

c/142

4/6  
etc

GOA UNIVERSITY  
 REGISTRATION OFFICE  
 Award No. 2628(R)  
 Date: 19/08/2019

No.1/212/GEDA/19-20/371  
**Office of the Member Secretary**  
**Goa Energy Development Agency**  
 5<sup>th</sup> Floor, Goa - IDC Building  
 Patto, Panaji, Goa - 403001.  
 Date : 14/08/19

To  
**The Director**  
**Agrawal Renewable Energy Pvt. Ltd.,**  
 Anand Bhavan, Old Station Road,  
 Margao.

**WORK ORDER**

**Sub :** Work order for design, supply, installation, testing, commissioning of aggregate capacity of 605kWp Grid connected Solar Rooftop PV power plants including operation & maintenance for 5 years at Goa University, Bambolim, Goa.

**Ref :** Tender No. 1/212/2018-19/GEDA/SPVRT-GU/834 Dated 05/03/2019.

Sir,

This has reference to above referred tender and your offer submitted for above said tender has been accepted by this Office. We are pleased to award you the work order for design, supply, installation, testing, commissioning of aggregate capacity of 605kWp Grid connected Solar Rooftop PV power plants including operation & maintenance for 5 years at Goa University, Bambolim, Goa alongwith supply & installation of 11kV & 33kV Cubicle Metering for tendered amount of Rs.2,67,33,500.00 (Rupees Two Crore Sixty Seven Lakh Thirty Three Thousand Five Hundred only) which is 29.28% below the estimated cost of Rs.3,78,00,000.00 put to the tender.

2. You are requested to attend this office to complete the formal agreement immediately. The above work should be completed within 180 days from the date of issue of this Order.

3. The Warranty/Guarantee for the said 605kWp Solar PV Grid Connected power plant will be 5 years from the date of commissioning. The SPV module shall be guaranteed life of 25 years from the date of commissioning. After the successful installation & commissioning, you are required to operate & maintained the 605kWp Solar power plant for a period of 5 years as per the guidelines mentioned in the said tender.

ENGINEERING & TECHNICAL  
 DIVISION  
 GOA UNIVERSITY  
 TENDER NO. 134/  
 DATE 20/08/19

YVRMYSIV  
 4/6  
 21/08/19  
 EE  
 AE(E)

plc spk  
 Discussed with  
 on 22/8/19. I  
 has been decided  
 to depate the depertan  
 electrician to supprk  
 the work on bldgs

2/c

4. You are also required to supply & install 11kV & 33kV Cubicle Metering from the approved contractor of the Goa Electricity Department as per specification mentioned in the Tender. The warranty for the Cubicle Metering will be 1 year from the date of commissioning. If the said work of Cubicle Metering is not required as per the norms of Electricity Department then the said tendered amount i.e. Rs.7,00,000.00 & Rs.5,50,000.00 for 11kV & 33kV Cubical Metering respectively will be reduced thereof.

5. For the benefit of visitors and general public, you are required to erect an attractive and all weather Description Board with a concise write-up of the 605kWp Solar PV Grid Connected power plant alongwith illustrative diagrams showing the linkage and working of each of its components at the location approved by the GEDA.

6. You are required to comply formalities within the 10 days of this work order as required under the provisions of Contract Labour (Regulation & Abolition) Act 1970 and Rules there under from the Labour Department, Panaji. The Health Safety Manual shall be strictly followed and implemented on site.

7. The Scope of Work, General Terms & Conditions, Technical Specifications, Terms of Payment and all other conditions specified in the Tender Document No. 1/212/2018-19/GEDA/SPVRT-GU/834 Dated 05/03/2019 should be strictly followed & implemented.

Yours faithfully,

*Sanjeev*

(Sanjeev Joglekar)

**Member Secretary (GEDA)**

Copy for kind information to:

1. The Registrar, Goa University, Bambolim, Tiswadi, Goa.
2. The Director, Department of Non-Conventional Sources of Energy, 5<sup>th</sup> Floor, Goa-  
IDC, Patto, Panaji, Goa.
3. The Commissioner of Labour & Employment, Panaji, Goa.
4. Concerned File.
5. Guard File.

e/144

140/c

No.1/212/GEDA/20-21/ 525  
Office of the Member Secretary  
Goa Energy Development Agency  
5<sup>th</sup> Floor, Goa - IDC Building,  
Patto, Panaji, Goa -403001.

GOA UNIVERSITY  
REGISTRAR OFFICE  
2541-R  
Date: 20-11-2020

Date: 20/11/2020

ENGINEERING TECHNICAL  
3597  
Date: 23/11/2020

To  
✓ The Registrar  
Goa University  
Bambolim, Tiswadi, Goa.

Sub: Installation & commissioning of 605kWp Grid Connected Rooftop Solar PV Power Plant at Goa University, Bambolim, Goa.

Sir

This is to inform you that the installation of 240kWp & 365kWp Grid connected rooftop solar PV power plant at Goa University, Bambaolim has been completed. Electricity Department has installed the bidirectional meters on the 22/10/2020 and the said solar power plants have been connected to the grid.

Thanking you,

Yours faithfully,

*(Signature)*

(Sanjeev Joglekar)  
Member Secretary (GEDA)

Copy for information to:

1. The Director, Directorate of Higher Education, Porvorim, Goa.
2. Office Copy.
3. Guard Copy.

*Stromb*  
20/11/2020  
*UE*

*EE PIS SPE*  
*(Signature)*  
24/11/2020  
*AE (E)*

Discussed  
*(Signature)*  
24/11/2020

GOVERNMENT OF GOA  
OFFICE OF THE EXECUTIVE ENGINEER,  
ELECT. (O&M), 2<sup>nd</sup> FLOOR,  
VIDYUT BHAVAN, PANAJI - GOA.  
Email: ee1-elec.goa@nic.in Tel: :0832-2426421/2416022

38/6  
3481  
23/10/2020

EE/Div-I/Tech-98/20-21/29/7

Date: 16/10/2020

To,  
The Executive Engineer,  
Elect. Division-VIII (MRT),  
2<sup>nd</sup> floor, Vidyut Bhavan,  
Aquem, Margao, Goa-403601.

GOA  
REGISTRAR  
Toward: 2151(R)  
Date: 22/10/20

**Sub:** Grid connectivity for Solar PV Rooftop system with Net Metering  
Inspection of HT Installations.

**Ref:** No. EE-VIII (MRT)/HT/GEN-13/503/20-21, dated 11/08/2020.


Sir,

With reference to the above cited letter, this is to inform you that the inspection has been carried by the Sub Divisional Engineer of Solar Power Plant of the following HT Installations.

1. HTC-180, CA No. 60000801385 The Registrar, Goa University, Bambolim, Tiswadi, Goa in the jurisdiction of Sub Division-III, Bambolim.
2. HTC-273, CA No. 60000803217 The Registrar, Goa University, Bambolim, Tiswadi, Goa in the jurisdiction of Sub Division-IV, Taleigao.

You are kindly requested to provide Bi-directional meter for the above HT installations in order to release the solar connection.


Yours Faithfully

  
Executive Engineer,  
Elect. Div-I (O&M), Panaji

Copy to:-

- 1) The Registrar, Goa University, Bambolim.....for your kind information.
- 2) The Sub Divisional Engineer,  
SD - III, Bambolim / IV, Taleigao.....for information.
- 3) Tech-98(51) / 98(52).

  
22/10/2020  
VF

  
EE  
AE(O)  
23/10/20

The required meters are  
already provided by  
the agency.  
23/10/20



"Cleanliness is next to Godliness"

Office of the Executive Engineer  
Electricity Department,  
Division-VIII (MRT)

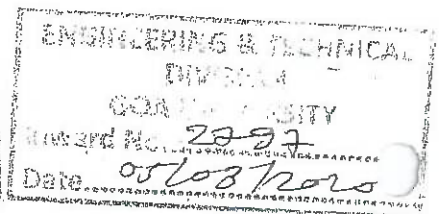
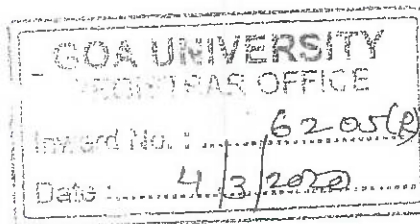
2<sup>nd</sup> floor, Vidyut Bhavan, Aquem, Margao, Goa - 403 601  
Email: [ecmrt8@gmail.com](mailto:ecmrt8@gmail.com) Ph: +91-832-2734141, 8380015008



No: EE-VIII (MRT)/Tech-15(HT)/ 1853 /19-20

Date: 2/3/2020

To,  
The Chief Electrical Engineer  
Vidyut Bhavan 3<sup>rd</sup> Floor,  
Electricity Department,  
Panaji-Goa



Sub.: - Grid connectivity for 240KWp Solar Rooftop system on Net metering for the Goa University, Bambolim (11KV)

Ref.: No: I01/1/solar/SPD/CEE/TECH/2019-20/1315 dated 13/10/2019

Sir,

With reference to above, this is to inform you that the 240KWp Solar Rooftop system set up by the consumer Goa University(11KV) was inspected on 18/02/2020 by MRT and copy of the report is enclosed herewith for reference.

It is to be noted that the applicant has installed 5 nos of independent rooftop solar generation system at 5 different premises/location (60KWp -2nos. & 40KWp-3nos.), each having independent solar generation meter installed at the respective premises/location. It is necessary to provide single solar generation meter for the ease of recording readings. The applicant has also commissioned D.G. set at the premises but has not produced a copy of the permission granted by the CEE for energization of the D.G. set.

The installation is serviced through 11KV supply line and is having 2 Transformers at site with one 11KV outdoor type combined CTPT unit. As per requirement, the applicant has to be provide check/standby metering.

The applicant has to comply the requirements before installation of bi-directional meter.

Yours faithfully,

(Diogo J. Coutinho)  
Executive Engineer  
Elect. Div-VIII(MRT), Margao

Encl.: As above

Copy to:

- 1) The Registrar, Goa University, Bambolim.....
- 2) The Executive Engineer, Div-I, Panaji.....

For information and necessary action. The existing 11KV combined CTPT unit is consisting of 3PT's and 2CT's. The same has to be replaced with 3PT's and 3CT's for the installation of bidirectional meter.

Handwritten notes: 05/03/2020, 4V Ready 4B, 4B

Handwritten note: Submit CEDA accountancy report of this also may be sent



c/146



Office of the Executive Engineer  
Electricity Department,  
Division-VIII (MRT)  
2<sup>nd</sup> floor, Vidyut Bhavan, Aquem, Margao, Goa - 403 601  
Email: [ceemrt8@gmail.com](mailto:ceemrt8@gmail.com) Ph: +91-832-2734141, 8380015008



**ON SITE CHECKLIST FOR HT SOLAR INSTALLATIONS**

Name of the consumer:	The Registrar, Goa University
Contract Account No.:	60000801385
Division:	I- Panaji
Sub-Division:	III- Bambolim

Category:	HT
Sanctioned load:	800KVA
Solar Inverter capacity:	240KWp
Date of Inspection:	18/02/2020

Sr. No.	Observation	Comment
1.	Protection logic of inverter at site: Automatic Isolation and Islanding protection of inverter at site:	Checked at site and found ok
2.	Earthing for AC system:	Provided
3.	Earthing for solar strings DC system:	Provided
4.	Earthing for Surge Protection Device:	Provided
5.	4-pole isolating switch with inter locking arrangement:	Provided
6.	MRT tested Solar meter :	Provided
7.	AMR facility for solar meter:	
8.	MRT tested bi-directional meter with AMR facility	Provided. Make: Secure.Sr.no. Goa39971 & Goa39972
9.	Surge protection devices:	Provided
10.	3-phase MCCB for AC	Provided
11.	Wire termination	As per Guidelines
12.	Technical details of Invertors :	Make: Growatt. Submitted
13.	Test report of Inverter	Submitted
14.	Technical details of Solar panel:	Submitted

**Remarks:**

It is to be noted that the applicant has installed 5nos of independent rooftop solar generation system at 5 different premises/location (60KWp -2nos. & 40KWp-3nos.), each having independent solar generation meter installed at the respective premises/location. It is necessary to provide single solar generation meter for the ease of recording readings. The applicant has also commissioned D.G. set at the premises but has not produced a copy of the permission granted by the CEE for energization of the D.G. set. The installation is having 11KV supply with two transformers at site with one 11KV outdoor type combined CTPT unit. As per requirement, the applicant has to provide check/standby metering.

(MRT Official)

10/8/19

2362(R)  
05/08/2019

No.1/212/GEDA/19-20/.32/  
Office of the Member Secretary  
Goa Energy Development Agency  
5<sup>th</sup> Floor, Goa-IDC Building,  
Patto, Panaji, Goa - 403001.  
Date: 31/07/2019

To  
The Chief Electrical Engineer  
Electricity Department,  
Vidyut Bhavan,  
Panaji, Goa.

Sub: Application for the grid connectivity for the 240kWp Solar PV Power plant with Net Metering System.

Madam,

This office in receipt of letter from Registrar, Goa University, for seeking the grid connectivity and approval for installation of 240kWp Solar Power Plant under Net Metering to be installed at Goa University, Bambolim. The copy of the duly filled application form is forwarded to your office for issuing grid connectivity under Net Metering system.

In view of above, you are requested to kindly look into the matter and provide the grid connectivity for the 240kWp Solar Power Plant with Net Metering System.

Yours faithfully

(Sanjeev Joglekar)  
Member Secretary (GEDA)

Enclosure: As above.

Copy for information to:

- 1) Registrar, Goa University, Bambolim, Goa.
- 2) Concern file.
- 3) Guard file

ENGINEERING & TECHNICAL  
1880  
06/08/19

Handwritten notes and signatures at the bottom right, including 'Yr Reply 07', '6/8', 'AE(E)', and '06/08/19'.

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N

Engg & Tech Div  
22/07/19

Note.

Sub: Installation & Commissioning of 240 kWp  
Connected roof top, solar PV power  
Plant at G. U. Bambolim, Goa.

The member Secretary, GEDA, Shri. Sanjeev  
Joglekar vide their letter bearing NO.1/212/GEDA/  
19-20/252 dated 3/7/2019 has requested the University  
to endorse the application form (duly filled, submitted  
by them for forwarding to the Chief Electrical  
Engineer, Panjim.

The duly filled forms, in duplicate as required  
are enclosed in the folder for signature  
of 'R' please.  
Submitted.

ENGINEERING & TECHNICAL  
DIVISION  
GOA UNIVERSITY  
Date 22/07/19

~~E/E~~  
*[Signature]*  
22/07/19

*[Signature]*  
22/7/19  
(V.P. Bandodkar)

May kindly be filled to be submitted  
to DST. R's signature is also  
required.

~~U.A~~

~~W.Sant~~  
~~res~~

~~P.A/R~~

The details in respect of phone nos.  
and email id are indicated in the enclosed  
form and placed for signature please.

Register - YV Reddy 23/7

Shri  
23/7/19

P.A/R Shri 24/7/19

AECG  
Call No. Number

ENGINEERING & TECHNICAL  
DIVISION  
GOA UNIVERSITY  
Date 22/07/19

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No.1/212/GEDA/19-20/252

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41713

1748(R)  
08/7/19

**Office of the Member Secretary**  
**Goa Energy Development Agency**  
5<sup>th</sup> Floor, Goa - IDC Building,  
Patto, Panaji, Goa -403001.

Date : 03/07/2019

To  
✓ **The Registrar**  
**Goa University**  
Bambolim, Tiswadi, Goa.

**Sub : Installation & commissioning of 240kWp Grid Connected Rooftop Solar PV Power Plant at Goa University, Bambolim, Goa.**

Madam,

As you are aware that, Goa Energy Development Agency is installing the aggregated capacity of 240kWp Solar Grid Connected Power plant on the roof of the Faculty Block A, B, C, Admin Building & Library Building and 365kWp solar power plant on the roof of the Faculty E & F respectively at Goa University, Bambolim, Goa. In order to connect the said plants to the grid and as per the Joint Electricity Regulatory Commission (JERC) Regulation we have to obtain the approval of the Electricity Department.

In view of above, please find enclosed herewith duly filled applications form for your kind perusal and endorsement, to enable this office for the onward submission & to obtain approval from Electricity Department.

Thanking you,

Yours faithfully,

(Sanjeev Joglekar)  
**Member Secretary (GEDA)**

Enclosure : As above.

15152-UNG 8/7/19  
5/7/19

May kindly provide  
YV Remy 4/17

v4 Ashwin 8/7/19

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YV Remy 9/17

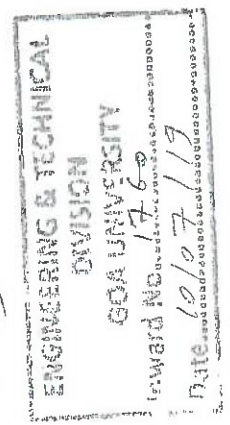
UP

11/07/19

EE  
AECG

pls ok

AE (E) Discard 22/7/19 101 ✓



c/194

10/C  
*[Signature]*

To  
The Chief Electrical Engineer  
Electricity Department,  
Vidyut Bhavan,  
Panaji, Goa.

I herewith apply for a Solar Energy Net Metering Connection at the service connection for the Solar Power Project of which details are given below:

Sl.	Details Required	Details Furnished
1.	Name of applicant	Registrar
2.	Address of the applicant	Goa University, Bambolim
3.	Service connection number	CA No. 60000801385
4.	If there is Electricity Connection in the name of the applicant, please provide details	Yes. Copy of Electricity Bill enclosed
5.	Is it for an individual premises or for a Group/Society	Government Premises
6.	Land Line Number(s)	8669609005
7.	Mobile Phone Number	----- 8669609300
8.	Email Contact if available	registrarc@unigoa.ac.in
9.	Solar Plant Capacity kWp	240kWp
10.	Solar Inverter make & type	Delta String Inverter
11.	Solar Project inverter has automatic isolation protection	Yes
12.	Has a Solar Generation Meter been installed (Y/N)?	Will be arranged by the supplier and installed by the Distribution Licensee
13.	Expected date of commissioning of Solar project	180 days from the date of approval from Electricity Department
14.	Concerned safety requirement fulfillment (Y/N)	Will be fulfilled
15.	Any other information desired by the Distribution Licensee	NA

DECLARATION

I do hereby declare that the information furnished above is true to my knowledge and belief.

Signature with Name: *Y V Reddy*  
*Y.V. REDDY*

Position if on behalf of a Group or a Society : **REGISTRAR**  
Goa University  
Taleigao Plateau  
Goa. 403 206

Address :

8/4  
HRC

To  
The Chief Electrical Engineer  
Electricity Department,  
Vidyut Bhavan,  
Panaji, Goa.

I herewith apply for a Solar Energy Net Metering Connection at the service connection for the Solar Power Project of which details are given below:

Sl.	Details Required	Details Furnished
1.	Name of applicant	Registrar
2.	Address of the applicant	Goa University, Bambolim
3.	Service connection number	CA No. 60000803217
4.	If there is Electricity Connection in the name of the applicant, please provide details	Yes. Copy of Electricity Bill enclosed
5.	Is it for an individual premises or for a Group/Society	Government Premises
6.	Land Line Number(s)	8669609005
7.	Mobile Phone Number	----- 8669609300
8.	Email Contact if available	registrar@unigoa.ac.in
9.	Solar Plant Capacity kWp	365kWp
10.	Solar Inverter make & type	Delta String Inverter
11.	Solar Project inverter has automatic isolation protection	Yes
12.	Has a Solar Generation Meter been installed (Y/N)?	Will be arranged by the supplier and installed by the Distribution Licensee
13.	Expected date of commissioning of Solar project	180 days from the date of approval from Electricity Department
14.	Concerned safety requirement fulfillment (Y/N)	Will be fulfilled
15.	Any other information desired by the Distribution Licensee	NA

DECLARATION

I do hereby declare that the information furnished above is true to my knowledge and belief.

Signature with Name :

*Y.V. Reddy*  
PROF. Y.V. REDDY

Position if on behalf of a Group or a Society :

**REGISTRAR**  
Goa University  
Taleigao Plateau  
Goa. 403 206

Address :

e/196

6/10  
2/2

GU/9/Engg & Tech Div/2019-20/114

Date: - 29/07/2019

To,  
Member Secretary (GEDA),  
Office of the Member Secretary  
Goa Energy Development Agency  
5<sup>th</sup> Floor, Goa- IDC Building,  
Patto, Panaji, Goa 403001.

**Sub: Installation & commissioning of 240KWp Grid connected Rooftop Solar PV  
Power plant at Goa University, Bambolim -Goa.**

Ref No: - No. 1/212/GEDA/19-20/252 dated 03/07/2019

Sir/Madam,

Please find enclosed herewith duly filled application forms for Installation & commissioning of 240KWp Grid connected Rooftop Solar PV power plant at Goa University.

Thanking you,

Yours faithfully



**V. L sawkar**  
**University Engineer**

**Copy to:-**

1. Guard File
2. Concerned file
3. PA to R

ENGINEERING & TECHNICAL  
DIVISION  
GOA UNIVERSITY  
Panaji No. 3205  
10/07/2020

GOVERNMENT OF GOA  
OFFICE OF THE EXECUTIVE ENGINEER,  
ELECT. (O&M), 2nd FLOOR,  
VIDYUT BHAVAN, PANAJI - GOA.

Email: ee1-elec.goa@nic.in Tel: :0832-2426421/2416022

EE/Div. I/Tech-98(51)/20-21/1591

Date: 27/07/2020

To,  
The Registrar,  
Goa University,  
Bambolim, Goa - 403005.


GOA UNIVERSITY  
BAMBOILIM  
1206 CR)  
31/7/20

Sub: Grid connectivity for 365 KWP Solar PV Rooftop system with Net Metering of The Registrar, Goa University at Bambolim, Goa.  
Ref: No. 101/1/solar/SPD/CEE/Tech/2019-20/159, dated 11/05/2020.

Sir,

With reference to the subject matter, you are called upon to office of the undersigned during working hours for signing of the PPA as per the prescribed format and departmental procedure and also submit the payment details if made as mentioned in the final approval at condition no. 1.

Yours Faithfully

  
Executive Engineer,  
Elect. Div -I (O&M) Panaji - Goa.

*A examine and  
show to them  
and find out details*  
V V Reddy 31/7  
WB

  
EE 10/08/2020  
AE/CS  
10/08/2020  
10/81





गोवा GOA

A 172910

Date 18/8/20 Sr. No. 109 Value Rs. 1000  
 name of Purchaser ...  
 Resident of ...  
 Place of Vendor Panaji  
 Licence No. AC/STP/VEN/102/2003  
 Sign. of Vendor ... Sign. of Purchaser ...

**AGREEMENT**

This Agreement is entered into at (location) Panaji, Goa, on  
 this (date) 06<sup>th</sup> day of (month) August  
 (year) 2020.

**BETWEEN**

The Electricity Department, Goa (EDG), with its registered office  
 located at 3<sup>rd</sup> floor, Vidyut Bhavan, Panaji, Goa (hereinafter called the  
 "EDG") of the ONE PART.

YVR Reddy  
 REGISTRAR  
 Goa University  
 Taleigao Plateau  
 Goa 403 205

AND

C/134

Shri Y.V. Reddy, Registrar, Goa University, Bambolim, Goa having its Consumer Contract Account No.60000803217 (hereinafter referred to as the "Prosumer" (Producer-cum-Consumer) which expression shall, unless repugnant to the context or meaning thereof, mean and include its successors, executors, administrators and permitted assignee) of the OTHER PART.

The EDG and Prosumer are individually referred to as "Party" and collectively as "Parties".

WHEREAS the Prosumer intends to connect and operate the "Solar Photo Voltaic Roof Top/Ground Mounted" (SPV) system with the EDG HT/LT Distribution system for sale of Solar Power to the EDG in terms of the Solar Power as per the Joint Regulatory Commission for the State of Goa and Union Territories Grid Connected Solar Power Regulations -2015 and as amended from time to time (hereinafter referred to as "JERC Regulations");

AND WHEREAS, the Prosumer intends to install a SPV system of 365kWp capacity on the roof top/ground mounted of the premises situated at Bambolim, Goa and having the Consumer Number (Cons. No) 60000803217 in the same premises under Sub-Division .., in the Jurisdiction of Division-I of the EDG with contract demand 1501KVA;

AND WHEREAS, the Prosumer intends to self-consume the power generated from the SPV system and feed excess power to the EDG network which shall be recorded in the bi-directional meter installed by the Prosumer in their premises from the date of declaration for commercial operation of the SPV plant;

x

Y.V. Reddy  
REGISTRAR  
Goa University

AND WHEREAS, the application has been duly verified and forwarded by the Goa Energy Development Agency (GEDA), being the agency designated by the Joint Electricity Regulatory Commission. (Hereinafter referred to as "JERC") to the EDG;

AND WHEREAS, the EDG has verified the application after verification and forwarded by GEDA and agrees to purchase net energy exported by such SPV system at the Tariff as approved by JERC on year to year basis and as approved by EDG. However, Agreement shall come into operation from the date of commercial operation (COD) of the SPV Plant.

Now, therefore, this Agreement witnesses and the parties hereto hereby mutually agree as under:-

1. **Definitions, Abbreviations and Interpretations shall be as per JERC Regulation.**

2. **Technical and Interconnection Requirements :**

**Prosumer shall,**

- 2.1. comply with the standards and conditions in respect of integrating the SPV system with the grid/distribution system.
- 2.2. connect the SPV system to the EDG distribution system and shall be bound by requirements of JERC/State Grid and Distribution Code as amended from time to time.
- 2.3. prior to connection of SPV system to the EDGs distribution system, make provision of an inverter having an automatic inbuilt isolation device which should cut-off the SPV system in the event of grid failure.
- 2.4. Provide external manual isolation mechanism with suitable locking facility so that the SPV system does not back-feed into the EDG's network in case of power outage of the EDG's distribution system and it

*Y. V. Reddy*  
SECRETARY

f) DC Injection: Photovoltaic system shall not inject DC power more than 0.5% of full rated output at the interconnection point or 1% of rated inverter output current into distribution system under any operating conditions.

g) Power Factor: While the output of the inverter is greater than 50%, a lagging power factor of greater than 0.9 shall be maintained.

2.8 The SPV system, in the event of power outage or voltage or frequency variations, shall island/disconnect itself automatically and shall not inject power to the EDG distribution systems as per IEC standards within the stipulated period.

3. Safety :

3.1 Prosumer shall comply with the Central Electricity Authority (Measures Relating to Safety and Electricity Supply) Regulations, 2010.

3.2 Prosumer agrees that the design, installation, maintenance and operation of the SPV system are performed in a manner conducive to the safety of the SPV system as well as the EDGs distribution system.

3.3 Solar Power Generator shall install a main switch or isolator with Double pole / Triple pole with neutral isolating disconnect switches with locking arrangement near the Energy Feed-In Meter, which is accessible to the EDG and with which the Prosumers Solar Power Plant could be disconnected from the EDGs distribution system.

3.4 If the Prosumer's SPV system either causes damage to and/or produces adverse effects affecting other distribution systems, consumer's or EDG assets, the Prosumer shall disconnect SPV system immediately from the distribution system upon direction from the EDG and correct the problem at its own expense prior to reconnection. The Prosumer however, shall continue to get the normal power supply from the EDGs

\* Y. Kelly

shall be accessible for the EDG to operate, if required, during maintenance / emergency conditions.

- 2.5. install all the equipment of SPV system compliant with relevant International (IEEE/IEC) and Indian standards (BIS).
- 2.6. design, engineer and construct and operate the SPV system with reasonable diligence subject to all applicable Indian laws, rules & regulations as amended from time to time, and regulation having the force of law.
- 2.7. adhere to the following power quality measures as per the International and Indian standards and/or such other measures stipulated by the JERC Regulation namely;
  - a) Harmonic current: Harmonic current injections from a generation unit shall not exceed the limits specified in IEEE 519.
  - b) Synchronization: SPV system shall be equipped with grid frequency synchronization device. Every time the generating station shall be synchronized to the electricity system. It shall not cause voltage fluctuation greater than +/- 5% at the point of interconnection.
  - c) Voltage at the injection point shall be in the operating range of 80% to 110% of the nominal connected voltage. Beyond the clearing time of 2 seconds, the solar plant shall not isolate itself from the grid.
  - d) Flicker: Operation of Photovoltaic system shall not cause voltage flicker in excess of the limits stated in the relevant sections of IEC 61000 standards or other equivalent Indian standards, if any.
  - e) Frequency: When the Distribution system frequency deviates outside the specified conditions (50.5 Hz on upper side and 47.5 Hz on lower side), the SPV system shall shift to island mode. There shall be over and under frequency trip functions with clearing time of 0.2 seconds.



distribution system in the event of isolation of the SPV system from the grid.

C/130

3.5 The Prosumer shall be solely responsible for any accidents to human beings/animals whatsoever (fatal/non-fatal/departmental/non-departmental) that may occur due to back feeding from the SPV plant when the grid supply is off.

3.6 The EDG reserves the right to disconnect the SPV system at any time in the event of SPV power plant damaging to its grid or meter, etc. or to prevent any accident or damage.

3.7 Rest of the safety measures as per clause 24 of the JERC Regulations.

#### 4 Clearances and Approvals :

The Prosumer agrees to obtain all the statutory approvals and clearances if applicable before connecting the SPV system to the network of the EDG.

#### 5 Access and Disconnection:

5.1 The EDG shall have access to metering equipment and disconnecting other devices of SPV system, both automatic and manual, at all times.

5.2 In emergency or outage situation, where there is no access to the disconnecting devices, both automatic and manual, such as a switch or breaker, the EDG may disconnect its distribution system from the SPV system.

#### 6 Liabilities :

6.1 The Prosumer agrees that the EDG shall not be responsible for any damages to his solar power plant resulting from parallel operation with the grid and that the EDG shall not be liable to pay any such damages or compensation to the Prosumer.

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*YV Reddy*  
REGISTRAR

6.2 The EDG and Prosumer shall not be liable to each other for any loss of profits or revenues, business interruption losses, loss of contract or loss of goodwill, or for indirect, consequential, incidental or special damages, including, but not limited to, punitive or exemplary damages, whether any of the said liability, loss or damages arise out of the contract, or otherwise.

6.3 The Subsidy/Incentives to the Prosumer would be as per the State's Solar Policy 2017 and as amended from time to time.

## 7 **Tariff:**

The solar Energy Tariff agreed upon between the EDG and the Prosumer under this Agreement is as detailed below:

- a) The feed in tariff for the settlement of net surplus energy credits outstanding at the end of the settlement period will be as per the Joint Electricity Regulatory Commission (JERC) approved solar tariff rates for the year or Average Power Purchase Cost (APPC) as per current year Tariff Order of JERC, whichever is lower. However, this Tariff will remain fixed for the period 5 (five) years and subsequently will be revised every five years and notified separately and will be applicable to all Prosumers with effect from the date of notification.
- b) Tariff/Price per kilowatt-hour : Rs.2.93 (Rupees Two and Paise Ninety Three only) and will be revised as per 7(a) above.
- c) Validity: This Agreement shall be in a force for Twenty-five (25) years from the date of commercial operation of the plant for the capacity commissioned on that date.
- d) If only a part of plant capacity is commissioned within the specified time, the solar tariff applicable shall be for the part capacity that is commissioned. The tariff for the balance part of un-commissioned

*YV Reddy*  
REGISTRAR

project shall be fixed on its commissioning. Both Tariffs would be in the line with clause 7(a) of this Agreement.

c/128

- e) The Prosumer shall not be entitled to claim compensation, if its SPV system is not in a position to inject surplus solar power generation to the EDG network, on account of failure of power supply in the grid/network for whatsoever reasons, such as line clear, load shedding and line faults etc, and no compensation shall be paid for the above reasons by the EDG.
- f) The Prosumer shall be exempted from charges in respect of electricity banking, wheeling within the State of Goa, line losses and cross subsidy to the extent of the solar energy produced.

### 8 **Billing and Payment :**

- 8.1 At the end of each Billing Cycle, the EDG shall take readings of imported and exported energy as recorded in the bi-directional service connection meter. The Prosumer shall be presented an **electricity bill** indicating the difference between the imported and exported energy (i.e. the net-imported energy). Such bill shall be raised at the consumer tariff applicable to the Prosumer's service connection, if the import is higher than the export of the energy.
- 8.2 If, during a billing cycle including any export surplus already available to the credit of the Prosumer at the beginning of the billing cycle or a credit of banked energy available, the energy exported exceeds the energy imported, the export surplus shall be carried over to the next billing cycle in kWh (electricity units) as a credit to be adjusted in the next billing cycle(s) for the unadjusted exported units in terms of energy units.
- 8.3 In case the Prosumer is under the arbit of time of day tariff, as determined by the JERC from time to time, the electricity consumption in any time block (e.g. peak hours, off-peak hours, etc.) shall be first

*Y V Reddy*  
REGISTRAR

compensated with the electricity generation in the same time block. Any cumulated excess generation over consumption in any other time block in a billing cycle shall be accounted as if the excess generation occurred during off-peak time block.

- 8.4 A final settlement energy bill shall be prepared by the EDG at the end of each settlement period, after crediting the exported energy surplus (in kWh) under the Net Metering and in other service connections of the Prosumer within the State of Goa if the Prosumer opts for using Group Net Metering facility.
- 8.5 The energy exported to the Grid (measured in kWh) can only be utilized to offset the electricity consumption (measured in kWh) and not for adjustment of any other fees or charges levied by the EDG.
- 8.6 The settlement period of overall export **energy surplus** shall be 1<sup>st</sup> April to 30<sup>th</sup> September and 1<sup>st</sup> October to 31<sup>st</sup> March. Adjusted net export energy surplus shall be purchased by the EDG at the rate agreed in this Agreement. The amount will be credited to the Prosumer's account within 30 days of issue of the bill. The EDG shall pay interest at the rate of 1.25% (One & Quarter Percent) per month (on per day basis) as late payment charges for any delay in payment for the net energy exported beyond 30 (Thirty) days period from the date of issue of the bill.
- 8.7 For payment of bill, a rebate of 2% (Two Percent) shall be allowed if the amount is paid to the Prosumer's account within five working days of issue of the bill. If payment is made beyond five working days but within thirty days of issue of bill, a rebate of 1% (One Percent) shall be allowed.
- 8.8 If the Energy Feed-In Meter becomes defective the Net Exported Energy for the days during which the meter is defective shall be computed as follows:

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i) If the Prosumer has installed an Energy Feed-In Check Meter, the readings of that meter shall be used. e/126

ii) In the absence of an Energy Feed-In Check Meter or if that meter is also defective, it shall be the responsibility of the Prosumer to repair /replace the meters at the earliest, failing which, billing shall be suspended for that period.

8.9 The Prosumer is to submit to EDG account of the power generated annually before the financial year end.

8.10 The Prosumer shall be billed on net metering upto sanction Load/ Contract Demand such that anticipated generation in the year is not more than 100% of electricity consumption in previous 12 months.

### 9 Metering :

9.1 The Prosumer shall install one Bi-directional meter for recording export and import of energy and separate Electronic Energy meter at the generating bus to measure total solar power generation.

9.2 Prosumer shall test all the meters at MRT Division of the EDG. The meters shall be installed as per the JERC Regulations.

9.3 Prosumer may optionally install an Energy Feed-In Check Meter as its own cost.

9.4 Both, uni-directional and bi-directional meter shall be fixed in separate meter boxes in the same proximity.

9.5 The EDG shall arrange to test and seal all the energy meters for which Prosumer shall bear all the testing charges.

9.6 The Prosumer has to pay monthly Rent of the meters if installed/ provided by EDG.

9.7 All such installations shall have electricity meters with feature having load survey for 45 days data storage as provided under JERC Regulations. All Installation with capacity of 25kW shall have an optical communication port and RS 232 port for exchanging data with the EDG. For plant size

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REGISTRAR



IMW and above, the communication shall be with State Load Dispatch Centre SLDC) in addition to the EDG.

9.8 All meters installed in such installation shall be having DLMS/COSEM protocol.

## 10 Taxes and Duties

Tariff fixed under this Agreement shall be exclusive of taxes and duties on sale of power as may be levied by the EDG. Provided that the taxes and duties levied by the EDG / administration shall be allowed as pass through on actual incurred basis.

## 11 Term and Termination of the Agreement :

11.1 This Agreement shall be in force for a period of 25 years from the date of commercial operation of the SPV system unless terminated otherwise as provided hereunder.

11.2 Either Party to this Agreement shall have the right to terminate this Agreement at any time by serving a written notice of 60 (sixty) days in advance to the other party.

11.3 If the Prosumer commits any breach of the terms of this Agreement, the EDG shall serve a written notice specifying the breach and calling upon the Prosumer to remedy/ rectify the same within 30 (thirty) days or at such other period and in case of failure on the part of the prosumer to remedy/rectify the breach, this EDG shall at the expiry of 30 (Thirty) days or such other period from the delivery of the notice, terminate this agreement by delivering the termination notice,

11.4 Upon termination of this Agreement, Prosumer shall disconnect the SPV system from the distribution system and intimate the same to the EDG.

## 12 Dispute, Change in Law and Supersession :

Y.V. Reddy  
REGISTRAR  
Goa University

12.1 Disputes in billing or payments shall be referred to the Grievances Redressal Forum (CGRF) established under Sub-section (5) of section 42 of the Electricity Act 2003. c/124

12.2 In case of any change in law during the tenure of this Agreement, the aggrieved party shall be required to approach the JERC for seeking approval of impact due to change in law. The decision of the JERC to acknowledge change in law and the date from which it shall become effective and to provide relief for the same shall be final and governing on both the parties.

**13 Interpretation :**

If any question arises relating to the interpretation of any provision of this Agreement, Solar Regulations and the Solar Tariff, the decision of the Appropriate Authority shall be final.

**13.1 Where any Dispute**

(a) arises from a claim made by any party for any change in or determination of the tariff or any matter related to tariff or claims made by any party which partly or wholly relate to any change in the Tariff or determination of any of such claims shall result in change in the tariff; OR

(b) relates to any matter agreed by the parties here to be referred to the JERC,

shall be referred to the JERC.

14. The original copy of this Agreement shall remain with the EDG and the duplicate thereof with the Prosumer.

15. The parties hereto shall be bound by the JERC Regulations.

x  
Y V Reddy  
REGISTRAR  
Goa University

IN WITNESS WHEREOF, the parties here to have signed this Agreement on the day, month and year first hereinabove mentioned.

SIGNED, SEALED AND DELIVERED BY

Signature: \_\_\_\_\_

Shri. Arun Patil

The Executive Engineer **Executive Engineer  
Elec. Div. (P&M),  
Panaji Goa**

Electricity Department \_\_\_\_\_, Goa.

Seal

For and on Behalf of the

Electricity Department, Goa.

Date: 06/08/2020

SIGNED, SEALED AND DELIVERED BY

Signature: Y.V. Reddy

Shri. Y.V. REDDY

Seal **REGISTRAR  
Goa University  
Taleigao Plateau  
Goa 403 206**

For and on behalf of Prosumer \_\_\_\_\_ dated \_\_\_\_\_

By virtue of (Authority) \_\_\_\_\_

**WITNESSES :**

(Name)	(Address)	(Designation)	(Signature)
1) <u>SHRI. KRISHNA V. NAIK</u>		<u>Electrician Engg &amp; Tech Div Goa University</u>	<u>[Signature]</u>
2) <u>SHRI. RAJARAM D. SAWANT</u>		<u>Electrician Engg &amp; Tech Div Goa University</u>	<u>[Signature]</u>

22/10/19

OFFICE OF THE CHIEF ELECTRICAL ENGINEER  
ELECTRICITY DEPARTMENT  
GOVERNMENT OF GOA  
VIDYUT BHAVAN 3<sup>rd</sup> FLOOR  
PANAJI - GOA

ENGINEERING & TECHNICAL  
DIVISION  
GOA UNIVERSITY  
Inward No. 2248  
Date 21/10/19

GOA UNIVERSITY  
VIDYUT BHAVAN  
Inward No. 2248 (CR)  
Date 18/10/19

Contact No. 0832-2224680,2222354/2426986(FAX)/Email ID: cee-elec.goa@nic.in

No.101/1/Solar/SPD/CEE/Tech/2019-20/1314

Dated: 11/10/2019.

To,  
The Registrar,  
Goa University,  
Bambolim Goa - 403005.

*Handwritten notes:*  
42/10/19  
uB  
AECG

Sub: Grid connectivity for 365 kWp Solar PV Rooftop system, Net Metering at The Registrar, Goa University, Bambolim Goa.  
Ref: No 1/212/GEDA/19-20/320 dated 31/07/2019.

*Handwritten signature and date:*  
22/10

Sir,

Provisional approval is hereby given to your installation bearing C.A. No. 60000803217 (IITI) at 33kv to install solar PV rooftop solar power generation restricting to contract demand of 365 kWp, at The Registrar, Goa University, Bambolim Goa, comes under jurisdiction of Division I, subject to the following conditions:

- 1) The Grid connection shall be on "Net Metering" basis.
- 2) The inverter catalogue, manufactures test report, IFC certificate and other relevant details are to be submitted to the department and the same are required to be checked by MRT for its correctness of protection logic and automatic isolation and islanding protection at site.
- 3) All equipments should be tested from Accredited National Laboratories.
- 4) The inverter shall have inbuilt automatic isolation and islanding protection on failure of grid supply. Apart from this, there should be back up islanding scheme to avoid accidental injection to grid by back feeding which can cause loss of life & property. The backup islanding scheme should be shown in the SLID and also explained in detail with recommended setting after studying the protection scheme of EDG. The report and study on protection system behavior during fault condition on EDG line should also be submitted. This is essential for reliable and timely tripping of solar supply from the grid during line fault in EDG system
- 5) The provision for DG supply if any, should be shown on existing SLID. To avoid back feeding in EDG Network due to Solar Generation on D. G. set manual/automatic 4-pole changeover switch shall be installed for D. G. changeover.
- 6) Separate isolating switch 4 pole with neutral isolator disconnecting switch as per relevant capacity having locking arrangement to be provided by the party.

- c/148
- 7) kind attention is brought to section 9.5 of JERC Net Metering Regulation 2019 which stated that the Consumer shall be solely responsible for any accident to human beings / animals whatsoever (Fatal/Non-fatal/ departmental/ Non-departmental) that may occur due to back feeding from solar plant when grid supply is off. Provided that the Distribution Licensee shall have the rights to disconnect the Solar Project from its distribution Network at any time in the event of any threat of accident or damage from such project to its distribution system, for maintenance of distribution system so as to avoid any accident or damage to it.
- 8) MRT tested bidirectional meter with AMR facility to be provided as main meter as per specifications and Regulations in force. The Specification are as follows:
- a) Meter: Renewable Energy meter (Bi-directional), Class: 0.5s, Rating: 3 x  $\frac{110V}{Rt.3}$  V
- b) CT & PT: The system voltage shall be as per the available HT supply level, i.e. 11 KV, indoor Epoxy Resin Cast, wound Primary type, single phase, 50 Hz CT having ratio 25/5A, Class 0.5s, Burden 15VA, ISF <=5, STC 13.1KA/1-sec, 11KV- 36/70/170KV, Ref. Std. IS:2705/1992, Secondary Terminals on p2 side.
- Indoor Epoxy Resin Cast VT, single phase, single pole, 50Hz, ratio 11 KV/Rt.3//110V/Rt.3, Class 0.5s, Burden 50VA, Voltage factor 1.2, continuous 1.9 for 8 hours, 11KV- 36/70/170KV, Ins. Class B, Ref. Std IS:3156/1992, one end earthed type without fuse.
- 9) MRT tested Bi-direction check meter shall be mandatory
- 10) Separate MRT tested total solar meter to measure total solar energy shall be installed.
- 11) All meters to be installed preferably at one location with separate identity marked. Prosumer has to pay monthly rent of main meter and solar meter if installed/ provided by EDG.
- 12) The primary neutral of the transformer is solidly earlier.
- 13) The consumer has to follow Net Metering Regulation 2019 of JERC notified dated. 24/7/2019 and its subsequent amendments if any as on date in this regard.
- 14) The consumer shall provide all safety equipments in order to prevent back feeding. Separate MCB's for AC&.DC along with Surge Protection Devices (SPD) to be provided. The wiring of AC&DC should be done in accordance with relevant IEC standard. The Single line diagram with bill of material of equipment installed to be submitted.
- 15) Applicant has to pay non-refundable Registration fee Rs. 500 (five hundred only) to the Electricity Department, **Division I, Panaji** in favour of "**Chief Electrical Engineer**".
- 16) The Consumer shall sign Power Purchase Agreement (PPA) with the Executive Engineer, **Elect Division -I, Panaji Goa**, before synchronizing with Grid system.
- 17) The tariff applicable for solar Net surplus at the end of settlement period shall be decided as per Solar Policy 2017 amended as on 7/2/2019 at the date of



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signing PPA or at the time of commercial operation whichever is later. The Average Power Purchase Cost (APPC) rate shall be Rs. 2.93/ KWH as per notified tariff order of JERC for Financial Year 2019-20.

- 18) Separate earthing shall be done for solar panel, for AC and DC system in accordance with IS 3043-1986.
- 19) The lightning rod to be provided for solar installation with proper earthing using GI strip not less than 3 mm thick or Alluminum strip of required size or 10 sq. mm or above multi-strand copper wire.
- 20) The Prosumer has to submit completion report of installation comprising of single line diagram, Invertor catalog, Manufacture test report, Panel catalog and all relevant IEC certification with Anti islanding certificates, Meter test certificate, certificate of earthing resistance values issued by Licensing Electrical Contractor.
- 21) The details of Invertor/ Generator installed if any to be submitted and required 4 pole/ 2pole Isolation /Change over switch to be provided.
- 22) State Electrical Inspectors approval is required to be obtained for Grid Connectivity.

Compliance to above may please be intimated to MRT Division VIII of this Dept. for carrying out inspection.

The address and contact of the said Div. is Division VIII (MRT), Vidyut Bhavan, Aquem, Margao Goa. Contact No. 0832-2734141 and Email eemrt8@gmail.com

Any errors or omissions observed subsequent to issue of this approval will be at the risk and consequences to be faced by the party.

Yours's faithfully,



(Reshma Mathew)  
Chief Electrical Engineer

**Copy to: -**

- 1) The Superintending Engineer, Circle -II (North), Electricity Department, Panaji, Goa.
- 2) The Executive Engineer -- Division -I, Electricity Department Panaji Goa, with a direction to maintain system / grid so as uninterrupted evacuation of solar power is maintained.
- 3) The Executive Engineer, Division -- VIII (MRT), Electricity Department, Margao, Goa.
- 4) The Nodal Officer Electricity Department, O/O Chief Electrical Engineer, Panaji, Goa.
- 5) The Member Secretary, Goa Energy Development Agency, 5<sup>th</sup> floor, Goa IDC Building, near Passport Office, Patto, Panaji - Goa.

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2361 (R)  
05/08/2019

No.1/212/GEDA/19-20/320  
Office of the Member Secretary  
Goa Energy Development Agency  
5<sup>th</sup> Floor, Goa-IDC Building,  
Patto, Panaji, Goa - 403001.  
Date: 31/07/2019

To  
The Chief Electrical Engineer  
Electricity Department,  
Vidyut Bhavan,  
Panaji, Goa.

Sub: Application for the grid connectivity for the 365kWp Solar PV Power plant with Net Metering System.

Madam,

This office in receipt of letter from Registrar, Goa University, for seeking the grid connectivity and approval for installation of 365kWp Solar Power Plant under Net Metering to be installed at Goa University, Bambolim. The copy of the duly filled application form is forwarded to your office for issuing grid connectivity under Net Metering system.

In view of above, you are requested to kindly look into the matter and provide the grid connectivity for the 365kWp Solar Power Plant with Net Metering System.

Yours faithfully

*SJA*

(Sanjeev Joglekar)  
Member Secretary (GEDA)

Enclosure: As above.

Copy for information to:

- 1) Registrar, Goa University, Bambolim, Goa.
- 2) Concern file.
- 3) Guard file

*YV K...*  
*UB*

*05/08/19*  
*AE (G)*  
*20*  
*21*

1851  
06/08/19

OFFICE OF THE CHIEF ELECTRICAL ENGINEER  
ELECTRICITY DEPARTMENT  
GOVERNMENT OF GOA  
VIDYUT BHAVAN 3<sup>rd</sup> FLOOR  
PANAJI - GOA

2022  
REGISTRATION & TECHNICAL DIVISION  
GOA UNIVERSITY  
Inward No. 2249  
Date 21/10/19

GOA UNIVERSITY  
REGISTRATION OFFICE  
Inward No. 3814 CR  
Date 18/10/19

Contact No. 0832-2224680,2222354/2426986(FAX)/Email ID: eee-elec.goa@nic.in

No.101/1/Solar/SPD/CEE/Tech/2019-20/1315

Dated: 11/10/2019.

✓ To,  
The Registrar,  
Goa University,  
Bambolim Goa - 403005.

Handwritten signatures and initials, including a date stamp 23/10/19 and the initials AE.

**Sub: Grid connectivity for 240kWp Solar PV Rooftop system, Net Metering at The Registrar, Goa University, Bambolim Goa.**  
**Ref: No 1/212/GEDA/19-20/321 dated 31/07/2019.**

Sir,

Provisional approval is hereby given to your installation bearing C.A. No. 60000801385 (UTI) at 11kv to install solar PV rooftop solar power generation restricting to contract demand of 240 kWp, at The Registrar, Goa University, Bambolim Goa, comes under jurisdiction of Division I, subject to the following conditions:

- 1) The Grid connection shall be on "Net Metering" basis.
- 2) The inverter catalogue, manufacturer's test report, IEC certificate and other relevant details are to be submitted to the department and the same are required to be checked by MRT for its correctness of protection logic and automatic isolation and islanding protection at site.
- 3) All equipments should be tested from Accredited National Laboratories.
- 4) The inverter shall have inbuilt automatic isolation and islanding protection on failure of grid supply. Apart from this, there should be back up islanding scheme to avoid accidental injection to grid by back feeding which can cause loss of life & property. The backup islanding scheme should be shown in the SLD and also explained in detail with recommended setting after studying the protection scheme of EDG. The report and study on protection system behavior during fault condition on EDG line should also be submitted. This is essential for reliable and timely tripping of solar supply from the grid during line fault in EDG system
- 5) The provision for DG supply if any, should be shown on existing SLD. To avoid back feeding in EDG Network due to Solar Generation on D. G. set manual/automatic 4-pole changeover switch shall be installed for D. G. changeover.
- 6) Separate isolating switch 4 pole with neutral isolator disconnecting switch as per relevant capacity having locking arrangement to be provided by the party.

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signing PPA or at the time of commercial operation whichever is later. The Average Power Purchase Cost (APPC) rate shall be Rs. 2.93/ KWH as per notified tariff order of JERC for Financial Year 2019-20.


- 18) Separate earthing shall be done for solar panel, for AC and DC system in accordance with IS 3043-1986.
- 19) The lightning rod to be provided for solar installation with proper earthing using GI strip not less than 3 mm thick or Aluminum strip of required size or 10 sq. mm or above multi-strand copper wire.
- 20) The Prosumer has to submit completion report of installation comprising of single line diagram, Inverter catalog, Manufacture test report, Panel catalog and all relevant IEC certification with Anti islanding certificates, Meter test certificate, certificate of earthing resistance values issued by Licensing Electrical Contractor.
- 21) The details of Inverter/ Generator installed if any to be submitted and required 4 pole/ 2 pole Isolation / Change over switch to be provided.
- 22) State Electrical Inspectors approval is required to be obtained for Grid Connectivity.

Compliance to above may please be intimated to MRT Division VIII of this Dept. for carrying out inspection.

The address and contact of the said Div. is Division VIII (MRT), Vidyut Bhavan, Aquem, Margao Goa. Contact No. 0832-2734141 and Email eemrt8@gmail.com

Any errors or omissions observed subsequent to issue of this approval will be at the risk and consequences to be faced by the party.

Yours's faithfully,



(Reshma Mathew)  
Chief Electrical Engineer

**Copy to: -**

- 1) The Superintending Engineer, Circle -II (North), Electricity Department, Panaji, Goa.
- 2) The Executive Engineer - Division -I, Electricity Department, Panaji Goa, with a direction to maintain system / grid so as uninterrupted evacuation of solar power is maintained.
- 3) The Executive Engineer, Division - VIII (MRT), Electricity Department, Margao, Goa.
- 4) The Nodal Officer Electricity Department, O/O Chief Electrical Engineer Panaji, Goa.
- 5) The Member Secretary, Goa Energy Development Agency, 5<sup>th</sup> floor, Goa IDC Building, near Passport Office, Patto Panaji - Goa.



TECHNICAL  
ACTIVITY  
Inward No. 2408  
Date 01/10/2020

GOVERNMENT OF GOA  
OFFICE OF THE EXECUTIVE ENGINEER,  
ELECT. (O&M), 2<sup>nd</sup> FLOOR,  
VIDYUT BHAVAN, PANAJI - GOA.  
Email: ee1-elec.goa@nic.in Tel: :0832-2426421/2416022

134/e/140  
GOA UNIVERSITY  
REGISTRAR'S OFFICE  
Inward No. 18.91-R  
Date: 30-09-2020

EE/Div-I/Tech-98(52)/20-21/ 2568

U.K. Date: 28/09/2020

To,  
The Sub Divisional Engineer,  
Sub-Div-III,  
Bambolim-Goa.

ENGINEERING & TECHNICAL  
DIVISION  
GOA UNIVERSITY  
Inward No.  
Date


**Sub: Grid connectivity for 240KWP Solar PV Rooftop system with Net Metering of The Registrar, Goa University, Bambolim-Goa.**  
**Ref: No. AE/SD-III(R)/BML/Tech-38/20-21/874, Dated 22/09/2020.**

Approval is hereby conveyed for Grid Connectivity to 240KWP Rooftop Solar PV power plant of The Registrar, Goa University, Bambolim-Goa, bearing CA No. 60000801385 subject to the following conditions:

- 1) The Bidirectional meter and total solar meter are to be installed at your end. For H.T. Prosumer, MRT to be called for installation inspection.
- 2) The observation raised during inspection if any is to be complied.
- 3) The date of Grid Connectivity should be intimated to this office without fail.

You are directed to maintain system/Grid so as uninterrupted evacuation of solar is maintain.

Also, monthly readings are to be taken by Sub-Division for Import and Export of energy and total meter for billing purpose.

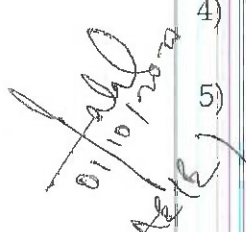
  
Executive Engineer,  
Elect. Div-I (O&M), Panaji

Copy to:-

- 1) The Registrar, Goa University, Bambolim-Goa.

Your kind attention is brought to section 9.5 of JERC Regulation 2019 which stated that the Consumer shall be solely responsible for any accident to human beings / animals whatsoever (Fatal/Non-fatal/ departmental/ Non-departmental) that may occur due to back feeding from solar plant when grid supply is off. Provided that the Distribution Licensee shall have the rights to disconnect the Solar Project from its distribution Network at any time in the event of any threat of accident or damage from such project to its distribution system, for maintenance of distribution system so as to avoid any accident or damage to it.

- 2) The Chief Electrical Engineer, Electricity Department, 3<sup>rd</sup> Floor, Vidyut Bhavan, Panaji.
- 3) The Superintending Engineer, Electricity Department, Circle-II(N), Panaji.
- 4) The Member Secretary, Goa Energy Development Agency, 5<sup>th</sup> floor, Goa IDC Building, near Passport Office, Patto, Panaji - Goa.
- 5) Smt. Mohsina Khan, Junior Engineer.....alongwith copy of HT meter testing sheet of MRT.

  
01/10/2020  
A.E.

32/C  
HAR

3872(CR)  
22/10/19

No.1/212/GEDA/19-20/543  
Office of the Member Secretary  
Goa Energy Development Agency  
5th Floor, Goa - IDC Building  
Patto, Panaji, Goa - 403001.  
Date : 18/10/2019

To  
The Director  
Agrawal Renewable Energy Pvt. Ltd,  
Anand Bhavan, Old Station Road,  
Margao, Goa.

Sub : Revision of Building wise Solar Rooftop Installation at Goa University.

Sir,

This has reference to your letter dated 28/09/2019 on the above cited subject matter. In this regard it is to inform you that due to the shadow effect safety aspect during the maintenance and inclination angle which results in deviation of power generation, you are now hereby directed to install the 605kWp solar power plant at the following building at Goa University, Bambolim. The details alongwith capacity of the solar power plant is as below;

Sr. No.	Building Name	Capacity (kWp)
1	Library	40
2	Faculty Block A	60
3	Faculty Block B	40
4	Faculty Block C	40
5	Silver Jubilee Hall	60
6	Faculty Block E	200
7	Faculty Block F	165

Total: 605 kWp

Yours faithfully,

(Sanjeev Joglekar)  
Member Secretary (GEDA)

Copy for information to :

- ✓ 1. The Registrar, Goa University, Bambolim, Tiswadi, Goa.
- 2. The Director, Directorate of Higher Education, Porvorim, Goa.
- 3. Concerned file.
- 4. Guard file.

42/10/19  
u/s

AE (E) PLS spe m 23/10

DISCARD  
23/10 with D.B. on 24  
IT IS observed that GEDA  
conceded ADM Bldg site & taken  
Silver Jubilee Hall for solar panel  
power plant.