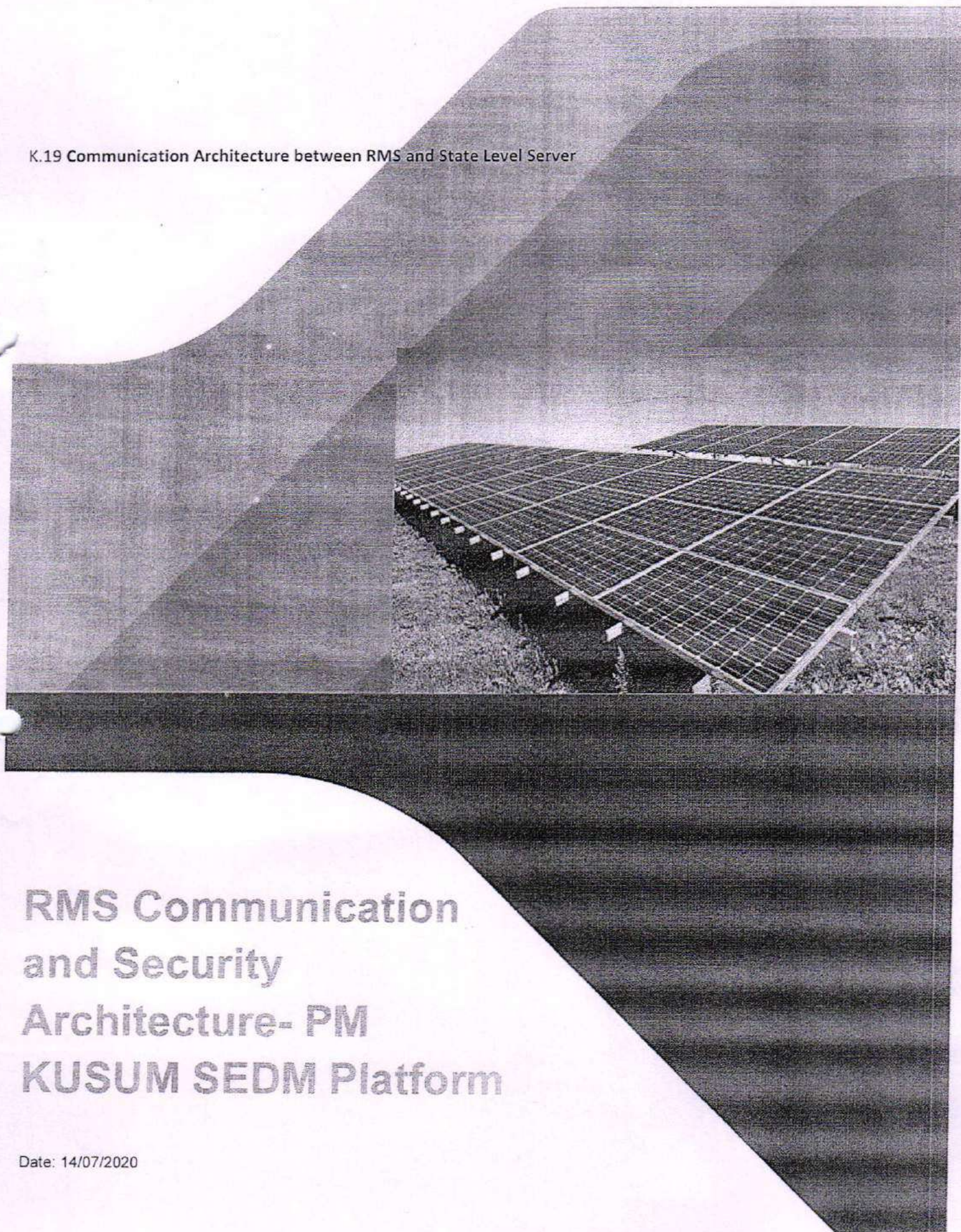


Annexure - E3

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K.19 Communication Architecture between RMS and State Level Server



RMS Communication and Security Architecture- PM KUSUM SEDM Platform

Date: 14/07/2020

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RMS Communication & Security Architecture

1. Security Architecture (with reference to EESL Tender Annexure 8 – clause 4.d)
2. RMS Registration (with reference to EESL Tender Annexure 8 – clause 4.d)
3. MQTT Topic Structure (with reference to EESL Tender Annexure 8 – clause 4.b,4.c)
4. MQTT Message Structure (with reference to EESL Tender Annexure 8 – clause 4.e,4.f)
5. Annexure: JSON Formats with parameter keywords, sample values and description
 - a. Annexure: Pump Controller
 - b. Annexure: Energy Meter
 - c. Annexure: Inverter
 - d. Annexure: String Combiner Box (SJB)
 - e. Annexure: Heartbeat
 - f. Annexure: DAQ

1. Security Architecture

This section highlights the communication security architecture between RMS/DCU and State SWPS IoT Platform. With this security architecture, third parties are unable to intercept or "sniff" the encrypted data. This stops ISPs, employers, local network administrators and cybercriminals from being able to perform "packet sniffing" to access what the traffic contains. It also protects against man in the middle (MitM) attacks. This implements Private TLS/SSL VPN to ensure highest level of security.

In addition to this, use of OTP in every message exchange shall help restrict spammers and Bots. Such OTP based mechanism will provide transaction level security which is required for remote operations.



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2. RMS Registration

This section details how individual RMS/DCU shall be registered and communicate securely with State SWPS IoT Platform.

- Every supplier/vendor must Register all unique IMEI (International Mobile Equipment Identity) of RMS/DCU with State SWPS
- State SWPS will generate individual client certificate for RMS/DCU against unique IMEI registered and share with supplier/vendor through secured web API interface.
- Every supplier/vendor shall be able to access web API with unique credentials shared with them.
- Web API shall return individual client certificate, Device Broker url and "info" topic.
- After installation of client certificate relevant to IMEI of RMS/DCU, RMS/DCU will connect to Device Broker and get authenticated using client certificate and further shall be able to receive additional configuration details such as FTP credential, Message Topic structure etc. after subscribing to default topic.
- After client certificate expiry, RMS will connect to FTP using available credentials and download the renewed certificate

3. MQTT Topic Structure

This section defines the different topic structure for communication between RMS/DCU and State SWPS through Device Broker.

RMS/DCU will publish and subscribe to their respective topics only, authorization of topic shall be done against unique credentials.

Application Version	Solution	IMEI	Message Type	Publish/Subscribe
IIOT-1	Standalonesolarpump	{IMEI}	Info	Subscribe
	Gridconnectedsolarpump		OTP	Subscribe
	SolarMW		Heartbeat	Publish
	Ongridrooftop		Data	Publish
	Offgridrooftop		Ondemand	Subscribe
			Config	Subscribe

Sample Topic structure for Stand-alone Solar Pump shall be: IIOT-1/Standalonesolarpump/{IMEI}/info

Multiple sub-topics will be formed for communication between RMS/DCU and sate SWPS IoT Platform

- **Info:** Default Topic To exchange RMS/DCU configuration details
- **OTP:** To exchange OTP at every interval of 15/30/60 minutes
- **Heartbeat:** To update RMS/DCU health indicators at frequent configurable intervals.
- **Data:** To exchange data related to RMS/DCU Monitoring parameters in "push mode"
 - Push data Periodically
 - Push data on Event/Notification
 - History Missing Data Push Mode: History data will be identified against "index"

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- **Ondemand:** To exchange data between RMS/DCU and Server in "Command on Demand" Mode
 - Each "On Demand" message will have two transactions: Commands, Response.
 - On demand command and response will be tracked against a common "MSGID".
 - On demand message can be used to read and write with two command types
 - Command: "Read" - In json received from server replace each key with value from RMS/DCU and send the updated json back to server.
 - Command: "Write" - After executing the command based on key-value pair received in json, send the updated json back to server on successful execution.
 - Note: handshaking parameters such as msgid, etc has to send back to server as is, without modification
- **Config:** To update configurable parameters of Device, which is similar to Ondemand but will be used only for configurable parameters of Device, this implements "Configuration over the air"
 - Command: "Read" - In json received from server replace each key with value from RMS/DCU and send the updated json back to server.
 - Command: "Write" - After executing the command based on key-value pair received in json, send the updated json back to server on successful execution.
 - Note: handshaking parameters such as msgid, etc has to send back to server as is, without modification

4. Communication Modes

- **Push on Periodic Interval:** In this mode deployed RMS shall transmit data of Multiple devices and sensors on different configurable time intervals such as Inverter or pump controller data at every 5 minutes, Energy Meter data at every 15 minutes, String Combiner Box data at every 10 minutes
- **Push on Event:** RMS shall detect various configurable alarm or event conditions such as Pump On / Off Status, Inverter On/Off Status, Low Water Flow Rate, Fault or Trip status etc. and It shall transmit data immediately to the server
- **On Demand Read:** In this mode, User will send command to RMS to get data as and when required and RMS will send the required data to server immediately
- **On Demand Write:** In case of Remote Operations, Farmer / Consumer shall send On Demand Write Command to the RMS and RMS will send back the acknowledgement with change in parameters after operation is completed
- **Configuration read/write:** Using this mode, user will be able to read and change configurable parameters remotely such as updating periodic interval, alarm limits, server parameters etc.

5. Communication Protocols

- **Field Device Communication:** RMS to Field Devices communication such as Inverter, Pump Controller, Drive, String Combiner box, MFT/MFM, Data Acquisition System shall be established using MODBUS RTU protocol supported by all leading manufacturers globally

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- **Energy Meter Communication:** RMS to Energy Meter communication such as Bi Directional (Revenue) Meter, Solar Generation (Audit) Meter shall be established using **DLMS/Modbus** protocol supported by all leading Meter Manufacturers in India
- **RMS to Server Communication - Industrial IoT MQTT Protocol:** RMS to Server Communication shall be established using MQTT protocol which is well accepted IoT protocol across the globe and supported by all leading IT as well as OT companies for Smart Grid, Smart RE and Smart City Applications

6. MQTT Message Structure

This section details message structure exchanged between RMS/DCU and state SWPS IoT Platform through Device Broker

keyword	Description	Sample Value
IMEI	Unique Identification of RMS/DCU – required to ensure registered source of data	863287049443888
VD	Virtual device/group – required for grouping parameters based on update interval/subsystems such as inverter/pump controller/meter/string combiner box etc.	2
MSGID	Message Transaction Id - required for "Ondemand"/"Config" message type, request/response/acknowledgement/feedback	123456789
COMMAND	Read/Write - Applicable only in case of "Ondemand"/"Config" message Type	Read
TIMESTAMP	RTC timestamp of RMS/DCU against all parameters of vd/group (YYYY-MM-DD HH:mm:ss)	2019-08-20 20:15:08
STINTERVAL	Periodic interval at which RMS shall store and transmit data to server. (in minutes)	15
DATE	local storage date – required as a reference to fetch data from local storage (YYYY-MM-DD)	2020-06-15
INDEX	Local storage Index – required as a reference to fetch data from local storage	5
MAXINDEX	Local storage maximum index of local storage date – required to calculate missing index	96
LOAD	Local storage retrieval command & status	0
POTP	Previous One Time Password	12345678
COTP	Current One Time Password, State SWPS Broker will update OTP at interval of 30/60 minutes	12345678
Parameter-1 Parameter-2 Parameter-3 Parameter-1 Parameter-n	Equipment wise Keywords for multiple Parameters.	

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Communication Format Annexure

Annexure – 1 (Revision-B) Pump Controller

Message Name	: Periodic Push Pump Controller (1)
Message Format	: JSON
Message Type	: Data
Message Command Flow	: Not Applicable for Data periodic Push
Message response Flow	: RMS -> State SWPS IoT Platform
Message Medium	: GPRS

Command Message

Not Applicable

Response Message

Message	Description	Unit												
{														
"VD":1	Virtual Device Index/Group	-												
"TIMESTAMP":"2020-05-18 17:58:00",	RTC timestamp of RMS/DCU against all parameters of vd/group	-												
"MAXINDEX":96	maximum index of local storage date	-												
"INDEX":7,	reference of local storage	-												
"LOAD":0,	Local storage retrieval command & status	-												
"STINTERVAL":15,	Periodic interval at which RMS shall store and transmit data to server. (in minutes)	-												
"MSGID": "",	Message Transaction Id - required for "Ondemand"/"Config" message type, request/response/acknowledgement/feedb ack	-												
"DATE":200518,	local storage date	YYMMDD												
"IMEI":"1234561234561234",	IMEI No. of First Sim to be considered always for unique identity of DCU	-												
"ASN_11":"34123450",	Pump Controller Serial No. <table><tr><td>RMS</td><td>0</td></tr><tr><td>DAQ</td><td>1-9</td></tr><tr><td>Pump Controller</td><td>11-19</td></tr><tr><td>Meter</td><td>21-29</td></tr><tr><td>Inverter</td><td>31-39</td></tr><tr><td>String Combiner Box</td><td>41-49</td></tr></table>	RMS	0	DAQ	1-9	Pump Controller	11-19	Meter	21-29	Inverter	31-39	String Combiner Box	41-49	-
RMS	0													
DAQ	1-9													
Pump Controller	11-19													
Meter	21-29													
Inverter	31-39													
String Combiner Box	41-49													
"POTP":"341234",	Previous One Time Password	-												
"COTP":"341234",	Current One Time Password	-												
"PMAXFREQ1":"50.00",	Maximum Frequency	Hz												

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"PFREQLSP1": "50.00",		Lower Limit Frequency	Hz
"PFREQHSP1": "50.00",		Upper Limit Frequency	Hz
"PCNTRMODE1": "1",		Solar Pump Controller Control Mode Status	-
0	Variable Frequency Control Mode		
1	CVT Mode for Solar		
2	MPPT mode for Solar		
"PRUNST1": "2",		Solar Pump Controller Run Status	-
0	Stop		
1	Running		
2	Sleep		
3	Low Speed Protection		
4	Dry Run Protection		
5	Over Current Protection		
6	Minimum Power Protection		
"PREFFREQ1": "50.00",		Solar Pump Controller Reference Frequency	Hz
"POPFREQ1": "50.00",		Solar Pump Controller Output Frequency	Hz
"POPI1": "20.00",		Output Current	A
"POPV1": "230.00",		Output Voltage	V
"POPKW1": "45.00",		Output Active Power	KW
"PDC1V1": "550.00",		DC Input Voltage	DC V
"PDC1I1": "50.00",		DC Current	DC I
"PDCVOC1": "650.00",		DC Open Circuit Voltage	DC V
"PDKWH1": "35.00",		Today Generated Energy	KWH
"PTOTKWH1": "120.00",		Cumulative Generated Energy	KWH
"POPFLW1": "2.00",		Flow Speed	LPM
"POPDWD1": "120.00",		Daily Water Discharge	Litres
"POPTOTWD1": "220.00",		Total Water Discharge	Litres
"PMAxDCV1": "750.00",		Max DC Voltage	DC V
"PMAxDCI1": "40.00",		Max DC Current	DC I
"PMA XKW1": "650.00",		Max Output Active Power	DC KW
"PMA XFLW1": "650.00",		Max Flow Speed	LPM
"PDHR1": "8.00",		Pump Day Run Hours	Hrs
"PTOTHR1": "8.00",		Pump Cumulative Run Hours	Hrs
}			

Reaction	
Not Applicable	

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Communication Format Annexure

Annexure - 2 Energy Meter

Message Name	: Periodic Push Meter (1)
Message Format	: JSON
Message Type	: Data
Message Command Flow	: Not Applicable for Data periodic Push
Message response Flow	: RMS -> State SWPS IoT Platform
Message Medium	: GPRS

Command Message

Not Applicable

Response Message

Message	Description
{	
"VD":2	Virtual Device Index/Group
"TIMESTAMP":"2020-05-18 17:58:00",	RTC timestamp of RMS/DCU against all parameters of vd/group
"MAXINDEX":96	maximum index of local storage date
"INDEX":7,	reference of local storage
"LOAD":0,	Local storage retrieval command & status
"STINTERVAL":15,	Periodic interval at which RMS shall store and transmit data to server. (in minutes)
"MSGID": "",	Message Transaction Id - required for "Ondemand"/"Config" message type, request/response/acknowledgement/feedback
"DATE":200518,	local storage date

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"IMEI":1234561234561234",	IMEI No. of First Sim to be considered always for unique identity of DCU												
"ASN_21":12345678,	Asset Serial Number <table border="1"> <tr> <td>RMS</td><td>0</td></tr> <tr> <td>DAQ</td><td>1-9</td></tr> <tr> <td>Pump Controller</td><td>11-19</td></tr> <tr> <td>Meter</td><td>21-29</td></tr> <tr> <td>Inverter</td><td>31-39</td></tr> <tr> <td>String Combiner Box</td><td>41-49</td></tr> </table>	RMS	0	DAQ	1-9	Pump Controller	11-19	Meter	21-29	Inverter	31-39	String Combiner Box	41-49
RMS	0												
DAQ	1-9												
Pump Controller	11-19												
Meter	21-29												
Inverter	31-39												
String Combiner Box	41-49												
"MTDET1":30012302,	Meter Detail												
"POTP":34123450",	Previous One Time Password												
"COTP":34123450",	Current One Time Password												
"MTBLDATE1":18,	Billing Date for meter 1												
"DATE1":180606,	Present date for meter1												
"TIME1":105400,	Present time for meter1												
"IR1":20.58,	R Phase Current in Amps												
"IY1":20.65,	Y Phase Current in Amps												
"IB1":20.12,	B Phase Current in Amps												
"VRN1":240.12,	R Phase to Neutral Voltage in Volts												
"VYN1":242.13,	Y Phase to Neutral Voltage in Volts												
"VBN1":243.55,	B Phase to Neutral Voltage in Volts												
"VRY1":420.18,	Phase to Phase Voltage(R-Y) in Volts												
"VYB1":419.38,	Phase to Phase Voltage(Y-B) in Volts												
"VBR1":421.5,	Phase to Phase Voltage(B-R) in Volts												
"PFR1":0.98,	R Phase Power Factor												
"PFY1":0.97,	Y Phase Power Factor												
"PFB1":0.96,	B Phase Power Factor												
"FRQ1":50.05,	Grid Frequency												
"POWR1":42.578,	R Phase Active Power in KW												
"POWY1":42.156,	Y Phase Active Power in KW												
"POWB1":42.354,	B Phase Active Power in KW												
"POW1":42.185,	Total Active Power in KW												
"RPOWR1":22.123,	R Phase Reactive Power in KVAR												
"RPOWY1":20.110,	Y Phase Reactive Power in KVAR												
"RPOWB1":22.310,	B Phase Reactive Power in KVAR												
"RPOW1":65.610,	Total Reactive Power in KVAR												
"APOWR1":55.610,	R Phase Apparent Power in KVA												
"APOWY1":52.910,	Y Phase Apparent Power in KVA												
"APOWB1":53.911,	B Phase Apparent Power in KVA												
"APOW1":14.198,	Total Apparent Power in KVA												
"KWHNET1":98561.4,	Cumulative Net Energy in KWH												
"KWHIMP1":98561.4,	Cumulative Import Energy in KWH												
"KWHEXP1":98561.2,	Cumulative Export Energy in KWH												
"KVAHNET1":99100.3,	Cumulative Net Energy in KVAH												
"KVAHIMP1":99105.1,	Cumulative Import Energy in KWH												
"KVAHEXP1":98999.1,	Cumulative Export Energy in KWH												
"MDKWIMP1":100.3,	Rising Demand (Import) in KW												
"MDKWEXP1":98.6,	Rising Demand (Export) in KW												

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"POFF1":1020,	Grid Power Failure in Minutes
"TC1":100,	Total Tamper Counts
"PF1":0.99,	Average PF
"LBKWHNET1":98561,	Last Billing Cycle Net Energy in KWH
"LBKWHIMP1":98561,	Last Billing Cycle Import Energy in KWH
"LBKWHEXP1":98561,	Last Billing Cycle Export Energy in KWH
"PMDKVAIMP1":22.50,	Present MD KVA Import
"PMDKVAEXP1":0.00,	Present MD KVA Import
"LBMDKWIMP1":7.07,	Last Billing MD KW Import
"LBMDKWEXP1":0.00,	Last Billing MD KW Export
"LBMDKVAIMP1":7.07,	Last Billing MD KVA Import
"LBMDKVAEXP1":0.00,	Last Billing MD KVA Export
"MDRSTC1":4	MD Reset Count
}	

Reaction	
Not Applicable	

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Communication Format Annexure

Annexure – 3 Inverter

Message Name	: Inverter Periodic Push (INVERTER-1)
Message Format	: JSON
Message Type	: Data
Message Command Flow	: Not Applicable for Data periodic Push
Message response Flow	: RMS -> State SWPS IoT Platform
Message Medium	: GPRS

Command Message

Not Applicable

Response Message

Message	Description
{	
"VD":5	Virtual Device Index/Group
"TIMESTAMP":"2020-05-18 17:58:00",	RTC timestamp of RMS/DCU against all parameters of vd/group
"MAXINDEX":96	maximum index of local storage date
"INDEX":7,	reference of local storage
"LOAD":0,	Local storage retrieval command & status
"STINTERVAL":15,	Periodic interval at which RMS shall store and transmit data to server. (in minutes)
"MSGID": "",	Message Transaction Id - required for "Ondemand"/"Config" message type, request/response/acknowledgement/feedback
"DATE":200518,	local storage date
"IMEI":"1234561234561234",	IMEI No. of First Sim to be considered always for unique identity of DCU
"ASN_31":"34123450",	Inverter Serial No.

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	RMS	0
	DAQ	1-9
	Pump Controller	11-19
	Meter	21-29
	Inverter	31-39
	String Combiner Box	41-49
"POTP": "34123450",	Previous One Time Password	
"COTP": "34123450",	Current One Time Password	
"IST1": 1,	Inverter Status	
"IFREQ1": 40,	Frequency	
"IPF1": 0.8,	Power Factor	
"IDC1V1": 500,	DC-1 Voltage	
"IDC1I1": 200,	DC-1 Current	
"IDC1KW1": 200,	DC-1 Power	
"IDC2V1": 243.55,	DC-2 Voltage	
"IDC2I1": 420.18,	DC-2 Current	
"IDC2KW1": 200,	DC-2 Power	
"IDC3V1": 419.38,	DC-3 Voltage	
"IDC3I1": 421.8,	DC-3 Current	
"IDC3KW1": 200,	DC-3 Power	
"IDC4V1": 0.98,	DC-4 Voltage	
"IDC4I1": 0.97,	DC-4 Current	
"IDC4KW1": 200,	DC-4 Power	
"IRPHV1": 0.96,	R phase voltage	
"IRPHI1": 50.05,	R phase current	
"IRPHKW1": 50.05,	R phase Active Power	
"IYPHV1": 42.578,	Y phase voltage	
"IYPHI1": 42.156,	Y phase current	
"IYPHKW1": 50.05,	Y phase Active Power	
"IBPHV1": 42.354,	B phase voltage	
"IBPHI1": 42.185,	B phase current	
"IBPHKW1": 50.05,	B phase Active Power	
"IKW1": 22.123,	Active Power	
"ITKWH1": 20.110,	Today Generated Energy	
"ITON1": 22.310,	Today On Time of Inverter	
"ILKWH1": 65.610,	Life time Generated Energy	
"ILON1": 55.610,	Life time running hours	
"ITEMP1": 52.910,	Inverter Temperature	
"IFT1": 53.911,	Fault-1	
"IFT2": 14.198,	Fault-2	
"IFT3": 98561.4,	Fault-3	
"IFT4": 98561.4,	Fault-4	
"IFT5": 98561.2,	Fault-5	
"IKVA1": 99100.3,	Apparent power	
"IKVAR1": 99105.1	Reactive power	
}		

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Reaction	
Not Applicable	

Communication Format Annexure

Annexure - 4 String Combiner Box

Message Name	: Periodic Push String Combiner Box
Message Format	: JSON
Message Type	: Data
Message Command Flow	: Not Applicable for Data periodic Push
Message response Flow	: RMS -> State SWPS IoT Platform
Message Medium	: GPRS

Command Message	
Not Applicable	

Response Message					
Message	Description				
{					
"VD":9	Virtual Device Index/Group				
"TIMESTAMP":"2020-05-18 17:58:00",	RTC timestamp of RMS/DCU against all parameters of vd/group				
"MAXINDEX":96	maximum index of local storage date				
"INDEX":7,	reference of local storage				
"LOAD":0,	Local storage retrieval command & status				
"STINTERVAL":15,	Periodic interval at which RMS shall store and transmit data to server. (in minutes)				
"MSGID": "",	Message Transaction Id - required for "Ondemand"/"Config" message type, request/response/acknowledgement/feedback				
"DATE":200518,	local storage date				
"IMEI":"1234561234561234",	IMEI No. of First Sim to be considered always for unique identity of DCU				
"ASN_41":"34123450",	SJB Serial no				
	<table> <tr> <td>RMS</td><td>0</td></tr> <tr> <td>DAQ</td><td>1-9</td></tr> </table>	RMS	0	DAQ	1-9
RMS	0				
DAQ	1-9				

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	Pump Controller	11-19	
	Meter	21-29	
	Inverter	31-39	
	String Combiner Box	41-49	
"POTP": "34123450",	Previous One Time Password		
"COTP": "34123450",	Current One Time Password		
"SI11": "3.00",	SJB1, Channel1 Current		
"SI21": "5.00",	SJB1, Channel2 Current		
"SI31": "5.00",	SJB1, Channel3 Current		
"SI41": "5.00",	SJB1, Channel4 Current		
"SI51": "5.00",	SJB1, Channel5 Current		
"SI61": "5.00",	SJB1, Channel6 Current		
"SI71": "5.00",	SJB1, Channel7 Current		
"SI81": "5.00",	SJB1, Channel8 Current		
"SI91": "5.00",	SJB1, Channel9 Current		
"SI101": "5.00",	SJB1, Channel10 Current		
"SI111": "5.00",	SJB1, Channel11 Current		
"SI121": "5.00",	SJB1, Channel12 Current		
"SI131": "5.00",	SJB1, Channel13 Current		
"SI141": "5.00",	SJB1, Channel14 Current		
"SI151": "5.00",	SJB1, Channel15 Current		
"SI161": "5.00",	SJB1, Channel16 Current		
"SI171": "5.00",	SJB1, Channel17 Current		
"SI181": "5.00",	SJB1, Channel18 Current		
"SI191": "5.00",	SJB1, Channel19 Current		
"SI201": "5.00",	SJB1, Channel20 Current		
"SI211": "5.00",	SJB1, Channel21 Current		
"SI221": "5.00",	SJB1, Channel22 Current		
"SI231": "5.00",	SJB1, Channel23 Current		
"SI241": "5.00",	SJB1, Channel24 Current		
"SDCV1": "635.00",	SJB1, DC Voltage		
"SDCTOTI1": "40.00",	SJB1, Total DC Current		
"SDCTOTKW1": "28.00",	SJB1, Total DC Power		
"SDI11": "1.00",	SJB1, Digital Input1		
"SDI21": "1.00",	SJB1, Digital Input2		
"ST11": "1.00",	SJB1, Temperature1		
"ST21": "1.00",	SJB1, Temperature2		
"ST31": "1.00"	SJB1, Temperature3		
}			

Reaction	
Not Applicable	

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Communication Format Annexure

Annexure – 5 RMS

Message Name	: RMS
Message Format	: JSON
Message Type	: Heartbeat
Message Command Flow	: Not Applicable
Message response Flow	: RMS -> State SWPS IoT Platform
Message Medium	: GPRS

Command Message

Not Applicable

Response Message

Message	Description
{	
"VD":0	Virtual Device Index/Group
"TIMESTAMP":"2020-05-18 17:58:00",	RTC timestamp of RMS/DCU against all parameters of vd/group
"MAXINDEX":96	maximum index of local storage date
"INDEX":7,	reference of local storage
"LOAD":0,	Local storage retrieval command & status
"STINTERVAL":15,	Periodic interval at which RMS shall store and transmit data to server. (in minutes)
"MSGID": "",	Message Transaction Id - required for "Ondemand"/"Config" message type, request/response/acknowledgement/feedback
"DATE":200518,	local storage date
"IMEI":"1234561234561234",	IMEI No. of First Sim to be considered always for unique identity of DCU
"POTP":"341234",	Previous One Time Password
"COTP":"341234",	Current One Time Password
"GSM":1,	Device connected to GSM network
"SIM":1,	SIM detected (1 - detected)
"NET":1,	Device in Network (1 - in network)
"GPRS":"1",	GPRS connected (1 - connected)

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"RSSI":22,	Signal Strength
"SD":1,	SD card detected (1 - detected)
"ONLINE":1,	Device Online (1- Online)
"GPS":1,	GPS Module Status (1-ON,0-OFF)
"GPSLOC":1,	GPS Location Locked
"RF":1,	RF Module Status (1-ON,0-OFF)
"RTCDATE":180918,	RTC Date
"RTCTIME":175800,	RTC Time
"TEMP":45.5,	Device Temperature
"LAT":19.06,	Latitude from gps
"LONG":72.8777,	Longitude from gps
"SIMSLOT":1,	Sim Slot (Current Sim Slot: 1 or 2)
"SIMCHNGCNT":10,	Total Sim Slot Change Count
"FLASH":1,	Device Flash Status 1: Detected 0: Error
"BATTST":0,	Battery Input Status: 1 if on battery power else 0
"VBATT":5.0,	Battery Voltage
"PST":1	Power Supply (1-Mains, 2-Battery)
}	

Reaction	
Not Applicable	

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Communication Format Annexure

Annexure – 6 DAQ System

Message Name	: Periodic Push DAQ System
Message Format	: JSON
Message Type	: Data
Message Command Flow	: Not Applicable for Data periodic Push
Message response Flow	: RMS -> State SWPS IoT Platform
Message Medium	: GPRS

Command Message

Not Applicable

Response Message

Message	Description
{	
"VD":12	Virtual Device Index/Group
"TIMESTAMP":"2020-05-18 17:58:00",	RTC timestamp of RMS/DCU against all parameters of vd/group
"MAXINDEX":96	maximum index of local storage date
"INDEX":7,	reference of local storage
"LOAD":0,	Local storage retrieval command & status
"STINTERVAL":15,	Periodic interval at which RMS shall store and transmit data to server. (in minutes)
"MSGID":"","	Message Transaction Id - required for "Ondemand"/"Config" message type, request/response/acknowledgement/feedback
"DATE":200518,	local storage date
"IMEI":"1234561234561234",	IMEI No. of First Sim to be considered always for unique identity of DCU
"POTP":"34123450",	Previous One Time Password
"COTP":"34123450",	Current One Time Password
"AI11":45.5,	Analog Input – 1
"AI21":45.5,	Analog Input – 2
"AI31":45.5,	Analog Input – 3
"AI41":45.5,	Analog Input – 4

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"DI11":1,	Digital Input – 1
"DI21":0,	Digital Input – 2
"DI31":1,	Digital Input – 3
"DI41":0,	Digital Input – 4
"DO11":1,	Digital Output – 1
"DO21":1,	Digital Output – 2
"DO31":1,	Digital Output – 3
"DO41":1	Digital Output – 4
}	

Reaction	
Not Applicable	

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Annexure - 7

Message Name : On Demand Read/Write Parameter/Keyword
 Message Format : JSON
 Message Type : Config
 Message Command Flow : Cloud Server-> RMS
 Message Response Flow : RMS -> Cloud Server
 Message Medium : GPRS

Command Message	
Message	Description
{	
"timestamp": "2018-09-18 17:58:00",	
"type": "config",	
"cmd": "write",	To write config
"msgid": "130",	Server Auto Generated
"APN1": "www"	APN Value for sim1
"USR1": "string"	sim1 user name
"PASS1": "string"	sim1 password
"APN2": "Internet"	APN Value for sim2
"USR2": "string"	Sim2 user name
"PASS2": "string"	Sim2 password
"RESTART": 1	To restart DCU, 1 : Execute command
"UPDATEINTERVAL": 15	Enter update interval in mins.
"HEARTINTERVAL": 5	Heartbeat Update Interval in mins
"URTCDATE": 200622	DCU RTC Date (YYMMDD) Update
"URTCTIME": 220312	DCU RTC Time (HH:MM:SS) Update - 24 hour format
"UPDATERTC": 1	Update RTC, 1: Execute command, 0 : Successful execution
"GSMSYNC": 1	RTC auto GSM synchronization, 1: to execute command
"DO1": 1	Pump Remote ON/OFF Operation (1-ON, 0-OFF)
"AI1ZERO": 1	Engineering Zero Value (4 mA dc) for AI1 E.G. 0(LPM)
"AI1SPAN": 100	Engineering Span Value (20 mA dc) for AI1 E.G. 5000(LPM)
"AI2ZERO": 1	Engineering Zero Value (4 mA dc) for AI2

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"AI2SPAN":100	Engineering Span Value (20 mA dc) for AI2
"AI3ZERO":1	Engineering Zero Value (4 mA dc) for AI3
"AI3SPAN":100	Engineering Span Value (20 mA dc) for AI3
"AI4ZERO":1	Engineering Zero Value (4 mA dc) for AI4
"AI4SPAN":100	Engineering Span Value (20 mA dc) for AI4
"URL": "rms1.kusumiiot.co"	URL of Broker Server
"PORT":8883	Port of Broker Server
"CID": "d:860906045525646\$standalonesolarpump\$27"	Unique Client id of device
"USERNAME": "860906045525646\$standalonesolarpump\$27"	Username for device authentication
"PASSWORD": "9e0baa73"	Password for device authentication
"FTPPURL": "rms1.kusumiiot.co"	URL for FTP
"FTPUSER": "866191037709301"	Username for FTP
"FTPPASS": "908552f"	Password for FTP
"FTPPORT":22	Port for FTP
"FTPDOWN":1	Download Certificates from ftp 1: To execute command, 0: Command is successfully executed
}	

Response Message	
Message	Description
{	
"timestamp": "2018-09-18 17:58:00",	
"type": "config",	
"cmd": "write",	To write config
"msgid": "130",	Server Auto Generated
"APN1": "www"	APN Value for sim1
"USR1": "string"	sim1 user name
"PASS1": "string"	sim1 password
"APN2": "Internet"	APN Value for sim2
"USR2": "string"	Sim2 user name
"PASS2": "string"	Sim2 password
"RESTART":1	To restart DCU, 1 : Execute command
"UPDATEINTERVAL":15	Enter update interval in mins.
"HEARTINTERVAL":5	Heartbeat Update Interval in mins

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"URTCDATE":200622	DCU RTC Date (YYMMDD) Update
"URTCTIME":220312	DCU RTC Time (HH:MM:SS) Update - 24 hour format
"UPDATERTC":1	Update RTC, 1: Execute command, 0 : Successful execution
"GSMSYNC":1	RTC auto GSM synchronization, 1: to execute command
"DO1":1	Pump Remote ON/OFF Operation (1-ON, 0-OFF)
"AI1ZERO":1	Engineering Zero Value (4 mA dc) for AI1 E.G. 0(LPM)
"AI1SPAN":100	Engineering Span Value (20 mA dc) for AI1 E.G. 5000(LPM)
"AI2ZERO":1	Engineering Zero Value (4 mA dc) for AI2
"AI2SPAN":100	Engineering Span Value (20 mA dc) for AI2
"AI3ZERO":1	Engineering Zero Value (4 mA dc) for AI3
"AI3SPAN":100	Engineering Span Value (20 mA dc) for AI3
"AI4ZERO":1	Engineering Zero Value (4 mA dc) for AI4
"AI4SPAN":100	Engineering Span Value (20 mA dc) for AI4
"URL":"rms1.kusumiiot.co"	URL of Broker Server
"PORT":8883	Port of Broker Server
"CID":"d:860906045525646\$standalonesolarpump\$27"	Unique Client id of device
"USERNAME":"860906045525646\$standalonesolarpump\$27"	Username for device authentication
"PASSWORD":"9e0baa73"	Password for device authentication
"FTPUURL":"rms1.kusumiiot.co"	Url for FTP
"FTPUSER":"866191037709301"	Username for FTP
"FTPPASS":"908552f"	Password for FTP
"FTPPORT":22	Port for FTP
"FTPDOWN":1	Download Certificates from ftp 1: To execute command, 0: Command is successfully executed
}	

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Command Message	
Command – B. In case, if some key in command are invalid	
Message	Description
{	
"timestamp": "2018-09-18 17:58:00",	
"type": "config",	
"cmd": "write",	to write config
"msgid": "130",	server auto generated
"APNN1": 2	send value "2"
"USR1": "xyz"	send value "xyz"
}	

Response Message	
Message	Description
{	
"timestamp": "2018-09-18 17:58:00",	
"type": "config",	
"cmd": "write",	to write config
"msgid": "130",	server auto generated
"APNN1": 0	invalid Key, value will be returned '0'
"USR1": "xyz"	actual value received
}	

Reaction	
Not Applicable	

Annexure - E3

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Amendment No-1

Date: 30.07.2022

RFS No: RFS No PGVCL/Project/DSM/PM-KUSUM-C-FLS/ TN-05 dtd 23/07/2022
Plant No: PG-FLS-105 to PG-FLS-185

Corrigendum in the Terms condition of the RFS is as under: -

Sr. No	Clause/ Para No.	page no.	Existing terms	Amended terms
1	E1 1.3 & Annx-K8 3	26, 68	The Bidder must have the required GST Registration. In case of JV, all the members must fulfill this requirement.	The Bidder must have the required GST Registration. In case of JV, all the members must fulfil this requirement. If one of the partners is new, then new partner should have applied for GST Registration. Bidder is to submit the proof of document containing registered application of new partner along with payment receipt of registration charges towards GST Registration. However, other partner must have valid GST Number. Bidder is responsible to submit GST number with documents in support in respect of other member, within 30 (Thirty) days from the date of opening of the Price bid. If the bidder failed to do so, EMD of the bidder will be forfeited and bid will be ineligible for any further processing.
2	E1 1.4 & Annx-K8 4	26, 68	The Bidder must have valid PAN Number. In case of JV, all the members must fulfil this requirement.	The Bidder must have valid PAN Number. If one of the partners is new, then new partner should have applied for PAN Registration. Bidder is to submit the proof of document containing registered application of new partner along with payment receipt of registration charges towards GST Registration. However, other partner must have valid PAN Number. Bidder is responsible to submit PAN number with documents in support in respect of other member, within 30 (Thirty) days from the date of opening of the Price bid. If the bidder failed to do so, EMD of the bidder will be forfeited and bid will be ineligible for any further processing.

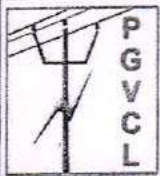
3	E2 1.2 & Annx-K9 2.1	28, 70	1.2.1. The Bidder should have positive net worth for each of the last three Financial Years (FY19-20, FY 20-21 & FY21-22). In case of JV, all the members must fulfil this requirement.	1.2.1. The Bidder should have positive net worth for each of the last three Financial Years (FY:19-20, FY:20-21 & FY:21-22). In case of JV, at least one member must fulfil this requirement. In case of JV, if firm is new, it's Net worth and turnover will be considered as a zero for preceding years.
4	E2 1.1 & Annx-K9 1.1	28 70	1.1.1 Bidder shall have experience of execution of supply, installation and commissioning of grid connected solar power plants with cumulative capacity of 1 MWp considering capacity of individual solar plants of 10 kWp or more, during last five years with any govt. or private organization in India. In case of JV, all the partners of the JV shall collectively meet this technical criteria.	1.1.1 Bidder shall have experience of execution of supply, installation and commissioning of grid connected solar power plants with cumulative capacity of 1 MWp considering capacity of individual solar plants of 10 kWp or more, during last five years with any govt. or private organization in India. In case of JV, all the partners of the JV shall collectively meet this technical criteria. In case of JV, if one partner is new, it's experience will be considered as a zero for preceding years.

Other terms and conditions of RFS will remain unchanged.

For and on behalf of PGVCL
Chief Engineer (Project)
PGVCL, Corporate Office,
Rajkot

Annexure - C3

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	PASCHIM GUJARAT VIJ COMPANY LIMITED REGD. & CORPORATE OFFICE:- "PASCHIM GUJARAT VIJ SEVA SADAN" OFF NANA MAVA MAIN ROAD, LAXMINAGAR, RAJKOT-360004 CIN U40102GJ2003SGC042908 Telephone Nos:-0281-2380425/427/2360182 Website:www.pgvcl.com	
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TENDER NO. PGVCL/Project/DSM/PM-KUSUM-C-FLS/ TN-05

Amendment no. 2, published on 17.08.2022

Bidders are requested to note that following amendment is made for the tender.

LAST DATE OF SUBMISSION OF OFFER AND OTHER DETAILS:

The REVISED schedule of the tender is as under.

1	Last Date & Time of submission of On- line bid in electronic form (Tender Fee, EMD, Technical & Financial Tariff offer. (This is mandatory)	Date: 24/08/2022 Up to 18.00 hours
2	Date of opening of Tender Fee, EMD on-line	Date: 26/08/2022 at 11.00 hours
3	Submission of original copy of DD/ Banker's Cheque/Pay Order /Bank Guarantee	Within 5 days of the on-line bid opening date of Tender Fee & EMD stage. (On working days, During office hours)
4	Date of opening of Technical offer on-line (If possible)	Date: 02/09/2022 at 11.00 hours
5	Tentative Date of on – line opening of financial "Tariff bid" (Price bid) (tentative, if possible)	Date: 06/09/2022 at 11.00 hours

This amendment is to be duly signed and sealed and to be submitted along with technical bid.

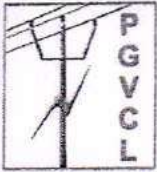
Other terms and conditions for tender remain unchanged.

Chief Engineer (Project),
PGVCL, Corporate Office, Rajkot

Signature of Tenderer	Company's Round Seal	Date:	Place:
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Annexure - E3

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	PASCHIM GUJARAT VIJ COMPANY LIMITED REGD. & CORPORATE OFFICE:- "PASCHIM GUJARAT VIJ SEVA SADAN" OFF NANA MAVA MAIN ROAD, LAXMINAGAR, RAJKOT-360004 CIN U40102GJ2003SGC042908 Telephone Nos:-0281-2380425/427/2360182 Website:www.pgvcl.com	
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TENDER NO. PGVCL/Project/DSM/PM-KUSUM-C-FLS/ TN-05

Amendment no. 3, published on 24.08.2022

Bidders are requested to note that following amendment is made for the tender.

LAST DATE OF SUBMISSION OF OFFER AND OTHER DETAILS:

The REVISED schedule of the tender is as under.

1	Last Date & Time of submission of On- line bid in electronic form (Tender Fee, EMD, Technical & Financial Tariff offer. (This is mandatory)	Date: 14/09/2022 Up to 18.00 hours
2	Date of opening of Tender Fee, EMD on-line	Date: 16/09/2022 at 11.00 hours
3	Submission of original copy of DD/ Banker's Cheque/Pay Order /Bank Guarantee	Within 5 days of the on-line bid opening date of Tender Fee & EMD stage. (On working days, During office hours)
4	Date of opening of Technical offer on-line (If possible)	Date: 22/09/2022 at 11.00 hours
5	Tentative Date of on – line opening of financial "Tariff bid" (Price bid) (tentative, if possible)	Date: 28/09/2022 at 11.00 hours

Note: - Bidders are requested to attend a meeting as per following schedule:-

Date: - 29.08.2022
Time: - 4:00 PM
Venue: - Conference hall, PGVCL,
Corporate office, Rajkot.

Other terms and conditions for tender remain unchanged.

Chief Engineer (Project),
PGVCL, Corporate Office, Rajkot

Signature of Tenderer	Company's Round Seal	Date:	Place:
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Annexure - E3

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	PASCHIM GUJARAT VIJ COMPANY LIMITED REGD. & CORPORATE OFFICE:- "PASCHIM GUJARAT VIJ SEVA SADAN" OFF NANA MAVA MAIN ROAD, LAXMINAGAR, RAJKOT-360004 CIN U40102GJ2003SGC042908 Telephone Nos:-0281-2380425/427/2360182 Website:www.pgvcl.com	
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TENDER NO. PGVCL/Project/DSM/PM-KUSUM-C-FLS/ TN-05

Amendment no. 4, published on 13.09.2022

Bidders are requested to note that following amendment is made for the tender.

LAST DATE OF SUBMISSION OF OFFER AND OTHER DETAILS:

The REVISED schedule of the tender is as under.

1	Last Date & Time of submission of On- line bid in electronic form (Tender Fee, EMD, Technical & Financial Tariff offer. (This is mandatory)	Date: 21/09/2022 Up to 18.00 hours
2	Date of opening of Tender Fee, EMD on-line	Date: 23/09/2022 at 11.00 hours
3	Submission of original copy of DD/ Banker's Cheque/Pay Order /Bank Guarantee	Within 5 days of the on-line bid opening date of Tender Fee & EMD stage. (On working days, During office hours)
4	Date of opening of Technical offer on-line (If possible)	Date: 29/09/2022 at 11.00 hours
5	Tentative Date of on – line opening of financial "Tariff bid" (Price bid) (tentative, if possible)	Date: 06/10/2022 at 11.00 hours

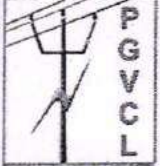
Other terms and conditions for tender remain unchanged.

Chief Engineer (Project),
PGVCL, Corporate Office, Rajkot

Signature of Tenderer	Company's Round Seal	Date:	Place:
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Annexure - E3

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	PASCHIM GUJARAT VIJ COMPANY LIMITED REGD. & CORPORATE OFFICE:- "PASCHIM GUJARAT VIJ SEVA SADAN" OFF NANA MAVA MAIN ROAD, LAXMINAGAR, RAJKOT-360004 CIN U40102GJ2003SGC042908 Telephone Nos:-0281-2380425/427/2360182 Website:www.pgvcl.com	
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TENDER NO. PGVCL/Project/DSM/PM-KUSUM-C-FLS/ TN-05

Amendment no. 5, published on 21.09.2022

Bidders are requested to note that following amendment is made for the tender.

LAST DATE OF SUBMISSION OF OFFER AND OTHER DETAILS:

The REVISED schedule of the tender is as under.

1	Last Date & Time of submission of On- line bid in electronic form (Tender Fee, EMD, Technical & Financial Tariff offer. (This is mandatory)	Date: 28/09/2022 Up to 18.00 hours
2	Date of opening of Tender Fee, EMD on-line	Date: 30/09/2022 at 11.00 hours
3	Submission of original copy of DD/ Banker's Cheque/Pay Order /Bank Guarantee	Within 5 days of the on-line bid opening date of Tender Fee & EMD stage. (On working days, During office hours)
4	Date of opening of Technical offer on-line (If possible)	Date: 06/10/2022 at 11.00 hours
5	Tentative Date of on – line opening of financial "Tariff bid" (Price bid) (tentative, if possible)	Date: 13/10/2022 at 11.00 hours

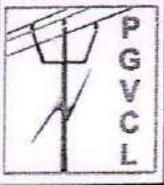
Other terms and conditions for tender remain unchanged.

Chief Engineer (Project),
PGVCL, Corporate Office, Rajkot

Signature of Tenderer	Company's Round Seal	Date:	Place:
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Amendment - CB

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	PASCHIM GUJARAT VIJ COMPANY LIMITED REGD. & CORPORATE OFFICE:- "PASCHIM GUJARAT VIJ SEVA SADAN" OFF NANA MAVA MAIN ROAD, LAXMINAGAR, RAJKOT-360004 CIN U40102GJ2003SGC042908 Telephone Nos:-0281-2380425/427/2360182 Website:www.pgvcl.com	
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TENDER NO. PGVCL/Project/DSM/PM-KUSUM-C-FLS/ TN-05

Amendment no. 6, published on 27.09.2022

Bidders are requested to note that following amendment is made for the tender.

LAST DATE OF SUBMISSION OF OFFER AND OTHER DETAILS:

The REVISED schedule of the tender is as under.

1	Last Date & Time of submission of On- line bid in electronic form (Tender Fee, EMD, Technical & Financial Tariff offer. (This is mandatory)	Date: 12/10/2022 Up to 18.00 hours
2	Date of opening of Tender Fee, EMD on-line	Date: 14/10/2022 at 11.00 hours
3	Submission of original copy of DD/ Banker's Cheque/Pay Order /Bank Guarantee	Within 5 days of the on-line bid opening date of Tender Fee & EMD stage. (On working days, During office hours)
4	Date of opening of Technical offer on-line (If possible)	Date: 20/10/2022 at 11.00 hours
5	Tentative Date of on – line opening of financial "Tariff bid" (Price bid) (tentative, if possible)	Date: 28/10/2022 at 11.00 hours

Other terms and conditions for tender remain unchanged.

Chief Engineer (Project),
PGVCL, Corporate Office, Rajkot

Signature of Tenderer	Company's Round Seal	Date:	Place:
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Annexure - E3

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Amendment No-7

Date: 11.10.2022

RFS No: RFS No PGVCL/Project/DSM/PM-KUSUM-C-FLS/ TN-05 dated 23/07/2022

The REVISED Schedule dates are amended as under: -

1	Last Date & Time of submission of On- line bid in electronic form (Tender Fee, EMD, Technical & Financial Tariff offer. (This is mandatory)	Date: 19/10/2022 Up to 18.00 hours
2	Date of opening of Tender Fee, EMD on-line	Date: 20/10/2022 at 11.00 hours
3	Submission of original copy of DD/ Banker's Cheque/Pay Order /Bank Guarantee	Within 5 days of the on-line bid opening date of Tender Fee & EMD stage. (On working days, During office hours)
4	Date of opening of Technical offer on-line (If possible)	Date: 25/10/2022 at 11.00 hours
5	Tentative Date of on – line opening of financial "Tariff bid" (Price bid) (tentative, if possible)	Date: 28/10/2022 at 11.00 hours

Corrigendum in the Terms condition of the RFS is as under: -

Sr. No	Clause/ Para No.	page no.	Existing terms	Amended terms
1	Section B (8)	10	Capacity Utilisation Factor (CUF)": CUF in a Year shall mean the ratio of the net output energy injected at delivery point of the SPV Power Plant in a Year versus installed Project capacity x 365 x 24 (i.e. CUF = Cumulative Project output in kWh / (installed Project capacity in kWp x 24 x 365))	Capacity Utilisation Factor (CUF)": CUF in a Year shall mean the ratio of the net output energy injected at delivery point of the SPV Power Plant in a Year versus installed Project capacity x 365 x 24 (i.e. CUF = Cumulative Project output in kWh / (installed Project capacity in kWp x 24 x 365)) CUF to be considered on AC capacity (KW).
2	E2 1.1 1.1.1 Annx-K9 1.1	28 70	Technical Criteria Bidder shall have experience of execution of supply, installation and commissioning of grid connected solar power plants with cumulative capacity of 1 MWp considering capacity of individual solar plants of 10 kWp or more, during last five years with any govt. or private organization in India. In case of JV, all the partners of the	Technical Criteria Bidder shall have experience of execution of supply, installation and commissioning of grid connected solar power plants with cumulative capacity of 500 KWp considering capacity of individual solar plants of 03 kWp or more, during last five years with any govt. or private organization in India. In case of JV, all the partners of the

			JV shall collectively meet this technical criteria. In case of JV, if one partner is new, it's experience will be considered as a zero for preceding years.	JV shall collectively meet this technical criteria. In case of JV, if one partner is new, it's experience will be considered as a zero for preceding years. (Amended Annexure-K9)
3	E2 1.2 1.2.2 Annexure-K9 2.2	28,29 71	Financial Criteria To ascertain that the Bidder has sufficient means to manage the fund requirements for the Project, the Bidder shall be required to have Minimum Average Annual Turnover during LAST 3 financial years (FY2019-20, FY 2020-21, FY2021-22) not be less than amount in Rs. mentioned against each separate individual Solar Plant in Annexure K20 for which the bidder wants to bid. (If audited annual accounts for FY 2021-22 are not available, provide accounts for FY 2020-21, FY 2019-20 and 2018-19.) If the Bidder wants to participate in the bid for the more than one solar plants, the bidder shall require to have the average annual Turnover not less than the sum of the individual separate amount mentioned against respective individual Solar plants in Annexure K20 for which the bidder wants to bid. The bidder shall ensure that the average annual turnover of the bidder must be higher than the sum of the individual turn over mentioned in the bid against the solar plant selected by the bidder for bidding. In case of the turnover is less than the sum of turnover of the mentioned against the selected plants, the complete bid will be rejected and the bidder will be	Financial Criteria To ascertain that the Bidder has sufficient means to manage the fund requirements for the Project, the Bidder shall be required to have Minimum Average Annual Turnover during LAST 3 financial years (FY2019-20, FY 2020-21, FY2021-22) not be less than amount in Rs. mentioned against each separate individual Solar Plant in Annexure K20 for which the bidder wants to bid. (If audited annual accounts for FY 2021-22 are not available, provide accounts for FY 2020-21, FY 2019-20 and 2018-19.) If the Bidder wants to participate in the bid for the more than one solar plants, the bidder shall require to have the average annual Turnover not less than the individual separate amount mentioned against respective individual Solar plants in Annexure K20 for which plants, the bidder wants to bid. The bidder shall ensure that the average annual turnover of the bidder must be higher than the individual turn over mentioned in the bid against the solar plant selected by the bidder for bidding. In case of bidders the turnover is less than the turnover of the selected plant, the bid will be rejected and the bidder will be disqualified for the further process

			disqualified for the further process of bid. In case of JV, all the partners of the JV shall collectively meet this criteria.	of bid for that plant. In case of JV, all the partners of the JV shall collectively meet this criteria. (Amended Annexure-K9)
4	E1 1.1.1 1.3 & Amendm ent-1 Annexur e-K8 Sr. No 4.	26 68	The Bidder must have the required GST Registration. In case of JV, all the members must fulfil this requirement. If one of the partners is new, then new partner should have applied for GST Registration. Bidder is to submit the proof of document containing registered application of new partner along with payment receipt of registration charges towards GST Registration. However, other partner must have valid GST Number. Bidder is responsible to submit GST number with documents in support in respect of other member, within 30 (Thirty) days from the date of opening of the Price bid. If the bidder failed to do so, EMD of the bidder will be forfeited and bid will be ineligible for any further processing.	The Bidder must have the required GST Registration. In case of JV, all the members must fulfil this requirement. If one of the partners is new, then new partner should have applied for GST Registration. Bidder is to submit the proof of document containing registered application of new partner along with payment receipt of registration charges towards GST Registration. However, other partner must have valid GST Number. Bidder is responsible to submit GST number with documents in support in respect of other member, within 15 (Fifteen) days from the date of issue of LOI. If the bidder failed to do so, SD/PBG of the bidder for the respective plant will be forfeited. (Amended Annexure-K8)
5	E1 1.1.1 1.4 Amendm ent-1 Annexur e-K8 Sr. No 5.	26 68	The Bidder must have valid PAN Number. If one of the partners is new, then new partner should have applied for PAN Registration. Bidder is to submit the proof of document containing registered application of new partner along with payment receipt of registration charges towards GST Registration. However, other partner must have valid PAN Number. Bidder is responsible to submit PAN number with documents in	The Bidder must have valid PAN Number. If one of the partners is new, then new partner should have applied for PAN Registration. Bidder is to submit the proof of document containing registered application of new partner along with payment receipt of registration charges towards GST Registration. However, other partner must have valid PAN Number. Bidder is responsible to submit PAN number with documents in support

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			support in respect of other member, within 30 (Thirty) days from the date of opening of the Price bid. If the bidder failed to do so, EMD of the bidder will be forfeited and bid will be ineligible for any further processing.	in respect of other member, within 15 (Fifteen) days from the issue of LOI. If the bidder failed to do so, SD/PBG of the bidder will be forfeited and bid will be ineligible for any further processing. (Amended Annexure-K8)
6	Annexure-K13	75	Annexure-K13	Amended Annexure-K13

Note: It is required to refill all the forms and check the entries made by bidders in any of the old forms prior to this amendment and ensure the data reflected in all the online forms before final submission of the bid with scanned copies of the documents.

Also above amended clause will be applicable to relevant clauses of RFS wherever applicable.

PGVCL updated Bank Details:

1. Name of Bank: State Bank of India
2. Name of Branch: Gymkhana Branch, Rajkot - Gujarat
3. Branch Code: 60070
4. MICR Code: 360002011
5. IFSC Code: SBIN0060070
6. Name of Account: PASCHIM GUJARAT VIJ COMPANY LIMITED
7. Account No: 66007422551

Other terms and conditions of RFS will remain unchanged.

For and on behalf of PGVCL
Chief Engineer (Project)
PGVCL, Corporate Office,
Rajkot

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Amended K.13 Declaration Regarding Alternative Deviations and Exceptions to the Provision

The Bidder is required to upload scanned copy of this document duly filled and signed *On Letterhead* with company Seal

To
The Chief Engineer (Project),
Paschim Gujarat Vij Company Ltd.,
Regd. & Corporate Office,
"Paschim Gujarat Vij Seva Sadan",
Laxminagar, Nana Mava main road,
RAJKOT-360004, (Gujarat)

Sub: Bid towards RfS for Solar Power Generator (SPG) for work of Design, survey, supply, installation, testing, commissioning, operation & maintenance for 25 years (unless extended by both the parties on mutual agreement) from COD of grid connected **Feeder level** solar power plant, its associated 11kV line to connect the plant with concerned substation and RMS of solar power plant through RESCO model for solarization of various 11kV feeders of associated 66/11kV substation in PGVCL under PM-KUSUM scheme – Component C -feeder level Solarization (FLS).

Ref: NIT NO: PGVCL/Project/DSM/PM-KUSUM-C-FLS/TN-5.

Dear Sir,

The bidder shall itemize any deviation from the RfS document included in his bid. Each item shall be listed (separate sheets may be used and enclosed with this Attachment) with the following information:

Sl. No.	Reference clause in the RfS document	Deviation
1		
2		
3		

(Signature & Seal of Authorized Signatory for which POA attached)

Name of Authorized Signatory:

Designation:Date:

Place

Note: It is required to refill all the forms and check the entries made by bidders in any of the old forms prior to this amendment and ensure the data reflected in all the online forms before final submission of the bid with scanned copies of the documents.

For and on behalf of PGVCL
Chief Engineer (Project)
PGVCL, Corporate Office,
Rajkot.

Amended K.8. Details of Bidders Eligibility Requirements

The Bidder is required to upload scanned copies of this document along with supporting documents duly filled On Letterhead and signed with company Seal. To The Chief Engineer (Project), Paschim Gujarat Vij Company Ltd.,

To
The Chief Engineer (Project),
Paschim Gujarat Vij Company Ltd.,
Regd. & Corporate Office,
"Paschim Gujarat Vij Seva Sadan",
Laxminagar, Nana Mava main road,
RAJKOT-360004, (Gujarat)

Sub: Bid towards RfS for Solar Power Generator (SPG) for work of Design, survey, supply, installation, testing, commissioning, operation & maintenance for 25 years (unless extended by both the parties on mutual agreement) from COD of grid connected Feeder level solar power plant, its associated 11kV line to connect the plant with concerned substation and RMS of solar power plant through RESCO model for solarization of various 11kV feeders of associated 66/11kV substation in PGVCL under PM-KUSUM scheme – Component C - feeder level Solarization (FLS).

Ref: NIT NO: PGVCL/Project/DSM/PM-KUSUM-C-FLS/ TN-5.

We hereby declare that we are eligible for bidding in reference to "Eligibility Requirements" of the RfS document vide above referenced NIT No. and submit the following certificate(s) /documents in support:

S. No.	Criteria	Documents Required	Status & Supporting Documents Attached
1.	Bidder can be sole/ singlebidder OR, Joint Venture (JV) of up to 2 (two) members, with one of the members as a Lead Member	In case of JV, Deed of Undertaking	Status: Documents Attached: Yes/No (Attached atAnnexure..... to this letter)
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;	e) In case of Company – Copy of Registration/ Incorporation Certificate f) In case of LLP – Copy of Deed of Partnership g) In case of Partnership – Copy of Deed of Partnership h) In case of SoleProprietor –	Status: Documents Attached: Yes/No (Attached atAnnexure..... to this letter)

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	OR d) Sole Proprietor In case of JV, all the members must fulfill this requirement and submit the documents as per the RfS document.	Duly notarized Undertaking from Sole proprietor	
3.	The Bidder must have the required GST Registration In case of JV, all the members must fulfil this requirement. If one of the partners is new, then new partner should have applied for GST Registration. Bidder is to submit the proof of document containing registered application of new partner along with payment receipt of registration charges towards GST Registration. However, other partner must have valid GST Number. Bidder is responsible to submit GST number with documents in support in respect of other member, within 15 (Fifteen) days from the date of issue of LOI. If the bidder failed to do so, SD/PBG of the bidder for the respective plant will be forfeited.	Copy of GST registration certificate with legible GSTIN.	Status: Documents Attached: Yes/No (Attached atAnnexure..... to this letter)
4.	The Bidder must have valid PAN Number. If one of the partners is new, then new partner should have applied for PAN Registration. Bidder is to submit the proof of document containing registered application of new partner along with payment receipt of registration charges towards GST Registration. However, other partner must have valid PAN Number. Bidder is responsible to submit PAN number with documents in support in respect of other member, within 15 (Fifteen) days from the issue of LOI. If the bidder failed to do so, SD/PBG of the bidder will be forfeited and bid will be ineligible for any further processing.	Copy of Pan Card	Status: Documents Attached: Yes/No (Attached atAnnexure..... to this letter)

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5.	The Bidder should have Electrical contractor license in Gujarat. In case of non-availability of the same at the time of bid submission, the contractor should submit a valid electrical contractor license issued by Govt. of Gujarat within 1 month of award of contract. The bidder should submit an undertaking in this regard along with the bid. Or submit a copy of contract executed for electrical work with a contractor having a valid license. In case of JV, any one of the members must fulfill this requirement and submit the documents as per the RfS document.	Copy of Registration Certificate issued by Government of Gujarat	Status: Documents Attached: Yes/No (Attached as t Annexure..... to this letter)
6.	The bidders should be qualified, not be insolvent, not be in receivership, not be bankrupt or being wound up, should not have affairs administered by a court or a judicial officer, should not have business activities suspended, should not be blacklisted or debarred by any utility / government agency, should not have a conflict of interest. In case of JV, all the members must fulfill this requirement.	The bidder shall provide an Undertaking as per the Format K.15. In case of JV, all the members must submit the undertaking as per the Format K.15.	Status: Documents Attached: Yes/No (Attached as t Annexure..... to this letter)
7.	The bidder must submit a Power of Attorney (POA) authorizing a person to sign the documents on behalf of the Bidder, submit technical, commercial information and attend meetings on behalf of the Bidder. In case of JV, all the JV members must submit individual PoA with supporting BoD resolution, except in case of proprietor wherein only undertaking in this regard is to be submitted along with combined PoA (signed by individually authorized person of each JV member)	Sole Bidder to provide POA as per the applicable Law as provided in SECTION - K: Format K.2 In case of JV, Undertaking by JV as per the format Format K.4 and POA as per the format provided in Format K.3	Status: Documents Attached: Yes/No (Attached as t Annexure..... to this letter)

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8.	The bidder should have "No Conflict of Interest" as defined in SECTION - G: clause SECTION - G:5.1.5 of this RfS document. Bidders have an obligation to disclose any situation of actual or potential conflict of interest. Failure to disclose said situations may lead to the disqualification of the Bidder or the termination of its Contract. In case of JV, all the members must fulfill this requirement.	The bidder shall provide an undertaking as per the format provided in as per the Format K.12 In case of JV, all the members shall submit the undertaking as per the Format K.12	Status: Documents Attached: Yes/No (Attached a t Annexure..... to this letter)
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All supporting documents enclosed.

(Signature & Seal of Authorized Signatory for which POA attached)Name of Authorized Signatory:

Designation:

Date:

Place:

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Amended K9 Details of Bidders Qualification Requirements

The Bidder is required to upload scanned copies of this document along with supporting documents duly filled On Letterhead and signed with company Seal.

To
The Chief Engineer (Project),
Paschim Gujarat Vij Company Ltd.,
Regd. & Corporate Office,
"Paschim Gujarat VijSevaSadan",
Laxminagar, Nana Mava main road,
RAJKOT-360004, (Gujarat)

Sub: Bid towards RfS for Solar Power Generator (SPG) for work of Design, survey, supply, installation, testing, commissioning, operation & maintenance for 25 years (unless extended by both the parties on mutual agreement) from COD of grid connected Feeder level solar power plant, its associated 11kV line to connect the plant with concerned substation and RMS of solar power plant through RESCO model for solarization of various 11kV feeders of associated 66/11kV substation in PGVCL under PM-KUSUM scheme – Component C -feeder level Solarization (FLS).

Ref: NIT NO: PGVCL/Project/DSM/PM-KUSUM-C-FLS/ TN-5.

We hereby declare that we are eligible for bidding in reference to "Qualification Requirements" of the RfS document vide above referenced NIT No. and submit the following certificate(s) /documents in support:

S. No.	Criteria	Documents Attached Details
1	Technical Criteria	
1.1	Bidder shall have experience of execution of supply, installation and commissioning of grid connected solar power plants with cumulative capacity of 500 KWp considering capacity of individual solar plants of 03 kWp or more, during last five years with any govt. or private organization in India. In case of JV, all the partners of the JV shall collectively meet this technical criteria. In case of JV, if one partner is new, it's experience will be considered as a zero for preceding years.	Meeting Qualification: (Yes/No) Documents along with Format..... attached in Annexure.... to this letter
2	Financial Criteria	
2.1	The Bidder should have positive net worth for each of the last three Financial Years (FY19-20, FY 20-21, FY21-22). In case of JV, all the members must fulfill this requirement.	Meeting Qualification: (Yes/No) Documents along with Format..... attached in Annexure....to this letter

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2.2	To ascertain that the Bidder has sufficient means to manage the fund requirements for the Project, the Bidder shall be required to have Minimum Average Annual Turnover during LAST 3 financial years (FY2019-20, FY 2020-21, FY2021- 22) not be less than amount in Rs. mentioned against each separate individual Solar Plant in Annexure K20 for which the bidder wants to bid. (If audited annual accounts for FY 2021-22 are not available, provide accounts for FY 2020-21, FY 2019-20 and 2018-19.) If the Bidder wants to participate in the bid for the more than one solar plants, the bidder shall require to have the average annual Turnover not less than the individual separate amount mentioned against respective individual Solar plants in Annexure K20 for which plants, the bidder wants to bid. The bidder shall ensure that the average annual turnover of the bidder must be higher than the individual turn over mentioned in the bid against the solar plant selected by the bidder for bidding. In case of bidders the turnover is less than the turnover of the selected plant, the bid will be rejected and the bidder will be disqualified for the further process of bid for that plant. In case of JV, all the partners of the JV shall collectively meet this criteria.
-----	--

Supporting Documents enclosed.

(Supporting Documents, wherever required & applicable are to be attached at Annexure to this letter.....)

(Signature & Seal of Authorized Signatory for which POA attached)Name of Authorized Signatory:
Designation:
Date:
Place:

Annexure - E4

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ON-LINE
REQUEST FOR SELECTION (RfS)
OF
Solar Power Generator (SPG)
FOR
DESIGN, SURVEY, SUPPLY, INSTALLATION, TESTING, COMMISSIONING AND
OPERATION & MAINTENANCE OF GRID CONNECTED FEEDER LEVEL SOLAR
POWER PLANTS, ITS ASSOCIATED 11KV LINE AND RMS OF SOLAR POWER
PLANT FOR 25 YEARS
THROUGH
RESCO MODE
FOR
SOLARIZATION OF VARIOUS 11KV FEEDERS OF ASSOCIATED 66/11KV
SUBSTATIONS IN PGVCL
UNDER
PM-KUSUM COMPONENT-C
FEEDER LEVEL SOLARIZATION
(Version- 1.2)

The Chief Engineer (Project)
Paschim Gujarat Vij Company Ltd.,
CIN: U40102GJ2003SGC042908, Regd. & Corporate Office,
"Paschim Gujarat Vij Seva Sadan", Laxminagar, Nana Mava main road,
RAJKOT-360004, GUJARAT-INDIA
Web: www.pgvcl.com, Email: ceproject.pgvcl@gebmail.com

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RfS document for feeder level Solarization under PM-KUSUM-Component-C in PGVCL

Notice Inviting RfS

No: PGVCL/Project/DSM/PM-KUSUM-C-FLS/ TN-6 DT: 14-10-2022

As authorized by the Gujarat Urja Vikas Nigam Ltd. (GUVNL), the State Implementing Agency (SIA) for Component-C of PM-KUSUM Scheme in the Gujarat State, the Chief Engineer (Project)-PGVCL invites 'On-line' Request for Selection (RfS) of Solar Power Generator (SPG) for Design, survey, supply, installation, testing, commissioning, operation & maintenance for 25 years (unless extended by both the parties on mutual agreement) from COD of grid connected Feeder level solar power plant, its associated 11kV line to connect the plant with concerned substation and RMS of Solar power plant through RESCO model for solarization of various 11kV feeders of associated 66/11kV substation in PGVCL under PM-KUSUM scheme – Component C - feeder level Solarization (FLS).

RfS documents may be down loaded from web site <https://pgvcl.nprocure.com> (For view, down load and on line submission) and PGVCL's web sites www.pgvcl.com for view & down load only). (To view the PDF file please use "Acrobat Reader" software which can be downloaded from "Adobe "website.)

RfS bid offer is required to be submitted by *online mode only in electronic form on website <https://pgvcl.nprocure.com>* (i.e. under preliminary, technical and price offer stage of online) Required document specifically mentioned in RfS is to be submitted physically addressed to

The Chief Engineer (Project),
Paschim Gujarat Vij Company Ltd., Regd. & Corporate Office,
"Paschim Gujarat Vij Seva Sadan", Laxminagar, Nana Mava main road,
RAJKOT-360004, (Gujarat).

RfS Schedule: -

1	NIT /RfS No.	PGVCL/Project/DSM/PM-KUSUM-C-FLS/ TN-6
2	NIT Issue Date	14-10-2022
3	Bidding portal	https://pgvcl.nprocure.com
4	Project:-	Design, survey, supply, installation, testing, commissioning, operation & maintenance for 25 years (unless extended by both the parties on mutual agreement) from COD of grid connected Feeder level solar power plant, its associated 11kV line to connect the plant with concerned substation and RMS of Solar power plant through RESCO model for solarization of various 11kV feeders of associated 66/11kV substation in PGVCL under PM-KUSUM scheme – Component C -feeder level Solarization (FLS). (Plants: PG-FLS-186 to PG-FLS-219)
5	Tender/Rfs Document fee	Rs. 15000+ Rs. 2700/- (GST @18%)= Rs. 17700/- (Seventeen Thousand Seven hundred only) Payment of Tender fee can be accepted by RTGS/NEFT. In case of payment through DD/Banker's Cheque the scanned copy of original documents shall have to be uploaded with the bid on- line and original copy of the same will have to be submitted, at the office of the Chief Engineer (Project), PGVCL Rajkot, within 5 days of the on-line bid opening (Tender Fee EMD stage).
6	EMD	Payment of Earnest Money deposit (EMD) can be accepted by RTGS/NEFT. In case of payment through DD/Banker's

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RfS document for feeder level Solarization under PM-KUSUM-Component-C in PGVCL

		Cheque/Pay Order /Bank Guarantee, the scanned copy of original documents shall have to be uploaded with the bid on-line and original copy of the same will have to be submitted, at the office of the Chief Engineer (Project), PGVCL Rajkot, within 5 days of the on-line bid opening. (Tender Fee EMD stage). Bidders shall require to pay separate EMD amount indicated against separate individual Solar plants to participate in the respective bid(s) of that concerned separate individual Solar plant(s).
7	Pre-bid meeting	Date and timing: 20-10-2022 at 11:00 AM Venue: Conference Hall, 3rd floor, PGVCL, Corporate Office, Laxminagar, Rajkot (The Agency who wants to attend the pre-bid meeting is requested to intimate us at least one day in advance prior to pre-offer meeting by e-mail only on following e-mail IDs eedsmcell.pgvcl@gebmail.com ceproject.pgvcl@gebmail.com
8	Last Date & Time of submission of On- line bid in electronic form (Tender Fee, EMD, Technical & Financial Tariff offer. (This is mandatory)	Date: 04/11/2022 Up to 18.00 hours
9	Date of opening of Tender Fee, EMD on-line	Date: 05/11/2022 at 11.00 hours
10	Submission of original copy of DD/ Banker's Cheque/Pay Order /Bank Guarantee	Within 5 days of the on-line bid opening date of Tender Fee & EMD stage. (On working days, During office hours)
11	Date of opening of Technical offer on-line (If possible)	Date: 09/11/2022 at 11.00 hours
12	Tentative Date of on – line opening of financial "Tariff bid" (Price bid) (If possible)	Date: 10/11/2022 at 11.00 hours
13	Reverse e-auction	Date of Reverse e-auction will be conveyed to eligible bidders on e-bidding portal, if required for the respective Solar plants. The bidders shall require to create e auction user id on https://e-auction.nprocure.com/ The bidder shall require to mention their e-auction user id in the on-line submission of technical bid. This is mandatory.
Note: Bidders shall ensure that they have verified the scanned copies of the documents uploaded by them are opened properly without any error. It shall be sole responsibility of the bidder that the uploaded documents (in PDF form) remain legible and should not be password protected.		

PGVCL GSTIN No: 24AADCP1453C1ZZ

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RfS document for feeder level Solarization under PM-KUSUM-Component-C in PGVCL

- Every bidder has to inform their GSTIN No. at the time of payment of applicable fees

AS PER THE NOTICE OF THE INVITATION OF RfS DOCUMENT (NEWS PAPER ADVERTISEMENT), THE RfS DOCUMENT IS INVITED BY e-tender (ON – LINE) SYSTEM, FOR WHICH FOLLOWING CONDITIONS ARE MANDATORY.

[A] ALL REQUIRED DOCUMENTS ARE TO BE SUBMITTED IN ONLINE MODE ONLY EXCEPT DOCUMENTS REQUIRED AGAINST PAYMENT OF TENDER FEE & EARNEST MONEY DEPOSIT (EMD), Bank Guarantee etc. as specifically mentioned in this tender documents.

[B] The documents other than mentioned in Section-C KEY Bid Data and documents mentioned in general and commercial terms and conditions of RfS Document are required **to be uploaded in technical stage of online EOI Document**. In case of not uploading of required document in online offer or uploading of wrong document, offer may not be considered for technical evaluation. However, the Bidder SPG have to furnish all required documents physically and it will be the responsibility of the bidder to submit the same in time (Not more than 5 days after opening of Technical bid)

[C] Bidder SPGs are requested to submit price – offer (financial bid) in on-line (e-RfS electronic form) only and not to submit the price offer in physical form. This is mandatory. If price offer is submitted in physical form, the bid/RfS offer will be summarily rejected.

[D] It is mandatory for all the Agencies to confirm and agree all the terms and condition by on-line mode only, the RfS documents, draft Power Purchase Agreement and RMS Communication and Security Architecture- PM KUSUM SEDM Platform attached herewith as a part of the whole tender. By confirming this, bidder will also confirm all the amendments thereafter issued time to time and will be automatically binding to the bidder.

[E] PGVCL at its sole discretion may ask additional clarification or information or documents from the Agency who are found to be eligible in main pre-qualification criteria.

Note:- Bidder should be familiar with websites <https://pgvcl.nprocure.com> & www.pgvcl.com, <https://e-auction.nprocure.com/> for information regarding revision/corrigendum/Amendment in RfS Document till due date of online submission and thereafter. No separate information shall be sent in this regard and also not publish in newspaper.

Any technical questions, information and clarifications that may be required pertaining to this EOI should be referred to: The Chief Engineer(Project), Paschim Gujarat Vij Company Ltd., Regd. & Corporate Office, "Paschim Gujarat Vij Seva Sadan", Laxminagar, Nana Mava main road, RAJKOT-360004, (Gujarat)

E-Mail:- ceproject.pgvcl@gebmail.com; with a copy to eedsmcell.pgvcl@gebmail.com

PGVCL reserves the right to reject any OR all RfS Documents/offers without assigning any reasons thereof.

For and on behalf of PGVCL

Chief Engineer (Project)

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RfS document for feeder level Solarization under PM-KUSUM-Component-C in PGVCL

DISCLAIMER

The information contained in this RfS document or subsequently provided to bidder(s), written or, verbal, by or on behalf of PGVCL or any of its employees, is provided to bidder(s) on the terms and conditions of this RfS document and its subsequent amendment(s).

This RfS document is non-transferable and is neither an agreement nor an offer by PGVCL to the prospective bidders or any other person. The purpose of this document is to provide interested parties/bidders with information that may be required by them in the preparation of their bid for stated scope of work.

Although adequate care has been taken while preparing the RfS document, however, the bidders shall satisfy themselves that document is complete in all respects. If noticed, bidders shall intimate any discrepancy in the RfS document to office of the undersigned within 3 days from the date of issuance of the RfS document. If no intimation is received from the Bidders within the stipulated period, it shall be assumed that the RfS document is complete in all respects and fulfils the expectations of the Bidders.

PGVCL, its officers, employees and consultants have made best efforts to provide as accurate and reliable information as possible. However, before submitting their bids, the Bidders are expected to independently assess, verify and validate the information/data provided in the RfS document.

PGVCL reserves the right to annul the bid process and/or reject any or all of the Bids submitted in response to this RfS document at any stage without assigning any reasons whatsoever. In such cases PGVCL will refund the EMD, if any, and cannot be subjected to any liability whatsoever due to such rejection/cancellation.

PGVCL, its officers, employees and consultants have no responsibility for authenticity of the information/data hence shall not be held liable for any possible omission, misrepresentation, mistake or error in the information/data provided in the RfS document and consequences thereof.

PGVCL also accepts no liability of any nature whether resulting from negligence or otherwise howsoever caused arising from reliance of any applicant upon the statements contained in this document.

PGVCL may modify, amend or supplement any aspect of this RfS document, including draft PPA, including selection process and evaluation criteria, if deemed necessary by it or the same is required under Law. Further, PGVCL or its authorized officers reserve the right, without prior notice, to change the selection procedure and the delivery of information at any time before submission of bids without assigning any reasons thereof. However, such change shall be posted on Bidding Portal.

The bidder, regardless of the conduct or outcome of the Bidding Process, shall bear all its costs associated with or relating to the preparation and submission of its bid including but not limited to preparation, copying, postage, delivery fees, expenses associated with any demonstrations or presentations which may be required by PGVCL or any other costs incurred in connection with or relating to its bid.

Under this RfS of SPG of feeder level Solarization under component -C of MNRE's PM-KUSUM Scheme for various feeders, the CFA for various feeders subject to MNRE's quantity allocation, CFA's sanction and disbursement of CFA by MNRE to Gujarat. The CFA amount depends upon MNRE's evaluation of data for various projects under this Tender. PGVCL and GUVNL shall not be responsible for not receiving the CFA for any feeder or reduce in CFA amount or delay in disbursement of CFA for any feeder to the developer/ Solar Power Generator (SPG). PGVCL /GUVNL shall not be liable to pay /compensate any difference of CFA on account of less amount of CFA received from MNRE.

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RfS document for feeder level Solarization under PM-KUSUM-Component-C in PGVCL

LIST OF ABBREVIATIONS

1.	+	Plus (Addition)
2.	AC	Alternating Current
3.	Ag.	Agriculture
4.	BOQ	Bill of Quantity
5.	BOS	Balance-of-System
6.	CEA	Central Electricity Authority
7.	CEIG	Chief Electrical Inspector of Gujarat
8.	CERC	Central Electricity Regulatory Commission
9.	COD	Commercial Operation Date
10.	DC	Direct Current
11.	DCR certificate	Domestic Content Requirement certificate
12.	DTR	Distribution Transformer
13.	DWC	Double Walled corrugated
14.	FF	Fill Factor
15.	HP	Horse Power
16.	IEC	International Electro technical Commission
17.	IEEE	Institute of Electrical and Electronics Engineers
18.	IoT	Internet of Things
19.	IS	Indian Standard
20.	IST	Indian Standard Time
21.	kV	Kilo Volt
22.	kW	Kilo Watts
23.	kWp	Kilo Watt peak
24.	LoI	Letter of Intent
25.	LT	Low Tension
26.	MCB	Miniature Circuit Breaker
27.	MDAS	Meter Data Acquisition System
28.	MIS	Management Information System
29.	MNRE	Ministry of New & Renewable Energy, Government of India
30.	MWp	Mega Watt Peak
31.	NIT	Notice Inviting RfS
32.	OEM	Original Equipment Manufacturer
33.	PCU	Power Conditioning Unit
34.	PID	Potential-induced degradation
35.	POC	Proof of Concept
36.	PBG	Performance Bank Guarantee
37.	PV	Photovoltaic
38.	PVC	Poly vinyl chloride
39.	RCCB	Residual Current Circuit Breaker
40.	RDBMS	Relational Data Base Management System
41.	REC Ltd.	Rural Electrification Corporation, Govt. of India
42.	GERC	Gujarat Electricity Regulatory Commission
43.	RESCO	Renewable Energy Service Company
44.	RMS	Remote Monitoring System

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RfS document for feeder level Solarization under PM-KUSUM-Component-C in PGVCL

45.	RTC	Real Time Clock
46.	SCADA	Supervisory Control And Data Acquisition
47.	SECI	Solar Energy Corporation of India
48.	SMB	Sub Miniature version Board
49.	SNA	State Nodal Agency for Renewable Energy
50.	SPG	Solar Power Generator
51.	SPV	Solar Photo Voltaic
52.	STC	Standard Testing Condition ("STC" shall mean Standard Testing Condition for solar cells and PV modules with air mass AM1.5, irradiance 1000W/ m2, and cell temperature of 25°C)
53.	TPI	Third-party inspection
54.	TPIA	Third-Party Inspection Agency' appointed by Discom and / or MNRE as may be applicable
55.	UAT	User Acceptance Test
56.	-ve	Negative
57.	W	Watt
58.	WO	Work Order
59.	Wp	Watt peak
60.	PGVCL	Paschim Gujarat Vij Company LTD
61.	GUVNL	Gujarat Urja Vikas Nigam Ltd.
62.	RfS	Request for Selection
63.	CFA	Central Finance Assistance (provides by MNRE)
64.	FLS	Feeder level Solarization under PM-KUSUM Scheme
65.	SLDC	State Load Dispatch Centre of Gujarat

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Annexure-K.19 Communication Architecture between RMS and State Level Server	
Annexure-K.20 List of Solar Power Plants with details viz: Name of Substation, Name of feeders, Plant capacity, Energy requirement, EMD against plant, PBG against plant, Requirement of minimum Turn Over, etc.	

RfS document for feeder level Solarization under PM-KUSUM-Component-C in PGVCL

SECTION - A: INTRODUCTION

A.1. Background

1.1.1. The erstwhile Gujarat Electricity Board has been restructured into seven companies. One generation (GSEC), one transmission (GETCO), four distribution companies (DGVCL, MGVCL, PGVCL & UGVCL) and Holding Company GUVNL in terms of Gujarat Electricity Industry (Reorganization & Regulation) Act-2003.

- a) Gujarat Urja Vikas Nigam Limited (GUVNL) to do co-ordination activities among all subsidiaries
- b) Gujarat State Electricity Corporation Ltd. (GSECL) manages the electricity generation business of erstwhile GEB.
- c) Gujarat Electricity Transmission Corporation Limited (GETCO) to manage the electricity transmission and bulk supply business of erstwhile GEB. All Substation 66 KV/11, 132KV/11KV, 220KV/11 KV are under control of GETCO.
- d) Paschim Gujarat Vij Company Limited (PGVCL) to manage the electricity distribution and retail supply business of erstwhile GEB in Saurashtra and Kutch region of Gujarat.

1.1.2. On 22-07-2019 Ministry of New and Renewable Energy, Government of India announced Guidelines for Implementation of Pradhan Mantri Kisan Urja Suraksha evam Utthan Mahabhiyan (PM KUSUM) Scheme for installation of solar pumps and grid connected solar power plants through three components, viz.

- Component A: Decentralized Ground Mounted Grid Connected Renewable Energy (RE) based Power Plants of individual plant size up to 2 MW.
- Component B: Installation of standalone Solar Powered Agriculture Pumps
- Component C: Solarization of Grid-connected Agriculture Pumps - individual

1.1.3. Subsequently on 04 December 2020, MNRE introduced and issued guidelines for implementation of **feeder level solarization under Component-C** of PM-KUSUM Scheme. Under the scheme, agriculture feeders already segregated or, feeders having major load for agriculture may be solarized using installation of grid connected solar power plant to cater the annual power requirement of feeder(s). This will lead to lower cost both in terms of lower capital cost and cost of power. The Scheme guideline is available on MNRE's Website www.mnre.gov.in and GUVNL's PM-KUSUM Portal <https://pmkusum.guvnl.com>.

1.1.4. As per MNRE guidelines for feeder level Solarization, the requirement of total annual power for an agriculture feeder(s) is to be assessed and a solar power plant of capacity that can cater to the requirement of annual power for that agriculture feeder(s) can be installed either through CAPEX model or RESCO model, which will supply solar power to that feeder(s). **Under this Tender/RfS the feeder level Solar power plant/s is/are required to be installed under the RESCO model.**

1.1.5. As per MNRE guidelines for feeder level solarization, for installation of feeder level solar power plants through RESCO model, the SPGs will be selected on the basis of lowest tariff offered for supply of required solar power for a period of 25 years (unless extended by both the parties on mutual agreement). The developer will get CFA @ 30% of the estimated cost of installation of solar power plant i.e. **Rs. 1.05 Cr/MW (30% of Rs. 3.5 Cr/MW).**

1.1.6. As per MNRE's Scheme guideline for Feeder level Solarization, for the purpose of calculating CFA, the cost of installation of solar power plant has been estimated as Rs. 3.5 Cr/MW. Under the Scheme solarisation of pumps of any capacity is allowed, however, in case of pumps of capacity above 7.5 HP, the CFA will be limited to solar capacity for 7.5 HP pumps.

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RfS document for feeder level Solarization under PM-KUSUM-Component-C in PGVCL

A.2. Objective

- 2.1.1. PGVCL intends to select competent, experienced and eligible bidder, hereafter to be referred as "Solar Power Generator" or, SPG, for the work of design, survey, supply, installation, testing, commissioning, operation & maintenance of grid connected solar power plants of different capacities for various feeders of associated Sub-stations, its associated 11kV line to connect the plant with concerned substation and Remote Monitoring System (RMS) of solar power plant through RESCO model for 25 years (unless extended by both the parties on mutual agreement) for Solarization of various 11kV feeders associated with various 66/11kV substation in PGVCL under PM-KUSUM scheme – Component C (feeder level Solarization) as mentioned in the Annexure K20.

Note:-

- i. For the multiple feeders emanating from same sub-station and covered under this project, the sum of solar plant capacities of individual feeder is to be considered for installation of single solar power plant for the capacity indicated against the group of feeders in the substation.
- ii. In case, two groups of feeders are covered under the same substation, there will be two separate Solar plants for each groups of feeders. These two solar plants shall not be in adjacent to each other for a same SPG.

A.3. Model of execution of project

- 3.1.1. The feeder level solar power plant is to be installed in RESCO model in the Solar Power Generator's land along with its associated 11kV line to connect the plant with concerned 66KV/11 KV substation at 11 KV Bus and RMS of solar power plant. Detailed scope of work mentioned in Clause D.1.
- 3.1.2. The basis of evaluation of the bids shall be the levelized tariff for 25 years in Rs. Per kWh quoted in the Price Schedule against each feeder separately. To further clarify, all the costs, distribution losses up to the delivery point including applicable taxes (incl. GST and cess as applicable), duties, etc. pertaining to design, survey, supply, installation, testing, commissioning, operation & maintenance of grid connected solar power plant, its associated 11kV line to connect the plant with concerned substation and RMS of solar power plant, shall be inclusive in the Price Bid quoted by Bidders for the purpose of comparison and evaluation. Bidders are required to quote the tariff on firm price Endcost with GST & cess as applicable basis and no price variation on any account shall be considered.

SECTION - B: KEY DEFINITIONS

- (1) "Act" or "EA 2003" shall mean the Electricity Act, 2003 and include any modifications, amendments and substitution from time to time;
- (2) "Affiliate" shall mean a Bidder or a Bidding Entity that, directly or indirectly, controls, or is controlled by, or is under the common control with such Company. The expression "control" shall mean the ownership, directly or indirectly, of more than 50% of the voting shares of such Company or right to appoint majority Directors.
- (3) "Appropriate Commission" shall mean as defined in the PPA or, GERC;
- (4) "Authorized Officer" shall mean Officer Designated by Discom for specific task
- (5) "Bid" shall mean the "Proposal" / "Quotation" submitted by eligible bidders for the work envisaged under this RfS
- (6) "Bidder" or "Bidding Entity" shall mean legal entity : Body incorporated in India under the Companies Act, 2013 including any amendment thereto; OR Body incorporated in India under

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the Limited Liability Partnership (LLP) Act, 2008 including any amendment thereto; OR Firm registered under Partnership Act, 1932 in India; OR Sole Proprietor OR Joint Venture as per this RfS, submitting the Bid. Any reference to the Bidder includes an entity including its successors, executors and permitted assigns severally, as the context may require.

- (7) **"Bidding Portal"** shall mean <https://pgvcl.nprocure.com>
- (8) **"Capacity Utilisation Factor (CUF)"**: CUF in a Year shall mean the ratio of the net output energy injected at delivery point of the SPV Power Plant in a Year versus installed Project capacity $\times 365 \times 24$ (i.e. $CUF = \frac{\text{Cumulative Project output in kWh}}{(\text{installed Project capacity in kWp} \times 24 \times 365)}$)
- CUF to be considered on AC capacity (KW).
- The annual CUF will be calculated every year from 1st April of the year (COD for first year) to 31st March next year.
- (9) **"CEI" / "CEIG"** shall mean Chief Electrical Inspector to the State Government.
- (10) **"Chartered Accountant"** for bidders or its Parent, Affiliate or Ultimate Parent or any Group Company incorporated in India, "Chartered Accountant" shall mean a person practicing in India or a firm whereof all the partners practicing in India as a Chartered Accountant(s) within the meaning of the Chartered Accountants Act, 1949; For bidders or its Parent, Affiliate or Ultimate Parent or any Group Company incorporated in countries other than India, "Chartered Accountant" shall mean a person or a firm practicing in the respective country and designated / registered under the corresponding Statutes/laws of the respective country.
- (11) **"Company"** shall mean a body incorporated in India under the Companies Act, 1956 or the Companies Act, 2013, as applicable;
- (12) **"Commissioning"** with respect to the Project as certified by PGVCL shall mean when all equipment as per rated capacity has been installed and energy has flown into the grid.
- (13) **"Commercial Operation Date" (COD)** shall mean the date certified by the DISCOM's committee upon successful commissioning (as per provisions of the PPA) of the project when all equipments as per rated capacity have been installed and energy has flown into the grid.
- (14) **"Conflict of Interest"** shall mean a Bidder may be considered to be in a conflict of interest with one or more Bidders in the same bidding process if they have a relationship with each other and as defined in the section G-4.
- (15) **"Contracted Capacity"** shall mean ____ MWp AC contracted with DISCOM for supply by the SPG to DISCOM at the Delivery Point which shall be the maximum injection limit at delivery point in any 15 minute time block during the entire term of the PPA.
- (16) **"Contract Year"** shall mean, with respect to the initial Contract Year, the period beginning on the Commercial Operation Date and ending at 12.00 midnight on 31st March of that Fiscal Year. Each successive Contract Year shall coincide with the succeeding Fiscal Year, i.e., a period of twelve months commencing on April 1 and ending on following March 31, except that the final Contract Year shall end on the date of expiry of the Term or on Termination of this Agreement whichever is earlier.
- (17) **"Control"** shall mean holding not less than 51% of voting rights or of paid up share capital.
- (18) **"Controlling shareholding"** shall mean not less than 51% of the voting rights or paid up share capital in the Company/Consortium.
- (19) **"Day"** shall mean calendar day.
- (20) **"Delivered Energy"** means the kilowatt hours of energy actually fed and measured by the energy meters at the Delivery Point and as certified by SLDC.

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- (21) **"Delivery Point"** Delivery Point" shall mean the point at the voltage level of 11kV of the 66/11 kV Sub-station i.e. 11kV side of 66/11kV _____ substation under this PPA. Metering shall be done at this interconnection point where the power is injected into the 66/11 kV Sub- station. For interconnection with grid and metering, the SPG shall abide by the relevant and applicable regulations, Grid Code notified by the State Commission and Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006 as amended and revised from time to time, or orders passed thereunder by the Appropriate Commission or CEA. All charges and losses related to Transmission of power from project up to Delivery Point shall be borne by the SPG without any reimbursement thereof.
- (22) **"Due Date "** Due Date shall mean the thirtieth (30th) day after a Monthly Bill (including all the relevant documents) or a Supplementary Bill is received in hard copy and duly acknowledged by PGVCL or, if such day is not a Business Day, the immediately succeeding Business Day, by which date such Monthly Bill or a Supplementary Bill is payable by PGVCL.
- (23) **"Effective Date"** shall have the meaning ascribed thereto in Article 2.1 of attached PPA;
- (24) **"Electrical Inspectorate"** shall mean Electrical Inspectorate Department Gujarat
- (25) **"Engineer In-charge"** shall mean the authorized Officer of the PGVCL
- (26) **"EQUITY"** shall mean Net Worth as defined in Companies Act, 2013.
- (27) **"nproc"** shall mean electronic procurement system of Gujarat.
- (28) **"Financial Closure" or "Project Financing Arrangements"** shall mean the agreements pursuant to which the SPG has sought financing for the Power Project including the loan agreements, security documents, notes, indentures, security agreements, letters of credit and other documents, as may be amended, modified, or replaced from time to time, but without in anyway increasing the liabilities of PGVCL.
- (29) **"Financing Documents"** mean the agreements and documents (including asset leasing arrangements) entered/to be entered into between the bidder and the Financing Parties relating to the financing of the Project.
- (30) **"Financing Parties"** means Parties financing the Project, pursuant to Financing Documents.
- (31) **"Group Business Entity"** shall mean a Business Entity, which directly or indirectly or through common control holds not less than 26% of voting securities in the Bidder; or A Business Entity in which the Bidder directly or indirectly or through common control holds not less than 26% of voting securities.
- (32) **"Guidelines"** shall mean the "Guidelines for Implementation of Feeder Level Solarisation under Component-C of PM-KUSUM Scheme" issued by the Ministry of new and Renewable Energy vide OM 32/645/2017 –SPV dated 04/12/2020.
- (33) **"Interconnection Point/ Delivery point"** shall mean the point(s) of connection(s) at which the project is connected to the grid i.e. **it shall be at 11 kV bus bar level of 66/11kV substations mentioned in the tender against respective feeders.**
- (34) **"PGVCL"** shall mean Paschim Guajrat Vij Company Ltd.
- (35) **"Letter of Award" or "LOA"** shall mean the work order issued by PGVCL to the Selected Bidder for award of contract.
- (36) **"LLC"** shall mean Limited Liability Company.
- (37) **"Metering Point"** Metering shall be at 11 kV side of 66/11Kv substation.
- (38) **"Month"** shall mean calendar month.
- (39) **"Nodal Officer"** shall mean Superintending Engineer (Solar cell), PGVCL, Rajkot

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- (40) **"Net-Worth"** means the Net-Worth as defined in Section 2 of the Companies Act 2013.
- (41) **"NIT" / "RfS document" / "RfS" / "Notice Inviting Tender" / "Tender"** shall refer to this "Request for Selection of Solar Power Generator (SPG) for the work of design, survey, supply, installation, testing, commissioning, operation & maintenance for 25 years (unless extended by both the parties on mutual agreement) from COD, of grid connected feeder level solar power plant, its associated 11 kV line to connect the plant with concerned substation and RMS of solar power plant through RESCO model for solarization of different 11kV feeders of 66/11kV substation of in PGVCL under KUSUM scheme – Component C (feeder level solarization)"
- (42) **"Paid-up share capital"** means the paid-up share capital as defined in Section 2 of the Companies Act, 2013.
- (43) **"Payment Officer"** shall mean Account Officer (Bill), PGVCL, Rajkot
- (44) **"Performance Bank Guarantee"** shall mean the irrevocable unconditional bank guarantee to be submitted by the successful bidder as per the RfS.
- (45) **"PPA"** shall mean the Power Purchase Agreement signed between the SPG and PGVCL according to the terms and conditions of the standard PPA enclosed with this RfS, for purchase of Solar Power at tariff discovered in the tender and adopted by the GERC, by procurer.
- (46) **"procurer"** shall mean PGVCL
- (47) **"Gujarat Discoms"** shall mean all 4 Discoms in Gujarat namely: PGVCL, UGVCL, DGVCL, MGVCL
- (48) **"Power Project" or "Solar Project" or "Project"** shall mean the Solar Power generation facility of Contracted Capacity having a separate control system, metering and separate points of injection into the grid at Delivery point. The Project shall include all units and auxiliaries such as water supply, treatment or storage facilities, bay(s) for transmission system in the switchyard, dedicated electrical line up to the Delivery Point and all the other assets, buildings/structures, equipment, plant and machinery, facilities and related assets required for the efficient and economic operation of the power generation facility, whether completed or at any stage of development and construction or intended to be developed and constructed for the purpose of supply of power as per the PPA.
- (49) **"Project Site"** means any and all parcels of real property, rights-of-way, easements and access roads, upon which the Project and its related infrastructure will be located.
- (50) **"Project Capacity"** means the AC capacity of the project at the generating terminal(s) and to be contracted with PGVCL for supply from the Solar Power Project.
- (51) **"Project Commissioning"** shall mean the Project will be considered as commissioned if all equipment as per rated project capacity has been installed and energy has flown into grid, in line with the Commissioning procedures defined in the RfS/PPA.
- (52) **"Project Developer" or "Developer" or "Solar Power Generator (SPG)"** shall mean the successful Bidder whose Bid to perform the Contract as per this RfS has been accepted by PGVCL, Work order is issued by PGVCL and is named as such in the Contract Agreement, and includes the legal successors or permitted assigns of the Contractor
- (53) **"RESCO"** shall mean Renewable Energy Service Company i.e. an energy service company that develops, installs, finances, operates and owns the solar power project and supplies power generated from the Project to the PGVCL.
- (54) **"Selected Bidder" or "Successful Bidder"** shall mean the Bidder selected pursuant to this RfS to set up the Project and supply electrical output as per the terms of standard PPA.

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- (55) "SLDC" means the State Load Dispatch Center, Gujarat as notified by the State Government.
- (56) "Solar PV Project" means the solar Photo Voltaic Power project that uses sunlight for direct conversion into electricity through Photo Voltaic technology.
- (57) "Week" shall mean calendar week.
- (58) "Voltage of Delivery" means the voltage at which the Electricity generated by the Project is required to be delivered at 66/11kV substation.

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SECTION - C: KEY BID DATA

1	Solar PV Plant technology	All components used for installation of solar power plants shall conform to applicable BIS/MNRE specifications and follow quality control guidelines issued by MNRE. <u>It will be mandatory to use domestically manufactured modules from ALMM only.</u>
2	"Work Area" / "Site"	The Solar Power plant for Feeder level Solarization will be preferably installed within Five KM radius of the concerned sub-stations in order to avoid high cost of sub-transmission lines and to reduce transmission losses. SPG to identify and procure/lease the land on his own for 25 years for installation of Solar plant for this feeder level Solarization projects for each individual plants/Location. Land will not be provided by PGVCL to SPG.
3	Delivery point	11 KV Bus of associated 66Kv/11kv substation of respective feeders
4	11kv feeders to be solarized under Feeder level Solarization	As per mentioned in Annexure K20
5	Guaranteed CUF / minCUF	19% (fixed i.e. no deration permitted) CUF in a Year shall mean the ratio of the net output energy injected at delivery point of the SPV Power Plant in a Year versus installed Project capacity x 365 x 24 (i.e. CUF = Cumulative Project output in kWh / (installed Project capacity in kWp x 24 x 365)) The annual CUF will be calculated every year from 1st April of the year (COD for first year) to 31st March next year.
6	Eligible CFA by MNRE	Successful bidder to get CFA @ Rs. 1.05 Cr per MW (subject to installation & commissioning of project in line with MNRE requirement). CFA up to 100% of the total eligible CFA will be released to the RESCO developer through DISCOM on successful operation and performance of solar plant for two months after the commissioning with at least one month CUF as per minimum CUF agreed in PPA, as per MNRE's sanction for the CFA, subject to release of the same by MNRE-Gol. Further, the SPG shall give an undertaking that he shall not sell power to any other buyer except the PGVCL under the agreement of this tender during the tenure of this PPA. At any point of time during the tenure of PPA, if it is found that the SPG has sold the solar power produce from the contracted solar plant strict legal action will be taken against the SPG, including stop deal or black list from Participation in future tender of MNRE in Gujarat and the SPG shall require to refund

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		the proportionate CFA granted for the project by MNRE to PGVCL. For the recovery of the Proportionate CFA, the CFA granted by MNRE for the project will be divided by 25 years to arrive at per year CFA. If any event of sell of power is found at a particular time, the amount to be recovered from the SPG shall be the remaining period of PPA after the event date multiply by per year CFA. The recovery of the proportionate CFA will be made through the payments of invoices or through remedies taken in accordance with applicable laws. In case of any liquidation of assets of the solar power plants prior to completion of PPA period the first charge shall be towards recovery of the proportionate CFA granted to the project by MNRE.
7	Mode of bid submission	All required documents are to be submitted in online mode only except documents required against payment of tender fee & earnest money deposit (EMD) etc. as specified in tender shall be require to submit in physical mode also. Payment of Tender fee can be accepted by RTGS/NEFT. In case of payment through DD/Banker's Cheque the scanned copy of original documents shall have to be uploaded with the bid on- line and original copy of the same will have to be submitted, at the office of the Chief Engineer (Project), PASCHIM GUJARAT VIJ COMPANY LTD., Regd. & Corporate Office, Nana Mava Main Road, Laxminagar, Rajkot, within 5 days of the on-line bid opening (Tender Fee EMD stage). Note: The offer will be rejected; if the Tender Fee is paid through DD/Banker's Cheque and the original copy of such document is not submitted in physical form within 5 days of the on-line bid opening (Tender Fee EMD stage). Payment of Earnest Money deposit (EMD) can be accepted by RTGS/NEFT. In case of payment through DD/Banker's Cheque/Pay Order /Bank Guarantee, the scanned copy of original documents shall have to be uploaded with the bid on- line and original copy of the same will have to be submitted, at the office of the Chief Engineer (Project), PASCHIM GUJARAT VIJ COMPANY LTD., Regd. & Corporate Office, Nana Mava Main Road, Laxminagar, Rajkot, within 5 days of the on-line bid opening. (Tender Fee EMD stage). Note: The offer will be rejected out rightly; if the EMD is paid through DD/Banker's Cheque/Pay Order /Bank Guarantee and the original copy of such document is not submitted in physical form within 5 days of the on-line bid opening (Tender Fee EMD stage). <u>'TECHNICAL BID ' SHALL CONTAINS THE FOLLOWING ON-LINE DOCUMENTS with SELF CERTIFICATION:</u> The documents Supporting/ establishing the Techno-commercial eligibility criteria as mentioned in the tender are required to be submitted in online

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		mode only. Non blacklisting / non debarment undertaking a) Individual power of attorney b) Joint venture agreement c) Joint power of attorney d) Experience related documents e) Turnover related documents f) Company related documents g) GST,PAN,PF related documents l) Technical Engineer related documents
8	Selection criteria	Lowest (L1) quoted levelized tariff for 25 years followed by e-reverse auction
9	Estimated Project Cost for	Rs. 3.5 crore per MW as estimated by MNRE in the guideline of Feeder Level Solarization indicated in the Annexure K20 against each plant capacity.
10	Bid Validity	120 days from the date of opening of online Technical bid.
11	Performance Bank Guarantee (PBG) against commissioning	Performance Bank Guarantee (PBG) of Rs. 5 Lakh/MW is required to be submitted to PGVCL by the successful bidder-SPG within 15 days from date of issue of Letter of Award. The PBG will be returned to the SPG immediately after successful commissioning of solar power plant, after taking into account any penalties due to delay in commissioning as per provisions stipulated in the Guidelines. The PBG shall be initially valid from the date of issue until 2 months (i.e. sixty (60) days) beyond the 9 months from the date of signing of Power Purchase Agreement (PPA). It shall be responsibility of selected bidder to get the PBG extended, if required, such that it is valid till 2 months after date of commissioning of project. The Performance Bank Guarantee (PBG) required to be paid is mentioned against each plants in Annexure K20.
12	Power Purchase Agreement (PPA)	PPA for a period of 25 years (unless extended by both the parties on mutual agreement), at tariff discovered in the tender and adopted by the GERC, by procurer (i.e. PGVCL) within 7 days of submission of PBG.
13	Date of Project commissioning	Within 9 months from date of signing of PPA
14	Terms of PPA	25 years (unless extended by both the parties on mutual agreement) of O&M

1.1.1. Instructions for e- bid (Online bidding for RfS) to Bidders:

I	Downloading of RfS Documents
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A	Offer document will be available on web site up to date shown in the RfS
B	SPG Bidder willing to participate in RfS offer will have to get themselves registered on website www.nprocure.com
ii	Digital Signature
A	SPG Bidder should have valid digital certificate as per Information Technology Act 2000 using which they can sign their electronic offers. Agency can also procure the same from (n) code solutions, a division of GNFC Ltd., who are licensed certifying authority by Govt. of India.
B	In case RfS Bidder needs any clarification for e-bidding, details regarding digital certificate or if training required for participating in online RfS Document, they can contact the following office:- (n) Procure Cell M/s (n) Code Solution, A division of GNFC 403, GNFC Info Tower, Bodakdev, S.G. Road, Ahmedabad 380054.(Gujarat) E-mail: nprocure@gnfc.net Mob.: 9327084190; 9898589652 Toll Free: 1-800-233-1010 (Ext. 501, 512, 516, 517, 525) Phone No. 079-26857315 / 316 / 317 Fax: 079-26857321 / 40007533 Other Terms & Conditions as per detailed EOI Document
C	Agency who already possess valid Digital certificate need not to procure a new digital certificate.
iii	On line Submission of Technical and Price Offer
A	Bidder can prepare and edit their offers number of times before RfS submission date and time. After RfS Document submission date and time, RfS applicant cannot edit their offer submitted in any case. No written or online request in this regard shall be granted.
B	RfS applicant shall submit their offer, i.e. Technical Offer as well as price offer in Electronic format on above mentioned website and date shown in RfS Document details before digitally signing the same.
C	Offers submitted without on-line confirmation and digitally signed will not be accepted.

1.1.2. The bidders are requested to submit their bids prior to scheduled date & time to avoid event of non-submission of their bids due to non-availability / connectivity or any other issue of Bidding portal, at last moment or any reason whatsoever. The last date of submission of bids will not be extended in such circumstances.

1.1.3. It is mandatory for all the participating bidders to submit the following in original at the mentioned address prior to schedule of Physical submission (upload the scanned copy on the nprocure bidding portal)

- Bid security -EMD :** RTGS/NEFT, DD, BG in the prescribed format (Format K.1) on Non-Judicial Stamp Paper of Rs. 300/- for each plant bidder want to participate. Bidders shall require to pay separate EMD amount indicated against separate individual Solar plants to participate in the bidding of that concerned separate individual Solar plant(s).
- Tender Fee:-** RTGS/NEFT ,DD/Banker's Cheque only of prescribed value towards the cost of tender fee.
Payment of Tender Fee Can be accepted by RTGS/NEFT
- In case of DD, it shall be in favor of PGVCL, payable at Rajkot.

1.1.4. The PBG shall be from any Scheduled / Nationalized Banks (in a standard format prescribed by PGVCL) as notified vide finance department of Govt. of Gujarat GR no.: EMD/4/2022/002/DMO dated 20/05/2022 and further amendments if any. CORPORATE

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GUARANTEES ARE NOT ALLOWED.

- 1.1.5. Cutting / overwriting if any in the figures of the tendered documents is required to be clarified / indicated in words, duly signed, failing which the tender may be rejected.
- 1.1.6. Bidders shall not quote any deviation of any kind in the bid. Such deviations shall not prevail.
- 1.1.7. The bidders shall provide complete information at the time of submission of bid. If the bidders are asked to furnish some more clarification/confirmation/document, they shall be required to furnish the same within specified time, failing which the case shall be finalized /decided on the basis of available information/documents. The responsibility of ignorance of their bid on account of delay in furnishing of desired information/documents shall be of the bidder. However, if there are any shortcomings in the submission of the information which may not materially affects the qualification criterion, then PGVCL shall have the power to consider the facts on the merit of the case and decide the bid evaluation accordingly.
- 1.1.8. All the required information shall be furnished strictly in the prescribed Format only. Any information indicated other than the prescribed Formats shall not be entertained. The bid shall be evaluated on the basis of information furnished in the prescribed Formats only.
- 1.1.9. Clarifications regarding this RfS document for any type of typographical Errors or misunderstanding of document, the version/decision of PGVCL shall be final.
- 1.1.10. PGVCL reserves the right to cancel / withdraw or alter the RfS without assigning any reason and shall bear no liability whatsoever consequent upon such a decision.
- 1.1.11. **Correspondence for enquiries and clarifications:** All correspondence in respect of this RfS and submission of the bid shall be addressed to:

The Chief Engineer (Project)
Paschim Gujarat Vij Company Ltd.,
CIN: U40102GJ2003SGC042908, Regd. & Corporate Office,
"Paschim Gujarat Vij Seva Sadan", Laxminagar, Nana Mava main road,
RAJKOT-360004, GUJARAT-INDIA Email: ceproject.pgvcl@gebmil.com

1.1.12. Removed

- 1.1.13. Bidders have to enable e-auction id and mentioned detail at the time of filing data on e - tender for e- auction facility.

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SECTION - D: SCOPE OF WORK

D.1. Scope of Work

1.1.1. Overall scope of work of the Solar Power Generator (SPG) under this RfS covers following, which is applicable for the plant/ location individually:

- a. Detailed site survey,
- b. Procurement of required land or getting land on lease for 25 years for installation of the solar power plant for feeder level Solarization,

The SPG shall identify the project land preferably within the distance of Five KM radius of the respective 66/11 KV sub-station, get ownership of land or its lease rights and make necessary arrangement including ROW, clearances etc for the electrical line between sub-station and the solar power plant. The SPG shall ensure submission of the "In-Principle" land documents including documents such as Agreements to Sell, Banakhat etc. within 90 days from the date of issuance of work order after which PPA shall be signed by PGVCL with the SPG. Further, the SPG shall submit the final land documents within the period of 4 months after the date of signing of PPA for the entire required land duly registered by appropriate revenue authority.

- c. The Solar Power plant for Feeder level Solarization will be preferably installed within Five KM radius of the concerned sub-stations in order to avoid high cost of sub-transmission lines and to reduce transmission losses,
- d. Design, supply and installation of solar power plant near respective 66/11kV substation in line with requirements under MNRE guidelines.
- e. Supply and erection of associated 11kV line connecting the solar power plant with associated 66/11kV substation (including bay, breakers and metering system at substation) as per design and specifications of PGVCL /GUVNL/ MNRE / CEA.

Further, if an 11 KV line is exist for evacuating Solar power from the Generator end to substation end, having private ownership of the Generator, PGVCL will allow to use the same line with required extension/augmentation of the line on mutually agreed condition between the original solar Generator(s) and the incoming new Generator under this scheme on the same 11 KV line subject-to the aggregate capacity of the solar plants does not increase beyond 4 MW, without any financial implication to PGVCL. In such case necessary metering arrangement shall require to be implemented.

- f. Testing and commissioning of plant & associated 11kV line by designated official(s) of DICOM Committee.
- g. Construction of control room or any other relative civil work (at the plant end) essential for Commissioning of Project.
- h. Operation & maintenance of the solar power plant as well as 11kV line for 25 years (unless extended by both the parties on mutual agreement) from COD.
- i. Injection of power at delivery point for 25 years at the awarded levelized tariff (Rs. per kWh) (inclusive of applicable taxes incl. GST, duties, etc.), at the guaranteed CUF extendable on mutual agreement.
- j. Remote Monitoring of installed solar power plant of the capacity mentioned against each feeder (or any revised quantity identified after detailed survey by SPG) on the respective 11kV feeders through RMS for 25 years (unless extended by both the parties on mutual agreement).

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- 1.1.2. It will be mandatory to use domestically manufactured Solar modules from ALMM only. An undertaking is required to be submitted by the SPG complying that only domestically manufactured Solar modules from ALMM only are used in this project of FLS to PGVCL.
- 1.1.3. SPG shall be responsible for all the works related to testing & commissioning, replacement of defective PV modules by same make /model and remote monitoring for 25 years of the project.
- 1.1.4. In no case, Procurer or PGVCL shall be responsible to pay or increase in tariff for any work related to Project.
- 1.1.5. The project (solar power plant and associated 11kV line) is to be set up with adequate arrangements upto the delivery point and O&M for 25 years (unless extended by both the parties on mutual agreement) from COD, by the SPG at its own cost and in accordance with this RfS document. All approvals, permits and clearances required for setting up of the Project including those required from State Government and local bodies along with any associated cost for getting the clearances shall be in the scope of the SPG.
- 1.1.6. It shall be the responsibility of the SPG, entirely at its cost and expense, to install such number of solar panels and associated equipment as may be necessary to achieve the required **minimum CUF of 19%**, and for this purpose selected bidder shall make its own study and investigation of the Global Horizontal Irradiation (GHI) and other factors prevalent in the area which have implication on the quantum of generation.
- 1.1.7. All components used for installation of solar power plants shall conform to applicable BIS/MNRE specifications and follow quality control guidelines issued by MNRE and ALMM order with its amendments issued by MNRE time to time.
- 1.1.8. It is clarified that the project awarded under this RfS would not include energy storage with solar power plant.
- 1.1.9. The scope of work shall also include submission of following by the SPG:
 - a. A layout plan of the site to the Inspecting Authority clearly indicating the identified location for installation of solar power plant & control room, where control panels shall be installed.
 - b. Detailed planning of time bound smooth execution of Project;
 - c. Performance testing of the completion and successful commissioning of the Project;
 - d. O&M plan for the plant and 11kV line for twenty-five (25) years from COD to assure faultless operation;
 - e. Inventory plan to ensure availability of spare parts for minimal / no downtime of the project and/or, 11kV line during the term of PPA;
 - f. Coverage of risk liability of all personnel associated with implementation and realization of the Project;

D.2. Metering and grid connectivity

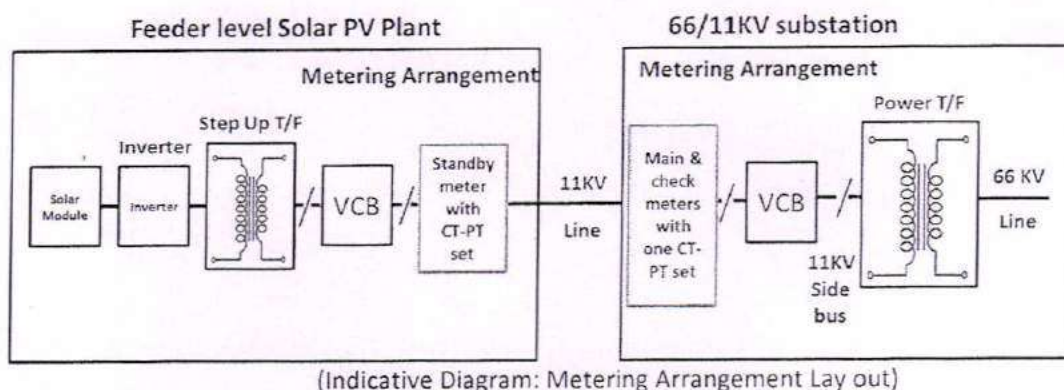
- 2.1.1. Metering and grid connectivity of the projects would be the responsibility of the SPG in accordance with the prevailing guidelines / practices of PGVCL and / or CEA. PGVCL may facilitate in the process; however, the entire responsibility lies only with the SPG.
- 2.1.2. Meters and metering equipment (CT-PT sets) shall be tested as per provision of GERC and as per IS 14697 at CPRI or at any NABL accredited / distribution licensee lab before installation at site at the cost of SPG and should be properly sealed in the presence of designated authority from PGVCL at the time of installation.
- 2.1.3. The accuracy class, current rating and certifications of the metering system shall confirm with relevant CERC/ GERC Regulations, Grid Code and Central Electricity Authority

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(Installation and Operation of Meters) Regulations, 2006 as amended and revised from time to time.

- 2.1.4. SPG to install 3 ABT meters (main, check and standby) with RMS connectivity AND 2 CT-PT sets (one for main & check meter and another for standby meter) as per the metering arrangement indicated in below layout :-



- 2.1.5. Installation and timely replacement of meters (main, check and standby) as required to directly measure energy supplied by the Solar Power Plant shall be the responsibility of selected bidder.
- 2.1.6. SPG shall also be responsible for installation of IoT Devices-RMS Set for Remote Monitoring system connectivity of Inverters, String combiner box, Energy Meters at Solar plant, Substation.
- 2.1.7. The cost of all required meters at Substation end (main, check, standby meter) at substation end along with Meter and associated CT-PT sets at Solar plant site shall be borne by the SPG.

D.3. Remote Monitoring System (RMS)

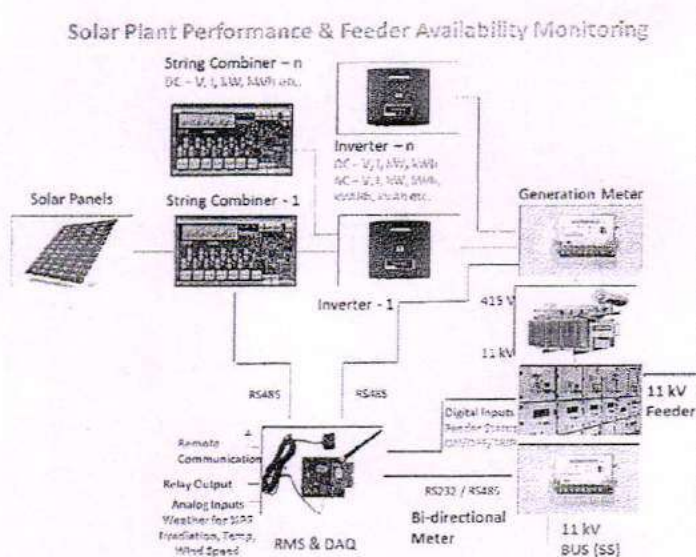
- 3.1.1. As per the MNRE guidelines for feeder level solarization under Component C of PM-KUSUM scheme, it is mandatory for Discoms to monitor solar power generation and performance of the solar power plant through online system on State-Portal www.pmkusum.guvnl.com. The online data will be integrated with central monitoring portal of MNRE which will extract data from the State portals for monitoring of the scheme.
- 3.1.2. In line with MNRE model guidelines for State Level SEDM Software Development issued in July 2020, Gujarat Discoms are in the process of development of State Level Solar Energy Data Management (SEDM) platform to integrate & monitor the performance of all systems installed under Component A, B & C (individual as well as feeder level solarization) of PM-KUSUM scheme.
- 3.1.3. Also, as per the Specifications for Remote Monitoring System for Component A & C of the scheme, issued by MNRE on 15 Jul 2020, the SPG under this RfS shall be required to install required remote monitoring systems for solar power plant to integrate with State SEDM platform directly which in turn will have interface with National Level Solar Energy Data Management Platform of MNRE.
- 3.1.4. As part of National and State SEDM platform, various modules will be provided such as Consumer Management, Scheme Progress Management, Asset Management, Live Asset Monitoring, Performance Analysis, Complaint and Ticket Management, Device Integration / SCADA Platform, Alarm/Events/Notification, Meter Data Acquisition (MDAS) / Meter Data

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Management (MDM), Archiving and Historian, Report Manager, Mobile application, SIA officer and EPC, Enterprise level user and role management.

- 3.1.5. MNRE and Discoms will develop and host the of National and State Level SEDM platform which is excluded from the scope of the SPG but SPG needs to operate and do various data entries related to application processing, asset and workflow mgmt.



- 3.1.6. As shown in above diagram SPG needs to provide a remote monitoring system for:

- (a) **Solar Power Plant Remote Monitoring system:** To capture electrical parameters from multiple devices such as ABT Meter, Inverters, String Combiner boxes or String inverters including meters at Sub-station level. Remote monitoring system will capture important Electrical and Status parameters such as AC/DC voltage, control, power, energy as well as monitoring of Breaker etc and will transmit data to State Level Solar Energy data management (SEDM) platform.
- (b) **Communication Connectivity for Solar Plant RMS:**
 - i. **Field Device Connectivity:** RMS will connect to Inverter, String combiner boxes or string inverters using RS485 MODBUS communication protocol as well as meters using RS232 DLMS protocol. Both protocols are widely used by equipment manufacturers.
 - ii. **Remote Connectivity:** RMS will connect to State Level SEDM Server using 2G/3G/4G or any other suitable cellular communication.
 - iii. **Local Connectivity:** Ethernet / Bluetooth / Wi-Fi connectivity to configure parameter, notifications, communication intervals, set points, operation mode configuration or to download locally stored data.

- 3.1.7. Once a bidder submits its technical bid by due date of submission, it shall be considered that the bidder is well verse with all the local conditions and has prepared its technical and financial bid accordingly. No claim or issue by the bidder(s) in this regard shall be accepted or, entertained by PGVCL after due date of bid submission.

- 3.1.8. Details of Communication Modes, Communication Protocols, Security and Message formats and equipment wise parameter details are enclosed as "Communication Architecture between RMS and State Level Server" in Section K.19

- 3.1.9. It is the responsibility of SPG to provide SIM card, bear recurring communication charges and maintain communication connectivity of more than 96% and data availability of 99% for the

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25 years (unless extended by both the parties on mutual agreement) of operation & maintenance of solar power plant and its associated 11kV line.

D.4. Insurance

4.1.1. The SPG shall also take insurance for third party liability covering loss of human life, engineers and workmen and also covering the risks of damage, theft of material/ equipment/ properties after completion of the work(s). Before commencement of the work, the SPG shall ensure that all its employees and representatives are covered by suitable insurance against any damage, loss, injury or death arising out of the execution of the work. Implication on account of Liquidation, Death, Bankruptcy etc., shall be the responsibility of SPG only.

4.1.2. Application of Insurance Proceeds

- a. In case of the Project not being implemented through Financing Agreement(s), save as expressly provided in this Agreement or the Insurances, the proceeds of any insurance claim made due to loss or damage to the Power Project or any part of the Power Project shall be first applied to reinstatement, replacement or renewal of such loss or damage.
- b. In case of the Project being financed through Financing Agreement(s), save as expressly provided in this Agreement or the Insurances, the proceeds of any insurance claim made due to loss or damage to the Power Project or any part of the Power Project shall be applied as per such Financing Agreements.
- c. If a Force Majeure Event renders the Power Project no longer economically and technically viable and the insurers under the Insurances make payment on a "total loss" or equivalent basis, PGVCL shall have claim on such proceeds of such Insurance limited to outstanding dues of PGVCL against SPG.

D.5. Type and quality of materials and workmanship

- 5.1.1. The design, supply, installation, testing, commissioning, operation and maintenance of the solar power plant and the associated 11kV line shall be in accordance with latest/ appropriate IEC/Indian Standards. Where appropriate Indian Standards and Codes are not available, other suitable standards and codes as approved by the MNRE/ CEA/ GERC/ PGVCL shall be used. All the relevant test certifications must be kept valid up to one (1) Year from the COD of the Project.
- 5.1.2. The SPG shall ensure that the specifications of the components / equipments like 11kV circuit breaker, 11kV CT-PT metering unit, etc should meet the technical specifications of PGVCL.
- 5.1.3. Any material / equipment which have not been specifically mentioned in this RfS but which are necessary during construction or O&M period of the plant & associated 11kV line shall be provided by the SPG without any extra cost and within the time schedule for efficient and smooth construction and O&M activities.

D.6. Completion and commissioning

- 6.1.1. Part Commissioning is NOT allowed for the Project. SPG, in coordination with PGVCL, shall submit commissioning certificate, issued by DISCOM committee, in accordance with all applicable regulations/policies. For the purpose of obtaining Completion certificate following documents shall be required:
 - a) Inspection Report of the Work(s) for all equipments / material
 - b) CEIG approval for the PPA Capacity.

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D.7. Completion Period

- 7.1.1. The design, survey, supply, installation, testing and commissioning of solar power plant with associated 11 kV line connecting the solar power plant with concerned substation and RMS of solar power plant as per terms & conditions of this RfS is to be completed within 9 (nine) months from date of execution of Power Purchase Agreement (PPA).
- 7.1.2. In addition to above, the SPG shall be responsible for operation and maintenance of the SPV plant, its associated 11kV line and RMS of solar power plant for a period of 25 years from the COD (unless extended by both the parties on mutual agreement), of the plant, including insurance coverage for the installed project against natural calamities and theft.

D.8. Delay in commissioning

- 8.1.1. A duly constituted Committee of officials by DISCOM COMMITTEE will physically inspect the Solar Power Plant in not more than 03 days from the date of receiving a call from the SPG and certify successful commissioning of the solar power plant.
- 8.1.2. In case any SPG fails to achieve this milestone, PGVCL shall encash the Performance Bank Guarantee (PBG) as liquidated damages (LD) in the following manner:

Delay up to two months: LD equal to the PBG on per day basis. The no. of days in "month" for the LD calculation shall be considered as 30.

In case the commissioning of the solar power plant is delayed over two months: The complete PBG amount shall be encashed.

In case of delays of plant commissioning due to the reasons beyond the control of the SPG, Procurer / PGVCL after having been satisfied with documentary evidences produced by the SPG for the purpose, can extend the time in writing for commissioning date without any financial implications to the SPG.

D.9. Project milestones and timeline

S. No.	Milestone	Timeline
1	Issuance of Letter of Intent (LoI) to the successful bidders -SPG	T1
2	Unconditional acceptance of LoI by successful Bidder and payment of the PBG by the Bidder	T1 + 15 days
<i>Petition filing by PGVCL to GERC for adoption of discovered levelized tariff for the solar power plant</i>		
3	Issuance of work order to the successful bidder after approval of discovered tariff receives from GERC	T2
4	Unconditional acceptance of work order/LOA by successful Bidder	T2 + 3 days
5	submission of the "In-Principle" land documents including documents such as Agreements to Sell, Banakhat etc by SPG	T3= T2 + 90 days
6	Signing of PPA between selected bidder (SPG) and PGVCL upon submission "in principle" land document	T4
7	Submission of the final land documents after the date of signing of PPA for the entire required land duly registered by appropriate revenue authority	T4+ 4 Months
8	Completion of design, supply, installation, testing and commissioning of the SPV power plant and associated 11V	T4 + 9 months

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	line for connecting solar power plant with concerned substation	
9	Operation and maintenance of power plant and associated 11kV line	25 years from COD (unless extended by both the parties on mutual agreement)

D.10. Clearances required from the state government and other local bodies.

- a) The SPG is required to obtain necessary clearances and permits as required for setting up the Solar Power Project, including but not limited to the following:
 - i. Approval for water from the concerned authority (if applicable) required for the solar power plant and/or, associated 11kV line.
 - ii. Any other clearances (forest dept., etc) as may be legally required, in order to establish and operate the solar power plant and/or, associated 11kV line.
- b) The above clearances, as applicable for the solar power plant and/or, associated 11 kV line, shall be required to be submitted to PGVCL prior to commissioning of the Project. In case of any of the clearances as indicated above being not applicable for the said Project, the SPG shall submit an undertaking in this regard, and it shall be deemed that the SPG has obtained all the necessary clearances for establishing and operating the Project. Any consequences contrary to the above shall be the responsibility of the SPG. The SPG shall coordinate with PGVCL in case of any clarifications.
- c) Any cost associated with getting the above required clearances for the project shall be borne by the SPG only.

D.11. Notice Board for display at site

- a) The selected bidder will have to put a notice board (atleast 180cmx120cm) at its project site main entrance prominently displaying the following message before declaration of COD:

PM-KUSUM Scheme Feeder Level Solarization under Component-C ___ MWp Grid Connected Solar PV Project Owned and operated by ...<insert name of the selected bidder>... Implemented by PGVCL ...<Name of location, Taluka>....., district>..., Gujarat
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SECTION - E: ELIGIBILITY & QUALIFICATION

E.1. Eligibility Requirement

1.1.1. 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
1.1.	Bidder can be sole/ single bidder OR, Joint Venture (JV) of up to 2 (two) members, with one of the members as a Lead Member	In case of JV, Deed of Undertaking
1.2.	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 case of JV, all the members must fulfill this requirement and submit the documents as per the RfS 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 duly registered Deed of Partnership d) In case of Sole Proprietor – Duly notarized Undertaking from Sole proprietor
1.3.	The Bidder must have the required GST Registration. In case of JV, all the members must fulfil this requirement. If one of the partners is new, then new partner should have applied for GST Registration. Bidder is to submit the proof of document containing registered application of new partner along with payment receipt of registration charges towards GST Registration. However, other partner must have valid GST Number. Bidder is responsible to submit GST number with documents in support in respect of other member, within 15 (Fifteen) days from the date of issue of LOI. If the bidder failed to do so, SD/PBG of the bidder for the respective plant will be forfeited.	Copy of GST registration certificate with legible GSTIN.
1.4.	The Bidder must have valid PAN Number. If one of the partners is new, then new partner should have applied for PAN Registration. Bidder is to submit the proof of document containing registered application of new partner along with payment receipt of registration charges towards GST Registration. However, other partner must	Copy of Pan Card

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	have valid PAN Number. Bidder is responsible to submit PAN number with documents in support in respect of other member, within 15 (Fifteen) days from the issue of LOI. If the bidder failed to do so, SD/PBG of the bidder will be forfeited and bid will be ineligible for any further processing.	
1.5.	The Bidder should have Electrical contractor license in Gujarat. In case of non-availability of the same at the time of bid submission, the contractor should submit a valid electrical contractor license issued by Govt. of Gujarat within 1 month of award of contract. The bidder should submit an undertaking in this regard along with the bid. Or submit a copy of contract executed for electrical work with a contractor having a valid license. In case of JV, any one of the members must fulfill this requirement and submit the documents as per the RfS document.	Copy of Registration Certificate issued by Government of Gujarat
1.6	The bidders should be qualified, not be insolvent, not be in receivership, not be bankrupt or being wound up, should not have affairs administered by a court or a judicial officer, should not have business activities suspended, should not be blacklisted or debarred by any utility / government agency, should not have a conflict of interest. In case of JV, all the members must fulfill this requirement.	The bidder shall provide an Undertaking as per the Format K.15. In case of JV, all the members must submit the undertaking as per the Format K.15.
1.7	The bidder must submit a Power of Attorney (POA) authorizing a person to sign the documents on behalf of the Bidder, submit technical, commercial information and attend meetings on behalf of the Bidder. In case of JV, all the JV members must submit individual PoA with supporting BoD resolution, except in case of proprietor wherein only undertaking in this regard is to be submitted along with combined PoA (signed by individually authorized person of each JV member)	Sole Bidder to provide POA as per the applicable Law as provided in SECTION - K:Format K.2 In case of JV, Undertaking by JV as per the format Format K.4 and POA as per the format provided in Format K.3 In case of Company- BR

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S. No.	Criteria	Documents Required
1.8.	The bidder should have "No Conflict of Interest" as defined in SECTION - G: clause SECTION - G:5.1.5 of this RfS document. Bidders have an obligation to disclose any situation of actual or potential conflict of interest. Failure to disclose said situations may lead to the disqualification of the Bidder or the termination of its Contract. In case of JV, all the members must fulfill this requirement.	The bidder shall provide an undertaking as per the format provided in as per the Format K.12 In case of JV, all the members shall submit the undertaking as per the Format K.12

E.2. Qualification Requirement

The details of qualification 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
1.1.	Technical Criteria	
1.1.1.	Bidder shall have experience of execution of supply, installation and commissioning of grid connected solar power plants with cumulative capacity of 500 KWp considering capacity of individual solar plants of 03 kWp or more, during last five years with any govt. or private organization in India. In case of JV, all the partners of the JV shall collectively meet this technical criteria. In case of JV, if one partner is new, it's experience will be considered as a zero for preceding years.	1. The details of projects executed during the mentioned period should be listed in as per the format provided in Format K.9 & K.10. Attested Copy of work orders and a certificate issued by the govt. or private organization towards the satisfactory work completion to be furnished by the bidder. In absence of any supporting document(s) for any project in line with above, the project will not be considered for evaluating the requirement.
1.2.	Financial Criteria	
1.2.1.	The Bidder should have positive net worth for each of the last three Financial Years (FY:19-20, FY:20-21 & FY:21-22). In case of JV, at least one member must fulfil this requirement. In case of JV, if firm is new, it's Net worth and turnover will be considered as a zero for preceding years.	1. Certificate fulfilling required financial criteria in the name of Bidder duly certified by Practicing Chartered Accountant as per the format provided in Format K.11, duly mentioning UDIN 2. Firm's Annual Audited Balance sheet

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1.2.2.	To ascertain that the Bidder has sufficient means to manage the fund requirements for the Project, the Bidder shall be required to have Minimum Average Annual Turnover during LAST 3 financial years (FY2019-20, FY 2020-21, FY2021- 22) not be less than amount in Rs. mentioned against each separate individual Solar Plant in Annexure K20 for which the bidder wants to bid. (If audited annual accounts for FY 2021-22 are not available, provide accounts for FY 2020-21, FY 2019-20 and 2018-19.) If the Bidder wants to participate in the bid for the more than one solar plants, the bidder shall require to have the average annual Turnover not less than the individual separate amount mentioned against respective individual Solar plants in Annexure K20 for which plants, the bidder wants to bid. The bidder shall ensure that the average annual turnover of the bidder must be higher than the individual turn over mentioned in the bid against the solar plant selected by the bidder for bidding. In case of bidders the turnover is less than the turnover of the selected plant, the bid will be rejected and the bidder will be disqualified for the further process of bid for that plant. In case of JV, all the partners of the JV shall collectively meet this criteria.	and Profit & Loss statement for last 3 financial years.
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2.1.1. Key Information regarding Documentary proofs

- The bidder must fill up above information clearly in enclosed sheet and attach all required documents in support as at a glance in Technical bid with all plants/location bidder want to participate.
- If supporting documents are not attached for each eligible criterion above, the bid may be rejected without further reference.

E.3. Joint Venture Participation

- Unless otherwise mentioned in Key Bid Data in SECTION - C:, bids submitted by a joint venture having not more than two partners with one partner as lead partner, if allowed as per stipulated Qualification Requirements, shall comply with the following requirements:

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- i. The bid shall include all the information required as described above for each joint venture partner.
- ii. The bid shall be signed so as to be legally binding on both the partners.
- iii. One of the partners responsible for performing a key component of the contract shall be designated as leader; this authorization shall be evidenced by submitting with the bid a power of attorney signed by legally authorized signatories as per Format K.3.
- iv. The leader shall be authorized to incur liabilities and receive instructions for and on behalf of any and both the partners of the joint venture, and the entire execution of the contract, including payment, shall be done exclusively with the leader.
- v. All partners of the joint venture shall be liable jointly and severally for the execution of the contract in accordance with the contract terms.
- vi. A copy of the agreement entered into by the joint venture partners shall be submitted with the bid as per Format K.4, including inter alia delineation of responsibilities and obligations of each partner appended thereto, notwithstanding the joint and several liability.
- vii. The joint venture agreement should indicate precisely the responsibility of all members of JV in respect of planning, design, survey, manufacturing, supply, installation and commissioning.
- viii. All members of JV should have active participation in execution of the contract. This should not be varied/modified subsequently without prior approval of PGVCL.
- ix. In order for a joint venture to qualify, both the partners must meet the minimum criteria listed in the Qualification Requirement for the Bidder for an individual Bidder for the component of the contract they are designated to perform. Failure to comply with this requirement will result in rejection of the joint venture bid.
- x. A firm can be a partner in only one joint venture; bids submitted by joint ventures including the same firm as partner will be rejected.

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SECTION - F: SUBMISSION OF BIDS

ALL REQUIRED DOCUMENTS ARE TO BE SUBMITTED IN ONLINE MODE ONLY EXCEPT DOCUMENTS REQUIRED AGAINST PAYMENT OF TENDER FEE & EARNEST MONEY DEPOSIT (EMD)

F.1. Sale of RfS Document

- 1.1.1. RfS documents may be down loaded from web site <https://pgvcl.nprocure.com> (For view, down load and on line submission) and PGVCL's web sites www.pgvcl.com for view & down load only). (To view the PDF file please use "Acrobat Reader" software which can be downloaded from "Adobe "website.")

F.2. Local Conditions

- 2.1.1. It will be imperative on each Bidder to fully acquaint himself of all local conditions and factors which may have any effect / bearing on the execution of the works covered under this RfS Document. PGVCL, shall not entertain any request for clarifications from the Bidder, regarding such local conditions, post award of contract. It must be understood and agreed that such factors have properly been investigated and considered while submitting the Bid. No claim for financial adjustment to the contract awarded under this RfS Document will be entertained by the PGVCL as applicable. Neither any change in the time schedule of the contract nor any financial adjustments arising thereof shall be permitted by the PGVCL. The Contractor can take few visits of plant location to get acquainted with local conditions, if required.

F.3. Amendment of Bidding Document

- 3.1.1. At any time prior to the deadline for submission of the Bids, PGVCL may amend the RfS document by issuing Corrigendum/ Addenda.
- 3.1.2. Any Corrigendum/ Addendum issued shall be a part of the RfS document and shall be communicated on the Bidding Portal.
- 3.1.3. To give prospective Bidders reasonable time in which to take a Corrigendum /Addendum into account in preparing their Bids, PGVCL may, at its discretion, extend the deadline for the submission of the Bids.
- 3.1.4. Any change in date of submission and opening of bids would be published on Bidding Portal.

At any time prior to the deadline for submission of offers, PGVCL may, at its own discretion modify /add/delete/change the provision of this RfS document by amendments.

The amendment will be notified on Website. PGVCL will bear no responsibility or liability arising out of noncompliance of the same in time or otherwise.

In order to afford prospective RfS applicant's reasonable time in which to take the amendment into account in preparing their offers, PGVCL may at its discretion, extend the deadline for the submission of offers.

Such amendments, clarification etc. shall be binding on the Agency and will be given due consideration by the Agency before they submit their offers and invariably enclose such documents as a part of the offer. All such amendments will be considered as part of RfS Document.

F.4. Submission of Bid Security –EMD

- 4.1.1. Bidder need to submit "EMD" by RTGS/NEFT, DD, BG in the prescribed format (enclosed as Format K.1), on Non-Judicial Stamp Paper of Rs. 300/- separately for each selected Solar plants.

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F.5. Submission of Bids

- 5.1.1. E-procurement system as mentioned in this document shall be followed for the bidding.
- 5.1.2. The Bidder would ensure that all the required documents, as mentioned in this RfS Document, are submitted along with the Bid and in the prescribed format and manner only. Non-submission of the required documents or submission of the documents in different format/contents & different manner may lead to the rejections of the Bid submitted by the Bidder, without further correspondence.

F.6. Language of Bids

- 6.1.1. Bidders are required to furnish all information and documents as called for in this RfS document in **English Language**.

F.7. Submission of Technical Bid (Part 1)

- 7.1.1. The technical bid comprises of:

All required documents are to be submitted in online mode only.

'TECHNICAL BID' SHALL CONTAINS THE FOLLOWING ON-LINE DOCUMENTS with SELF CERTIFICATION:

The documents Supporting/ establishing the Techno-commercial eligibility criteria as mentioned in the tender are required to be submitted in online mode only.

Non blacklisting / non debarment undertaking

- a) Individual power of attorney
- b) Joint venture agreement
- c) Joint power of attorney
- d) Experience related documents
- e) Turnover related documents
- f) Company related documents
- g) GST,PAN,PF related documents
- l) Technical Engineer related documents

Scanned copies of all Annexures duly signed and supporting documents for establishing eligibility of the bidder as mentioned in section : E :ELIGIBILITY And QUALIFICATION criteria required to be submitted in online mode only.

F.8. Submission of Price Bid:

- 8.1.1. Bidders shall quote on-line their lowest levelized tariff in Rs. per kWh for selling the power generated against the respective capacity of solar power plant for the respective feeder(s) under this feeder level Solarization scheme to PGVCL for 25 years (unless extended by both the parties on mutual agreement) from date of CoD (commercial operations date).
Solar plant wise Individual evaluation of price bid (tariff quoted) shall be carried out for the capacity of Solar plant mentioned against respective feeder(s).
- 8.1.2. The tariff has to be quoted up to two places of decimal only. If it is quoted with more than two digits after decimal, it shall be ignored after first two decimal places. (For e.g. if the quoted tariff is INR 1.786 / kWh, then it shall be considered as INR 1.78 / kWh).

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- 8.1.3. SPG to get CFA @ Rs. 1.05 Cr per MW subject to installation & commissioning of project in line with MNRE stipulated timeline and requirement. The release of CFA to the selected bidder shall be subjected to release of CFA from MNRE to PGVCL.

Further, the SPG shall give undertaking that he shall not sell power to any other buyer except the PGVCL under the agreement of this tender during the tenure of this PPA. At any point of time during the tenure of PPA, if it is found that the SPG has sold the solar power produce from the contracted solar plant strict legal action will be taken against the SPG, including stopped/black list, from Participation in future tender of MNRE in Gujarat & the SPG shall require to refund the proportionate CFA granted for the project by MNRE.

For the recovery of the Proportionate CFA, the CFA granted by MNRE for the project will be divided by 25 years to arrive at per year CFA. If any event of sell of power is found at a particular time, the amount to be recover from the SPG shall be the remaining of PPA after the event multiply by per year CFA.

The recovery of the proportionate CFA will be made through the payments of invoices or through remedies taken in accordance with applicable laws. In case of any liquidation of assets of the solar power plants prior to completion of PPA period the first charge shall be towards recovery of the proportionate CFA granted to the project by MNRE.

- 8.1.4. Financial tariff offered by the bidder against each Solar plant for which the bidder wants to participate shall be quoted on-line in the on-line price bid schedule by the bidder on Bidding Portal before scheduled due date and time for submission of bids. The bidder can offer tariff against any one solar power plant or for more depending upon his interest to bid against that Solar plant(s).
- 8.1.5. Due intimation shall be given to technically and commercially cleared bidders about date and time of opening of prices bids on bidding portal.
- 8.1.6. If price offer is submitted in technical bid, such bids will be rejected in technical bid evaluation stage and will not be considered for further process to conclude the bid.

F.9. Cost of Bidding:

- 9.1.1. The Bidder shall bear all costs associated with the preparation and submission of its Bid, and PGVCL shall not be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

F.10. Alternative Bids:

- 10.1.1. Alternative bids shall NOT be considered at all and all such alternative bids shall be liable to be rejected.

F.11. Period of Validity of Bids:

- 11.1.1. Bids shall remain valid for 120 days from the date of opening of Technical Bid as prescribed by PGVCL. A Bid valid for a shorter period shall be rejected and treated as non-responsive.
- 11.1.2. In exceptional circumstances, PGVCL 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.

F.12. Format and Signing of Bid

- 12.1.1. The bid forms/templates/annexure etc., wherever applicable, shall be typed or written in indelible ink and shall be signed (all the pages) by a person duly authorized by Bidder to sign, in token of acceptance of all the terms and conditions of the RfS Document. This authorization shall consist of a written confirmation in the form of Power of Attorney as

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specified in the RfS document and shall be attached to the bid.

- 12.1.2. Any amendments such as interlineations, erasures, or overwriting shall be valid only if they are signed or initialled by the authorized person signing the bid.
- 12.1.3. The bid documents shall be properly checked before uploading for submission of Bids.
- 12.1.4. The bid, duly signed (digitally) by Auth. Signatory, shall be uploaded on the Bidding portal in respective file/ format.
- 12.1.5. Bidders must submit their bids online at Bidding Portal. Bids received by another other means except as desired in this RfS Document shall not be accepted.
- 12.1.6. If bids are not submitted as per the details mentioned in this RfS document and Bidding Portal, PGVCL shall reject the bid.
- 12.1.7. Bidders are required to carefully go through the instructions included in the RfS Document and furnish complete information, necessary documents and schedules.
- 12.1.8. The Bidder shall sign the bid on each page and also at the specified location. Each and every paper enclosed must be given a page no. like 1,2,3,.....etc. & a bid summary must be enclosed along with covering letter on the Letter Head of the firm in the following format:

Sr. No.	Particulars/brief of information/ schedule/ Annexure	Page No:
1.		
2.		
3		
.....		
Total Page		

Signature of Authorized Signatory, Seal of Entity, Date and Place

F.13. Withdrawal, Substitution, and Modification of Bids

- 13.1.1. A Bidder may withdraw its bid or re-submit its bid (technical and/ or financial cover) as per the instructions/ procedure mentioned at Bidding Portal, but not after bid submission end date and time.
- 13.1.2. Bids withdrawn in terms of 13.1.1 above shall not be opened and processed further by PGVCL.

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SECTION - G: BID OPENING & EVALUATION

G.1. Bid Opening

- 1.1.1. PGVCL will first perform the preliminary bid opening for tender fee and Bid security. Technical bids of those bidders will be opened who are qualified in the preliminary bid. Preliminary & Technical bid opening, which is a critical event in the bidding process, shall be done online and physical mode on the stipulated date & time.
- 1.1.2. After opening of Bids and till final selection of successful Bidder, no correspondence of any type will be entertained, unless called for by PGVCL. Any type of uncalled for clarifications on prices and or rebates shall not be accepted.

G.2. Confidentiality

- 2.1.1. Information relating to the examination, evaluation, comparison, and post qualification of bids, and recommendation of contract award, shall not be disclosed to bidders or any other persons not officially concerned with such process until publication of the contract award.
- 2.1.2. Any attempt by a bidder to influence PGVCL or other officials in the examination, evaluation, comparison, and post qualification of the bids or Contract award decisions may result in the rejection of his bid.

G.3. Clarification of Bids

- 3.1.1. To assist in the examination, evaluation, comparison and qualification of the bids, the PGVCL may, at its discretion, ask any bidder for a clarification regarding its bid. The PGVCL's request for clarification and the response of the bidder shall be in writing.
- 3.1.2. Any clarification submitted by a bidder with regard to its bid that is not in response to a request by PGVCL shall not be considered.
- 3.1.3. No change in the prices or substance of the bid shall be sought, offered, or permitted, except to confirm the correction of arithmetic errors discovered by the committee in the evaluation of the financial bids.
- 3.1.4. No substantive change to qualification information or to a submission, including changes aimed at making an unqualified bidder, qualified or an unresponsive submission, responsive shall be sought, offered or permitted.
- 3.1.5. All communications generated under this rule shall be included in the record of the procurement proceedings.

G.4. Conflict of Interest

- 4.1.1. PGVCL considers a conflict of interest to be a situation in which a party has interests that could improperly influence that party's performance of official duties or responsibilities, contractual obligations, or compliance with applicable laws and regulations. In pursuance of PGVCL's procurement ethics, the bidders, suppliers, and contractors under contracts, observe the highest standard of ethics, PGVCL will take appropriate actions against the Bidder, if it determines that a conflict of interest has flawed the integrity of any procurement process. Consequently, all Bidders found to have a conflict of interest shall be disqualified.
- 4.1.2. Conflict of interest will be determined in accordance with GUVNL's Purchase policy as under

Conflict of Interest among Bidders/ Agents:-

A bidder shall not have conflict of interest with other bidders for particular quoted item. Such conflict of interest can lead to anti-competitive practices to the detriment of Procuring Entity's interests. The bidder found to have a conflict of interest shall be

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disqualified. A bidder may be considered to have a conflict of interest with one or more parties in this bidding process for particular quoted item, if:

- a) they have proprietor/ partner(s)/ Director(s) in common; or
- b) they receive or have received any direct or indirect subsidy/ financial stake from any of them; or
- c) they have the same legal representative/ agent for purposes of this bid; or
- d) they have relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the bid of another bidder; or
- e) bidder participates in more than one bid in this bidding process. Participation by a bidder in more than one Bid will result in the disqualification of all bids in which the parties are involved. However, this does not limit the inclusion of the components/ sub-assembly/ assemblies from one bidding manufacturer in more than one bid.
- f) in cases of agents quoting in offshore procurements, on behalf of their principal manufacturers, one agent cannot represent two manufacturers or quote on their behalf in a particular tender enquiry. One manufacturer can also authorise only one agent/ dealer. There can be only one bid from the following:
 - 1. The principal manufacturer directly or through one Indian agent on his behalf; and
 - 2. Indian/ foreign agent on behalf of only one principal.
- g) A Bidder or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the contract that is the subject of the Bid;
- h) In case of a holding company having more than one independently manufacturing units, or more than one unit having common business ownership/ management, only one unit should quote. Similar restrictions would apply to closely related sister companies. Bidders must proactively declare such sister/ common business/ management units in same/ similar line of business.
- i) Bidder shall not act in contravention/ violation to the provisions of competition act, as amended from time to time.

Every bidder should, at the time of submission of bid, give a declaration, that bidder shall not have conflict of interest with other bidders for particular quoted item, as above.

4.1.3. Further, it may be considered to be in a conflict of interest with one or more parties in the bidding process if

- a) they have controlling shareholders in common; or
- b) it receives or have received any direct or indirect subsidy from any of them; or
- c) they have the same legal representative for purposes of the Bid; or
- d) they have a relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the Bid of another Bidder, or influence the decisions of PGVCL regarding this bidding process.

G.5. Technical Bid opening and evaluation:

5.1.1. Technical Bid submitted online and in physical mode of only those bidders will be opened by PGVCL who are qualified in the preliminary bid. Documents received after the bid submission deadline, shall be rejected and returned unopened when called for, if superscribed properly with address, to the bidder. Online submitted technical bid of such bidders shall not be opened.

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- 5.1.2. If the above highlighted documents are received in order and as per the schedule, PGVCL will examine all the documents submitted by the Bidders and ascertain meeting of eligibility conditions prescribed in the RfS. During the examination of the bids, PGVCL may seek clarifications/ additional documents to the documents submitted etc. from the Bidders if required to satisfy themselves for meeting the eligibility conditions by the Bidders. Bidders shall be required to respond to any clarifications/ additional documents sought by PGVCL within the stipulated timeline. All correspondence in this regard shall be made through email / bidding portal. It shall be the responsibility of the Bidder to ensure that the email id of the authorized signatory of the Bidder is functional. It shall be the sole responsibility of the Bidders to remove all the discrepancies and furnish additional documents as requested. PGVCL shall not be responsible for rejection of any bid on account of the above.
- 5.1.3. The response to RfS submitted by the Bidder shall be scrutinized to establish Technical eligibility as per RfS.
- 5.1.4. However, it may be noted that if only one or two Bidder(s) is /are eligible for the next stage, opening of the financial bid of the Bidder(s) will be at the discretion of PGVCL. Thereafter, PGVCL will take appropriate action as deemed fit.
- 5.1.5. Bids having following characteristics shall be considered non-responsive and shall be liable for disqualification/rejection:-
- a) Bid is not received by the due date & time and Bids is not accompanied with the required documents & schedules.
 - b) Bid not submitted in accordance with RfS document.
 - c) Bid do not meet the minimum eligibility criteria as mentioned in the bidding document.
 - d) Bids is not accompanied by Bid Security Declaration /Cost of Tender Document /
 - e) Conditional Bid shall be rejected.
 - f) Proposal is not valid for at least 120 days from the date of opening of online Technical Bid.
 - g) During validity of the Bid or its extended period, if any, Bidder increases his quoted prices.
 - h) Desired certificates in the required formats in the RfS not attached by the bidder.
 - i) Prices not quoted in prescribed Performa /schedule.
 - j) Bidder has made misleading or false representations in the forms, statements and attachments submitted in proof of the eligibility requirements.
 - k) Bidder is found to have a record of poor performance such as abandoning work, not properly completing the contract, inordinately delaying completion, being involved in major litigation or financial failures, etc.
 - l) Bidder failed to provide clarifications related thereto, when sought.
 - m) Bidder has submitted more than one bid. This will cause disqualification of all Bids submitted by such Bidders including forfeiture of the Bid Security.
 - n) Bidder who is found to canvass, influence or attempt to influence in any manner for the qualification or selection process, including without limitation, by offering bribes or other illegal gratification shall be disqualified from the process at any stage.

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- o) Bid is not meeting any other pre-requisite as spelt out elsewhere in this document.

G.6. Financial Bid Opening:

- 6.1.1. Evaluation committee of PGVCL shall refer the evaluation report to the Competent Authority of PGVCL, which reserves the right to reject any Bid which is nonresponsive and no request for alteration, modification, substitution or withdrawal shall be entertained by PGVCL in respect of such Bids.
- 6.1.2. The Price Bid shall be kept unopened and shall be opened later individually for each plant/Location on the date and time intimated to the bidders who qualify in the evaluation of technical bids.
- 6.1.3. The Bidders which could not qualify in technical evaluation will be informed about this fact. Their financial bid will be remain unopened for such Bidders.

G.7. Financial Evaluation:

Financial evaluation will be done for each plant/location

- 7.1.1. To evaluate a bid, PGVCL shall consider the following: -
- a) The bid price as quoted in accordance with RfS document.
- b) Price adjustment for correction of arithmetic errors in accordance with RfS document.
- 7.1.2. PGVCL's evaluation of a bid will exclude and not take into account any allowance for price adjustment during the period of performance of the Contract, if provided in the Bid.
- 7.1.3. The evaluation shall include all costs and all taxes and duties applicable to the bidder as per law of the Central/ State Government/ Local Authorities.
- 7.1.4. if there is a discrepancy between words and figures, the amount in words shall prevail.
- 7.1.5. Financial offers will be arranged in the ascending order for each lot, of their levelized tariff in the respective price bid i.e. L-1, L-2, L-3, L-4, L-5, Ln.
- 7.1.6. If same tariff is quoted by two or more Bidders, then all the Bidders with same tariff shall be considered of equal rank/ standing in the order.
- 7.1.7. Further, the Bidder with the highest Tariff in the Bid will be called the "H1 Bidder".
- 7.1.8. If only single bid is received and no competition is found, then decision of the Competent Committee of PGVCL for consideration of the bid will be final.

7.2. Electronic Reverse Auction

- 7.2.1. After evaluation for each plant/location of financial bids of the bidders in line with Clause G.7 of the RfS and subsequent amendments (if any), PGVCL will conduct electronic reverse auctioning on the discovered L1 rate.
- 7.2.2. If the number of bidders registered for the electronic reverse auction is less than three, to ensure effective competition, PGVCL may cancel the auction.
- 7.2.3. The cancellation of the auction shall be communicated promptly to each registered bidder.
- 7.2.4. The e-reverse auctioning for the shortlisted bidders shall be conducted on separate portal which will be informed to the bidders in advance.
- 7.2.5. e-reverse auctioning shall be carried out on the day as intimated by PGVCL to the eligible bidders on the lowest quoted tariff (L1) discovered after evaluation of financial bids (as per Clause G.7 of the RfS).
- 7.2.6. In line with Section G clause 7.1.7 and 7.1.8 of the RfS, after financial bid evaluation, the bidders shall be ranked in ascending order of price bid quoted.
- 7.2.7. From the above ranking, bidders eligible for the e-reverse auction shall be shortlisted by PGVCL.

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- 7.2.8. The bidder whose bid becomes the highest evaluated value (H1) shall be eliminated, **subject to ensuring maximum five (5) bidders participation in the e-reverse auction** i.e., H1 will be eliminated if six (6) or more bidders participated in the tender.
- 7.2.9. In case, participation is less than or equal to five (5), all the bidders will be qualified for the e-reverse auction.
- 7.2.10. In case more than one bidder turn out to be H1 bidders (with the same evaluated price), all H1 bidders will be eliminated subject to ensuring five (5) bidders participation in the e-reverse auction. Due to such elimination of H1 bidders, if the available eligible bidders get reduced to less than five (5), all will be included without elimination.
- 7.2.11. In case there is a tie on fifth bidder, then all ties bidders on fifth bidding rate will be considered for Reverse Auction.
- 7.2.12. **e-reverse auction TENTATIVE process (may be revised by PGVCL during intimation of the electronic reverse auction portal):**
- (a) At least one day prior to e-reverse auction, an advance intimation regarding the date and time of the e-reverse auction will be sent by email to all such qualified bidders which are identified by PGVCL as per the above stipulated conditions.
 - (b) However, this advance intimation shall not be construed by the bidders as award of contract.
 - (c) Post intimation through email by PGVCL, all such bidders shall be required to register on the reverse bidding portal along with payment of requisite registration fees and any other mandatory charges for participation in the e-reverse auction.
 - (d) The e-reverse bidding portal details along with eligible mode(s) of payment and amount for the applicable fees / charges shall be intimated separately.
 - (e) At least two hours before the schedule start time of e-reverse auctioning, a system generated email for invitation for e-reverse auctioning will be sent to all those bidders who were shortlisted & intimated by PGVCL as above and have timely registered on the reverse bidding portal (to be intimated later).
 - (f) Shortlisted bidders for e-reverse auctioning will be able to login to the e-reverse auction portal 15 minutes before the start time of e-auctioning after completing necessary formalities at the Portal and paying all requisite charges.
 - (g) During the e-reverse auctioning process complete transparency will be maintained. The auctioning shall be on the lowest quoted tariff (L-1) discovered during financial bid evaluation by PGVCL. Hence the L-1 price will become the start price of e-auctioning process.
 - (h) The tariff has to be quoted up to two places of decimal only. If it is quoted with more than two digits after decimal, it shall be ignored after first two decimal places. (For e.g. if the quoted tariff is INR 1.7869 / kWh, then it shall be considered as INR 1.78 / kWh).
 - (i) The minimum decrement step for e-Auctioning is Rs. 0.01 /- in lowest quoted tariff as per price schedule i.e. each decrement shall be in multiples of Rs. 0.01 /- only.
 - (j) Bidders can only quote any value lower than lowest quoted tariff (L-1) of e- reverse auctioning at that point of time. However, at no stage, increase in lowest quoted tariff (L-1) will be permissible.
 - (k) The initial auctioning period will be of **30 (thirty) minutes** with a provision of auto extension by **five (5) minutes** from the scheduled/ extended closing time if any fresh bid is received in last five (5) minutes of auctioning period or extended auctioning period.
 - (l) If no valid bid is received during last **Five (5) minutes** of auctioning period or extended auctioning period, then the e-reverse auctioning process will get closed and the last offered L1 rate i.e. further no bidders responds within the time limit, shall become RL-1 rate.
- 7.2.13. **Selection of Successful Bidder:**
- (a) The bidders shall be arranged in the ascending order with lowest quoted tariff i.e RL-1, RL-2 and so on after the reverse auction.

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- (b) The RL-1 will be selected as successful bidder and subsequently, contractual documentation shall be initiated as per the conditions stipulated in the RfS document.
- (c) In all cases, PGVCL's decision regarding selection of bidder through e-reverse auctioning or otherwise based on First Round quotation (financial bids) or annulment of tender process shall be final and binding on all participating bidders.

PGVCL at its own discretion, has the right to reject any or all the Bids without assigning any reason whatsoever, at its sole discretion.

G.8. Negotiations

- 8.1.1. Except in case of procurement by method of single source procurement or procurement by competitive negotiations, to the extent possible, no negotiations shall be conducted after the pre-bid stage. All clarifications needed to be sought shall be sought in the pre-bid stage itself.
- 8.1.2. The Competent Committee appointed by PGVCL shall have full powers to undertake negotiations in case where single bid is received. Detailed reasons and results of negotiations shall be recorded in the proceedings.
- 8.1.3. Negotiations shall not make the original offer made by the bidder inoperative. The Competent Committee shall have option to consider the original offer in case the bidder decides to increase tariff originally quoted or imposes any new terms or conditions.
- 8.1.4. In case of non-satisfactory achievement of tariff from single bidder, the Competent Committee may choose to make a written counter offer to the single bidder and work / supply order be awarded to the bidder if he accepts the counter-offer. PGVCL shall carryout reverse auction for locations as per above condition G.7.2.
- 8.1.5. In case the tariff even after the negotiation is considered very high, fresh bids shall be invited.

G.9. Right to Reject by PGVCL

- 9.1.1. PGVCL reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to award of contract, without thereby incurring any liability to the affected Bidder or bidders or any obligation to inform the affected Bidder or bidders of the grounds for PGVCL's action.



SECTION - H: AWARD OF CONTRACT

H.1. LOI and Award of contract

- 1.1.1. Based on the results of the financial evaluation, PGVCL shall identify the L1 Bidder i.e. bidder whose bid has been determined to be substantially responsive and to be the lowest evaluated bid, after reverse auction further provided that the Bidder is determined to be qualified, as per the Qualification Requirement specified in RfS document to perform the contract satisfactorily.
- 1.1.2. The Bidder with the lowest quoted tariff after completion of e-reverse auction process shall be selected as the Successful Bidder (SPG) as per condition G.7.2.
- 1.1.3. A Letter of Intent (LOI) will be issued to the Successful bidder SPG after completion of the selection process.

H.2. GERC approval

- 2.1.1. The bidders should note that after discovery of L1 price and completion of negotiations on the same with bidder(s), Work order and further contract processing will be done with the successful bidder only after adoption of discovered L1 levelized tariff by GERC.
- 2.1.2. For this, PGVCL shall file petition for the adoption of the discovered levelized tariff.

H.3. Performance Bank Guarantee

- 3.1.1. The successful bidder shall be required to furnish Performance Bank Guarantee as mentioned against the each solar power plant in Annexure K20 within **15 days** from the date of issue of LOI. The Performance bank guarantee shall be returned after 2 months of commissioning of the project.
- 3.1.2. The Performance Bank Guarantee shall be in the Form of unconditional Bank Guarantee as per the Format K.16 in favour of "The Chief Engineer (Project), PGVCL, Rajkot" and to be submitted at the office of The Chief Engineer (Project), PGVCL, Rajkot.
- 3.1.3. It shall be responsibility of selected bidder to get the PBG extended, if required, such that it is valid till 2 months after date of commissioning of project.
- 3.1.4. Work order shall not be issued due to Non submission of PBG within the above mentioned timelines:
- 3.1.5. The selected bidder shall furnish the PBG from any Scheduled / Nationalized Banks (in a standard format prescribed by PGVCL) as notified vide finance department of Govt. of Gujarat GR no.: EMD/4/2022/0002/DMO dated 20/05/22 and further amendments if any. **CORPORATE GUARANTEES NOT ALLOWED**
- 3.1.6. In case of award of the contract to a Joint Venture, the Bank Guarantees for performance bank guarantee shall be submitted in the name of all the partner(s) of the Joint Venture "OR" in the name of Lead/other Partner in the Joint Venture submitting the bid.
- 3.1.7. The BG for performance bank guarantee shall be executed on Gujarat Non-Judicial Stamp Paper worth Rs.300/-.

H.4. Forfeiture of Performance bank guarantee:

- 4.1.1. Apart from cases mentioned in the RfS regarding forfeiture of Performance bank guarantee, the Performance bank guarantee amount in full or part may also be forfeited in the following cases:
 - a) Non-submission of Land document in prescribed time limit

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- b) Failure in executing the PPA
- c) When the terms and conditions of contract is breached / infringed by the SPG
- d) When contract is being terminated due to non-performance by the SPG

Notice of reasonable time will be given in case of forfeiture of Performance bank guarantee deposit. The decision of the PGVCL, as applicable, in this regard shall be final.

- 4.1.2. No interest will be paid by PGVCL on the amount of Performance bank guarantee.

H.5. Signing of PPA:

- 5.1.1. After approval of the GERC for the adoption of the discovered levelized tariff and payment of the PBG by SPG, the Work Order will be placed the concerned SPG against the respective solar plant.
- 5.1.2. The SPG shall ensure submission of the "In-Principle" land documents including documents such as Agreements to Sell, Banakhat etc. within 90 days from the date of issuance of work order after which PPA shall be signed by PGVCL with the SPG.
- 5.1.3. Power Purchase Agreement (PPA) as per the enclosed format of PPA in Annexure-K18 shall be signed after submission of the "In-Principle" land documents including documents such as Agreements to Sell, Banakhat etc. within 90 days from the date of issuance of work order by PGVCL with the SPG. The PPA shall be valid for a period of 25 years from COD as per provisions of PPA. Any extension of the PPA period beyond 25 years shall be through mutual agreement between the SPG and PGVCL.
- 5.1.4. Further, the SPG shall submit the final land documents within the period of 4 months after the date of signing of PPA for the entire required land duly registered by appropriate revenue authority
- 5.1.5. If the bidder, whose bid has been accepted, fails to furnish the required PBG or fails to sign a PPA within specified period, PGVCL shall take action against such bidder. PGVCL may, in such case, may cancel the tender process or if it deems fit, offer the discovered tariff to the next lowest or most advantageous bidder for acceptance, in accordance with the criteria and procedures set out in this RfS.
- 5.1.6. The bidder shall execute the PPA on a non-judicial stamp of Gujarat State of value worth Rs. 300/- and submitted the same to the office of Chief Engineer (Project), PGVCL. All expenditure towards execution of Bank Guarantees shall be borne by the SPG.

H.6. Reservation of Rights

- 6.1.1. To take care of unexpected circumstances, PGVCL shall reserve the rights for the following:
 - a) Extend the closing date for submission of the bids.
 - b) Amend the bidding requirements at any time prior to the closing date, with the amendment being notified to prospective bidders.
 - c) Seek information from or negotiate with single bidder
 - d) Discontinue negotiations at any time with any bidder.
 - e) Allow a bidder to change its Technical proposal if the same opportunity is given to all bidders.
 - f) Terminate or abandon the Tender procedure or the entire Project whether before or after the receipt of Bids.
 - g) Make enquiries of any person, company or organization to ascertain information regarding the bidder and its Bid.
 - h) Reproduce for the purposes of the procedure the whole or any portion of the Bid despite any copyright or other intellectual property right that may subsist in the Bid.

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SECTION - I: BILLING AND PAYMENT CONDITIONS

The conditions in this section are as per the Article 10 of PPA mentioned here under:-

10.1.1 Energy measurement for Monthly billing

- a) The SPG shall raise the invoice after issuance of State Energy Account by SLDC each month and submit the relevant extracts thereof along with the monthly invoice.
- b) Subsequently, the SPG shall furnish the joint meter reading report (JMR)/Energy Account, duly verified by its authorized representative and concerned Executive Engineer, along with downloaded CMRI data (of all three meters) of 15 minutes time block to The Chief Engineer SLDC, Vadodara, through courier and/or e-mail along with the Monthly Bill (final energy net of import and export, multiplied by the Rs. per kWh tariff as per PPA and reactive power charges compensation) on the same day (i.e. 1st day of the month).
- c) Subsequently, the SPG shall furnish the joint meter reading report (JMR)/Energy Account, duly verified by its authorized representative and concerned Executive Engineer(O&M) Division, along with downloaded CMRI data (of all three meters) to The Chief Engineer (Project) PGVCL, through courier and/or e-mail along with the Monthly Bill (final energy net of import and export, multiplied by the Rs. per kWh tariff as per PPA and reactive power charges or any other charges compensation) on the same day (i.e. 1st day of the month).
- d) Provided that:
 - i. if the date of commencement or supply of power falls during the period between the first (1st) day and up to and including the fifteenth (15th) day of a Month, the first Monthly Bill shall be issued for the period until the last day of such Month, or
 - ii. if the date of commencement of supply of power falls after the fifteenth (15th) day of a Month, the first Monthly Bill shall be issued for the period commencing from the Delivery Date until the last day of the immediately following Month.
- e) Provided further that if a Monthly Bill is received on or before the second (2nd) day of a Month, it shall be deemed to have been received on the second (2nd) Business Day of such Month.
- f) Provided further that if a Monthly Bill for the immediately preceding Month is issued after 1st day of the next Month, the Due Date for payment of such Monthly Bill shall be extended accordingly.
- g) The monthly bills shall be raised by SPG only after issuance of State Energy Account by SLDC.

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10.1.2 Inspection and Testing of Meters

- a) PGVCL and SPG shall jointly inspect and if necessary, recalibrate the metering system on a regular basis but in any event, at least once every year or at a shorter interval at the request of any of the two parties.
- b) Each Meter comprising the metering system shall be sealed by PGVCL, and shall be opened, tested or calibrated in the presence of both the parties.

10.1.3 Inaccuracy of Meters

- a) In case the difference between the energy recorded in the main meter and the check meter for any calendar month is within 0.5%, the energy recorded in the main meter shall be taken as final.
- b) However, if the variation exceeds $\pm 0.5\%$, following steps shall be taken:
 - i. Both interface meters (Main as well Check) and metering system shall be tested and checked.
 - ii. Re-Calibration of both meters at site with reference standard meter of accuracy class higher than the meter under test, if no issues found in step (a) above.
 - iii. On carrying out the re-calibration of the main meter, if it is discovered that either the percentage of inaccuracy exceeds $\pm 0.5\%$ or that the main meter is not working, the following procedure in order of priority, whichever is feasible, for arriving at the computation of quantity of energy during the period between the last calibration and the present, shall be followed:
 - On the basis energy recorded in the check meter if installed and functioned accurately; or
 - By correcting the error, if the percentage of error is ascertainable from calibration, tests or mathematical calculation
 - iv. The correction to the quantity of energy injected shall apply to the following periods (hereinafter referred to as the "Correction Period"):
 - To any period of time during which the main meter was known to be malfunctioning or to which the parties mutually agree;
 - If the period during which the main meter was malfunctioning is not known or is not agreed to between the parties, the correction shall be applicable for a period equal to half the time elapsed since the date of the preceding calibration test, provided that under no circumstance shall the Correction Period exceed one month.
 - v. If the difference exists even after such checking or testing, then the defective meter(s) shall be replaced with a tested meter.
 - vi. In case of conspicuous failures like burning of meter and erratic

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display of metered parameters and when the error found in testing of meter is beyond the permissible limit of error provided in the relevant standard, the meter shall be immediately replaced with a tested meter.

- vii. In case where both the Main meter and Check meter fail, energy recorded in the Standby meter shall be considered as final and at least one of the meters shall be immediately replaced by a tested meter.

10.1.4 General

- a) From the Commercial Operations Date of the solar power plant, PGVCL shall pay to the Successful SPG the monthly Tariff Payments subject to the adjustments as per provisions of the PPA and submission of following documents:
- Monthly bill (Injection /Schedule at delivery point as certified by SLDC multiplied by the Rs. per kWh tariff as per PPA)
 - Relevant Extracts of State Energy Account.
- b) All Tariff Payments by PGVCL shall be in Indian Rupees.
- c) The SPG shall be required to make arrangements and payments for import of energy (if any) as per applicable regulations.
- Reactive power charges or any other charges as per CERC/ GERC regulations shall be payable by SPG as per provisions of PPA.

10.1.5 Delivery and Content of Monthly Bills/Supplementary Bills

- a) The SPG shall issue to PGVCL hard copy of a signed Monthly Bill for the immediately preceding Month based on the State Energy Account along with all relevant documents (payments made by selected bidder for drawl of power, payment of reactive energy charges, Metering charges or any other charges as per regulations of CERC/GERC shall not be a part of bill raised by SPG to PGVCL)
- b) Each Monthly Bill shall include all charges as per the Agreement for the energy supplied for the relevant Month based on State Energy Account. The Monthly Bill amount shall be the product of the energy as per Energy Accounts and the applicable levelized tariff. Net energy import from the grid shall be billed at HTP-III tariff.

10.1.6 Payment of Monthly Bills

- a) On receipt of JMR/Energy Account along with CMRI data (of both meters) and bill, Superintending Engineer (Regulation) PGVCL shall verify the readings and subsequent share the same along with original bill and other relevant documents to PGVCL.

PGVCL shall make payment of the amounts due in Indian Rupees within thirty (30) days from the date of receipt of the Tariff Invoice by the Chief Engineer (Project) PGVCL.

- b) As defined under the PPA, Due Date of Payment" in respect of a Tariff Invoice means the date, which is 30 (thirty) days from the date of receipt of such

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invoices by the designated official of the PGVCL. The Tariff Invoice shall include relevant documents.

All payments required to be made under this Agreement shall also include any deduction or set off for:

- i. deductions required by the Law; and
 - ii. Amount claimed by PGVCL, if any, from the SPG, will be adjusted from the monthly energy payment.
 - iii. Charges for net import of energy by the solar plant from the grid shall be as per HTP-III Tariff as per GERC
- a) The SPG shall open a bank account (if not having any bank account) for all Tariff Payments to be made by PGVCL to the SPG and notify PGVCL of the details of such account at least sixty (60) Days before the dispatch of the first Monthly Bill.

10.1.7 Late Payment Surcharge

(1) For payment of Monthly bill by PGVCL, if paid after Due Date of Payment, a late Payment charge shall be payable by PGVCL to the SPG on the payment outstanding after the due date at the base rate of Late Payment Surcharge applicable for the period for the first month of default.

(2) The rate of Late Payment Surcharge for the successive months of default shall increase by 0.5 percent for every month of delay provided that the Late Payment Surcharge shall not be more than 3 percent higher than the base rate at any time.

(3) Provided that the rate at which Late Payment Surcharge shall be payable shall not exceed the rate of seven (7) percent in excess of the SBI 1 year Marginal Cost of Funds Based Lending Rate (MCLR) per annum / any replacement thereof by SBI, on the amount of outstanding payment, calculated on a week or part thereof basis viz. (SBI MCLR rate + 7%)

= _____ per week or part thereof.

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(4) Provided further that all Payments shall be first adjusted towards Late Payment Surcharge and thereafter, towards monthly charges, starting from the longest overdue bill.

(5) The Late Payment Surcharge shall be claimed by SPG through the supplementary bill.

(6) The Late Payment Surcharge shall be governed as per the provisions of Electricity (Late Payment Surcharge) Rules, 2021 issued by Ministry of Power, Government of India vide notification dated 22.02.2021 and subsequent amendments or replacements thereof issued from time to time.

10.1.8 Rebate

a) For payment of any Bill on or before Due Date, the following Rebate shall be paid by the SPG to PGVCL in the following manner and the SPG shall not raise any objections to the payments made under this article.

- i. For payment of Monthly Bill by PGVCL, if paid before Due Date of Payment, a Rebate shall be deducted by PGVCL at the rate of seven (7) percent in excess of the applicable SBI 1 year Marginal Cost of Funds

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Based Lending Rate (MCLR) per annum / any replacement thereof by SBI, on the amount paid before due date, calculated on a week or part thereof basis viz.

(SBI MCLR rate + 7%)

= _____ per week or part thereof.

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10.1.9 Payment of Supplementary Bills

- a) Either party may raise a ("Supplementary Bill") for payment on account of adjustments required by the Energy Accounts (if any) and such Supplementary Bill shall be paid by the other Party.
- b) The Parties shall remit all amounts due under a Supplementary Bill to the Designated Account by the Due Date.
- c) The Rebate and Late Payment Surcharge shall be applicable at the same terms applicable to the Monthly Bill.

10.1.10 Payment Security Mechanism

Letter of Credit (LC):

- a) PGVCL shall provide to the SPG, in respect of payment of its Monthly Bills and/or Supplementary Bills, a monthly unconditional, revolving and irrevocable letter of credit ("Letter of Credit"), opened and maintained which may be drawn upon by the SPG in accordance with the PPA.
- b) Not later than one (1) Month before the start of supply, PGVCL through a scheduled bank open a Letter of Credit in favour of the SPG, to be made operative from a date prior to the Due Date of its first Monthly Bill under this Agreement. The Letter of Credit shall have a term of twelve (12) Months and shall be renewed annually, for an amount equal to:
 - i. for the first Contract Year, equal to the estimated average monthly billing;
 - ii. for each subsequent Contract Year, equal to the average of the monthly billing of the previous Contract Year.
- c) Provided that the SPG shall not draw upon such Letter of Credit prior to the Due Date of the relevant Monthly Bill and/or Supplementary Bill, and shall not make more than one drawal in a Month.
- d) Provided further that if at any time, such Letter of Credit amount falls short of the amount specified above due to any reason whatsoever, PGVCL shall restore such shortfall within fifteen (15) days.
- e) PGVCL shall cause the scheduled bank issuing the Letter of Credit to intimate the SPG, in writing regarding establishing of such irrevocable Letter of Credit.
- f) PGVCL shall ensure that the Letter of Credit shall be renewed not later than its expiry.

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- g) All costs relating to opening, maintenance of the Letter of Credit shall be borne by the SPG.
- h) If PGVCL fails to pay undisputed Monthly Bill or Supplementary Bill or a part thereof within and including the Due Date, then, subject to above, the SPG may draw upon the Letter of Credit, and accordingly the bank shall pay without any reference or instructions from PGVCL, an amount equal to such Monthly Bill or Supplementary Bill or part thereof, in accordance with above, by presenting to the scheduled bank issuing the Letter of Credit, the following documents:
 - i. a copy of the Monthly Bill or Supplementary Bill which has remained unpaid to SPG and;
 - ii. a certificate from the SPG to the effect that the bill at item (a) above, or specified part thereof, is in accordance with the Agreement, is not disputed and has remained unpaid beyond the Due Date;

10.1.11 Disputed Bill

- a) If PGVCL does not dispute a Monthly Bill or a Supplementary Bill raised by the SPG within thirty (30) days of receiving such Bill shall be taken as conclusive.
- b) If PGVCL disputes the amount payable under a Monthly Bill or a Supplementary Bill, as the case may be, it shall pay undisputed amount of the invoice amount and it shall within fifteen 30 days of receiving such Bill, issue a notice (the "Bill Dispute Notice") to the invoicing Party setting out:
 - i. the details of the disputed amount;
 - ii. its estimate of what the correct amount should be; and
 - iii. all written material in support of its claim.
- c) If the SPG agrees to the claim raised in the Bill Dispute Notice, the SPG shall revise such Bill and present along with the next Monthly Bill. In such a case excess amount shall be refunded along with interest at the same rate as Late Payment Surcharge, which shall be applied from the date on which such excess payment was made by the disputing Party to the invoicing Party and up to and including the date on which such payment has been received as refund.
- d) If the SPG does not agree to the claim raised in the Bill Dispute Notice, it shall, within fifteen (15) days of receiving the Bill Dispute Notice, furnish a notice (Bill Disagreement Notice) to PGVCL (i.e. office of Superintending Engineer (Regulation), PGVCL) providing:
 - i. reasons for its disagreement;
 - ii. its estimate of what the correct amount should be; and
 - iii. all written material in support of its counter claim.
- e) Upon receipt of the Bill Disagreement Notice by Superintending Engineer (Regulation), PGVCL, authorized representative(s) or a director of the board of directors/ member of board of the PGVCL and SPG shall meet and make best endeavours to amicably resolve such dispute within fifteen (15) days of

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receipt of the Bill Disagreement Notice.

- f) If the Parties do not amicably resolve the Dispute within fifteen (15) days of receipt of Bill Disagreement Notice, the matter shall be referred to Dispute resolution in accordance with Article 16 of PPA.
- g) For the avoidance of doubt, it is clarified the despite a Dispute regarding an invoice, PGVCL shall, without prejudice to its right to Dispute, be under an obligation to make payment of undisputed amount of the invoice amount in the Monthly Bill.

SECTION - J: OTHER TERMS AND CONDITIONS

J.1. Jurisdiction of Contract

- 1.1.1. The laws applicable to the Contract shall be the Laws in force in India. The court at Rajkot District i.e. city where the Corporate Office of PGVCL is situated shall have exclusive jurisdiction in all matters arising under this contract.

J.2. Change in Laws & Regulations

- 2.1.1. Change in Law conditions shall be applicable as mentioned in the Power Purchase Agreement
- 2.1.2. In addition to the receipt of applicable CFA from MNRE for the SPV plant, the Bidders will be free to avail fiscal incentives like Accelerated Depreciation, Concessional custom and Excise Duties, Tax Holidays etc. if available for such Projects. The same will not have any bearing on comparison of bids for selection. As equal opportunity is being provided to all bidders at the time of tendering itself, it is up to the bidders to avail various tax and other benefits. No claim shall arise on PGVCL for any liability if bidders are not able to avail any available fiscal incentives and this will not have any bearing on the applicable tariff.
- 2.1.3. If the Project is transferred or sold to a third party during its tenure (after initial lock in period of 1 year after COD), PGVCL will retain full rights to operationalize the PPA with the third party, which will be under full obligation to honor all the obligations and terms & conditions of the PPA.

J.3. Min. Generation Guarantee

- 3.1.1. The Selected bidder shall provide a minimum generation guarantee corresponding to a capacity utilization factor (CUF) of 19% (the "Guaranteed CUF") with respect to the AC capacity of the PV system.
- 3.1.2. This Guaranteed CUF shall be calculated on an annual-basis and shall be verified by PGVCL at the end of each year during the 25 (twenty-five) years operation period or any extension thereof on mutual agreement.
- 3.1.3. There shall be no year-on-year reduction on the Guaranteed CUF during the 25 (twenty-five) year's period.

3.1.4. Right to Contracted Capacity & Energy

PGVCL, in any Contract Year shall not be obliged to purchase any additional energy from the SPG beyond the contract capacity. If for any Contract Year except for the first year of operation, it is found that the SPG has not been able to generate and supply minimum energy of as mentioned against each Solar power plant as mentioned in Annexure K20 in KWH (Units) (corresponding to 19% minimum CUF) for respective Feeder(s) level Solar plant during the term of the agreement, on account of reasons solely attributable



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to the SPG, the non-compliance by SPG shall make the SPG liable to pay the compensation. PGVCL shall not be obliged to purchase energy in excess of maximum CUF of 30% during any contract year. If PGVCL decides to purchase the excess energy beyond CUF of 30%, the payments for such excess energy shall be made at 75% of the PPA tariff. For the first year of operation, the above limits shall be considered on pro-rata basis. The lower limit will, however be relaxable by PGVCL to the extent of grid non-availability for evacuation which is beyond the control of the SPG.

This compensation shall be applied to the amount of shortfall in generation during the Contract Year. The amount of such penalty would ensure that the PGVCL is offset for all potential costs associated with low generation and supply of power under the PPA. **The compensation payable to PGVCL by the SPG shall be 25% (twenty-five percent) of the cost of this shortfall in energy terms, calculated at PPA tariff.** This compensation shall not be applicable in events of Force Majeure identified under PPA.

At any point of time block, the peak of capacity shall not reach higher than the contracted capacity at the point where power is injected in the grid. The SPG shall forego the excess generation and reduce the output to the contract capacity and shall be required to pay the penalty/charges in case of failure to do so. The SPG shall install adequate protection equipment at the interconnection point to avoid excess energy feeding into the grid and failure to do so shall entitle DISCOM to not pay for the additional energy over and above the contracted capacity.

3.1.5. Generation compensation for Off-take constraints

- a. Generation Compensation in offtake constraints due to Grid Unavailability: During the operation of the plant, PGVCL shall endeavor to ensure **95% of grid availability** in a contract year, however, there can be some periods where the Project can generate power but due to temporary transmission unavailability, the power is not evacuated, for reasons not attributable to the SPG. In such cases, subject to the submission of documentary evidences from the competent authority, the generation compensation shall be restricted to the following and there shall be no other claim, directly or indirectly against PGVCL:

Duration of Grid unavailability	Provision for Generation Compensation
Grid unavailability in excess of 5% in a contract year as defined in the PPA (only period from 8 am to 6 pm to be counted):	$\text{Generation Loss} = [(\text{Average Generation per hour during the Contract Year}) \times (\text{number of hours of grid unavailability during the Contract Year})]$ Where, $\text{Average Generation per hour during the Contract Year (kWh)} = \frac{\text{Total generation in the Contract Year (kWh)}}{\text{Total hours of generation in the Contract Year.}}$

The excess generation beyond 19% CUF by the SPG equal to this generation loss shall be procured by PGVCL at the PPA tariff so as to offset this loss in the succeeding 3 (three) Contract Years.

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- b. Offtake constraints due to Backdown: In the eventuality of backdown, subject to the submission of documentary evidences from the competent authority, the SPG shall be eligible for a minimum generation compensation, from PGVCL, restricted to the following and there shall be no other claim, directly or indirectly against PGVCL.

Duration of Backdown	Provision for Generation Compensation
Hours of Backdown during a monthly billing cycle.	<i>Minimum Generation Compensation = 100% of [(Average Generation per hour during the month) X (number of backdown hours during the month)] X PPA tariff</i> Where, Average Generation per hour during the month (kWh) = Total generation in the month (kWh) ÷ Total hours of generation in the month

The SPG shall not be eligible for any compensation in case the Backdown is on account of events like consideration of grid security or safety of any equipment or personnel or other such conditions. The Generation Compensation shall be paid as part of the energy bill for the successive month after JMR.

J.4. Other Key Responsibilities

4.1.1. MNRE/ PGVCL Inspection & Reporting

- The Ministry officials or designated agency may inspect the ongoing installation or installed plants. In case the installed systems are not as per standards, non- functional on account of poor quality of installation, or non-compliance of AMC, the Ministry reserves the right to blacklist the selected bidder. Blacklisting may inter-alia include the following:
 - The SPG will not be eligible to participate in tenders for Government supported projects.
 - In case, the concerned Director(s) of the SPG joins another existing or starts/joins a new firm/company, the company will automatically be blacklisted.
- The SPG shall be responsible for providing daily / weekly / monthly or customized information regarding progress of projects required by PGVCL / MNRE, online or in hard copy. For which the SPG is also responsible for maintaining online & off-line records.
- Assist PGVCL with a real-time monitoring dedicated web-portal (SEDM).

J.5. Code of Integrity

5.1.1. All the officers or employees of PGVCL shall:

- maintain an unimpeachable standard of integrity both inside and outside their office
- act in accordance with the provisions of the Act, these rules, guidelines issued under the Act and instructions
- not allow any bidders to have access to information on a particular procurement, before such information is available to the public at large
- not intentionally use unnecessarily restrictive or "tailored" specifications, terms of reference or statements of work that can discourage competition
- not solicit or accept any bribe, reward or gift or any material benefit of any directly or indirectly promise of future employment from anyone, who has sought or is seeking procurement from PGVCL.
- not have a financial interest in any bidder(s) responding to PGVCL's bidding process and

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any person having financial interest in any bidder shall not participate in this tender process

- g) not disclose proprietary and source selection information, directly or indirectly, to any person other than a person authorised to receive such information
- h) treat all bidders in a fair and equitable manner in line with the principle of fairness, integrity and transparency in the procurement process
- i) provide all bidders identical information at the same time, during the bidding process;
- j) apply the same criteria of evaluation as specified in the bidding documents, bidder registration documents or pre-qualification documents and under no circumstances new evaluation criteria shall be introduced during the evaluation process
- k) not entertain any favour, recreation, presents, services, etc. from the bidders or prospective bidders
- l) protect the interests of the PGVCL under all circumstances while dealing with information and information sources
- m) maintain confidentiality of all bids
- n) ensure that the selection of bidder is as per the RfS document and is not influenced by personal reasons attributable to concerned officials in any manner
- o) Disclose conflict of interest, if any.

5.1.2. Any Bidder participating in Tender process shall:

- a) not offer any bribe, reward or gift or any material benefit either directly or indirectly in exchange for an unfair advantage in procurement process or to otherwise influence the procurement process
- b) not misrepresent or omit information that misleads or attempts to mislead so as to obtain a financial or other benefit or avoid an obligation
- c) not indulge in any collusion, bid rigging or anticompetitive behaviour to impair the transparency, fairness and progress of the Tender process
- d) not misuse any information shared between PGVCL and the bidders with an intent to gain unfair advantage in the Tender process
- e) not indulge in any coercion including impairing or harming or threatening to do the same, directly or indirectly, to any party or to its property to influence the Tender process;
- f) not obstruct any investigation or audit of a Tender process
- g) disclose conflict of interest, if any; and
- h) disclose any previous transgressions with any entity in India or any other country during the last three years or any debarment by any other procuring entity.

J.6. Breach of code of integrity by the bidder

- 6.1.1. In case of breach of any provision of the code of integrity by a bidder or prospective bidder, as the case may be, PGVCL may take appropriate action in accordance with the provisions.

J.7. Vexatious Appeals & Complaints

- 7.1.1. Whoever intentionally files any vexatious, frivolous or malicious appeal or complaint with

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the intention of delaying or defeating any procurement or causing Loss to PGVCL or any other bidder, shall be punished with fine as per the laws of land.

SECTION - K: EMD Bank Guarantee Format

PGVCL Bank Details:

1. Name of Bank State Bank of India
2. Name of Branch Gymkhana Branch, Rajkot - Gujarat
3. Branch Code 60070
4. MICR Code 360002011
5. IFSC Code SBIN0060070
6. Name of Account PASCHIM GUJARAT VIJ COMPANY LIMITED
7. Account No. 66007422551

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K.1. EMD Bank Guarantee Format

(To be Physically submitted by bidder on non-judicial stamp paper of Rs. 300/- and scanned copy is to be submitted in 'on-line' on the bidding platform)

For RFS No: PGVCL/Project/DSM/PM-KUSUM-C-FLS/ TN-6

WHEREAS M/s. _____ (name & address of the Firm) having their registered office at _____ (address of the firms Registered Office) (hereinafter called the 'RFS Documenter') wish to participate in the RFS Document No. _____ for _____ of (Supply / Erection / Supply & Erection Work) (Name of the material / equipment / Work) for _____ Paschim Gujarat Vij Company Ltd and WHEREAS a Bank Guarantee for (hereinafter called the "Beneficiary") Rs. _____ (amount of EMD) valid till _____ (mention here date of validity of this Guarantee which will be **6 (SIX)** months from the schedule date of opening of the RFS Document. **be submitted by the RFS Documenter along with the RFS Document.**

We, _____ (name of the Bank and address of the Branch giving the Bank Guarantee) having our Registered Office at _____ (address of Bank's Registered Office) hereby give this Bank Guarantee No. _____ dated _____ and hereby agree unequivocally and unconditionally to pay immediately on demand in writing from the Paschim Gujarat Vij Company Ltd or any Officer authorized by it in this behalf any amount not exceeding Rs. _____ (amount of E.M.D.), (Rupees _____ (in words) to the said Paschim Gujarat Vij Company Ltd on behalf of the RFS Documenter.

We _____ (name of the Bank) also agree that withdrawal of the RFS Document or part thereof by the RFS Documenter within its validity or Non-submission of Security Deposit by the RFS Documenter within one month from the date RFS Document or a part thereof has been accepted by the Paschim Gujarat Vij Company Ltd would constitute a default on the part of the RFS Documenter and that this Bank Guarantee is liable to be invoked and encashed within its validity by the Beneficiary in case of any occurrence of a default on the part of the RFS Documenter and that the encashed amount is liable to be forfeited by the Beneficiary.

This agreement shall be valid and binding on this Bank up to and inclusive of _____ (mention here the date of validity of Guarantee) and shall not be terminable by notice or by Guarantor change in the constitution of the Bank or the firm of RFS Documenter Or by any reason whatsoever and our liability hereunder shall not be impaired or discharged by any extension of time or variations or alternations made, given, conceded with or without our knowledge or consent by or between the RFS Documenter and the PGVCL.

"Notwithstanding anything contrary contained in any law for the time being in force or banking practice, this Guarantee shall not be assignable, transferable by the beneficiary (i.e. PGVCL/GUVNL 's Subsidiaries). Notice or invocation by any person such as assignee, transferee or agent of beneficiary shall not be entertained by the Bank. Any invocation of the Guarantee can be made only by the beneficiary directly."

NOTWITHSTANDING anything contained hereinbefore, our liability under this guarantee is restricted to Rs. _____ (Amt. of E.M.D.) (Rupees _____) (in words). Our Guarantee shall remain in force till _____ (Date of validity of the Guarantee). Unless demands or claims under this Bank Guarantee are made to us in writing on or before _____ (***Date of validity of the Guarantee***), all rights of Beneficiary under this Bank Guarantee shall be forfeited and we shall be released and discharged from all liabilities there under:

Place:

Date:

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RfS document for feeder level Solarization under PM-KUSUM-Component-C in PGVCL

Please Mention here Complete Postal Signature of the Bank's Address of the Bank with Branch
Code,
Authorized Signatory
Telephone and Fax Nos.
Official Round Seal.

Note: The Banks shall be the Banks recognized / notified by the Finance Department, Government of Gujarat
(GoG) from time to time.

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RfS document for feeder level Solarization under PM-KUSUM-Component-C in PGVCL

K.2. Power of Attorney in favour of Authorized Signatory (In Case of Bidder is Single Entity)

{On Non-Judicial Stamp Paper of Rs. 300/- attested by Notary Public/ First Class Magistrate}

The Bidder is required to upload scanned copy of the Power of Attorney in the Format as per the applicable Law.

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RfS document for feeder level Solarization under PM-KUSUM-Component-C in PGVCL

K.3. Power of Attorney in favour of Authorized Signatory (In Case Bidder is Joint Venture)

*{On Non-Judicial Stamp Paper of Rs. 300/- attested by Notary Public/ First Class Magistrate}
The Bidder is required to upload scanned copy of this document duly filled and signed with company Seal*

KNOW ALL MEN BY THESE PRESENTS THAT WE, the Partners whose details are given hereunder

..... have formed a Joint Venture under the laws of and having our Registered Office(s) / Head Office(s) at (hereinafter called the 'Joint Venture' which expression shall unless repugnant to the context or meaning thereof, include its successors, administrators and assigns) acting through M/s

..... being the Partner in-charge do hereby constitute, nominate and appoint M/s..... a

Company incorporated under the laws of and having its Registered/Head Office at as our duly constituted lawful Attorney (hereinafter called "Attorney" or "Authorised Representative" or "Partner In-charge") to exercise all or any of the powers for and on behalf of the Joint Venture in regard to "Bid Specification" for the work of Design, survey, supply, installation, testing, commissioning, operation & maintenance for 25 years (unless extended by both the parties on mutual agreement) from COD of grid connected **Feeder level** solar power plant, its associated 11kV line to connect the plant with concerned substation and RMS of solar power plant through RESCO model for solarization of various 11kV feeders of associated 66/11kV substation in PGVCL under PM-KUSUM scheme – Component C -feeder level Solarization (FLS).under NIT No: PGVCL/Project/DSM/PM-KUSUM-C-FLS/ TN-6, for which bids have been invited by Paschim Gujarat Vij Company Limited("PGVCL") undertake the following acts:

- i. To submit proposal and participate in the aforesaid Bid Specification of PGVCL on behalf of the "Joint Venture".
- ii. To negotiate with PGVCL the terms and conditions for award of the Contract pursuant to the aforesaid Bid and to sign the Contract with the PGVCL for and on behalf of the "Joint Venture".
- iii. To do any other act or submit any document related to the above.
- iv. To receive, accept and execute the Contract for and on behalf of the "Joint Venture".

It is clearly understood that the Partner In-charge (Lead Partner) shall ensure performance of the Contract(s) and if one or more Partner fail to perform their respective portions of the Contract(s), the same shall be deemed to be a default byall the Partners.

It is expressly understood that this Power of Attorney shall remain valid binding and irrevocable till completion of the period to complete all the Scope of Work awarded under the terms of Bid Specification/ Contract.

The Joint Venture hereby agrees and undertakes to ratify and confirm all the whatsoever the said Attorney/Authorised Representatives/Partner in-charge quotes in the bid and negotiates with PGVCL and signs the Contract with PGVCL and/orproposes to act on behalf of the Joint Venture by virtue of this Power of Attorneyand the same shall bind the Joint Venture as if done by itself.

IN WITNESS THEREOF the Partners Constituting the Joint Venture as aforesaid have

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RfS document for feeder level Solarization under PM-KUSUM-Component-C in PGVCL

executed these presents on this day of.....under the Common Seal(s) of their Companies.

For and on behalf of the
Partners of Joint Venture

.....
.....
.....

The Common Seal of the above Partners of the Joint Venture: The

Common Seal has been affixed there unto in the presence of:WITNESS

1. Signature.....

Name

Designation

Occupation

2. Signature.....

Name

Designation

Occupation

Note:

1. For the purpose of executing the Agreement, the non-judicial stamp papers of appropriate value shall be purchased in the name of Joint Venture.
2. The Agreement shall be signed on all the pages by the authorised representatives of each of the partners and shall invariably be witnessed.

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RfS document for feeder level Solarization under PM-KUSUM-Component-C in PGVCL

K.4. Undertaking by the Joint Venture Partners (In Case Bidder is Joint Venture)

{On Non-Judicial Stamp Paper of Rs. 300/- attested by Notary Public/ First Class Magistrate}

The Bidder is required to upload scanned copy of this document duly filled and signed with company Seal

THIS JOINT DEED OF UNDERTAKING executed on this day of Two Thousand and by M/s company incorporated under the laws of and having its Registered Office at (hereinafter called the "Party No.1" which expression shall include its successors, executors and permitted assigns) and M/s company incorporated under the laws of and having its Registered Office at (hereinafter called the "Party No.2" which expression shall include its successors, executors and permitted assigns) for the purpose of making a bid and entering into a contract [hereinafter called the "Contract" {in case of award}] against the "Bid Specification" for the work of Design, survey, supply, installation, testing, commissioning, operation & maintenance for 25 years (unless extended by both the parties on mutual agreement) from COD of grid connected Feeder level solar power plant, its associated 11kV line to connect the plant with concerned substation and RMS of solar power plant through RESCO model for solarization of various 11kV feeders of associated 66/11kV substation in PGVCL under PM-KUSUM scheme – Component C -feeder level Solarization (FLS). under NIT No: PGVCL/Project/DSM/PM-KUSUM-C-FLS/ TN-6, the bids for which have been invited by Paschim Gujarat Vij Company Limited("PGVCL") WHEREAS the Party No.1 and Party No.2 have entered into an Agreement dated..... AND WHEREAS PGVCL has invited bids as per the above mentioned Bid Specification for the work of Design, survey, supply, installation, testing, commissioning, operation & maintenance for 25 years (unless extended by both the parties on mutual agreement) from COD of grid connected Feeder level solar power plant, its associated 11kV line to connect the plant with concerned substation and RMS of solar power plant through RESCO model for solarization of various 11kV feeders of associated 66/11kV substation in PGVCL under PM-KUSUM scheme – Component C -feeder level Solarization (FLS). under NIT No: PGVCL/Project/DSM/PM-KUSUM-C-FLS/ TN-6

AND WHEREAS SECTION - E:(1.1.1) forming part of the RfS document, inter-alia stipulates that an Undertaking of upto two qualified entities as partners in a Joint Venture, meeting the requirements of Eligibility & Qualification Criteria SECTION - E; as applicable may bid, provided, the Joint Venture fulfils all other requirements under SECTION - E: and in such a case, the Bid Formats shall be signed wherever applicable and as required by RfS document either by the Authorized Signatory (appointed by a Power of Attorney executed by all partners of Joint Venture) and/or all the partners so as to legally bind all the Partners of the Joint Venture, who will be jointly and severally liable to perform the Contract and all obligations hereunder.

The above clause further states that this Undertaking shall be attached to the bid and the Performance bank guarantee will be as per the format enclosed with the RfS document without any restrictions or liability for either party.

AND WHEREAS the bid is being submitted to PGVCL vide Bid No..... (Reference No: of Bid submitted by Bidder) dated by Party No.1 based on this Undertaking between all the parties; under these presents and the bid in accordance with the requirements of RfS document, has been signed by all the parties.

NOW THIS UNDERTAKING WITNESSETH AS UNDER:

In consideration of the above premises and agreements all the parties of this Deed of Undertaking

Sign & Seal of SPG

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RfS document for feeder level Solarization under PM-KUSUM-Component-C in PGVCL

do hereby declare and undertake:

1. In requirement of the award of the Contract by PGVCL to the Joint Venture Partners, we, the Parties do hereby undertake that M/s the **Party No.1**, shall act as Lead Partner and further declare and confirm that we the parties to the Joint Venture shall jointly and severally be bound onto PGVCL for the successful performance of the Contract and shall be fully responsible for successful completion and performance of Scope of Work as provided in Contract in accordance with the terms and conditions specified in the Contract.
2. In case of any breach or default of the said Contract by any of the parties to the Joint Venture, the party(s) do hereby undertake to be fully responsible for the successful performance of the Contract and to carry out all the obligations and responsibilities under the Contract in accordance with the requirements of the Contract.
3. Further, if PGVCL suffers any loss or damage on account of any breach in the Contract or any shortfall in the performance of the equipment in meeting the performances guaranteed as per the specification in terms of the Contract, the Party(s) of these presents undertake to promptly make good such loss or damages caused to PGVCL, on its demand without any demur. It shall not be necessary or obligatory for PGVCL to proceed against Lead Partner to these presents before proceeding against or dealing with the other Party(s), PGVCL can proceed against any of the parties who shall be jointly and severally liable for the performance and all other liabilities/obligations under the Contract to PGVCL.
4. The financial liability of the Parties of this Deed of Undertaking to the PGVCL, as applicable, with respect to any of the claims arising out of the performance or non- performance of the obligations set forth in this Deed of Undertaking, read in conjunction with the relevant conditions of the Contract shall, however not be limited in any way so as to restrict or limit the liabilities or obligations of any of the Parties of this Deed of Undertaking.
5. It is expressly understood and agreed between the Parties to this Undertaking that the responsibilities and obligations of each of the Parties shall be as delineated in Appendix - *(to be suitably appended by the JV Partners alongwith this Undertaking in its bid)* to this Deed of Undertaking. It is further undertaken by the parties that the above sharing of responsibilities and obligations shall not in any way be a limitation of joint and several responsibilities of the Parties under the Contract.
6. It is also understood that this Undertaking is provided for the purposes of undertaking joint and several liabilities of the partners to the Joint Venture for submission of the bid and performance of the Contract and that this Undertaking shall not be deemed to give rise to any additional liabilities or obligations, in any manner or any law, on any of the Parties to this Undertaking or on the Joint Venture, other than the express provisions of the Contract.
7. This Undertaking shall be construed and interpreted in accordance with the provisions of the Contract.
8. In case of an award of a Contract, we the parties to this Deed of Undertaking do hereby agree that we shall be jointly and severally responsible for furnishing a Contract Performance bank guarantee from a bank in favour of PGVCL in the currency/currencies of the Contract.
9. It is further agreed that this Deed of Undertaking shall be irrevocable and shall form an integral part of the bid and shall continue to be enforceable till PGVCL discharges the same or upon the completion of the Contract in accordance with its provisions, whichever is earlier. It shall be effective from the date first mentioned above for all purposes and intents.

IN WITNESS WHEREOF, the Parties to this Deed of Undertaking have through their authorized representatives executed these presents and affixed Common Seals of their companies, on the day,

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RfS document for feeder level Solarization under PM-KUSUM-Component-C in PGVCL

month and year first mentioned above.

Common Seal of
has been affixed in my/ our
presence pursuant to Board of
Director's Resolution dated

For Lead Partner (Party No.-1)
For and on behalf of M/s
.....

Name
Designation
Signature

(Signature of the authorized
representative)

WITNESS:

I.
II.

Common Seal of
has been affixed in my/ our
presence pursuant to Board of
Director's Resolution dated

For Party No.-2
For and on behalf of M/s.....

Name
Designation
Signature

(Signature of the authorized
representative)

WITNESS:

I.
II.

Note:

1. For the purpose of executing the Joint Deed of Undertaking, the non-judicial stamp papers of appropriate value shall be purchased in the name of Joint Venture.
2. The Undertaking shall be signed on all the pages by the authorized representatives of each of the partners and shall invariably be witnessed.
3. Attach the Appendix.....as mentioned in the Clause 5 of this Deed of Undertaking.

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RfS document for feeder level Solarization under PM-KUSUM-Component-C in PGVCL

K.5. Bid Submission Letter/Undertaking

The Bidder is required to upload scanned copy of this document on their letter head duly filled and signed with company Seal

From

(Full name of Bidder / Lead Member of JV)
Address of the Organization.....
Name of Authorized Signatory:
Designation:
Email ID:
Phone / Mobile No.:

To:

The Chief Engineer (Project),
Paschim Gujarat Vij Company Ltd.,
Regd. & Corporate Office,
"Paschim Gujarat Vij Seva Sadan",
Laxminagar, Nana Mava main road,
RAJKOT-360004, (Gujarat)

Sub: Bid towards RfS for Solar Power Generator (SPG) Design, survey, supply, installation, testing, commissioning, operation & maintenance for 25 years (unless extended by both the parties on mutual agreement) from COD of grid connected Feeder level solar power plant, its associated 11kV line to connect the plant with concerned substation and RMS of solar power plant through RESCO model for solarization of various 11kV feeders of associated 66/11kV substation in PGVCL under PM-KUSUM scheme – Component C-feeder level Solarization (FLS).

Ref: NIT No: PGVCL/Project/DSM/PM-KUSUM-C-FLS/ TN-6

Dear Sir,

In connection with the above subject, I / We confirm the following:

1. I/We, the undersigned.....[insert name of the 'Bidder'] having read, examined and understood in detail the RfS document issued vide above referenced NIT, hereby submit our "Bid" in full compliance with terms & conditions of RfS document. A copy of the RfS document, duly signed on each page is also submitted as a proof of our acceptance of all specifications as well as terms/ Conditions. I/ We have submitted the Bid in electronic form on ON-LINE mode at the Bidding Portal mentioned in the RfS document.
2. [Insert this clause in case JV] I/We are submitted our Bid in form of Joint Venture, whereby M/s..... is the Lead Member and Partner, M/s..... is the other JV Partner. We have enclosed the Joint Deed of Undertaking executed by us in our Bid as per the requirement mentioned in the RfS document.
3. I/We have selected Mr....., as our Authorized Signatory in our Bid. We have enclosed the Power of Attorney (POA) executed in favour of Authorized Signatory in our Bid as per the requirement mentioned in the RfS document.
4. I/We have paid the requisite amount of EMD. I/we understand that without payment of the EMD by us, our offer shall out rightly be rejected. If, I/we are selected and shortlisted for as successful Bidder, we agree pay the required Performance bank guarantee as per the

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RfS document for feeder level Solarization under PM-KUSUM-Component-C in PGVCL

terms & conditions mentioned in the RfS document. I/We understand that I/we shall not be awarded the Contract if we fail to pay the Performance bank guarantee in stipulated time.

5. I/We agree to treat the RfS document and other records connected with the Scope of Work as secret and confidential documents and shall not communicate information described therein to any person other than the person authorized by you or use the information in any manner prejudicial to the safety requirement.
6. I/We understand that you are not bound to accept the lowest or any bid you may receive.
7. I/ We are participating, as Bidders, in not more than one Bid in this Bidding process.
8. I / We declare that our Bid is strictly in line with RfS document Specification and there is no deviation. Further, I/We also agree that additional conditions / deviations, if any, found in our Bid, the Bid shall be out rightly rejected without assigning any reason thereof. We shall ensure that we execute such Bid documents as per the provisions of the NIT and provisions of such RfS document shall be binding on us. I/We confirm that we have not taken any deviation so as to be deemed non- responsive.
9. I/We hereby unconditionally and irrevocably agree and accept that the decision made by PGVCL in respect of any matter regarding or arising out of the Bid submitted by us/ RfS document issued by PGVCL shall be binding on us. We hereby expressly waive any and all claims in respect of Bid process.
10. I/ We confirm that there are no litigations or disputes against us, which materially affect our ability to fulfil our obligations with regard to execution of Project mentioned in the RfS document.
11. I / We hereby submit our Bid and undertake to keep our Bid valid for a period of 120 days from the date of opening of Technical Bid. I / We hereby further undertake that during the said period, I / We shall not vary/alter or revoke my/ our Bid.
12. I/We also agree to abide by and fulfil all the terms, conditions and provisions of the above mentioned RfS document, including .
13. I/We also agree to abide and hereby confirm and agree all the terms and condition by on-line mode only, the RfS documents along with all Annexures K-1 to K-20, including draft Power Purchase Agreement, RMS Communication and Security Architecture-PM KUSUM SEDM Platform, etc. documents attached herewith as a part of the whole on line tender. By confirming this, I/We also confirm all the amendments thereafter issued time to time and will be automatically binding to us.
14. I/We also agree to abide and hereby confirm and agree that all uploaded documents are copy of original documents. By submission of these documents on-line, I/We hereby agree that all such uploaded soft copy documents on the bidding platform as authentic, legal and will be binding to us.

Enclosed:

1. Summary Details of Bidder/ JV Partners
2. Details of Material offered, Solar PV Modules, Configuration & Work execution capacity, existing & proposed after sales service centers in Gujarat

(Signature & Seal of Authorized Signatory for which POA attached)Name
of Authorized Signatory:

Designation:

Date:

Place:

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RfS document for feeder level Solarization under PM-KUSUM-Component-C in PGVCL

K.6. Summary Details of Bidder

The Bidder (in case of JV for each individual members) is required to upload scanned copy of this document duly filled and signed on their letter head with company Seal

In Response to NIT No:	PGVCL/Project/DSM/PM-KUSUM-C-FLS/ TN-6
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S. No.	Information:	Details:
1.	Name of Bidder:	
2.	Bidding entity:	(JV / Sole Bidder)
3.	JV partners: (Not applicable for Sole Bidder)	1. Lead Member: 2. Other Partner:
4.	Registration status:	(Company/ LLP/ Partnership/ Sole Proprietor)
5.	Registration Number:	
6.	GST Registration Number:	
7.	PAN No:	
8.	Key Contact details:	Name: Email id: Mobile no.:
9.	Registered office details:	Address: Phone no.: Email ids:
10.	Other Branch offices in India:	
	(i)	Address: Phone no.: Email ids:
	(ii)	Address: Phone no.: Email ids:
11.	Details of firm's Directors:	
	(i) <Name of director>	Designation: Address: Mobile Number: Email ID:
	(ii) <Name of director>	Designation: Address: Mobile Number: Email ID:
	(iii) <Name of director>	Designation: Address: Mobile Number: Email ID:
	(iv) <Name of director>	Designation: Address: Mobile Number: Email ID:

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12.	If Manufacturer of any item, theName of products being manufactured:	
13.	Address of Manufacturing unit:	
14.	Brief details of firm's work experiences:	

(Signature & Seal of Authorized Signatory for which POA attached)Name

of Authorized Signatory:

Designation:

Date:

Place:

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K.7. Details of Material

(Annexure-K7 is not require to be submitted with Tender but successful SPG shall require to submit before PPA)

In Response to NIT No:	PGVCL/Project/DSM/PM-KUSUM-C-FLS/ TN-6
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S. No.	Material	Per unit power rating (Watts)	Name of Manufacturer with whom Bidder has made MoU of supply material under this project	Manufacturing Country	Production Capacity of the material (per annum)	Tested from..... {Enclose the test certificate}
1	SPV Modules					
2	Invertors					
3	Meters					
4	Circuit Breakers					
5	Conductor / Cable					
6	Other Material					

Note:

1. Also power performance test data sheets of all modules. The exact power of the module shall be indicated if the data sheet consists of a range of modules with varying output power.
2. Also provide complete technical data sheets for each equipment giving details of the specifications along with make/makes along with basic design of the PV Installation setup and power evacuation, synchronization along with protection equipment.

(Signature & Seal of Authorized Signatory for which POA attached)Name

of Authorized Signatory:

Designation:

Date:

Place:

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K.8. Details of Bidders Eligibility Requirements

The Bidder is required to upload scanned copies of this document along with supporting documents duly filled On Letterhead and signed with company Seal.

To
The Chief Engineer (Project),
Paschim Gujarat Vij Company Ltd.,
Regd. & Corporate Office,
"Paschim Gujarat Vij Seva Sadan",
Laxminagar, Nana Mava main road,
RAJKOT-360004, (Gujarat)

Sub: Bid towards RfS for Solar Power Generator (SPG) for work of Design, survey, supply, installation, testing, commissioning, operation & maintenance for 25 years (unless extended by both the parties on mutual agreement) from COD of grid connected **Feeder level** solar power plant, its associated 11kV line to connect the plant with concerned substation and RMS of solar power plant through RESCO model for solarization of various 11kV feeders of associated 66/11kV substation in PGVCL under PM-KUSUM scheme – Component C -feeder level Solarization (FLS).

Ref: NIT NO: PGVCL/Project/DSM/PM-KUSUM-C-FLS/ TN-6

We hereby declare that we are eligible for bidding in reference to "Eligibility Requirements" of the RfS document vide above referenced NIT No. and submit the following certificate(s) /documents in support:

S. No.	Criteria	Documents Required	Status & Supporting Documents Attached
1.	Bidder can be sole/ single bidder OR, Joint Venture (JV) of up to 2 (two) members, with one of the members as a Lead Member	In case of JV, Deed of Undertaking	Status: Documents Attached: Yes/No (Attached at Annexure..... to this letter)
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 case of JV, all the members	e) In case of Company – Copy of Registration/ Incorporation Certificate f) In case of LLP – Copy of Deed of Partnership g) In case of Partnership – Copy of Deed of Partnership h) In case of Sole Proprietor – Duly notarized Undertaking from Sole proprietor	Status: Documents Attached: Yes/No (Attached at Annexure..... to this letter)

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RfS document for feeder level Solarization under PM-KUSUM-Component-C in PGVCL

S. No.	Criteria	Documents Required	Status & Supporting Documents Attached
	must fulfill this requirement and submit the documents as per the RfS document.		
3.	The Bidder must have the required GST Registration. In case of JV, all the members must fulfil this requirement. If one of the partners is new, then new partner should have applied for GST Registration. Bidder is to submit the proof of document containing registered application of new partner along with payment receipt of registration charges towards GST Registration. However, other partner must have valid GST Number. Bidder is responsible to submit GST number with documents in support in respect of other member, within 15 (Fifteen) days from the date of issue of LOI. If the bidder failed to do so, SD/PBG of the bidder for the respective plant will be forfeited.	Copy of GST registration certificate with legible GSTIN.	Status: Documents Attached: Yes/No (Attached at Annexure..... to this letter)
4.	The Bidder must have valid PAN Number. If one of the partners is new, then new partner should have applied for PAN Registration. Bidder is to submit the proof of document containing registered application of new partner along with payment receipt of registration charges towards GST Registration. However, other partner must have valid PAN Number. Bidder is responsible to submit PAN number with documents in support in respect of other member, within 15 (Fifteen) days from the issue of LOI. If the bidder	Copy of Pan Card	Status: Documents Attached: Yes/No (Attached at Annexure..... to this letter)

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RfS document for feeder level Solarization under PM-KUSUM-Component-C in PGVCL

	failed to do so, SD/PBG of the bidder will be forfeited and bid will be ineligible for any further processing.		
5.	The Bidder should have Electrical contractor license in Gujarat. In case of non-availability of the same at the time of bid submission, the contractor should submit a valid electrical contractor license issued by Govt. of Gujarat within 1 month of award of contract. The bidders should submit an undertaking in this regard along with the bid. Or submit a copy of contract executed for electrical work with a contractor having a valid license. In case of JV, any one of the members must fulfill this requirement and submit the documents as per the RfS document.	Copy of Registration Certificate issued	Status: Documents Attached: Yes/No (Attached at Annexure..... to this letter)
6.	The bidders should be qualified, not be insolvent, not be in receivership, not be bankrupt or being wound up, should not have affairs administered by a court or a judicial officer, should not have business activities suspended, should not be blacklisted or debarred by any utility / government agency, should not have a conflict of interest. In case of JV, all the members must fulfill this requirement.	The bidder shall provide an Undertaking as per the Format K.15. In case of JV, all the members must submit the undertaking as per the Format K.15.	Status: Documents Attached: Yes/No (Attached at Annexure..... to this letter)
7	The bidder must submit a Power of Attorney (POA) authorizing a person to sign the documents on behalf of the Bidder, submit technical, commercial information and attend meetings on behalf of the Bidder. In case of JV, all the JV members must submit individual PoA with supporting BoD resolution, except in case of proprietor wherein only undertaking in this regard is to be submitted along with combined PoA (signed by individually	Sole Bidder to provide POA as per the applicable Law as provided in SECTION - K:Format K.2 In case of JV, Undertaking by JV as per the format Format K.4 and POA as per the format provided in Format K.3	Status: Documents Attached: Yes/No (Attached at Annexure..... to this letter)

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RfS document for feeder level Solarization under PM-KUSUM-Component-C in PGVCL

	authorized person of each JV member)		
8.	The bidder should have "No Conflict of Interest" as defined in SECTION - G: clause SECTION - G:5.1.5 of this RfS document. Bidders have an obligation to disclose any situation of actual or potential conflict of interest. Failure to disclose said situations may lead to the disqualification of the Bidder or the termination of its Contract. In case of JV, all the members must fulfill this requirement.	The bidder shall provide an undertaking as per the format provided in as per the Format K.12 In case of JV, all the members shall submit the undertaking as per the Format K.12	Status: Documents Attached: Yes/No (Attached at Annexure..... to this letter)

All supporting documents enclosed.

(Signature & Seal of Authorized Signatory for which POA attached)Name
of Authorized Signatory:

Designation:

Date:

Place:

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RfS document for feeder level Solarization under PM-KUSUM-Component-C in PGVCL

K.9. Details of Bidders Qualification Requirements

The Bidder is required to upload scanned copies of this document along with supporting documents duly filled On Letterhead and signed with company Seal.

To
The Chief Engineer (Project),
Paschim Gujarat Vij Company Ltd.,
Regd. & Corporate Office,
"Paschim Gujarat VijSevaSadan",
Laxminagar, Nana Mava main road,
RAJKOT-360004, (Gujarat)

Sub: Bid towards RfS for Solar Power Generator (SPG) for work of Design, survey, supply, installation, testing, commissioning, operation & maintenance for 25 years (unless extended by both the parties on mutual agreement) from COD of grid connected **Feeder level** solar power plant, its associated 11kV line to connect the plant with concerned substation and RMS of solar power plant through RESCO model for solarization of various 11kV feeders of associated 66/11kV substation in PGVCL under PM-KUSUM scheme – Component C -feeder level Solarization (FLS).

Ref: NIT NO: PGVCL/Project/DSM/PM-KUSUM-C-FLS/ TN-6.

We hereby declare that we are eligible for bidding in reference to "Qualification Requirements" of the RfS document vide above referenced NIT No. and submit the following certificate(s) /documents in support:

S. No.	Criteria	Documents Attached Details
1	Technical Criteria	
1.1	Bidder shall have experience of execution of supply, installation and commissioning of grid connected solar power plants with cumulative capacity of 500 KWp considering capacity of individual solar plants of 03 KWp or more, during last five years with any govt. or private organization in India. In case of JV, all the partners of the JV shall collectively meet this technical criteria. In case of JV, if one partner is new, it's experience will be considered as a zero for preceding years.	Meeting Qualification: (Yes/No) Documents along with Format..... attached in Annexure.... to this letter
2	Financial Criteria	
2.1	The Bidder should have positive net worth for each of the last three Financial Years (FY:19-20, FY:20-21 & FY:21-22). In case of JV, at least one member must fulfil this requirement. In case of JV, if firm is new, it's Net worth and turnover will be considered as a zero for preceding years.	Meeting Qualification: (Yes/No) Documents along with Format..... attached in Annexure....to this letter

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RfS document for feeder level Solarization under PM-KUSUM-Component-C in PGVCL

2.2	To ascertain that the Bidder has sufficient means to manage the fund requirements for the Project, the Bidder shall be required to have Minimum Average Annual Turnover during LAST 3 financial years (FY2019-20, FY 2020-21, FY2021- 22) not be less than amount in Rs. mentioned against each separate individual Solar Plant in Annexure K20 for which the bidder wants to bid. (If audited annual accounts for FY 2021-22 are not available, provide accounts for FY 2020-21, FY 2019-20 and 2018-19.) If the Bidder wants to participate in the bid for the more than one solar plants, the bidder shall require to have the average annual Turnover not less than the individual separate amount mentioned against respective individual Solar plants in Annexure K20 for which plants, the bidder wants to bid. The bidder shall ensure that the average annual turnover of the bidder must be higher than the individual turn over mentioned in the bid against the solar plant selected by the bidder for bidding. In case of bidders the turnover is less than the turnover of the selected plant, the bid will be rejected and the bidder will be disqualified for the further process of bid for that plant. In case of JV, all the partners of the JV shall collectively meet this criteria.	
-----	--	--

Supporting Documents enclosed.

(Supporting Documents, wherever required & applicable are to be attached at Annexure to this letter.....)

(Signature & Seal of Authorized Signatory for which POA attached)Name
of Authorized Signatory:

Designation:

Date:

Place:

K.10.

Work Experience Certificate for Technical Qualification

The Bidder is required to upload scanned copies of this document along with supporting documents duly filled On Letterhead and signed with company Seal.

In Response to NIT No:	PGVCL/Project/DSM/PM-KUSUM-C-FLS/ TN-6
------------------------	--

Name of Bidder (In case of JV, name of Lead Member and Partner having experience): _____

Sr. No.	Client Name	Description of Work	Work order No.	Date of order	Amount of order Rs. in Lakh	Date of commissioning	Solar plant capacity in KW	Experience Certificate attached (Yes /No)
TOTAL:								

(Signature & Seal of Authorized Signatory for which POA attached)

Name of Authorized Signatory: Designation:

Date:

Place:

Note:

- The details of projects executed during period mentioned above shall be listed in as per the above format. In support of above, self-certified Copy of work orders and a certificate issued by the govt. or private organization towards the satisfactory work completion to be furnished by the Bidder. In absence of any one, it will not be considered for qualifying in technical bid.
- In case of JV, both the partners should collectively meet the total work experience requirement.

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RfS document for feeder level Solarization under PM-KUSUM-Component-C in PGVCL

K.11. Certificate of Bidder's Financial Qualification

(On Letterhead of CA for the bidder (Bidder/ Lead Member/ Other Member) for which the below details are provided. In Case of JV the following format is to be provided by Each Member of the Joint Venture separately).

The Bidder is required to upload scanned copy in on-line Mode.

Financial Qualification Certificate for Annual Turnover and Positive Network

In Response to NIT No:	PGVCL/Project/DSM/PM-KUSUM-C-FLS/ TN-6
------------------------	--

TO WHOMSOEVER IT MAY CONCERN

We have verified the books of accounts and related record of M/s. _____ situated at Address of the factory/firm> _____ and on verification of the records, we hereby certify that **average Turnover and net worth** of this mentioned entity/firm during the last three financial years which are as under:

Sr. No.	Financial Year	Total Turnover Rupees in LAKHS	Net worth (Positive/Negative)
1	2018-19		
2	2019-20		
3	2020-21		
4	2021-22		
Total (Last Three years only)			
Average Annual Turn Over of last three years			

ABOVE FIGURE OF TURN OVER IS MENTIONED IN RUPEES IN LAKH.

(Signature & Seal of Authorized Signatory for which POA attached)

Name of Authorized Signatory:

Designation:

Date:

Place:

(Signature & Seal of Practicing Chartered Account)

Certifying Chartered Accountant:

Name of Firm:

UDIN No:

Date:

Place:

Note:

1. In addition to above certificate from Chartered Accountant, Bidder is required to submit firm's annual audited Balance sheet and Profit & Loss statement for last 5 years till FY21. If audited annual accounts for FY 2021-22 are not available, provide accounts for FY 2020-21, FY 2019-20 and 2018-19.)
2. In case of JV, the form shall also be signed by respective entity's authorized signatory along with Authorized Signatory for which POA is attached.

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RfS document for feeder level Solarization under PM-KUSUM-Component-C in PGVCL

K.12. Declaration for Compliance with the Code of integrity and No Conflict of interest

(On Letterhead of Bidder giving said declaration)

(In Case of JV, the following format is to be provided by Each Member of the Joint Venture on their respective letterhead, signed by respective authorized Signatory along with Authorized Signatory for which POA is attached with Bid)

The Bidder is required to submit this document On-line ONLY

To
The Chief Engineer (Project),
Paschim Gujarat Vij Company Ltd.,
Regd. & Corporate Office,
"Paschim Gujarat Vij Seva Sadan",
Laxminagar, Nana Mava main road,
RAJKOT-360004, (Gujarat)

Sub: Bid towards RfS for Solar Power Generator (SPG) for work of Design, survey, supply, installation, testing, commissioning, operation & maintenance for 25 years (unless extended by both the parties on mutual agreement) from COD of grid connected **Feeder level** solar power plant, its associated 11kV line to connect the plant with concerned substation and RMS of solar power plant through RESCO model for solarization of various 11kV feeders of associated 66/11kV substation in PGVCL under PM-KUSUM scheme – Component C -feeder level Solarization (FLS).

Ref: NIT NO: PGVCL/Project/DSM/PM-KUSUM-C-FLS/ TN-6

We hereby declare that, we are in complete compliance of clause of Conflict of interest as per RfS Document.

(Signature & Seal of Authorized Signatory for which POA attached)Name

of Authorized Signatory:

Designation:

Date:

Place:

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RfS document for feeder level Solarization under PM-KUSUM-Component-C in PGVCL

K.13. Declaration Regarding Alternative Deviations and Exceptions to the Provision

The Bidder is required to upload scanned copy of this document duly filled and signed *On Letterhead with company Seal*

To
The Chief Engineer (Project),
Paschim Gujarat Vij Company Ltd.,
Regd. & Corporate Office,
"Paschim Gujarat Vij Seva Sadan",
Laxminagar, Nana Mava main road,
RAJKOT-360004, (Gujarat)

Sub: Bid towards RfS for Solar Power Generator (SPG) for work of Design, survey, supply, installation, testing, commissioning, operation & maintenance for 25 years (unless extended by both the parties on mutual agreement) from COD of grid connected **Feeder level** solar power plant, its associated 11kV line to connect the plant with concerned substation and RMS of solar power plant through RESCO model for solarization of various 11kV feeders of associated 66/11kV substation in PGVCL under PM-KUSUM scheme – Component C -feeder level Solarization (FLS).

Ref: NIT NO: PGVCL/Project/DSM/PM-KUSUM-C-FLS/ TN-6.

Dear Sir,

The bidder shall itemize any deviation from the RfS document included in his bid. Each item shall be listed (separate sheets may be used and enclosed with this Attachment) with the following information:

Sl. No.	Reference clause in the RfS document	Deviation
1		
2		
3		

(Signature & Seal of Authorized Signatory for which POA attached)Name of Authorized Signatory:

Designation:

Date:

Place:

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RfS document for feeder level Solarization under PM-KUSUM-Component-C in PGVCL

K.14. Declaration Regarding No Omissions or Inconsistencies or Reservations

The Bidder is required to upload scanned copy of this document duly filled and signed *On Letterhead* with company Seal

To

The Chief Engineer (Project),
Paschim Gujarat Vij Company Ltd.,
Regd. & Corporate Office,
"Paschim Gujarat Vij Seva Sadan",
Laxminagar, Nana Mava main road,
RAJKOT-360004, (Gujarat)

Sub: Bid towards RfS for Solar Power Generator (SPG) for work of Design, survey, supply, installation, testing, commissioning, operation & maintenance for 25 years (unless extended by both the parties on mutual agreement) from COD of grid connected **Feeder level** solar power plant, its associated 11kV line to connect the plant with concerned substation and RMS of solar power plant through RESCO model for solarization of various 11kV feeders of associated 66/11kV substation in PGVCL under PM-KUSUM scheme – Component C -feeder level Solarization (FLS).

Ref: NIT NO: PGVCL/Project/DSM/PM-KUSUM-C-FLS/ TN-6.

Dear Sir,

We confirm that Bid submitted by us and have been filled up by us as per the provisions of the RfS document issued vide above-referenced NIT. We have also uploaded price bidelectronically as per the provisions of the RfS document. Further, we have noted that the same shall be evaluated as per the provisions of the RfS document.

Further, we hereby confirm that except as mentioned in the Declaration Regarding Alternative, Deviations and Exceptions to the Provisions hereof and/or the Covering Letter, forming part of our Bid:

- (i) There are no discrepancies/inconsistencies and deviations/omissions/ reservations to the RfS document, in the price bid;
- (ii) The description of items and the unit thereof in the price schedules are in conformity with those indicated in the price schedule of the RfS document without any deviation to the specified scope of work.

We also confirm that in case any discrepancies/ inconsistencies and deviations/ omissions/ reservations, as referred to in para (i) and (ii) above, is observed in the online price bid, the same shall be deemed as withdrawn/rectified without any financial implication, whatsoever to PGVCL. However, in case of any arithmetical errors, the same shall be governed as per the provisions of RfS document SECTION - G:

(Signature & Seal of Authorized Signatory for which POA attached)Name

of Authorized Signatory:

Designation:

Date:

Place:

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RfS document for feeder level Solarization under PM-KUSUM-Component-C in PGVCL

K.15. Undertaking for No Blacklisting & No Banning

(On Non-Judicial Stamp Paper of Rs. 300/- attested by Notary Public/ First Class Magistrate)(In case of JV the undertaking is to be provided by each Member of the Joint Venture)

The Bidder is required to submit this document On-line ONLY

To
The Chief Engineer (Project),
Paschim Gujarat Vij Company Ltd.,
Regd. & Corporate Office,
"Paschim Gujarat Vij Seva Sadan",
Laxminagar, Nana Mava main road,
RAJKOT-360004, (Gujarat)

Sub: Bid towards RfS for Solar Power Generator (SPG) for work of Design, survey, supply, installation, testing, commissioning, operation & maintenance for 25 years (unless extended by both the parties on mutual agreement) from COD of grid connected **Feeder level** solar power plant, its associated 11kV line to connect the plant with concerned substation and RMS of solar power plant through RESCO model for solarization of various 11kV feeders of associated 66/11kV substation in PGVCL under PM-KUSUM scheme – Component C -feeder level Solarization (FLS).

Ref: NIT NO: PGVCL/Project/DSM/PM-KUSUM-C-FLS/ TN-6.

I / We hereby declare that presently our Company/Limited Liability Partnership/ Partnership Firm/ Sole Proprietorship is not insolvent, not in receivership, not bankrupt or wound up, not have affairs administered by a court or a judicial officer, not have business activities suspended.

I / We further declare that presently our Company/Limited Liability Partnership/ Partnership Firm/ Sole Proprietorship is not blacklisted or debarred by any utility / government agency, and not have a conflict of interest.

If this declaration is found to be incorrect then without prejudice to any other action that may be taken, our security may be forfeited in full and the tender if any to the extent accepted may be cancelled.

(Signature & Seal of Authorized Signatory for which POA attached)Name

of Authorized Signatory:

Designation:

Date:

Place:

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RfS document for feeder level Solarization under PM-KUSUM-Component-C in PGVCL

K.16. Performance Bank Guarantee Format

(On Non judicial Stamp of worth of Rs.300/-)

Bank Guarantee No.

Date.....

Contract No.....

Contract for work of Bid towards RfS for Solar Power Generator (SPG) for work of Design, survey, supply, installation, testing, commissioning, operation & maintenance for 25 years (unless extended by both the parties on mutual agreement) from COD of grid connected Feeder level solar power plant, its associated 11kV line to connect the plant with concerned substation and RMS of solar power plant through RESCO model for solarization of various 11kV feeders of associated 66/11kV substation in PGVCL under PM-KUSUM scheme – Component C -feeder level Solarization (FLS).under NIT No: PGVCL/Project/DSM/PM-KUSUM-C-FLS/ TN-6

To

The Chief Engineer (Project),
Paschim Gujarat Vij Company Ltd.,
Regd. & Corporate Office,
"Paschim Gujarat Vij Seva Sadan",
Laxminagar, Nana Mava main road,
RAJKOT-360004, (Gujarat)

Dear Sir,

We refer to the Letter of Intent ("LOI") <Insert LOI No:>, issued on <Insert Date of issue of LOI by PGVCL> by Paschim Gujarat Vij Company Limited(hereinafter referred to as "PGVCL"), having its Registered Office at Laxminagar, Nana Mava main road, RAJKOT- 360004 (Gujarat), to M/s (Name of SPG), having its Principal place of business at(Address of Contractor) and Registered Office at (Registered address of Contractor)..... ("SPG") concerning "Design, survey, supply, installation, testing, commissioning, operation & maintenance for 25 years (unless extended by both the parties on mutual agreement) from COD of grid connected Feeder level solar power plant, its associated 11kV line to connect the plant with concerned substation and RMS of solar power plant through RESCO model for solarization of various 11kV feeders of associated 66/11kV substation in PGVCL under PM-KUSUM scheme – Component C - feeder level Solarization (FLS). under NIT No: PGVCL/Project/DSM/PM-KUSUM-C-FLS/ TN-6 on RESCO model, and the LOI having been accepted by the SPG vide <.....Insert Letter No.....>, resulting in Letter of Award to be issued vide <.....Insert Work order No.....> dated

By this letter we, the undersigned,(insert name & address of the issuing bank) , a Bank (which expression shall include its successors, administrators, executors and assigns) organized under the laws of and having its Registered/Head Office at(insert address of registered office of the bank)..... do hereby irrevocably guarantee payment to PGVCL up to Rs. _____ (_____ rupees only) until 2 months (i.e. sixty (60) days) beyond the 9 months from the date of signing of Power Purchase Agreement (PPA) between SPG and PGVCL i.e., upto and inclusive of (dd/mm/yy).

We undertake to make payment under this Letter of Guarantee upon receipt by us of your first written demand signed by PGVCL duly authorized officer or the authorized officer of PGVCL declaring the SPG to be in default under the Contract and without civil or argument any sum or sums within the above named limits, without your need to prove or show grounds or reasons for your demand and without the right of the SPG to dispute or question such demand.

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RfS document for feeder level Solarization under PM-KUSUM-Component-C in PGVCL

Our liability under this Letter of Guarantee shall be to pay to PGVCL whichever is the lesser of the sum so requested or the amount then guaranteed hereunder in respect of any demand duly made hereunder prior to expiry of the Letter of Guarantee, without being entitled to inquire whether or not this payment is lawfully demanded.

This letter of Guarantee shall remain in full force and shall be valid from the date of issue until 2 months (i.e. sixty (60) days) beyond the 9 months from the date of signing of Power Purchase Agreement (PPA) between SPG and PGVCL i.e., upto and inclusive of (dd/mm/yy) and shall be extended from time to time for such period (not exceeding one year), as per the terms & conditions of RfS document.

Except for the documents herein specified, no other documents or other action shall be required, notwithstanding any applicable law or regulation.

Our liability under this Letter of Guarantee shall become null and void immediately upon its expiry, whether it is returned or not, and no claim may be made hereunder after such expiry or after the aggregate of the sums paid by us to PGVCL shall equal the sums guaranteed hereunder, whichever is the earlier.

All notices to be given under shall be given by registered (airmail) posts to the addressee at the address herein set out or as otherwise advised by and between the parties hereto.

All disputes arising under the said Guarantee between the Bank and PGVCL or between the SPG and PGVCL pertaining to the Guarantee shall be subject to the jurisdiction of courts only at Rajkot in Gujarat alone.

We hereby agree that any part of the Contract may be amended, renewed, extended, modified, compromised, released or discharged by mutual agreement between you and the SPG, and this security may be exchanged or surrendered without in any way impairing or affecting our liabilities hereunder without notices to us and without the necessity for any additional endorsement, consent or guarantee by us, provided, however, that the sum guaranteed shall not be increased or decreased.

No action, event or condition which by any applicable law shall operate to discharge us from liability hereunder shall have any effect and we hereby waive any right we may have to apply such law so that in all respects our liability hereunder shall be irrevocable and, except as stated herein, unconditional in all respects.

For and on behalf of the Bank

[Signature of the authorised signatory(ies)]

Signature _____
Name _____
Designation _____
POA Number _____

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Contact Number(s): Tel. _____ Mobile _____ Fax Number _____
email _____
Common Seal of the Bank _____

Witness:

Signature _____

Name _____

Address _____

Contact Number(s): Tel. _____ Mobile _____ email _____

Note:

1. For the purpose of executing the Bank Guarantee, the non-judicial stamp papers of appropriate value shall be purchased in the name of Bank who issues the 'Bank Guarantee'.
2. The Bank Guarantee shall be signed on all the pages by the Bank Authorities indicating their POA nos. and shall invariably be witnessed.
3. The Bank Guarantee shall be in accordance with the proforma as provided. However, in case the issuing bank insists for additional paragraph for limitation of liability, the following may be added at the end of the proforma of the Bank Guarantee [i.e., end paragraph of the Bank Guarantee preceding the signature(s) of the issuing authority(ies) of the Bank Guarantee]:

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K17 Price Bid Format

The bidder shall require to quote their tariff in the on-line price bid on n-procure.

ANNEXURE- K18

Draft Power Purchase Agreement (PPA)

-----Seperetly attached-----

ANNEXURE- K19

Communication Architecture between RMS and State Level Server

-----Seperetly attached-----

ANNEXURE- K20

List of Solar Power Plants with detils viz: Name of Substation, Name of feeders, Plant capacity, Energy requirment, EMD against plant, PBG against plant, Requirment of minumum Turn Over, etc.

-----Seperetly attached-----

Annexure - E4

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RfS document for feeder level Solarization under PM-KUSUM-Component-C in PGVCL

(On Non-Judicial Stamp Paper of Rs. 300/- attested by Notary Public/ First Class Magistrate)

NIT No: PGVCL/Project/DSM/PM-KUSUM-C-FLS/ TN-6 DT: 14-10-2022

K.18. DRAFT Power Purchase Agreement (PPA)

POWER PURCHASE AGREEMENT

for

Procurement of ____ MWp

Solar Power on Long Term basis under

Feeder level Solarization -Component-C of

PM-KUSUM Component-C Scheme for

____ 11 KV Feeder(s) of ____ 66/11 KV Substation,

____ sub-division, ____ Division, ____ Circle of PGVCL

Between

<name of Solar Power Generator (SPG)>

and

PASCHIM GUJARAT VIJ COMPANY LIMITED

[____ 2022]

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RfS document for feeder level Solarization under PM-KUSUM-Component-C in PGVCL

This Power Purchase Agreement is made on the _____ day of _____ of 20____ at _____.

Between

.....<name of SPG>....., selected as Solar Power Generator for implementation of Solar Power Project with associated 11kV line under **Pradhan Mantri Kisan Urja Suraksha evam Utthan Mahabhiyan (PM KUSUM) Scheme Component C (feeder level solarization)**, having registered office at<Address of SPG>..... (hereinafter referred to as "**Solar Power Generator or SPG**", which expression shall, unless repugnant to the context or meaning thereof, be deemed to include its successors and permitted assigns) as a Party of the **First Part**;

And

PASCHIM GUJARAT VIJ COMPANY LIMITED a company incorporated under the Companies Act 1956, having its registered office at, _____ (hereinafter referred to as '**PGVCL**' " which expression shall, unless repugnant to the context or meaning thereof, be deemed to include its successors and assignees) as a Party of the **Second Part**;

The SPG and PGVCL are individually referred to as 'Party' and collectively referred to as 'Parties'.

WHEREAS:

- A. The Ministry of New and Renewable Energy [MNRE] has launched a guidelines for feeder level solarization under Component C of PM KUSUM Scheme on 04th Dec 2020.
- B. PGVCL initiated a selection process for Solar Power Generator (SPG) to set up _____MWp solar power plant through RESCO mode and procurement of power generated from the solar power plant as per the terms and conditions contained in the RfS No: _____ DT: _____
- C. The SPG has been selected for the work of design, survey, supply, installation, testing, commissioning and operation & maintenance of grid connected _____MWp solar power plant, its associated 11kV line to connect the plant with concerned substation and RMS of solar power plant for Solarization of _____ 11kV feeder(s) of 66/11kV _____ substation under _____ subdivision, _____ Division, _____ Circle of PGVCL.
- D. PGVCL has issued the Letter of Award/Work Order No. _____ dated in favour of<name of SPG> as per the terms and conditions contained in the RfS.
- E. The SPG has furnished the Project Security Amount of Rs. _____ (_____ rupees only) in

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RfS document for feeder level Solarization under PM-KUSUM-Component-C in PGVCL

the form of Bank Guarantee in favour of PGVCL, _____.

- F.** The SPG has fulfilled the terms and conditions for signing this Power Purchase Agreement as a definitive agreement for establishing the Solar Power Project of ____ MWp under Feeder level solarization –Component-C of PM-KUSUM Scheme for _____ feeder(s) of _____ 66/11kV substation, _____ sub-division, _____ division, _____ circle of PGVCL under _____ district and sale of electricity by the SPG to PGVCL at 66/11 kV _____ substation.
- G.** Hon'ble GERC vide judgement dated _____ in petition no. _____ has adopted the tariff discovered in the competitive bidding process conducted vide RfS dated _____ wherein the SPG has emerged as a successful bidder.
- H.** The parties have agreed to execute this Power Purchase Agreement in terms of the RfS and the Letter of Award in regard to the work of Design, survey, supply, installation, testing, commissioning, operation & maintenance for 25 years (unless extended by both the parties on mutual agreement) from COD of grid connected **Feeder level** solar power plant having capacity of _____ MW, its associated 11kV line to connect the plant with concerned substation and RMS of solar power plant through RESCO model for solarization of _____ 11kV feeders of associated _____ 66/11kV substation in PGVCL under PM-KUSUM scheme – Component C (feeder level solarization) Now therefore, in consideration of the premises and mutual agreements, covenants and conditions set forth herein, it is hereby agreed by and between the Parties as follows:

ARTICLE 1: DEFINITIONS AND INTERPRETATION

1.1 Definitions

The terms used in this Agreement, unless as defined below or repugnant to the context, shall have the same meaning as assigned to them by the Electricity Act, 2003 and the rules or regulations framed there under, including those issued/framed by the Appropriate Commission (as defined hereunder), as amended or re-enacted from time to time.

"Electricity Act, 2003"	shall mean the Electricity Act, 2003 and include any modifications, amendments and substitution from time to time;
"Agreement" or "Power Purchase Agreement" or "PPA"	shall mean this Power Purchase Agreement including its recitals and Schedules, amended or modified from time to time in accordance with the terms hereof;
"Appropriate Commission"	Appropriate Commission or "GERC" shall mean the Gujarat Electricity Regulatory Commission (GERC)

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RfS document for feeder level Solarization under PM-KUSUM-Component-C in PGVCL

"Bill Dispute Notice"	shall mean the notice issued by a Party raising a Dispute regarding a Monthly Bill or a Supplementary Bill issued by the other Party;
"Base rate of Late Payment Surcharge"	shall mean the marginal cost of funds based lending rate for one year of the State Bank of India, as applicable on the 1st April of the financial year in which the period lies, plus five percent and in the absence of marginal cost of funds based lending rate, any other arrangement that substitutes it, which the Central Government may, by notification, in the Official Gazette, specify. Provided that if the period of default lies in two or more financial years, the base rate of Late Payment Surcharge shall be calculated separately for the periods falling in different years.
"Business Day"	shall mean with respect to SPG and DISCOM, a day other than Sunday or a statutory holiday, on which the banks remain open for business in the State;
"Capacity Utilisation Factor" or "CUF"	CUF in a Year shall mean the ratio of the net output energy injected at delivery point of the SPV Power Plant in a Year versus installed Project capacity x 365 x 24 (i.e. CUF = Cumulative Project output in kWh / (installed Project capacity in kWp x 24 x 365)) The annual CUF will be calculated every year from 1st April of the year (COD for first year) to 31 st March next year.
"CFA"	Shall mean the Central finance Assistance to be provided by the Ministry of New and Renewable Energy Government of India under the Pradhan Mantri Urja Suraksha evam Utthaan Mahabhiyaan (PM-KUSUM) scheme as per the Guidelines for Implementation of Feeder Level Solarisation under Component-C of PM-KUSUM Scheme issued on date 4-12-2020 with subsequent amendment/s, if any.
"Change in Law"	shall have the meaning ascribed thereto in Article 12 of this Agreement;
"Commercial Operation Date (COD)"	shall mean the date certified by the DISCOM's committee upon successful commissioning (as per provisions of this Agreement) of the project when all equipments as per rated capacity have been installed and energy has flown into the grid.
"Competent Court of Law"	shall mean the Supreme Court of India or Gujarat High Court, or any tribunal or any similar judicial or quasi-judicial body that has jurisdiction in relation to issues relating to the Project.

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RfS document for feeder level Solarization under PM-KUSUM-Component-C in PGVCL

"Consents, Clearances and Permits"	shall mean all authorizations, licenses, approvals, registrations, permits, waivers, privileges, acknowledgements, agreements, or concessions required to be obtained from or provided by any concerned authority for the purpose of setting up of the generation facilities and/ or supply of power;
"Consultation Period"	shall mean the period of ninety (90) days or such other longer period as the Parties may agree, commencing from the date of issuance of a SPG Preliminary Default Notice or DISCOM Preliminary Default Notice as provided in Article 13 of this Agreement, for consultation between the Parties to mitigate the consequence of the relevant event having regard to all the circumstances;
"Contract Year"	shall mean the period beginning from the Effective Date and ending on the immediately succeeding March 31 and thereafter each period of 12 months beginning on April 1 and ending on March 31 provided that: 1) in the financial year in which the COD occurs, the Contract Year shall end on the date immediately before the COD and a new Contract Year shall commence once again from the COD and end on the immediately succeeding March 31, and thereafter each period of twelve (12) months commencing on April 1 and ending on March 31, and 2) provided further that the last Contract Year of this Agreement shall end on the last day of the Term of this Agreement or on termination of this agreement whichever is earlier.
"Contracted Capacity"	shall mean <u> </u> MWp AC contracted with DISCOM for supply by the SPG to DISCOM at the Delivery Point which shall be the maximum injection limit at delivery point in any 15 minute time block during the entire term of the PPA.
"Delivery Point"	"Delivery Point" shall mean the point at the voltage level of 11kV of the 66/11 kV Sub-station i.e. 11kV side of 66/11kV <u> </u> substation under this PPA. Metering shall be done at this interconnection point where the power is injected into the 66/11 kV Sub-station. For interconnection with grid and metering, the SPG shall abide by the relevant and applicable regulations, Grid Code notified by the State Commission and Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006 as amended and revised from time to time, or orders passed thereunder by the Appropriate Commission or CEA. All charges and losses related to Transmission of power from project up to Delivery Point shall be borne by the SPG without any reimbursement thereof.

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"Dispute"	shall mean any dispute or difference of any kind between DISCOM and the SPG, in connection with or arising out of this Agreement including but not limited to any issue on the interpretation and scope of the terms of this Agreement as provided in Article 16 of this Agreement;
DISCOM	Shall mean the Electricity Distribution Company. The DISCOM in this PPA is PGVCL.
"Due Date"	Due Date shall mean the thirtieth (30 th) day after a Monthly Bill (including all the relevant documents) or a Supplementary Bill is received in hard copy and duly acknowledged by PGVCL or, if such day is not a Business Day, the immediately succeeding Business Day, by which date such Monthly Bill or a Supplementary Bill is payable by PGVCL.
"Effective Date"	shall have the meaning ascribed thereto in Article 2.1 of this Agreement;
"Electricity Laws"	shall mean the Electricity Act, 2003 and the rules and regulations made there under from time to time along with amendments thereto and replacements thereof and any other Law pertaining to electricity including regulations framed by the Appropriate Commission;
"Event of Default"	shall mean the events as defined in Article 13 of this Agreement;
"Expiry Date"	Shall mean the date occurring twenty-five (25) years from the Commercial Operation Date provided that the supply of power shall be limited for a period of 25 years from the COD (unless extended by both the parties on mutual agreement);
"Financing Agreements"	shall mean the agreements pursuant to which the SPG has sought financing for the Power Project including the loan agreements, security documents, for the Power Project including the loan agreements, security documents, notes, indentures, security agreements, letters of credit and other documents, as may be amended, modified, or replaced from time to time, but without in anyway increasing the liabilities of PGVCL;
"Force Majeure" or "Force Majeure Event"	shall have the meaning ascribed thereto in Article 11 of this Agreement;

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"Indian Governmental Instrumentality"	shall mean the Government of India, Governments of state of Gujarat and any ministry, department, board, authority, agency, corporation, commission under the direct or indirect control of Government of India or the above state Government or both, any political sub- division of any of them including any court or Appropriate Commission or tribunal or judicial or quasi-judicial body in India
"Insurances"	shall mean the insurance cover to be obtained and maintained by the SPG in accordance with Article 8 of this Agreement;
"Interconnection Facilities"	shall mean the facilities on SPG's side of the Delivery Point for scheduling, transmitting and metering the electrical output in accordance with this Agreement and which shall include, without limitation, all other transmission lines and associated equipment, transformers, relay and switching equipment and protective devices, safety equipment and RTU, Data Transfer and Acquisition facilities for transmitting data subject to Article 7, the Metering System required for supply of power as per the terms of this Agreement;
"Invoice" or "Bill"	shall mean either a Monthly Bill / Supplementary Bill or a Monthly Invoice/ Supplementary Invoice raised by any of the Parties;
"Joint Meter Reading" or "JMR":	Shall mean the monthly joint meter reading statement which shall be jointly signed by SPG and PGVCL representative
"Late Payment Surcharge"	shall have the meaning ascribed thereto in Article 10. 1.7 of this Agreement;
"Law"	shall mean in relation to this Agreement, all laws including Electricity Laws in force in India and any statute, ordinance, regulation, notification or code, rule, or any interpretation of any of them by an Indian Governmental Instrumentality and having force of law and shall further include without limitation all applicable rules, regulations, orders, notifications by an Indian Governmental Instrumentality pursuant to or under any of them and shall include without limitation all rules, regulations, decisions and orders of the GERC;
"Letter of Credit" or "LC"	shall have the meaning ascribed thereto in Article 10.1.10 of this Agreement;
"Letter of Award" or "LoA"	shall mean work order issued by PGVCL to the SPG for the project;
MNRE"	shall mean the Ministry of New and Renewable Energy, Government of India;
"Month"	shall mean a period of thirty (30) days from (and excluding) the date of the event, where applicable, else a calendar month;

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"Party" and "Parties"	shall have the meaning ascribed thereto in the recital to this Agreement;
"Payment Security Mechanism"	shall have the meaning ascribed thereto in Article 10.1.10 of this Agreement
"PM-KUSUM "	Pradhan Mantri Urja Suraksha evam Utthaan Mahabhiyaan- A scheme notified by the Ministry of New and Renewable Energy Government of India with Guidelines for Implementation of Feeder Level Solarisation under Component-C of PM-KUSUM Scheme issued on date 4-12-2020.
"Power Project" or "Project"	shall mean the Solar Power generation facility of Contracted Capacity having a separate control system, metering and separate points of injection into the grid at Delivery point. The Project shall include all units and auxiliaries such as water supply, treatment or storage facilities, bay(s) for transmission system in the switchyard, dedicated electrical line up to the Delivery Point and all the other assets, buildings/structures, equipment, plant and machinery, facilities and related assets required for the efficient and economic operation of the power generation facility, whether completed or at any stage of development and construction or intended to be developed and constructed for the purpose of supply of power as per this Agreement;.
"Preliminary Default Notice"	shall have the meaning ascribed thereto in Article 13 of this Agreement;
"Project Capacity"	shall mean the maximum AC capacity of the Project at the point of injection for which the Power Purchase Agreement has been signed.
"Prudent Utility Practices"	shall mean the practices, methods and standards that are generally accepted internationally from time to time by electric utilities for the purpose of ensuring the safe, efficient and economic design, construction, commissioning, operation and maintenance of power generation equipment and which practices, methods and standards shall be adjusted as necessary to take account of: a. operation and maintenance guidelines recommended by the manufacturers of the plant and equipment to be incorporated in the Power Project b. the requirements of Indian Law; and the physical conditions at the site of the Power Project
"Rebate"	shall have the same meaning as ascribed thereto in Article 10.1.9 of this Agreement;

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"RESCO"	shall mean Renewable Energy Service Company i.e. an energy service company that develops, installs, finances, operates and owns the solar power project and supplies power generated from the Project to the PGVCL.
"Rupees", "Rs.",	shall mean Indian rupees, the lawful currency of India;
"Scheduled Commissioning Date" or "SCD" of the Project	Shall mean date that is nine (9) Months from the Date of execution of this PPA between _PGVCL
"Tariff"	Shall have the same meaning as provided for in Article 9 of this Agreement;
"Tariff Payment"	shall mean the payments to be made under Monthly Bills as referred to in Article 10 and the relevant Supplementary Bills;
"Termination Notice"	shall mean the notice given by either Parties for termination of this Agreement in accordance with Article 13 of this Agreement;
"Term of Agreement"	shall have the meaning ascribed thereto in Article 2 of this Agreement;

1.2 INTERPRETATION

Save where the contrary is indicated, any reference in this Agreement to:

- i) "Agreement" shall be construed as including a reference to its Schedules, Appendices
- ii) An "Article", a "Recital", a "Schedule" and a "paragraph / clause" shall be construed as a reference to an Article, a Recital, a Schedule and a paragraph/clause respectively of this Agreement;
- iii) A "crore" means a reference to ten million (10,000,000) and a "lakh" means a reference to one tenth of a million (1,00,000).
- iv) An "encumbrance" shall be construed as a reference to a mortgage, charge, pledge, lien or other encumbrance securing any obligation of any person or any other type of preferential arrangement (including, without limitation, title transfer and retention arrangements) having a similar effect;
- v) "Indebtedness" shall be construed so as to include any obligation (whether incurred as principal or surety) for the payment or repayment of money, whether present or future, actual or contingent;
- vi) A "person" shall be construed as a reference to any person, firm, company, corporation, society, trust, government, state or agency of a state or any association or partnership (whether or not having separate legal personality) of two or more of the above and a person shall be construed as including a reference to its successors, permitted transferees and permitted assigns in accordance with their respective interests;

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- vii) "*Rupee*", "*Rupees*" and "*Rs.*" shall denote Indian Rupees, the lawful currency of India;
- viii) The "*winding-up*", "*dissolution*", "*insolvency*", or "*reorganization*" of a company or corporation shall be construed so as to include any equivalent or analogous proceedings under the Law of the jurisdiction in which such company or corporation is incorporated or any jurisdiction in which such company or corporation carries on business including the seeking of liquidation, winding- up, reorganization, dissolution, arrangement, protection or relief of debtors;
- ix) Words importing the singular shall include the plural and vice versa;
- x) This Agreement itself or any other agreement or document shall be construed as a reference to this or to such other agreement or document as it may have been, or may from time to time be, amended, varied, novated, replaced or supplemented;
- xi) A Law shall be construed as a reference to such Law including its amendments or re-enactments from time to time;
- xii) A time of day shall, save as otherwise provided in any agreement or document be construed as a reference to Indian Standard Time;
- xiii) Different parts of this Agreement are to be taken as mutually explanatory and supplementary to each other and if there is any inconsistency between or among the parts of this Agreement, they shall be interpreted in a harmonious manner so as to give effect to each part;
- xiv) The tables of contents and any headings or sub-headings in this Agreement have been inserted for ease of reference only and shall not affect the interpretation of this Agreement.
- xv) The words "*hereof*" or "*herein*", if and when used in this Agreement shall mean a reference to this Agreement.
- xvi) The terms "*including*" or "*including without limitation*" shall mean that any list of examples following such term shall in no way restrict or limit the generality of the word or provision in respect of which such examples are provided.

ARTICLE 2: TERM OF AGREEMENT

2.1 *Effective Date*

- 2.1.1 This Agreement shall come into effect from the date of its execution by all the parties and such date shall be referred to as the Effective Date.

2.2 *Term of Agreement*

- 2.2.1 Subject to Article 2.3 and 2.4 of this Agreement, this Agreement shall be valid for a term from the Effective Date until the Expiry Date. This Agreement may be extended for a further period at least one hundred eighty (180) days prior to the Expiry Date, on mutually agreed terms and conditions.

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2.2.2 The SPG is free to operate their plants beyond the Expiry Date if other conditions like land lease / Right to Use of Land (as applicable), permits, approvals and clearances etc. allow. In such case unless otherwise agreed by PGVCL, PGVCL shall not be obligated to procure power beyond the Expiry Date.

2.3 Early Termination

2.3.1 This Agreement shall terminate before the Expiry Date if either PGVCL or SPG terminates the Agreement, pursuant to Article 13 of this Agreement.

2.4 Survival

2.4.1 The expiry or termination of this Agreement shall not affect any accrued rights, obligations and liabilities of the Parties under this Agreement, including the right to receive penalty as per the terms of this Agreement, nor shall it affect the survival of any continuing obligations for which this Agreement provides, either expressly or by necessary implication, which are to survive after the Expiry Date or termination including those under Article 11 (Force Majeure), Article 13 (Events of Default and Termination), Article 14 (Liability and Indemnification), Article 16 (Governing Law and Dispute Resolution), Article 17 (Miscellaneous Provisions), and other Articles and Schedules of this Agreement which expressly or by their nature survive the Term or termination of this Agreement shall continue and survive any expiry or termination of this Agreement.

2.5 Performance Bank Guarantee (PBG)

2.5.1. The Performance Bank Guarantee furnished under this Agreement shall be for guaranteeing the successful commissioning of the Project for power up to the Contracted Capacity within the time specified in this Agreement.

2.5.2. The failure on the part of the SPG to furnish and maintain the Performance Bank Guarantee shall be a material breach of the term of this Agreement on the part of the SPG.

2.5.3. The PBG shall be initially valid from the date of issue until 2 months (i.e. sixty (60) days) beyond the 9 months from the date of signing of Power Purchase Agreement (PPA).

2.5.4. The PBG will be returned to the SPG after successful commissioning of Solar power plant, after taking into account any penalties due to delay in commissioning as per terms and conditions of RfS.

2.5.5. CFA up to 100% of the total eligible CFA will be released to the RESCO developer through DISCOM on successful operation and performance of solar plant for two months after the commissioning with at least one month CUF as per minimum CUF agreed in PPA, as per MNRE's sanction for the CFA, subject to release of the same by MNRE-Gol

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2.5.6. On

ARTICLE 3: CONDITIONS SUBSEQUENT

- 3.1 The SPG agrees and undertakes to secure Project Financing Arrangements for its Project and should provide necessary documents to PGVCL in this regard within six Months from the Date of issue of Work order by PGVCL for the project.
- 3.2 The SPG shall identify the project land preferably within the distance of Five KM radius of the respective 66/11 KV Sub-station, get ownership of land or its lease rights and make necessary arrangement including ROW, clearances etc for the electrical line between 66/11 KV sub-station and the solar power plant. The SPG shall submit the final land documents within the period of 4 months after the date of signing of PPA or such other period as may be extended by DISCOM under Force Majeure provisions of Article 11 for the entire required land duly registered by appropriate revenue authority.

ARTICLE 4: CONSTRUCTION & DEVELOPMENT OF THE PROJECT

4.1 SPG's Obligations

- 4.1.1 The SPG undertakes to be responsible, at SPG's own cost and risk, for:
- a) The SPG shall be solely responsible and make arrangements for infrastructure for development of the Project and for Connectivity with the 66/11 kV sub- station for confirming the evacuation of power by the Scheduled Commissioning date or COD, whichever is earlier, and all clearances related thereto;
 - b) obtaining all Consents, Clearances and Permits as required and maintaining all documents.
 - c) Designing, constructing, erecting, commissioning, completing and testing the Power Project including then RMS in accordance with the applicable Law, the Grid Code, the terms and conditions of this Agreement and Prudent Utility Practices.
 - d) the commencement of supply of power up to the Contracted Capacity to PGVCL no later than the Scheduled Commissioning Date and continuance of the supply of power throughout the term of the Agreement at the agreed CUF;
 - e) Connecting the Power Project switchyard with the Interconnection Facilities at the Delivery Point. The SPG shall make adequate arrangements to connect the Power Project switchyard with the Interconnection Facilities at Interconnection / Metering / Delivery Point. SPG will be responsible for laying of dedicated 11 KV line from Solar Power Plant to sub-station, construction of bay and related switchgear & metering equipment at sub-station where the plant is connected to the grid and metering is done. SPG will be responsible to set up Remote Metering Systems as per Article 7.2 of this agreement

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- f) owning the Power Project throughout the Term of Agreement free and clear of encumbrances, except those expressly permitted under Article 15;
- g) fulfilling all obligations undertaken by the SPG under this Agreement.
- h) The SPG shall be responsible for directly coordinating and dealing with PGVCL, SLDC and GETCO and other authorities in all respects in regard to declaration of availability, scheduling and dispatch of Power and due compliance with deviation and settlement mechanism and the applicable Grid code/State Regulations.
- i) The SPG shall be required to follow the applicable rules regarding project registration with the State Nodal Agency GEDA in line with the provisions of the applicable policies/regulations of the State of Gujarat. It shall be the responsibility of the SPG to remain updated about the applicable charges payable to PGVCL, SLDC, GETCO, GEDA or any other authority under the respective rules, regulations, policies, framework.
- j) The technology adopted by SPG shall be in accordance with MNRE's Approved Models and Manufacturers of Solar PV Modules having PV Module from ALMM only. (Requirements for Compulsory Registration) Order, 2019 as amended from time to time
- k) All the mandatory standards issued by MNRE and / or BIS regarding project equipments and material shall be followed.
- l) The SPG shall be responsible for all payments on account of any taxes, cesses, duties or levies imposed by the GoG or its competent statutory authority on the land, equipment, material or works of the Project or on the Electricity generated or consumed by the Project or by itself or on the income or assets owned by it. All expenses including wheeling / transmission charges and losses, UI / DSM Charges applicable as per GERC / CERC Regulations, upto Delivery Point shall be paid by the SPG without any reimbursement by PGVCL.
- m) To procure start up power required for the plant from PGVCL.
- n) The SPG shall ensure that he shall not sell power to any other buyer except the PGVCL under the agreement of this tender during the tenure of this PPA. At any point of time during the tenure of PPA, if it is found that the SPG has sold the solar power produce from the contracted solar plant strict legal action will be taken against the SPG, including stop deal or black list from Participation in future tender of MNRE in Gujarat and the SPG shall require to refund the proportionate CFA granted for the project by MNRE to PGVCL.

For the recovery of the proportionate CFA, the CFA granted by MNRE for the project will be divided by 25 years to arrive at per year CFA. If any event of sell of power is found at a particular time, the amount to be recovered from the SPG shall be the remaining period of PPA after the

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event date multiply by per year CFA.

The recovery of the proportionate CFA will be made through the payments of invoices or through remedies taken in accordance with applicable laws. In case of any liquidation of assets of the solar power plants prior to completion of PPA period the first charge shall be towards recovery of the proportionate CFA granted to the project by MNRE.

4.2 Purchase and sale of Contracted Capacity

- 4.2.1 Subject to the terms and conditions of this Agreement, the SPG undertakes to sell to PGVCL and PGVCL undertakes to pay Tariff for all the energy supplied at the Delivery Point corresponding to the Contracted Capacity.

4.3 Right to Contracted Capacity & Energy

- 4.3.1 PGVCL, in any Contract Year shall not be obliged to purchase any additional energy from the SPG beyond the contract capacity. If for any Contract Year except for the first year of operation, it is found that the SPG has not been able to generate and supply minimum energy of _____ KWH (Units) (corresponding to 19% minimum CUF) for _____ Feeder level Solar plant during the term of the agreement, on account of reasons solely attributable to the SPG, the non-compliance by SPG shall make the SPG liable to pay the compensation. PGVCL shall not be obliged to purchase energy in excess of maximum CUF of 30% during any contract year. If PGVCL decides to purchase the excess energy beyond CUF of 30%, the payments for such excess energy shall be made at 75% of the PPA tariff. For the first year of operation, the above limits shall be considered on pro-rata basis. The lower limit will, however be relaxable by PGVCL to the extent of grid non-availability for evacuation which is beyond the control of the SPG.
- 4.3.2 This compensation shall be applied to the amount of shortfall in generation during the Contract Year. The amount of such penalty would ensure that the PGVCL is offset for all potential costs associated with low generation and supply of power under the PPA. **The compensation payable to PGVCL by the SPG shall be 25% (twenty-five percent) of the cost of this shortfall in energy terms, calculated at PPA tariff.** This compensation shall not be applicable in events of Force Majeure identified under PPA.
- 4.3.3 At any point of time block, the peak of capacity shall not reach higher than the contracted capacity at the point where power is injected in the grid. The SPG shall forego the excess generation and reduce the output to the contract capacity and shall be required to pay the penalty/charges, **25% of Tariff rate + applicable taxes** in case of failure to do so. The SPG shall install adequate protection equipment at the interconnection point to avoid excess energy feeding into the grid and failure to do so shall entitle DISCOM to not pay for the additional energy over and above the contracted capacity.

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4.4 Extensions of Time

4.4.1 In the event that the SPG is prevented from performing its obligations under Article 4.1 by the Scheduled Commissioning Date due to:

- (a) any DISCOM Event of Default; or
- (b) Force Majeure Events affecting PGVCL, or
- (c) Force Majeure Events affecting the SPG,

the Scheduled Commissioning Date and the Expiry Date shall be deferred, subject to Article 4.4.4, for a reasonable period but not less than 'day for day' basis, to permit the SPG or DISCOM through the use of due diligence, to overcome the effects of the Force Majeure Events affecting the SPG or PGVCL, or till such time such Event of Default is rectified by PGVCL.

4.4.2 If the Parties have not agreed, within thirty (30) days after the affected Party's performance has ceased to be affected by the relevant circumstance, on the time period by which the Scheduled Commissioning Date or the Expiry Date should be deferred, any Party may raise the Dispute to be resolved in accordance with Article 16.

4.4.3 As a result of such extension, the newly determined Scheduled Commissioning Date and newly determined Expiry Date shall be deemed to be the Scheduled Commissioning Date and the Expiry Date for the purposes of this Agreement.

4.4.4 Notwithstanding anything to the contrary contained in this Agreement, any extension of the Scheduled Commissioning Date arising due to any reason envisaged in this Agreement shall not be allowed beyond the date pursuant to Article 4.5.2.

4.4.5 Delay in commissioning of the project beyond the scheduled commissioning date for reasons other than those specified in Article 4.4.1 shall be an event of default on part of the SPG and shall be subject to the consequences specified in the Article 4.5.

4.5 Liquidated Damages not amounting to penalty for delay in Commissioning

4.5.1 If the SPG is unable to commission the Project by the Scheduled Commissioning Date other than for the reasons specified in Article 4.4.1, the SPG shall pay to PGVCL, damages for the delay in such commissioning and making the Contracted Capacity available for dispatch by the Scheduled Commissioning Date as per following:

4.5.2 In case any SPG fails to achieve this milestone, PGVCL shall encash the Performance Bank Guarantee (PBG) as liquidated damages (LD) in the following manner:

Delay up to two months: LD equal to the PBG on per day basis. The no. of days In "month" for the LD calculation shall be considered as 30.

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In case the commissioning of the solar power plant is delayed over two months: The complete PBG amount shall be encashed and DISCOM shall have right to terminate the PPA. The decision of MNRE regarding release of CFA shall be binding and to the account of SPG.

In case of delays of plant commissioning due to the reasons beyond the control of the SPG, Procurer / PGVCL after having been satisfied with documentary evidences produced by the SPG for the purpose, can extend the time for commissioning date without any financial implications on the SPG.

- 4.5.3 The SPG further acknowledge that the amount of the liquidated damages fixed is genuine and reasonable pre-estimate of the damages that may be suffered by DISCOM.

4.6 System Specifications and Quality Control

- 4.6.1 All components used for installation of solar power plants shall confirm to applicable BIS/MNRE specifications and follow quality control guidelines issued by MNRE. It will be mandatory to use domestically manufactured solar modules from ALMM only.

- 4.6.2 Erection of 11 KV Line network shall be confirming to relevant standards.

4.7 Third Party Verification

- 4.7.1 The SPG shall be further required to provide entry to the site of the Power Project free of all encumbrances at all times during the Term of the Agreement to PGVCL and a third Party nominated by PGVCL or any Indian Governmental Instrumentality for inspection and verification of the works being carried out by the SPG at the site of the Power Project.

- 4.7.2 The third party may verify the construction works/operation of the Power Project being carried out by the SPG and if it is found that the construction works/operation of the Power Project is not as per the Prudent Utility Practices, it may seek clarifications from SPG or require the works to be stopped or to comply with the instructions of such third party.

4.8 Breach of Obligations

- 4.8.1 The Parties herein agree that during the subsistence of this Agreement, subject to PGVCL being in compliance of its obligations & undertakings under this Agreement, the SPG would have no right to negotiate or enter into any dialogue with any third party for the sale of Contracted Capacity of power which is the subject matter of this Agreement. It is the specific understanding between the Parties that such bar will apply throughout the entire term of this Agreement.

4.9 Generation compensation for Off-take constraints

- 4.9.1 Generation Compensation in offtake constraints due to Grid Unavailability:
During the operation of the plant, PGVCL shall endeavor to ensure 95% of grid

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availability in a contract year, however, there can be some periods where the Project can generate power but due to temporary transmission unavailability, the power is not evacuated, for reasons not attributable to the SPG. In such cases, subject to the submission of documentary evidences from the competent authority, the generation compensation shall be restricted to the following and there shall be no other claim, directly or indirectly against PGVCL:

Duration of Grid unavailability	Provision for Generation Compensation
Grid unavailability in excess of 5% in a contract year as defined in the PPA (only period from 8 am to 6 pm to be counted):	Generation Loss = [(Average Generation per hour during the Contract Year) × (number of hours of grid unavailability during the Contract Year)] Where, Average Generation per hour during the Contract Year (kWh) = Total generation in the Contract Year (kWh) ÷ Total hours of generation in the Contract Year.

The excess generation beyond 19% CUF by the SPG equal to this generation loss shall be procured by PGVCL at the PPA tariff so as to offset this loss in the succeeding 3 (three) Contract Years.

- 4.9.2 Offtake constraints due to Backdown: The SPG and PGVCL shall follow the forecasting and scheduling process as per the regulations in this regard by the Appropriate Commission. In the eventuality of backdown, subject to the submission of documentary evidences from the competent authority, the SPG shall be eligible for a minimum generation compensation, from PGVCL, restricted to the following and there shall be no other claim, directly or indirectly against PGVCL.

Duration of Backdown	Provision for Generation Compensation
Hours of Backdown during a monthly billing cycle.	Minimum Generation Compensation = 100% of [(Average Generation per hour during the month) X (number of backdown hours during the month)] X PPA tariff Where, Average Generation per hour during the month (kWh) = Total generation in the month (kWh) ÷ Total hours of generation in the month

The SPG shall not be eligible for any compensation in case the Backdown is on account of events like consideration of grid security or safety of any

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equipment or personnel or other such conditions. The Generation Compensation shall be paid as part of the energy bill for the successive month after JMR.

ARTICLE 5: SYNCHRONISATION, COMMISSIONING AND COMMERCIAL OPERATION

5.1 *Synchronization, Commissioning and Commercial Operation*

- 5.1.1 The SPG shall give PGVCL at least thirty (30) days' advanced preliminary written notice and at least fifteen (15) days' advanced final written notice, of the date on which it intends to synchronize the Solar Power Project to the Grid System.
- 5.1.2 Subject to Article 5.1.1, the Power Project may be synchronized by the SPG to the Grid System when it meets all the connection conditions prescribed in applicable Grid Code then in effect and otherwise meets all other Indian legal requirements for synchronization to the Grid System.
- 5.1.3 The synchronization equipment and all necessary arrangements / equipment including RTU for scheduling of power generated from the Project and transmission of data to the concerned authority as per applicable regulation shall be installed by the SPG at its generation facility of the Power Project at its own cost. The SPG shall synchronize its system with the Grid System only after the approval of synchronization scheme is granted by the head of the concerned substation/ and checking/verification is made by the concerned authorities of the PGVCL.
- 5.1.4 The SPG shall immediately after each synchronization/tripping of generator, inform the sub-station of the Grid System to which the Power Project is electrically connected in accordance with applicable Grid Code. In addition, the SPG will inject in-firm power to grid from time to time to carry out operational/ functional test prior to commercial operation. For avoidance of doubt, it is clarified that Synchronization / Connectivity of the Project with the grid shall not to be considered as Commissioning of the Project.
- 5.1.5 The SPG shall commission the Project within nine (9) Months from the Date of execution of this PPA. Declaration of COD shall be certified by the commissioning committee.
- 5.1.6 The Parties agree that for the purpose of commencement of the supply of electricity by SPG to PGVCL, liquidated damages for delay etc., the Scheduled Commissioning Date as defined in this Agreement shall be the relevant date.

ARTICLE 6: DISPATCH AND SCHEDULING

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6.1 Dispatch and Scheduling

- 6.1.1 The SPG shall be required to schedule its power as per the applicable regulations of GERC /SLDC or any other competent agency and same being recognized by the SLDC or any other competent authority / agency as per applicable regulation/ law / direction and maintain compliance to the applicable Codes/ Grid Code requirements and directions, if any, as specified by concerned SLDC from time to time. Any deviation from the Schedule will attract the provisions of applicable regulation / guidelines / directions and any financial implication on account of this shall be on the account of the SPG.
- 6.1.2 The SPG shall be responsible for directly coordinating and dealing with the PGVCL, State Load Dispatch Centers, and other authorities in all respects in regard to declaration of availability, scheduling and dispatch of Power and due compliance with deviation and settlement mechanism and the applicable Grid code Regulations.
- 6.1.3 The SPG shall be responsible for any deviation from scheduling and for any resultant liabilities on account of charges for deviation as per applicable regulations. UI /DSM charges on this account shall be directly paid by the SPG.
- 6.1.4 Auxiliary power consumption will be treated as per the orders of GERC or concerned GERC regulations. The charges for net import of energy by the solar power plant from the grid shall be billed at HTP-III tariff by PGVCL. The SPG shall not undertake any other commercial activity within the project premises except generation of Solar Power under this contract.

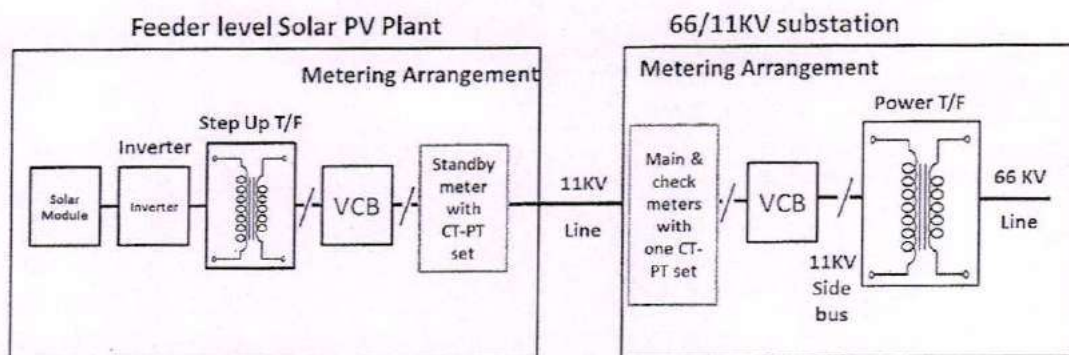
ARTICLE 7: METERING

7.1 Meters

- 7.1.1 Metering and grid connectivity of the projects would be the responsibility of the SPG in accordance with the prevailing guidelines of PGVCL, SLDC, GETCO and / or CEA. PGVCL and PGVCL may facilitate in the process; however, the entire responsibility lies only with the SPG. The cost of required meters shall be borne by the SPG.
- 7.1.2 Meters and metering equipment shall be tested as per provision of GERC and as per IS 14697 at CPRI or at any NABL accredited / distribution licensee lab before installation at site on the cost of SPG and should be properly sealed in the presence of designated authority from PGVCL at the time of installation.
- 7.1.3 The accuracy class, current rating and certifications of the metering system shall confirm with relevant CERC/ GERC Regulations, Grid Code and Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006 as amended and revised from time to time.
- 7.1.4 SPG to install 3 ABT meters (main, check and standby) with RMS connectivity AND 2CT-PT sets (one for main & check meter and another for standby meter)

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at substation end of the 33kV line. An indicative layout of metering arrangement is given below:



- 7.1.5 Installation and timely replacement of meters (main, check and standby) as required to directly measure energy supplied by the Solar Power Plant shall be the responsibility of selected bidder.
- 7.1.6 SPG shall also be responsible for installation of IoT Devices-RMS Set for Remote Monitoring system connectivity of Inverters, String combiner box, Energy Meters at Solar plant and Substation.
- 7.1.7 The cost of all required meters (main, check, standby meter at substation end alongwith consumer meters) and associated CT-PT sets shall be borne by the SPG.
- 7.2 Remote Monitoring System (RMS)**
- 7.2.1 As per the MNRE guidelines for feeder level solarization under Component C of KUSUM scheme, it is mandatory for Discoms to monitor solar power generation and performance of the solar power plant through online system. The online data will be integrated with central monitoring portal of MNRE which will extract data from the State portals for monitoring of the scheme.
- 7.2.2 In line with MNRE model guidelines for State Level SEDM Software Development issued in July 2020, Gujarat Discoms are in the process of development of State Level Solar Energy Data Management (SEDM) platform to integrate & monitor the performance of all systems installed under Component A, B & C (individual as well as feeder level solarization) of PM-KUSUM scheme.
- 7.2.3 Also, as per the Specifications for Remote Monitoring System for Component A & C of the scheme, issued by MNRE on 15 Jul 2020, the SPG under this RfS shall be required to install required remote monitoring systems for solar power plant to integrate with State SEDM platform directly which in turn will have interface with National Level Solar Energy Data Management Platform of MNRE.
- 7.2.4 As part of National and State SEDM platform, various modules will be provided such as Scheme Progress Management, Asset Management, Live Asset Monitoring, Performance Analysis, Complaint and Ticket Management, Device Integration / SCADA Platform, Alarm/Events/Notification, Meter Data

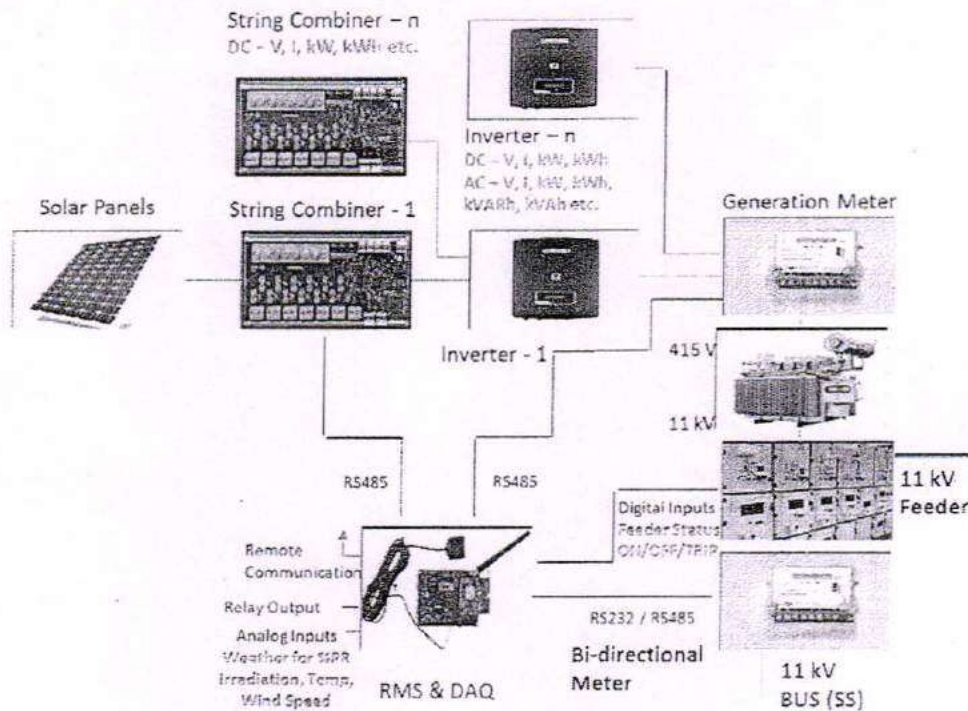
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RfS document for feeder level Solarization under PM-KUSUM-Component-C in PGVCL

Acquisition(MDAS) /Meter Data Management (MDM), Archiving and Historian, Report Manager, SIA officer and EPC, Enterprise level user and role management.

- 7.2.5 MNRE and Discoms will develop and host the of National and State Level SEDM platform which is excluded from the scope of the SPG but SPG needs to operate and do various data entries for the portal for asset management and RMS.

Solar Plant Performance & Feeder Availability Monitoring



- 7.2.6 As shown in above diagram SPG needs to provide a remote monitoring system for:

- Solar Power Plant Remote Monitoring system:** To capture electrical parameters from multiple devices such as ABT Meter, Generation Meter, Inverters, String Combiner boxes or String inverters. Remote monitoring system will capture important Electrical and Status parameters such as AC/DC voltage, control, power, energy as well as monitoring of Breaker etc and will transmit data to State Level Solar Energy data management (SEDM) platform. It shall be also possible to control Inverter Active and Reactive power.
- Communication Connectivity for Solar Plant RMS and Smart Meter:**
 - Field Device Connectivity:** RMS will connect to Inverter, String combiner boxes or string inverters using RS485 MODBUS communication protocol as well as meters using RS232 DLMS protocol. Both protocols are widely used by equipment manufacturers.
 - Remote Connectivity:** RMS will connect to State Level SEDM Server using 2G/3G/4G or any other suitable cellular communication.
 - Local Connectivity:** Ethernet / Bluetooth / Wi-Fi connectivity to configure parameter, notifications, communication intervals, set points, operation mode configuration or to download locally stored data.

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RfS document for feeder level Solarization under PM-KUSUM-Component-C in PGVCL

- 7.2.7 It is the responsibility of SPG to provide SIM card, recurring communication charges and maintain communication connectivity of more than 96% and data availability of 99% for the 25 years (unless extended by both the parties on mutual agreement) of operation & maintenance of solar power plant and its associated 11kV line.

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ARTICLE 8: INSURANCES

8.1 Insurance

- 8.1.1 The SPG shall effect and maintain or cause to be effected and maintained, at its own cost and expense, throughout the Term of PPA, Insurances against theft, damage, fire and damage or loss due to natural calamities, Cyclones, earthquake, flood, riots, etc. consistent with **Prudent Utility Practice** and all such risks to keep the Project in good condition and shall take Industrial All Risk insurance policy covering risks against any loss or damage, with such deductibles and with such endorsements and co-insured(s), which the Prudent Utility Practices would ordinarily merit maintenance of and as required under the Financing Agreements, and under the applicable laws.

8.2 Application of Insurance Proceeds

- 8.2.1 In case of the Project not being implemented through Financing Agreement(s), save as expressly provided in this Agreement or the Insurances, the proceeds of any insurance claim made due to loss or damage to the Power Project or any part of the Power Project shall be first applied to reinstatement, replacement or renewal of such loss or damage.

In case of the Project being financed through Financing Agreement(s), save as expressly provided in this Agreement or the Insurances, the proceeds of any insurance claim made due to loss or damage to the Power Project or any part of the Power Project shall be applied as per such Financing Agreements.

- 8.2.2 If a Force Majeure Event under the insurance contract renders the Power Project no longer economically and technically viable and the insurers under the Insurances make payment on a "total loss" or equivalent basis, PGVCL shall have claim on such proceeds of such Insurance limited to outstanding dues of PGVCL against SPG.

8.3 Effect on liability of DISCOM

- 8.3.1 Notwithstanding any liability or obligation that may arise under this Agreement, any loss, damage, liability, payment, obligation or expense which is insured or not or for which the SPG can claim compensation, under any Insurance shall not be charged to or payable by PGVCL. It is for the SPG to ensure that appropriate insurance coverage is taken for payment by the insurer for the entire loss and there is no under insurance or short adjustment etc.

ARTICLE 9: APPLICABLE TARIFF

- 9.1 The SPG shall be entitled to receive the Tariff of per kWh, fixed for the entire term of 25 years (unless extended by both the parties on mutual agreement), with effect from the COD, for the power sold to PGVCL as reflected in the State Energy Accounts published by SLDC Gujarat.

ARTICLE 10: BILLING AND PAYMENT**10.1.1 Energy measurement for Monthly billing**

- a) The SPG shall raise the invoice after issuance of State Energy Account by SLDC each month and submit the relevant extracts thereof along with the monthly invoice.
- b) Subsequently, the SPG shall furnish the joint meter reading report (JMR)/Energy Account, duly verified by its authorized representative and concerned Executive Engineer, along with downloaded CMRI data (of all three meters) of 15 minutes time block to The Chief Engineer SLDC, Vadodara, through courier and/or e-mail along with the Monthly Bill (final energy net of import and export, multiplied by the Rs. per kWh tariff as per PPA and reactive power charges compensation) on the same day (i.e. 1st day of the month).
- c) Subsequently, the SPG shall furnish the joint meter reading report (JMR)/Energy Account, duly verified by its authorized representative and concerned Executive Engineer(O&M) Division, along with downloaded CMRI data (of all three meters) to The Chief Engineer (Proj) PGVCL, through courier and/or e-mail along with the Monthly Bill (final energy net of import and export, multiplied by the Rs. per kWh tariff as per PPA and reactive power charges or any other charges compensation) on the same day (i.e. 1st day of the month).
- d) Provided that:
 - i. if the date of commencement or supply of power falls during the period between the first (1st) day and up to and including the fifteenth (15th) day of a Month, the first Monthly Bill shall be issued for the period until the last day of such Month, or
 - ii. if the date of commencement of supply of power falls after the fifteenth (15th) day of a Month, the first Monthly Bill shall be issued for the period commencing from the Delivery Date until the last day of the immediately following Month.
- e) Provided further that if a Monthly Bill is received on or before the second (2nd) day of a Month, it shall be deemed to have been received on the second (2nd) Business Day of such Month.
- f) Provided further that if a Monthly Bill for the immediately preceding Month is issued after 1st day of the next Month, the Due Date for payment of such Monthly Bill shall be extended accordingly.
- g) The monthly bills shall be raised by SPG only after issuance of State Energy Account by SLDC.

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10.1.2 *Inspection and Testing of Meters*

- a) PGVCL and SPG shall jointly inspect and if necessary, recalibrate the metering system on a regular basis but in any event, at least once every year or at a shorter interval at the request of any of the two parties.
- b) Each Meter comprising the metering system shall be sealed by PGVCL, and shall be opened, tested or calibrated in the presence of both the parties.

10.1.3 *Inaccuracy of Meters*

- a) In case the difference between the energy recorded in the main meter and the check meter for any calendar month is within 0.5%, the energy recorded in the main meter shall be taken as final.
- b) However, if the variation exceeds $\pm 0.5\%$, following steps shall be taken:
 - i. Both interface meters (Main as well Check) and metering system shall be tested and checked.
 - ii. Re-Calibration of both meters at site with reference standard meter of accuracy class higher than the meter under test, if no issues found in step (a) above.
 - iii. On carrying out the re-calibration of the main meter, if it is discovered that either the percentage of inaccuracy exceeds $\pm 0.5\%$ or that the main meter is not working, the following procedure in order of priority, whichever is feasible, for arriving at the computation of quantity of energy during the period between the last calibration and the present, shall be followed:
 - On the basis energy recorded in the check meter if installed and functioned accurately; or
 - By correcting the error, if the percentage of error is ascertainable from calibration, tests or mathematical calculation
 - iv. The correction to the quantity of energy injected shall apply to the following periods (hereinafter referred to as the "Correction Period"):
 - To any period of time during which the main meter was known to be malfunctioning or to which the parties mutually agree;
 - If the period during which the main meter was malfunctioning is not known or is not agreed to between the parties, the correction shall be applicable for a period equal to half the time elapsed since the date of the preceding calibration test, provided that under no circumstance shall the Correction Period exceed one month.
 - v. If the difference exists even after such checking or testing, then the defective meter(s) shall be replaced with a tested meter.
 - vi. In case of conspicuous failures like burning of meter and erratic display

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of metered parameters and when the error found in testing of meter is beyond the permissible limit of error provided in the relevant standard, the meter shall be immediately replaced with a tested meter.

- vii. In case where both the Main meter and Check meter fail, energy recorded in the Standby meter shall be considered as final and at least one of the meters shall be immediately replaced by a tested meter.

10.1.4 General

- a) From the Commercial Operations Date of the solar power plant, PGVCL shall pay to the Successful SPG the monthly Tariff Payments subject to the adjustments as per provisions of the PPA and submission of following documents:
 - i. Monthly bill (Injection /Schedule at delivery point as certified by SLDC multiplied by the Rs. per kWh tariff as per PPA)
 - ii. Relevant Extracts of State Energy Account.
- b) All Tariff Payments by PGVCL shall be in Indian Rupees.
- c) The SPG shall be required to make arrangements and payments for import of energy (if any) as per applicable regulations.

Reactive power charges or any other charges as per CERC/ GERC regulations shall be payable by SPG as per provisions of PPA.

10.1.5 Delivery and Content of Monthly Bills/Supplementary Bills

- a) The SPG shall issue to PGVCL hard copy of a signed Monthly Bill for the immediately preceding Month based on the State Energy Account along with all relevant documents (payments made by selected bidder for drawl of power, payment of reactive energy charges, Metering charges or any other charges as per regulations of CERC/GERC shall not be a part of bill raised by SPG to PGVCL)
- b) Each Monthly Bill shall include all charges as per the Agreement for the energy supplied for the relevant Month based on State Energy Account. The Monthly Bill amount shall be the product of the energy as per Energy Accounts and the applicable levelized tariff. Net energy import from the grid shall be billed at HTP-III tariff.

10.1.6 Payment of Monthly Bills

- a) On receipt of JMR/Energy Account along with CMRI data (of both meters) and bill, Superintending Engineer (Regulation) PGVCL shall verify the readings and subsequent share the same along with original bill and other relevant documents to PGVCL.

PGVCL shall make payment of the amounts due in Indian Rupees within thirty (30) days from the date of receipt of the Tariff Invoice by the Chief Engineer (Project) PGVCL.

- b) As defined under the PPA, "Due Date of Payment" in respect of a Tariff Invoice means the date, which is 30 (thirty) days from the date of receipt of such invoices by the designated official of the PGVCL. The Tariff Invoice shall include relevant documents.

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All payments required to be made under this Agreement shall also include any deduction or set off for:

- i. deductions required by the Law; and
 - ii. Amount claimed by PGVCL, if any, from the SPG, will be adjusted from the monthly energy payment.
 - iii. Charges for net import of energy by the solar plant from the grid shall be as per HTP-III Tariff as per GERC
- a) The SPG shall open a bank account (if not having any bank account) for all Tariff Payments to be made by PGVCL to the SPG and notify PGVCL of the details of such account at least sixty (60) Days before the dispatch of the first Monthly Bill.

10.1.7 Late Payment Surcharge

(1) For payment of Monthly bill by PGVCL, if paid after Due Date of Payment, a late Payment charge shall be payable by PGVCL to the SPG on the payment outstanding after the due date at the base rate of Late Payment Surcharge applicable for the period for the first month of default.

(2) The rate of Late Payment Surcharge for the successive months of default shall increase by 0.5 percent for every month of delay provided that the Late Payment Surcharge shall not be more than 3 percent higher than the base rate at any time.

(3) Provided that the rate at which Late Payment Surcharge shall be payable shall not exceed the rate of seven (7) percent in excess of the SBI 1 year Marginal Cost of Funds Based Lending Rate (MCLR) per annum / any replacement thereof by SBI, on the amount of outstanding payment, calculated on a week or part thereof basis viz. (SBI MCLR rate + 7%)

= _____ per week or part thereof.

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(4) Provided further that all Payments shall be first adjusted towards Late Payment Surcharge and thereafter, towards monthly charges, starting from the longest overdue bill.

(5) The Late Payment Surcharge shall be claimed by SPG through the supplementary bill.

(6) The Late Payment Surcharge shall be governed as per the provisions of Electricity (Late Payment Surcharge) Rules, 2021 issued by Ministry of Power, Government of India vide notification dated 22.02.2021 and subsequent amendments or replacements thereof issued from time to time.

10.1.8 Rebate

- a) For payment of any Bill on or before Due Date, the following Rebate shall be paid by the SPG to PGVCL in the following manner and the SPG shall not raise any objections to the payments made under this article.
- i. For payment of Monthly Bill by PGVCL, if paid before Due Date of Payment, a Rebate shall be deducted by PGVCL at the rate of seven (7) percent in excess of the applicable SBI 1 year Marginal Cost of Funds

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Based Lending Rate (MCLR) per annum / any replacement thereof by SBI, on the amount paid before due date, calculated on a week or part thereof basis viz.

(SBI MCLR rate + 7%)

= _____ per week or part thereof.

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10.1.9 Payment of Supplementary Bills

- a) Either party may raise a ("Supplementary Bill") for payment on account of adjustments required by the Energy Accounts (if any) and such Supplementary Bill shall be paid by the other Party.
- b) The Parties shall remit all amounts due under a Supplementary Bill to the Designated Account by the Due Date.
- c) The Rebate and Late Payment Surcharge shall be applicable at the same terms applicable to the Monthly Bill.

10.1.10 Payment Security Mechanism

Letter of Credit (LC):

- a) PGVCL shall provide to the SPG, in respect of payment of its Monthly Bills and/or Supplementary Bills, a monthly unconditional, revolving and irrevocable letter of credit ("Letter of Credit"), opened and maintained which may be drawn upon by the SPG in accordance with the PPA.
- b) Not later than one (1) Month before the start of supply, PGVCL through a scheduled bank open a Letter of Credit in favour of the SPG, to be made operative from a date prior to the Due Date of its first Monthly Bill under this Agreement. The Letter of Credit shall have a term of twelve (12) Months and shall be renewed annually, for an amount equal to:
 - i. for the first Contract Year, equal to the estimated average monthly billing;
 - ii. for each subsequent Contract Year, equal to the average of the monthly billing of the previous Contract Year.
- c) Provided that the SPG shall not draw upon such Letter of Credit prior to the Due Date of the relevant Monthly Bill and/or Supplementary Bill, and shall not make more than one drawal in a Month.
- d) Provided further that if at any time, such Letter of Credit amount falls short of the amount specified above due to any reason whatsoever, PGVCL shall restore such shortfall within fifteen (15) days.
- e) PGVCL shall cause the scheduled bank issuing the Letter of Credit to intimate the SPG, in writing regarding establishing of such irrevocable Letter of Credit.
- f) PGVCL shall ensure that the Letter of Credit shall be renewed not later than its expiry.

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- g) All costs relating to opening, maintenance of the Letter of Credit shall be borne by the SPG.
- h) If PGVCL fails to pay undisputed Monthly Bill or Supplementary Bill or a part thereof within and including the Due Date, then, subject to above, the SPG may draw upon the Letter of Credit, and accordingly the bank shall pay without any reference or instructions from PGVCL, an amount equal to such Monthly Bill or Supplementary Bill or part thereof, in accordance with above, by presenting to the scheduled bank issuing the Letter of Credit, the following documents:
 - i. a copy of the Monthly Bill or Supplementary Bill which has remained unpaid to SPG and;
 - ii. a certificate from the SPG to the effect that the bill at item (a) above, or specified part thereof, is in accordance with the Agreement, is not disputed and has remained unpaid beyond the Due Date;

10.1.11 Disputed Bill

- a) If PGVCL does not dispute a Monthly Bill or a Supplementary Bill raised by the SPG within thirty (30) days of receiving such Bill shall be taken as conclusive.
- b) If PGVCL disputes the amount payable under a Monthly Bill or a Supplementary Bill, as the case may be, it shall pay undisputed amount of the invoice amount and it shall within fifteen 30 days of receiving such Bill, issue a notice (the "Bill Dispute Notice") to the invoicing Party setting out:
 - i. the details of the disputed amount;
 - ii. its estimate of what the correct amount should be; and
 - iii. all written material in support of its claim.
- c) If the SPG agrees to the claim raised in the Bill Dispute Notice, the SPG shall revise such Bill and present along with the next Monthly Bill. In such a case excess amount shall be refunded along with interest at the same rate as Late Payment Surcharge, which shall be applied from the date on which such excess payment was made by the disputing Party to the invoicing Party and up to and including the date on which such payment has been received as refund.
- d) If the SPG does not agree to the claim raised in the Bill Dispute Notice, it shall, within fifteen (15) days of receiving the Bill Dispute Notice, furnish a notice (Bill Disagreement Notice) to PGVCL (i.e. office of Superintending Engineer (Regulation), PGVCL) providing:
 - i. reasons for its disagreement;
 - ii. its estimate of what the correct amount should be; and
 - iii. all written material in support of its counter claim.
- e) Upon receipt of the Bill Disagreement Notice by Superintending Engineer (Regulation), PGVCL, authorized representative(s) or a director of the board of directors/ member of board of the PGVCL and SPG shall meet and make best endeavours to amicably resolve such dispute within fifteen (15) days of receipt of the Bill Disagreement Notice.

- f) If the Parties do not amicably resolve the Dispute within fifteen (15) days of receipt of Bill Disagreement Notice, the matter shall be referred to Dispute resolution in accordance with Article 16 of PPA.
- g) For the avoidance of doubt, it is clarified the despite a Dispute regarding an invoice, PGVCL shall, without prejudice to its right to Dispute, be under an obligation to make payment of undisputed amount of the invoice amount in the Monthly Bill.

ARTICLE 11: FORCE MAJEURE

11.1 Definitions

11.1.1 In this Article, the following terms shall have the following meanings:

11.2 Affected Party

11.2.1 An affected Party means DISCOM or the SPG whose performance has been affected by an event of Force Majeure.

11.3 Force Majeure Events

- a) Neither Party shall be responsible or liable for or deemed in breach hereof because of any delay or failure in the performance of its obligations hereunder (except for obligations to pay money due prior to occurrence of Force Majeure events under this Agreement) or failure to meet milestone dates due to any event or circumstance (a "Force Majeure Event") beyond the reasonable control of the Party experiencing such delay or failure, including the occurrence of any of the following:
 - i) acts of God;
 - ii) typhoons, floods, lightning, cyclone, hurricane, drought, famine, epidemic, plague or other natural calamities;
 - iii) acts of war (whether declared or undeclared), invasion or civil unrest;
 - iv) any requirement, action or omission to act pursuant to any judgment or order of any court or judicial authority in India (provided such requirement, action or omission to act is not due to the breach by the SPG or PGVCL of any Law or any of their respective obligations under this Agreement);
 - v) inability despite complying with all legal requirements to obtain, renew or maintain required licenses or Legal Approvals;
 - vi) earthquakes, explosions, accidents, landslides; fire;
 - vii) expropriation and/or compulsory acquisition of the Project in whole or in part by Government Instrumentality;
 - viii) chemical or radioactive contamination or ionizing radiation; or
 - ix) damage to or breakdown of transmission facilities of GETCO/ DISCOMs;
 - x) Exceptionally adverse weather condition which are in excess of the statistical measure of the last hundred (100) years.

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11.4 Force Majeure Exclusions

- a) Force Majeure shall not include the following conditions, except to the extent that they are consequences of an event of Force Majeure:
 - 1. Unavailability, Late Delivery or Change in cost of plants and machineries, equipment, materials, spares parts or consumables for the project;
 - 2. Delay in performance of any contractor / sub contractor or their agents;
 - 3. Non performance resulting from normal wear and tear experience in power generation materials and equipment;
 - 4. Strike or Labour Disturbances at the facilities of affected parties;
 - 5. Insufficiency of finances or funds or the agreement becoming onerous to perform, and
 - 6. Non performance caused by, or concerned with, the affected party's
 - I. Negligent and intentional acts, errors or omissions;
 - II. Failure to comply with Indian law or Indian Directive; or
 - III. Breach of, or default under this agreement or any Project agreement or Government agreement.
- b) The affected Party shall give notice to other party of any event of Force Majeure as soon as reasonably practicable, but not later than 7 days after the date on which such Party knew or should reasonably have known of the commencement of the event of Force Majeure. If any event of Force Majeure results in a breakdown of communication rendering it not reasonable to give notice within the applicable time limit specified herein, then the party claiming Force Majeure shall give notice as soon as reasonably practicable after reinstatement of communication, but not later than one day after such reinstatement. Such notice shall include full particulars of the event of Force Majeure, its effects on the Party claiming relief and the remedial measures proposed, and the Affected Party shall give the other Party regular (and not less than monthly) reports on the progress of those remedial measures and such other information as the other party may reasonably request about the situation.
- c) The affected Party shall give notice to the other Party of (1) cessation of relevant event of Force Majeure; and (2) cessation of the effects of such event of Force Majeure on the performance of its rights or obligations under this agreement, as soon as practicable after becoming aware of each of these cessations.
- d) To the extent not prevented by a Force Majeure event, the affected party shall continue to perform its obligations pursuant to this agreement. The affected party shall use its reasonable efforts to mitigate the effect of any event of Force Majeure as soon as practicable.

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11.5 Available Relief for a Force Majeure Event

No Party shall be in breach of its obligations pursuant to this agreement to the extent that the performance of its obligations was prevented, hindered or delayed due to a Force Majeure event. However, adjustment in tariff shall not be allowed on account of Force Majeure event.

For avoidance of doubt, neither Party's obligation to make payments of money due and payable prior to occurrence of Force Majeure events under this Agreement shall be suspended or excused due to the occurrence of a Force Majeure Event in respect of such Party.

ARTICLE 12: CHANGE IN LAW

12.1 Definitions

"Change in Law" shall refer to the occurrence of any of the following events notified after the Bid Deadline.

- a) the enactment, bringing into effect, adoption, promulgation, amendment, modification or repeal, of any statute, decree, ordinance or other law, regulations, notice, circular, code, rule or direction by Governmental Instrumentality or a change in its interpretation by a Competent Court of law, tribunal, government or statutory authority or any of the above regulations, taxes, duties charges, levies etc. that results in any change with respect to any tax or surcharge or cess levied or similar charges by the Competent Government on the generation of electricity (leviable on the final output in the form of energy) or sale of electricity.
- b) Introduction / modification / changes in rates of safeguard duty and/or anti-dumping duty and/or custom duty including surcharge thereon which have direct effect on the cost of solar PV modules.

12.2 Relief for Change in Law

- a) In case Change in Law on account of 9.1.1 (a) above results in the SPG's costs directly attributable to the Project being decreased or increased by one percent (1%), of the estimated revenue from the Electricity for the Contract Year for which such adjustment becomes applicable or more, during Operation Period, the Tariff Payment to the SPG shall be appropriately increased or decreased with due approval of GERC.
- b) In case of Change in Law on account of 9.1.1 (b) above, the SPG shall be allowed an increase / decrease in tariff of 1 paise / unit for every increase / decrease of Rs. 2 Lakh per MW in the Project Cost incurred upto the Scheduled Commercial Operation Date upon submission of proof of payment made by the SPG towards safeguard duty and/or anti-dumping duty and/or custom duty to the concerned Authority and with due approval of GERC. This increase / decrease in tariff due to this change in cost of solar PV modules shall be limited to actual DC capacity or 150% (One hundred & fifty percent) of contracted AC capacity, whichever is lower.
- c) PGVCL or SPG, as the case may be, shall provide the other Party with a certificate stating that the adjustment in the Tariff Payment is directly as a result of the Change in Law and shall provide supporting documents to substantiate the same

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and such certificate shall correctly reflect the increase or decrease in costs.

- d) The revised tariff shall be effective from the date of such Change in Law as approved by GERC.

ARTICLE 13: EVENTS OF DEFAULT AND TERMINATION

13.1 *SPG Event of Default*

13.1.1 The occurrence and/or continuation of any of the following events, unless any such event occurs as a result of a Force Majeure Event or a breach by DISCOM of its obligations under this Agreement, shall constitute an SPG Event of Default:

- (i) the failure to commence supply of power to DISCOM up to the Contracted Capacity, by the end of the period specified in Article 4, or failure to continue supply of Contracted Capacity to DISCOM after Commercial Operation Date throughout the term of this Agreement, or

if

- the SPG assigns, mortgages or charges or purports to assign, mortgage or charge any of its assets or rights related to the Power Project in contravention of the provisions of this Agreement; or
- the SPG transfers or novates any of its rights and/ or obligations under this agreement, in a manner contrary to the provisions of this Agreement; except where such transfer
- is in pursuance of a Law; and does not affect the ability of the transferee to perform, and such transferee has the financial capability to perform, its obligations under this Agreement or
- is to a transferee who assumes such obligations under this Agreement and the Agreement remains effective with respect to the transferee;

if

- a. the SPG becomes voluntarily or involuntarily the subject of any bankruptcy or insolvency or winding up proceedings and such proceedings remain uncontested for a period of thirty (30) days, or
- b. any winding up or bankruptcy or insolvency order is passed against the SPG, or
- c. the SPG goes into liquidation or dissolution or has a receiver or any similar officer appointed over all or substantially all of its assets or official liquidator is appointed to manage its affairs, pursuant to Law, provided that a dissolution or liquidation of the SPG will not be a SPG Event of Default if such dissolution or liquidation is for the purpose of a merger, consolidation or reorganization and where the resulting company retains creditworthiness similar to the SPG and expressly assumes all obligations of the SPG under this Agreement and is in a position to perform them; or

- (ii) the SPG repudiates this Agreement and does not rectify such breach within a

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period of thirty (30) days from a notice from DISCOM in this regard; or

- (iii) except where due to any DISCOM's failure to comply with its material obligations, the SPG is in breach of any of its material obligations pursuant to this Agreement, and such material breach is not rectified by the SPG within thirty (30) days of receipt of first notice in this regard given by DISCOM .
- (iv) Occurrence of any other event which is specified in this agreement to be a material breach/default of the SPG
- (v) except where due to any DISCOM's failure to comply with its material obligations, the SPG is in breach of any of its material obligations pursuant to this Agreement, and such material breach is not rectified by the SPG within thirty (30) days of receipt of first notice in this regard given by DISCOM.
- (vi) Failure on the part of the SPG for a continuous period of ninety (90) days to (i) operate and/or (ii) maintain (in accordance with Prudent Utility Practices), the Project at all times.
- (vii) Failure on part of the SPG to maintain the minimum shareholding of 51% for a period of one year after Commercial Operation Date of the Project.
- (viii) Failure to supply power in terms of the PPA
- (ix) Failure to make any payment required to be made to DISCOM under this agreement within three (3) months after the due date of a valid invoice raised by the DISCOM on the SPG.

13.2 DISCOM Event of Default

13.2.1 The occurrence and the continuation of any of the following events, unless any such event occurs as a result of a Force Majeure Event or a breach by the SPG of its obligations under this Agreement, shall constitute the Event of Default on the part of defaulting DISCOM:

- (i) DISCOM fails to pay (with respect to a Monthly Bill or a Supplementary Bill), subject to Article 11, for a period of ninety (90) days after the Due Date and the SPG is unable to recover the amount outstanding to the SPG through the Letter of Credit,
- (ii) DISCOM repudiates this Agreement and does not rectify such breach even within a period of sixty (60) days from a notice from the SPG in this regard; or
- (iii) If DISCOM becomes voluntarily or involuntarily the subject of proceeding under any bankruptcy or insolvency laws or goes into liquidation or dissolution or has a receiver appointed over it or liquidator is appointed, pursuant to Law, except where such dissolution of DISCOM is for the purpose of a merger, consolidation or reorganization and where the resulting entity has the financial standing to perform its obligations under this Agreement and creditworthiness similar to DISCOM and expressly assumes all obligations under this agreement and is in a position to perform them.

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13.3 Procedure for cases of SPG Event of Default

13.3.1 Upon the occurrence and continuation of any SPG Event of Default under Article 13.1, DISCOM shall have the right to deliver to the SPG, with a copy to the representative of the lenders to the SPG with whom the SPG has executed the Financing Agreements, a notice stating its intention to terminate this Agreement (DISCOM Preliminary Default Notice), which shall specify in reasonable detail, the circumstances giving rise to the issue of such notice and calling upon the SPG to remedy the same. Where a "Default Notice" has been issued with respect to an Event of Default, which requires the co-operation of both DISCOM and the SPG to remedy, DISCOM shall render all reasonable co-operation to enable the Event of Default to be remedied without any legal obligations. Upon being in default on account of failure to commission the project within Scheduled Commercial Operation Date, the SPG shall be liable to pay liquidated damages as per Article 4.5 whereas for failure to supply power in terms of Article 4.3, the SPG shall be liable to make payment of compensation as per the said clause. For other cases, the damages shall be as under.

- a. At the expiry of 90 (ninety) days from the delivery of the default notice and unless the Parties have agreed otherwise, or the Event of Default giving rise to the default notice has been remedied, the SPG shall have liability to make payment toward compensation to DISCOM equivalent to six (6) months' billing at minimum CUF for its contracted capacity. Also, DISCOM shall have the right to recover the said damages by way of forfeiture of bank guarantee, if any, without prejudice to resorting to any other legal course or remedy.
- b. In addition to the levy of damages as aforesaid, in the event of a default by the SPG, the lenders shall be entitled to exercise their rights to seek substitution of the SPG by a selectee, in accordance with the substitution agreement and in concurrence with DISCOM. However, in the event the lenders are unable to substitute the defaulting SPG within the stipulated period, DISCOM may terminate the PPA and acquire the Project assets for an amount equivalent to 90% of the debt due by issuing a "Termination Notice" / "Takeover Notice", failing which, the lenders may exercise their mortgage rights and liquidate the Project assets.
- c. Provided that any substitution under this Agreement can only be made with the condition that the selectee meets the eligibility requirements of Request for Selection (RfS) issued by DISCOM.
- d. The lenders in concurrence with DISCOM, may seek to exercise the right of substitution under by an amendment or novation of the PPA in favour of the selectee. The SPG shall cooperate with DISCOM to carry out such substitution and shall have the duty and obligation to continue to operate the Power Project in accordance with this PPA till such time as the substitution is finalized. In the event of Change in Shareholding/Substitution of Promoters triggered by the Financial Institutions leading to signing of fresh PPA with a New Entity, an

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amount of Rs. 10 Lakh per Project per Transaction as Facilitation Fee (non-refundable) shall be deposited by the developer-SPG to DISCOM.

- 13.3.2 During the Consultation Period, the Parties shall continue to perform their respective obligations under this Agreement.

13.4 Procedure for cases of DISCOM Event of Default

- 13.4.1 Upon the occurrence and continuation of any DISCOM Event of Default specified in Article 13.2, the SPG shall have the right to deliver to DISCOM, a SPG Preliminary Default Notice, which notice shall specify in reasonable detail the circumstances giving rise to its issue and calling upon DISCOM to remedy the same.
- 13.4.2 DISCOM with the prior consent of the SPG may novate its part of the PPA to any third party, including its Affiliates within the period of 7 days following the expiry of notice period. In the event the aforesaid novation is not acceptable to the SPG, or if no offer of novation is made by the defaulting Procurer/ DISCOM within the stipulated period of 7 days, then the SPG may terminate the PPA and at its discretion require the defaulting Procurer/ DISCOM to either (i) takeover the Project assets by making a payment of the termination compensation equivalent to the amount of the debt due and 110% (one hundred and ten per cent) of the adjusted equity as detailed below, less insurance cover, if any by issuing a "Termination Notice" / "Takeover Notice", or, (ii) pay to the SPG, damages, equivalent to 6 (six) months billing at contracted CUF, or balance PPA period whichever is less, of charges for its contracted capacity, with the Project assets being retained by the SPG.
- 13.4.3 In the event of such termination of PPA, any damages or charges payable to GETCO/ DISCOM, for the connectivity of the plant, shall be borne by DISCOM.
- 13.4.4 "Adjusted Equity" means the Equity funded in Indian Rupees and adjusted on the first day of the current month (the "Reference Date"), in the manner set forth below, to reflect the change in its value on account of depreciation and variations in Wholesale Price Index (WPI), and for any Reference Date occurring between the first day of the month of Appointed Date (the date of achievement of Financial Closure) and the Reference Date;
- i. On or before Commercial Operation Date (COD), the Adjusted Equity shall be a sum equal to the Equity funded in Indian Rupees and expended on the Project, revised to the extent of one half of the variation in WPI occurring between the first day of the month of Appointed Date and Reference Date;
 - ii. An amount equal to the Adjusted Equity as on COD shall be deemed to be the base (the "Base Adjusted Equity");
 - iii. After COD, the Adjusted Equity hereunder shall be a sum equal to the Base Adjusted Equity, reduced by 0.333% (zero point three threethree percent) thereof at the commencement of each month following the COD [reduction of 1% (one

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percent) per quarter of an year] and the amount so arrived at shall be revised to the extent of variation in WPI occurring between the COD and the Reference Date;

For the avoidance of doubt, the Adjusted Equity shall, in the event of termination, be computed as on the Reference Date immediately preceding the Transfer Date; provided that no reduction in the Adjusted Equity shall be made for a period equal to the duration, if any, for which the PPA period is extended, but the revision on account of WPI shall continue to be made.

13.4.5 "Debt Due" means the aggregate of the following sums expressed in Indian Rupees outstanding on the Transfer Date:

i. The principal amount of the debt provided by the Senior Lenders under the Financing Agreements for financing the Total Project Cost (the 'Principal') but excluding any part of the principal that had fallen due for repayment 2 (two) years prior to the Transfer Date;

ii. All accrued interest, financing fees and charges payable under the Financing Agreements on, or in respect of, the debt referred to in sub-clause (i) above until the Transfer Date but excluding: (i) any interest, fees or charges that had fallen due one year prior to the Transfer Date, (ii) any penal interest or charges payable under the Financing Agreements to any Senior Lender, (iii) any pre-payment charges in relation to accelerated repayment of debt except where such charges have arisen due to Utility Default, and (iv) any Subordinated Debt which is included in the Financial Package and disbursed by lenders for financing the Total Project Cost. Provided that if all or any part of the Debt Due is convertible into Equity at the option of Senior Lenders and/or the Concessionaire, it shall for the purposes of this Agreement be deemed not to be Debt Due even if no such conversion has taken place and the principal thereof shall be dealt with as if such conversion had been undertaken. Provided further that the Debt Due, on or after COD, shall in no case exceed 80% (eighty percent) of the Total Project Cost."

13.4.6 During the Consultation Period, the Parties shall continue to perform their respective obligations under this Agreement.

13.4.7 After a period of two hundred ten (210) days following the expiry of the Consultation Period and unless the Parties shall have otherwise agreed to the contrary or DISCOM Event of Default giving rise to the Consultation Period shall have ceased to exist or shall have been remedied, DISCOM under intimation to SPG shall, subject to the prior consent of the SPG, novate its part of the PPA to any third party, including its Affiliates within the stipulated period. In the event the aforesaid novation is not acceptable to the SPG, or if no offer of novation is made by DISCOM within the stipulated period, then the SPG may terminate the PPA and at its discretion require DISCOM to either (i) takeover the Project assets by making a

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payment of the termination compensation equivalent to the amount of the debt due and 110% (one hundred and fifty per cent) of the adjusted equity or, (ii) pay to the SPG, damages, equivalent to 6 (six) months, or balance PPA period whichever is less, of charges for its contracted capacity, with the Project assets being retained by the SPG.

Provided further that at the end of three (3) months period from the period mentioned in this Article 13.4.4, this Agreement may be terminated by the SPG.

ARTICLE 14: LIABILITY AND INDEMNIFICATION

14.1 *Indemnity*

14.1.1 **The SPG's indemnity** -The SPG agrees to defend, indemnify and hold harmless DISCOM, its officers, directors, agents, employees and affiliates (and their respective officers, directors, agents and employees) from and against any and all claims, liabilities, actions, demands, judgments, losses, costs, expenses, suits, actions and damages arising by reason of bodily injury, death or damage to property sustained by third parties that are caused by an act of negligence or the willful misconduct of the SPG, or by an officer, director, sub-contractor, agent or employee of the SPG except to the extent of such injury, death or damage as is attributable to the willful misconduct or negligence of, or breach of this Agreement by, DISCOM, or by an officer, director, sub-contractor, agent or employee of the DISCOM.

14.1.2 **DISCOM's Indemnity** - DISCOM agrees to defend, indemnify and hold harmless the SPG, its officers, directors, agents, employees and affiliates (and their respective officers, directors, agents and employees) from and against any and all claims, liabilities, actions, demands, judgments, losses, costs, expenses, suits, actions and damages arising by reason of bodily injury, death or damage to property sustained by third parties that are caused by an act of negligence or the willful misconduct of DISCOM, or by an officer, director, sub-contractor, agent or employee of DISCOM except to the extent of such injury, death or damage as is attributable to the willful misconduct or negligence of, or breach of this Agreement by, the SPG, or by an officer, director, sub-contractor, agent or employee of the SPG.

ARTICLE 15: ASSIGNMENTS AND CHARGES

15.1 *Assignments*

15.1.3 Neither Party shall assign this Agreement nor shall any portion hereof without the prior written consent of the other Party, provided further that any assignee expressly assume the assignor's obligations thereafter arising under this Agreement pursuant to documentation satisfactory to such other Party. However, such assignment shall be permissible only for entire contracted capacity.

15.1.3 Provided however, no approval is required from DISCOM for the assignment by the SPG of its rights herein to the Financing Parties and their successors and assigns in connection with any financing or refinancing related to the construction, operation and maintenance of the Project.

15.1.3 In furtherance of the foregoing, DISCOM acknowledges that the Financing Documents may

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provide that upon an event of default by the SPG under the Financing Documents, the Financing Parties may cause the SPG to assign to a third party the interests, rights and obligations of the SPG thereafter arising under this Agreement. DISCOM further acknowledges that the Financing Parties, may, in addition to the exercise of their rights as set forth in this Section, cause the SPG to sell or lease the Project and cause any new lessee or purchaser of the Project to assume all of the interests, rights and obligations of the SPG thereafter arising under this Agreement.

15.2 Permitted Charges

- 15.2.1 SPG shall not create or permit to subsist any encumbrance over all or any of its rights and benefits under this Agreement, other than as set forth in Article 15.1

ARTICLE 16: GOVERNING LAW AND DISPUTE RESOLUTION

16.1 Governing Law

- 16.1.1 This Agreement shall be governed by and construed in accordance with the Electricity Act 2003 and other applicable Laws of India. Any legal proceedings in respect of any matters, claims or disputes under this Agreement shall be under the jurisdiction of Gujarat Electricity Regulatory Commission.

16.2 Dispute Resolution

- 16.2.1 All disputes or differences between the Parties arising out of or in connection with this Agreement shall be first tried to be settled through mutual negotiation.
- 16.2.2 The Parties hereto agree to attempt to resolve all disputes arising hereunder promptly, equitably and in good faith.
- 16.2.3 Each Party shall designate in writing and communicate to the other Party its own representative who shall be authorized to resolve any dispute arising under this Agreement in an equitable manner and, unless otherwise expressly provided herein, to exercise the authority of the Parties hereto to make decisions by mutual agreement.
- 16.2.4 In the event that such differences or disputes between the Parties are not settled through mutual negotiations within sixty (60) days, after such dispute arises, then it shall be adjudicated by GERC in accordance with the law.

ARTICLE 17: MISCELLANEOUS PROVISIONS

17.1 Amendment

- 17.1.1 This Agreement shall not be amended, changed, altered, or modified except by a written instrument duly executed by an authorized representative of both Parties. However, DISCOM may consider any amendment or change that the Lenders may require to be made to this Agreement.

17.2 Waiver

- 17.2.1 Any failure on the part of a Party to exercise, and any delay in exercising, exceeding three years, any right hereunder shall operate as a waiver thereof. No waiver by a Party of any right hereunder with respect to any matter or default arising in

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connection with this Agreement shall be considered a waiver with respect to any subsequent matter or default.

17.3 Severability

17.3.1 The invalidity or unenforceability, for any reason, of any part of this Agreement shall not prejudice or affect the validity or enforceability of the remainder of this Agreement, unless the part held invalid or unenforceable is fundamental to this Agreement.

17.4 Notices

17.4.1 Any notice, communication, demand, or request required or authorized by this Agreement shall be in writing and shall be deemed properly given upon date of receipt if delivered by hand or sent by courier, if mailed by registered or certified mail at the time of posting, if sent by fax when dispatched (provided if the sender's transmission report shows the entire fax to have been received by the recipient and only if the transmission was received in legible form), to:

In case of SPG

Name & Designation	
Address	
Email	
Mobile /Whatsapp No.	
Telephone	

In case of DISCOM

Name & Designation	
Address	
Email	
Telephone	

17.5 Language

17.5.1 All agreements, correspondence and communications between the Parties relating to this Agreement and all other documentation to be prepared and supplied under the Agreement shall be written in English, and the Agreement shall be construed and interpreted in accordance with English language.

17.5.2 If any of the agreements, correspondence, communications or documents are prepared in any language other than English, the English translation of such agreements, correspondence, communications or documents shall prevail in matters of interpretation.

17.6 Restriction of Shareholders / Owners' Liability

17.6.1 Parties expressly agree and acknowledge that none of the shareholders of the

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Parties hereto shall be liable to the other Parties for any of the contractual obligations of the concerned Party under this Agreement. Further, the financial liabilities of the shareholder/s of each Party to this Agreement, shall be restricted to the extent provided in the Indian Companies Act, 2013.

17.7 Taxes and Duties

- 17.7.1 The SPG shall bear and promptly pay all statutory taxes, duties, levies and cess, assessed/ levied on the SPG, contractors or their employees that are required to be paid by the SPG as per the Law in relation to the execution of the Agreement and for supplying power as per the terms of this Agreement.
- 17.7.2 DISCOM shall be indemnified and held harmless by the SPG against any claims that may be made against DISCOM in relation to the matters set out in Article 17.9.1.
- 17.7.3 DISCOM shall not be liable for any payment of, taxes, duties, levies, cess whatsoever for discharging any obligation of the SPG by DISCOM on behalf of SPG.

17.8 Independent Entity

- 17.8.1 The SPG shall be an independent entity performing its obligations pursuant to the Agreement.
- 17.8.2 Subject to the provisions of the Agreement, the SPG shall be solely responsible for the manner in which its obligations under this Agreement are to be performed. All employees and representatives of the SPG or contractors engaged by the SPG in connection with the performance of the Agreement shall be under the complete control of the SPG and shall not be deemed to be employees, representatives, contractors of DISCOM and nothing contained in the Agreement or in any agreement or contract awarded by the SPG shall be construed to create any contractual relationship between any such employees, representatives or contractors and DISCOM.

17.9 Compliance with Law

- 17.9.1 Despite anything contained in this Agreement but without prejudice to this Article, if any provision of this Agreement shall be in deviation or inconsistent with or repugnant to the provisions contained in the Electricity Act, 2003, or any rules and regulations made there under, such provision of this Agreement shall be deemed to be amended to the extent required to bring it into compliance with the aforesaid relevant provisions as amended from time to time.

17.10 Order of priority in application

- 17.10.1 In case of inconsistencies in the agreements executed between the Parties, applicable Law including rules and regulations framed thereunder, the order of priority shall be as mentioned below:
- (i) applicable Law, rules and regulations framed thereunder,
 - (ii) this Agreement

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17.11 Affirmation

17.11.1 The SPG and PGVCL, both affirm that;

- a) neither it nor its respective directors, employees, or agents has paid or undertaken to pay or shall in the future pay any unlawful commission, bribe, pay-off or kick-back; and
- b) it has not in any other manner paid any sums, whether in Indian currency or foreign currency and whether in India or abroad to the other Party to procure this Agreement, and the SPG and DISCOM hereby undertake not to engage in any similar acts during the Term of Agreement.

17.12 No consequential or Indirect Losses

17.14.1. The liability of the Seller and the Procurers is limited to that explicitly provided in this Agreement.

17.14.2. Provided that notwithstanding anything contained in this Agreement, under no event shall the Procurers or the Seller claim from one another any indirect or consequential losses or damages.

17.13 Breach of Obligations

17.13.1 The Parties acknowledge that a breach of any of the obligations contained herein would result in injuries. The Parties further acknowledge that the amount of the liquidated damages or the method of calculating the liquidated damages specified in this Agreement is a genuine and reasonable pre-estimate of the damages that may be suffered by the non-defaulting party in each case specified under this Agreement.

17.14 Books and Records: The SPG shall maintain books of account relating to the Project in accordance with generally accepted Indian accounting principles.

17.15 Limitation Remedies and Damages: Neither Party shall be liable to the other for any consequential, indirect or special damages to persons or property whether arising in tort, contract or otherwise, by reason of this Agreement or any services performed or undertaken to be performed hereunder.

17.16 Severability: Any provision of this Agreement, which is prohibited or unenforceable in any jurisdiction, shall, as to such jurisdiction, be ineffective to the extent of such prohibition or unenforceability without invalidating the remaining provisions hereof and without affecting the validity, enforceability or legality of such provision in any other jurisdiction.

17.17 Entire Agreement, Appendices: This Agreement constitutes the entire agreement between DISCOM and the SPG, concerning the subject matter hereof. All previous documents, undertakings, and agreements, whether oral, written, or otherwise, between the Parties concerning the subject matter hereof are hereby cancelled and shall be of no further force or effect and shall not affect or modify any of the terms or obligations set forth in this Agreement, except as the same may be made part of this Agreement in accordance with its terms, including the terms of any of the appendices, attachments or exhibits. The appendices, attachments and exhibits are hereby made an integral part of this Agreement and shall be

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fully binding upon the Parties.

In the event of any inconsistency between the text of the Articles of this Agreement and the appendices, attachments or exhibits hereto or in the event of any inconsistency between the provisions and particulars of one appendix, attachment or exhibit and those of any other appendix, attachment or exhibit DISCOM and the SPG shall consult to resolve the inconsistency.

17.18 Further Acts and Assurances: *Each of the Parties after convincing itself agrees to execute and deliver all such further agreements, documents and instruments, and to do and perform all such further acts and things, as shall be necessary or convenient to carry out the provisions of this Agreement and to consummate the transactions contemplated hereby.*

IN WITNESS WHEREOF the Parties have caused the Agreement to be executed through their duly authorized representatives as of the date and place set forth above.

Signature

Signature with Seal

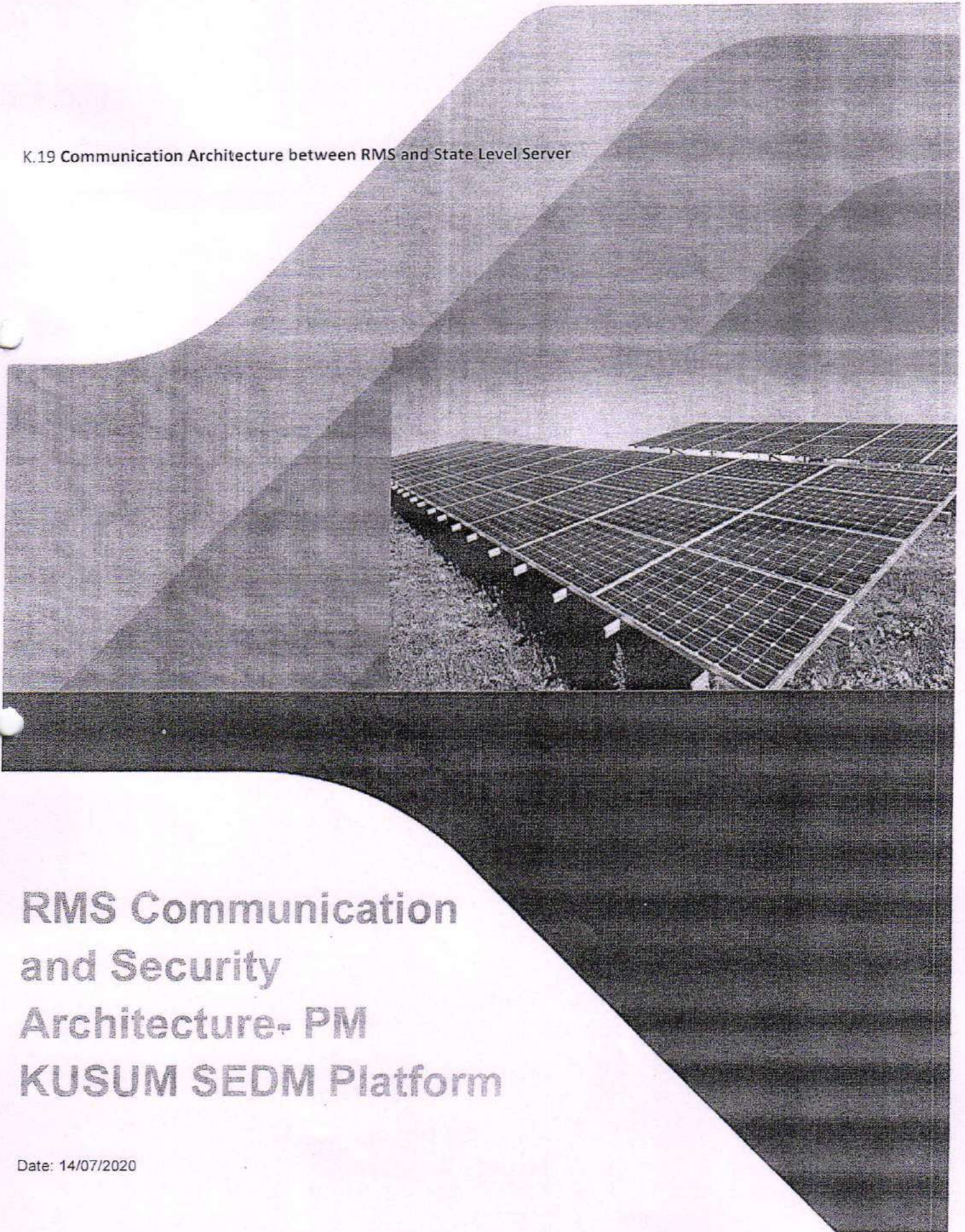
Solar Power Generator
Witness:

Paschim Gujarat Vij Company Ltd.
DISCOM
Witness:

Annexure - E4

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K.19 Communication Architecture between RMS and State Level Server



RMS Communication and Security Architecture- PM KUSUM SEDM Platform

Date: 14/07/2020

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RMS Communication & Security Architecture

1. Security Architecture (with reference to EESL Tender Annexure 8 – clause 4.d)
2. RMS Registration (with reference to EESL Tender Annexure 8 – clause 4.d)
3. MQTT Topic Structure (with reference to EESL Tender Annexure 8 – clause 4.b,4.c)
4. MQTT Message Structure (with reference to EESL Tender Annexure 8 – clause 4.e,4.f)
5. Annexure: JSON Formats with parameter keywords, sample values and description
 - a. Annexure: Pump Controller
 - b. Annexure: Energy Meter
 - c. Annexure: Inverter
 - d. Annexure: String Combiner Box (SJB)
 - e. Annexure: Heartbeat
 - f. Annexure: DAQ

1. Security Architecture

This section highlights the communication security architecture between RMS/DCU and State SWPS IoT Platform. With this security architecture, third parties are unable to intercept or "sniff" the encrypted data. This stops ISPs, employers, local network administrators and cybercriminals from being able to perform "packet sniffing" to access what the traffic contains. It also protects against man in the middle (MitM) attacks. This implements Private TLS/SSL VPN to ensure highest level of security.

In addition to this, use of OTP in every message exchange shall help restrict spammers and Bots. Such OTP based mechanism will provide transaction level security which is required for remote operations.



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2. RMS Registration

This section details how individual RMS/DCU shall be registered and communicate securely with State SWPS IoT Platform.

- Every supplier/vendor must Register all unique IMEI (International Mobile Equipment Identity) of RMS/DCU with State SWPS
- State SWPS will generate individual client certificate for RMS/DCU against unique IMEI registered and share with supplier/vendor through secured web API interface.
- Every supplier/vendor shall be able to access web API with unique credentials shared with them.
- Web API shall return individual client certificate, Device Broker url and "info" topic.
- After installation of client certificate relevant to IMEI of RMS/DCU, RMS/DCU will connect to Device Broker and get authenticated using client certificate and further shall be able to receive additional configuration details such as FTP credential, Message Topic structure etc. after subscribing to default topic.
- After client certificate expiry, RMS will connect to FTP using available credentials and download the renewed certificate

3. MQTT Topic Structure

This section defines the different topic structure for communication between RMS/DCU and State SWPS through Device Broker.

RMS/DCU will publish and subscribe to their respective topics only, authorization of topic shall be done against unique credentials.

Application Version	Solution	IMEI	Message Type	Publish/Subscribe
IIOT-1	Standalonesolarpump	{IMEI}	Info	Subscribe
	Gridconnectedsolarpump		OTP	Subscribe
	SolarMW		Heartbeat	Publish
	Ongridrooftop		Data	Publish
	Offgridrooftop		Ondemand	Subscribe
			Config	Subscribe

Sample Topic structure for Stand-alone Solar Pump shall be: IIOT-1/Standalonesolarpump/{IMEI}/info

Multiple sub-topics will be formed for communication between RMS/DCU and sate SWPS IoT Platform

- **Info:** Default Topic To exchange RMS/DCU configuration details
- **OTP:** To exchange OTP at every interval of 15/30/60 minutes
- **Heartbeat:** To update RMS/DCU health indicators at frequent configurable intervals.
- **Data:** To exchange data related to RMS/DCU Monitoring parameters in "push mode"
 - Push data Periodically
 - Push data on Event/Notification
 - History Missing Data Push Mode: History data will be identified against "index"

- **Ondemand:** To exchange data between RMS/DCU and Server in "Command on Demand" Mode
 - Each "On Demand" message will have two transactions: Commands, Response.
 - On demand command and response will be tracked against a common "MSGID".
 - On demand message can be used to read and write with two command types
 - Command: "Read" - In json received from server replace each key with value from RMS/DCU and send the updated json back to server.
 - Command: "Write" - After executing the command based on key-value pair received in json, send the updated json back to server on successful execution.
 - Note: handshaking parameters such as msgid, etc has to send back to server as is, without modification
- **Config:** To update configurable parameters of Device, which is similar to Ondemand but will be used only for configurable parameters of Device, this implements "Configuration over the air"
 - Command: "Read" - In json received from server replace each key with value from RMS/DCU and send the updated json back to server.
 - Command: "Write" - After executing the command based on key-value pair received in json, send the updated json back to server on successful execution.
 - Note: handshaking parameters such as msgid, etc has to send back to server as is, without modification

4. Communication Modes

- **Push on Periodic Interval:** In this mode deployed RMS shall transmit data of Multiple devices and sensors on different configurable time intervals such as Inverter or pump controller data at every 5 minutes, Energy Meter data at every 15 minutes, String Combiner Box data at every 10 minutes
- **Push on Event:** RMS shall detect various configurable alarm or event conditions such as Pump On / Off Status, Inverter On/Off Status, Low Water Flow Rate, Fault or Trip status etc. and It shall transmit data immediately to the server
- **On Demand Read:** In this mode, User will send command to RMS to get data as and when required and RMS will send the required data to server immediately
- **On Demand Write:** In case of Remote Operations, Farmer / Consumer shall send On Demand Write Command to the RMS and RMS will send back the acknowledgement with change in parameters after operation is completed
- **Configuration read/write:** Using this mode, user will be able to read and change configurable parameters remotely such as updating periodic interval, alarm limits, server parameters etc.

5. Communication Protocols

- **Field Device Communication:** RMS to Field Devices communication such as Inverter, Pump Controller, Drive, String Combiner box, MFT/MFM, Data Acquisition System shall be established using MODBUS RTU protocol supported by all leading manufacturers globally

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- **Energy Meter Communication:** RMS to Energy Meter communication such as Bi Directional (Revenue) Meter, Solar Generation (Audit) Meter shall be established using **DLMS/Modbus protocol** supported by all leading Meter Manufacturers in India
- **RMS to Server Communication - Industrial IoT MQTT Protocol:** RMS to Server Communication shall be established using MQTT protocol which is well accepted IoT protocol across the globe and supported by all leading IT as well as OT companies for Smart Grid, Smart RE and Smart City Applications

6. MQTT Message Structure

This section details message structure exchanged between RMS/DCU and state SWPS IoT Platform through Device Broker

keyword	Description	Sample Value
IMEI	Unique Identification of RMS/DCU – required to ensure registered source of data	863287049443888
VD	Virtual device/group – required for grouping parameters based on update interval/subsystems such as inverter/pump controller/meter/string combiner box etc.	2
MSGID	Message Transaction Id - required for "Ondemand"/"Config" message type, request/response/acknowledgement/feedback	123456789
COMMAND	Read/Write - Applicable only in case of "Ondemand"/"Config" message Type	Read
TIMESTAMP	RTC timestamp of RMS/DCU against all parameters of vd/group (YYYY-MM-DD HH:mm:ss)	2019-08-20 20:15:08
STINTERVAL	Periodic interval at which RMS shall store and transmit data to server. (in minutes)	15
DATE	local storage date – required as a reference to fetch data from local storage (YYYY-MM-DD)	2020-06-15
INDEX	Local storage Index – required as a reference to fetch data from local storage	5
MAXINDEX	Local storage maximum index of local storage date – required to calculate missing index	96
LOAD	Local storage retrieval command & status	0
POTP	Previous One Time Password	12345678
COTP	Current One Time Password, State SWPS Broker will update OTP at interval of 30/60 minutes	12345678
Parameter-1 Parameter-2 Parameter-3 Parameter-1 Parameter-n	Equipment wise Keywords for multiple Parameters.	

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Communication Format Annexure

Annexure – 1 (Revision-B) Pump Controller

Message Name	: Periodic Push Pump Controller (1)
Message Format	: JSON
Message Type	: Data
Message Command Flow	: Not Applicable for Data periodic Push
Message response Flow	: RMS -> State SWPS IoT Platform
Message Medium	: GPRS

Command Message	
Not Applicable	

Response Message														
Message	Description	Unit												
{														
"VD":1	Virtual Device Index/Group	-												
"TIMESTAMP":"2020-05-18 17:58:00",	RTC timestamp of RMS/DCU against all parameters of vd/group	-												
"MAXINDEX":96	maximum index of local storage date	-												
"INDEX":7,	reference of local storage	-												
"LOAD":0,	Local storage retrieval command & status	-												
"STINTERVAL":15,	Periodic interval at which RMS shall store and transmit data to server. (in minutes)	-												
"MSGID": "",	Message Transaction Id - required for "Ondemand"/"Config" message type, request/response/acknowledgement/feedb ack	-												
"DATE":200518,	local storage date	YYMMD D												
"IMEI":"1234561234561234",	IMEI No. of First Sim to be considered always for unique identity of DCU	-												
"ASN_11":"34123450",	Pump Controller Serial No. <table><tr><td>RMS</td><td>0</td></tr><tr><td>DAQ</td><td>1-9</td></tr><tr><td>Pump Controller</td><td>11-19</td></tr><tr><td>Meter</td><td>21-29</td></tr><tr><td>Inverter</td><td>31-39</td></tr><tr><td>String Combiner Box</td><td>41-49</td></tr></table>	RMS	0	DAQ	1-9	Pump Controller	11-19	Meter	21-29	Inverter	31-39	String Combiner Box	41-49	-
RMS	0													
DAQ	1-9													
Pump Controller	11-19													
Meter	21-29													
Inverter	31-39													
String Combiner Box	41-49													
"POTP":"341234",	Previous One Time Password	-												
"COTP":"341234",	Current One Time Password	-												
"PMAXFREQ1":"50.00",	Maximum Frequency	Hz												

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"PFREQLSP1": "50.00",		Lower Limit Frequency	Hz
"PFREQHSP1": "50.00",		Upper Limit Frequency	Hz
"PCNTRMODE1": "1",		Solar Pump Controller Control Mode Status	-
0	Variable Frequency Control Mode		
1	CVT Mode for Solar		
2	MPPT mode for Solar		
"PRUNST1": "2",		Solar Pump Controller Run Status	-
0	Stop		
1	Running		
2	Sleep		
3	Low Speed Protection		
4	Dry Run Protection		
5	Over Current Protection		
6	Minimum Power Protection		
"PREFFREQ1": "50.00",		Solar Pump Controller Reference Frequency	Hz
"POPFREQ1": "50.00",		Solar Pump Controller Output Frequency	Hz
"POPI1": "20.00",		Output Current	A
"POPV1": "230.00",		Output Voltage	V
"POPKW1": "45.00",		Output Active Power	KW
"PDC1V1": "550.00",		DC Input Voltage	DC V
"PDC1I1": "50.00",		DC Current	DC I
"PDCVOC1": "650.00",		DC Open Circuit Voltage	DC V
"PDKWH1": "35.00",		Today Generated Energy	KWH
"PTOTKWH1": "120.00",		Cumulative Generated Energy	KWH
"POPFLW1": "2.00",		Flow Speed	LPM
"POPDWD1": "120.00",		Daily Water Discharge	Litres
"POPTOTWD1": "220.00",		Total Water Discharge	Litres
"PMAXDCV1": "750.00",		Max DC Voltage	DC V
"PMAXDCI1": "40.00",		Max DC Current	DC I
"PMAXKW1": "650.00",		Max Output Active Power	DC KW
"PMAXFLW1": "650.00",		Max Flow Speed	LPM
"PDHR1": "8.00",		Pump Day Run Hours	Hrs
"PTOTHR1": "8.00",		Pump Cumulative Run Hours	Hrs
}			

Reaction	
Not Applicable	

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Communication Format Annexure

Annexure - 2 Energy Meter

Message Name	: Periodic Push Meter (1)
Message Format	: JSON
Message Type	: Data
Message Command Flow	: Not Applicable for Data periodic Push
Message response Flow	: RMS -> State SWPS IoT Platform
Message Medium	: GPRS

Command Message	
Not Applicable	

Response Message	
Message	Description
{	
"VD":2	Virtual Device Index/Group
"TIMESTAMP":"2020-05-18 17:58:00",	RTC timestamp of RMS/DCU against all parameters of vd/group
"MAXINDEX":96	maximum index of local storage date
"INDEX":7,	reference of local storage
"LOAD":0,	Local storage retrieval command & status
"STINTERVAL":15,	Periodic interval at which RMS shall store and transmit data to server. (in minutes)
"MSGID": "",	Message Transaction Id - required for "Ondemand"/"Config" message type, request/response/acknowledgement/feedback
"DATE":200518,	local storage date

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"IMEI":1234561234561234",	IMEI No. of First Sim to be considered always for unique identity of DCU												
"ASN_21":12345678,	Asset Serial Number <table border="1"> <tr> <td>RMS</td><td>0</td></tr> <tr> <td>DAQ</td><td>1-9</td></tr> <tr> <td>Pump Controller</td><td>11-19</td></tr> <tr> <td>Meter</td><td>21-29</td></tr> <tr> <td>Inverter</td><td>31-39</td></tr> <tr> <td>String Combiner Box</td><td>41-49</td></tr> </table>	RMS	0	DAQ	1-9	Pump Controller	11-19	Meter	21-29	Inverter	31-39	String Combiner Box	41-49
RMS	0												
DAQ	1-9												
Pump Controller	11-19												
Meter	21-29												
Inverter	31-39												
String Combiner Box	41-49												
"MTDET1":30012302,	Meter Detail												
"POTP":34123450",	Previous One Time Password												
"COTP":34123450",	Current One Time Password												
"MTBLDATE1":18,	Billing Date for meter 1												
"DATE1":180606,	Present date for meter1												
"TIME1":105400,	Present time for meter1												
"IR1":20.58,	R Phase Current in Amps												
"IY1":20.65,	Y Phase Current in Amps												
"IB1":20.12,	B Phase Current in Amps												
"VRN1":240.12,	R Phase to Neutral Voltage in Volts												
"VYN1":242.13,	Y Phase to Neutral Voltage in Volts												
"VBN1":243.55,	B Phase to Neutral Voltage in Volts												
"VRY1":420.18,	Phase to Phase Voltage(R-Y) in Volts												
"VYB1":419.38,	Phase to Phase Voltage(Y-B) in Volts												
"VBR1":421.5,	Phase to Phase Voltage(B-R) in Volts												
"PFR1":0.98,	R Phase Power Factor												
"PFY1":0.97,	Y Phase Power Factor												
"PFB1":0.96,	B Phase Power Factor												
"FRQ1":50.05,	Grid Frequency												
"POWR1":42.578,	R Phase Active Power in KW												
"POWY1":42.156,	Y Phase Active Power in KW												
"POWB1":42.354,	B Phase Active Power in KW												
"POW1":42.185,	Total Active Power in KW												
"RPOWR1":22.123,	R Phase Reactive Power in KVAR												
"RPOWY1":20.110,	Y Phase Reactive Power in KVAR												
"RPOWB1":22.310,	B Phase Reactive Power in KVAR												
"RPOW1":65.610,	Total Reactive Power in KVAR												
"APOWR1":55.610,	R Phase Apparent Power in KVA												
"APOWY1":52.910,	Y Phase Apparent Power in KVA												
"APOWB1":53.911,	B Phase Apparent Power in KVA												
"APOW1":14.198,	Total Apparent Power in KVA												
"KWHNET1":98561.4,	Cumulative Net Energy in KWH												
"KWHIMP1":98561.4,	Cumulative Import Energy in KWH												
"KWHEXP1":98561.2,	Cumulative Export Energy in KWH												
"KVAHNET1":99100.3,	Cumulative Net Energy in KVAH												
"KVAHIMP1":99105.1,	Cumulative Import Energy in KWH												
"KVAHEXP1":98999.1,	Cumulative Export Energy in KWH												
"MDKWIMP1":100.3,	Rising Demand (Import) in KW												
"MDKWEXP1":98.6,	Rising Demand (Export) in KW												

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"POFF1":1020,	Grid Power Failure in Minutes
"TC1":100,	Total Tamper Counts
"PF1":0.99,	Average PF
"LBKWHNET1":98561,	Last Billing Cycle Net Energy in KWH
"LBKWHIMP1":98561,	Last Billing Cycle Import Energy in KWH
"LBKWHEXP1":98561,	Last Billing Cycle Export Energy in KWH
"PMDKVAIMP1":22.50,	Present MD KVA Import
"PMDKVAEXP1":0.00,	Present MD KVA Export
"LBMDKWIMP1":7.07,	Last Billing MD KW Import
"LBMDKWEXP1":0.00,	Last Billing MD KW Export
"LBMDKVAIMP1":7.07,	Last Billing MD KVA Import
"LBMDKVAEXP1":0.00,	Last Billing MD KVA Export
"MDRSTC1":4	MD Reset Count
}	

Reaction	
Not Applicable	

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Communication Format Annexure

Annexure – 3 Inverter

Message Name : Inverter Periodic Push (INVERTER-1)
Message Format : JSON
Message Type : Data
Message Command Flow : Not Applicable for Data periodic Push
Message response Flow : RMS -> State SWPS IoT Platform
Message Medium : GPRS

Command Message

Not Applicable

Response Message

Message	Description
{	
"VD":5	Virtual Device Index/Group
"TIMESTAMP":"2020-05-18 17:58:00",	RTC timestamp of RMS/DCU against all parameters of vd/group
"MAXINDEX":96	maximum index of local storage date
"INDEX":7,	reference of local storage
"LOAD":0,	Local storage retrieval command & status
"STINTERVAL":15,	Periodic interval at which RMS shall store and transmit data to server. (in minutes)
"MSGID": "",	Message Transaction Id - required for "Ondemand"/"Config" message type, request/response/acknowledgement/feedback
"DATE":200518,	local storage date
"IMEI":"1234561234561234",	IMEI No. of First Sim to be considered always for unique identity of DCU
"ASN_31":"34123450",	Inverter Serial No.

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	RMS	0	
	DAQ	1-9	
	Pump Controller	11-19	
	Meter	21-29	
	Inverter	31-39	
	String Combiner Box	41-49	
"POTP": "34123450",	Previous One Time Password		
"COTP": "34123450",	Current One Time Password		
"IST1": 1,	Inverter Status		
"IFREQ1": 40,	Frequency		
"IPF1": 0.8,	Power Factor		
"IDC1V1": 500,	DC-1 Voltage		
"IDC1I1": 200,	DC-1 Current		
"IDC1KW1": 200,	DC-1 Power		
"IDC2V1": 243.55,	DC-2 Voltage		
"IDC2I1": 420.18,	DC-2 Current		
"IDC2KW1": 200,	DC-2 Power		
"IDC3V1": 419.38,	DC-3 Voltage		
"IDC3I1": 421.8,	DC-3 Current		
"IDC3KW1": 200,	DC-3 Power		
"IDC4V1": 0.98,	DC-4 Voltage		
"IDC4I1": 0.97,	DC-4 Current		
"IDC4KW1": 200,	DC-4 Power		
"IRPHV1": 0.96,	R phase voltage		
"IRPHI1": 50.05,	R phase current		
"IRPHKW1": 50.05,	R phase Active Power		
"IYPHV1": 42.578,	Y phase voltage		
"IYPHI1": 42.156,	Y phase current		
"IYPHKW1": 50.05,	Y phase Active Power		
"IBPHV1": 42.354,	B phase voltage		
"IBPHI1": 42.185,	B phase current		
"IBPHKW1": 50.05,	B phase Active Power		
"IKW1": 22.123,	Active Power		
"ITKWH1": 20.110,	Today Generated Energy		
"ITON1": 22.310,	Today On Time of Inverter		
"ILKWH1": 65.610,	Life time Generated Energy		
"ILON1": 55.610,	Life time running hours		
"ITEMP1": 52.910,	Inverter Temperature		
"IFT11": 53.911,	Fault-1		
"IFT21": 14.198,	Fault-2		
"IFT31": 98561.4,	Fault-3		
"IFT41": 98561.4,	Fault-4		
"IFT51": 98561.2,	Fault-5		
"IKVA1": 99100.3,	Apparent power		
"IKVAR1": 99105.1	Reactive power		
}			

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Reaction	
Not Applicable	

Communication Format Annexure

Annexure - 4 String Combiner Box	
Message Name	: Periodic Push String Combiner Box
Message Format	: JSON
Message Type	: Data
Message Command Flow	: Not Applicable for Data periodic Push
Message response Flow	: RMS -> State SWPS IoT Platform
Message Medium	: GPRS

Command Message	
Not Applicable	

Response Message					
Message	Description				
{					
"VD":9	Virtual Device Index/Group				
"TIMESTAMP":"2020-05-18 17:58:00",	RTC timestamp of RMS/DCU against all parameters of vd/group				
"MAXINDEX":96	maximum index of local storage date				
"INDEX":7,	reference of local storage				
"LOAD":0,	Local storage retrieval command & status				
"STINTERVAL":15,	Periodic interval at which RMS shall store and transmit data to server. (in minutes)				
"MSGID": "",	Message Transaction Id - required for "Ondemand"/"Config" message type, request/response/acknowledgement/feedback				
"DATE":200518,	local storage date				
"IMEI":"1234561234561234",	IMEI No. of First Sim to be considered always for unique identity of DCU				
"ASN_41":"34123450",	SJB Serial no <table border="1"> <tr> <td>RMS</td><td>0</td></tr> <tr> <td>DAQ</td><td>1-9</td></tr> </table>	RMS	0	DAQ	1-9
RMS	0				
DAQ	1-9				

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	Pump Controller	11-19	
	Meter	21-29	
	Inverter	31-39	
	String Combiner Box	41-49	
"POTP": "34123450",	Previous One Time Password		
"COTP": "34123450",	Current One Time Password		
"SI11": "3.00",	SJB1, Channel1 Current		
"SI21": "5.00",	SJB1, Channel2 Current		
"SI31": "5.00",	SJB1, Channel3 Current		
"SI41": "5.00",	SJB1, Channel4 Current		
"SI51": "5.00",	SJB1, Channel5 Current		
"SI61": "5.00",	SJB1, Channel6 Current		
"SI71": "5.00",	SJB1, Channel7 Current		
"SI81": "5.00",	SJB1, Channel8 Current		
"SI91": "5.00",	SJB1, Channel9 Current		
"SI101": "5.00",	SJB1, Channel10 Current		
"SI111": "5.00",	SJB1, Channel11 Current		
"SI121": "5.00",	SJB1, Channel12 Current		
"SI131": "5.00",	SJB1, Channel13 Current		
"SI141": "5.00",	SJB1, Channel14 Current		
"SI151": "5.00",	SJB1, Channel15 Current		
"SI161": "5.00",	SJB1, Channel16 Current		
"SI171": "5.00",	SJB1, Channel17 Current		
"SI181": "5.00",	SJB1, Channel18 Current		
"SI191": "5.00",	SJB1, Channel19 Current		
"SI201": "5.00",	SJB1, Channel20 Current		
"SI211": "5.00",	SJB1, Channel21 Current		
"SI221": "5.00",	SJB1, Channel22 Current		
"SI231": "5.00",	SJB1, Channel23 Current		
"SI241": "5.00",	SJB1, Channel24 Current		
"SDCV1": "635.00",	SJB1, DC Voltage		
"SDCTOTI1": "40.00",	SJB1, Total DC Current		
"SDCTOTKW1": "28.00",	SJB1, Total DC Power		
"SDI11": "1.00",	SJB1, Digital Input1		
"SDI21": "1.00",	SJB1, Digital Input2		
"ST11": "1.00",	SJB1, Temperature1		
"ST21": "1.00",	SJB1, Temperature2		
"ST31": "1.00"	SJB1, Temperature3		
}			

Reaction	
Not Applicable	

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Communication Format Annexure

Annexure – 5 RMS

Message Name : RMS
 Message Format : JSON
 Message Type : Heartbeat
 Message Command Flow : Not Applicable
 Message response Flow : RMS -> State SWPS IoT Platform
 Message Medium : GPRS

Command Message

Not Applicable

Response Message

Message	Description
{	
"VD":0	Virtual Device Index/Group
"TIMESTAMP":"2020-05-18 17:58:00",	RTC timestamp of RMS/DCU against all parameters of vd/group
"MAXINDEX":96	maximum index of local storage date
"INDEX":7,	reference of local storage
"LOAD":0,	Local storage retrieval command & status
"STINTERVAL":15,	Periodic interval at which RMS shall store and transmit data to server. (in minutes)
"MSGID": "",	Message Transaction Id - required for "Ondemand"/"Config" message type, request/response/acknowledgement/feedback
"DATE":200518,	local storage date
"IMEI":"1234561234561234",	IMEI No. of First Sim to be considered always for unique identity of DCU
"POTP":"341234",	Previous One Time Password
"COTP":"341234",	Current One Time Password
"GSM":1,	Device connected to GSM network
"SIM":1,	SIM detected (1 - detected)
"NET":1,	Device in Network (1 - in network)
"GPRS":"1",	GPRS connected (1 - connected)

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"RSSI":22,	Signal Strength
"SD":1,	SD card detected (1 - detected)
"ONLINE":1,	Device Online (1- Online)
"GPS":1,	GPS Module Status (1-ON,0-OFF)
"GPSLOC":1,	GPS Location Locked
"RF":1,	RF Module Status (1-ON,0-OFF)
"RTCDATE":180918,	RTC Date
"RTCTIME":175800,	RTC Time
"TEMP":45.5,	Device Temperature
"LAT":19.06,	Latitude from gps
"LONG":72.8777,	Longitude from gps
"SIMSLOT":1,	Sim Slot (Current Sim Slot: 1 or 2)
"SIMCHNGCNT":10,	Total Sim Slot Change Count
"FLASH":1,	Device Flash Status 1: Detected 0: Error
"BATTST":0,	Battery Input Status: 1 if on battery power else 0
"VBATT":5.0,	Battery Voltage
"PST":1	Power Supply (1-Mains, 2-Battery)
}	

Reaction	
Not Applicable	

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Communication Format Annexure

Annexure – 6 DAQ System

Message Name	: Periodic Push DAQ System
Message Format	: JSON
Message Type	: Data
Message Command Flow	: Not Applicable for Data periodic Push
Message response Flow	: RMS -> State SWPS IoT Platform
Message Medium	: GPRS

Command Message	
Not Applicable	

Response Message	
Message	Description
{	
"VD":12	Virtual Device Index/Group
"TIMESTAMP":"2020-05-18 17:58:00",	RTC timestamp of RMS/DCU against all parameters of vd/group
"MAXINDEX":96	maximum index of local storage date
"INDEX":7,	reference of local storage
"LOAD":0,	Local storage retrieval command & status
"STINTERVAL":15,	Periodic interval at which RMS shall store and transmit data to server. (in minutes)
"MSGID": "",	Message Transaction Id - required for "Ondemand"/"Config" message type, request/response/acknowledgement/feedback
"DATE":200518,	local storage date
"IMEI":"1234561234561234",	IMEI No. of First Sim to be considered always for unique identity of DCU
"POTP":"34123450",	Previous One Time Password
"COTP":"34123450",	Current One Time Password
"AI11":45.5,	Analog Input – 1
"AI21":45.5,	Analog Input – 2
"AI31":45.5,	Analog Input – 3
"AI41":45.5,	Analog Input – 4

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"DI11":1,	Digital Input – 1
"DI21":0,	Digital Input – 2
"DI31":1,	Digital Input – 3
"DI41":0,	Digital Input – 4
"DO11":1,	Digital Output – 1
"DO21":1,	Digital Output – 2
"DO31":1,	Digital Output – 3
"DO41":1	Digital Output – 4
}	

Reaction	
Not Applicable	

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Annexure - 7

Message Name : On Demand Read/Write Parameter/Keyword
 Message Format : JSON
 Message Type : Config
 Message Command Flow : Cloud Server-> RMS
 Message Response Flow : RMS -> Cloud Server
 Message Medium : GPRS

Command Message	
Message	Description
{	
"timestamp": "2018-09-18 17:58:00",	
"type": "config",	
"cmd": "write",	To write config
"msgid": "130",	Server Auto Generated
"APN1": "www"	APN Value for sim1
"USR1": "string"	sim1 user name
"PASS1": "string"	sim1 password
"APN2": "Internet"	APN Value for sim2
"USR2": "string"	Sim2 user name
"PASS2": "string"	Sim2 password
"RESTART": 1	To restart DCU, 1 : Execute command
"UPDATEINTERVAL": 15	Enter update interval in mins.
"HEARTINTERVAL": 5	Heartbeat Update Interval in mins
"URTCDATE": 200622	DCU RTC Date (YYMMDD) Update
"URTCTIME": 220312	DCU RTC Time (HH:MM:SS) Update - 24 hour format
"UPDATERTC": 1	Update RTC, 1: Execute command, 0 : Successful execution
"GSMSYNC": 1	RTC auto GSM synchronization, 1: to execute command
"DO1": 1	Pump Remote ON/OFF Operation (1-ON, 0-OFF)
"AI1ZERO": 1	Engineering Zero Value (4 mA dc) for AI1 E.G. 0(LPM)
"AI1SPAN": 100	Engineering Span Value (20 mA dc) for AI1 E.G. 5000(LPM)
"AI2ZERO": 1	Engineering Zero Value (4 mA dc) for AI2

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"AI2SPAN":100	Engineering Span Value (20 mA dc) for AI2
"AI3ZERO":1	Engineering Zero Value (4 mA dc) for AI3
"AI3SPAN":100	Engineering Span Value (20 mA dc) for AI3
"AI4ZERO":1	Engineering Zero Value (4 mA dc) for AI4
"AI4SPAN":100	Engineering Span Value (20 mA dc) for AI4
"URL":"rms1.kusumiiot.co"	URL of Broker Server
"PORT":8883	Port of Broker Server
"CID":"d:860906045525646\$standalonesolarpump\$27"	Unique Client id of device
"USERNAME":"860906045525646\$standalonesolarpump\$27"	Username for device authentication
"PASSWORD":"9e0baa73"	Password for device authentication
"FTPPURL":"rms1.kusumiiot.co"	URL for FTP
"FTPUSER":"866191037709301"	Username for FTP
"FTPPASS":"908552f"	Password for FTP
"FTPPORT":22	Port for FTP
"FTPDOWN":1	Download Certificates from ftp 1: To execute command, 0: Command is successfully executed
}	

Response Message	
Message	Description
{	
"timestamp":"2018-09-18 17:58:00",	
"type": "config",	
"cmd": "write",	To write config
"msgid": "130",	Server Auto Generated
"APN1": "www"	APN Value for sim1
"USR1": "string"	sim1 user name
"PASS1": "string"	sim1 password
"APN2": "Internet"	APN Value for sim2
"USR2": "string"	Sim2 user name
"PASS2": "string"	Sim2 password
"RESTART":1	To restart DCU, 1 : Execute command
"UPDATEINTERVAL":15	Enter update interval in mins.
"HEARTINTERVAL":5	Heartbeat Update Interval in mins

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"URTCDATE":200622	DCU RTC Date (YYMMDD) Update
"URTCTIME":220312	DCU RTC Time (HH:MM:SS) Update - 24 hour format
"UPDATERTC":1	Update RTC, 1: Execute command, 0 : Successful execution
"GSMSYNC":1	RTC auto GSM synchronization, 1: to execute command
"DO1":1	Pump Remote ON/OFF Operation (1-ON, 0-OFF)
"AI1ZERO":1	Engineering Zero Value (4 mA dc) for AI1 E.G. 0(LPM)
"AI1SPAN":100	Engineering Span Value (20 mA dc) for AI1 E.G. 5000(LPM)
"AI2ZERO":1	Engineering Zero Value (4 mA dc) for AI2
"AI2SPAN":100	Engineering Span Value (20 mA dc) for AI2
"AI3ZERO":1	Engineering Zero Value (4 mA dc) for AI3
"AI3SPAN":100	Engineering Span Value (20 mA dc) for AI3
"AI4ZERO":1	Engineering Zero Value (4 mA dc) for AI4
"AI4SPAN":100	Engineering Span Value (20 mA dc) for AI4
"URL": "rms1.kusumiiot.co"	URL of Broker Server
"PORT":8883	Port of Broker Server
"CID": "d:860906045525646\$standalonesolarpump\$27"	Unique Client id of device
"USERNAME": "860906045525646\$standalonesolarpump\$27"	Username for device authentication
"PASSWORD": "9e0baa73"	Password for device authentication
"FTPUURL": "rms1.kusumiiot.co"	Url for FTP
"FTPUSER": "866191037709301"	Username for FTP
"FTPPASS": "908552f"	Password for FTP
"FTPPORT":22	Port for FTP
"FTPDOWN":1	Download Certificates from ftp 1: To execute command, 0: Command is successfully executed
}	

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Command Message	
Command – B. In case, if some key in command are invalid	
Message	Description
{	
"timestamp":"2018-09-18 17:58:00",	
"type":"config",	
"cmd":"write",	to write config
"msgid":"130",	server auto generated
"APNN1": 2	send value "2"
"USR1": "xyz"	send value "xyz"
}	

Response Message	
Message	Description
{	
"timestamp":"2018-09-18 17:58:00",	
"type": "config",	
"cmd":"write",	to write config
"msgid":"130",	server auto generated
"APNN1": 0	invalid Key, value will be returned '0'
"USR1": "xyz"	actual value received
}	

Reaction	
Not Applicable	

Annexure-K20

ANNEXURE-K20- List of Solar Power plants with details viz: Name of Substation, No of Ag feeders, capacity, Energy requirement, EMD , PBG , Requirment of mininum Turn Over, etc. (TN-6)													
Sr. No.	Circle	Sub division	Name of Sub Station 66KV/11KV	Name of Solar Plant	Name of Ag. Feeders under Sub station	No. of Ag Feeders	No. of Connectio ns	Total Consumption up to 7.5 HP Eligible for CFA (KWH)	Solar Plant capacity considering eligible CFA (Considering 19% CUF) up to 7.5 HP (MW)	Estimated Project cost (i.e. @Rs. 3.5 Cr per MW) (Rs. in Cr.)	EMAD @Rs. 1 Lakh per MW (Rs.) in Lakh	PBG@Rs. 5 Lakh per MW (Rs.) in Lakh	Required amount of Minimum average Annual Turn over (Rs) in Cr.
1	AMRELI	LATHI	66 KV CHAWAND	PG-FLS-186	VIRPUR AG, VADHAVIYA	2	627	2187519	1.314	4.600	1.314	6.571	1.380
2	AMRELI	SKD RURAL	66 KV SAVARKUNDLA	PG-FLS-187	GADHAKADA	1	606	1867826	1.122	3.928	1.122	5.611	1.178
3	AMRELI	SKD RURAL	66 KV GADHAKADA	PG-FLS-188	RAMGADH A, SENJAL AG	2	802	2538464	1.525	5.338	1.525	7.626	1.601
4	AMRELI	SAVARKUNDLA (R)	66 KV VANDA	PG-FLS-189	PIYAVA	1	470	2757966	1.657	5.800	1.657	8.285	1.740
5	AMRELI	RAJULA R-RAJULA TOWN	66 KV RAJULA	PG-FLS-190	KOTADI, HINDORANA, CHARODIYA	3	849	3157037	1.896	6.639	1.897	9.484	1.992
6	AMRELI	JAFRABAD- KHAMBHA	66 KV MOTA-BARMAN	PG-FLS-191	PICHHADI, FACHARIYA, BARMAN, SHAMALIYA	4	1911	6097711	3.663	12.823	3.664	18.318	3.847
7	AMRELI	KHAMBHA- JAFRABAD	66 KV MOTA-BARMAN	PG-FLS-192	TRAKUDA, JAMKA AG	2	1016	3404905	2.045	7.160	2.046	10.229	2.148
8	AMRELI	RAJULA R-RAJULA TOWN	66 KV BARPATOLI	PG-FLS-193	RAMAPIR A, DHATARVAD, KHAKHBAI	3	635	2326746	1.397	4.893	1.398	6.990	1.468
9	AMRELI	BABRA RURAL	66 KV KHAMBHALA	PG-FLS-194	KHAMBHALA, SUKHNATH- LALKA AG, VANKIYA A	4	1357	4925885	2.959	10.358	2.960	14.798	3.108
10	AMRELI	BABRA RURAL	66 KV KHAMBHALA	PG-FLS-195	KARNUKI A	1	460	2090188	1.255	4.395	1.256	6.279	1.319
11	AMRELI	BABRA RURAL	66 KV CHARKHA	PG-FLS-196	DHAAR AG, SAMADHIYA, SAGAR AG, PAVAN AG	4	1047	3585269	2.154	7.539	2.154	10.770	2.262
12	AMRELI	LATHI	66 KV LATHI	PG-FLS-197	HIRANA	1	375	1774830	1.066	3.732	1.066	5.332	1.120
13	AMRELI	AMRELI(R)	66 KV JALIYA	PG-FLS-198	JALIYA AG, GURUDATT, PANIYA AG, RAMNATH A	4	985	3144196	1.889	6.612	1.889	9.445	1.984
14	AMRELI	VADIA	66 KV LILAKHA	PG-FLS-199	DEVLA, DEVALKI	2	891	3710519	2.229	7.803	2.229	11.147	2.341
15	AMRELI	VADIA	66 KV AMARNAGAR	PG-FLS-200	KHARESHWA, JAMNAVAD	2	692	2367514	1.422	4.979	1.422	7.112	1.494
16	AMRELI	DAMNAGAR	66 KV DAMNAGAR	PG-FLS-201	KACHARDI, CHHABHADI, MANDVI AG	3	1325	5633362	3.384	11.846	3.385	16.923	3.554
17	AMRELI	DAMNAGAR	66 KV DAMNAGAR	PG-FLS-202	DHAMEL, THASA	2	1267	5910544	3.551	12.429	3.551	17.756	3.729

Annexure - E4

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Annexure-K20

ANNEXURE-K20- List of Solar Power plants with details viz: Name of Substation, No of Ag feeders, capacity, Energy requirement, EMD , PBG , Requirement of minimum Turn Over, etc. (TN-6)													
Sr. No.	Circle	Sub division	Name of Sub Station 66KV/11KV	Name of Solar Plant	Name of Ag. Feeders under Sub station	No. of Ag Feeders	No. of Connections	Total Consumption up to 7.5 HP Eligible for CFA (KWH)	Solar Plant capacity considering eligible CFA (Considering 19% CUF) up to 7.5 HP (MW)	Estimated Project cost (i.e. @Rs. 3.5 Cr per MW) (Rs. in Cr.)	EMD @Rs. 1 Lakh per MW (Rs.) in Lakh	PBG@Rs. 5 Lakh per MW (Rs.) in Lakh	Required amount of Minimum average Annual Turn over (Rs) in Cr.
18	AMRELI	KODINAR-2	66 KV ARNEJ	PG-FLS-203	PAVTI AG, DATAR AG, FACHARIYA	3	432	2439466	1.465	5.130	1.466	7.328	1.539
19	AMRELI	KODINAR-2	66 KV AADPOKAR	PG-FLS-204	JAMANVADA, SHEDHAYA, RAJAPARA, BHIYAL AG	4	894	4270904	2.566	8.981	2.566	12.830	2.694
20	AMRELI	UNA-2	66 KV DANDI	PG-FLS-205	ANJAR AG, SIMAR AG	2	656	3414946	2.051	7.181	2.052	10.259	2.154
21	AMRELI	UNA-2	66 KV DANDI	PG-FLS-206	RANDAL AG, KALAPAN A	2	615	3586180	2.154	7.541	2.155	10.773	2.262
22	AMRELI	DHOKADAVA	66 KV DHOKADAVA	PG-FLS-207	AMBADA AG, MAHOBATPA, MOTISAR A	3	1006	5514412	3.313	11.596	3.313	16.566	3.479
23	AMRELI	DHOKADAVA	66 KV DHOKADAVA	PG-FLS-208	NAGADIYA, MOLI, SONARIYA	3	1041	4702055	2.825	9.888	2.825	14.125	2.966
24	AMRELI	DHOKADAVA	66 KV RABARIKA	PG-FLS-209	AMBALIYAL, SALVA AG, PIPARIYA, SANADUNGE	4	1516	5905383	3.548	12.418	3.548	17.740	3.725
25	AMRELI	KHAMBHA	66 KV TATANIYA	PG-FLS-210	UMARIYA A, BHANIYA A, NANI DHAR, GIR AG	4	694	1808464	1.086	3.803	1.087	5.433	1.141
26	AMRELI	DHOKADAVA	66 KV NAVA UGLA	PG-FLS-211	SANOSARI, JUNA UGLA, AMBADA AG, SARA KHADI	4	876	4201235	2.524	8.835	2.524	12.621	2.650
27	AMRELI	VADIA	66 KV JETPUR-B	PG-FLS-212	KHIRASARA	1	418	1816572	1.091	3.820	1.091	5.457	1.146
28	AMRELI	KODINAR-2	66 KV ADVI	PG-FLS-213	DOLASA, ALIDAR, MALGAM, ADVI	4	1270	5402997	3.246	11.362	3.246	16.231	3.409
29	AMRELI	UNA-1	66 KV KESARIYA	PG-FLS-214	SIMASI, VIRNATH A, MADHGAM, BHADASHI	4	1507	5747764	3.453	12.087	3.453	17.267	3.626
30	AMRELI	KODINAR-2	66 KV MORADIYA	PG-FLS-215	PEDHAVADA, OMKAR AG	2	576	3413257	2.050	7.178	2.051	10.254	2.153
31	AMRELI	KODINAR	66 KV KANJOTAR	PG-FLS-216	BARDA AG	1	315	1687132	1.013	3.548	1.014	5.068	1.064
32	AMRELI	UNA 1-UNA-T	66 KV UNA	PG-FLS-217	KOB	1	499	2517067	1.512	5.293	1.512	7.561	1.588
33	AMRELI	GIR GADHADA	66 kv Zud Vadli	PG-FLS-218	RAJAL AG	1	319	1887340	1.133	3.969	1.134	5.670	1.191
34	AMRELI	RAJULA R	66 KV DUNGAR	PG-FLS-219	RAJPARDA, MOTA-RING, PATVA	3	1042	2434830	1.462	5.120	1.463	7.314	1.536

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Annexure - E4

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	PASCHIM GUJARAT VIJ COMPANY LIMITED REGD. & CORPORATE OFFICE:- "PASCHIM GUJARAT VIJ SEVA SADAN" OFF NANA MAVA MAIN ROAD, LAXMINAGAR, RAJKOT-360004 CIN U40102GJ2003SGC042908 Telephone Nos:-0281-2380425/427/2360182 Website:www.pgvcl.com	
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TENDER NO. PGVCL/Project/DSM/PM-KUSUM-C-FLS/ TN-06

Amendment no. 1, published on 04.11.2022

Bidders are requested to note that following amendment is made for the tender.

LAST DATE OF SUBMISSION OF OFFER AND OTHER DETAILS:

The REVISED schedule of the tender is as under.

1	Last Date & Time of submission of On- line bid in electronic form (Tender Fee, EMD, Technical & Financial Tariff offer. (This is mandatory)	Date: 11/11/2022 Up to 18.00 hours
2	Date of opening of Tender Fee, EMD on-line	Date: 14/11/2022 at 11.00 hours
3	Submission of original copy of DD/ Banker's Cheque/Pay Order /Bank Guarantee	Within 5 days of the on-line bid opening date of Tender Fee & EMD stage. (On working days, During office hours)
4	Date of opening of Technical offer on-line (If possible)	Date: 16/11/2022 at 11.00 hours
5	Tentative Date of on – line opening of financial "Tariff bid" (Price bid) (tentative, if possible)	Date: 17/11/2022 at 11.00 hours

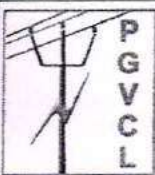
Other terms and conditions for tender remain unchanged.

Chief Engineer (Project),
PGVCL, Corporate Office, Rajkot

Signature of Tenderer	Company's Round Seal	Date:	Place:
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Annexure - E4

	PASCHIM GUJARAT VIJ COMPANY LIMITED REGD. & CORPORATE OFFICE:- "PASCHIM GUJARAT VIJ SEVA SADAN" OFF NANA MAVA MAIN ROAD, LAXMINAGAR, RAJKOT-360004 CIN U40102GJ2003SGC042908	
	Telephone Nos:-0281-2380425/427/2360182 Website:www.pgvcl.com	

TENDER NO. PGVCL/Project/DSM/PM-KUSUM-C-FLS/ TN-06

Amendment no. 2, published on 11.11.2022

Bidders are requested to note that following amendment is made for the tender.

LAST DATE OF SUBMISSION OF OFFER AND OTHER DETAILS:

The REVISED schedule of the tender is as under.

1	Last Date & Time of submission of On- line bid in electronic form (Tender Fee, EMD, Technical & Financial Tariff offer. (This is mandatory)	Date: 28/11/2022 Up to 18.00 hours
2	Date of opening of Tender Fee, EMD on-line	Date: 29/11/2022 at 11.00 hours
3	Submission of original copy of DD/ Banker's Cheque/Pay Order /Bank Guarantee	Within 5 days of the on-line bid opening date of Tender Fee & EMD stage. (On working days, During office hours)
4	Date of opening of Technical offer on-line (If possible)	Date: 03/12/2022 at 11.00 hours
5	Tentative Date of on – line opening of financial "Tariff bid" (Price bid) (tentative, if possible)	Date: 06/12/2022 at 11.00 hours

Other terms and conditions for tender remain unchanged.

Chief Engineer (Project),
PGVCL, Corporate Office, Rajkot

Signature of Tenderer	Company's Round Seal	Date:	Place:
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Annexure - E5

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ON-LINE
REQUEST FOR SELECTION (RFS)
OF

Solar Power Generator (SPG)

FOR

DESIGN, SURVEY, SUPPLY, INSTALLATION, TESTING, COMMISSIONING AND
OPERATION & MAINTENANCE OF GRID CONNECTED FEEDER LEVEL SOLAR
POWER PLANTS, ITS ASSOCIATED 11KV LINE AND RMS OF SOLAR POWER
PLANT FOR 25 YEARS

THROUGH

RESCO MODE

FOR

SOLARIZATION OF VARIOUS 11KV FEEDERS OF ASSOCIATED 66/11KV
SUBSTATIONS IN PGVCL

UNDER

PM-KUSUM COMPONENT-C
FEEDER LEVEL SOLARIZATION
(Version- 1.2)

The Chief Engineer (Project)
Paschim Gujarat Vij Company Ltd.,
CIN: U40102GJ2003SGC042908, Regd. & Corporate Office,
"Paschim Gujarat Vij Seva Sadan", Laxminagar, Nana Mava main road,
RAJKOT-360004, GUJARAT-INDIA
Web: www.pgvcl.com, Email: ceproject.pgvcl@gebmail.com

(999)

RfS document for feeder level Solarization under PM-KUSUM-Component-C in PGVCL

Notice Inviting RfS

No: PGVCL/Project/DSM/PM-KUSUM-C-FLS/ TN-7 DT: 13/10/2022

As authorized by the Gujarat Urja Vikas Nigam Ltd. (GUVNL), the State Implementing Agency (SIA) for Component-C of PM-KUSUM Scheme in the Gujarat State, the Chief Engineer (Project)-PGVCL invites 'On-line' Request for Selection (RfS) of Solar Power Generator (SPG) for Design, survey, supply, installation, testing, commissioning, operation & maintenance for 25 years (unless extended by both the parties on mutual agreement) from COD of grid connected Feeder level solar power plant, its associated 11kV line to connect the plant with concerned substation and RMS of Solar power plant through RESCO model for solarization of various 11kV feeders of associated 66/11kV substation in PGVCL under PM-KUSUM scheme – Component C - feeder level Solarization (FLS).

RfS documents may be down loaded from web site <https://pgvcl.nprocure.com> (For view, down load and on line submission) and PGVCL's web sites www.pgvcl.com for view & down load only). (To view the PDF file please use "Acrobat Reader" software which can be downloaded from "Adobe" website.)

RfS bid offer is required to be submitted by *online mode only in electronic form on website <https://pgvcl.nprocure.com>* (i.e. under preliminary, technical and price offer stage of online) Required document specifically mentioned in RfS is to be submitted physically **addressed to**

The Chief Engineer (Project),
Paschim Gujarat Vij Company Ltd., Regd. & Corporate Office,
"Paschim Gujarat Vij Seva Sadan", Laxminagar, Nana Mava main road,
RAJKOT-360004, (Gujarat).

RfS Schedule: -

1	NIT /RfS No.	PGVCL/Project/DSM/PM-KUSUM-C-FLS/ TN-7
2	NIT Issue Date	13-10-2022
3	Bidding portal	https://pgvcl.nprocure.com
4	Project:-	Design, survey, supply, installation, testing, commissioning, operation & maintenance for 25 years (unless extended by both the parties on mutual agreement) from COD of grid connected Feeder level solar power plant, its associated 11kV line to connect the plant with concerned substation and RMS of Solar power plant through RESCO model for solarization of various 11kV feeders of associated 66/11kV substation in PGVCL under PM-KUSUM scheme – Component C -feeder level Solarization (FLS).
5	Tender/Rfs Document fee	Rs. 15000+ Rs. 2700/- (GST @18%)= Rs. 17700/- (Seventeen Thousand Seven hundred only) Payment of Tender fee can be accepted by RTGS/NEFT. In case of payment through DD/Banker's Cheque the scanned copy of original documents shall have to be uploaded with the bid on- line and original copy of the same will have to be submitted, at the office of the Chief Engineer (Project), PGVCL Rajkot, within 5 days of the on-line bid opening (Tender Fee EMD stage).
6	EMD	Payment of Earnest Money deposit (EMD) can be accepted by RTGS/NEFT. In case of payment through DD/Banker's Cheque/Pay Order /Bank Guarantee, the scanned copy of

(1000)

RfS document for feeder level Solarization under PM-KUSUM-Component-C in PGVCL

		original documents shall have to be uploaded with the bid on-line and original copy of the same will have to be submitted, at the office of the Chief Engineer (Project), PGVCL Rajkot, within 5 days of the on-line bid opening. (Tender Fee EMD stage). Bidders shall require to pay separate EMD amount indicated against separate individual Solar plants to participate in the respective bid(s) of that concerned separate individual Solar plant(s).
7	Pre-bid meeting	Date and timing: 20-10-2022 at 11:00 AM Venue: Conference Hall, 3rd floor, PGVCL, Corporate Office, Laxminagar, Rajkot (The Agency who wants to attend the pre-bid meeting is requested to intimate us at least one day in advance prior to pre-offer meeting by e-mail only on following e-mail IDs eedsmcell.pgvcl@gebmail.com ceproject.pgvcl@gebmail.com
8	Last Date & Time of submission of On- line bid in electronic form (Tender Fee, EMD, Technical & Financial Tariff offer. (This is mandatory)	Date: 04/11/2022 Up to 18.00 hours
9	Date of opening of Tender Fee, EMD on-line	Date: 05/11/2022 at 11.00 hours
10	Submission of original copy of DD/ Banker's Cheque/Pay Order /Bank Guarantee	Within 5 days of the on-line bid opening date of Tender Fee & EMD stage. (On working days, During office hours)
11	Date of opening of Technical offer on-line (If possible)	Date: 09/11/2022 at 11.00 hours
12	Tentative Date of on – line opening of financial "Tariff bid" (Price bid) (If possible)	Date: 10/11/2022 at 11.00 hours
13	Reverse e-auction	Date of Reverse e-auction will be conveyed to eligible bidders on e-bidding portal, if required for the respective Solar plants. The bidders shall require to create e auction user id on https://e-auction.nprocure.com/ The bidder shall require to mention their e-auction user id in the on-line submission of technical bid. This is mandatory.
Note: Bidders shall ensure that they have verified the scanned copies of the documents uploaded by them are opened properly without any error. It shall be sole responsibility of the bidder that the uploaded documents (in PDF form) remain legible and should not be password protected.		

PGVCL GSTIN No: 24AADCP1453C1ZZ

- Every bidder has to inform their GSTIN No. at the time of payment of applicable fees

Sing & Seal of SPG

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(001)

RfS document for feeder level Solarization under PM-KUSUM-Component-C in PGVCL

AS PER THE NOTICE OF THE INVITATION OF RfS DOCUMENT (NEWS PAPER ADVERTISEMENT), THE RfS DOCUMENT IS INVITED BY e-tender (ON – LINE) SYSTEM, FOR WHICH FOLLOWING CONDITIONS ARE MANDATORY.

[A] ALL REQUIRED DOCUMENTES ARE TO BE SUBMITTED IN ONLINE MODE ONLY EXCEPT DOCUMENTS REQUIRED AGAINST PAYMENT OF TENDER FEE & EARNEST MONEY DEPOSIT (EMD), Bank Guarantee etc. as specifically mentioned in this tender documents.

[B] The documents other than mentioned in Section-C KEY Bid Data and documents mentioned in general and commercial terms and conditions of RfS Document are required *to be uploaded in technical stage of online EOI Document*. In case of not uploading of required document in online offer or uploading of wrong document, offer may not be considered for technical evaluation. However, the Bidder SPG have to furnish all required documents physically and it will be the responsibility of the bidder to submit the same in time (Not more than 5 days after opening of Technical bid)

[C] Bidder SPGs are requested to submit price – offer (financial bid) in on-line (e-RfS electronic form) only and not to submit the price offer in physical form. This is mandatory. If price offer is submitted in physical form, the bid/RfS offer will be summarily rejected.

[D] It is mandatory for all the Agencies to confirm and agree all the terms and condition by on-line mode only, the RfS documents, draft Power Purchase Agreement and RMS Communication and Security Architecture- PM KUSUM SEDM Platform attached herewith as a part of the whole tender. By confirming this, bidder will also confirm all the amendments thereafter issued time to time and will be automatically binding to the bidder.

[E] PGVCL at its sole discretion may ask additional clarification or information or documents from the Agency who are found to be eligible in main pre-qualification criteria.

Note:- Bidder should be familiar with websites <https://pgvcl.nprocure.com> & www.pgvcl.com, <https://e-auction.nprocure.com/> for information regarding revision/corrigendum/Amendment in RfS Document till due date of online submission and thereafter. No separate information shall be sent in this regard and also not publish in newspaper.

Any technical questions, information and clarifications that may be required pertaining to this EOI should be referred to: The Chief Engineer(Project), Paschim Gujarat Vij Company Ltd., Regd. & Corporate Office, "Paschim Gujarat Vij Seva Sadan", Laxminagar, Nana Mava main road, RAJKOT-360004, (Gujarat)

E-Mail:- ceproject.pgvcl@gebmail.com; with a copy to eedsmcell.pgvcl@gebmail.com

PGVCL reserves the right to reject any OR all RfS Documents/offers without assigning any reasons thereof.

For and on behalf of PGVCL

Chief Engineer (Project)

RfS document for feeder level Solarization under PM-KUSUM-Component-C in PGVCL

DISCLAIMER

The information contained in this RfS document or subsequently provided to bidder(s), written or verbal, by or on behalf of PGVCL or any of its employees, is provided to bidder(s) on the terms and conditions of this RfS document and its subsequent amendment(s).

This RfS document is non-transferable and is neither an agreement nor an offer by PGVCL to the prospective bidders or any other person. The purpose of this document is to provide interested parties/bidders with information that may be required by them in the preparation of their bid for stated scope of work.

Although adequate care has been taken while preparing the RfS document, however, the bidders shall satisfy themselves that document is complete in all respects. If noticed, bidders shall intimate any discrepancy in the RfS document to office of the undersigned within 3 days from the date of issuance of the RfS document. If no intimation is received from the Bidders within the stipulated period, it shall be assumed that the RfS document is complete in all respects and fulfils the expectations of the Bidders.

PGVCL, its officers, employees and consultants have made best efforts to provide as accurate and reliable information as possible. However, before submitting their bids, the Bidders are expected to independently assess, verify and validate the information/data provided in the RfS document.

PGVCL reserves the right to annul the bid process and/or reject any or all of the Bids submitted in response to this RfS document at any stage without assigning any reasons whatsoever. In such cases PGVCL will refund the EMD, if any, and cannot be subjected to any liability whatsoever due to such rejection/cancellation.

PGVCL, its officers, employees and consultants have no responsibility for authenticity of the information/data hence shall not be held liable for any possible omission, misrepresentation, mistake or error in the information/data provided in the RfS document and consequences thereof.

PGVCL also accepts no liability of any nature whether resulting from negligence or otherwise howsoever caused arising from reliance of any applicant upon the statements contained in this document.

PGVCL may modify, amend or supplement any aspect of this RfS document, including draft PPA, including selection process and evaluation criteria, if deemed necessary by it or the same is required under Law. Further, PGVCL or its authorized officers reserve the right, without prior notice, to change the selection procedure and the delivery of information at any time before submission of bids without assigning any reasons thereof. However, such change shall be posted on Bidding Portal.

The bidder, regardless of the conduct or outcome of the Bidding Process, shall bear all its costs associated with or relating to the preparation and submission of its bid including but not limited to preparation, copying, postage, delivery fees, expenses associated with any demonstrations or presentations which may be required by PGVCL or any other costs incurred in connection with or relating to its bid.

Under this RfS of SPG of feeder level Solarization under component -C of MNRE's PM-KUSUM Scheme for various feeders, the CFA for various feeders subject to MNRE's quantity allocation, CFA's sanction and disbursement of CFA by MNRE to Gujarat. The CFA amount depends upon MNRE's evaluation of data for various projects under this Tender. PGVCL and GUVNL shall not be responsible for not receiving the CFA for any feeder or reduce in CFA amount or delay in disbursement of CFA for any feeder to the developer/ Solar Power Generator (SPG). PGVCL /GUVNL shall not be liable to pay /compensate any difference of CFA on account of less amount of CFA received from MNRE.

(1003)

RfS document for feeder level Solarization under PM-KUSUM-Component-C in PGVCL

LIST OF ABBREVIATIONS

1.	+	Plus (Addition)
2.	AC	Alternating Current
3.	Ag.	Agriculture
4.	BOQ	Bill of Quantity
5.	BOS	Balance-of-System
6.	CEA	Central Electricity Authority
7.	CEIG	Chief Electrical Inspector of Gujarat
8.	CERC	Central Electricity Regulatory Commission
9.	COD	Commercial Operation Date
10.	DC	Direct Current
11.	DCR certificate	Domestic Content Requirement certificate
12.	DTR	Distribution Transformer
13.	DWC	Double Walled corrugated
14.	FF	Fill Factor
15.	HP	Horse Power
16.	IEC	International Electro technical Commission
17.	IEEE	Institute of Electrical and Electronics Engineers
18.	IoT	Internet of Things
19.	IS	Indian Standard
20.	IST	Indian Standard Time
21.	kV	Kilo Volt
22.	kW	Kilo Watts
23.	kWp	Kilo Watt peak
24.	LoI	Letter of Intent
25.	LT	Low Tension
26.	MCB	Miniature Circuit Breaker
27.	MDAS	Meter Data Acquisition System
28.	MIS	Management Information System
29.	MNRE	Ministry of New & Renewable Energy, Government of India
30.	MWp	Mega Watt Peak
31.	NIT	Notice Inviting RfS
32.	OEM	Original Equipment Manufacturer
33.	PCU	Power Conditioning Unit
34.	PID	Potential-induced degradation
35.	POC	Proof of Concept
36.	PBG	Performance Bank Guarantee
37.	PV	Photovoltaic
38.	PVC	Poly vinyl chloride
39.	RCCB	Residual Current Circuit Breaker
40.	RDBMS	Relational Data Base Management System
41.	REC Ltd.	Rural Electrification Corporation, Govt. of India
42.	GERC	Gujarat Electricity Regulatory Commission
43.	RESCO	Renewable Energy Service Company
44.	RMS	Remote Monitoring System