

**BEFORE THE MAHARASHTRA STATE REGULATORY
COMMISSION**

CASE NO. _____ OF 2018

Filing No. _____

IN THE MATTER OF

**PETITION FOR SEEKING APPROVAL FOR BIDDING DOCUMENTS
OF LONG TERM WIND SOLAR HYBRID POWER PROCUREMENT
FOR 25 YEARS TO MEET THE RENEWABLE PURCHASE
OBLIGATIONS.**

AND

IN THE MATTER OF

**REGULATION 5 OF THE MERC (TERMS AND CONDITIONS FOR
DETERMINATION OF RENEWABLE ENERGY TARIFF)
REGULATIONS, 2015**

IN THE MATTER OF

**REGULATION 19 OF MERC (RPO, ITS COMPLIANCE AND
IMPLEMENTATION OF REC FRAMEWORK) REGULATIONS, 2016.**

AND IN THE MATTER OF

**REGULATION 94 OF MERC (CONDUCT OF BUSINESS)
REGULATIONS, 2004.**

AND

IN THE MATTER OF

**MAHARASHTRA STATE ELECTRICITY DISTRIBUTION COMPANY
LTD PETITIONER;**

**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**

**AFFIDAVIT ON BEHALF OF PETITIONER (MSEDCL) VERIFYING THE
PETITION**



I, KAVITA K. GHARAT, aged 40 years having my office at 5th Floor, Prakashgad, Bandra (East), Mumbai-400051 do solemnly affirm and say as follows:

1. I am the Chief Engineer (Renewable Energy) of Maharashtra State Electricity Distribution Co. Ltd., the respondent in the above matter and am duly authorized competent to make this affidavit.
2. The statements made in paragraphs of the petition are true to my knowledge and belief and statements made in paragraphs 1 to 6 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 Petitioner is 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 day...22... of month October... 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.

Identified before me

Deponent

Kharat

Chief Engineer (Renewable Energy)
MSEDCL

Date: 22.10.2018

Place: Mumbai

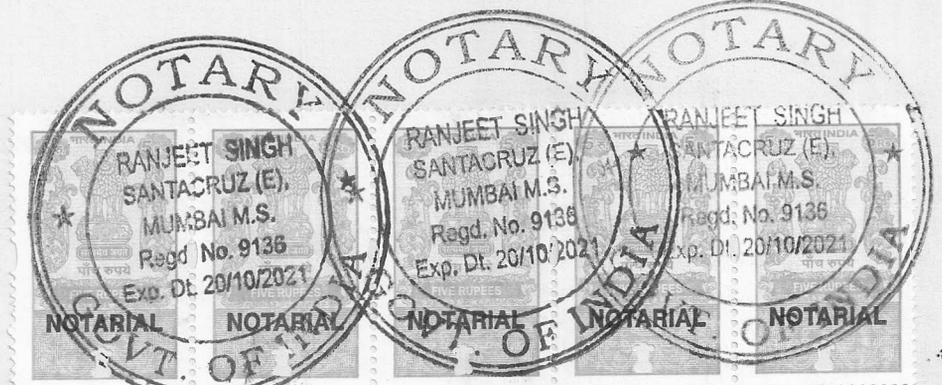


BEFORE ME

R Singh

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

22 OCT 2018



BEFORE THE MAHARASHTRA STATE REGULATORY
COMMISSION

CASE NO. _____ OF 2018

Filing No. _____

IN THE MATTER OF

PETITION FOR SEEKING APPROVAL FOR BIDDING DOCUMENTS
OF LONG TERM WIND SOLAR HYBRID POWER PROCUREMENT
FOR 25 YEARS TO MEET THE RENEWABLE PURCHASE
OBLIGATIONS.

AND

IN THE MATTER OF

REGULATION 5 OF THE MERC (TERMS AND CONDITIONS FOR
DETERMINATION OF RENEWABLE ENERGY TARIFF)
REGULATIONS, 2015

IN THE MATTER OF

REGULATION 19 OF MERC (RPO, ITS COMPLIANCE AND
IMPLEMENTATION OF REC FRAMEWORK) REGULATIONS, 2016.

AND IN THE MATTER OF

REGULATION 94 OF MERC (CONDUCT OF BUSINESS)
REGULATIONS, 2004.

AND

IN THE MATTER OF

MAHARASHTRA STATE ELECTRICITY DISTRIBUTION COMPANY
LTD PETITIONER;

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

**MAHARASHTRA STATE ELECTRICITY DISTRIBUTION COMPANY
LTD. RESPECTFULLY SUBMITS:**

1. ★ Background:

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").

- 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. MSEDCL is functioning in accordance with the provisions envisaged in the Electricity Act, 2003 and is engaged, within the framework of the Electricity Act, 2003, in the business of Distribution of Electricity to its consumers situated over the entire State of Maharashtra, except some parts of city of Mumbai.
- 1.4. Clause 6.4 of the National Tariff Policy (NTP), 2016, provides that *'States shall endeavour to procure power from Renewable Energy (RE) sources through Competitive Bidding to keep the tariff low, except from the waste to energy plants. Procurement of power by Distribution Licensee from RE sources from projects above the notified capacity shall be done through Competitive Bidding process, from the date to be notified by the Central Government'*.
- 1.5. Clause 5.12.2 of the National Electricity Policy (NEP), 2005 notified on 12 February, 2005, provides for Competitive Bidding in Renewable Energy

"...Progressively the share of electricity from non-conventional sources would need to be increased as prescribed by State Electricity Regulatory Commissions. Such purchase by distribution companies shall be through Competitive Bidding process...."

- 1.6. Accordingly, the Ministry of Power (MoP), vide its Notification dated 03.08.2017, has issued Guidelines under Section 63 of the Electricity Act (EA),

2003 for Tariff- based Competitive Bidding for long-term procurement of 5 MW and above from grid-connected Solar PV Power Projects.

Further, the Ministry of Power (MoP), vide its Notification dated 08.12.2017, has issued Guidelines under Section 63 of the Electricity Act (EA),2003 for long term procurement of power through Tariff- based Competitive Bidding from grid-connected Wind Power Projects.

1.8. Also, the Ministry of New and Renewable Energy, vide its Notification dated 14.05.2018, has issued National Wind Solar Hybrid policy.

1.9. Considering the above initiative specified in the NTP / NEP to promote Renewable Power and the guidelines / Policy issued by MoP to undertake the procurement of the renewable power under the competitive bidding route, MSEDCL hereby proposed to procure the Wind-Solar Hybrid Power under Competitive bid route. The bidding documents so framed by MSEDCL are based on the above specified guidelines of Wind and Solar (since the guidelines for Hybrid Power is yet to be issued) and the National Wind Solar Hybrid policy as issued by MoP and hereby request the Hon'ble Commission to accord the approval of the bidding documents and allow MSEDCL to carry out the bid process.

2. RPO targets and fulfillments:

2.1. The Hon'ble Commission has notified the Maharashtra Electricity Regulatory Commission (Renewable Purchase Obligation, its compliance and implementation of REC framework) Regulations, 2016 (*hereinafter to be referred as RPO Regulations 2016*) on 30th March, 2016 for the control period from FY 2016-17 to FY 2019-20:

2.2. As per Regulation 7.1 of the RPO Regulations 2016, the revised RPO targets are as below:

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

2.3. Accordingly, to comply with the said Regulations, MSEDCL's provisional Non-solar RPO is specified as below:

(Units in MU)	FY 2016-17		FY 2017-18	
	Non-Solar RPO		Non-Solar RPO	
Target	11154	10%	12801	10.5%
Achievement (Including REC Purchase)	11154	10%	12801	10.5%
Non-Solar REC Purchase within achievement	1822		2279	

2.4. The Compliance status of MSEDCL's existing Solar RPO is as under:

Period	Shortfall in Mus
FY 2010-11 to FY 2015-16	1360
FY 2016-17 (Provisional)	690
FY 2017-18 (Provisional)	1476
Total	3526

2.5. It is submitted that, MSEDCL is fulfilling Non-Solar and Solar RPO target by way of purchase of Non – Solar and Solar RECs. However, considering the future RPO targets, MSEDCL needs to procure additional RE power for fulfillment of RPO targets so as to accommodate the actual power in the system rather than to rely on REC.

2.6. In order to fulfill the RPO targets & also to provide daytime Power supply to Agricultural Consumers, MSEDCL proposes to carry out the competitive

bidding for selection of project developers for power procurement from Wind-Solar Hybrid projects on long term basis for 25 years on the MEDA's land provided on lease basis to MSEDCL. This may result in a Win-Win situation for MSEDCL and Agriculture consumers as well as will also result in compliance of RPO as specified in the relevant regulations.

2.7. The basic advantage of implementation of solar wind hybrid model is defined as follows:

- A combined wind and solar power system can achieve synergy if used together whereby the daily output will be more stable whereby solar is available during daytime and wind is prominently available in evening / night;
- Seasonal variations are offset whereby in monsoon wind is available and in summer solar is available;
- Grid stability can be achieved;
- Point of Generation and consumption being close to each other hence saves on infrastructure costs especially for serving Agriculture Consumers as well as result in lower distribution / Transmission loss;
- Generally Hybrid solar-wind powered systems become a cost-competitive option in areas where wind and solar patterns supplement each other significantly.

3. MSEDCL's proposal for development of Wind-Solar Hybrid projects:

3.1. MSEDCL would like to submit that, MEDA has proposed to MSEDCL to explore the possibility for development of Power projects on MEDA's following lands where wind mills are already existing:

Sr. No.	Site Name	Total land in hector	Capacity of existing wind power project (MW)	Approximate utilised Land in hector	Spare land available in hector
1	Motha, Tal. Chikhaldara Dist. Amaravati	51.93	2.00	13.00	38.93
2	Chalkewadi, Satara	79.40	6.00	40.00	39.40
3	Gudhepanchgani, Sangli	44.16	1.84	16.50	27.66
4	Vijaydurg, Sindhudurg	47.60	1.50	6.60	41.00
5	Sautada, Tal Patoda, Beed	54.23	Nil	Nil	54.23
	Total	277.32	11.34	76.10	201.22

3.2. Further, MSEDCL, vide letter dated 26th June, 2018 has requested MEDA to make these lands available for development of wind-solar hybrid project at the nominal lease rate of Re. 1 per year, for the period of 30 years, on the similar lines of the *Mukhyamantri Sour krishi Vahini Yojana*.

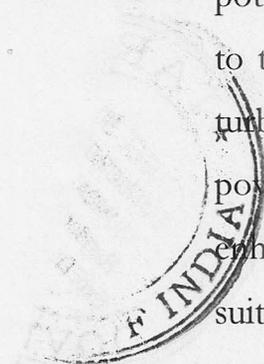
MNRE's National Wind Solar Hybrid policy dated 14 May, 2018 allows hybridizing existing wind projects with the solar power by utilizing existing evacuation arrangement.

3.4. The details of the existing Wind projects on the land owned by MEDA are as below:

Sr. No.	Site Name	Capacity of existing wind power project (MW)	Date of Commissioning	Date of Expiry of EPA
1	Motha Tal. Chikhaldara Dist. Amaravati	2.00	09.06.2003 (Wind Group-II)	08.06.2016
2	Chalkewadi, Satara	2.25	24.05.1996 (Wind Group-I)	23.05.2016
		3.75	20.09.2004 (Wind Group-III)	19.09.2017
3	Gudhe Panchgani, Sangli	1.84	29.06.1999 (Wind Group-I)	28.06.2019
4	Vijaydurg, Sindhudurg	1.50	11.07.1995 (Wind Group-I)	10.07.2015
5	Sautada Tal Patoda, Beed	--	--	--
	Total	11.34 MW		

3.5. From the above said table, it is observed that there is no wind power project installed at Sautada, Beed Site, while the wind projects at Vijaydurg (1.50 MW) & Chalkewadi (2.25 MW) sites have completed their useful life. For the remaining 2 sites of Motha (2.00 MW) & Chalkewadi (3.75 MW), the balance useful life is only 4-5 years whereas the useful life of Gudhe Panchgani is expiring in next year. The Energy Purchase Agreements (EPA's) are already expired for all the above locations except Gudhe Panchgani, Sangli (which will be expiring in next year).

3.6. It is pertinent to note that the wind-turbines installed in these Wind projects are of capacity below 500kW and these sites are having high wind energy



potential and can be utilized for optimum Wind Generation. Furthermore, due to technology enhancement in the Wind Turbines, maximum individual wind turbine capacity at these sites can reach upto 2.2 MW by undertaking re-powered wind turbine. Considering the opportunity of the capacity enhancement in the said area which provides higher CUF, these sites are more suitable for a new Wind Solar Hybrid projects after dismantling the existing low capacity, old wind turbine Generators. The land available, after dismantling of existing Wind Power projects and the already available spare land, may be utilized at its optimum level for hybridization of wind and Solar Power.

4. Features of the Bidding Process

- 4.1. It will be the option with developer to decide the composition of solar wind hybrid system percentage based on optimal utilization of land, which also will reduce the variability in renewable power generation and will help in achieving better grid stability. However, as per the National Wind Solar Hybrid Policy, to recognize a wind-solar plant as a hybrid plant, it will be mandatory for developer to maintain the rated power capacity of one resource of at least 25% of the rated power capacity of other resource.
- 4.2. Considering the above, MSEDCL will initiate the process for power procurement from Wind-Solar Hybrid projects on long term basis for 25 years on the above mentioned sites, through the competitive bidding process on TCIL Portal to fulfill the Renewable Purchase Obligation requirement as per MERC (Renewable Purchase Obligation, its Compliance and implementation of REC Framework) Regulations, 2016 after due approval from Hon'ble Commission.
- 4.3. Since it's an innovative concept and one of its kind, at present, it is difficult to assess the optimum quantum that will be available in the bidding process and also the participation of the bidders. Therefore, for the test of the market, MSEDCL shall conduct two stage bidding process for power procurement from Wind-Solar Hybrid projects at maximum possible capacity. In the first stage, bidders shall bid for the maximum capacity that can be generated by utilizing all the above said available land as a single project with the proportion of wind and solar as per the provisions of the National Wind Solar Hybrid

policy dated 14 May, 2018. The elimination of bidder will be done in first stage, who has quoted lowest capacity & will not be allowed to bid in second stage.

4.4. During second stage, bidders participated in the first stage shall submit its financial bid quoting the Tariff (below the ceiling Tariff) for the maximum MW capacity arrived in the first stage, followed by e-reverse auction. In second stage, e-reverse auction will be carried out for final Tariff bidding with the ceiling rate for the maximum quantum arrived in the first stage. All the bidders who have quoted and qualified in the first stage shall be eligible for the second stage.

4.5. It is important to note that MSEDCL will make available the spare land mentioned above to the developer on lease basis upto PPA Period on as is where is basis, however the evacuation arrangements/Grid connectivity for these proposed Wind-Solar hybrid projects shall be the responsibility of the Developer. The said land will be taken over by MSEDCL post completion of the contract or in case of the termination of the Agreement. Accordingly, all approvals, permits and clearances required for setting up of the Project and those required from State Government and local bodies shall be in the scope of the successful bidder.

5. Approval of the Bidding Documents

5.1. As per the Clause 3.1.1 (b) of the Guidelines dated 03.08.2017 issued by Ministry of Power, for Tariff Based Competitive Bidding Process for Procurement of Power from Grid Connected Solar PV Power Projects, and Clause 5.1 (b) of the Guidelines dated 08.12.2017 issued by Ministry of Power, for Tariff Based Competitive Bidding Process for Procurement of Power from Grid Connected Wind Power Projects, the procurer shall inform the initiation of bidding process to the appropriate Commission.

5.2. Also, the Hon'ble Commission in its order dated 6 December, 2017 in Case No. 157 of 2017; in the matter of seeking approval of Long/Medium/Short term procurement of Renewable Energy through Competitive Bidding has ruled that MSEDCL shall come before the Hon'ble Commission through

specific Petition prior to the bidding process only if MSEDCL requires any deviation with respect to the bidding documents.

5.3. Accordingly, MSEDCL through this petition is approaching this Hon'ble Commission for Procurement of Power through competitive bidding process followed by e-reverse e-auction for Grid connected Wind-Solar hybrid power projects at identified sites.

5.4. MNRE has not notified any specific guidelines for Wind-Solar Hybrid Projects till the date. Therefore, MSEDCL while preparation of Bidding Documents has considered the already issued guidelines for Solar Projects and Wind Projects along with the provisions of the Wind-Solar Hybrid Policy.

5.5. Accordingly, MSEDCL has prepared bidding documents, namely Draft Request for Selection (RfS) (**Annexure A**) and Draft Power Purchase Agreement (PPA) (**Annexure B**) in line with the MoP guidelines dated 03.08.2017 for Solar Power projects, the MoP guidelines dated 08.12.2017 for Wind Power projects and MNRE's Wind-Solar Hybrid Policy dated 14.05.2018. MSEDCL most humbly requests the Hon'ble Commission to kindly approve the draft RfS and draft PPA. The documents are prepared with an objective to get a higher participation from the bidder considering the naïve concept i.e. Wind and Solar Hybrid approach.

5.6. On completion of the bidding process followed by e-reverse auction, MSEDCL shall again approach to the Hon'ble Commission for adoption of Tariff discovered through the Competitive bidding process under Section 63 of the Electricity Act, 2003.

6. Regulatory Provisions

6.1. The Petitioner humbly submits that the Hon'ble commission has the powers to issue orders under following relevant Regulations.

- a) Regulation 5 of RE Tariff Regulations 2016 provides for adoption of Tariff by Hon'ble Commission if tariff is determined through competitive bidding.

5. Competitive Bidding for procurement of power generated by grid-connected RE Projects

The Commission shall adopt the tariff for a RE Power Project where such tariff has been determined through a transparent process of competitive bidding in accordance with guidelines under Section 63 of the Act as and when issued by the Central Government.

- b) Regulation 19 of the RPO Regulations 2016 provides for Power to Remove Difficulties in implementation of the RPO Regulations 2016.

19 Power to Remove Difficulties

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

- c) Regulation 94 of the Conduct of Business Regulations 2004 empowers Hon'ble Commission to deal with the matters where no Regulations have been framed.

94. Nothing in these Regulations shall bar the Commission to deal with any matter or exercise any power under the Act for which no regulations have been framed, and the Commission may deal with such matters, powers and functions in a manner it thinks fit.

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

7. Prayers:

- 7.1. In view of the above the Petitioner respectfully prays to the Hon'ble Commission:

- a) To admit the Petition as per the provisions of the Regulation 5 of the RE Tariff Regulations 2016, 19 of RPO Regulations 2016 and 94 of the Conduct of Business 2004.
- b) To accord approval for initiation of competitive bidding process for procurement of power from Wind-Solar Hybrid projects on long term basis to be established on the MEDA's land to be provided on lease basis to MSEDCL.
- c) To allow MSEDCL to conduct two stage tendering as mentioned in para 4 of this Petition.
- d) To approve the Bidding Documents prepared for procurement of power from Wind-Solar Hybrid projects.

- e) To consider procurement of power from Wind-Solar Hybrid Power projects for meeting the respective solar and non-solar RPO requirement of MSEDCL.
- f) To consider the submission made by the Petitioner and consider the same positively while deciding the Petition as well as for further actions;
- g) To pass any other order/relief as the Hon'ble Commission may deem fit and appropriate under the circumstances of the case and in the interest of justice;
- h) Condone any error/omission and to give opportunity to rectify the same;
- i) To permit the Petitioner to make further submissions, addition and alteration to this Petition as may be necessary from time to time.

K. Bharat
Chief Engineer (Renewable Energy)

Place: Mumbai

Date: 22.10.2018

