

**CENTRAL ELECTRONICS LIMITED**  
(A Public Sector Enterprise)



**TENDER DOCUMENT**

**For**

**“Design, Survey, Supply, Installation, Testing, Commissioning  
& 5 Years Comprehensive Maintenance of Distributed Grid  
Connected Solar PV Systems for Solarization of Grid  
Connected Agriculture Consumers under “Kusum Scheme –  
Component C (LOT-4)”**

**Tender No.C-2(b)/RC/0700/4624/2020 dated 04.09.2020**

Assistant General Manager  
Materials Management Division  
Central Electronics Limited,  
4, Industrial Area, Saur Urja Marg, Sahibabad–201010(UP) INDIA  
Tel.No.0091-120-2895144 FaxNo.0091-120-2895148  
Email: mmd@celindia.co.in Website: www.celindia.co.in

**For any query:**

Mob. No. 9910666741/8700612676 email Id: aksingh@celindia.co.in/indu@celindia.co.in

Tender No.: C-2(b)/RC/0700/4624/2020



FORMAT NO. : CEL/FR/MMD/TN/03(01)

## **CENTRAL ELECTRONICS LIMITED**

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### **TENDER NOTICE**

**Tender No.C-2(b)/RC/0700/4624/2020**

**Date: 04.09.2020**

Central Electronics Limited invites **ONLINE** bids (Technical & Price) from eligible bidders which are valid for a minimum period of 180 days from the date of opening for **“Design, Survey, Supply, Installation, Testing, Commissioning & 5 Years Comprehensive Maintenance of Distributed Grid Connected Solar PV Systems for Solarization of Grid Connected Agriculture Consumers under “Kusum Scheme – Component C (LOT-4)”**.

<b>Scope of Tender</b>	<b>Design, Survey, Supply, Installation, Testing, Commissioning &amp; 5 Years Comprehensive Maintenance of Distributed Grid Connected Solar PV Systems for Solarization of Grid Connected Agriculture Consumers under “Kusum Scheme – Component C (LOT-4)”</b>
<b>Earnest Money Deposit</b>	<b>Rs. 10,00,000/- (Rupees Ten Lakhs Only)</b>

Interested parties may view and download the tender document containing the detailed terms & conditions, free of cost from the website [www.etenders.gov.in](http://www.etenders.gov.in) or [www.celindia.co.in](http://www.celindia.co.in).

Bids are to be submitted **ONLINE** Only.

Please see document control Sheet at Annexure-A.

**FOR CENTRAL ELECTRONICS LIMITED**

Sd-

**Assistant General Manager  
Materials Management Division**

TENDER DOCUMENT for Tender No. **C-2(b)/RC/0700/4624/2020** dated **04.09.2020**

**Important Instructions: -**

1. The following documents/Annexures are part of tender document:
  - a. Tender notice
  - b. Document Control Sheet - Annexure-1
  - c. BOQ Format Annexure-2
  - d. Eligibility Requirement
  - e. Scope of Work
  - f. Special Conditions of Contract
  - g. Detailed Scope of Work and Technical Specifications
  - h. Price bid format
  - i. Commercial terms & conditions Annexure-B
  - j. Format for submission of Vendor Data Annexure-C
  - k. Tender acceptance letter Annexure-D
2. Quotations shall be liable to be rejected if there is/are any deviation(s) from the specifications.
3. Escalation in price (except where price variation clause is applicable), deviation from delivery schedule, terms and conditions will not be permitted in your quotation. Statutory Taxes & Duties should be shown separately from the price.
4. Catalogue, literature, specification details should accompany the quotation. Incomplete quotations are liable to be rejected.
5. **Any deviations whether technical or commercial stated anywhere in the bid shall not be taken into account and may render the bid non-responsible and liable to be rejected.**
6. Vendor Data should be submitted in the **Format for submission of Vendor Data** as per **Annexure C**.
7. Quotation should be submitted in **Two Packet System**.
8. Bids should be submitted in ONLINE only. Following are to be submitted in your bid:
  - a) **Technical Bid:**
    - I. Earnest Money Deposit RTGS/NEFT acknowledgement or the documents for exemption from submission of EMD.
    - II. Documents required as per eligibility criteria given in the tender.
    - III. Filled up Format for Submission of Vendor Data as per format at **Annexure C**.
    - IV. Tender acceptance letter as per format at **Annexure D**.
  - b) **Price Bid:** Prices to be filled ONLINE in the separate BOQ file only.

Tender No.: C-2(b)/RC/0700/4624/2020

**Annexure-1**

**Document Control Sheet & Important dates**

Tender Reference No.	C-2(b)/RC/0700/4624/2020
Name of Organization	Central Electronics Limited
Tender Type (Open/Limited/EOI/Auction/Single)	Open
No. of Packets	Two Packet
Tender Category (Services/Goods/Works)	Goods
Type/Form of Contract (Work/Supply/Auction/Service/Buy/Empanelment/Sell)	Supply
Payment Mode (Online/Offline)	Online

Date of Issue/Publishing	04/09/2020 (15:00 Hrs)
Document Download/Sale Start Date	04/09/2020 (15:00 Hrs)
Document Download/Sale End Date	18/09/2020 (14:30 Hrs)
Bid submission Start Date	04/09/2020 (15:00 Hrs)
Last Date and Time for Submission of Bids	18/09/2020 (14:30 Hrs)
Date and Time of Opening of Bids	18/09/2020 (15:00 Hrs)

**THIS IS AN OPEN TENDER.**

**BIDS ARE TO BE SUBMITTED ONLINE ONLY.**

[Validate](#) [Print](#) [Help](#)

**Item Rate BoQ**

Tender Inviting Authority: ASSISTANT GENERAL MANAGER, MATERIALS MANAGEMENT DIVISION, CENTRAL ELECTRONICS LIMITED, SAHIBABAD

Name of Work: Tender for Design, Survey, Supply, Installation, Testing, Commissioning & 5 Years Comprehensive Maintenance of Distributed Grid Connected Solar PV Systems for Solarization of Grid Connected Agriculture Consumers under "Kusum Scheme - Component C (LOT-4)

Tender No: C-2(b)/RC/0700/4624/2020

Name of the Bidder/ Bidding Firm / Company :								
Price-Bid								
(This BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevant columns, else the bidder is liable to be rejected for this tender. Bidders are allowed to enter the Bidder Name and Values only )								
Sl. No.	Item Description	Quantity	Units	Basic Price To be entered by the Bidder Rs. P	GST Percentage	HSN/SAC Code	TOTAL AMOUNT Without GST in Rs. P	TOTAL AMOUNT WITHOUT GST In Words
1	2	4	5	3	30	31	53	55
1	Supply of BOS for 4.5 KWp Solar Power generating system as per tender documents	14	Sets				0.00	INR Zero Only
2	Design, Survey, Installation, Testing, Commissioning, & 5 years comprehensive maintenance for 4.5 KWp Solar Power generating system as per tender documents	14	Sets				0.00	INR Zero Only
3	Supply of BOS for 7.5 KWp Solar Power generating system as per tender documents	29	Sets				0.00	INR Zero Only
4	Design, Survey, Installation, Testing, Commissioning, & 5 years comprehensive maintenance for 7.5 KWp Solar Power generating system as per tender documents	29	Sets				0.00	INR Zero Only
5	Supply of BOS for 11.25 KWp Solar Power generating system as per tender documents	33	Sets				0.00	INR Zero Only
6	Design, Survey, Installation, Testing, Commissioning, & 5 years comprehensive maintenance for 11.25 KWp Solar Power generating system as per tender documents	33	Sets				0.00	INR Zero Only
<b>Total in Figures</b>							<b>0.00</b>	<b>INR Zero Only</b>
<b>Quoted Rate in Words</b>								

BOQ format for reference only. Price to be filled ONLINE in a separate BOQ.

**Tender for Design, Survey, Supply, Installation, Testing, Commissioning & 5 Years Comprehensive Maintenance of Distributed Grid Connected Solar PV Systems for Solarization of Grid Connected Agriculture Consumers Under “Kusum Scheme – Component C (LOT-4)”**

**Eligibility Requirement**

The detail of eligibility requirements is provided in the table below. The bidders are required to furnish the required supporting documents along with the Technical Bid.

S. No.	Criteria	Documents Required
1.	Bidder can be sole/single bidder or consortium of upto 2 members with one of the member as lead member as per format of consortium agreement.	Duly notarized copy of consortium agreement as per attached format in Appendix-1 must be submitted.
2.	The Bidder should have any of the following legal status: a) Body incorporated in India under the Companies Act, 2013 including any amendment thereto; OR b) Body incorporated in India under the Limited Liability Partnership (LLP) Act, 2008 including any amendment thereto; OR c) Firm registered under Partnership Act, 1932 in India; OR d) Sole Proprietor In consortium, all members must fulfill the requirement and submit the documents as per the tender document.	a) In case of Company – Copy of Registration/Incorporation Certificate b) In case of LLP – Copy of Deed of Partnership c) In case of Partnership – Copy of Deed of Partnership d) In case of Sole Proprietor – Duly notarized Undertaking from Sole proprietor
3.	The Bidder must have the required GST Registration In case of consortium, all the members must fulfill this requirement.	Copy of GST registration certificate with legible GSTIN.
4.	The bidder must be company registered under GST in the state of Rajasthan. All compliance of GST is to made by bidder. Copy of the certificate to be enclosed. In case, bidder doesn't have the GST registration in the state of Rajasthan, bidder shall submit the undertaking that GST registration certificate of Rajasthan state will be provided within 15 days from the date of purchase order. In consortium, lead bidder must fulfill the requirement and submit the documents as per the tender document.	Copy of valid GST registration certificate/undertaking
5.	Contractor has to submit the undertaking on stamp paper that the contractor shall arrange a valid electrical contractor license of Class "A"/"B" in the name of CEL issued by Govt. of Rajasthan within 20 days of PO. In consortium, lead bidder must fulfill the requirement and submit the documents as per the tender document.	The bidder shall provide an Undertaking
6.	The firm must not have been debarred / blacklisted / defaulted by any Govt. Dept., agency, PSUs	The bidder shall provide an Undertaking as per format in

	/institution / agencies / autonomous organizations. As proof of the same the bidder shall submit duly notarized self-certificate by an authorized person of the bidder's company/firm. In consortium, both members must fulfill the requirement and submit the documents as per the tender document.	Appendix-2.
7.	Bidder shall have experience of execution of supply, installation and maintenance of grid connected / off-grid Solar Photovoltaic Systems (SPV) (SPV Pumps / Rooftop SPV / Ground mounted SPV / Mini-grid/home lighting) during last Five years [i.e. 2015-16 to 1 <sup>st</sup> July, 2020]. The works shall have been executed for any government department/ PSU/NGO/ NSE-BSE Listed company/ Regd. Co-operative society with a value of not less than 6.7 Crores.  In consortium, both parties shall jointly meet the eligibility criteria.	The details of projects executed during the mentioned period should be listed as per attached format. Copy of each work order and completion certificates must be submitted.  Work experience certificate having value of completed work in the name of bidder duly certified by Chartered Accountant as per the attached format in Appendix-3.
8.	The Bidder should have positive net worth for each of the last three Financial Years (FY16-17, FY17-18, and FY18-19). In case of consortium, all the partners of consortium shall meet individually this qualification.	Certificate fulfilling required financial criteria in the name of Bidder duly certified by Practicing Chartered Accountant as per attached format in Appendix-4.
9.	Minimum Average Annual Turnover (MAAT) during any 3 best out of last five financial years (FY15-16, FY16-17, FY17-18, FY18-19 and FY19-20) of the bidder shall not be less than 6.7 Crores.  In consortium, both parties shall jointly meet the eligibility criteria.	Copies of the audited balance sheet, ITRs and profit & loss account must be submitted along with the technical bid.
10.	Certificate from Banker	A certificate from banker indicating various fund based/non fund based limits sanctioned to the bidder and the extent of utilization as on date as per the attached format in Appendix-5. Such certificate shall have been issued not earlier than three months prior to the date of bid opening. Wherever necessary, CEL may make queries with the Bidders' bankers.  In case of Bid Submitted in consortium, the certificate from Bank for all the consortium partners be furnished.

## Note:

- a) Firms who are debarred/ blacklisted anywhere in India will not be considered.
- b) The purchaser reserves the right for verification of any original documents submitted with the bids.

## **INTRODUCTION**

In February 2019, Government of India launched Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan (KUSUM scheme) with the objective of financial and water security to farmers.

Individual farmers having grid connected agriculture pump will be supported to solarise pumps. The farmer will be able to use the generated solar power to meet the irrigation needs and the excess solar power will be sold to DISCOM.

It will help DISCOMS to reduce the subsidy burden as well as meet their RPO targets

The Ministry of New & Renewable Energy, Government of India vide OM F. No. 32/645/2017-SPV Division dated 22.07.2019 issued operational guidelines for implementation of Pradhan Mantri Kisan Urja Suraksha Evam Uttan Mahabhiyan Scheme (KUSUM). Under Component C, solarisation of grid connected agriculture pumps of individual pump capacity is targeted across India.

Modality to be adopted for KUSUM Component C implementation shall be based on Net-metering arrangement, where the agriculture pump will continue to run at rated capacity taking power from solar panels and balance power from grid, if required, and in case solar power generation is higher than required by pump, the additional solar power would be fed to the grid. **In case of non-availability of power from grid, the pump should be able to run taking power from solar panels while avoiding any power supply to the grid (suitable arrangement is to be made by the contractor in this regard).**

Key benefits of KUSUM scheme:

- a) DISCOM will save on recurring deficit by low agriculture tariff.
- b) Farmers will receive reliable day time power.
- c) Farmers can sell excess power to Grid and increase their income
- d) Farmers will be incentivised to conserve energy as well as ground water.
- e) No additional Electric load on the grid for Agriculture Pumps.

## **Scope of work**

Scope of work is design, survey, supply, installation, testing, commissioning & 5 years comprehensive maintenance of distributed grid connected solar PV systems for solarization of grid connected agriculture consumers under “KUSUM Scheme – Component C” in Jaipur Discom on selected agriculture feeders (as per technical specifications as prescribed).

The list of agriculture consumers where such solar systems are to be installed will be made available to the bidders after award of contract.

## **Mode of Execution of Programme:**

The basis of evaluation of the bids shall be the cost/rate quoted in the Price Schedule (without GST). To further clarify, all the costs including applicable taxes, duties, etc. (without GST) pertaining to design, survey, supply, installation, testing, commissioning & 5 (five) years comprehensive maintenance of the said complete SPV systems shall be inclusive in the Price Bid quoted by Bidders for the purpose of comparison and evaluation. Bidders are required to quote rate / cost on firm basis and no price variation on any account shall be considered.

**The work is to be carried out on a ‘Turn Key Basis’.**

The contractor shall be provided the list of agriculture connections/ beneficiaries covered under the scope of work under this tender.

The contractor shall also be required to set up their repair and maintenance centres for providing effective repair/maintenance services to the beneficiaries and meet conditions detailed in tender documents.



## KEY DEFINITIONS

### Definitions

1.	“JVVNL” / “Jaipur Discom”	Jaipur Vidyut Vitran Nigam Limited, Jaipur
2.	Rajasthan Discoms	Discoms in Rajasthan namely: JVVNL
3.	SPV System:	<p>“SPV System” shall mean the grid-connected Solar PV system as per Tender Document that shall be supplied, installed, commissioned and maintained with all other ancillary required by the Contractor for satisfactory operation of the SPV System.</p> <p>It shall mean the Grid-tie Solar Photo-Voltaic (PV) system including the grid-tie inverter(s), SPV controller, module mounting structure(s), cables and connectors, safety and earthing equipment, interconnection equipment, and inverter with remote monitoring with other components for Solarization of Agriculture pump sets of Agriculture Consumers that shall be supplied, installed, commissioned and maintained by the Contractor.</p>
4.	CMC:	Comprehensive Maintenance Contract
5.	Beneficiary:	“Agriculture Consumer” / Owner of Agriculture Connection which is going to be solarized under this tender.
6.	Scheme:	KUSUM Scheme – Component C launched by MNRE, GoI
7.	Project:	Work of design, survey, supply, installation, testing, commissioning & 5 years comprehensive maintenance of distributed grid connected solar PV systems for solarization of grid connected agriculture consumers under “KUSUM Scheme – Component C” in Jaipur Discom
8.	“Solarization”	“Solarization” shall mean to connect the existing grid-connected Agriculture Consumer pump-sets of farmer to the distributed, renewable energy source of Solar by installing Grid connected SPV system of the required capacity in the farmer’s premises (i.e. farm) as per the Tender Document terms and condition.
9.	Guaranteed CUF	<p>Shall be <b>15%</b> calculated with respect to the AC capacity of the PV plant.</p> <p>CUF in a Year shall mean the ratio of the output of the SPV Power Plant in a Year versus installed Project capacity x 365 x 24. (CUF = Cumulative Project output in kWh / (installed Project capacity in kWp x 24 x 365))</p>

1.	+	Plus (Addition)
2.	AC	Alternating Current
3.	ACP	Aluminium Composite Panel
4.	Ag.	Agriculture
5.	AM	Air Mass
6.	ASTM	American Society for Testing and Materials
7.	BOQ	Bill of Quantity
8.	BOS	Balance-of-System
9.	CEA	Central Electricity Authority
10.	CEIG	Chief Electrical Inspector of Rajasthan
11.	CERC	Central Electricity Regulatory Commission
12.	CMC	Comprehensive maintenance Contract
13.	DC	Direct Current
14.	DCR certificate	Domestic Content Requirement certificate
15.	DTR	Distribution Transformer
16.	DWC	Double Walled corrugated
17.	FF	Fill Factor
18.	HFL	High Flood Level
19.	HP	Horse Power
20.	IEC	International Electro-technical Commission
21.	IEEE	Institute of Electrical and Electronics Engineers
22.	IoT	Internet of Things
23.	IP	Internet Protocol /Ingress Protection
24.	IPR	Intellectual Property Right
25.	IS	Indian Standard
26.	Isc	Short Circuit Current
27.	IST	Indian Standard Time
28.	kV	Kilo Volt
29.	kW	Kilo Watts
30.	kWp	Kilo Watt peak
31.	LoI	Letter of Intent
32.	LT	Low Tension
33.	MCB	Miniature Circuit Breaker
34.	MDAS	Meter Data Acquisition System
35.	MIS	Management Information System
36.	MMS	Module Mounting Structure
37.	MNRE	Ministry of New & Renewable Energy, Government of India
38.	MPPT	Maximum Power Point Tracker
39.	MW	Mega Watt
40.	NEC	National Electric Code
41.	NIT	Notice Inviting EOI Document
42.	NOCT	Normal Operating Cell Temperature
43.	OS	Operating System for Computer/server
44.	OEM	Original Equipment Manufacturer
45.	PAN	Permanent Account Number

46.	PCU	Power Conditioning Unit
47.	PID	Potential-induced degradation
48.	POC	Proof of Concept
49.	PBG	Performance Bank Guarantee
50.	PV	Photovoltaic
51.	PVC	Poly vinyl chloride
52.	RCCB	Residual Current Circuit Breaker
53.	RDBMS	Relational Data Base Management System
54.	REC Ltd.	Rural Electrification Corporation, Govt. of India
55.	RERC	Rajasthan Electricity Regulatory Commission
56.	RFID	Radio Frequency Identification
57.	RRECL	Rajasthan Renewable Energy Corporation Ltd.
58.	RTC	Real Time Clock
59.	RTPP Act 2012	Rajasthan Transparency in Public Procurement Act 2012 including any amendments issued thereto;
60.	RTPP Rules 2013	Rajasthan Transparency in Public Procurement Rules 2013 including any amendments issued thereto;
61.	SCADA	Supervisory Control And Data Acquisition
62.	SECI	Solar Energy Corporation of India
63.	SMB	Sub Miniature version B
64.	SNA	State Nodal Agency for Renewable Energy
65.	SPD	Surge Protection Device
66.	SPV	Solar Photo Voltaic
67.	STADD-Pro	Structural Analysis And Design Computer Program
68.	STC	Standard Testing Condition (“STC” shall mean Standard Testing Condition for solar cells and PV modules with air mass AM1.5, irradiance 1000W/ m <sup>2</sup> , and cell temperature of 25°C.)
69.	THD	Total Harmonic Distortion
70.	ToU	Time of Use
71.	TPI	Third-party inspection
72.	TPIA	Third-Party Inspection Agency’ appointed by Discom and / or MNRE as may be applicable
73.	UAT	User Acceptance Test
74.	UV	Ultra Violet
75.	-ve	Negative
76.	Vmp	Voltage at Maximum Power
77.	Voc	Voltage at Open Circuit
78.	W	Watt
79.	WO	Work Order
80.	Wp	Watt peak
81.	XLPE	Cross-linked Polyethylene

## **SCOPE OF WORK**

Scope of work under this tender covers design, survey, supply, installation, testing, commissioning & 5 years comprehensive maintenance of distributed grid connected solar PV systems for solarization of Agriculture Pumps, with individual pump capacity, under “KUSUM Scheme – Component C” in Jaipur Discom.

The scope shall be limited to selected agriculture feeders, conforming to detailed scope & technical specifications enumerated in this Tender document.

Summary scope of work is provided hereunder:

### **a) Work of installation of SPV System shall involve:**

Completion of work of design, survey, supply, installation, commissioning and testing as per time schedule. Survey shall include assessing the works/approvals required on the Sites/ location of the list of agriculture consumers which will be provided by Discom/CEL.

For effective management of the project, **feeder-wise implementation** is to be carried out for solarisation of grid connected agricultural pumps. Feeders may be selected based on load, technical and commercial losses, number of consumers, etc. Contractor shall ensure that all identified sites of agriculture pumps (as per the work area / site locations listed in this tender) in a feeder are solarized before proceeding the work on to the next feeder.

Contractor will essentially provide the verified documents (from CEL after physical verification of installations) along-with location coordinates (Longitude and Latitude of agriculture connection where system installed) to CEL as per directions before submission the claims for payment. Verified copies of statements of GPS coordinates shall be submitted to CEL & Nodal Officer of Discom on behalf of CEL every fortnightly-basis.

The Contractor shall be allowed to install the systems conforming to the technical specifications (as per specifications detailed in the tender document) with submission of type test certificates (not older than five years) of SPV system along with CEL make solar modules issued from “MNRE approved test house”/“any Government recognized lab”/ **"international labs"** after authorisation by Discom/CEL.

### **b) Work of ongoing maintenance of SPV System shall involve:**

CEL gives great importance to comprehensive maintenance of the systems & it is felt that without proper maintenance after installation of system, consumers may be deprived of the benefits of this Scheme. To achieve this objective, contractor shall proceed to first establish office-cum-service centre (on behalf of CEL) in each operational district for installation of systems with a helpline in local language.

Contractor shall be bound to provide after sales service to the beneficiaries in the vicinity of the area of the installed systems or at least at tehsil level /at district to facilitate CMC services.

The beneficiaries must be well informed about the CMC centre of the Contractor, call centre/toll free numbers. This may consist of office-cum-service centre at a convenient place to be reached by a beneficiary. Such office-cum- service centers shall have spares for the system and repair facility.

The Concerned Nodal officer of Discom & CEL shall verify this fact and only then Contractor shall be allowed to install the systems.

The Contractor will educate the Beneficiaries on the process for registering the complaints on Call Center/toll free nos. The details of office-cum-service centers along with telephone numbers & contact persons of firm & details of Discom & CEL offices, address and telephone numbers must be provided to each beneficiary. Beneficiaries shall also be educated through brochures about do's & don'ts on the system.

The contractor will update the status of fault rectification on Discom website/call centre for online monitoring of the complaints registered and services being provided by the Contractor. Cleaning of dust from SPV Panel shall be in scope of the contractor.

**Note: The SPV modules shall be supplied by CEL at a centralised location in the state of Rajasthan as decided by CEL.**

### Tentative Quantity

The tentative estimated quantity of each SPV System to be executed under this tender are as provided below:

Lot	Lot name	No. of 11kV feeders	No. of agricultural consumers with sanctioned load of			
			3 hp	5 hp	7.5 hp	Total
1	Tonk - 1	16	14	829	33	876

**Note: (1) This quantity may further increase up to 50% or decrease as required by Discom.**

**(2) Farmers may be given option to declare his actual connected load or alternatively the contractor may carry out survey to get details on actually connected load so that solar PV panels of required capacity is provided to the participating farmers.**

### Site Details

The Project Sites shall be the agriculture farm lands of the Agriculture Consumers of Discom where the grid-connected Agriculture connection is issued by Discom for grid-connected pump-set. The list of such consumers where grid-connected SPV systems are to be installed & commissioned to solarize such connections shall be provided by CEL/Discom. Such agriculture consumers are located on the following feeders in JVVNL:

Lot	Circle Name	Name of 33/11kV substation	Name of 11kV Feeder	No. of pumps with capacity of			
				3 hp	5 hp	7.5 hp	Total
Lot 4	Tonk	Aanwa	SITAPURA	4	56		60
		Banthali	SANTHALI	1	81		82
		BAWDI	PANDRAHEDA		20	4	24
		Bhansu	THADOLI	4	116	1	121
		DEWADAWAS	DEWADAWAS		108	1	109
		Dhua kala	GEROLI		25	2	27
		Ganwadi	GANWADI		24		24
			GANWDI 2	3	19		22
		Gurai	GURAI-2	1	108	6	115
		JUNIYA	JUNIYA	1	58		59
		NAGARFORT	GURAI-1		53	7	60
			NAGARFORT		21		21
			RAMSAGAR		26	1	27
			SAKRAMPURA		67	10	77
NASIRADA	MALEDA		17		17		
Todaraisingh	BASSI		30	1	31		
<b>TOTAL</b>				<b>14</b>	<b>829</b>	<b>33</b>	<b>876</b>

### Completion Period

- a) The design, survey, supply, installation, testing, commissioning of distributed grid connected SPV systems for solarization of grid connected agriculture consumers as per terms & conditions of this Tender Document is to be completed within 8 (eight) months from date of PO. The following completion schedule shall be followed:

- i. Commencement Period: 20 days from date of award of work (PO) which will include material & labour mobilization with survey, design & approvals and submission of feeder-wise consumer list with their consent for solarization of water pumps.
  - ii. In next 7 months, completion of all the required scope of work pertaining to design, survey, supply, installation, testing, commissioning of distributed grid connected SPV systems for solarization of grid connected agriculture consumers as per terms & conditions of this Tender Document.
  - iii. Further, the Contractor has to start and operationalize the Office-cum-service center on behalf of CEL and depute required staff for ongoing maintenance and registration & rectification of faults, within 20 days from the date of issue of PO.
- b) The time specified for work in the contract is important essence of the contract and the contractor shall arrange to complete the work within the stipulated period. For effective management of the project, feeder-wise implementation of solarisation work is to be carried out. The work progress of the contractor will be reviewed on fortnight basis by CEL/customer.
- c) In addition to above, the contractor shall provide CMC for a period of 5 years **from the date of commissioning of the last system of total awarded work or, 9 months from the Purchase order, whichever is later**, including insurance coverage for the installed systems (including modules) against natural calamities and theft.

#### Project milestones and timeline

S. No.	Milestone	Timeline (T is date of Purchase order)
1	Team mobilization, site survey and submission of feeder-wise consumer list with their consent for solarization of water pumps	T + 20 days
2	Completion of design, supply, installation, commissioning and testing of grid interactive solar PV systems at all identified locations	T + 8 months
5	Completed Comprehensive annual maintenance of all installed systems for 5 years	T + 69 months

- o **Further, inverters/controllers and the balance of system should also be manufactured indigenously. If required, MNRE may conduct its independent inspection or verification to ensure domestic manufacturing requirement. The contractor has to declare the list of imported components used in the solarisation system.**

### Special Conditions of Contract

#### Submission of Price Bid:

Bidders shall quote their lowest rates / costs for the work of design, survey, supply, installation, commissioning, testing and five years free comprehensive maintenance of SPV as per terms & condition of this tender including all applicable taxes, duties etc. The rates quoted by Bidders for the work of design, survey, supply, installation, commissioning, testing and 5 (five) years free comprehensive maintenance of SPV systems must be firm and fixed, FOR site(s) as per prescribed format. The prices quoted by bidder are inclusive of all cess and duties including loading, unloading, transfer to site, insurance, inspection charges, other costs incidental to delivery but excluding GST. You should mandatorily registered

yourself under GST act of particular state. Any other charges/Cost/TA/DA is also included in the above contract price

Unless otherwise indicated in the Tender document, prices quoted by Bidder shall correspond to 100% cost & risk of the scope of work to be delivered.

**Handing Over Asset:**

After successful installation, commissioning, testing with User Acceptance Testing (UAT) of complete SPV system, the asset is to be jointly handed over to the beneficiary and concerned engineer in-charge of the CEL & Discom. The Handing over note covering the details of all the materials used and total work executed must be signed jointly by the beneficiary, CEL representative & the Discom's Engineer In-charge. The copy of Installation Certificate along with beneficiary's certificate to final bill is required to be submitted by Contractor for release of payment.

**User Acceptance Test (UAT) shall comprise of measurement and reporting of all technical parameters of system with jointly signed by contractor, CEL, EIC-customer and beneficiary. All BIS/MNRE technical standards shall be applicable for such UAT including inspection of support structures, modules, mounting, cabling, equipment labels, markings, placards, manufacturer identification, and specifications and ratings. Relevant IEC / BIS / MNRE standards shall be guiding standard for such tests or inspections.**

The Taking over Certificate & Operational Acceptance Certificate as well as completion certificate (as per approved formats of CEL) shall be issued according on completion of requisite works and completion of Contract Period, if the complete scope of work is completed.

**Payment Conditions**

Payments shall be done on back to back pro-rata basis after receipt of payment from customer subject to verification of material and activities by CEL site representative. The contractor has to submit all the documents required for claiming the payments from customer and overall completion of the project including CMC for 5 years.

The contractor shall claim **feeder-wise** payment by submitting complete list of beneficiaries connected on the same feeder along with K. No., full addresses, date of installation, models and makes and serial numbers of systems & PV modules (supplied by CEL) supplied along with the photographs of installed system duly verified by Engineer In-charge in co-ordination with CEL.

Contractor shall submit their bills for SPV Systems installation completed to CEL along with required documents/papers and obtain receipt of the same from CEL. CEL will be informed about this along with list of beneficiaries & details of installations within next 10 days.

The Final bill must be submitted to CEL not later than 10 days after expiry of the scheduled time period & CEL representative shall be informed within the following 10 days along with receipt of Engineer In-charge along with list of beneficiaries & details of installations. Payment terms will be as:

The payment of billed amount (Design, Survey, Supply, Installation, Testing and Commissioning and CMC) of SPV systems shall be released on back to back pro-rata basis after receipt of payments from customer as per following terms:

**(I) Supply value of the total contract**

- a) 1<sup>st</sup> installment of 40% of the supply value (inclusive of taxes) after delivery of material at site by the contractor for the feeders as per the instruction of nodal

officer/ CEL representative/Engineer In-charge of Discom (to be claimed feeder-wise by the contractor) with following documents duly verified by CEL Discom's concerned Nodal Officer/CEL representative/ Discom's Engineer In-charge, will be made by CEL.

- i. Invoice issued by the Contractor
- ii. Material Dispatch Clearance Certificate (MDCC) / Dispatch Instructions (DI) from customer / CEL for dispatch of materials from the manufacturer's works. MDCC/DI shall be issued by CEL/Assistant Controller of Stores (ACOS) or, AEN of the concerned subdivision.
- iii. Submission of certificate by CEL representative that materials have been supplied as per technical specification, scope of work & approved drawings enclosing certified copy of inspection reports and dispatch clearances. (Material is to be delivered at the stores of contractor; however, the contractor shall update the CEL & concerned Nodal officer with the daily stock status)

Note: [Two sets of above listed documents must be prepared & submitted to CEL].

- b) 2<sup>nd</sup> installment of 50% of the supply value (inclusive of taxes) (for feeder completed) after receipt of with following documents duly verified by CEL representative/ Engineer In-charge of Discom from contractor, will be made by CEL.

- i. Invoice issued by the Contractor & Duly Signed Installation Certificate (format shall be provided by CEL after award of contract)
- ii. Date of commissioning along with K.No. of Agriculture Consumer.
- iii. Model
- iv. Make
- v. Serial Nos. of PV modules, and Balance of systems.
- vi. Address proof of beneficiary like Ration Card, Aadhar card, Voters Identification Card number etc.
- vii. Two Photographs of beneficiary with installed system (The Photograph must match with the photograph in the ID proof) on behalf of CEL. As far as possible, photograph of installed system shall be taken with person whose ID proof is being taken but in case at the time of taking Photograph the ID proof person is not available at his/her residence, spouse's photograph may be taken with installed system. The Contractor shall not display the photograph of the work and shall not take advantage through publicity of the work without written permission of CEL/Discom.
- viii. Copy of Agreement with beneficiary for maintenance in co-ordination with CEL
- ix. Copy of installation certificate duly signed (with seal) by the beneficiary, CEL and Engineer-Incharge designated by Discom.

Note: [Two sets of above listed documents must be prepared and submitted to CEL].

- c) Balance 10% of the supply value (inclusive of taxes) for total contract will be released to the Contractor after 60 months of handing over the system after successful completion, commissioning and charging in all respect and also subject to clearance/ verification of 3<sup>rd</sup> party inspection.



**(II) Erection value of the total contract**

- a) 1<sup>st</sup> installment of 90% of the erection value (inclusive of taxes) (for the feeder completed) against receipt of following documents duly verified by CEL representative, Discom's concerned Nodal Officer/Engineer In-charge of Discom, will be made by CEL.
- i. Invoice issued by the Contractor & Duly Signed Installation Certificate
  - ii. Date of commissioning along with K.No. of Agriculture Consumer.
  - iii. Model
  - iv. Make
  - v. Serial Nos. of PV modules, and Balance of systems.
  - vi. Address proof of beneficiary like Ration Card, Aadhar card, Voters Identification Card number etc.
  - vii. Two Photographs of beneficiary with installed system (The Photograph must match with the photograph in the ID proof). As far as possible, photograph of installed system shall be taken with person whose ID proof is being taken but in case at the time of taking Photograph the ID proof person is not available at his /her residence, spouse's photograph may be taken with installed system. The Contractor shall not display the photograph of the work and shall not take advantage through publicity of the work without written permission of CEL/Discom.
  - viii. Copy of Agreement with beneficiary for maintenance in coordination with CEL.
  - ix. Copy of installation certificate duly signed (with seal) by the beneficiary, CEL representative /Engineer-Incharge designated by Discom.
- Note: [Two sets of above listed documents must be prepared and submitted to CEL].
- b) Balance 10% of the erection value (inclusive of taxes) for total contract will be released to the Contractor after 60 months of handing over the system after successful completion, commissioning and charging in all respect and also subject to clearance/ verification of 3<sup>rd</sup> party inspection.

Invoicing Pattern: The Contractor will supply and install the system to beneficiary and submit the invoice of BOS to CEL. The invoice shall clearly mention the full value of the system and tax components. Feeder wise payment claims by CEL with complete list of beneficiaries (with all details) connected on the same feeder shall be done after receipt of payment from customer. Contractor will submit claims enclosing one copy of sale invoice and Handing over Note.

Delay in submission of bills (with complete documents as required for payment realization) to CEL after 10 days from scheduled date for completion of work as per schedule will attract Liquidated damages on back to back basis as mentioned in tender documents.

The Contractor shall provide comprehensive maintenance services as under:

The Contractor shall develop office-cum-service centre at tehsil headquarters/ at local block level as asked by CEL in each operation district essentially and every beneficiary shall be well informed about the concerned office-cum-service centre for lodging their complaint.

The Contractor shall ensure half yearly routine maintenance of system. Contractor has to undertake to perform regular visit of his technician with necessary spare parts from the office-cum-Service centre established at various headquarters of the division to the beneficiary Sites selected for attending complaints and for doing regular maintenance of the system installed.

The office-cum-Service Centre shall have adequately trained staff available for repair and maintenance of Solar PV Systems, Inverters supplied and installed.

The office-cum-service centre shall be open for atleast 8 hours per day and 6 days a week excluding bank holidays.

Contractor shall ensure that necessary spares are always available with the office cum service centres to provide necessary after sales service to the beneficiary during the guarantee period.

**In line with maintenance and servicing report requirement, cleaning of dust from SPV panel shall be in scope of the contractor.**

Contractor need to have a dedicated mobile number which shall be readily available during its office hours and an e-mail ID for correspondence.

**Resolving Complaints related to defects/ non-working / poor performance of the System:**

In any case of breakdown/ any problem/defect in SPV system or whenever a complaint is lodged by the beneficiary, the contractor shall have to replace/repair the defect of the SPV system, resolve it and make the SPV system operative at site as per the Technical specifications, **within 72 hours** of the receipt of the complaint. In case of theft, the complaint is to be resolved within 15 calendar days provided theft is duly certified by the nodal officer & CEL.

**Logging of Complaint:**

a) The concern beneficiary may lodge their complaint for SPV system. The record of each and every complaint received and resolved, with down time and up time shall have to be maintained by the Contractor in register as well as computer based software and in mobile application.

b) These records shall have to be submitted to CEL office weekly (for complaints received and resolved during the week) and monthly (comprising of all complaints received and resolved during the month). Such register shall be verified by CEL & Concerned Nodal Officers or TPIA.

While doing repairing or rectification work, the Contractor's technician or any person is not authorized to work on Discom's electric line of 11 KV and LT having potential danger of electricity.

If the down time period for any beneficiary complaint exceeds 72 hours (15 calendar days in case for theft cases) and the contractor fails to make the plant operational, a penalty on for the time period exceeding 72 hours (15 calendar days in case for theft cases), as per the below mentioned schedule on back to back basis shall be deposited by the contractor to the CEL.

<b>Water pump capacity (in HP)</b>	<b>Penalty applicable (in INR per day)</b>
3	140
5	235
7.5	355

The loss in generation shall be decided on daily basis.

For any system / consumer complaint, the maximum applicable amount as penalty against loss of generation shall not be more than 10% of the overall cost of the SPV system (including SPV modules) installed at the consumer premises.

The Contractor shall be issued a notice to pay the applicable penalty within 7 days by CEL / as decided by CEL. If the Contractor fails to pay the penalty within notice period, the CEL shall encash the Performance Bank Guarantee immediately.

Unless specified otherwise, In the event of breach of any of the conditions of the contract at any time on the part of Contractor, the contract may be terminated summarily by CEL

without compensation to the Contractor and Performance Bank guarantee will be forfeited and CEL will take action for debarring & blacklisting the firm.

The price quoted for the systems must be including installation charges and comprehensive maintenance for 5 years charges and shall remain fixed and firm during the period of contract.

**Period of Validity of Bids:**

Bids shall remain valid for 6 months from the date of opening of Technical Bid. A Bid valid for a shorter period shall be rejected and treated as non-responsive.

In exceptional circumstances, CEL may solicit the Bidder's consent to an extension of the period of validity. The request and the responses thereto shall be made in writing.

Evaluation Criteria: Techno-commercially suitable bidder having the lowest price for grid tied solar power plant as specified in price bid shall be considered as L-1. GST will not be considered for evaluating the L1 price.

CEL reserves the right to divert the awarded quantity of successful bidder if the bidder does not perform as per the requirement of tender. In such event, the relevant clause mentioned in General Terms & Conditions shall apply.

CEL reserves the right to increase the total order quantity by 50% and award the same to qualified Bidders at same rate & Terms and Conditions.

In case of any ambiguity in interpretation of any of the provisions of the tender, the decision of "CEL" shall be final and binding on the bidders.

"If any successful bidders are not meeting the timeline given in terms and conditions then CEL reserves the right to withdraw work in part or full and award to empanelled vendors as above or retender the same."

Central Electronics Limited, (CEL) reserves the right to alter and/ or modify the terms, reject any or all tenders without assigning any reason thereof. The decision of CMD, CEL will be final and binding on the Bidders.

**Performance Bank Guarantee**

The successful bidder shall be required to furnish Performance Bank Gurarantee @ 10% of the PO value within 10 (ten) days from the date of PO, initially valid for 69 months from the date of PO. The Performance Bank guarantee shall be returned after 69 (Sixty Nine) months from the date of successful installation of the last system. The same shall be extended by the Contractor time to time till ninety (90) days beyond 69 (Sixty Nine) months from the date of successful installation of the last system, as may be required under the Contract.

CEL reserves right to encash the PBG in case extended PBG/fresh PBG is not furnished by the bidders at least 60 days prior to expiry of original PBG.

Bank guarantee (in CEL's format) shall be issued from any Nationalized Banks/other scheduled private banks. CEL shall at its own discretion have recourse to the said Bank Guarantee for the recovery of any or all amount due from the bidder in connection with the contract including guarantee obligations.

PBG format may be requested from MMD, CEL through mail on [mmd\\_spvm@outlook.com](mailto:mmd_spvm@outlook.com). Failure of the Successful Bidder to comply with the requirements of tender shall constitute sufficient grounds for the annulment of the purchase order and forfeiture of the Performance Bank Guarantee.

### **Forfeiture of Performance Bank Guarantee:**

Apart from cases mentioned in the Tender Document regarding forfeiture of Performance Bank Guarantee, the Performance Bank Guarantee amount in full or part may also be forfeited in the following cases:

- a) Failure in executing the PO with the CEL
- b) When the terms and conditions of contract is breached / infringed by the Successful Bidder/ Contractor.
- c) If the Successful Bidder/ Contractor fails to carry out the work satisfactorily.
- d) When contract is being terminated due to non-performance by the Successful Bidder/ Contractor.
- e) Notice of reasonable time will be given in case of forfeiture of Performance Bank Guarantee. The decision of the CEL, as applicable, in this regard shall be final. No interest will be paid by the CEL on the amount of Performance Bank Guarantee.

### **Liquidated Damages (LD)**

The Works & required completion period under this clause of LD on back to back basis shall pertain to the works required as per the Completion Period.

While making the purchases as envisaged in this Tender Document, CEL may exercise its own discretion and if possible resort to limited tender system issuing short term notices irrespective of the value of tender. In all cases where orders are cancelled due to non-supply of stores, it will be treated as breach of contract and CEL shall take action accordingly. It is clarified that the CEL may resort to risk purchase without granting any extension.

The bidders are required to study carefully the conditions of the tender document, the enclosed specifications and the relevant provision of the relevant BIS/MNRE specifications wherever necessary before submitting the proposal. Technical particulars of the material offered must comply with the enclosed specifications and the relevant provisions of the BIS/MNRE.

The authorisation for installing SPV system can be repudiated at any time by the CEL if the systems are not supplied and installed to its satisfaction. The reasons for repudiation shall be recorded by CEL. In case of non-performance in any form and shape of the terms & conditions of the agreement, CEL has the sole discretion to cancel the authorization pertaining to the supply and installation of systems.

If a bidder imposes conditions, which are in addition to/or in contravention with the conditions mentioned herein, his tender is liable to be summarily rejected. In any case none of such conditions will be deemed to have been accepted unless specifically mentioned in the letter of authorisation issued by CEL.

If any dispute arises out of the contract with regard to the interpretation / meaning and the breach of the terms of the contract, the matter shall be referred to by the parties to CMD, CEL whose decision shall be final and binding.

### **Inspection of Material**

Prior to dispatch, the materials may be inspected and tested by respective CEL or TPIA, at the works of OEM (Original Equipment Manufacturer), where SPV (Solar Photovoltaic) panels, Grid tie Inverters, Module mounting structure, other components of the project are manufactured. The Contractor shall inform CEL for such inspection at least 15 (fifteen) days in advance before the probable date of dispatch. Materials dispatched without Discom's/CEL approval shall not be