MAHAVITARAN
Maharashtra State Electricity Distribution Co. Ltd.
(A Govt. of Maharashtra Undertaking)
CIN: U40109MH2005SGC153645

Office of the Chief Engineer (Power Purchase)
Maharashtra State Electricity Distribution Co. Ltd.
"Prakashgad", 5th Floor, Station Road, Bandra (E), Mumbai -400 051.
Tel.: (P) 26478643, (O) 26474211, Fax - 26580645
Email: cepp@mahadiscom.in, Website: www.mahadiscom.com

No. CEPP/MERC/2017/ 13082 Date: 23/05/2017

To
The Secretary,
Maharashtra Electricity Regulatory Commission,
13th Floor, Centre No.1, World Trade Centre,
Cuffe Parade, Mumbai – 400 005.

Sub: Petition in matter of Forecasting, Scheduling and Imbalance handling for renewable energy (RE) generating station.

Ref: MERC (Terms & Conditions For Determination Of Renewable Energy Tariff) Regulations, 2015

Respected Sir,

With reference to the above subject, please find enclosed herewith the MSEDCL petition in the matter of Forecasting, Scheduling and imbalance handling for renewable energy (RE) generating station.

The requisite fees of Rs. 10000/- (Rs. Ten Thousand Only) is submitted herewith Demand Draft No. 218822 dated 23.05.2017.

Submitted for further needful please.

Thanking you,

Yours faithfully,

Chief Engineer (Power Purchase)

Copy s. w. r. to:
The Executive Director (Comm), MSEDCL, Mumbai.
Copy to:
1. Prayas (Energy Group),
   Amrita clinic, Athwale Corner, Lakdipool-Karve Road Junction,
   Deccan Gymkhana, Karve Road, Pune – 411 004
2. The General Secretary, Thane Belapur Industries Association,
   Plot No. P-14, MIDC, Rabale Village, PO Ghansoli, Navi Mumbai - 400 701
3. Mumbai Grahak Panchayat,
   Grahak Bhavan, Sant Dnyaneshwar Marg,
   Behind Cooper Hospital, Vile Parle (West), Mumbai – 400 056
4. Maharashtra Chamber Of Commerce,
   Industry & Agriculture, Oricon House, 6th Floor,
   12 K. Dubash Marg, Fort, Mumbai-400 001
5. Vidarbha Industries Association,
   1st Floor, Udyog Bhavan, Civil lines, Nagpur - 440 001
6. Chamber Of Marathwada Industries & Agriculture
   Bajaj Bhavan, P-2, MIDC Industrial Area,
   Railway Station Road, Aurangabad – 431005

BEFORE THE MAHARASHTRA STATE ELECTRICITY REGULATORY COMMISSION, MUMBAI

Case No. of 2017

In the matter of

Petition for removal of difficulties in implementation of MERC (Terms and Conditions for Determination of Renewable Energy Tariff) Regulations, 2015

In the matter of

Regulation 12 of the MERC (Terms and Conditions for Determination of Renewable Energy Tariff) Regulations, 2015

In the matter of

Regulation 82 of the MERC (Terms and Conditions for Determination of Renewable Energy Tariff) Regulations, 2015

Maharashtra State Electricity Distribution Company Limited ..... Petitioner

Affidavit

I, Kavita K. Gharat, aged 39 years, having my office at Maharashtra State Electricity Distribution Co. Ltd, Prakashgad, Plot No. G -9, Anant Kanekar Marg, Bandra (East), Mumbai 400051, do solemnly affirm and say as follows:

I am Chief Engineer (Power Purchase) of the Maharashtra State Electricity Distribution Company Limited, the petitioner in the above matter and am duly authorized to make this affidavit.

The averments made in the enclosed petition are based on the information received from the concerned officers of the Company and I believed them to be true.

I say that there are no proceedings pending in any court of law / tribunal or arbitrator or any other authority, wherein the petitioner is a party and where issues arising and or reliefs sought are identical or similarly to be issues arising in the matter pending before the Commission.

I solemnly affirm at Mumbai on this 23th Day of May, 2017 that the contents of this affidavit are true to my knowledge, no part of it is false and nothing material has been concealed there from.

Kgharat

Chief Engineer (Power Purchase)
MSEDCL

BEFORE ME

23/5/2017

M. S. GAITONDE
B.A.LL.M
NOTARY
GREATER MUMBAI
GOVT. OF MAHARASHTRA
INDIA

Identified By Me
Identified before me

P. K. DUBEY
B.A.LL.B.
ADVOCATE HIGH COURT
Lawyer's Chamber Bhaskar Bldg.,

NOTED | REGISTER
Sr. No. 455 | 23-5-2017

(1)

BEFORE THE MAHARASHTRA ELECTRICITY REGULATORY COMMISSION, MUMBAI

FILING NO:

CASE NO:

IN THE MATTER OF

PETITION FOR REMOVAL OF DIFFICULTIES IN IMPLMENTATION OF MERC (TERMS AND CONDITIONS FOR DETERMINATION OF RENEWABLE ENERGY TARIFF) REGULATIONS, 2015

AND

IN THE MATTER OF:

REGULATION 12 OF THE MERC (TERMS AND CONDITIONS FOR DETERMINATION OF RENEWABLE ENERGY TARIFF) REGULATIONS, 2015

AND

IN THE MATTER OF:

REGULATION 82 OF THE MERC (TERMS AND CONDITIONS FOR DETERMINATION OF RENEWABLE ENERGY TARIFF) REGULATIONS, 2015

IN THE MATTER OF:

MAHARASHTRA STATE ELECTRICITY DISTRIBUTION COMPANY LIMITED – THE PETITIONER

NOTARY M. S. GAITONDE GR. MUMBAI. REGD NO. GOVT. OF MAHARASHTRA

(2)

Maharashtra State Electricity Distribution Company Ltd. respectfully submits as under:

1. Background

1.1. Maharashtra State Electricity Distribution Co. Ltd. (hereinafter to be referred to as "MSEDCL" or "the Petitioner") has been incorporated under Indian Companies Act, 1956 pursuant to decision of Government of Maharashtra to reorganize erstwhile Maharashtra State Electricity Board. The Petitioner submits that the said reorganization of the MSEB has been done by Government of Maharashtra pursuant to "Part XIII – Reorganization of Board" read with section 131 of The Electricity Act 2003. The Petitioner has been incorporated on 31.05.2005 with the Registrar of Companies, Maharashtra, Mumbai has obtained Certificate of Commencement of Business on 15th September 2005. The Petitioner is a Distribution Licensee under the provisions of the Electricity Act, 2003 (EA, 2003) having license to supply electricity in the State of Maharashtra except some parts of city of Mumbai.

1.2. The Petitioner is a Company constituted under the provisions of Government of Maharashtra, General Resolution No. PLA-1003/C.R.8588/Energy-5 dated 25th January 2005 and is duly registered with the Registrar of Companies, Mumbai on 31st May 2005.

1.3. The Petitioner is functioning in accordance with the provisions envisaged in the Electricity Act, 2003 and is engaged, within the framework of the Electricity Act, 2003, in the business of Distribution of Electricity to its consumers situated over the entire State of Maharashtra, except some parts of city of Mumbai.

1.4. The Hon'ble Commission has issued the MERC (Terms and Conditions for Determination of Renewable Energy Tariff) Regulations, 2015 (*hereinafter referred as "RE Tariff Regulations 2015"*). The RE Tariff Regulations 2015 came into force from 10th November 2015.

NOTARY M. S. GAITONDE GR. MUMBAI GOVT. OF MAHARASHTRA

1.5. Regulation 12 of the RE Tariff Regulations 2015 provides for Despatch principles for electricity generated from RE Sources. As per the Regulation 12.1, all the RE Power Projects, except for Biomass-based Power Projects and Co-Generation Project are treated as 'Must Run' Projects and are not be subjected to 'merit order despatch' principles. The relevant Regulations is reproduced below:

12.1 Subject to the provisions of the Indian Electricity Grid Code and the State Electricity Grid Code, all RE Power Projects, except for Biomass-based Power Projects and Co-Generation Project, shall be treated as 'Must Run' Projects and shall not be subjected to 'merit order despatch' principles.

12.2 The Biomass-based Power Projects and Co-Generation Projects shall be subject to the scheduling and despatch code as specified under the State Grid Code:

Provided that, in case any other scheduling provisions for RE Projects are made by the appropriate authorities, these may be applied to the RE Projects in the State by the Commission by general or specific Order.

1.6. The National Tariff Policy provides that the Appropriate Commission shall fix a minimum percentage of the total consumption of electricity in the area of a distribution licensee for purchase of energy from renewable energy sources, taking into account availability of such resources and its impact on retail tariffs.

1.7. The Hon'ble Commission has already notified the MERC (Renewable Purchase Obligation, its compliance and Implementation of Renewable Energy Certificate Framework) Regulations, 2016 on 30th March, 2016 with higher RPO targets to be achieved by FY 2019-20. The below table illustrates the percentage of purchase from the renewable energy for the upcoming years.

NOTARY M. S. GAITONDE GR. MUMBAI REGD. NO. 197 1988 GOVT. OF MAHARASHTRA

Year	Quantum of Purchase of (in %) from renewable energy sources (in terms of the energy equivalent in kWh)		
	Solar	Non-Solar	Total
2016-17	1.00%	10.00%	11.00%
2017-18	2.00%	10.50%	12.50%
2018-19	2.75%	11.00%	13.75%
2019-20	3.50%	11.50%	15.00%

1.8. The Petitioner hereby submits that Maharashtra being an energy rich State with an installed RE capacity of 6705.15 MW (as on 31/03/15 source: MEDA) is second only to Tamil Nadu (9548.87 MW as on 08.02.2016) and in terms of combined installed capacity of wind and solar, Maharashtra has 4770.96 MW.

1.9. The Petitioner further submits that the MNRE has predicted future installations of 22045 MW (7600 MW wind and 11926 MW Solar) of Renewable energy in the State of Maharashtra. This is in line with the GoI's ambitious target of 175 GW of renewable capacity to be achieved by the year 2022.

1.10. In the view of the above said, the Petitioner would like further add that owing to Govt. of India's ambitious plan setting up 175 GW of Renewable energy by 2022, Indian States have accelerated the pace of renewable energy installation which is visible through the recent increase in variable wind and solar power generation and future projections of higher share of RE in the total generation portfolio.

NOTARY M. S. CATCHPOLE GR. MUMBAI REGD. NO. 193/ Expiry GOVT. OF MAHARASHTRA

1.11. In view of the above developments, the Petitioner would like to highlight the associated challenges of grid management and RE power procurement scheduling which makes wind and solar power forecasting an essential task for the system. Better forecasting helps grid operators more efficiently operate generators to accommodate changes in wind and solar generation and prepare for extreme events in which renewable generation is unusually high or low.

1.12. The Petitioner submits that the forecasting and scheduling will not only drive operational efficiency but also help in cost savings. Short-term forecasts can be used to determine the need for a quick-start generator, demand response, or other mitigating option and thus drive reliability.

1.13. **OPTIMUMUTILISATION OF EXISTING PPA**

a) Considering the future requirement, the Petitioner has tied up sufficient conventional power after the due approval of the Hon'ble Commission by taking into account the overall growth in the State. The Government of India's ambitious plan of RE Capacity addition has accelerated the capacity addition from Renewable Energy Sources. Considering the expected capacity addition of RE Sources, it will be a real challenge to balance the generation from already tied up thermal capacity and RE sources economically. The Petitioner is already in surplus power position and backing down or running the thermal plants at technical minimum capacity. This is however adding additional burden of fixed cost affecting viability and sustainability of operations of MSEDCL.

b) Considering the substantial component of fixed cost burden and expected RE capacity addition, optimum utilization of available generating sources will be essential for the Petitioner. The Petitioner will require the flexibility to optimally utilize the conventional as well as RE sources. Flexibility refers to the ability of a power system to respond to change in demand and supply. The requirement of increased generation flexibility is one of the major challenges posed by intermittent RE Generation. Increase in

NOTARY M. S. GAITONDE GR. MUMBAI. REGD NO 193/1982 Exp 28-02-2025 GOVT. OF MAHARASHTRA

variable generation on a system increases the variability of the generation from conventional plants. Due to the differences in design and technology, different types of power plants have different levels of operational flexibility, implying varying impacts on operations of the Plants and correspondingly on the DISCOMs. Considering the intermittent generation from increased RE capacity, it is becoming more important for the power purchase planning process to consider not only the adequacy of capacity to meet the demand, but also the adequacy of generation flexibility. This would necessitate the issuance of requisite regulations for forecasting and scheduling so as to enable the Petitioner to make proper power planning.

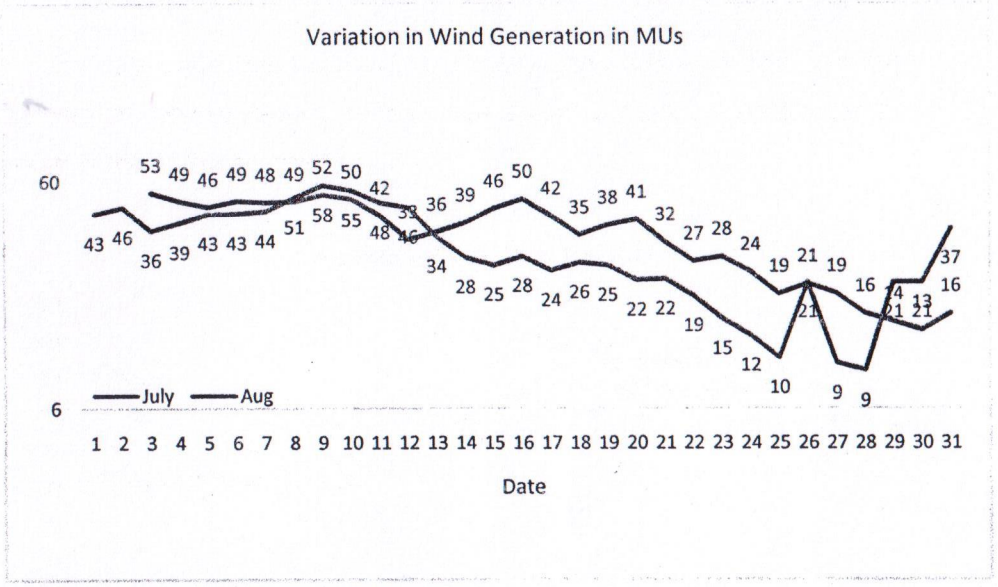
c) In absence of such Regulations, the Petitioner is facing difficulties in power purchase planning and scheduling. The RE Power being variable in nature (the variation of generation over a period of time) makes optimum utilization of tied up thermal capacity difficult. Due to variable generation from RE sources, requisite balancing power from conventional sources is required to be made available as reserve to ensure that demand at any time is fully met. This is adding costs to the Petitioner and thereby the tariffs of end consumers.

1.14. SCHEDULING

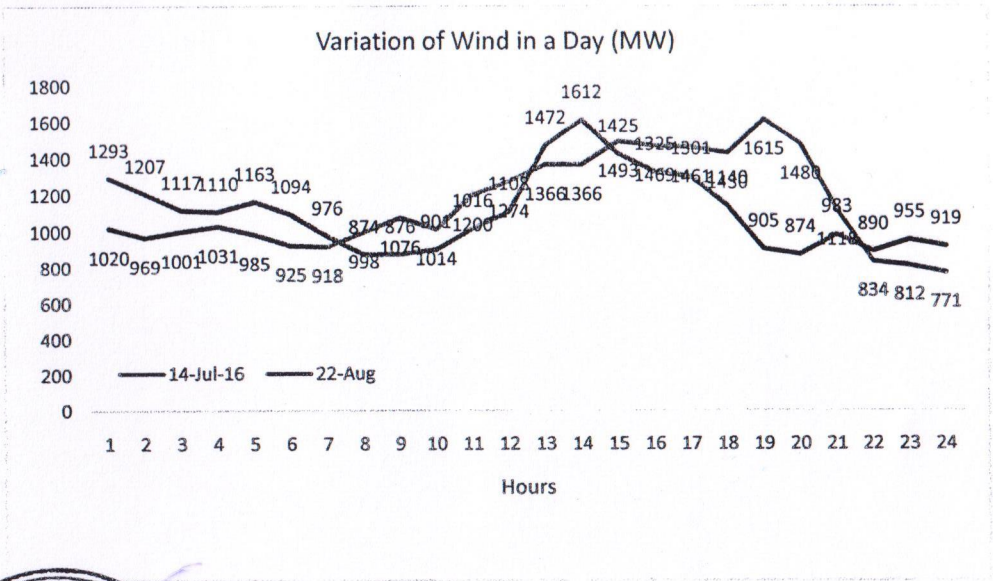
a) The Petitioner submits that it is one of the largest Distribution Utility in India in terms of energy consumption. During FY 15-16, MSDEDCL's peak demand varied from 16000 MW to 18000 MW. Further, there is huge variation in the demand (according to hours of the day as well as on monthly basis). Considering the variations in the demand, MSEDCL plans its power schedule. However, infirm nature of Wind Power makes the power planning more and more difficult.

b) Electricity generated from wind power is highly variable at several different timescales: hourly, daily, or seasonally. Because instantaneous electrical generation and consumption must remain in balance to maintain grid stability, this variability can present substantial challenges to

incorporating large amounts of wind power into a grid system. Following chart shows the variation in Wind Power in the month of the July and August 2016.



Further, there is huge variation in the daily generation as well. For the purpose of representation, MSEDCL has shown 2 days generation for 24 hours in the following chart.



c) The Petitioner submits that with such variability, it is difficult to plan the power procurement diligently.

d) The Petitioner submits that generally, wind and solar power forecasts for the short term tend to be more accurate than forecasts for longer terms. Thus the Petitioner requests to incorporate provisions for frequency of revisions for the day-ahead scheduling. The Petitioner humbly submits that higher the limit of frequency of revisions, lesser will be the forecast error. The Petitioner would like to submit relevant excerpts from FOR's Model Regulation.

"Once the day-ahead schedule is submitted, flexibility must be accorded to the QCA (or generators) to revise it as the accuracy of forecasting improves closer to real time. Keeping this in mind, 16 revisions per day have been allowed, to provide maximum opportunity to minimize deviations from schedule..."

e) In view of the above, the Petitioner would like to submit that higher frequency of revisions shall result in a considerable reduction in the forecast error and the over-drawal/ under-drawal of electricity shall fall within the limits specified in the Deviation Settlement Mechanism Regulations as amended time to time.

1.15. **FORECASTING:**

a) The Petitioner submits that forecasting is an estimation of probable generation with attempts to cope with the uncertainty of the future, relying mainly on data from the past and present and analysis of trends.

b) The Petitioner would like to cite excerpts from the 'Procedure for implementation of the frame work on Forecasting, Scheduling and imbalance handling for renewable energy (RE) generating stations including power parks based on Wind and solar at interstate level'

'Regional forecasting shall be done by the concerned RLDC to facilitate secure grid operation. The concerned RLDC may engage a forecasting

agency to undertake forecasting for RE Generators/solar parks /wind parks which are regional entities.

RE generator shall provide the forecast to the concerned RLDC which may be based on their own forecast or RLDC"s forecast

c) Therefore, the primary objective of the forecasting of wind and solar power is to ensure secure grid operation by planning for the requisite balancing resources. In line with the above provision, the Forecasting for the wind and solar generators connected to the State grid required to be made mandatory for secure grid operations.

1.16. **GRID SECURITY**

a) The Petitioner further submits that because of the higher penetration of variable wind and solar resources, the energy mix gradually will shift towards higher share of renewable energy. In order to facilitate large scale integration of Renewable energy which is infirm in nature and without compromising on the grid stability, reliability and security as envisaged under Grid code, appropriate guidelines/regulations are the need of the hour to ensure proper grid discipline and smooth functioning of various Stakeholders in the system.

b) Further according to the Regulation 2 (m-i) and Regulations 7 (1) of CERC (Deviation Settlement Mechanism and related matters) (Third Amendment) Regulations, 2016, the deviation limit in a renewable rich state has been set at 250 MW per time block.

"7 Limits on Deviation volume and consequences of crossing limits

(1) The overdrawal/ underdrawal of electricity by any buyer (except Renewable Rich States) during the time block shall not exceed 12% of its scheduled drawal or 150 MW, whichever is lower, when grid frequency is "49.70 Hz and above and below 50.10 Hz.

(10)

NOTARY ★ MAHARASHTRA ★ GOVT. OF

Provided that over-drawal/under-drawal of electricity by any Renewable Rich State during the time block shall not exceed limits as specified in Annexure-III, when grid frequency is "49.70 Hz and above and below 50.10 Hz.

Provided that no overdrawal of electricity by any buyer shall be permissible when grid frequency is "below 49.70 Hz" and no underdrawal of electricity by any buyer shall be permissible when grid frequency is "50.10 Hz and above".

Annexure - III

Deviation Limits for Renewable Rich States

Sr. No.	*States having combined installed capacity of Wind and Solar projects*	*Deviation Limits (MW) - "L"*
1.	*1000-3000MW*	*200*
2.	*>3000MW*	*250*

...'

c) The Petitioner respectfully submits that increasing share of Renewable energy in the electricity generation mix and increasing deviation limits, grid discipline and security also need to be ensured by way of monitoring and scheduling the RE power being fed into the grid.

d) The Petitioner most respectfully submits that as wind and solar enjoy 'must run' status under Regulation 5.2 (u) of CERC (Indian Electricity Grid Code) Regulations, 2010.

"System operator (SLDC/ RLDC) shall make all efforts to evacuate the available solar and wind power and treat as a must-run station....."

(11)

NOTARY ★ GOVT. OF MAHARASHTRA ★ M. S. GAITONDE GR. MUMBAI REGD. NO. 19371988 Expiry Date 28-08-2020

e) Further, RE Tariff Regulations, 2015 provides the Renewable Energy Sources except for Biomass-based Power Projects and Co-Generation Project status of Must Run.

f) In view of the above, the Petitioner would like to submit that large scale induction of renewable energy into the system will attract counter measure from the Petitioner and the load dispatch center to balance the renewable energy injected into the grid and accordingly, certain generators shall be asked to back down. The Petitioner submits that in case of huge quantum of energy from renewable sources being fed into the grid, it's nearly impossible to back down such a quantum of scheduled conventional/hydro energy. The Petitioner ascertains that such a huge back down may not be feasible technically, as this may result in temporary shutdown of conventional power generators.

f) The Petitioner submits that the Hon'ble Commission has issued orders on Final Balancing and Settlement Code for Intra State ABT in Maharashtra for maintaining discipline with regard to the supply and drawl of energy by the state pool participants.

(xi) Accordingly with an objective of governing the functioning of the State Pool Participants in a way that discipline is maintained with regard to the supply and drawl of energy by the State Pool Participants and the reliability and integrity of power system is maintained, the Commission vide this order is notifying the 'Balancing and Settlement Code' for the Final Balancing & settlement mechanism. "

1.17. The Petitioner would like to submit that FBSM monitors the Intra-state transaction within Maharashtra. However, the existing FBSM has no specific provisions for scheduling of Wind and Solar Power generators. Therefore, considering the difficulties faced by the Petitioner, it is requested to provide suitable guidelines in respect of scheduling and forecasting of wind and solar Power. The Petitioner further submits that alternatively Hon'ble Commission may issue separate regulations for

(12)

NOTARY
M. S. GAITONDE
GR. MUMBAI.
REGD. NO.
193/1988
Expiry Date
28-02-2020
GOVT. OF MAHARASHTRA

Forecasting and Scheduling of the wind and solar powerat state level in line with the Model Regulations by FOR on Forecasting and Scheduling of Wind and solar Generating stations at interstate level.

1.18. The Petitioner further would like to submits that Central Electricity Regulatory Commission (CERC)on 3.03.2017issued the *Procedure for implementation of the framework on Forecasting, Scheduling and Imbalance Handling for Renewable Energy (RE) Generating Stations including Power Parks based on wind and solar at Inter-State level* with a view to strengthen the RE forecasting, scheduling and balancing framework.

1.19. The RE Generator shall provide day ahead forecast, real time availability and generation schedule. The RE Generator will also provide monthly data transfer at the turbine and inverter level respectively. He will be responsible for metering and data collection, transmission and co-ordination and undertake commercial settlement of all deviation settlement charges as per applicable CERC Regulations etc.

1.20 The concerned RLDC shall be responsible for forecasting, scheduling, communication, coordination with RE Generators. There are two alternatives suggested in the framework for scheduling and dispatch for Generators. One is that the RLDC shall be responsible for scheduling, communication, coordination with RE Generators of 50 MW and above and connected to Inter State Transmission System. In other case, the generator shall be responsible for coordination and communication with RLDC, SLDC, RPC and other agencies for scheduling of RE Generators individually having less than 50 MW, but collectively having an aggregate installed capacity of 50 MW and above and connected within the solar park.RPC shall be responsible for energy accounting. Further, there are procedures laid down for Treatment of RECs, commercial settlement, application of losses and charges, RLDC fees and charges and removal of difficulties.

(13)

NOTARY
M. S. GAITONDE
GR. MUMBAI,
REGD. NO.
193/1988
Expiry Date
26-02-2020
GOVT. OF MAHARASHTRA

1.21 This procedure shall be followed by National Load Despatch Centre (NLDC), all Regional Load Despatch Centres (RLDCs), Regional Power Committees (RPCs), and State Load Despatch Centres (SLDCs), regional entity Wind / solar generating stations including power parks, Principal Generators, Lead Generator.

1.22. The Forum of Regulators (FOR) – a body representing all the state electricity regulatory commissions (SERCs) chaired by CERC, published a Model Regulation on *Forecasting, Scheduling and Deviation Settlement of Wind and Solar Generating Stations at the State Level* for intra-state RE deviation settlement covering all the wind and solar power generators connected to the State Grid.

1.23. CERC and FOR have come up these regulations with the objective to facilitate large-scale grid integration of solar and wind generating stations, as envisaged by Government of India's thrust on renewable sources of energy.

1.24. The Karnataka Electricity Regulatory Commission has notified the final regulation on wind/ solar forecasting and scheduling i.e. KERC (Forecasting, Scheduling, Deviation Settlement and Related Matters for Wind and Solar Generation Sources) Regulations 2015, in line with FOR's Model Regulation on 31st May, 2016.

1.25. Four other States namely Tamil Nadu, Jharkhand, Rajasthan and Madhya Pradesh have followed the similar path and have come out with draft regulations on wind and solar forecasting and scheduling, in line with FOR's model regulation.

NOTARY M. S. GAITONDE GR. MUMBAI. REGD NO. 193/1988 Expiry Date 26-02-2020 GOVT. OF MAHARASHTRA

State	Regulations
Madhya Pradesh	Draft MPERC (Forecasting, Scheduling, Deviation Settlement and Related Matters of Solar and Wind Electricity Generation Sources) Regulations, 2015
Jharkhand	Draft Jharkhand State Electricity Regulatory Commission (Conditions for Forecasting, Scheduling and Deviation Settlement of Wind and Solar Generating Stations at the State Level) Regulations, 2016
Tamil Nadu	Draft Tamil Nadu Electricity Regulatory Commission (Forecasting, Scheduling, Deviation Settlement and Related Matters of Wind and Solar Generation Sources) Regulations 2016.
Rajasthan	Draft Rajasthan Electricity Regulatory Commission (Forecasting, Scheduling, Deviation Settlement and Related Matters of Solar and Wind Generation Sources) Regulations, 2016

1.26. The Model Regulations by FOR on Forecasting and Scheduling of Wind and Solar Generating Stations at State level focuses on:

- Mandatory forecasting and scheduling of all the existing and upcoming wind/solar power generation at the inter/intra-state level.
- Mandatory own parallel forecasting mechanism by RLDC/SLDC primarily to manage secure grid operations.
- Wind/solar power producer can either choose to have his own forecast or opt for RLDC/SLDC's forecast for the scheduling purpose.

- The deviations arising due to a difference between the scheduled generation and actual generation will be settled as per the penalty mechanism adopted under the respective regulations.

- Introduction of Qualified Coordinating Agency (QCA) which shall manage the entire exercise of forecasting, scheduling, energy metering, telemetry, deviation management, commercial settlement.

1.27. Further, most recently CERC has published an office memorandum dated April 10, 2017 on SFC Proposal for Establishment of Renewable Energy Management Centre. This proposal aims at establishment of region wise Renewable Energy Management Center (REMC) to address variability, intermittency & ramping aspect of the renewable integration through deployment of State-of-the-art monitoring, forecasting and scheduling system. This will help grid operator to effectively manage power system operations with economy, reliability & security. The main objective of the REMC includes:

a. Forecasting of RE generation on different levels such as State/region aggregated, pooling station wise etc. based on information from Forecast Service provider FSP) as well as Weather Service provider (WSP)

b. Renewable Generation Scheduling

c. Real time tracking of generation of RE sources, integration with REMC SCADA and its visualization

d. Close coordination with respective LDC for RE generation & integration with existing SCADA

1.28. In the view of the CERC Framework, 2017, CERC Proposal on establishment of REMC, 2017, FBSM and Model Regulations on Forecasting, Scheduling and Deviation Settlement of Wind and Solar Generating Stations at the State level published by Forum of Regulators, 2015; the Petitioner most humbly requests the Hon'ble Commission to

initiate the process of framing Regulations on Forecasting & Scheduling for the wind & solar power at Intra State level in Maharashtra.

1.29. The Petitioner feels that the Regulations on Scheduling and Forecasting shall be effective in inculcating discipline amongst the renewable generators with respect to grid discipline. The Regulations shall facilitate large-scale grid integration of solar and wind generating stations while maintaining grid stability and security as envisaged under the Grid Code, through forecasting, scheduling and commercial mechanism for deviation settlement of these generators.

1.30. The Petitioner submits that it is essential to have information about how much renewable energy (RE) is expected to be injected into the grid. Such information is critical for infirm sources such as wind and solar. Forecasting and scheduling of generation from these sources is important for balancing requirements and procure requisite reserves to maintain load-generation balance and grid reliability.

1.31. Therefore, the Petitioner most humbly request the Hon'ble Commission to initiate the consultative process for framing the Regulations on Forecasting & Scheduling for the wind & solar power at Intra State level in Maharashtra.

2. Powers to issue Orders

2.1. The Petitioner submits that the Hon'ble commission has the powers to issue regulations in the subject matter under the section 86 (1) (e) and 181 of the Electricity Act, 2003 in the larger interest of the various stakeholders in the system and promotion of renewable energy.

Section 86 Functions of State Commission

86. (1) The State Commission shall discharge the following functions, namely: -

(a) .....

(17)

NOTARY
M. S. GAITONDE
GR. MUMBAI.
REGD. NO.
193/1983
Expiry Date

.....

.....

(e) promote co-generation and generation of electricity from renewable sources of energy by providing suitable measures for connectivity with the grid and sale of electricity to any person, and also specify, for purchase of electricity from such sources, a percentage of the total consumption of electricity in the area of a distribution licence;

"Section 181. (Powers of State Commissions to make regulations):

(1) The State Commissions may, by notification, make regulations consistent with this Act and the rules generally to carry out the provisions of this Act."

2.2. Further, Regulation 82 of the MERC (Terms and Conditions for Determination of Renewable Energy Tariff) Regulations 2015 provides for removal of difficulties.

82. Power to remove difficulties

If any difficulty arises in giving effect to the provisions of these Regulations, the Commission may, by general or specific Order, make such provisions, not inconsistent with the provisions of the Act, as may appear to be necessary for removing the difficulty.

2.3. The Petitioner most respectfully submits that the Hon'ble Commission has sufficient powers to deal with the matter and issue orders on any matter as deemed appropriate.

3. Prayers

3.1. The Petitioner therefore, based on the submissions made in the foregoing paragraphs, most respectfully prays to the Hon'ble Commission:

a) To admit the Petition as per the provisions of Regulation 82 of the MERC

(18)

NOTARY
M. S. GAITONDE
GR. MUMBAI.
REGD. NO.
19371988
GOVT. OF MAHARASHTRA

(Terms and Conditions for Determination of Renewable Energy Tariff) Regulations, 2015);

b) To consider the submission made by the Petitioner and consider the same positively;

c) To provide suitable guidelines at state level in respect of scheduling and forecasting of wind and solar Power in view of the Model Regulations by FOR on Forecasting and Scheduling of Wind and Solar Generating Stations at the State level alternatively;

d) To initiate consultative process for framing of appropriate regulations for Forecasting & Scheduling for the wind & solar power at Intra State level in Maharashtra;

e) To pass any other order/relief as the Hon'ble Commission may deem fit and appropriate under the circumstances of the case and in the interest of justice;

f) To condone any error/omission and to give opportunity to rectify the same;

g) To permit the Petitioner to make further submissions, addition and alteration to this Petition as may be necessary from time to time.

Chief Engineer (Power Purchase)

MSEDCL (Petitioner)

(19)

NOTARY
M. S. GAITONDE
GR. MUMBAI.
REGD. NO.
19371988
GOVT. OF MAHARASHTRA