



December 8, 2014 CREG/MUM/2014/309

Principal Secretary,
Maharashtra Electricity Regulatory Commission,
13th Floor, Centre No 1, World Trade Centre,
Cuffe Parade, Colaba,
Mumbai 400 005

Dear Sir,

Subject: <u>Compliance of Renewable Purchase Obligations (RPO) Targets of Tata Power-D</u>

<u>cumulatively from FY 2010-11 to FY 2013-14</u>

(Suo Motu proceedings by MERC in Case No. 192 of 2014 – Notice dated 24th November, 2014 vide Letter MERC / RE Cell-5/RPO/2014-15/01206)

This has reference to the above mentioned letter issued by the Hon'ble Commission regarding Verification and Compliance of Renewable Purchase Obligation targets of Tata Power-D cumulatively for four years i.e. FY 2010-11, FY 2011-12, FY 2012-13 & FY 2013-14, as specified under MERC (Renewable Purchase Obligation, its compliance and Implementation of REC framework) Regulations, 2010 — Case No. 192 of 2014. In the said letter, the Hon'ble Commission has sought replies on affidavit on the various gueries raised. We have enclosed our point wise Response on the same as **Appendix** to this letter.

As regards the requirement of an Auditor's certificate, we wish to submit that in the case of energy (MUs) the statutory auditor will not be able to certify such information. However, we wish to submit that the data for the wind energy is based on the credit notes issued by M/s MSEDCL which is also used by SLDC for energy accounting purpose.

We trust this satisfies the requirement.

Yours Faithfully,

(Bhaskar Sarkar)

Business Strategy & Regulations (Mumbai Operations)

TATA POWER

The Tata Power Company Limited



December 10th, 2014 CREG/MUM/2014/309

Principal Secretary,
Maharashtra Electricity Regulatory Commission,
13th Floor, Centre No 1, World Trade Centre,
Cuffe Parade, Colaba,
Mumbai 400 005

Dear Sir,

Subject: Compliance of Renewable Purchase Obligations (RPO) Targets of Tata Power-D

cumulatively from FY 2010-11 to FY 2013-14

(Suo Motu proceedings by MERC in Case No. 192 of 2014 – Notice dated 24th November, 2014 vide Letter MERC / RE Cell-5/RPO/2014-15/01206)

This has reference to the above mentioned letter issued by the Hon'ble Commission regarding Verification and Compliance of Renewable Purchase Obligation targets of Tata Power-D cumulatively for four years i.e. FY 2010-11, FY 2011-12, FY 2012-13 & FY 2013-14, as specified under MERC (Renewable Purchase Obligation, its compliance and Implementation of REC framework) Regulations, 2010 — Case No. 192 of 2014. In the said letter, the Hon'ble Commission has sought replies on affidavit on the various queries raised. We have enclosed our point wise Response on the same as **Appendix** to this letter.

As regards the requirement of an Auditor's certificate, we wish to submit that in the case of energy (MUs) the statutory auditor will not be able to certify such information. However, we wish to submit that the data for the wind energy is based on the credit notes issued by M/s MSEDCL which is also used by SLDC for energy accounting purpose.

We trust this satisfies the requirement.

Yours Faithfully,

(Bhaskar Sarkar)

Business Strategy & Regulations (Mumbai Operations)

TATA POWER

The Tata Power Company Limited

Dharavi Receiving Station Regulations Department Matunga Mumbai 400019 Tel 91 22 6717 2636 Telefax 91 22 6717 2603

Registered Office Bombay House 24 Homi Mody Street Mumbai 400 001

CIN:L28920MH1919PLC000567 Website:www.tatapower.com Email:tatapower@tatapower.com



BEFORE THE MAHARASHTRA ELECTRICITY REGULATORY COMMISSION,

MUMBAI

Case No. 192 of 2014

In the matter of:

Suo-motu proceeding for Verification and Compliance of Renewable Purchase Obligation

targets of Tata Power-D for FY 2013-14 as specified under MERC (Renewable Purchase

Obligation, its compliance and Implementation of REC framework) Regulations, 2010 -

Case No. 192 of 2014

AFFIDAVIT ON BEHALF OF THE TATA POWER COMPANY LIMITED

I, Bhaskar Sarkar, aged 49 years, son of Mr. Arup Kumar Sarkar, residing at Flat No. 1202,

Intop Tower, Plot No. 12 & 13, Sector – 19, Kharghar, Navi Mumbai – 410 210 do hereby

swear and say as follows:

1. I am the Head -Business Strategy & Regulations (Mumbai Operations), of The Tata

Power Company Limited (hereinafter referred to as "Tata Power"), the Petitioner in

the above matter and I am duly authorized by the Petitioner Company to make this

Affidavit.

2. I am filing this Affidavit on behalf of The Tata Power Company Limited.

3. I say that the information enclosed as Appendix, now shown to me is based on the

records of the Petitioner Company and information received from the concerned

officers of the Petitioner and I believe the same to be true and correct.

S.

Ms. ROSHAN M. MASTER
NOTARY, GREATER BOMBAY
2403. ORCHID TOWER A
BELLASIS ROAD,
MUMBAI-400 008.

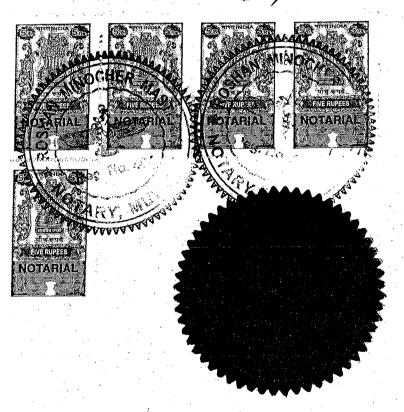
VERIFICATION

Sworn at Mumbai on this ${\mathcal I}$ day of December, 2014 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.

Deponent

Place: Mumbai

Date: 9-12 219



Bejore me: Rosseles Ms. ROSHAN M. MASTER

NOTARY, GREATER BOMBAY 2403, ORCHID TOWER A BELLASIS ROAD, MUMBAI - 400 008.

10. No. 404

5.no.11269 9.12.219

Response to Queries with respect to cumulative compliance of RPO for the period FY 2010-11 to FY 2013-14

In light of the notice issued by the Hon'ble Commission and the data submitted by MEDA our point wise response to the queries raised by the Hon'ble Commission regarding RPO Compliance are as follows:

a) Query

TPC-D should verify the RPO settlement details for FY 2013-14 as submitted by MEDA, under Table – A and highlight discrepancies, if any, along with proper justification.

Response

We have verified the data submitted by MEDA for FY 2013-14 with our records and based on Credit Notes issued by MSEDCL. The discrepancies in the data are as given in the table below.

Table 1: Discrepancy in the RPO data for FY 2013-14

Particulars		Requirement @ InSTS	Non- Solar Achieved	Mini / Micro Hydro Achieved	Solar Achieved
FY 2013-14					
Data Submitted by MEDA	1	6843.95	587.10	0.00	5.68
As per Tata Power-D	2	6844.80	590.37	0.00	5.68
Discrepancy	3	-0.85	-3.27	0.00	0.00
Obligation %	4	9.00%	8.48%	0.02%	0.50%
Obligation as per MEDA (Mus)[5=1*4]	5	615.96	581.74	1.16	34.22
Obligation as per Tata Power-D (Mus)[6=2*4]	6	616.03	580.64	1.16	34.22
Surplus/(Shortfall) as per MEDA [7=1-5]	7		5.36	-1.16	-28.54
Surplus/(Shortfall) as per Tata Power-D [8=2-6]	8		9.72	-1.16	-28.55
Discrepancy [9=7-8]	9	0.00	-4.36	0.00	0.01

As seen from the above, there are minor discrepancies between the data submitted by MEDA and that of Tata Power-D.

In the above table, there is a discrepancy in the Non Solar RPO achieved to the tune of 3.19 MUs on account of finalization of credit notes by MSEDCL subsequent to submission of periodic data to MEDA.

b) Query

Though the Commission vide above referred Order has allowed TPC-D to fulfill its Solar RPO target cumulatively by FY 2015-16, as part of the present proceeding, TPC-D should confirm shortfall in Solar RPO compliance cumulatively by FY 2013-14 i.e. cumulatively for four years (FY 2010-11, FY 2011-12, FY 2012-13 & FY 2013-14) as summarized under Table-A, along with detailed statement for project wise energy procurement in Mus from all solar generating projects and project wise contracted solar capacity in MW during FY 2010-11 to FY 2013-14, duly certified by auditor.

Response

The details of discrepancy in Solar RPO target is as given in the following Table 2:

Table 2: Solar RPO for the period FY 2010-11 to FY 2013-14

Particulars		Requirement @	Solar RPO	Solar Achieved
		InSTS	Obligation	
FY 2010-11				·····
Data Submitted by MEDA	1	4619.91	11.55	0.05
As per Tata Power-D	2	4619.91	11.55	0.05
Discrepancy	3	0.00	0.00	0.00
FY 2011-12				
Data Submitted by MEDA	1	6124.84	15.31	4.12
As per Tata Power-D	2	6124.73	15.31	4.12
Discrepancy	3	0.11	0.00	0.00
FY 2012-13				
Data Submitted by MEDA	1	6948.82	17.37	4.70
As per Tata Power-D	2	6918.96	17.30	4.70
Discrepancy	3	29.86	0.07	0.00
FY 2013-14				
Data Submitted by MEDA	1	6843.95	34.22	5.68
As per Tata Power-D	2	6844.80	34.22	5.68
Discrepancy	3	-0.85	0.00	0.00
Cumulative RPO		Anna and the propose such a deficiency description of the property of the prop		24.040.041.040.040.040.040.040.040.040.04
Data Submitted by MEDA	1		78.45	14.55
As per Tata Power-D	2	······································	78.38	14.55
Discrepancy			0.07	0.00
Cumulative Shortfall / (Surplus)				
Data Submitted by MEDA	1			63.90
As per Tata Power-D	2			63.83
Discrepancy				0.07

Further, the project wise energy procurement and contracted capacity from all solar generating sources during FY 2010-11 to FY 2013-14, is as follows:

Table 3: Source wise Solar Generation from FY 2010-11 to 2013-14

Resources	Contracted Capacity	FY 2010-11	FY 2011-12	FY 2012-13		Cumulative Solar RPO Achievement by FY 2013-14
UoM	MM	Mus	Mus	Mus		Mus
Mulshi Solar	3 MW	0.05	4.03	4.33	4.05	12.46
Solar Rooftop	60 kWp		0.09	0.07	0.06	0.22
REC Certificate - Solar			0.00	0.31	1.57	1.87
Total		0.05	4.12	4.70	5.68	14.55

c) Query

TPC-D should confirm the fulfillment of Non-Solar RPO compliance cumulatively by FY 2013-14 as summarized under Table A along with detailed statement for project wise energy procurement in MUs from various non-solar RE sources and project wise contracted non-solar RE capacity in MW during FY 2010-11 to FY 2013-14, duly certified by auditor.

Response

The details of discrepancy in Non Solar data is as given in the following Table 4:

Table 4: Non Solar RPO for the period FY 2010-11 to FY 2013-14

Particulars		Requirement @	Non Solar RPO	Non Solar
		InSTS (Mus)	Obligation (Mus)	Achieved (Mus)
FY 2010-11	***************************************		······································	
Data Submitted by MEDA	1	4619.91	265.64	219.17
As per Tata Power-D	2	4619.91	265.38	219.17
Discrepancy	3	0.00	0.27	0.00
FY 2011-12				
Data Submitted by MEDA	1	6124.84	413.43	415.32
As per Tata Power-D	2	6124.73	413.01	415.33
Discrepancy	3	0.11	0.42	-0.01
FY 2012-13				
Data Submitted by MEDA	1	6948.82	538.53	584.31
As per Tata Power-D	2	6918.96	535.68	583.76
Discrepancy	3	29.86	2.85	0.55
FY 2013-14				
Data Submitted by MEDA	1	6843.95	581.74	587.10
As per Tata Power-D	2	6844.80	580.64	590.37
Discrepancy	3	-0.85	1.10	-3.27
Cumulative RPO				
Data Submitted by MEDA	1		1799.34	1805.90
As per Tata Power-D	2		1794.71	1808.62
Discrepancy			4.63	-2.72
Cumulative Shortfall / (Surplus)				
Data Submitted by MEDA	1			-6.56
As per Tata Power-D	2		······································	-13.91
Discrepancy				7.35

Further, project wise energy procurement and contracted capacity from various non-solar RE sources during FY 2010-11 to FY 2013-14, is as given in the Table below:

Table 5: Source wise Non Solar generation from FY 2010-11 to 2013-14

Sources	Contracted Capacity	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	Cumulative Non Solar RPO Achievement by FY 2013-14
UoM	MW	Mus	Mus	Mus	Mus	Mus
Supa	17.00	22.96	19.63	0.00	0.00	42.59
Nivede	20.95	0.00	0.00	30.41	23.71	54.12
Khandke	50.40	96.43	108.41	110.32	113.94	429.10
Bramhanvel	11.25	16.03	17.09	18.98	18.07	70.18
Sadawaghapur	17.50	26.18	32.14	31.36	29.31	118.98
Visapur 6 MW	6.00	0.00	12.75	11.94	13.06	37.75
Visapur 4 MW	4.00	7.42	7.59	7.47	7.39	29.87
Agaswadi	49.50	0.00	29.33	112.28	113.88	255.49
Bilateral		50.14	0.00	0.00		50.14
REC		0.00	188.39	261.00	271.00	720.39
Total	176.60	219.17	415.33	583.76	590.37	1808.62

d) Query

Though the Commission vide above referred Order has allowed TPC-D to fulfill its Mini / Micro Hydro RPO Target cumulatively by FY 2015-16, as a part of present proceeding, TPC-D should confirm the shortfall in Mini/Micro Hydro power RPO compliance cumulatively by FY 2013-14 i.e. cumulatively for four years (FY 2010-11, FY 2011-12, FY 2012-13 & 2013-14) as summarized under Table-A, along with detailed statement for project wise energy procurement in Mus from all Mini/micro Hydro projects and project wise contracted Mini/micro hydro capacity in KW during FY 2010-11 to FY 2013-14, duly certified by auditor.

Response

The explanation regarding discrepancy for the shortfall in Mini / Micro Hydro is given in the following Table.

Table 6: Mini / Micro Hydro RPO for the period FY 2010-11 to FY 2015-16

Particulars		Requirement @	Mini/Micro Hydro	Mini/Micro Hydro
		InSTS (Mus)	RPO Obligation (Mus)	Achieved (Mus)
<u>FY 2010-11</u>	***************************************		***************************************	***************************************
Data Submitted by MEDA	1	4619.91	0.27	0.00
As per Tata Power-D	2	4619.91	0.27	0.00
Discrepancy	3	0.00	0.00	0.00
FY 2011-12				
Data Submitted by MEDA	1	6124.84	0.41	0.00
As per Tata Power-D	2	6124.73	0.41	0.00
Discrepancy	3	0.11	0.00	0.00
FY 2012-13				
Data Submitted by MEDA	1	6948.82	0.54	0.00
As per Tata Power-D	2	6918.96	0.54	0.00
Discrepancy	3	29.86	0.00	0.00
FY 2013-14				
Data Submitted by MEDA	1	6843.95	1.16	0.00
As per Tata Power-D	2	6844.80	1.16	0.00
Discrepancy	3	-0.85	0.00	0.00
Cumulative RPO	***************************************	**************************************	***************************************	
Data Submitted by MEDA	1		2.38	0.00
As per Tata Power-D	2		2.38	0.00
Discrepancy			0.00	0.00
Cumulative Shortfall / (Surplus)				
Data Submitted by MEDA	1	***************************************	**************************************	2.38
As per Tata Power-D	2			2.38
Discrepancy				0.00

With regards to Mini / Micro Hydro RPO compliance, Tata Power, in their submissions had submitted the following:

"....As per the provisions in Regulation 8.1 of the MERC (RPO and REC framework) Regulations, 2010 REC certificates may be used for fulfilling the compliance with respect to Mini/Micro Hydro RPO targets. Regulation 8.1 of the MERC (RPO and REC framework) Regulations, 2010 is reproduced below;

"8.1 Subject to the terms and conditions contained in these Regulations, the Certificates issued under the Central Electricity Regulatory Commission (Terms and conditions for recognition and issue of Renewable Energy Certificate for Renewable Energy Generation) Regulations, 2010 shall be valid instruments for the discharge of the mandatory obligations set out in these Regulations for the obligated entities to purchase electricity from renewable energy sources.

Provided that in the event of the obligated entity fulfilling the renewable purchase obligation by purchase of Certificates, the obligation to purchase electricity from generation based on solar as renewable energy source can be fulfilled by purchase of solar certificates only, and the obligation to purchase electricity from generation based on renewable energy other than solar can be fulfilled by purchase of non-solar certificates."

However, the Hon'ble Commission in their Order dated 6th March, 2014 in Case 182 of 2014 clarified the following:

Regarding fulfilment of cumulative targets for Mini-Micro hydro RPO targets (within Non-Solar RPO targets) the Commission has noted TPC-D's submission that the Non-Solar RECs may be used for fulfilling the compliance with respect to Mini/Micro Hydro RPO targets. However, the Commission is of the view that segregation of Non-solar RECs for fulfilling the RPO targets for Mini/Micro hydro under Regulation 8.1 of MERC (RPO-REC) Regulations-2010 will defeat the purpose of specifying separate target under Regulation 7.1 for Mini/Micro hydro within Non-Solar RPO targets. The objective of specifying separate target for Mini/Micro hydro within Non-Solar RPO targets is to facilitate promotion of power procurement from Mini/Micro hydro sources. At this moment the Commission is not inclined to accept the submission of TPC-D in this regard.

The Hon'ble Commission further directed to cumulatively comply with the Mini / Micro Hydro RPO cumulatively by FY 2015-16.

Accordingly, after this clarity from the Hon'ble Commission, Tata Power has scouted for mini / micro Hydro projects in Maharashtra. Further, we have now issued a tender for procurement of renewable energy power from Mini / Micro Hydro stations.

We will be continuing our efforts towards procurement of power through Mini / Micro Hydro to be able to comply with the RPO obligation by end of FY 2015-16.

e) Query

Tata Power-D should submit the detailed list of actions and efforts undertaken by it prior to and during FY 2010-11 to FY 2013-14 to ensure compliance of RPO targets in respect of Solar, Non Solar and Mini/Micro Hydro power.

Response

As can be seen from the submissions made in the queries above, we wish to submit that Tata power-D has been able to achieve its obligation in Non Solar excluding Mini / Micro Hydro through a combination of REC certificate and purchase of power from various wind farms.

With respect to procurement of RE power through Mini / Micro Hydro, we wish to submit that clarity regarding compliance to Mini / Micro Hydro RPO came only after the Order of the Hon'ble Commission in Case 182 of 2014 dated 6th March, 2014. Thereafter, as elaborated in the above response, Tata Power has already initiated action towards such purchase and will be taking all efforts to comply by the end of FY 2015-16.

With regards to compliance towards meeting the Solar RPO, Tata Power in the petition filed in Case 159 of 2014 had provided in detail, the efforts taken and difficulties faced in achieving the Solar target cumulatively by FY 2012-13. The same has been reproduced below:

Efforts undertaken by Tata Power-D to ensure compliance of RPO targets in respect of solar cumulatively by FY 2012-13 are as follows:

- I. Tata Power –D has tied up Solar generating capacities at Mulshi (3 MW) and Carnac (Roof Top Solar Generating Capacity of 60 kWp). However, due to the sudden increase in sales in FY 2011-12, the tied up capacity became insufficient to meet the solar RPO target.
- II. There is an inherent shortage of solar generation capacity in the country. Against a requirement of around 3500 MW capacity to meet the solar RPOs of all the states the current installed capacity is only around 1440 MW; i.e. only 41% of the required capacity is available. (Source: MNRE)
- III. Tata Power has made a long term contract with 25 MW solar generating capacity of Tata Power at Dinganchi, which is due to be commissioned in 2014. In view of this, Tata Power approached different developers for tying up solar power on short term basis to meet the balance RPO requirement. However, none of the developers came forward for short term supply and were insisting on long term contracts only.
- IV. Tata power-D tried to fulfill the above shortage by purchasing Solar REC certificates. However, the quantum of Solar REC certificates traded in the market during FY 2012-13 were very low. The summary of the REC Certificates purchased and the total REC trade in the market (including both Exchanges) in the Country is given in the table below. It is pertinent to note that the available REC's are purchased by all Distribution Utilities, OA generators / consumers and hence, availability to Tata Power-D reduces substantially.

Table 2: Solar REC trade and purchase by Tata Power during FY 2012-13

Month	Solar REC Bid by Tata Power-D	Solar REC received by Tata Power-D	REC trade in the Market	% Share purchase
Apr-12	0	0	0	0.0%
May-12	0	0	249	0.0%
Jun-12	250	11	324	3.4%
Jul-12	400	10	328	3.0%
Aug-12	400	0	190	0.0%
Sep-12	400	25	1443	1.7%
Oct-12	400	20	1412	1.4%
Nov-12	400	70	1603	4.4%
Dec-12	400	105	992	10.6%
Jan-13	400	40	3306	1.2%
Feb-13	400	25	1882	1.3%
Mar-13	400	0	2917	0.0%
Total	3850	306	14646	2.1%

Note: Data as per NLDC monthly Report

1 REC = 1 MWh

- V. It is clear from the above Table, that even if Tata power-D would have been able to purchase the entire RECs available in the Exchange i.e. equivalent to 14 MUs, it would have not possible to fulfill its RPO obligation requirement of around 35 MUs under Solar category.
- VI. We wish to submit that in spite of efforts taken it was not possible to meet the cumulative target up to FY 2012-13 as adequate solar generation is yet not available in the country. We, therefore, request the Hon'ble Commission to allow an extension of time to Tata Power to meet the Solar RPO target cumulatively by FY 2015-16.

Subsequent to this submission, the 25 MW solar generating capacity at Dinganchi has been commissioned in May, 2014 and generating about 3.6 MUs per month. In view of this and the fact that the sales of Tata Power have gone down substantially due to reverse migration of changeover consumers, we are of the opinion that, Tata Power would be able to meet its Solar RPO for FY 2014-15 and FY 2015-16 and also the balance RPO requirement of previous years. The balance requirement will be met through Solar RECs.

f) Query

Tata Power-D should submit the details for long term RE procurement plan for meeting the Year wise RPO Targets for FY 2014-15 & FY 2015-16.

Response

Tata Power has made long term power purchase agreements for the Renewable Energy Sources to meet the RPO Obligation of Tata Power-D. The same are listed below:

Table 7: Long Term Power Purchase Agreements from Renewable Sources

Sources	Contracted Capacity		
	MW		
Wind			
Khandke	50.40		
Bramhanvel	11.25		
Sadawaghapur	17.50		
Visapur 6 MW	6.00		
Visapur 4 MW	4.00		
Agaswadi	49.50		
Pethshivpur*	49.25		
Visapur*	32.00		
Sub Total	219.90		
Solar			
Mulshi	3.00		
Caranac Rooftop	0.72		
Palaswadi	25.00		
Sub Total	28.72		
Total	248.62		

[&]quot;* - Pethshivpur will be commissioned in FY 2015-16 while Visapur will be commissioned during FY 2014-15

All these capacities are contracted and will be available to meet the RPO obligation till the end of FY 2015-16.

