Office Of Principal Chief Materials Manager, South Western Railway, Hubli
Total Quantity	2
Item Category	inverters solar inverter
MSE Exemption for Years of Experience and Turnover	No
Startup Exemption for Years of Experience and Turnover	No
Document required from seller	Certificate (Requested in ATC) *In case any bidder is seeking exemption from Experience / Turnover Criteria, the supporting documents to prove his eligibility for exemption must be uploaded for evaluation by the buyer
Bid to RA enabled	No
Inspection Required	No

#### EMD Detail

Required	No
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#### ePBG Detail

Required	No
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#### Splitting

Bid splitting not applied.

### Inverters Solar Inverter ( 2 pieces )

#### Technical Specifications

[\\* As per GeM Category Specification](#)

Specification	Specification Name	Values	Bid Requirement (Allowed Values)
GENERIC	<b>Rating of inverter (KVA)</b>	5.0 KVA	1.0 KVA, 1.10 KVA, 1.20 KVA, 1.50 KVA, 1.60 KVA, 2.0 KVA, 3.0 KVA, 4.0 KVA, 5.0 KVA
	<b>ISI marked</b>	Yes	Yes
	If ISI marked yes, CM/L No. must declare. If ISI mark No write NA	-	*
	<b>Nos. of phase</b>	single	single
	<b>Inverter output wave form</b>	Pure sine wave	Pure sine wave
	<b>Ingress protection rating of inverter</b>	IP 65 for outdoor use	IP 65 for outdoor use
	<b>Built in protection for AC high/low voltage and frequency if connected to AC mains</b>	IP 65 for outdoor use	IP 65 for outdoor use
	<b>Display Type</b>	LED	LED
	Area required for installation of Solar panels with mounting structure (sq. mt)	-	*
	<b>Material of mounting structure</b>	Galvanised steel	Galvanised steel
CONSTRUCTIONAL	Mode of operation	Stand-alone	*
	<b>Switching device</b>	MOSFET	IGBT, MOSFET
	Maximum power point tracking (MPPT)	yes	*
	Galvanic isolation between input DC and output AC	yes	*
	By-pass facility if connected to AC mains	IP 65 for outdoor use	*
	Display parameters like DC voltage (V) DC current (A) AC voltage(V)	YES	*
	Sequence of power drawing	(1) SPV (2) AC MAINS (IF CONNECTED WITH AC POWER) (3) BATTERY BANK	*
	Nos. of modules in an array (NOS.)	-	*
	Rating of individual PV module (Wp)	-	*
	<b>Salt mist corrosion resistant material for body and frame of SPV module</b>	Galvanized steel	Galvanized steel
	Provision for Solar generation meter	yes	*
	Provision for bidirectional meter (Net Meter)	yes	*
	Provision of anti rusting/ non corrosive mounting structure	yes	*

FUNCTIONAL	<b>Sustainability of wind speed. (KM/Hr)</b>	150	150
	<b>Type of battery (KM/Hr)</b>	Tubular Gel	Tubular Gel
	Capacity of battery bank (VAH)	-	*
	3 stage battery charging (float, boost and equalize stage) for long life of the battery	yes	*
	Reverse polarity protection	yes	*
	Complete installation work to be done by supplier	yes	*
	Gross weight of the inverter (kg)	-	*
	Reverse polarity protection for PV modules	yes	*
	Inverter efficiency	-	*
	Total Harmonic distortion (%)	-	*
	Operating AC voltage range (Volts)	-	*
	Operating frequency range (Hz)	-	*
	Operating Temperature (degree cel)	-	*
	Operating relative humidity (%)	-	*
	Load power factor	-	*
	Output regulation at rated voltage	Yes	*
	Over load Protection 110% for 60 Seconds ,125% for 30 Seconds and 150% for 5 seconds	yes	*
	Efficiency of Solar panel (%)	-	*
	<b>Battery backup time at rated load (Hour)</b>	4	4
	Battery bank Voltage (Volt)	-	*
CERTIFICATIONS	Conformity of inverter to environmental testing conditions as per IEC 600688-2 (1,2,14,30) or equivalent BIS standard	YES	*
	90% performance warranty for SPV (years)	10	*
	80% performance warranty for SPV (years)	25	*
	TTC for PV module from any MNRE lab as per MNRE 2015-2016	yes	*
	OEM test report for indigenously produced PV module (s)	yes	*

Availability of Type test report for inverter including environmental tests from Central government/NABL/ILAC accredited laboratory to prove conformity to the specification	yes	*
Test report number	-	*
Date of test report	-	*
Name and address of laboratory	-	*
Type test report to be furnished on buyers demand	yes	*

\* Specifications highlighted in bold are the Golden Parameters.

\* Bidders may note that In respect of non-golden Parameters, the specifications 'Values' chosen by Buyer will generally be preferred over 'Bid requirement ( allowed Values) by the Buyer.

#### Additional Specification Documents

#### Consignees/Reporting Officer and Quantity

S.No.	Consignee/Reporting Officer	Address	Quantity	Delivery Days
1	Digvijay M Singh	560009,O/o Divisional Railway Manager, Office Complex, South Western Railway Divisional Office, Bangalore.	2	30

#### Bid Specific Additional Terms and Conditions

- 1.Scope of supply (Bid price to include all cost components) : Supply Installation Testing Commissioning of Goods and Training of operators and providing Statutory Clearances required (if any)
- 2.Availability of Service Centres: Bidder/OEM must have a Functional Service Centre in the State of each Consignee's Location in case of carry-in warranty. (Not applicable in case of goods having on-site warranty). If service center is not already there at the time of bidding, successful bidder / OEM shall have to establish one within 30 days of award of contract. Payment shall be released only after submission of documentary evidence of having Functional Service Centre.
- 3.Dedicated /toll Free Telephone No. for Service Support : BIDDER/OEM must have Dedicated/toll Free Telephone No. for Service Support.
- 4.Escalation Matrix For Service Support : Bidder/OEM must provide Escalation Matrix of Telephone Numbers for Service Support.
- 5.Successful bidder will have to ensure that adequate number of dedicated technical service personals / engineers are designated / deployed for attending to the Service Request in a time bound manner and for ensuring Timely Servicing / rectification of defects during warranty period, as per Service level agreement indicated in the relevant clause of the bid.
- 6.Timely Servicing / rectification of defects during warranty period: After having been notified of the defects / service requirement during warranty period, Seller has to complete the required Service / Rectification within 5 days time limit. If the Seller fails to complete service / rectification with defined time limit, a penalty of 0.5% of Unit Price of the product shall be charged as penalty for each week of delay from the seller. Seller can deposit the penalty with the Buyer directly else the Buyer shall have a right to recover all such penalty amount from the Performance Security (PBG).Cumulative Penalty cannot exceed more than 10% of the total contract value after which the Buyer shall have the right to get the service / rectification done from alternate sources at the risk and cost of the Seller besides forfeiture of PBG. Seller shall be liable to re-imburse the cost of such service / rectification to the Buyer.
- 7.The bidder is required to upload, along with the bid, all relevant certificates such as BIS licence, type test certificate, approval certificates and other certificates as prescribed in the Product Specification given in the bid document.

[This Bid is also governed by the General Terms and Conditions](#)

---Thank You---