



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

**CASE NO. OF 2019**

**IN THE MATTER OF:**

PETITION OF MAHARASHTRA STATE ELECTRICITY DISTRIBUTION  
CO. LTD. FOR RECLASSIFICATION OF WIND ZONES OF WIND  
ENERGY PROJECTS IN MAHARASHTRA

**AND**

**IN THE MATTER OF:**

REGULATIONS 75, 76 AND 77 OF MERC (TERMS AND CONDITIONS  
FOR DETERMINATION OF RENEWABLE ENERGY TARIFF)  
REGULATIONS, 2010 and SECTION 61,62 OF EA 2003.

**AND**

**IN THE MATTER OF:**

THE REQUIREMENT TO ASSESS AND ALTER THE CRITERIA,  
METHODOLOGY, MODE AND MANNER OF WIND ZONE  
CLASSIFICATION OF WIND PROJECTS for Feed In Tariff (FIT).

**AND**

**IN THE MATTER OF:**

MAHARASHTRA ENERGY DEVELOPMENT AGENCY REPORT ON  
"STUDY OF WIND POWER DENSITY ZONES OF WIND POWER  
PROJECTS COMMISSIONED UNDER MERC TARIFF REGULATIONS,  
2010"

**AND**

**IN THE MATTER OF:**

MAHARASHTRA STATE ELECTRICITY DISTRIBUTION COMPANY  
LTD

The Chief Engineer (Renewable Energy),

Maharashtra State Electricity Distribution Co. Ltd

Plot No G-9, Prakashgad, 5th floor, Station Road,

Bandra (East), Mumbai – 400051

E-mail: [ceremsedcl@gmail.com](mailto:ceremsedcl@gmail.com)

..... **Petitioner**

Affidavit verifying the Petition

I, Kavita Gharat, aged 42 years, having my office at MSEDCL, Prakashgad, Bandra (E), Mumbai- 400 051, do hereby solemnly affirm and state as under;

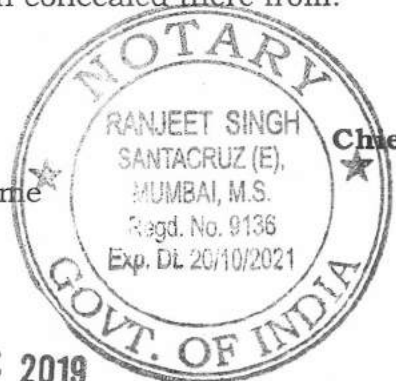
I am Chief Engineer (Renewable Energy) of the Maharashtra State Electricity Distribution Co. Ltd, (herein after referred to as "MSEDCL" for the sake of brevity), in the above matter and am duly authorized to make this affidavit.

The statements made in the enclosed petition are based on the information received from the concerned officers of the Company and I believe 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 Petitioners 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.

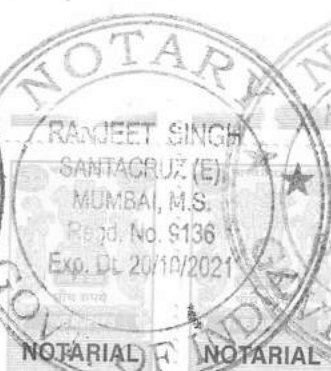
I solemnly affirm at Mumbai on this 13 DEC 2019 that the contents of this affidavit are true to my knowledge, no part of it is false and nothing material has been concealed there from.

Identified before me  
Place: Mumbai  
Date: 13 DEC 2019



*K. Gharat*  
Chief Engineer (Renewable Energy)

**BEFORE ME**  
*R. S.*  
**RANJEET SINGH**  
M.Sc.LL.B  
NOTARY  
MAHARASHTRA  
GOVT. OF INDIA





**IN THE MATTER OF:**

PETITION OF MAHARASHTRA STATE ELECTRICITY DISTRIBUTION CO. LTD. FOR RECLASSIFICATION OF WIND ZONES OF WIND ENERGY PROJECTS IN MAHARASHTRA

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E-mail: [ceremsedcl@gmail.com](mailto:ceremsedcl@gmail.com)

..... **Petitioner**

**Versus**

Maharashtra Energy Development Authority

MHADA Commercial Complex, II floor

Opp: Tridal Nagar, Yerwada.

Pune - 411 006

**MOST RESPECTFULLY SHOWETH:**

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 (*herein after referred to as "MSEB"*) under Section 131 of the Electricity Act, 2003.

- 1.2. MSEDCL 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 Respondent No. 1 is an Agency registered as a Society under Societies Registration Act, 1860 (in 1985) and Bombay Public Trust, 1950 (in 1987). It provides assistance to State and Central Government to promote and develop new and renewable sources of energy and technologies and to promote and implement energy conservation. It works as the State Nodal Agency in renewable energy sector and state designated agency in energy conservation sector. It is committed to explore the resources such as Wind, Bagasse Cogen, Hydro, Biomass, Geothermal, Wave which are clean and eco-friendly in nature. Maharashtra Electricity Regulatory



Commission vide its order dated 01.07.2010 has designated Maharashtra Energy Development Agency (hereinafter referred to as “MEDA” for sake of brevity) as a State Agency to undertake functions as envisaged in MERC (Renewable Purchase Obligation (RPO), its Compliance and REC Framework implementation) Regulations, 2010.

1.4. MSEDCL had approached the Commission in Case No. 41 of 2017 seeking revision in Wind Zone classification assigned by Maharashtra Energy Development Agency (MEDA) to the Wind Energy Projects achieving consistently higher generation in the last three years. The Commission vide its Order dated 3 April, 2018 did not allow the relief sought by MSEDCL. Thereafter, through review Petition in Case No 152 of 2018, MSEDCL approached the Commission for review of above said Order dated 3 April, 2018. The Commission by its Order dated 9 July, 2018 while allowing review sought report on MSEDCL’s plea regarding study of wind zone classification from MEDA. Accordingly, Report of MEDA (Annexure IV) was shared with MSEDCL, being Petitioner in Case No.



152 of 2018, for comments. MSEDCL submitted its comments on 22 April, 2019.

15. This Hon'ble Commissions gave the ruling in above matters on dated 10.07.2019 in case no. 108 of 2019 whereby liberty was given to MSEDCL to file a fresh petition for seeking specific relief. The relevant abstract of the ruling is reproduced as follows:

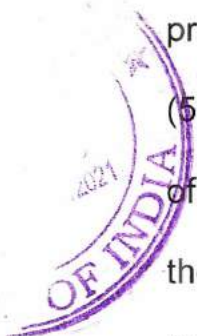
*"Based on the Report submitted by Maharashtra Energy Development Agency, if desired, Maharashtra State Electricity Distribution Co. Ltd. is at liberty to file a fresh Petition for seeking specific relief with a copy served on all affected parties with full justification for the relief sought, considering the provisions of the RE Tariff Regulations, 2010 and 2015, PPA and various RE Tariff Orders as well as by taking into consideration various Objections raised by Wind Generators."*

Hence the present petition.

**THE PETITION:**

2. The present Petition is filed by MSEDCL pursuant to the





provisions of Section 86 (1) (e) r/w Section 61 (b) to (d) and 62 (5) to (6), Section 86 (1) (b), Section 181 and other provisions of the Electricity Act, 2003 as applicable. The petition covers the provisions of the RE Tariff Regulations, 2010 and 2015, PPA executive with Wind generators under Group 4 and various RE Tariff Orders issued from time to time. The petition also takes into consideration various Objections raised by Wind Generators during the proceedings in Case No. 108 of 2019. The gist of objection raised by wind generators is as follows:

- (i) The Present proceeding is in contravention to the undertaking given by the Commission to the Bombay High court.
- (ii) Maintainability of Review Petition:
- (iii) Present proceeding is not maintainable against projects that have been set up under the RE Tariff Regulations, 2010.
- (iv) Amendment of Regulations with retrospective effect not permissible in law.
- (v) Wind zone classification and criteria of deciding it - CUF of first 3 year cannot be the criteria for revising the wind zone. There is no guarantee that same CUF will continue

for the entire duration of the Project.

(vi) Using advanced technology to optimize technical parameters shall not be penalized.



3. The petition addresses the above issues. This Hon'ble Commission has been conferred power under the Electricity Act, 2003 and the Regulations framed there under to consider and alter the methodology particularly as the proposed modification, alteration and amendment if any, to the wind zone classification methodology has a reasonable nexus with the object and the purpose of the Electricity Act, 2003.
  
4. MSEDCL would like to highlight the following issues for the kind consideration of this Hon'ble Commission which would assist this Hon'ble Commission in proper adjudication of the present matter. The issues as highlighted and discussed herein are without prejudice to one another:
  - (i) **What is the procedure adopted by MEDA for classification of wind zone? Is there provision in the Regulations for modification / amendment of the procedure?**



- (ii) Can the said procedure be approved without being incorporated in Regulations and without public consultation?
- (iii) Does MEDA report concludes that the projects were wrongly classified?
- (iv) Has MEDA revised the procedure devised in 2011 for wind zone classification after notification of MERC 2015 Regulations?
- (v) Has this Hon'ble Commission inadvertently missed the provisions of section 61 (d) of EA 2003 while issuing the RE generic tariff orders?
- (vi) Does an EPA executed under section 62 of EA 2003 permits a generating company to charge in excess tariff which it is permitted to recover?
- (vii) Does The Hon'ble Commission have powers to open the existing EPA and regulate the supply?



(viii)

Is the generator allowed to generate windfall gains by adopting better / advanced technology? If the generator is making profits by adopting better technology and generating above the benchmark CUF, such power shall be sold at preferential tariff of corresponding wind zone based on their actual generation/CUF.

**ISSUES DISCUSSED:**

- (i) **What is the procedure adopted by MEDA for classification of wind zone? Is there provision in the Regulations for modification / amendment of the procedure?**
5. **Zoning as per Annual Wind Power Density:**
- MERC notified the MERC RE tariff Regulations, 2010 and has determined source wise generic tariff from time to time for all approved RE sources as per the methodology stipulated in the Regulations mentioned above and the Regulations thereafter.
6. The MERC (Terms And Conditions For Determination of RE Tariff) Regulations, 2010 has laid down Capacity Utilisation

Factor (CUF) norms linked with annual mean wind power density. The relevant provisions (Regulation 26-Capacity Utilisation Factor) are reproduced as follows:

**26.1** *Capacity Utilisation Factor (CUF) norms for the Control Period shall be as follows:*

<b>Annual mean wind power density(<math>W/m^2</math>)</b>	<b>CUF</b>
200-250	20%
250-300	23%
300-400	27%
>400	30%

**26.2** *The annual mean wind power density specified in Regulation 26.1 above shall be measured at 50 metre hub-height.*

**26.3** *For the purpose of classification of wind energy project into particular wind zone class, the State-wise wind power density map prepared by the Centre for Wind Energy Technology (C-WET) and enclosed as Schedule to these Regulations, shall be considered.*

**Provided that the Commission may by notification in official gazette, amend the schedule from time to time, based on the input provided by C-WET/MNRE.**

7. Thus, the MERC RE Tariff Regulations 2010, allows amendment/change in the CUF from time to time under Regulation No. 26.3

8. **Procedure for Wind Zone Classification by MEDA**

MEDA has notified the "*Procedure for classification of wind power projects into wind zone class*" on dated 12.09.2011. The relevant abstract are reproduced as follows:

*"a. The value of annual mean Wind Power Density (WPD) of the windy sites declared by Centre for Wind Energy Technology (C-WET) under Ministry of New and Renewable Energy (MNRE) or Maharashtra Energy Development Agency (MEDA) programme; or the value of the annual mean WPD of the private windy site data vetted by C-WET, shall form the basis for the classification of wind power projects into wind zone class.*

*b. The effective area for each windy site declared by C-WET under MNRE or MEDA programme, and for the private windy site data vetted by C-WET, shall be 10 km radial distance from the location of the wind mast, which will be the reference point. The*




*annual mean WPD at the wind mast shall be considered to be the annual mean WPD for the effective area of that windy site. This annual mean WPD will be made applicable for the wind power projects falling within such effective area.*

- c. If a wind power project falls within the effective areas of two different wind masts having different values of annual mean WPD, then the annual mean WPD of the nearest wind mast shall be considered for that project. MEDA may advise the developer/investor, if found necessary in such a case, to approach C-WET to obtain project specific annual WPD report from C-WET.”*

It is pertinent to note that, MEDA's procedure states that, annual mean WPD measured by the wind mast forms the basis for the determination / classification of the wind zone. It is understood that, MEDA has classified all the Wind Zones accordingly.

#### **9. Revision in Zoning criteria by MERC**

Subsequently, considering the MNRE circular dated 1 August,




2011, which suggests that there should not be any restriction for minimum WPD of 200 W/m<sup>2</sup> for development of wind power projects and in pursuance of the powers of the Commission under “Deviation from Norms” as specified in Regulation 74.1 of RE Tariff Regulations, 2010, the Commission modified the wind zone-1 as “ $\leq 250$  W/m<sup>2</sup>” vide its generic RE tariff Order dated 22 March, 2013 issued for FY 2013-14 in Case No. 06 of 2013. **Thus, the MERC has already amended its RE tariff Regulations, 2010 in view of the above MNRE circular.**

10. It is to submit that, as early as in 2011, the CERC “Explanatory Memorandum For Draft Terms and Conditions for Determination of Tariff For Renewable Energy Sources November, 2011” has stated that “.....with better technology the higher CUF can be achieved at lower wind power density”.

Hence, the wind power density bracket should have been lowered for the CUF quoted in 2010 Regulations, instead the CUF for corresponding wind zone density was increased as shown in following table:





<b>Annual mean wind power density(W/m<sup>2</sup>)</b>	<b>CUF as per 2010 Regulations</b>	<b>CUF as per 2015 Regulations</b>
200-250 (<=250)	20%	22%
250-300 (>250 - <=300)	23%	25%
300-400 (>300 - <=400)	27%	30%
>400	30%	32%

The tariff is based on the CUF considered. Lower the CUF, Higher the tariff and vice versa. By increasing the CUF range the wind generators which would have otherwise in Zone II or higher category were retained in lower zone category as **Annual mean wind power density (W/m<sup>2</sup>) was the criterion considered for zoning instead of CUF**. As the relation between Wind Power Density, CUF and Preferential Tariff was not correctly effected, it resulted in undue enrichment of wind generators which is Ultra-vires to section 61 (d) of EA 2003.

11. MERC has categorically observed that there is need for revised zone-wise classification established through study of actual CUF data.




## 12. Direction to MEDA for CUF analysis of Wind Project

The Honourable Commission vide RE Tariff Order (Case No. 100 of 2014) for FY 2014-15 has specifically noted that, the benefit of advancement in the technology and improvement in the performance thereof should also be passed on to the utilities/consumers and accordingly directed MEDA to submit a report of project-wise CUF of wind projects in the State. The relevant extract is reproduced as follows:

*“.....The Commission recognizes that CUF to be specified against the revised zone-wise classification and higher hub height need to be established through study of actual CUF data for the recent years in the State.*

*Accordingly, the Commission directs MEDA to submit a report of project-wise CUF of wind projects in the State for the latest two years (FY 2012-13 & FY 2013-14) which would be taken into consideration to arrive at the CUF norms to be specified against the revised zone-wise classification at higher hub height. Result of such analysis shall be considered by the Commission for arriving at appropriate CUF norms in the future years.*



*Meanwhile, for the purpose of the FY 2014-15, the Commission in pursuance of its powers under “Deviation from Norms” as specified in Regulation 74.1 of RE Tariff Regulations, 2010, adopts the wind zone-wise CUFs norms as specified by CERC for the comparable wind zones specified under the CERC RE Regulations, 2012 and the Commission’s RE Tariff Regulations, 2010....”*

However the said directives were not complied by MEDA.

**13. MSEDCL’s Petition for Wind Zone Reclassification**

MSEDCL filed Petition for revision in Wind Zone classification of Wind Energy Projects with consistently higher generation. Again vide order dated 09 July 2018, the Hon’ble Commission directed MEDA to submit its report on Wind Zone classification based on actual data.

**14. MEDA’s Report**

The report submitted by MEDA on 28.02.2019, as per the order of Hon’ble Commission dated 09 July 2018 in Case No. 152 of 2018, states that, details of only 1 (one) wind mast are available with MEDA out of the total 14 wind masts (para 1.2, page no. 13). It is surprising to note that MEDA being the state nodal agency for development of renewable energy in



Maharashtra ought to have complete details of all the wind masts in the State whether owned by private developers or NIWE. If MEDA does not have the data of wind mast at first place, then question arise how did MEDA classified wind zone for 1519 no. of WTG (1572 MW) because as per its procedure (details in para 8) wind zone classification has to be done with respect to wind power density in 10 Km radius of wind mast. If MEDA has data for only one mast, did they classify wind zones for entire state with one method flouting their own rules.

15. It is to submit that, the wind zone classification done by MEDA is in violation of their own rules/ procedures. In absence of authentic data the wind zones classified by MEDA automatically become null and void right from beginning and any tariff fixed on that needs to be compulsorily reopened.

16. **NIWE Data and opinion**

The above fact is confirmed from the data available on NIWE webportal (<http://niwe.res.in>) for private wind monitoring stations i.e. wind mast for period from 20.06.2008 to 31.03.2012.



The data is as under:

Sr. No.	Owned by	Name of the site	District	Mast Height	Measured intrapolated / extrapolated at 50m AGL	
					WS	WPD
01	Enercon (I) Ltd. Mumbai	Vedganga	Kolhapur	75	6.64	310.16
02		Andralake	Pune	58	6.14	200.44
03		Ghotibudruk	Nasik	58	7.10	416.14
04		Andra Lake Western	Pune	58	6.25	230.91
05		Chandwad	Nasik	101	6.00	204.08
06		Igatpuri	Nasik	58	6.05	254.58
07		Kitawade	Kolhapur	58	6.49	321.49
08		Suleran	Kolhapur	76	7.08	336.51
09		Chavaneshwar	Satara	58	6.30	219.75
10		Chavaneshwar (k)	Satara	57	6.48	228.16
11			Khandke	Ahmednagar	76	6.46
12	M/s Kenersys Ind. Pvt. Ltd.	Rani Amberi	Satara	85	6.52	281.11
13	Sarvoday Properties Pvt Ltd	Avandi	Kolhapur	50	6.71	276.95
14	Suzlon Energy Ltd.	Sadawaghapur Forest	Satara	65	6.45	315.90
15		Gude Panchagani-II	Sangli	65	6.57	287.99
16		Malavshi	Satara	65	6.10	330.20
17		Gotne	Satara	65	5.87	257.11
18		Karvat	Satara	65	6.64	265.96
19		Maloshi	Satara	65	5.9	262.75
20		Maharsavali	Aurangabad	80	7	279.26
21	TS Wind Developer.	Kolvan	Kolhapur	80	7.41	426.23



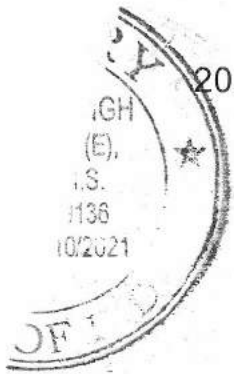
17. From the above data, it is established that, the wind sites in Maharashtra, especially in the Pune, Satara, Kolhapur, Nashik Districts has wind potential of Zone II and above even considering the wind mast height of 50 Mtr. If the same is extrapolated at 80 mtr hub height then the potential may fall in zone IV category also.

18. Further, it is to submit that, MEDA vide letter dated 09.08.2017 (Annexure V) sought opinion of National Institute of Wind Energy (NIWE) for wind zone class in respect of wind power projects. In reply to this letter NIWE, vide its letter dated 10.08.2017, had opined that the factors for deciding the adoption of an appropriate procedure for fixation of Wind Zone are as follows:

- (i) based on actual generation /CUF, or
- (ii) based on numerical at a static height (50m or 80 m) , or
- (iii) based on a combination of the above.

The above suggestion (i) by NIWE is in line with the MSEDCL's prayer.

19. Hence, it is observed that, the MEDA's procedure did not serve the purpose intend for zoning, the procedure formulated was not implemented with true spirit of wind zoning as envisaged under the Regulations.



20. It is to submit that, MEDA shall be directed to submit all record of zone classification. It is also pertinent to mention that, when the EPA between MSEDCL has Wind generators had the Specific provision of measurement of WPD at 80 mtr hub height (for the EPA signed after Nov. 2015) the same was not adhered too. The details submission on the same is provided at para (26 and 27 ) of the present petition.

It is clear that, the classification done by MEDA is not correct and has automatically become null of void from beginning. Hence, the Hon'ble Commission may amend/change the CUF on actual basis as empowered under Regulation 26.3 of MERC RE Tariff Regulations 2010.

(ii) Can the said procedure approved without being incorporated in Regulations and without public consultation?

21. It is to submit that, the methodology adopted by MEDA should have been incorporated in Regulations through public consultation process. MEDA's own report dated 28.02.2019 has pointed out the short-coming of the said methodology. MSEDCL has already submitted the detailed comments



(Annexure VII) on the said report. The same are not repeated for the sake of brevity. However, the observation made and conclusion drawn from the said report are specified at para 22 below. Hence, it clearly demonstrates that, the said procedure was required to be approved only after considering views of all stakeholders.

(iii) **Does MEDA report concludes that the projects were wrongly classified?**

22. In its report MEDA has stated that for some projects the generation has been higher i.e. the average CUF has been higher than 20% may be due to any of the four listed reasons [as per the No. 1.3 (Page No. 14 and 15)of the report].

**A. Wind farm's zone may be wrongly determined as Zone I instead of Zone II/III/IV.**

MEDA has itself accepted that wind zones of the said wind farms have been wrongly determined as Zone I instead of Zone II/III/IV.

**B. Higher generation may be due to deployment of high hub height wind turbines than that of 50 mtr.**





It is an established fact that, more the hub height – more the wind speed and higher the CUF. Hence the MEDA's methodology which identifies a geographical area based on the fixed hub height of MAST for wind zoning has a serious drawback. The said methodology treats the wind mills of different hub height at par. Even we strictly go by wind power density / wind speed method of classifying the wind zone, the wind density will vary for each machine depending on the hub height.

- C. Wind project / some of the wind turbines got the advantage of best location, elevation, lower array loss etc.**
- D. Improved wind profile/pattern in the year when CUF was assessed as compared to that of the wind mast's data was referred for measurement.**

23. MEDA has agreed in its report (Page No. 42) that 602.7 MW projects are generating energy at a CUF of more than 20%. It is to state hereby that, such wrong classification of even 602 MW



leads to financial burden of around **Eighty crores per annum** on the common consumers of the state of Maharashtra. As MEDA has agreed that 602.7 MW projects are generating more than 20% CUF, the Commission shall allow MSEDCL to amend the wind zone for these projects with immediate effect and also allow recovery of the excess tariff paid for these projects since their commissioning. For remaining areas, where some projects (31%) are achieving higher CUF, their wind zones should be re-classified as per actual CUF.

(iv) Has MEDA revised the procedure devised in September 2011 for wind zone classification after notification of MERC 2015 Regulations?

24. The amendments in the CUF norms (as compared to RE Tariff Regulations, 2010 owing to higher hub height) had been made through notification dated 10<sup>th</sup> November 2015. The excerpts of the amendments made on 10<sup>th</sup> November 2015 in the CUF norms (as compared to RE Tariff Regulations, 2010) are as under:



*"28. Capacity Utilisation Factor*

*28.1 The CUF norms for wind Energy Projects for the Review Period shall be as follows for the purpose of tariff determination:*

<b>Wind Zone</b>	<b>Annual Mean wind Power Density (W/m<sup>2</sup>)</b>	<b>CUF</b>
<i>Zone 1</i>	<i>&lt;= 250</i>	<i>22%</i>
<i>Zone 2</i>	<i>&gt;250 &lt;=300</i>	<i>25%</i>
<i>Zone 3</i>	<i>&gt;300 &lt;=400</i>	<i>30%</i>
<i>Zone 4</i>	<i>&gt;400</i>	<i>32%</i>

*Provided that these CUF norms may be revised by the Commission through general or specific Order considering data that may become available subsequently.*

*28.2 The **annual mean wind power density specified in Regulation 28.1 shall be measured at 80 meter hub height, and State Nodal Agency shall certify the Wind Zone relevant to the proposed Wind Energy Project.***

*28.3 For the purpose of classification of a Wind Energy Project in a particular Wind Zone class, the State Nodal Agency shall refer to the wind power density map prepared by the National Institute for Wind Energy."*

25. It is pertinent to mention that, the EPA's signed by MSEDCL with the Wind generators after the MERC (Terms and

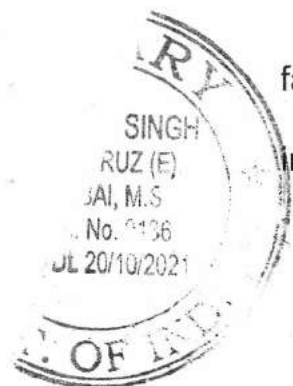


Conditions for Determination of Renewable Energy Tariff) Regulations, 2015 has incorporated the above directives at clause 7.01 of EPA as under:

*Clause No. 7.01*

*For the purpose of classification of wind energy project into particular wind zone class, the annual **Mean Wind Power Density specified in Regulation 28.1 shall be measured at 80 meter hub height** and the State Nodal Agency (MEDA) shall certify the relevant wind zone based on wind power density map prepared by the National Institute for Wind Energy (NIWE).*

26. It is to submit that, MEDA continued with the same old methodology for “wind zoning of wind mills” devised in September 2011 even for the EPA signed after 2015 Regulations by considering WPD at 50 mtr hub height inspite of clear provision in EPA to consider WPD at 80 mtrs for zoning. The same is established from the “Minutes of Wind Zone Classification & Evaluation Committee” published on MEDA website. It is also observed the zoning is being done with a delay of almost 2 years. MEDA must be asked for the reasons for not following Regulations, provisions of EPA and impact of financial burden on consumers.
27. The tentative nos. of EPA’s and sample MoM establishing the



fact that, the wind zones were classified on 50 mtr. hub height instead of 80 mtr. as provided in EPA, are as follows:

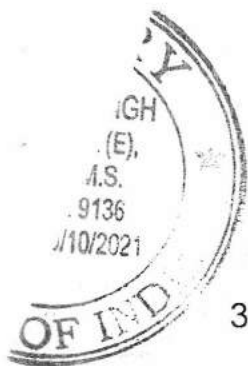
Sr. No.	EPA execution FY	EPA executed		Zoning done at 50 mtr. hub height (sample data)	
		No.	MW	No.	MW
1	2016-17	157	401.95	6	7.4
2	2017-18	23	119.45	5	20
<b>Total</b>		<b>182</b>	<b>525.4</b>	<b>11</b>	<b>27.4</b>

The sample EPAs and corresponding MEDA's MoM are annexed here to as Annexure I.

28. It is to submit that, from the report submitted by MEDA on dated 28.02.2019 it has been observed that MEDA does not have WPD data at all locations and has data available of only one wind mast out of 14 which were under consideration (para 1.2, page no. 13).

29. It is clear that MEDA has not followed Regulations as amended on 10<sup>th</sup> Nov 2015 and provisions in EPA (the actual hub height of the windmill vis-à-vis the hub height considered for zoning) for reasons best known to them causing losses to MSEDCL' consumers.

(v) Has this Hon'ble Commission inadvertently missed the



provisions of section 61 (d) of EA 2003 while issuing the RE generic tariff orders?

30. The Section 61, 62 and 63 of Electricity Act 2003 has empowered the State Regulatory Commissions to determine the tariff. The provisions of section 61 are reproduced as follows:

61. *The Appropriate Commission shall, subject to the provisions of this Act, specify the terms and conditions for the determination of tariff, and in doing so, shall be guided by the following, namely:-*

- (a) *the principles and methodologies specified by the Central Commission for determination of the tariff applicable to generating companies and transmission licensees;*
- (b) *the generation, transmission, distribution and supply of electricity are conducted on commercial principles;*
- (c) *the factors which would encourage competition, efficiency, economical use of*



*the resources, good performance and optimum investments;*

*(d) safeguarding of consumers' interest and at the same time, recovery of the cost of electricity in a reasonable manner;*

31. It is to submit that, the section 61 (h) of EA 2003 does envisage the promotion of Renewable Energy but it has to be read in context of other provisions of Act as well. The Renewable energy has to be sustainable and energy generated from such sources has to in line with the provisions of section 61 (b), (c), (d).
32. It is to submit that, the first rule of statutory interpretation is that the statute must be read as a whole. It has been proven from the CUF data enclosed herewith that, the wind mills achieving CUF which pertains to zone II/III/IV has been granted the tariff of zone I, which is highest among all zones. This is against the provision 61 (d) of Electricity Act and is injustice with the consumers of licensee.
33. The classification of wind projects assumes great significance and importance in view of the competing interests required to



be balanced under the provisions of the Electricity Act, 2003. On one hand, the promotion of RE-Energy like wind has to be ensured while on the other adherence to commercial principles and safeguarding of consumer interests has to be finely balanced.

- (vi) Does an EPA executed under section 62 of EA 2003 permits a generating company to charge in excess tariff which it is permitted to recover?

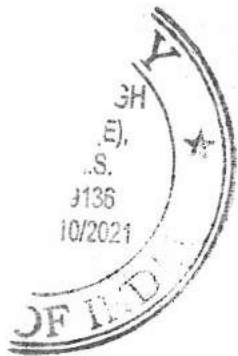
34. The Section 62 of Electricity Act 2003 has empowered the State Regulatory Commissions to determine the tariff. The relevant clauses are reproduced as follows:

62. (1) *The Appropriate Commission shall determine the tariff in accordance with provisions of this Act for –*

(a) ***supply of electricity by a generating company to a distribution licensee:***

*Provided that the Appropriate Commission may, in case of shortage of supply of electricity, fix the minimum and maximum ceiling of tariff*





*for sale or purchase of electricity in pursuance of an agreement, entered into between a generating company and a licensee or between licensees, for a period not exceeding one year to ensure reasonable prices of electricity;*

*(b) transmission of electricity ;*

*(c) wheeling of electricity;*

*(d) retail sale of electricity.*

.....

***(2) The Appropriate Commission may require a licensee or a generating company to furnish separate details, as may be specified in respect of generation, transmission and distribution for determination of tariff.***

.....

.....

***(5) The Commission may require a licensee or a generating company to comply with such procedures as may be specified for calculating the expected revenues from the***



*tariff and charges which he or it is permitted to recover.*

- (6) *If any licensee or a generating company recovers a price or charge exceeding the tariff determined under this section, the excess amount shall be recoverable by the person who has paid such price or charge along with interest equivalent to the bank rate without prejudice to any other liability incurred by the licensee.***

29. It is to submit that, the tariff determined under Generic Tariff determination process are as per section 62 of EA 2003. The Generic tariff order takes care of all elements from the generator / investor point of view including the return of equity / profit.

30. That in the instant case, the Petitioner has demonstrated a prima facie case, much less a balance of convenience and grave harm being caused to the public interest. The data shows a prima facie violation of the law. The Commission has relied



on principles prescribed under Section 62 of the Electricity Act, 2003 (hereinafter “the Act”), for framing the regulations. From the bare perusal of the provisions of section 62 of EA 2003, the Commission is required to balance the interests of common consumers and the generators from the factual data provided along with the Present Petition.

31. That by not considering the balance of convenience had and will have an adverse effect on the finances and therefore, the Petitioner was and will be forced to resort to alternative sources of raising revenue which had/will further have holding cost and was / will eventually be passed on to the common consumers of the utility as the Petitioner is a revenue neutral entity and is subject to regulation at every level by the Ld. MERC. Therefore, providing undue benefits to the wind generators will be contrary to public interest. The Hon’ble Supreme Court in All India Power Engineer Federation v. Sasan Power Ltd., (2017) 1 SCC 487, held that it is clear that the moment electricity tariff gets affected, the consumer interest comes in and public interest gets affected and that this aspect of the matter was statutorily recognised by the Act in Sections 61 and 62 which clearly provided that when the appropriate commission specifies terms



and conditions for determination of tariff it is to be guided inter alia by the safeguarding of the consumer interest and the recovery of the cost of electricity in a reasonable manner.

32. That the allegation of the Appellant that the alternation in Regulations makes the RE unviable and as such is unlawful is without any basis. The Act clearly mandated that the RE tariff shall be determined in reasonable manner to safeguard consumers interest.
33. As per the generic tariff order the CUF and tariff are inversely proportional i.e. higher the CUF lower the tariff and vice versa.
34. The tariff determined by this Hon'ble Commission for wind mills starting from 2010 is as follows:

FY	Zone 1 in INR	Zone 2 in INR	Zone 3 in INR	Zone 4 in INR
2010-11	5.07	4.41	3.75	3.38
2011-12	5.37	4.67	3.97	3.58
2012-13	5.67	4.93	4.20	3.78
2013-14	5.81	5.05	4.31	3.88
2014-15	5.70	5.01	4.18	3.92
2015-16	5.71	5.02	4.19	3.92
2016-17	5.56	4.89	4.08	3.82
2017-18	5.40	4.75	3.96	3.71

35. As seen from above table, there is increasing trend in the



generic tariff for wind power as against the decreasing trend in generic tariff of solar generators due to advancement in technology (Drastic reduction of tariff from Rs. 17.91 p.u in FY 2010-11 to Rs. 5.13 in FY 2017-18). It is to mention that, there was innovation in technology of wind mills also and with better technological advancement the efficiency of wind turbine has increased. This should have resulted in decreasing trend in wind power generic tariff likewise of Solar projects, which is not the case.

36. However due to wrong zoning the generators are getting highest tariff for higher CUF. Hence the generators are recovering more than what they are permitted to recover.

**(vii) Does the Hon'ble Commission have powers to open the existing EPA and regulate the supply?**

37. It is to submit that, MSEDCL has analyzed CUF on actual generation data from FY 2010-11 to FY 2018-19 of the 1656 no. of wind mills. MSEDCL has calculated the CUF based on actual generation and compared it with the CUF norms for corresponding wind zone.

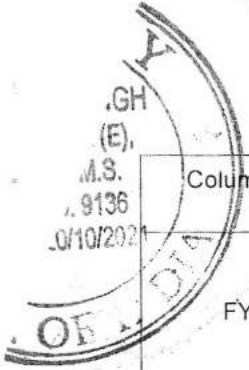
As given in the Regulations the CUF and corresponding wind

zone are as follows:

<i>Wind Zone</i>	<i>CUF as per 2010 Regulations</i>	<i>CUF as per 2015 Regulations</i>
<i>Zone I</i>	<i>20%</i>	<i>22%</i>
<i>Zone II</i>	<i>23%</i>	<i>25%</i>
<i>Zone III</i>	<i>27%</i>	<i>30%</i>
<i>Zone IV</i>	<i>30%</i>	<i>32%</i>

38. Based on the CUF derived from actual generation the zone is allotted as shown in above table. Accordingly, the yearwise analysis of windmill based on generation CUF is shown in the following table. The column 1 of the table shows the FY considered for the calculation of CUF. The Column 2 shows the no. of machines considered for analysis. The column no. 3 shows the number of machines whose CUF based on actual generation is more than zone 1 (i. e. upto 20% CUF as per 2010 Regulations and upto 22 % as per 2015 Regulations). The column 4 indicated the no. of machines whose CUF based on actual generation falls under zone II category. (i. e. <20% and > 22% CUF as per 2010 Regulations and <22 % and > 25% as per 2015 Regulations). The column 5 and 6 indicates the no. of machines falling under zone III and IV. The column 7 indicates the % number of machines which has generation CUF of higher

zone category.



Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7
FY	No. of Machines in Group 4	No. of M/c with high CUF (than zone I)	Wind Zone - II	Wind Zone - III	Wind Zone - IV	% Machines in higher zone
2010-11	79	1	1	0	0	1
2011-12	362	8	6	2	0	2
2012-13	537	160	104	35	21	30
2013-14	1189	355	126	185	44	30
2014-15	1388	448	297	135	16	32
2015-16	1490	609	339	199	71	41
2016-17	1519	873	370	302	201	57
2017-18	1519	694	375	259	60	46
2018-19	1519	1025	336	462	227	67

39. From the above table it can be seen that, based on the CUF calculated on actual generation, for any given FY under consideration there are quite large number of windmills which are wrongly classified in low wind zone category e. g. for FY 2016-17 the no. of machines considered for analysis are 1646. As per the data available 97% of the machines has been classified under zone I however the CUF based data shows that 53% of the machines has actual CUF more than that of zone 1 category and falls in higher wind zone category.

40. Due to such wrong wind zone classification MSEDCL's consumers have suffered financial burden to the tune INR 1556 Crores (with tentative compounded interest of Rs. 520.75 Crs. till



date ) since FY 2010-11 till now as WTGs are generating power continuously at CUF higher than their classified zone and supplied power to MSEDCL at the higher tariff of Zone I. The details are annexed hereto as **Annexure II**.

41. From above table, it can be observed that in merely 6-7 years (half EPA tenure), the financial burden on common consumers is to the tune of Rs. 1556 Crs. (with tentative compounded interest of Rs. 520.75 Crs. till date ) that too on account of wrong Wind Zone classification carried out by MEDA.
42. The Hon'ble APTEL in case 293 of 2017 dated 29.07.2019 has stated that the State Commissions has authority to revisit the terms and conditions of even the concluded contracts, i.e. PPA, if circumstances warrant. The relevant extract is reproduced as follows:

*26. It is not in dispute that in terms of the Agreement, sale of excess energy banked with KSEB Ltd could be opted out only after meeting the requirement of factories of the Appellant. This would mean, after utilising the power required for the factories of the Appellant and its associates, the excess banked energy has to be arrived at. Since the Act 2003 has*

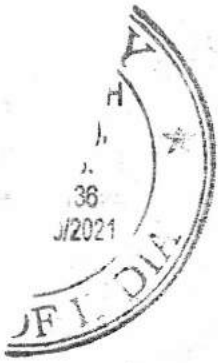




*introduced the scenario of facility of open access and created Electricity Regulatory Commission for regulating the electricity purchase and procurement process of the distribution licensees including the price at which power can be purchased, one cannot dispute the fact that State Regulatory Commission has the authority to revisit the terms and conditions of even the concluded contracts, i.e. PPA, if circumstances warrant.*

43. It is to submit that, the classification of wind zones was carried out wrongly by MEDA. MERC has time and again acknowledged the same and directed MEDA to look into the matter. However, the same was not complied by MEDA. In fact, MERC has even made the provision for amendment of CUF vide Regulation 26.3 of MERC RE Tariff Regulations, 2010, based on the input provided by C-WET/MNRE.
44. Further, the Act has empowered the State Commission to “regulate” the purchase of electricity by Discom from the generating companies through agreement. The relevant provision of the Act is reproduces as follows:

86. (1) *The State Commission shall discharge the following*



functions, namely: -

*(b) regulate electricity purchase and procurement process of distribution licensees including the price at which electricity shall be procured from the generating companies or licensees or from other sources through agreements for purchase of power for distribution and supply within the State;*

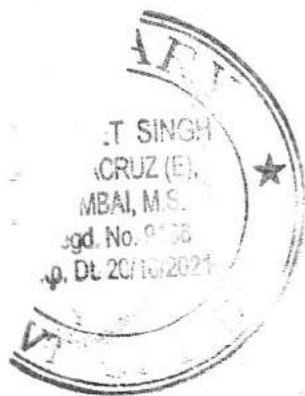
45. It is to state that, the Section 79 (1) (b) and Section 86 (1) (b) of the statute are similar provisions which empowers the CERC and SERC to regulate the tariff respectively.

46. In respect to the 79 (1) (b) provision of the Act, the Hon'ble Supreme Court in Civil Appeal Nos.5399-5400 of 2016 dated 11.04.2017 has specifically observed that, the CERC has powers to regulate the tariff under Section 79 (1) (b) of the Act meaning thereby the tariff as decided in agreement can be altered or changed. The relevant abstract of the Hon'ble Supreme Court judgement is reproduced as follows:

*19. It is important to note that the regulatory powers of the Central Commission, so far as tariff is concerned, are specifically mentioned in Section 79(1). This regulatory power is a general one, and it is very difficult to state that when the Commission adopts tariff under Section 63, it functions de hors its general regulatory power under Section 79(1)(b). For one thing, such regulation takes*



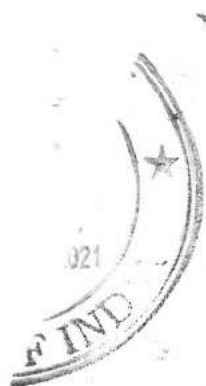
place under the Central Government's guidelines. For another, in a situation where there are no guidelines or in a situation which is not covered by the guidelines, can it be said that the Commission's power to "regulate" tariff is completely done away with. According to us, this is not a correct way of reading the aforesaid statutory provisions. The first rule of statutory interpretation is that the statute must be read as a whole. As a concomitant of that rule, it is also clear that all the discordant notes struck by the various Sections must be harmonized. Considering the fact that the non-obstante clause advisedly restricts itself to Section 62, we see no good reason to put Section 79 out of the way altogether. The reason why Section 62 alone has been put out of the way is that determination of tariff can take place in one of two ways – either under Section 62, where the Commission itself determines the tariff in accordance with the provisions of the Act, (after laying down the terms and conditions for determination of tariff mentioned in Section 61) or under Section 63 where the Commission adopts tariff that is already determined by a transparent process of bidding. **In either case, the general regulatory power of the Commission under Section 79(1)(b) is the source of the power to regulate, which includes the power to determine or adopt tariff. In fact, Sections 62 and 63 deal with "determination" of tariff, which is part of "regulating" tariff. Whereas "determining" tariff for inter-State transmission of electricity is dealt with by**



*Section 79(1)(d), Section 79(1)(b) is a wider source of power to “regulate” tariff. It is clear that in a situation where the guidelines issued by the Central Government under Section 63 cover the situation, the Central Commission is bound by those guidelines and must exercise its regulatory functions, albeit under Section 79(1)(b), only in accordance with those guidelines. As has been stated above, it is only in a situation where there are no guidelines framed at all **or where the guidelines do not deal with a given situation that the Commission’s general regulatory powers under Section 79(1)(b) can then be used.***

47. It is to submit that in peculiar facts and circumstances of the present petition and considering the provisions of Section 61 (d) and 86 (b), this Hon’ble Commission has been empowered to regulate the tariff between Discom and generating companies having power purchase agreements.

**(viii) Is the generator allowed to generate windfall gains by adopting better / advanced technology? If the generator is making profits by adopting better technology and generating above the benchmark CUF, such power shall be sold at preferential tariff of corresponding wind zone based on their actual generation/CUF.**



48. It has been argued that, the higher CUF are being achieved due to use of better technology and better hub height which requires additional capital cost.
49. MEDA should have approached the Hon'ble Commission for re-determination of Tariff by factoring the additional capital cost for WTG of 80m hub height instead of WTG of 50m hub height along with the higher CUF for such WTGs. However MEDA did not do the same. Further, MEDA or the Wind Power Generators did not have any free license to improve technology unilaterally and have tariff determined by considering technology under 'Feed – in Tariff' thus causing loss to consumers of Maharashtra.
50. Further, it is to submit that, if the capital cost increases the tariff increases and if the CUF increases the tariff decreases. As highlighted at para 35 above, it is seen that with advancement of technology in Solar generation, there is drastic reduction in tariff. Hence, it necessary to certify that, by incurring the additional cost towards use of advance technology how much additional income was generated by the Wind generators.
51. As per Central Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2012 dated 06.02.2012, the clause related



to capital cost and hub height is mentioned as below:

*Chapter 3: Technology specific parameters for Wind Energy*

**24. Capital Cost:**

*The capital cost for wind energy projects shall be 575 Lakh/MW (FY 2012- 13). The relevant pages of CERC Annexure III*

**26. Capacity Utilisation Factor (CUF):**

*The annual mean wind power density specified in sub-regulation (1) above shall be measured at 80 meter hub-height.*

52. An exercise was carried out for academic interest to evaluate the same. The results are summarised as follows:

Hub Height at 50 mtr			Hub Height at 80 mtr			Additional Tariff towards Additional capital cost	Additional tariff claimed of zone I in spite of CUF of higher class (CUF 25%)	Additional Revenue:	Excess profit earned per MW over period of 13 years
A			B			C	D	D - C	
Capital Cost (Lacs/MW)	CU F (%)	Tariff (Rs. p. u.)	Capital Cost (Lacs/MW)	CUF (%)	Tariff (Rs. p. u.)	Tariff (B-C)			=1x1000x24x365x13x0.25x0.47
538.18	20	5.81	575	20	6.14	33.paisa	80 paisa (i. e. Zone II tariff Rs. 5.01)	47 paisa	1.33 Crores

53. Hence, MSEDCL submits that the wind generators has taken /are taking undue advantage of higher tariff by registering under Zone-I instead of being registered under Zone- II/III/IV in accordance with their actual CUF which is much higher than the



CUF of Zone-I.

54. As such, considering the huge financial impact as demonstrated above at para 40 MSEDCL sincerely feels that the re-zoning of windmills is very much necessary and following options can be explored:

a) The classification shall be based on CUF (calculated on actual generation) as stipulated by regulator.

b) Revisiting classification of WTG post 2015-16 in view of wrong classification of WTG by MEDA by not considering the actual hub height

55. The exercise for reclassification of wind zone has to be undertaken to ensure that the delegated legislation which governs the field of the classification of wind projects is in tandem and conformity with the changing technology relating to the wind projects including the changed requirements relating to metering etc. The evolving and changing technical and technological scenario cannot be ignored to the detriment of the interests of the common consumers of the State. Delegated legislation framed a decade back, governing the field of classification of wind projects may not be appropriate to address



the changed scenario. To that extent, the Commission as Regulator would be in position to address the changed scenario. It is submitted that the wind zone classification undertaken in 2010 or there about cannot be construed as perennial and the impact of subsequent technological and technical advancement needs to be factored in. The present Petition seeks to address the issue of wind zone classification in the changed scenario while harmoniously considering the requirement to balance competing interests.

56. To conclude MSEDCL proposes that, the wind zone of a wind turbine shall be determined based on the actual generation i.e. CUF achieved for that financial year and the payment shall be effected as per preferential tariff determined pertaining to the CUF. The same has also been opined by NIWE vide its letter dated 10.08.2017. By adopting such practice, the generator's interest will also be taken care of in case there is low CUF for a particular financial year. At the same time it will also protect the consumer's interest.



**PRAYERS**

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

- (i) To admit the present petition and to invite comments from the respondents including any other stake holder and permit MSEDCL to file its detailed response to the said suggestion / objection / comments on subsequent date.
- (ii) Direct such data and details as are with the wind generators, MEDA and other entities to be filed before this Hon'ble Commission.
- (iii) MEDA shall be directed to file all such papers on which the windmills were classified in respect of all WTGs.
- (iv) The MEDA shall be directed to submit the reason for not considering the 80 mtr hub height for wind zone classification as stipulated in Nov. 2015 Regulation.
- (v) Amend / modify/ rectify the wind zone classification methodology as prescribed / stipulated and / or declared by MEDA in conformity with the provisions





of Section 86 (1) (e) r/w Section 61, Section 181, Section 64 and other provisions of the Electricity Act, 2003, as applicable, after following the due process therefor.

- (vi) Pass appropriate orders and directions for reclassification based on the actual generation by the WTG.
- (vii) Pass appropriate consequential, incidental and miscellaneous orders and directions in relation to the existing PPAs to ensure conformity with the modified / altered / amended wind zone classification.
- (viii) To allow MSEDCL to make any further submissions/ filing if the need arises
- (ix) To condone any inadvertent omissions/ errors/ shortcomings and permit MSEDCL to add/ change/ modify/ alter this filing and make further submissions as may be required at a future date.

(x) 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.

*K. Karat*  
Chief Engineer (Renewable Energy)

Place: Mumbai

Date:

