



Maharashtra State Electricity Distribution Co. Ltd.

(A Govt. of Maharashtra Undertaking)

CIN : U40109MH20005SGC153645

PHONE No. 26474753 (P)/26474211 (O)

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PLOT No. G-9, PRAKASHGAD
Prof. ANANT KANEKAR MARG
BANDRA (East)
MUMBAI-400051

No. Comm/Petition / Banking/

No 10746

Date:

11 MAY 2018

To,
The Secretary,
Maharashtra Electricity Regulatory Commission,
Mumbai

Sub: Filing of Petition for Review of order in Case No. 85 of 2017.

Ref: MERC order dated 27.03.2018 in case no. 85 of 2017.

Dear Sir,

Please find enclosed herewith the MSEDCL's petition, seeking review of order in Case No. 85 of 2018.

The requisite fee is submitted herewith in the form of demand draft no. 635303 dated 11.05.2018.

Thanking You,

Yours faithfully,

[Signature]
Chief Engineer (Commercial)

Copy S.w.r. to:-

1) The Director, (Commercial), MSEDCL, Mumbai.

Copy to:

- 1) Maharashtra Energy Development Agency, II Floor, MHADA Complex, Tridal Nagar, Pune-411006.
- 2) Prayas (Energy Group), Amrita Clinic, Athawale Corner, Deccan Gymkhana Karve Road, Pune 411 004.
- 3) Mumbai Grahak Panchayat, Grahak Bhavan, Behind Cooper Hospital, Vile Parle (West), Mumbai 400 056.
- 4) The General Secretary, Thane Belapur Industries Association, Robale Village, Post Ghansoli, Navi Mumbai 400 701.
- 5) Vidarbha Industries Association, 1st Floor, Udyog Bhavan, Civil Line, Nagpur 440 001.
- 6) Chamber of Marathwada Industries & Agriculture, Bajaj Bhavan, P-2, MIDC Industrial Area, Railway Station Road, Aurangabad - 431005
- 7) Maharashtra Chamber of Commerce, Industries & Agriculture, Oricon House, 6th Floor, 12 K, Dubash Marg, Fort, Mumbai - 400001.
- 8) Tata Power Company Limited, Bombay House, 24, Homi Mody Street, Fort, Mumbai 400 001.
- 9) Reliance Infrastructure Limited H-Block, 1st floor, Dhirubhai Ambani Knowledge City (DAKC), Navi Mumbai - 400 710.

**BEFORE THE HON'BLE MAHARASHTRA ELECTRICITY
REGULATORY COMMISSION**

AT MUMBAI

REVIEW CASE NO: _____ OF 2018

IN

CASE NO: 85 OF 2017



IN THE MATTER OF:

REVIEW PETITION UNDER REGULATION 85 OF MAHARASHTRA
ELECTRICITY REGULATORY COMMISSION (CONDUCT OF BUSINESS)
REGULATIONS, 2004 READ WITH SECTION 94 (1) (F) OF THE
ELECTRICITY ACT, 2003.

AND

IN THE MATTER OF:

REVIEW OF ORDER DATED 27.03.2018 PASSED BY THE HON'BLE
COMMISSION IN CASE NO 85 OF 2017.

AND

IN THE MATTER OF:

PETITION OF MAHARASHTRA STATE ELECTRICITY DISTRIBUTION
CO. LTD. FOR AMENDMENT OF BANKING PROVISIONS OF
DISTRIBUTION OPEN ACCESS REGULATIONS, 2016



AND

IN THE MATTER OF:

Maharashtra State Electricity Distribution Co. Ltd
Through its Chief Engineer (Commercial)
5th Floor, Plot No G-9, Station Road,
Prakashgad, Bandra (East), Mumbai- 400051

....Review Petitioner/Applicant

MOST RESPECTFULLY SHOWETH:

1. DESCRIPTON OF PARTIES:

PETITIONER:

(i) Maharashtra State Electricity Distribution Company Limited (*hereinafter referred to as "MSEDCL" or "The Petitioner"*) is a Company constituted under the provisions of Government of Maharashtra General Resolution No. PLA – 1003 / C. R. 8588 dated 25th January 2005 and is duly registered with the Registrar of Companies, Mumbai on 31st May 2005. The Petitioner Company is functioning in accordance with the provisions envisaged in the Electricity Act, 2003 and is engaged, within the framework of Electricity Act, 2003, in the business of distribution of electricity to its consumers situated over the entire State of Maharashtra, except Mumbai City & its suburbs (excluding Mulund & Bhandup).

2. PROVISIONS FOR REVIEW:

- Regulation 85 of the Maharashtra Electricity Regulatory Commission (Conduct of Business) Regulations, 2004:

85. Review of decisions, directions, and orders:

- (a) Any person aggrieved by a direction, decision or order of the Commission, from which (i) no appeal has been preferred or (ii) from which no appeal is allowed, may, upon the discovery of new and important matter or evidence which, after the exercise of due diligence, was not within his knowledge or could not be produced by him at the time when the direction, decision or order was passed or on account of some mistake or error apparent from the face of the record, or for any other sufficient reasons, may apply for a review of such order, within forty-five (45) days of the date of the direction, decision or order, as the case may be, to the Commission.
- (b) An application for such review shall be filed in the same manner as a Petition under these Regulations.
- (c) The Commission, shall for the purposes of any proceedings for review of its decisions, directions and

orders be vested with the same powers as are vested in a civil court under the Code of Civil Procedure, 1908.

- (d) *When it appears to the Commission that there is no sufficient ground for review, the Commission shall reject such review application.*
- (e) *When the Commission is of the opinion that the review application should be granted, it shall grant the same provided that no such application will be granted without previous notice to the opposite side or party to enable him to appear and to be heard in support of the decision or order, the review of which is applied for.*

- Section 94 (1) (f) of Electricity Act, 2003:

Section 94. (Powers of Appropriate Commission):

- (1) *The Appropriate Commission shall, for the purposes of any inquiry or proceedings under this Act, have the same powers as are vested in a civil court under the Code of Civil Procedure, 1908 in respect of the following matters, namely: -*




(a)

(f) *reviewing its decisions, directions and orders;*

.....

3. ISSUES RAISED IN REVIEW (WITHOUT PREJUDICE TO ONE ANOTHER):

- (i) *Whether the Hon'ble Commission has rightly evaluated the concept of settlement of banked energy in money terms instead of energy terms and the equity and fair play which it would seek to bring in a regulated sector like electricity.*
- (ii) *Whether the Hon'ble Commission has rightly appreciated and understood the intent behind the Petition?*
- (iii) *Whether the Hon'ble Commission was right in coming to a conclusion which it did even after appreciating that the present banking of renewable energy has a negative financial impact of MSEDCL?*

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- (iv) *Whether the order inadvertently promotes even a negligible negative financial impact to be suffered by MSEDCL which is revenue neutral and which could obviously be negated by a thorough public consultation process?*
- (v) *Whether the Hon'ble Commission has erred by holding that estimations of MSEDCL are on partial assumptions and do not fully reflect all aspects of impact of banked energy, including in favor of MSEDCL in four high-demand months or other relevant aspects?*
- (vi) *Whether reliance placed by the Hon'ble Commission on the "Draft Forecasting, Scheduling and Deviation Settlement Regulations" is incorrect?*
- (vii) *Whether there can be a situation to allow a dispensation which admittedly is causing a negative financial impact on an entity and such impact can surely be curtailed/minimized through a thorough public consultation process?*
- (viii) *Whether mandating MSEDCL to purchase 10% banked energy at the end of financial year at APPC rate without giving the benefit of accounting*


the same towards RPO compliance is an unjust restriction/imposition on MSEDCL?


(ix) *Whether allowing renewable generators to first bank their energy, then giving the benefit of purchase of such banked energy limited to 10% of the total generation at APPC rate and also giving the benefits of REC on such 10% purchase unjustly enriches the renewable generators at the cost of MSEDCL?*

(x) *Has the Hon'ble Commission lost sight of the real intent and purpose of its own order dated 24.11.2003 in Case No. 17 (3), 3, 4, 5 of 2012?*

4. GROUNDS (WITHOUT PREJUDICE TO ONE ANOTHER):


(a) That the Hon'ble Commission's order is vitiated by error apparent as the Hon'ble Commission has failed to understand the real intent of the Petition filed by MSEDCL. The Petition was aimed to only bring forward the difficulties faced by MSEDCL and persuade the Hon'ble Commission to initiate a public consultative process.

- 
- (b) MSEDCL had provided all the data, facts and figure related to banked energy and its adverse financial impact. It was submitted that, there is an adverse financial impact of INR 11.02 Crs which is purely due to the seasonal variation of price difference between energy banked slot and energy credit slot. The direct financial impact is of INR 40 crore considering Average Billing Rate (ABR) of Rs. 8.57 per unit for HT industrial consumers for FY 2016-17. The Commissions has commented that, banking has "*negligible impact on consumer tariffs*". In this regard, it is to submit that, RE is growing at rapid pace and subsequently the impact of banking will also be higher in upcoming years.
- (c) That the Hon'ble Commission's order is vitiated by error apparent as the Hon'ble Commission has failed to appreciate that converting the banked energy in money terms would seek to neutralize the negative impact of such banking dispensation on MSEDCL.
- (d) That the Hon'ble Commission's order is vitiated by error apparent as the Hon'ble Commission even after appreciating that the present dispensation w.r.t banking has a negative financial impact on MSEDCL has failed to appreciate that MSEDCL as a



distribution licensee is only supposed to highlight the concerns and it is the responsibility of the Hon'ble Commission to address the concerns and not leave it open ended.


- (e) That the Hon'ble Commission's order is vitiated by error apparent as the Hon'ble Commission has failed to appreciate that "Prayas" being a consumer representative strongly supported the petition filed by MSEDCL and agreed for a fresh public consultation on the issues involved in banking.
- (f) That the Hon'ble Commission being the guardian of the electricity sector in Maharashtra cannot let even a minute negative financial impact to be suffered by MSEDCL when such impact can surely be negated by a fresh dispensation.
- (g) That the Hon'ble Commission's order is vitiated by error apparent as the Hon'ble Commission has failed to appreciate that the Petition was only an attempt to highlight the issues faced by MSEDCL with a proposal to initiate a public consultation process so that, neutral and balanced system w.r.t banking can be achieved.

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- (h) That the Hon'ble Commission's order is vitiated by error apparent as the Hon'ble Commission has failed to appreciate that the "Draft Forecasting, Scheduling and Deviation Settlement Regulations" does not address a situation like the present one. Moreover on one hand such Regulation seeks to penalize the Generators for "under-injection and over-injection" and the present banking dispensation on the other hand seeks to minimize such a penalty by giving unjust privilege of Banking.
- (i) That the Hon'ble Commission's order is vitiated by error apparent as the Hon'ble Commission has failed to appreciate that mandating 10% purchase at the end of the year at APPC rate by the concerned distribution licensee only causes a negative financial impact that too without allowing the same power to be accounted towards its RPO.
- (j) That the Hon'ble Commission's order is vitiated by error apparent as the Hon'ble Commission has failed to appreciate that there cannot be a mandate to buy unadjusted banked power to the detriment of MSEDCL. A generator should not be allowed to be benefitted because of its own miscalculations.



- (k) It is to submit that, the present RE tariff as discovered in various bids is much lower than the APPC tariff. e.g. The solar tariff discovered at Bhadla bidding is INR 2.44 only; the wind prices discovered in SECI's 3rd auction is INR 2.44 only, whereas the APPC rate of MSEDCL for 2017-18 is @ INR 4.01. Further, the wind generators are also eligible for REC. Thus by virtue of surplus banked energy the open access generators are doubly benefiting i.e. by way of receiving tariffs higher than the presently discovered RE tariffs and also getting REC for such surplus RE banked power.
- (l) That the Hon'ble Commission's order is vitiated by error apparent as the Hon'ble Commission has failed to appreciate the real intent and purpose of its own order dated 24.11.2003 in Case No. 17 (3), 3, 4, 5 of 2012. Banking was never a privilege which it now has become but was rather only a facility/cushion available with certain caveats. The Hon'ble Commission has completely lost sight of the said fact.
- (m) That the Hon'ble Commission's order is vitiated by error apparent as the Hon'ble Commission has failed to appreciate that the present dispensation of

banking is certainly against the financial interest of MSEDCCL and causes continuing losses.

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5. Left with no other efficacious remedy, the Petitioner is constrained to approach this Hon'ble Commission vide the present Petition.
 6. The Petitioner states that this Hon'ble Commission has the jurisdiction to adjudicate the present dispute.
 7. The Petitioner states that there is no delay in filing the review petition and the same is filed well within limitation.
 8. The Petitioner craves leave of this Hon'ble Commission to add/amend/substitute the present petition with the prior permission of this Hon'ble Commission.

PRAYER

In view of the above, it is therefore most respectfully prayed that this Hon'ble Commission may graciously be pleased to:

- a) Review the order dated 27.03.2018 in case no. 85 of 2017 by allowing the present review petition.

- b) Initiate a public consultation process in accordance with the Electricity Act, 2003 to review the present dispensation w. r. t. banking of renewable energy.
- c) Pass such further orders as this Hon'ble Commission deems fit and proper in the interest of justice and good conscience.

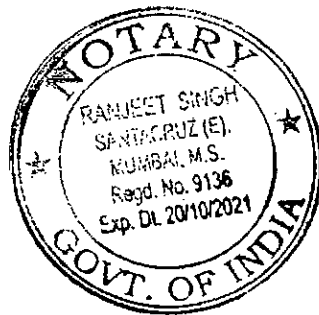
It is prayed accordingly.

Date: 11 MAY 2018

Place: Mumbai



Supdt. Engineer (Comm.)
M.S.E.D.C. Ltd.
Prakashgad, 5th Floor,
Prof. Anant Kanekar Rd; Bandra (E),
Mumbai-400 051.



**BEFORE THE HON'BLE MAHARASHTRA ELECTRICITY
REGULATORY COMMISSION**

AT MUMBAI

REVIEW CASE NO: ____ OF 2018

IN

CASE NO: 85 OF 2017

IN THE MATTER OF:

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AND

IN THE MATTER OF:

Maharashtra State Electricity Distribution Co. Ltd
Through its The Chief Engineer (Commercial)
Floor, Plot No G-9, Station Road,
Prakashgad, Bandra (East), Mumbai- 400051

....Review Petitioner/Applicant


AFFIDAVIT VERIFYING THE REVIEW PETITION

I, Anil Mahajan , age 50 years, having office at MSEDCL, Prakashgad, Plot No.G-9, Anant Kanekar Marg, Bandra (East), Mumbai 400 051 do solemnly affirm and say as follows:

- 1 I am Superintending Engineer, (II), Commercial Section, of Maharashtra State Electricity Distribution Co. Ltd., the Review Petitioner in the above matter and am duly authorized by the said Petitioner to make this affidavit.
- 2 The statements made in paragraphs 1 to 8 of the petition are true to my knowledge and belief and are based on information and I believe them to be true.
- 3 I say that there are no proceedings pending in any court of law/ tribunal or arbitrator or any other authority, wherein the Applicant are a party and where issues arising and/or reliefs

sought are identical or similar to the issues arising in the matter pending before the Commission.

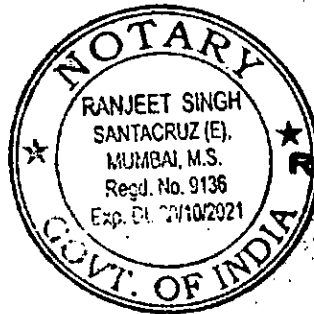
Solemnly affirm at Mumbai on this 11th day of May, 2018 that the contents of the above affidavit are true to my knowledge, no part of it is false and nothing material has been concealed therefrom.

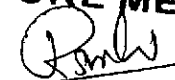
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Prakashgad, 5th Floor,
Prof. Anant Kanekar Rd; Bandra (E),
Deponat 400 051.

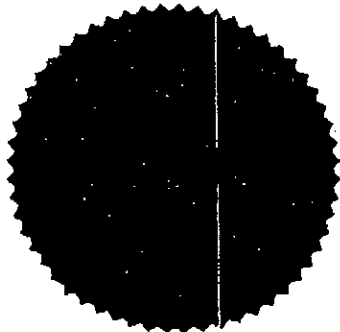
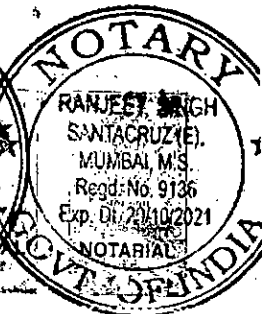
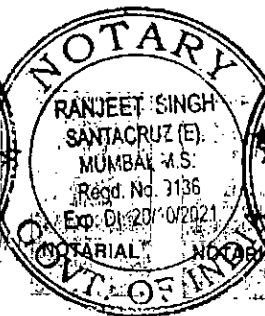
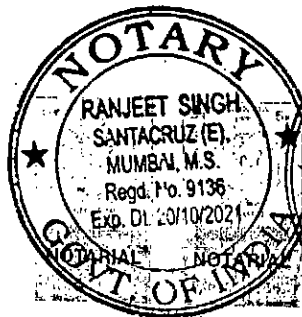
Identified before me

Mumbai

Dated: 11 MAY 2018
2018



BEFORE ME

RANJEET SINGH
M.Sc LL.B.
NOTARY
MAHARASHTRA
GOVT OF INDIA
11 MAY 2018





Before the
MAHARASHTRA ELECTRICITY REGULATORY COMMISSION
 World Trade Centre, Centre No.1, 13th Floor, Cuffe Parade, Mumbai 400005
 Tel. 022 22163964/65/69 Fax 22163976
 Email: mercindia@merc.gov.in
 Website: www.mercindia.org.in / www.merc.gov.in

Case No. 85 of 2017

In the matter of

Petition of Maharashtra State Electricity Distribution Co. Ltd. for amendment of
 Banking provisions of Distribution Open Access Regulations, 2016

Coram

Shri Azeez M. Khan, Member
 Shri Deepak Lad, Member

Maharashtra State Electricity Distribution Co. Ltd.

.....Petitioner

Appearance:

For the Petitioner

: Shri Ashish Singh (Adv.)
 : Shri A. W. Mahajan

ORDER

Dated: 27 March, 2018

Maharashtra State Electricity Distribution Co. Ltd (MSEDCL) has filed a Petition for amendment of Regulation 20 of the MERC (Distribution Open Access) Regulations ('DOA Regulations'), 2016 on 23 May, 2017 which relates to the provisions for to banking of Renewable Energy (RE).

2. MSEDCL's prayers are as follows:

- (a) *"To admit the Petition as per the provisions of the Regulations 36 and 37 of the MERC (Distribution Open Access) Regulations 2016;*
- (b) *To amend the Regulation 20 of MERC (Distribution Open Access) Regulations 2016 and also allow the sub-subsequent amendments in Regulations by virtue of proposed Regulations...."*

3. The Petition states as follows:

3.1 The Commission notified the DOA Regulations, 2016 on 30 March, 2016. The Regulations allow 'banking' of RE generation inspite of MSEDCL's concerns raised in its submission dated 31 October 2015 during the public consultation process on the draft Regulations. Therefore, MSEDCL has approached the Commission for amendments to Regulation 20.

3.2 Regulation 20 provides for the banking of RE generation. As per the Regulation, surplus energy from a non-firm RE Generating Station, after set-off, shall be banked with the Distribution Licensee.

3.3 In virtue of the Regulations, the infirm RE Generators are availing the following benefits over firm energy sources:

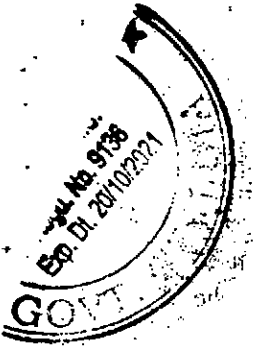
- a) Exemption from scheduling,
- b) Monthly Time-of-Day (ToD)-wise banking facility.
- c) Yearly ToD-wise banking facility.

3.4 The 'banking' provision allows RE Generators to inject surplus power into the grid when the power cost is less and draw back power for consumption during the peak period when the power cost is high, which in turn puts an additional financial burden on the Distribution Licensee, which in turn is passed on to the common consumers of MSEDCL. Very few consumers who are using Open Access (OA) through RE and availing benefit of banking are getting benefited from the provision of banking at the cost of common consumers.

3.5 The RE generation from Wind Generators is at the peak in the months of June to September in a calendar year, and particularly in the night hours when MSEDCL's demand is minimum. The market price of the power is least/ minimum during these months. During this period, the consumer/Generator banks the surplus energy injected to the grid and draws it back from the grid in the months when MSEDCL's own demand and power purchase cost is high. MSEDCL's common consumers have to bear this difference in the cost of power which in turn is passed on to other common consumers.

3.6 MSEDCL has tied up about 5,500 MW of thermal power through competitive bidding and is already in surplus. It is also expected to get an additional 10,000 MW from Central and State Generating Stations in the next 4-5 years. In this situation, due to further over-injection from RE sources, MSEDCL has to back down the thermal generation to the extent of these banked units and has to bear the fixed charges payable to the Thermal Generators. The power backing down scenario is as follows:

A) The total contracted capacity of MSEDCL (FY 2016-17) is as below:



Sr. No.	Source	Capacity in MW
1	Thermal	10370
2	Hydro	2585
3	Gas	672
4	Central Sector	5778
5	Renewable (Including Solar, biomass, bagasse, SHP)	5219
6	Total	24628

3.7 The following data shows that the RE Injection MUs and MSEDCL backed down MUs are nearly matching:

Month	Apr 16	May 16	June'16	Jul 16	Aug 16	Sept 16	Oct 16	Nov 16	Dec 16	Jan.17	Feb 17	Mar 17
MSEDCL Max Demand in MW	17411	17176	16779	13830	16063	17881	18013	18116	17764	18283	18830	19745
RE Injection in MUs	663	891	917	1044	1055	640	373	531	742	719	-	-
MSEDCL Back down in MUs	358	599	1046	1134	807	1082	696	946	907	798	305	421

3.8 MSEDCL has worked out the actual difference between the variable cost of power at the time of banking of surplus units that is lowest variable cost of backed down power and at the time of utilization of this banked units that is highest variable cost of on-bar power or Indian Energy Exchange (IEX), whichever is higher, in each 15 min. time slot in April, 2016 to March, 2017 considering banked units of all consumers availing the banking facility.

3.9 The sample working sheets for July, 2016 are attached to the Petition. The total difference works out to Rs. 11.02 crore for the full year. That much loss has been caused to MSEDCL's consumers by only 228 consumers taking banking facility:

Month	Over-injection Details		Total Cost at Credit (Rs. Crs)	Difference in Rs. Crs. (Cost at Credit - Cost at Banking)
	Units in Mus	Cost at Banking in Rs. Crs.		
APR-2016	9.24	2.33	2.57	0.25
MAY-2016	26.15	5.81	7.38	1.57
JUN-2016	29.67	6.24	8.11	1.88

JUL-2016	32.35	5.43	8.49	3.06
AUG-2016	28.20	5.11	7.46	2.34
SEP-2016	10.78	2.00	2.95	0.95
OCT-2016	4.57	0.95	1.11	0.86
NOV-2016	5.38	1.19	1.48	0.29
DEC-2016	5.56	1.25	1.53	0.28
JAN-2017	2.57	0.61	0.73	0.12
FEB-2017	2.79	0.75	0.81	0.07
MAR-2017	3.06	0.84	0.91	0.07
TOTAL	160.33	32.5	43.53	11.02

In the above Table, out of 160.33 MUs, 72.58 MUs are adjusted through ToD adjustment and 87.75 MUs are adjusted through credit in subsequent months (except April, May, October and November).

3.10 The methodology adopted by MSEDCL is as under:

- i. The injection and credit of units to OA consumers are first adjusted in 15 minutes time block (adjustment in terms of units).
- ii. The surplus units injected in every 15 minutes time block are banked at lowest variable cost of backed down power in that 15 minutes time block.
- iii. The credit of banked units to OA consumer through ToD adjustment in the same month or through adjustment in subsequent months is calculated in terms of cost, i.e. at highest variable on-bar cost or cost of purchase through IEX, whichever is higher in that 15 min time block.
- iv. The banking of units is done at the lowest variable cost of backed down power in every 15 minutes time block, as most of the generation is during off-peak season. Due to injection of surplus power in grid (for which MSEDCL has no Energy Purchase Agreement (EPA)), MSEDCL has to back down its own generation by paying the fixed charges.
- v. The credit of units is done at the highest variable cost of on-bar power in every 15 minutes time block, as most of the credit is during the peak season. MSEDCL has to procure additional expensive power to fulfill the banking obligation. The month-wise details of banked units and offset units are as under:

<u>Month</u>	<u>Current Month Banked</u>	<u>Previous Banked Offset</u>
	<u>units in Mus</u>	<u>Units in MUs</u>
Apr-16	9.57	0.00
May-16	11.40	0.00
Jun-16	23.86	7.75
Jul-16	31.44	7.72
Aug-16	29.69	8.63
Sep-16	10.72	17.64
Oct-16	0.59	0.00
Nov-16	1.59	0.00
Dec-16	3.87	20.00
Jan-17	0.67	15.72
Feb-17	0.80	5.92
Mar-17	0.80	4.36
Total	125.00	87.75

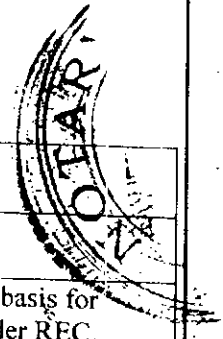
From the above, it is evident that maximum units are banked during off-peak season and credit is availed during peak season. High Tension (HT) sales of MSEDCL from December to March are reduced by 46 MUs due to offset of units banked during off-peak season. This has a direct financial impact of Rs. 40 crore considering Average Billing Rate (ABR) of Rs. 8.57 per unit for HT industrial consumers for FY 2016-17.

vi. By providing the banking facility in terms of currency settlement, MSEDCL will be revenue neutral.

vii. The calculation has been carried out through IT programming and can be shared with the Commission for verification.

3.11 Extending this concessional promotional benefit of banking will affect not only the common consumers but also the financial position of MSEDCL, and hence the concessional / promotional benefit of banking facility may be changed to make it revenue neutral to both consumers availing banking and MSEDCL and its consumers.

3.12 The banking facility in some states such as of Gujarat, Rajasthan and Karnataka is on monthly basis as below:



<u>S. No.</u>	<u>Criteria</u>	<u>Gujarat</u>	<u>Rajasthan</u>	<u>Karnataka</u>
1	Eligibility	Only Captive	Only captive	All
2	Period	Monthly basis	Monthly basis	1. Monthly basis for captive under REC. 2. Yearly for others
3	Credit	Credit in same month only in terms of ToD adjustment	Credit in same month only in terms of ToD adjustment	Credit in same month for captive under REC. yearly for non REC captive and third party
4	Conditions	NIL	NIL	NIL
5	Purchase	1. NON REC: 85% of feed in tariff. 2. REC : @APPC	Balance 10% at 60% of IND Tariff	Unutilized energy @ 85% of feed in tariff

us the seasonal variation in the prices of energy does not burden the Distribution licensee and its common consumers.

3.13 SEDCL's proposal is for a banking methodology of infirm RE to make it revenue neutral, instead of providing the banking in terms of MUs:

- Step 1: The surplus banked units from the RE sources in a month shall be treated as banked in terms of Rupees (currency terms) by MSEDCCL at the lowest variable cost of power purchase for respective 15 minutes time slot of month.
- Step 2: The consumer may avail these banked units in the subsequent months by paying the difference between variable cost, i.e. lowest variable cost of backed down power at the time of banking, and highest variable cost of on-bar power at the time of utilization of units.
- Step 3: The unutilized banked energy at the end of the financial year, limited to 10% of the actual total generation by such RE Generator in such financial year, shall be considered as deemed purchase by the Distribution Licensee at its lowest variable power purchase cost for that year and such power shall be eligible for Renewable Energy Certificate (REC) and Renewable Purchase Obligation (RPO).

3.14 With the proposed amendments, the OA consumers sourcing power from infirm RE sources can avail the banking facility without additional financial burden on MSEDCCL, which in turn will benefit its consumers.

4. After the hearing held on 27 July, 2017:

4.1 MSEDCCL stated that:



- (i) It has filed the Petition for removal of difficulties in implementation of DOA Regulations, 2016 relating to the provisions of banking.
 - (ii) Regulation 20 of the DOA Regulations 2016 provides for the banking of RE generation. As per the present mechanism, the energy injected from a non-firm RE Generating Station shall be banked with the Distribution Licensee after set-off with consumption/withdrawal of units in energy (kWh) terms. Also, withdrawals of banked units are not allowed in certain months.
 - (iii) MSEDCL proposes a new mechanism to provide banking of RE in terms of Rupees in absolute terms instead of in terms of energy (kWh) units. The banked Rupees currency unit shall be considered at the lowest variable cost of power purchase for respective 15 minutes time slots of a month. The consumer may avail these banked units in the subsequent months by paying the difference between the variable cost, i.e. lowest variable cost of backed down power at the time of banking, and the highest variable cost of on-bar power at the time of utilization of units.
- 4.2 To a query of the Commission, MSEDCL stated that it would file a detailed additional submission on the exact dispensation required for banking. The additional submission would also cover the restrictions on withdrawal of banked energy for 4 months, peak and off peak TOD slots, banking arrangements, etc.
- 4.3 The Commission observed that it has received 14 representations from various consumers/RE Generators seeking permission to file their objections and requesting a copy of the Petition. The Commission clarified that, if it is prima facie satisfied regarding the need for amendment of the Regulations, it would have to undertake a public consultation process in which the representationists would also have the opportunity to make their suggestions. Amendment of Regulations cannot be done through an Order, and hence there is no need to file Intervention Applications in the matter. The Applicants accordingly did not press the matter, but sought a copy of the Petition. MSEDCL stated that it would upload its Petition on its website, and provide a copy to the Applicants also.
- 4.4 The Commission directed MSEDCL to file its additional submission within three weeks and upload it along with its Petition on its website
5. Prayas (Energy Group) ('Prayas'), an Authorised Consumer Representative, vide its submission dated 20 September, 2017, has stated as follows:
- 5.1 Prayas broadly agrees with MSEDCL's approach of linking energy banking with the actual Merit Order Dispatch (MOD) of the Distribution Licensee. It agrees with the need to have a banking mechanism that is based on the difference between power purchase cost at the time of banking of energy and its drawal which is revenue

neutral to both MSEDCL and the consumers eligible for banking. Some modifications are suggested as below:

(i) The highest variable cost of on-bar power should mean 'the highest variable cost of the dispatched power (incl. any power bought from Exchanges)'. If this interpretation is correct, Prayas is in agreement with the MSEDCL proposal on this aspect of valuing drawal energy.

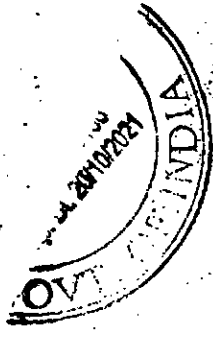
ii) The proposed framework for valuing banked and un-banked energy is a good starting point, especially with low level of RE-based OA. However, as the quantum of banking by RE-based OA increases in the future, a better framework may become necessary. One possibility could be as follows:

The banked energy could be valued at the weighted average variable cost of the backed down Generators due to total banked RE OA quantum. Similarly, at the time of drawal, the same energy can be valued at weighted average variable cost of additional Generators which are dispatched. The renewable OA consumer availing banking should be required to pay the difference between these weighted average costs. Such a framework would be more accurate in estimating the banking charges, especially if more than one Generating Unit is backed down or dispatched due to banking/unbanking.

ii) Since the banked energy is fully valued both at the time of banking and drawal, there should not be any seasonal or ToD based constraints on the drawal of the banked energy unless there are network constraints. This has also been proposed by MSEDCL in its additional submission.

v) However, going against the above principle, MSEDCL has proposed to limit energy banking to only one month, effectively putting a stop to RE-based OA. Instead, energy banking should be allowed for the whole year, as in Solar Net Metering. This is necessary since there is a strong seasonal element to Wind and Solar generation profiles.

) The credit for energy banking and charges for drawal should be calculated for each 15 minute block and would be commercially settled at the end of the month. Such monthly settlement will also avoid the need for specifying any buy-back rate for excess power banked with the Distribution Licensee at the end of the year as was needed in the erstwhile banking provision. MSEDCL and the RE OA consumer should directly settle the surplus/deficit in commercial terms at the end of the year. However, the green attribute of un-utilised banked energy at the end of the year should be credited to MSEDCL's RPO.



(vi) Since Wind and Solar power have relatively low Capacity Utilisation Factors (CUFs) (20-30%), OA consumers may seek OA permission for generation capacity greater than their stated drawal requirement. However, to ensure that the energy banking service provided by MSEDCL is not misused, there is a need to cap the maximum renewable generation capacity that can be procured in relation to the Contract Demand. A principle which can be considered for this is that the RE capacity contracted should be such that there is no significant excess generation (say up to 10%) over the yearly energy demand of the consumer.

(vii) Regulation 16.3 of the DOA Regulations, 2016, provides that RE Generating Plants identified as 'non-firm power' under the Commission's Regulations governing RE Tariff shall be exempted from scheduling till such time as the Commission stipulates or specifies otherwise. However the lack of scheduling by such RE Generating Plants selling power under OA may cause difficulties in the day-ahead power purchase planning of the Distribution Licensee. Hence, with the proposed facilitating banking mechanism, the Commission should finalize and implement the Forecasting, Scheduling and Deviation Settlement Regulations for Wind and Solar Generators as soon as possible.

(viii) Linking the banking charge to MOD of the Distribution Licensee will also enable the market to compare the cost of flexibility and value addition by other options such as grid level storage, demand response, demand aggregation etc.

6. In its further submission dated 20 September, 2017, MSEDCL stated that :

6.1 The following mechanism for banking of infirm RE power is being suggested by MSEDCL so that there will not be adverse financial impact and it remains revenue neutral:

- (i) The surplus banked units from the RE sources in a month shall be treated as banked in terms of Rupees (currency) at the lowest variable cost of backed down power for respective 15 minutes time slot of month.
- (ii) The consumer may avail these banked units in the same month by paying the difference between variable cost, i.e. lowest variable cost of backed down power at the time of banking, and highest variable cost of on-bar power at the time of utilization of units.
- (iii) The unutilized banked energy at the end of the month, limited to 10% of the actual total generation by such RE Generator in such month, shall be considered as deemed purchase by the Distribution Licensee at its lowest variable power purchase cost for that month, and such power shall be eligible for RPO. Unutilized banked energy in excess of 10% shall lapse.

6.2 MSEDCL's suggestions regarding the present dispensation provided by the regulations are to balance the equities. The following dispensation is provided in regulation 20.4 so as to balance the equities:

"Provided that the credit for banked energy shall not be permitted during the months of April, May, October and November, and the credit for energy banked in other months shall be as per the energy injected in the respective Time of Day ('TOD') slots:

Provided further that the energy banked during peak TOD slots may also be drawn during off-peak TOD slots, but the energy banked during off-peak TOD slots may not be drawn during peak TOD slots."

6.3 If the banking mechanism as proposed by MSEDCL is accepted, then the provisos to regulation 20.4 may not be necessary and can be repealed. The infirm RE may also banked and drawn during the months of April, May, October and November. So, the energy banked in any 15 minutes time slot of the day (peak or off peak) may be drawn during in any 15 minutes time slot of the day (peak or off peak) in terms of rupees currency as proposed by MSEDCL in this Petition.

6.4 MSEDCL has proposed the above alternative mechanism for banking based on the study and financial implications which have been observed in the recent past. Electricity being a dynamic and an ever-evolving subject poses new and emerging challenges every day and needs new mechanisms to minimize the ambit of foul play and preserving equities of all the stakeholders.

7. At the hearing held on 21 September, 2017:

7.1 MSEDCL stated that:

(i) Pursuant to the last hearing, MSEDCL has filed its submission and has uploaded the Petition on its website.

(ii) MSEDCL proposes a new mechanism to provide banking to RE sources in terms of rupees in absolute terms instead of in terms of Energy (kWh) units. The banked rupees currency units shall be considered at the lowest variable cost of power purchase for respective 15 minutes time slots of a month. The consumer may avail these banked units in the subsequent months by paying the difference between the variable cost, i.e. lowest variable cost of backed down power at the time of banking, and the highest variable cost of on-bar power at the time of utilization of the units.

(iii) Rayas has also submitted its comments supporting MSEDCL's approach.

(iv) The 10% surplus energy may be purchased every month instead of on annual basis. and may be allowed against the RPO of the Distribution Licensee.

- (v) Restriction on banking facility during 4 months of the year may also be not required if banking facility is provided in Rupee terms instead of kWh terms.

7.2 To a query of the Commission, MSEDCL stated that it agrees that the calculations of lowest variable cost of backed down power at the time of banking would be complex. The intention of suggesting such mechanism is that MSEDCL would be revenue neutral. MSEDCL is not against the banking facility.

Commission's Analysis and Ruling

8. Banking of non-firm RE in one form or the other was formally provided under policy dispensations of the Govt. of India, Govt. of Maharashtra and the erstwhile Maharashtra State Electricity Board from the 1990s, well before the Commission was established. The current DOA Regulations, 2016 were notified by the Commission after a due process of public consultation, and provide as follows with regard to banking:

"2.1(4) "Banking" means the surplus Renewable Energy injected in the grid and credited with the Distribution Licensee after set off with consumption in the same Time of Day slot as specified in Regulation 20..."

...20.1 Regulation 19.3 shall not be applicable in case Open Access consumer obtains supply from a Renewable Energy Generating Station identified as 'non-firm power' by the Commission in its Regulations governing the Tariff for Renewable Energy.

20.2 The surplus energy from a 'non-firm' Renewable Energy Generating Station after set-off shall be banked with the Distribution Licensee.

20.3 The banking year shall be the financial year from April to March.

20.4. Banking of energy shall be permitted during all twelve months of the year:

Provided that the credit for banked energy shall not be permitted during the months of April, May, October and November, and the credit for energy banked in other months shall be as per the energy injected in the respective Time of Day ('TOD') slots determined by the Commission in its Orders determining the Tariffs of the Distribution Licensees;

Provided further that the energy banked during peak TOD slots may also be drawn during off-peak TOD slots, but the energy banked during off-peak TOD slots may not be drawn during peak TOD slots...

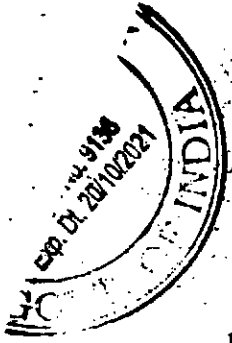
20.5. Banking charges shall be adjusted in kind @ 2% of the energy banked.

20.6. The unutilised banked energy at the end of the financial year, limited to 10% of the actual total generation by such Renewable Energy generator in such

financial year, shall be considered as deemed purchase by the Distribution Licensee its Pooled Cost of Power Purchase for that year:

Provided that such deemed purchase shall not be counted towards the Renewable Purchase Obligation of the Distribution Licensee, and the Generation Station would be entitled to Renewable Energy Certificates to that extent."

9. The Commission notes in passing that, by MSEDCL's own computations, the total quantum of banked energy is marginal as a proportion of its total power requirement, and it has estimated the financial impact as Rs. 11.02 crore in FY 2016-17. Apart from a negligible impact on consumer tariffs, these estimations are based on partial assumptions and do not fully reflect all aspects of the impact of the banked energy, including in favour of MSEDCL in four high-demand months, or other relevant aspects. Moreover, backing down of contracted generation is on account of many factors apart from RE injection. The Table at para. 3.7 is not meaningful to that extent. Moreover, that Table itself shows that, even in the low months of April and May and October onwards, the backing down by MSEDCL has been substantially higher or lower than the RE injected.
10. MSEDCL has sought amendment of Regulation 20 of the DOA Regulations, 2016, essentially to do away with the existing ToD-based banking provisions applicable to non-firm RE. MSEDCL has proposed a banking facility in terms of 'currency settlement' instead of 'energy settlement in kind'. The rate proposed for such 'currency based settlement' is the lowest variable cost of backed-down power in each 15-minute time block for the surplus banked power; and the credit for drawal of banked energy is proposed at the highest variable on-bar cost or cost of power purchase through the Power Exchanges, whichever is higher. In effect, MSEDCL proposes to do away with ToD-based adjustment in kind and to undertake the commercial settlement for such wheeling transactions in each 15-minute time block in monetary terms. This would be in addition to the wheeling charges, wheeling losses, banking charges, Cross-Subsidy Surcharge and Additional Surcharge, if any, to which the Distribution Licensee is separately entitled in any case.
11. If the accounting and credit of energy is to be undertaken in monetary terms for each 15-minute time block, it would be more appropriate to track the cost of deviation (schedule vs. actual) at both ends (i.e., the injection end and the drawal end) since there would continue to be deviations at both ends irrespective of banking down or otherwise. Deviations at the injection end will continue due to the variable nature of variable RE generation but can be minimised by better forecasting, scheduling and a deviation settlement mechanism (DSM). For this purpose, the Commission has recently issued draft Forecasting, Scheduling and DSM Regulations for Solar and Wind generation for public consultation. Deviations at the drawal end have to be seen in the context of the deviation treatment proposed



for partial OA consumers. As most of these are embedded consumers, their demand forecast is in any case a part of the aggregate demand forecast of the Distribution Licensee, and any variation is supplied by it and accounted for and compensated through the consumer category-wise tariffs.

12. Banking, on the other hand, is the energy credit adjustment of actual injection vis-à-vis the actual drawal by the consumer over a period. Banking is provided for non-firm RE considering the variable nature of such generation, but with appropriate qualifications to address the interests and concerns of both the Distribution Licensee and the consumer. In the DOA Regulations, 2016, these qualifications include ToD-based banking with adjustment of surplus injection of higher ToD slabs (peak) to lower ToD slabs (normal/off-peak), but not vice-versa; monthly carry-forward of surplus banked energy to annual settlement, but capped at 10% of total generation at the end of the year; restriction on banking credits for 4 months (viz. April, May, October and November, generally the peak demand months, as explained in the Statement of Reasons for the Regulations); levy of banking charges; etc. In the case of MSEDCL, Additional Surcharge in lieu of stranded capacity due to backing down is also being levied on RE OA wheeling transactions.
13. As regards counting of the surplus RE (upto 10%) at the end of the year against the RPO of the Distribution Licensee, MSEDCL may refer to the Commission's conclusion in its Statement of Reasons for the DOA Regulations, 2016:

"...since it will be difficult for Distribution Licensees to account the surplus RE in its annual renewable purchase planning to meet their RPO, RE Generators will be allowed to claim REC benefits on this power and Distribution Licensees will not be able to consider this power purchased against their RPO."

14. In view of the foregoing, the Commission does not consider it necessary or appropriate at present to initiate amendment of the DOA Regulations, 2016 to the extent sought by MSEDCL.

The Petition of Maharashtra State Electricity Distribution Co. Ltd. in Case No. 85 of 2017 stands disposed of accordingly.

Sd/-

(Deepak Lad)
Member

Sd/-

(Azeez M. Khan)
Member

Ashwani
(Ashwani Kumar Sinha)
Secretary





Maharashtra State Electricity Distribution Co. Ltd.
(A Govt. of Maharashtra Undertaking)
CIN : U40109MH200058GC153645

PHONE No. 26474753 (P)/26474211 (O)
FAX No. 26472366
Email: cecomm@mahadiscom.in
Website: www.mahadiscom.in

PLOT No. G-9, PRAKASHGAD
Prof. ANANT KANEKAR MARG
BANDRA (East)
MUMBAI-400051

No. Comm/Petition / No **13021** Date:

23 MAY 2017

To,
Secretary,
Maharashtra Electricity Regulatory Commission,
Mumbai

Sub: Filling of petition for removal of difficulties in implementation of MERC (Distribution Open Access) Regulation, 2016, (Provision of Banking).

Ref: MERC (Distribution Open Access) Regulation 2016.

Dear Sir,

Please find enclosed herewith the MSEDCL petition for removal of difficulties in implementation of MERC (Distribution Open Access) Regulation, 2016, (Provision of Banking).

The requisite fee is submitted herewith in the form of demand draft no 218825 dt 23/5/2017.

Thanking You,

Yours faithfully,

[Signature]
Chief Engineer (Commercial)

Copy S.w.r. to:-

- 1) The Executive Director, Dist. I/ (Commercial), MSEDCL, Mumbai.

Copy s.w.c.to:-

- 1) Reliance Infrastructure Ltd, W.E Highway, Dindoshi, Goregaon (East), Mumbai-400097.
- 2) Tata Power Company Ltd, Dharavi Receiving Station, Near Shalimar Ind.Estate, Matunga, Mumbai-400019.
- 3) Chief Engineer, STU, Prakashganga, Bandra-Kurla Complex, Bandra (E).

Copy to:

- 1) Maharashtra Energy Development Agency, II Floor, MHADA Complex, Tridal Nagar, Pune-411006.
- 2) Prayas (Energy Group), Amrita Clinic, Athawale Corner, Deccan Gymkhana Karve Road, Pune 411 004.
- 3) Mumbai Grahak Panchayat, Grahak Bhavan, Behind Cooper Hospital, Vile Parle (West), Mumbai 400 056.
- 4) The General Secretary, Thane Belapur Industries Association, Robale Village, Post Ghansoli, Navi Mumbai 400 701.
- 5) Vidarbha Industries Association, 1st Floor, Udyog Bhavan, Civil Line, Nagpur 440 001.



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महाराष्ट्र
harashtra

00154-MUMBAI BANDRA EAST

25/05/86

D. D. M. M. Y. Y. Y. Y.
218825

MAHARASHTRA ELECTRICITY REGULATORY COMMISSION

महाराष्ट्र विद्युत नियंत्रण आयोग
MAHARASHTRA ELECTRICITY REGULATORY COMMISSION

को याचनेक आदेश पर FOR ORDER

भारत के मुद्रा के रूप में
ON DEMAND PAY

रुपये
RUPEES

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10,000.00

FOR VALUE RECEIVED

FOR BANK OF MAHARASHTRA

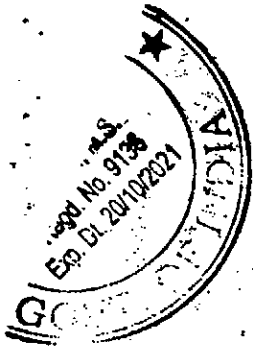
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बैंक ऑफ महाराष्ट्र
BANK OF MAHARASHTRA

BANK OF MAHARASHTRA
MUMBAI

M. 1915



**BEFORE THE MAHARASHTRA ELECTRICITY REGULATORY
COMMISSION, MUMBAI**

Case No. /

IN THE MATTER OF:

**PETITION FOR REMOVAL OF DIFFICULTIES IN
IMPLMENTATION OF MERC (DISTRIBUTION OPEN ACCESS)
REGULATIONS, 2016, (PROVISION OF BANKING).**

IN THE MATTER OF:

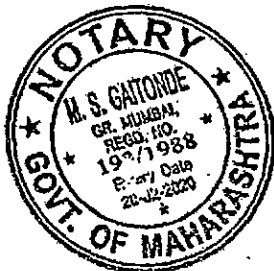
Maharashtra State Electricity Distribution Company Limited

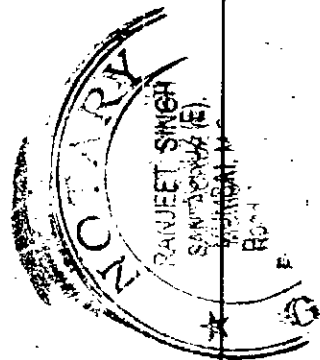
.... Petitioner

Affidavit

I, Sharad Rinke, Aged 57 years, having my office at Maharashtra State Electricity Distribution Co. Ltd., Prakashgad, Plot No.G-9, Anant Kanekar Marg, Bandra (East), Mumbai-400 051 do solemnly affirm and state as under :-

1. That I am Chief Engineer (Commercial) of Maharashtra State Electricity Distribution Co. Ltd., Petition in the above matter has been duly authorized on behalf of the MSEDCL.





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

3. I say that there are no proceedings pending in any court of law/tribunal or arbitrator on any authority, where the Petitioner is a party where issues arising and /or reliefs sought are identical or similar to the issues arising in the matter pending before the commission.

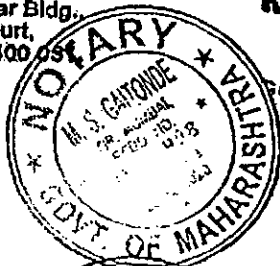
4. I solemnly affirm at Mumbai on this 23rd Day of May 17 that the contents of this affidavit are true to my knowledge, no part of it is false and nothing material has been concealed therefrom.

[Signature]
Chief Engineer (Commercial)
MSEDCL

Identified before me

[Signature]
K. DUBEY
B.A.L.L.B.
ADVOCATE HIGH COURT
Lawyer's Chamber Bhaskar Bldg.
2nd Floor, Bandra Court,
Bandra (East), Mumbai - 400 055

BEFORE ME
[Signature] 23/5/2017
M. S. GAITONDE
NOTARY B.A.L.L.B.
GREATER MUMBAI
GOVT OF MAHARASHTRA,
INDIA



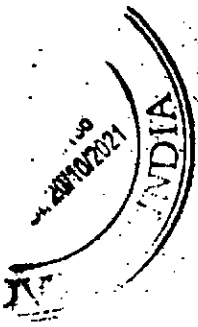
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Sr. No. 1454	23-5-2017



BEFORE THE MAHARASHTRA ELECTRICITY REGULATORY COMMISSION, MUMBAI

FILING NO:

CASE NO:



IN THE MATTER OF
PETITION FOR REMOVAL OF DIFFICULTIES IN IMPLEMENTATION OF MERC (DISTRIBUTION OPEN ACCESS) REGULATIONS, 2016, (PROVISION OF BANKING).

AND

IN THE MATTER OF
REGULATION 20 OF THE MERC (DISTRIBUTION OPEN ACCESS) REGULATIONS, 2016 (PROVISION OF BANKING)

IN THE MATTER OF
MAHARASHTRA STATE ELECTRICITY DISTRIBUTION COMPANY LIMITED – THE PETITIONER

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

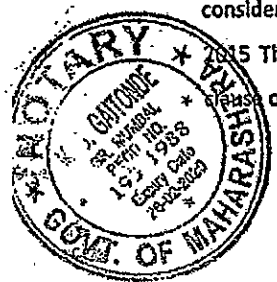
1. Background

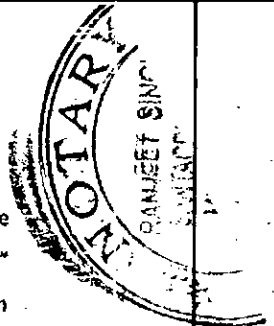
1.1. The Petitioner is a Company constituted under the provisions of Government of Maharashtra, General Resolution No. PLA-1003/C.R.8588/Energy-5 dated 25th January 2005 and is duly registered with the Registrar of Companies, Mumbai on 31st May 2005.

1.2. 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 Mumbai City & its suburbs (excluding Mulund & Bhandup).

1.3. The Petitioner submits that Hon'ble Commission has issued the Distribution Open Access Regulations, 2016 vide No. MERC/Tech/Open Access Distribution/2016/01742 dated 30th March, 2016 (Herein after to be referred as Distribution Open Access Regulations 2016"). The Petitioner submits the Distribution Open Access Regulations, 2016 has still issue in Regulation 20 "Banking of Renewable Energy generation" despite MSEDCL had submitted to the Hon'ble Commission vide its letter No.SE/TRC/38109 dated 31st October 2015 for consideration during comments/ suggestions on Draft Distribution Open Access Regulations

2015 Therefore, the Petitioner approaching the Hon'ble Commission for amendments in of MERC (Distribution Open Access) Regulations 2016.





2. BANKING OF RENEWABLE ENERGY GENERATION

2.1 Regulation 20 of the Open Access Regulations 2016 provides for the banking of the renewable energy generation. As per the said Regulation, surplus energy from a "non-firm" renewable energy generating station after set off shall be banked with the Distribution licensee. The said Regulation is annexed hereto as Annexure L.

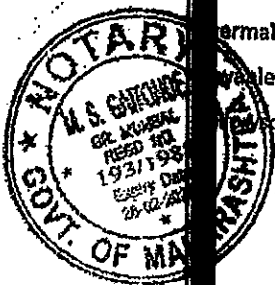
2.2 The Petitioner humbly submits that, by virtue of above Regulations the infirm RE generators are availing following benefits over firm energy sources:

- a) Exemption from scheduling.
- b) Monthly ToD wise banking facility.
- c) Yearly ToD wise banking facility.

2.3 The Petitioner humbly submits that the 'banking' provision allows renewable power generators to inject surplus power into the grid when the power cost is less and draw the power back for consumption during the peak period when the power cost is high, which in turn puts additional financial burden over the licensee, which in turn is passed on to the common consumers of MSEDCL. Very selective and few consumers who are using open access through RE and taking benefit of Banking are benefiting from the said provision of banking at the cost of common consumers.

2.4 The petitioner respectfully submits that the energy generation from wind generators is at the peak in the months of June to September in a calendar year and particularly in the night hours when the MSEDCL demand is minimum during the year. The market price of the power is least/ minimum during these months. During this period the consumer/generator bank the surplus energy injected in to the grid and draws it back from grid in the months when the MSEDCL demand and power purchase cost is more. MSEDCL's common consumer has to bear this difference in the cost of power which in turn is passed on to other common consumers.

2.5 It is respectfully submitted that MSEDCL has tied up about 5,500 MW of Thermal power through competitive bidding and is already in surplus power scenario. Also it is expected to get additional 10,000 MW from CGS/SGS in next 4-5 years. Under this situation due to further over injection from renewable energy sources, MSEDCL has to back down the thermal generation to the extent of these banked units and has to bear the fixed charges payable to the thermal generators. The power backing down scenario is elaborated as





A) The total contracted capacity of MSEDCL (2016-17) is as below:

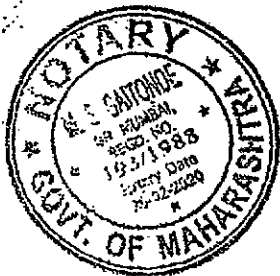
Sr. No.	Source	Capacity in MW
01	Thermal	10370
02	Hydro	2585
03	Gas	672
04	Central Sector	5778
05	Renewable (including Solar, biomass, bagasse, SHP)	5219
	Total	24628

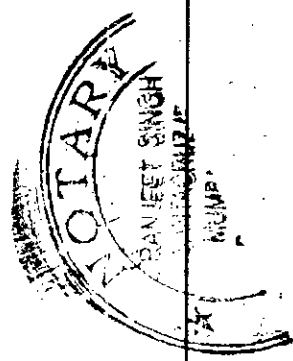
The following data in table shows that, the Renewable Injection MU's and MSEDCL back down MU's are nearly matching:

Table-1

Month	Apr'16	May'16	June'16	Jul'16	Aug'16	Sept'16	Oct'16	Nov'16	Dec'16	Jan'17	Feb'17	Mar'17
MSEDCL Max Demand in MW	17411	17176	16779	13830	16063	17881	18013	18116	17764	18283	18830	19745
RE Power Injection in MUs	663	891	917	1044	1055	640	373	531	742	719		
MSEDCL Back down in MUs	358	599	1046	1134	807	1082	696	946	907	798	305	421

2.6 MSEDCL has worked out the actual difference between the variable cost of power at the time of banking of surplus units that is lowest variable cost of backed down power and at the time of utilization of this banked units that is highest variable cost of on-bar power or IEX, whichever is higher, in each 15 min time slots for the period from April 2016 to March 2017 considering banked units of all consumers availing banking facility. The sample detail working sheets for the month of July 2016 are attached as Annexure-II. The total amount of difference is worked out to be Rs. 11.02 Crs for full years. The abstract sheet is attached as Annexure-III. This much loss has been caused to MSEDCL's consumers by 228 consumers taking banking facility. The abstract is as under:



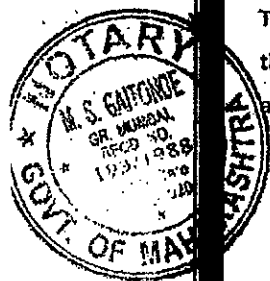


Over Injection Details			Total Cost at Credit (Rs. Crs)	Difference in Rs. Crs. (Cost at Credit - Cost at Banking)
Month	Units in Mus	Cost at Banking In Rs. Crs.		
Apr 2016	9.24	2.33	2.57	0.25
May 2016	26.15	5.81	7.38	1.57
Jun 2016	29.67	6.24	8.11	1.88
Jul 2016	32.35	5.43	8.49	3.06
Aug 2016	28.20	5.11	7.46	2.34
Sep 2016	10.78	2.00	2.95	0.95
Oct 2016	4.57	0.95	1.11	0.16
Nov 2016	5.38	1.19	1.48	0.29
Dec 2016	5.56	1.25	1.53	0.28
Jan 2017	2.57	0.61	0.73	0.12
Feb 2017	2.79	0.75	0.81	0.07
Mar 2017	3.06	0.84	0.91	0.07
TOTAL	160.33	32.5	43.53	11.02

In the above table, out of 160.33 Mus : 72.58 MUs are adjusted through ToD adjustment and 87.75 MUs are adjusted through credit in subsequent months (except April, May, October and November).

2.7 The details of methodology adopted by MSEDCL is as under:

- i. The injection and credit of units to OA consumer are first adjusted in 15 mins time block (adjustment in terms of units).
- ii. The surplus units injected in every 15 mins time block are banked at lowest variable cost of backdown power in that 15 min time block.
- iii. The credit of banked units to OA consumer through ToD adjustment in same month or through adjusted in subsequent months is calculated in terms of cost i.e. at highest variable on-bar cost or cost of purchase through IEX, whichever is higher in that 15 min time block.
- iv. The banking of units is done at lowest variable cost of backdown power in every 15 min time block, as most of the generation is during off peak season. Due to injection of surplus power in grid (for which MSEDCL has no EPA), MSEDCL has to backdown its own generation by paying the fixed charges.
- v. The credit of units is done at highest variable cost of on-bar power in every 15 min time block, as most of the credit is during peak season. MSEDCL has to procure additional expensive power to fulfill the banking obligation.



The month-wise details of banked units and offset units are as under:

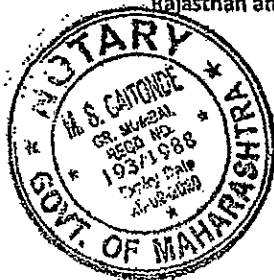
Month	Current Month Banked units in Mus	Previous Banked Offset Units in Mus
Apr-16	9.57	0.00
May-16	11.40	0.00
Jun-16	23.86	7.75
Jul-16	31.44	7.72
Aug-16	29.69	8.63
Sep-16	10.72	17.64
Oct-16	0.59	0.00
Nov-16	1.59	0.00
Dec-16	3.87	20.00
Jan-17	0.67	15.72
Feb-17	0.80	5.92
Mar-17	0.80	4.36
Total	125.00	87.75

From the above, it is clear that, maximum units are banked during off-peak season and credit is availed during peak season. Also, it is pertinent to note that, the HT sale of MSEDCL during the period from December to March is reduced by 46 MUs due to offset of units banked during off-peak season. This has a direct financial impact of Rs. 40 Crs considering ABR of Rs 8.57 per unit for HT Industrial consumers for FY 2016-17.

- vi. By providing the banking facility in terms of currency settlement, MSEDCL will be revenue neutral.
- vii. The calculation has been carried out through IT programming and the same can be shared with MERC for verification.

2.8 Extending this concessional promotional benefit of banking will affect not only the common consumers of the State but also financial position of MSEDCL and hence the concessional / promotional benefit of banking facility may be changed to make it revenue neutral to both consumers availing banking and MSEDCL and its consumers.

2.9 It is respectfully submitted that the banking facility in some states such as of Gujarat, Rajasthan and Karnataka is on monthly basis as below.



S No	CRITERIA	GUJARAT	RAJASTHAN	KARNATAKA
1	ELIGIBILITY	Only captive	Only captive	All
2	PERIOD	Monthly basis	Monthly basis	1. Monthly basis for captive under REC 2. Yearly for others
3	CREDIT	credit in same month only in terms of ToD adjustment	credit in same month only in terms of ToD adjustment	credit in same month for captive under REC. yearly for non REC captive and third party
4	CONDITIONS	NIL	NIL	NIL
5	PURCHASE	1. NON REC: 85% of feed in tariff. 2. REC: @APPC	Balance 10% at 60% of IND Tariff	Unutilised energy @ 85% of feed in tariff



Thus the seasonal variation in the prices of energy does not burden the distribution licensee and common consumers thereof.

3. MSEDCL PROPOSAL FOR BANKING METHODOLOGY OF INFIRM RENEWABLE ENERGY TO MAKE IT REVENUE NEUTRAL.

3.1 MSEDCL respectfully submit that instead of providing the banking in terms of MUs;

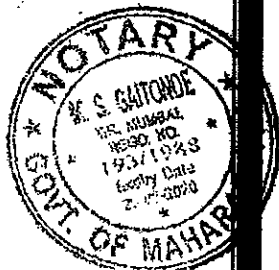
Step 1: The surplus banked units from the renewable sources in a month shall be treated as banked in terms of rupees currency by MSEDCL at the lowest variable cost of power purchase for respective 15 mins time slot of month.

Step 2: The consumer may avail these banked units in the subsequent months by paying the difference between variable cost i.e. lowest variable cost of backdown power at the time of banking and highest variable cost of on-bar power at the time of utilization of units.

Step 3: The unutilized banked energy at the end of the financial year, limited to 10% of the actual total generation by such Renewable Energy generator in such financial year, shall be considered as deemed purchase by the Distribution Licensee at its lowest variable Power Purchase cost for that year and such power shall be eligible for REC/RPO:

The proposed draft changes in banking Regulations are annexed hereto as Annexure IV.

3.2 In view of above proposed amendments, the open access consumers sourcing power from infirm renewable sources can avail the banking facility without additional financial burden over MSEDCL which in turn will benefit the common consumers of MSEDCL.

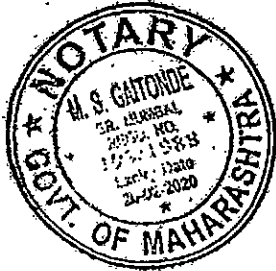


PRAYERS

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

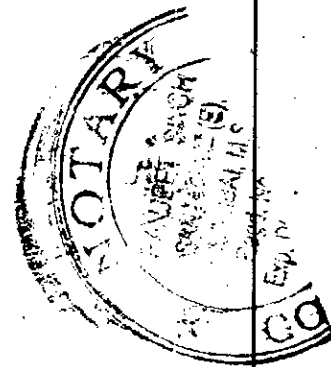
- 4.1 To admit the Petition as per the provisions of the Regulations 36 and 37 of the MERC (Distribution Open Access) Regulations 2016;
- 4.2 To amend the Regulation 20 of MERC (Distribution Open Access) Regulations 2016 and also allow the sub-sequent amendments in Regulations by virtue of proposed Regulations.
- 4.3 To condone any error/omission and to give opportunity to rectify the same;
- 4.4 To permit the Petitioner to make further submissions, addition and alteration to this Petition as may be necessary from time to time.


 Chief Engineer (Commercial)
 MSEDCL



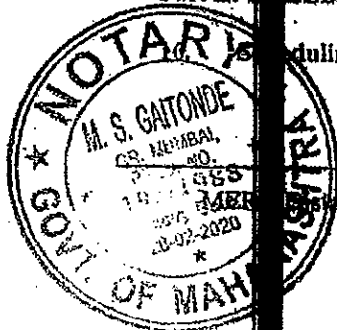
M.S.
 No. 9136
 Dated 20/10/2021

**MAHARASHTRA ELECTRICITY REGULATORY COMMISSION
(DISTRIBUTION OPEN ACCESS) REGULATIONS, 2016**



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20. Banking of Renewable Energy Generation

- 20.1. Regulation 19.3 shall not be applicable in case an Open Access Consumer obtains supply from a Renewable Energy Generating Station identified as 'non-firm power' by the Commission in its Regulations governing the Tariff for Renewable Energy.
- 20.2. The surplus energy from a 'non-firm' Renewable Energy Generating Station after set-off shall be banked with the Distribution Licensee.
- 20.3. The banking year shall be the financial year from April to March.
- 20.4. Banking of energy shall be permitted during all twelve months of the year:

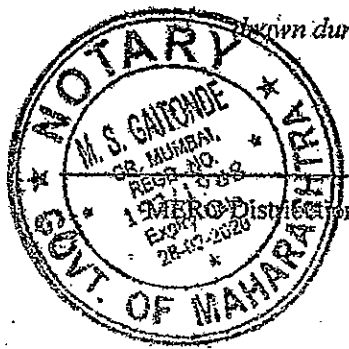
Provided that the credit for banked energy shall not be permitted during the months of April, May, October and November, and the credit for energy banked in other months shall be as per the energy injected in the respective Time of Day ('TOD') slots determined by the Commission in its Orders determining the Tariffs of the Distribution Licensees;

Provided further that the energy banked during peak TOD slots may also be drawn during off-peak TOD slots, but the energy banked during off-peak TOD slots may not be drawn during peak TOD slots.

Illustration: Energy banked during:

- Night off-peak TOD slot (2200 hrs – 0600 hrs) may only be drawn in the same TOD slot
- Off-peak TOD slot (0600 hrs – 0900 hrs & 1200 hrs – 1800 hrs) may be drawn in the same TOD slot and also during Night off-peak TOD slot

(However, the energy banked during night off peak and off peak shall not be drawn during morning peak and evening peak)



- *Morning peak TOD slot (0900 hrs – 1200 hrs) may be drawn in the same TOD slot and also during Off-peak and Night off-peak TOD slots*
- *Evening peak TOD slot (1800 hrs – 2200 hrs) may be drawn in the same TOD slot and also during Off-peak and Night off-peak TOD slots*



2.5. Banking charges shall be adjusted in kind @ 2% of the energy banked.

2.5. The unutilised banked energy at the end of the financial year, limited to 10% of the actual total generation by such Renewable Energy generator in such financial year, shall be considered as deemed purchase by the Distribution Licensee at its Pooled Cost of Power Purchase for that year:

Provided that such deemed purchase shall not be counted towards the Renewable Purchase Obligation of the Distribution Licensee, and the Generating Station would be entitled to Renewable Energy Certificates to that extent.

Reactive Energy Charge

2. The methodology for payment for the reactive energy charges by an Open Access Consumer, Generating Station or Licensee with load of 5 MW or more shall be in accordance with the State Grid Code and the Regulations of the Commission governing Multi-Year Tariff or relevant orders of the Commission.

2. The reactive energy charges in respect of Open Access Consumers with load less than 5 MW shall be calculated on Power Factor basis as may be specified in relevant orders of the Commission.

2. The reactive energy charges in respect of Renewable Energy Generating Stations shall be in accordance with the charges approved by the Commission in its relevant Tariff Orders.



3188
JUL 20/10/2021

DATA INJECTION DETAILS			Apr-16		May-16		Jun-16	
MONTH	UNITS	COST AT BANKING	UNITS	COST	UNITS	COST	UNITS	COST
APR-2016	9244258	23283115.86	0	0.00	0	0.00	5831517	17157856.40
MAY-2016	25150916	58068251.09	0	0.00	17011685	49371472.22	1861358	5420939.43
JUN-2016	29671864	62362012.15	0	0.00	0	0.00	16806797	31758800.00
JUL-2016	52354407	54264822.06	0	0.00	0	0.00	0	0.00
AUG-2016	28202528	51134836.47	0	0.00	0	0.00	0	0.00
SEP-2016	10778002	20047417.06	0	0.00	0	0.00	0	0.00
OCT-2016	4569807	8450861.15	0	0.00	0	0.00	0	0.00
NOV-2016	3376245	11970279.09	0	0.00	0	0.00	0	0.00
DEC-2016	5562757	12549285.29	0	0.00	0	0.00	0	0.00
JAN-2017	2571976	6086194.09	0	0.00	0	0.00	0	0.00
FEB-2017	2791973	7490985.31	0	0.00	0	0.00	0	0.00
MAR-2017	3055824	8384505.44	0	0.00	0	0.00	0	0.00
TOTAL	160330558	325022565.05	0	0.00	17011685	49371472.22	1860667	54336885.84

Jul-16		Aug-16		Sep-16		Oct-16	
UNITS	COST	UNITS	COST	UNITS	COST	UNITS	COST
1333925	3245417.06	201540	1798216.73	540531	1406130.43	0	0.00
1609498	3890404.97	952310	2406258.71	1600720	4148542.95	0	0.00
4780066	11516532.38	2401894	6080790.69	3082535	7918491.68	0	0.00
9987220	24946595.11	4573538	11591133.07	7116423	18405002.59	0	0.00
0	0.00	9755692	23921379.66	5297430	13638641.11	0	0.00
0	0.00	0	0.00	4922967	13014092.52	0	0.00
0	0.00	0	0.00	0	0.00	4383598	10545291.98
0	0.00	0	0.00	0	0.00	0	0.00
0	0.00	0	0.00	0	0.00	0	0.00
0	0.00	0	0.00	0	0.00	0	0.00
0	0.00	0	0.00	0	0.00	0	0.00
0	0.00	0	0.00	0	0.00	0	0.00
0	0.00	0	0.00	0	0.00	0	0.00
0	0.00	0	0.00	0	0.00	0	0.00
17210709	43558959.52	16384974	45796758.81	72256007	258528901.28	183598	4854281.98

Nov-16		Dec-16		Jan-17		Feb-17	
UNITS	COST	UNITS	COST	UNITS	COST	UNITS	COST
0	0.00	581723	3593908.21	140729	392306.04	32185	99044.98
0	0.00	2029906	8579297.91	875427	2421370.94	146656	423975.31
0	0.00	3750541	10299690.96	2839628	7932715.87	1264705	3661131.64
0	0.00	5191551	14242885.89	3175570	9166611.94	1389894	4044677.31
0	0.00	5156616	14169574.62	4998262	14018633.26	1934462	5606961.95
0	0.00	2420140	6629036.55	1812700	5113173.14	667859	1938458.03
0	0.00	120476	328818.68	65733	187669.88	0	0.00
4360095	11930660.74	751804	2068152.99	72828	201771.91	0	0.00
0	0.00	3301616	8829129.68	164355	4645529.02	322310	938358.32
0	0.00	0	0.00	2311293	6500903.48	160295	465078.55
0	0.00	0	0.00	0	0.00	2579408	7508670.58
0	0.00	0	0.00	0	0.00	0	0.00
4360095	11930660.74	23304373	63690494.89	18035325	50580186.27	8497774	23680357.53

Mar-17		TOTAL COST AT CREDIT	DIFFERENCE
UNITS	COST	COST AT BANKING	COST AT BANKING
21107	62578.08	25749467.95	-2466351.08
63356	187853.90	73797115.74	-15728864.65
645702	1847856.51	81115299.72	-16753287.57
820210	2480595.24	84877480.50	-30612658.44
1060066	3207642.12	74562833.72	-23427997.24
954336	2840118.32	29534878.61	-9487461.56
0	0.00	11061780.54	-1610919.39
191518	594840.33	14794927.57	-2874648.28
295676	889802.19	15302819.21	-1753533.92
100388	301951.04	7267932.87	-1181738.76
212566	634057.79	8142729.37	-651743.06
3055824	9054159.31	9054159.31	-689653.87
7420751	22201454.82	435261423.90	-110234858.85





Maharashtra State Electricity Distribution Co. Ltd.
(A Govt. of Maharashtra Undertaking)
CIN : U40109MH20005SGC153645

PHONE No.: 26474753 (P)/26474211 (O)
FAX No.: 26472366
Email: cecomm@mahadiscom.in
Website: www.mahadiscom.in

PLOT No. G-9, PRAKASHGAD
Prof. ANANT KANEKAR MARG
BANDRA (East)
MUMBAI-400051

No. Comm/Petition /Banking/

No 2 3 0 0 2

Date: **20 SEP 2017**

To,
The Secretary,
Maharashtra Electricity Regulatory Commission,
Mumbai.

Sub: MSEDCL's additional submission in Case No. 85 of 2017.

Dear Sir,

Please find enclosed herewith the additional submission of MSEDCL in case no. 85 of 2017.

Thanking You,

Yours faithfully,

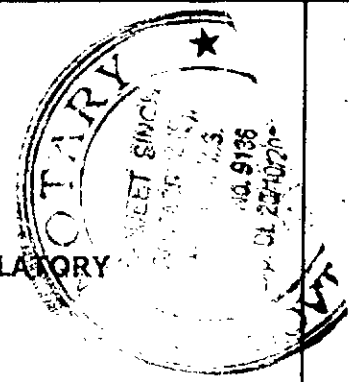
[Signature]
Chief Engineer (Commercial)

Copy S.w.r. to:-

- 1) The Executive Director, Dist. I/ (Commercial), MSEDCL, Mumbai.

Copy to:

- 1) Maharashtra Energy Development Agency, II Floor, MHADA Complex, Tridal Nagar, Pune-411006.
- 2) Prayas (Energy Group), Amrita Clinic, Athawale Corner, Deccan Gymkhana Karve Road, Pune 411 004.
- 3) Mumbai Grahak Panchayat, Grahak Bhavan, Behind Cooper Hospital, Vile Parle (West), Mumbai 400 056.
- 4) The General Secretary, Thane Belapur Industries Association, Robale Village, Post Ghansoli, Navi Mumbai 400 701.
- 5) Vidarbha Industries Association, 1st Floor, Udyog Bhavan, Civil Line, Nagpur 440 001.
- 6) Chamber of Marathwada Industries & Agriculture, Bajaj Bhavan, P-2, MIDC Industrial Area, Railway Station Road, Aurangabad - 431 057.
- 7) Maharashtra Chamber of Commerce, Industries & Agriculture, Oricon House, 6th Floor, 12 K, Dubash Marg, Fort, Mumbai - 400001.
- 8) Tata Power Company Limited, Bombay House, 24, Homi Mody Street, Fort, Mumbai 400 001.
- 9) Reliance Infrastructure Limited H-Block, 1st floor, Dhirubhai Ambani Knowledge City (DAKC), Navi Mumbai - 400 710
- 10) The Chief Engineer Regulatory, B E S & T Undertaking Best Bhavan, Best Marg, Post Box No 192, Colaba, Mumbai-400 001.



**BEFORE THE MAHARASHTRA ELECTRICITY REGULATORY
COMMISSION, MUMBAI
CASE NO. 85 OF 2017**

IN THE MATTER OF:

Petition for removal of difficulties in implementation of MERC
(Distribution Open Access) Regulations, 2016, (Provision of Banking).

AND

IN THE MATTER OF

Maharashtra State Electricity Distribution Company Limited –

The Petitioner

Affidavit

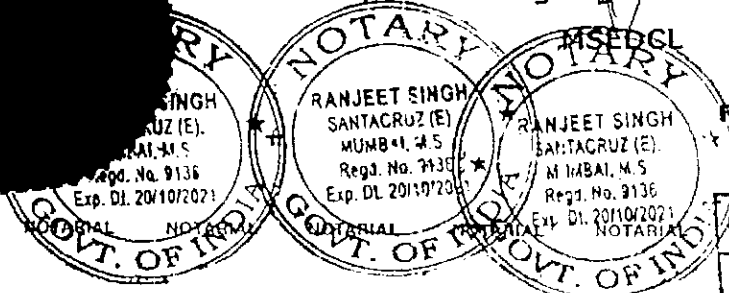
I, Anil Wasudeo Mahajan, Aged 50 years, having my office at Maharashtra State Electricity Distribution Co. Ltd., Prakashgad, Plot No.G-9, Anant Kanekar Marg, Bandra (East), Mumbai-400 051 do solemnly affirm and say as follows :-

I am Superintending Engineer- II (Commercial) of Maharashtra State Electricity Distribution Co. Ltd., the respondent in the above matter and am duly authorized to make this affidavit.

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

I solemnly affirm at Mumbai on this Day of September 17 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.

Superintending Engineer II (Commercial)
BEFORE ME



Ranjeet Singh
RANJEET SINGH
NOTARY PUBLIC
MAHARASHTRA

GOVT. OF INDIA
Registers: No. 53
Date: 20 SEP 2017



**BEFORE THE HON'BLE MAHARASHTRA ELECTRICITY
REGULATORY COMMISSION
AT MUMBAI
CASE NO. 85 OF 2017**

IN THE MATTER OF

Petition for removal of difficulties in implementation of MERC
(Distribution Open Access) Regulations, 2016, (Provision of
Banking).

**AND
IN THE MATTER OF**

Regulation 20 of the MERC (Distribution Open Access) Regulations,
2016 (Provision of Banking)

**AND
IN THE MATTER OF**

Maharashtra State Electricity Distribution Company Limited –

The Petitioner

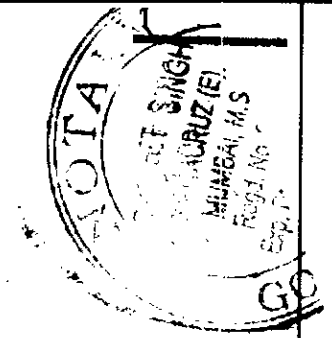
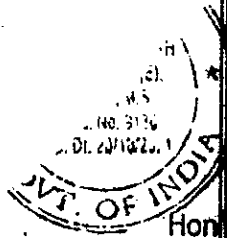
ADDITIONAL SUBMISSIONS

On behalf of the Petitioner

(Maharashtra State Electricity Distribution Company Limited)

MOST RESPECTFULLY SHOWETH:

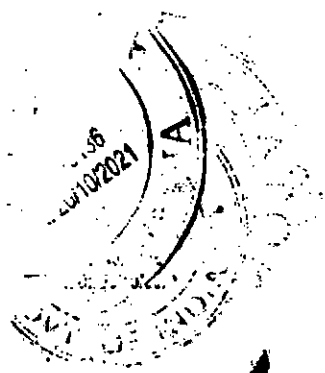
The present additional submission is being filed on behalf of the
Petitioner (MSEDCL) pursuant to the directions issued by this



Hon'ble Commission vide daily order dated 27.07.2017. The Petitioner is filing the present additional submissions in addition to the Petition dated 23.05.2017.

1. It is to submit that, the following mechanism for banking of firm Renewable power is being suggested by MSEDCL so that, there will not be adverse financial impact and it remains revenue neutral entity.

- (i) The surplus banked units from the renewable sources in a month shall be treated as banked in terms of rupees currency at the lowest variable cost of backdown power for respective 15 mins time slot of month.
- (ii) The consumer may avail these banked units in the same month by paying the difference between variable cost i.e. lowest variable cost of backdown power at the time of banking and highest variable cost of on-bar power at the time of utilization of units.

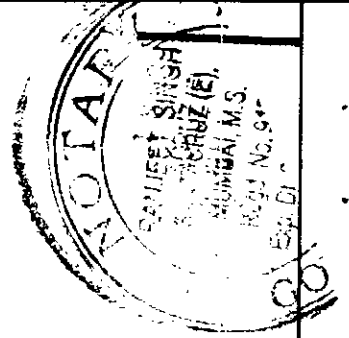


(iii) The unutilized banked energy at the end of the month, limited to 10% of the actual total generation by such Renewable Energy generator in such month, shall be considered as deemed purchase by the Distribution Licensee at its lowest variable Power Purchase cost for that month and such power shall be eligible for RPO. Unutilized banked energy, in excess of 10% shall lapse.

2. MSEDCL's suggestions regarding present dispensations provided by Regulation to balance the equities.

(i) It is most respectfully submitted that the following dispensation are provided in Regulation 20.4 so as to balance the equities.

" Provided that the credit for banked energy shall not be permitted during the months of April, May, October and November, and the credit for energy banked in other months shall be as per



the energy injected in the respective Time of Day (TOD) slots

Provided further that the energy banked during peak TOD slots may also be drawn during off-peak TOD slots, but the energy banked during off-peak TOD slots may not be drawn during peak TOD slots. "

ii) It is to submit that, if the banking mechanism as proposed above is accepted, then the Provision 20.4 of Regulations may not be necessary and can be repealed. The infirm renewable energy may also be banked and drawn during the months of April, May, October and November. Also the energy banked in any 15 min time slot of the day (peak or off peak) may be drawn during any 15 min time slot of the day (peak or off peak) in terms of rupees currency as proposed in this Petition.

3. SEDCL has proposed the above alternative mechanism for banking based on the study and financial implication which

have been observed in the recent past. Electricity being a dynamic and an ever-evolving subject poses a new and emerging challenge every day and needs for new mechanism to minimize the ambit of foul play and preserving equities of all the stakeholders needs to be arrived at.

- 4. The Respondent craves leave of this Hon'ble Commission to file additional submissions/replies etc.

Date:

MSEDCL

Place: Mumbai

Respondent

[Handwritten signature]
20/10/21

