

TRIPURA ELECTRICITY REGULATORY COMMISSION
Bidyut Bhavan, Bhutoria, Banamalipur, Agartala, Tripura-799001
phone nos: 0381-2300137 , 0381-2326372 ,
Website : https://terc.tripura.gov.in

CORAM

- 1 Sri. D. Radhakrishna, Chairman**
- 2 Sri. Jiban Krishna Sen, Member**

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Review Petition No. 12 of 2020 in connection to Petition No. 3 of 2020

Order No. 24 of 2020

Date of Order:

24.11.2020

IN THE MATTER OF : Filing of Review Petition by Airport Authority of India M.B.B Airport, Agartala for “Permission for Net Metering facility for new 2.0 MWp Solar Power Plant at MBB Airport Agartala”

Airport Authority of India M.B.B Airport, Agartala. ...

Petitioner. Vs.

- 1. Govt Of Tripura through The Principal Secretary Power.**
- 2. Tripura State Electricity Corporation Limited (TSECL)**
- 3. Tripura Power Generation Limited (TPGL)**
- 4. Tripura Renewable Energy Development Agency (TREDA) ...**

Respondents

Appearance on 20.10.2020

For the Petitioners

- 1.Sri. Mr.Rajiv Kapoor, Airport Director, MBB Airport, Agartala
- 2.Sri Sudhir Tripathi AGM, Engg. (E) MBB Airport, Agartala
3. Sri. K C Meena DGM Engg. (E) MBB Airport, Agartala

For the Respondents:

- | | |
|---------------------------|-------------------------------|
| 1. Dr. M S Kele | MD, TSECL Agartala, Tripura |
| 2. Sri. M Debbarma | MD TPGCL Agartala, Tripura . |
| 3. Sri Arup Gan Chaudhuri | DGM (C&T), TSECL, Agartala |
| 4. Sri. S Debbarma | P O, TREDA, Agartala, Tripura |

Appearance on 11.11.2020

For the Petitioners :

- | | | |
|-------------------------|---|---------|
| 1.Sri. Mr.Rajiv Kapoor, | Airport Director, MBB Airport, Agartala | 2. Sri. |
| 2.Sudhir Tripathi | AGM, Engg. (E) | |
| 3. Sri. K C Meena | DGM Engg. (E) | |

For the Respondents = None appeared for the Respondents.

The Review Petition came up for hearing on **20th October 2020** and on **11.11.2020** and posted the matter on **24th November 2020** for final order.

Brief facts and circumstances of the Petition are as under:

The Petitioner initially on **7th February 2020** filed a Petition being Petition **No.3** of 2020 before this Commission for Approval i.r.o. getting benefit of Net Metering applicable for ground mounted Solar PV system as per Tripura Electricity Regulatory Commission Renewable Energy Regulations, 2015 for 2 MWp Solar Power Plant at Agartala Airport and this Commission heard the matter on **18th August 2020** and passed its order dated **23rd September 2020**. The submissions of the Petitioner and the order of this Commission are as under.

1. The Petition No.3 of 2020 was filed by Airports Authority of India ,MBB Airport Agartala (AAI) on 07-02-2020 where it was prayed before the Hon'ble Commission that

AAI has earmarked 10.0 acre land for installation of ground mounted Solar Plant. AAI also interested to install Ground mounted 2.0 MWp Solar Power Plant in Phase I for Agartala Airport to promote Green Energy. To achieve this target AAI needs to get approval for getting benefit of Net Metering facility for ground mounted Solar PV system as per Tripura Electricity Regulatory Commission Renewable Energy Regulations 2015 for 2.0 MWp solar power plant in addition to the existing 250 KWp Solar Plant.

Brief facts of the Petition:

- i) Airport Authority of India (AAI) has taken long term measures for energy conservation by setting up the Solar Power Plant for Energy Generation at various airports following National Civil Aviation Policy 2018. AAI has commissioned **43 MW** Solar Power Plant at **50 nos** locations in various airports and AAI in the process of developing its airports with Net Zero energy Features.

- ii. The total load of existing terminal building is **1500 KW** which is catered by **2 nos. 1.6 MVA** transformers (01 main & 01 stand by). AAI has already commissioned a **250 KWp** roof top solar power plant on **20.01.2019** with Net Metering facility at old terminal building. The work of new integrated terminal building is in progress and is likely to be completed very soon. Total capacity of transformers for new terminal building is **2x4.0 MVA** (1 main & 1 stand by transformers).
- iii. AAI has earmarked 10.0 Acre land for installation of ground mounted Solar Power Plant. The intension is to install Ground Mounted 2.0 MWp Solar Power Plant in phase-I for Agartala Airport to promote Green Energy at Airports. To achieve this target, AAI needed approval of Net Metering applicable for ground mounted Solar PV system as per Tripura Electricity Regulatory Commission Renewable Energy Regulations 2015 for 2.0 MWp solar Power Plant in addition to the existing 250 KWp Solar Plant.
- iv. The matter as above submitted by AAI for kind consideration of the Hon'ble Commission and necessary approval.

Proceedings in the Case:

The Commission heard the case on 18th August 2020 when the representatives of the Petitioner and TSECL were present. The Commission directed to the petitioner to submit the detailed project Reports of the Solar Plant to be installed at MBB Airport along with the documents related to the Airport of the other states as Kolkata, Ahmadabad etc. where the system of Net Metering and Solar Power Plant has already been implemented within a week time. The petitioner submitted the requisite documents within specified time.

On 23rd September 2020, the Commission passed the following Order :

1. *The Commission, in the present Order, is pleased to communicate the decision that there is no bar for AAI's Proposed Ground Mounted Grid Connected Solar PV system at Agartala Airport in lieu of mounting the solar PV modules on the roof top ,for the purpose of getting benefit of net metering subject to installation of Solar Power generating Plant having total capacity not exceeding **1 MW**(including already installed capacity of **250KWp**) installed on rooftop or any other mounting structure at Agartala Airport as per the Tripura Electricity Regulatory Commission Regulation for*

Net metering for Grid interactive rooftop solar system Regulation 2016. The Commission will appreciate the initiative of installation of Solar PV system in the new terminal building also.

- 2. The Commission also directs that TSECL being the distribution licensee shall allow net metering arrangement so long as the cumulative capacity utilized at a particular distribution transformer does not exceed 15% of the rated capacity of that distribution transformer as per the Tripura Electricity Regulatory Commission Regulation for Net metering for Grid interactive Rooftop Solar system Regulation 2016 or any other amendment in force.*

The Petitioner after receiving the above order dated 23rd September 2020, sent a letter dated 12th October 2020, which reads as under

From
AIRPORTS AUTHORITY OF INDIA

To
The Chairman
Tripura Electricity Regulatory Commission Bidyut Bhavan, Bhutoria, Banamalipur,
Agartala, Tripura-799001

Date : 12/10/2020

Sub: Permission for net metering facility for new 2.0
MWp Solar Power plant
at MBB Airport, Agartala.

Sir,

AAI has implemented the long term measures for energy conservation in terms of setting up the Solar Power Plant for Energy Generation at various airports in line with the National Civil Aviation Policy 2018. AAI has commissioned **43 MWp** Solar Power Plant at 50 locations in various airports so far. In order to conserve energy AAI is in the process of developing its airports with Net Zero energy Features.

It is informed that total electrical load of existing terminal building is **1500 KW** which is catered by **2 nos. 1.6 MVA** transformers (01 main & 01 stand by). AAI has already commissioned a **250 KWp** roof top solar power plant on 20.01.2019 with Net Metering facility at old terminal building. The work of new integrated terminal building is in progress and is likely to be completed by 30.11.2020. Total electrical load of MBB Airport will be approx. 3500 KW after commissioning of new terminal building.

AAI has earmarked 10.0 Acre land for installation of Solar Power Plant . AAI intends to install 2.0 MWp Solar Power Plant in phase- I for Agartala Airport to promote Green

energy at Airports.

As per the existing TERC (net metering for grid interactive rooftop solar systems) Regulations 2016 Part “B” para 3 “the capacity of the solar energy systems to be installed at the premises of any eligible consumers under these Regulations shall not be less than One KWp and shall not exceed One MWp .

In view of above policy constraints AAI has filed Petition vide No.

AAI/AT/APD/Solar/2019-20 dated 07/02/2020 for getting benefit of net metering facility for ground mounted Solar PV system as per Tripura Electricity Regulatory Commission Renewable Energy Regulations, 2015 for 2.0 MWp Solar Power Plant at MBB Airport, Agartala.

The petition was heard by TERC on dated 02.02.2020, 06.05.2020 and 18. 08. 2020. The TERC has issued an order vide petition No 3 of 2020 and another order No 20 of 2020 dated 23.09 2020 as detailed below:

"1) The Commission in the present order, is pleased to communicate the decision that there is no bar for AAI's proposed Ground Mounted Connected Solar PV System at Agartala Airport in lieu of mounting the solar PV modules on the rooftop for the purpose of getting benefit of net metering subject to installation of solar power generating plant having total capacity not exceeding 1MW (including already installed capacity of 250 KWp) installed on rooftop or any other mounting structure at Agartala Airport as per the Tripura Electricity Regulatory Commission Regulation for Net metering for Grid interactive rooftop solar system regulation 2016. The commission will appreciate the initiative of installation of solar PV system in the new terminal building also.

2) The Commission also directs that TSECL being the distribution licensee shall allow net metering arrangement so long as the cumulative capacity utilized at a particular distribution transformer does not exceed 15% of the rated capacity of that distribution transformer as per the Tripura Electricity Regulatory Commission Regulation for Net metering for Grid interactive Rooftop Solar System Regulation 2016 or any other amendment in force"

It can be seen from the above that, decision of TERC is same as per the existing TERC (net metering for grid interactive rooftop solar systems) Regulations 2016 policy where maximum.1.0 MWp solar power plant is permissible.

As brought out above, AAI intends to install 2.0 MWp Solar Power Plant in phase-I for Agartala Airport, Hence the above decision dated 23.09.2020 of TERC may please be reviewed and approval for Net Metering facility for 2.0 MWp solar Power Plant in

addition to the existing 250 KWp Solar Plant to AAI may please be given.

Yours Sincerely
Sd/-

Rajiv Kapoor
Airport Director

The Commission after receiving the said letter dated 12th October 2020 from the Petitioner, held a hearing on 16th October 2020. The Minutes of the order dated 16th October 2020 reads as under:

Petition No. : 12 of 2020

ORDER NO. : 21 of 2020

In the Matter Of

Review Petition for Net Metering facility for new 2.0 MWp Solar Power Plant at Agartala Airport

Petitioner : Airports Authority of India , MBB Airport Agartala.(AAI)

ORDER

Date of Petition : 12-10-2020

Date of Order : 16-10-2020

The Commission has decided to convert the letter dated 12- 10-2020 received from Airport Authority as Review Petition against the order of the Commission issued on 23.09.2020. The matter will be heard in the chamber of the Hon'ble Chairman on 20- 10-2020 at 11.30 A.M. The persons interested may be present for the hearing.

By Order of the Commission
Sd/-

Smt Sujata Das Chakrabarti
Secretary, TERC

Copy for information & necessary action,

The Government of Tripura through the Principal Secretary Power.

*Tripura State Electricity Corporation Limited through the
Managing Director,*

*Tripura Power Generation Limited through the Managing
Director,*

Tripura Renewable Energy Development Agency through the Director General.

Notice Board.

Website of TERC.

Secretary,TERC

The Commission as per the Order dated 16th October 2020 has decided to convert the letter dated 12-10-2020 received from Airport Authority as Review Petition as against the order of the Commission issued on 23.09.2020 and posted the matter for hearing in the Chamber of the Hon'ble Chairman on **20-10-2020** at 11.30 A.M and informed the parties to present at the hearing.

Brief facts and submissions of the Review Petition:

AAI has implemented the long term measures for energy conservation in terms of setting up the Solar Power Plant for Energy Generation at various airports in line with the National Civil Aviation Policy 2018. AAI has commissioned **43 MW** Solar Power Plant at **50 locations** in various airports so far. In order to conserve energy AAI is in the process of developing its airports with Net Zero energy Features.

It is informed that total electrical load of existing terminal building is **1500 KW** which is catered by **2 nos. 1.6 MVA** transformers (01 main & 01 stand by). AAI has already commissioned a **250 KWp** roof top solar power plant on 20.01.2019 with Net Metering facility at old terminal building. The work of new integrated terminal building is in progress and is likely to be completed by 30.11.2020 . Total electrical load of MBB Airport will be approx. 3500 KW after commissioning of new terminal building.

AAI has already ear-marked 10.0 Acre land for installation of Solar Power Plant. AAI intends to install 2.0 MWp Solar Power Plant in phase- I for Agartala Airport to promote Green energy at Airports.

As per the existing TERC (net metering for grid interactive rooftop solar systems) Regulations 2016 Part B para 3 “the capacity of the solar energy systems to be installed at the premises of any eligible consumers under these Regulations shall not be less than One KWp and shall not exceed One MWp (copy attached).

In view of above policy constraints AAI has filed Petition vide No. AAI/AT/APD/Solar/2019-20 dated 07/02/2020 for getting benefit of net metering facility for ground mounted Solar PV system as per Tripura Electricity Regulatory Commission Renewable Energy Regulations, 2015 for 2.0 MWp Solar Power Plant at MBB Airport, Agartala.

The petition was heard by TERC on dated 02.02.2020, 06.05.2020 and 18. 08. 2020. The TERC has issued an order vide petition No 3 of 2020 and another order No 20 of 2020 dated 23.09 2020 as detailed below:

"1) The Commission in the present order, is pleased to communicate the decision that there is no bar for AAI's proposed Ground Mounted Connected Solar PV System at Agartala Airport in lieu of mounting the solar PV modules on the rooftop , for the purpose of getting benefit of net metering subject to installation of solar power generating plant having total capacity of 1MW (including already installed capacity of 250 KWp) installed on rooftop or any other mounting structure at Agartala Airport as per the Tripura Electricity Regulatory Commission Regulation for Net metering for Grid interactive rooftop solar system regulation 2016. The commission will appreciate the initiative of installation of solar PV system in the new terminal building also.

2) The Commission also directs that TSECL being the distribution licensee shall allow net metering arrangement so long as the cumulative capacity utilized at a particular distribution transformer does not exceed 15% of the rated capacity of that distribution transformer as per the Tripura Electricity Regulatory Commission Regulation for Net metering for Grid interactive Rooftop Solar System Regulation 2016 or any other amendment in force"

It can be seen from the above that, decision of TERC is same as per the existing TERC (net metering for grid interactive rooftop solar systems) Regulations 2016 policy where maximum 1.0 MWp solar power plant is permissible.

As brought out above, AAI intends to install 2.0 MWp Solar Power Plant in phase-I for Agartala Airport, Hence the above decision dated 23.09.2020 of TERC may please be reviewed and approval for Net Metering facility for 2.0 MWp solar Power Plant in addition to the existing 250 KWp Solar Plant to AAI may please be given.

Prayer :

AAI intends to install 2.0 MWp Solar Power Plant in phase-I for Agartala Airport, Hence the above decision dated 23.09.2020 of TERC may please be reviewed and approval for Net Metering facility for 2.0 MWp solar Power Plant in addition to the existing 250 KWp Solar Plant to AAI may please be given.

Proceedings and Order in this Case:

1. This Review Petition came up for hearing on 20th October 2020 and 11.11.2020 and heard the submissions made by the representatives of both the sides, when the **Respondent no 2** during the hearing orally submitted that the Petitioner should not be allowed to drift from its core business and enter into Solar business. The Respondent further submitted that capping of 1(One) MW power is with this intention only since TSECL is making Power Supplies to the satisfaction and any revenue loss on this account would attribute to increase of tariff to common consumers.

The matter kept for orders on **24th November 2020.**

2. On 20th October 2020, heard the Petitioners and Respondents and the following order passed on that day:

“After hearing all the parties, the Commission has directed for a detailed analysis and load flow study whether the sub-station can take 2.0 MWp load without interrupting grid stability be done. For which Commission shall approach Member Secretary, NERPC, Shillong for carrying out the load flow study and submit the report within next fortnight and thereafter next hearing will be done.”

3. On **11th November 2020**, heard the Petitioners and passed the following order:
“Heard the Petitioner and case is reserved for final order. None represented for the Respondent.

4. As per the order of the Commission, dated **20th October 2020**, the Petitioners submitted a Report of Load Flow Study for AAI Agartala and sent an email, which reads as follows :

Load Flow Study for AAI Agartala.

BRIEFLEE LYNGKHOI <brieflee.lyngkhoi@gmail.com>

Date: Mon, Nov 9, 2020, 12:18 PM

Subject: Load Flow Study for AAI Agartala To:

<secretarytercagt@gmail.com>

Cc: <erashokal@yahoo.com>

Dear Madam,

PFA herewith the load flow studies as requested by you for your kind perusal.

Note: Kindly note that the tap position of 33/11kV transformer (ICT as per diagram in our study) should be set at position no 3 and tap position for 11/0.415kV transformer should be set at position 12.

Since all the time AAI is drawing from Tripura grid, so, the question of net metering does not arise.

Further, since in some cases PV Plant may draw MVAR from the grid, MVAR billing may be ensured if not in place.

B. Lyngkhoi, FIE, IES
Director (O&P)
NERPC, Shillong,
Govt. of India, Ministry of Power.
O -0364-2534039
M.-0943616341

5. As per the order of the Commission, dated 20th October 2020, the Petitioners further submitted a Report on Load Flow Studies for Integration of PV plant at Agartala Airport, as follows :

Report on Load Flow Studies for Integration of PV plant at Agartala Airport.

Data considered for the Studies:

- a. Solar plant connection SLD;
- b. Present SLD of 33/11KV system;
- c. Load details.

Assumptions: PV data as attached, Transformer(s) parameter details like impedance etc. as per standard.

Present System with no PV in service : 2.99 MW and 1.12 MVAR is drawn from the 33kV grid of Tripura. 33/11kV ICT tap set at 3 to maintain 11kV Bus voltage. Submitted with Diagram.

Proposed System with PV in service : 1.00 MW and 1.26 MVAR drawn

from the 33kV grid of Tripura. 33/11kV ICT tap set at 3 and 11/0.415/0.415kV ICT tap set at 12 to maintain 11kV Bus voltage. Submitted with attachment of Study Diagram.

Proposed System with PV out of service (night time) : 2.99 MW and 1.12 MVAR is drawn from the **33kV** grid of Tripura. 33/11kV ICT tap set at 3 and 11/0.415/0.415kV ICT tap set at 12 to maintain 11kV Bus voltage. Submitted with attachment of Study Diagram.

6. Power to Relax - Part F - Clause 18 of TERC (Net metering for grid interactive rooftop solar systems) Regulations 2016, reads as under :

The Commission may by general or special order, for reasons to be recorded in writing, and after giving an opportunity of hearing to the parties likely to be affected may relax or may waive any of the provisions of these Regulations on its own motion or on an application made before it by an interested person.

7. The Commission after going through the Review Petition and after going through the detailed Reports submitted by the Petitioners, passed the following order :

ORDER

- 1.** The Commission, after hearing the submissions and after perusing various documents and **Report on Load Flow Studies for Integration of PV plant at Agartala Airport, observed that the** TERC (Net metering for grid interactive rooftop solar systems) Regulations 2016 in force for setting up Roof Top Solar Project specify maximum 1 Mega Watt capacity. This is as Roof Top Solar Project is primarily for Residential and Commercial consumers. The order passed by the Commission on 23rd September 2020 is based on these Regulations. However, since the Airport Authority has made representation and also expressed that their new building is coming up in next 2-3 months and their electricity demand goes up and filed Review Petition to install 2 MWp Solar Power Plant, as per technical specification.

- 2.** In the larger interest of Tripura and also to keep in mind that the Government of India is promoting solar power in a big way that is why the Commission feels that the Petitioner may be allowed to install 2.0 MWp as a very special case so that it will have local employments and also to meet the target of solar power obligation of the State. Tripura has got a low radiation and also less sunny days compared to other parts of the Country, hence the Commission considers a special dispensation should be given to the Petitioner. It is expected that while mounting 2.0 MWp plant, the Petitioner would comply all technical requirements and adhere to Regulatory compliance being issued / enforced from time to time.
- 3.** The Commission feels that equivalent amount of costly power of a Gas based power can be replaced with a cheaper power being made out of solar. Hence everyone need to support Greener Power and the Commission cannot obviate its prime responsibility of being provided cheaper power to the consumers.
- 4.** The Commission has got its technical scrutiny by North Eastern Regional Power Committee(NERPC) which has got a prime responsibility of being a watch dog of Grid disciplinary mechanism and their Report indicates that there will be no technical disturbance on the Grid stability. It is also observed in most of the Cities/ localities in the Country, the Airports have been permitted for entire capacities. In fact Cochi Airport is 100% Solar based Airport.
- 5.** The Commission has a Power to Relax under Part F - Clause 18 of TERC (Net metering for grid interactive rooftop solar systems) Regulations 2016, and this Commission may by general or special order, for reasons to be recorded in writing, and after giving an opportunity of hearing to the parties likely to be affected may relax or may waive any of the provisions of these Regulations on its own motion or on an application made before it by an interested person. Hence, The Commission as a very special case and exercising its power laid in Section 86 E for promoting Solar power in the State of Tripura, **permits the Petitioner to install 2.0 MWp Solar Power Plant in phase-I for Agartala Airport, as per technical specifications submitted by them to this Commission.**

6. In view of the above observations and order, the Review Petition is disposed off.

7. The Secretary, TERC is directed to inform to all concerned.

This order is corrected and signed on this 24 th day of November 2020.

Sd/
(Jiban Krishna Sen)
Member
TERC ,Agartala

Sd/
(D . Radhakrishna)
Chairman
TERC , Agartala

Certified True Copy
Sd/
24.11.2020
(Ms Sujata Das Chakrabarti)
Secretary
TERC , Agartala

