

Before the
MAHARASHTRA ELECTRICITY REGULATORY COMMISSION
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Case No. 192 of 2014

In the matter of

**Verification of compliance of Renewable Purchase Obligation targets by TPC for
FY 2013-14**

CORAM

Smt. Chandra Iyengar, Chairperson
Shri. Azeez M. Khan, Member
Shri. Deepak Lad, Member

Parties

1. The Tata Power Company Ltd. (TPC)
2. Maharashtra Energy Development Agency (MEDA)
3. Maharashtra State Load Despatch Centre (MSLDC)

Appearance

- | | | |
|--------------|---|----------------------------|
| 1. For TPC | : | Ms. Swati Mehendale (Rep.) |
| 2. For MEDA | : | Dr. J.V.Torane |
| 3. For MSLDC | : | Shri. Jayant Kulkarni |

ORDER

Date: 27th April, 2015

The Commission has notified the Maharashtra Electricity Regulatory Commission (Renewable Purchase Obligation, its Compliance and Implementation of Renewable Energy Certificate Framework) Regulations, 2010 ('RPO-REC Regulations') on 7 June, 2010. These Regulations specify the Renewable Purchase Obligation (RPO) targets for Obligated Entities,

including Tata Power Company Ltd. (TPC) (Distribution Business), as a Distribution Licensee, for FY 2010-11 to FY 2015-16. The specified RPO targets are as given below:

<i>Year</i>	<i>Minimum Quantum of purchase (in %) from Renewable Energy sources (in terms of energy equivalent in kWh)</i>		
	<i>Solar</i>	<i>Non-Solar (other RE)</i>	<i>Total</i>
2010-11	0.25%	5.75%	6.0%
2011-12	0.25%	6.75%	7.0%
2012-13	0.25%	7.75%	8.0%
2013-14	0.50%	8.50%	9.0%
2014-15	0.50%	8.50%	9.0%
2015-16	0.50%	8.50%	9.0%

The Regulations also stipulate that,

“Further, the Distribution Licensee (s) are also mandated to procure 0.1% per year of their Non-Solar (other RE) RPO obligation for the period from FY 2010-11 to FY 2012-13 and up to 0.2% of their Non-Solar (other RE) RPO obligation for the period from FY 2013-14 to FY 2015-16 by way of purchase from Mini Hydro or Micro Hydro power project.”

2. Regulation 12 of the RPO-REC Regulations empowers the Commission to deal with shortfall in compliance of RPO targets by Obligated Entities as follows:

“12. RPO Regulatory Charges

12.1 If the Obligated Entity fails to comply with the RPO target as provided in these Regulations during any year and fails to purchase the required quantum of RECs, the State Commission may direct the Obligated Entity to deposit into a separate fund, to be created and maintained by such Obligated Entity, such amount as the Commission may determine on the basis of the shortfall in units of RPO, RPO Regulatory Charges and the Forbearance Price decided by the Central Commission; separately in respect of solar and non-solar RPO:

Provided that RPO Regulatory Charges shall be equivalent to the highest applicable preferential tariff during the year for solar or non-solar RE generating sources, as the case may be, or any other rate as may be stipulated by the State Commission:

Provided further that the fund so created shall be utilised, as may be directed by the State Commission.”

3. The Commission, through its *suo motu* Order dated 1 July, 2010 in Case No. 21 of 2010, designated the Maharashtra Energy Development Agency (MEDA), Pune as the State Agency to undertake the functions envisaged under the Regulations.
4. As per Regulation 10.4 of the RPO-REC Regulations, 2010, a Distribution Licensee is obliged to submit, at the end of each financial year, a detailed statement of energy procurement from various Renewable Energy (RE) sources, duly certified by auditors.

5. Vide its Order dated 6 March, 2014 in Case No. 182 of 2013 in *suo moto* proceedings regarding compliance of RPO targets by TPC cumulatively for three years, i.e. FY 2010-11, 2011-12 and 2012-13, the Commission directed as follows:

“20. Regarding fulfillment of cumulative Solar RPO targets for TPC-D, the Commission has already dealt the same vide Order dated 20 December, 2013 in Case No. 159 of 2013 and has directed TPC-D to fulfill its Solar RPO target for FY 2010-11, FY 2011-12 and FY 2012-13 on a cumulative basis by FY 2015-16.

21. Regarding fulfillment of Non-Solar RPO target cumulatively by FY 2012-13, the Commission has observed that TPC-D has fulfilled its cumulative Non-Solar RPO targets by FY 2012-13 with surplus of 1.2 MUs except Mini-Micro hydro RPO Targets.

22. The Commission hereby relaxes/waives the provisions of Regulation 7.1 of the MERC (RPO-REC) Regulations, 2010 for the year during FY 2010-11 to FY 2012-13 for TPC-D for procurement of power from Mini/Micro hydro sources and directs TPC-D to fulfill the shortfall in RPO targets for Mini/Micro hydro for FY 2010-11 to FY 2012-13 cumulatively by FY 2015-16 i.e. cumulatively before 31 March, 2016. However, since TPC-D’s license is expiring on 15 August, 2014, this relaxation will continue subject to grant of licence to TPC-D for distribution of electricity.”

6. In accordance with Regulation 9.6 of the RPO-REC Regulations, MEDA, vide its letter dated 18 September, 2014, submitted the RPO settlement data cumulatively by FY 2013-14 for the Distribution Licensees, including TPC. The RPO compliance details of TPC for FY 2010-11 to FY 2013-14 as submitted by MEDA are summarized below:

Table A: RPO data for TPC as submitted by MEDA

Parameters	FY 2010-11		FY 2011-12		FY 2012-13		FY 2013-14		Cumulative RPO (Surplus) / Shortfall
	%	MUs	%	MUs	%	MUs	%	MUs	MUs
		(a)		(b)		(c)		(d)	Z=(a)+(b)+(c)+(d)
Gross Energy consumption	100	4619.91	100	6124.84	100	6948.82	100	6843.95	
Solar RPO target	0.25	11.55	0.25	15.31	0.25	17.37	0.5	34.22	78.45
Solar RPO target met	0.001	0.05	0.067	4.12	0.068	4.70	0.08	5.68	14.55
Solar RPO (surplus)/shortfall	0.25	11.50	0.18	11.19	0.18	12.67	0.42	28.54	63.90
Non Solar RPO target	5.75	265.64	6.75	413.43	7.75	538.53	8.5	581.74	
Non Solar RPO target met	4.74	219.17	6.78	415.32	8.41	584.31	8.58	587.10	
Non-Solar RPO (surplus)/ Shortfall	1.01	46.47	(0.03)	(1.89)	(0.66)	(45.78)	(0.08)	(5.36)	

Parameters	FY 2010-11		FY 2011-12		FY 2012-13		FY 2013-14		Cumulative RPO (Surplus) / Shortfall
	%	MUs	%	MUs	%	MUs	%	MUs	MUs
		(a)		(b)		(c)		(d)	Z=(a)+(b)+(c)+(d)
Mini/Micro Hydro RPO target (within Non Solar RPO target)	0.1	0.27	0.1	0.41	0.1	0.54	0.2	1.16	2.3
Mini/Micro Hydro RPO target met (within Non Solar RPO target)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mini/Micro Hydro RPO (within Non Solar RPO target) (surplus)/shortfall	0.1	0.27	0.1	0.41	0.1	0.54	0.2	1.16	2.38

7. MEDA has submitted that TPC has fulfilled its Non-Solar RPO target for FY 2013-14, with a surplus of 5.36 MUs. However, there is a shortfall in meeting the cumulative Solar RPO target and Mini/Micro Hydro RPO target (within Non-Solar RPO target) by the end of FY 2013-14 to the tune of 63.90 MUs and 2.38 MUs, respectively.
8. Since FY 2013-14 had already elapsed, the Commission decided to initiate *suo moto* proceedings for verification of compliance of RPO targets by TPC, and to undertake necessary actions in accordance with Regulation 12 of the RPO-REC Regulations. Accordingly, vide Notice dated 24 November, 2014, the Commission directed TPC to submit its response to the data furnished by MEDA within two weeks.
9. In response, vide its affidavit dated 8 December, 2014, TPC submitted as follows:
- 9.1. There are minor discrepancies between the data submitted by MEDA and that of TPC pertaining to Gross Energy Consumption (GEC) and Non-Solar RPO targets and achievements.
- 9.2. There is a discrepancy in the Non-Solar RPO achievement to the tune of 3.27 MUs on account of finalization of Credit Notes by the Maharashtra State Electricity Distribution Co. Ltd. (MSEDCL, another Distribution Licensee) and subsequent submission of periodic data to MEDA. Accordingly, the revised RPO settlement for FY 2013-14 is as below:

(in MUs)

GEC	Solar RPO			Non-Solar RPO			Mini-Micro Hydro RPO		
	Target (0.5%)	met	(Surplus)/ Shortfall	Target (8.48%)	Met	(Surplus)/ Shortfall	Target (0.02%)	Met	(Surplus)/ Shortfall
6844.80	34.22	5.68	28.54	580.64	590.37	(9.73)	1.16	0.00	1.16

- 9.3 TPC submitted yearly Solar RPO details for the period from FY 2010-11 to FY 2013-14, wherein cumulative Solar RPO achievement by FY 2013-14 is shown as 14.55 MUs, resulting in a cumulative shortfall of Solar RPO by FY 2013-14 of 63.83 MUs. TPC also submitted Project-wise energy procurement and contracted capacity from Solar Power Projects from FY 2010-11 to FY 2013-14.

- 9.4 A 25 MW Solar Power Project at Palaswadi has been commissioned in May, 2014 and is generating about 3.6 MUs per month. In view of this and the fact that the sales of TPC have fallen substantially due to reverse migration of 'change-over' consumers, TPC believes that it 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.
- 9.5 TPC has fulfilled its Non-Solar RPO, except in respect of Mini/Micro Hydro, for FY 2013-14, with a surplus of 9.73 MUs through a combination of Renewable Energy Certificates (RECs) and purchase of power from wind farms. The cumulative fulfillment of Non-Solar RPO by FY 2013-14 is with a surplus of 13.91 MUs.
- 9.6 TPC has a cumulative shortfall of 2.38 MUs with respect to Mini/Micro Hydro RPO. It has scouted for such Projects in Maharashtra. TPC has also issued tender for procurement of power from Mini/Micro Hydro Power Stations and is continuing efforts to procure such power so as to be able to comply with the RPO targets by the end of FY 2015-16.
- 9.7 TPC has executed long-term Power Purchase Agreements (PPAs) for 28.72 MW Solar Power, including the 25 MW Solar project at Palaswadi, and for 219.90 MW Wind Power so as to meet the RPO targets by the end of FY 2015-16.

Regulatory Process

10. Vide Public Notice dated 27 February, 2015, published in the Loksatta and Lokmat (Marathi), and Times of India and Indian Express (English) daily newspapers, the Commission invited suggestions and objections considering the submissions made by MEDA and TPC. The Commission also impleaded MEDA and the Maharashtra State Load Despatch Centre (MSLDC) as Parties. A Public Hearing was held on 23 March, 2015 in the Office of the Commission at the World Trade Centre, Cuffe Parade, Mumbai.
11. At the Public Hearing, TPC made a presentation regarding the status of its RPO compliance. With regard to the surplus over the Non-Solar RPO target, TPC sought that it be allowed to carry it forward to FY 2014-15 and FY 2015-2016. As regards the earlier shortfall against Mini/Micro Hydro RPO, the Commission had already allowed TPC to make up for that shortfall on a cumulative basis by FY 2015-16. In its written submissions, it had set out the efforts being made to procure Mini/Micro Hydro power, but had not received the required response. Hence, in case this situation persists, TPC may be allowed to meet the shortfall through corresponding purchase of Non-Solar RECs in FY 2015-16.
12. The summary of RPO compliance of TPC for FY 2013-14 based on details furnished by MEDA and TPC is at Annexure-1. The list of persons who submitted their comments/suggestions in writing or made oral submissions during the Public Hearing is at Annexure-2 (A). The list of persons present at the Public Hearing is at Annexure-2(B).

Suggestions/Objections Received (including those presented at the Public Hearing)

13. Vide letter dated 10 March, 2015, Hydro Power Association (India) submitted that, in order to meet the planned target of RPO, Distribution Licensees need to make more

source-wise efforts and be more transparent in their processes. Standard draft of EPA and other documents should be publicized. Project-wise contracted capacity and monthly energy fed into grid should be made available by each Distribution Licensee separately for Small Hydro Projects and Mini/Micro Hydro Projects.

14. Vide letter dated 18 March, 2015, Power Exchange India Limited (PXIL) submitted that, with better forecasting and scheduling, a Distribution Licensee should endeavour to meet its obligations well in advance rather than resorting to last minute efforts in order to avoid a penalty. Fulfillment of RPO on a quarterly rather than yearly basis is suggested so as to avoid financial burden during the latter half of the financial year.
15. PXIL further submitted that the actual energy consumption report for the financial year is available from MSLDC in April/May of the next financial year. Hence, the Distribution Licensees should be allowed time till the first quarter of the subsequent financial year to purchase RECs from the Power Exchanges and fulfill their RPO targets. While the Licensees have submitted that there is a dearth of long-term RE suppliers, purchase of RECs on the Power Exchanges will ensure compliance of yearly RPO targets.
16. Shri T.P. Vartak, Four Eyes Research Pvt. Ltd., submitted that special consideration should be given to Mini/Micro Hydro Projects. He refuted the contention that Mini/Micro Hydro Projects are not available or that their developers did not respond to Expressions of Interest sought by the Distribution Licensees. Maharashtra has sufficient potential for Mini/Micro Hydro Projects. However, due to connectivity issues at the LT level of the distribution network, such potential has largely not been exploited. Distribution Licensees should co-operate to harness the available Mini/Micro Hydro potential in the State.

Commission's Analysis and Ruling

17. **The status of achievement of RPO targets by TPC, based on the details provided by MEDA and subsequent submissions by TPC, and the shortfall in meeting the Solar RPO targets for FY 2010-11 to FY 2013-14 and carried forward to subsequent years, is shown in Table B below:**

Table B: RPO Settlement details in respect of TPC for FY 2013-14

TPC	FY 2010-11		FY 2011-12		FY 2012-13		FY 2013-14		Cumulative RPO (Surplus) / Shortfall
	%	MUs	%	MUs	%	MUs	%	MUs	MUs
		(a)		(b)		(c)		(d)	Z = (a)+(b)+(c)+(d)
Gross Energy Consumption	100	4619.91	100	6124.84	100	6948.82	100	6844.80	
<u>Solar RPO</u>									
Target	0.25	11.55	0.25	15.31	0.25	17.37	0.5	34.22	78.45
Achievement	0.001	0.05	0.067	4.12	0.068	4.70	0.08	5.68	14.55
(Surplus) / Shortfall	0.25	11.50	0.18	11.19	0.18	12.67	0.42	28.54	63.90

TPC	FY 2010-11		FY 2011-12		FY 2012-13		FY 2013-14		Cumulative RPO (Surplus) / Shortfall
	%	MUs	%	MUs	%	MUs	%	MUs	MUs
		(a)		(b)		(c)		(d)	Z = (a)+(b)+(c)+(d)
									Shortfall
<u>Non-Solar RPO</u>									
Target	5.75	265.64	6.75	413.43	7.75	538.53	8.5	581.81	
Achievement	4.74	219.17	6.78	415.32	8.41	584.31	8.58	590.37	
(Surplus) / Shortfall	1.01	46.47	(0.03)	(1.89)	(0.66)	(45.78)	(0.08)	(8.56)	Achieved
<u>Mini/Micro Hydro RPO (within Non-Solar)</u>									
Target	0.1	0.27	0.1	0.41	0.1	0.54	0.2	1.16	2.38
Achievement	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(Surplus) / Shortfall	0.1	0.27	0.1	0.41	0.1	0.54	0.2	1.16	2.38 Shortfall

Note:() indicates surplus achievement

18. The Commission notes that TPC has fulfilled its Non-Solar RPO targets, but not its Solar RPO and Mini/Micro Hydro Power (within the Non-Solar) RPO targets, for FY 2013-14. TPC has also fulfilled its Non-Solar RPO target by 2013-14, and exceeded its Non-Solar RPO target for FY 2013-14 by 8.56 MUs.
19. Regarding TPC's Solar and Mini/Micro Hydro RPO Targets, the Commission had directed, in its Order dated 6 March, 2014 in Case No. 182 of 2013, as follows:
- “20. Regarding fulfillment of cumulative Solar RPO targets for TPC-D, the Commission has already dealt the same vide Order dated 20 December, 2013 in Case No. 159 of 2013 and has directed TPC-D to fulfill its Solar RPO target for FY 2010-11, FY 2011-12 and FY 2012-13 on a cumulative basis by FY 2015-16...”*
- 22. The Commission hereby relaxes/waives the provisions of Regulation 7.1 of the MERC (RPO-REC) Regulations, 2010 for the year during FY 2010-11 to FY 2012-13 for TPC-D for procurement of power from Mini/Micro hydro sources and directs TPC-D to fulfil the shortfall in RPO targets for Mini/Micro hydro for FY 2010-11 to FY 2012-13 cumulatively by FY 2015-16 i.e. cumulatively before 31 March, 2016. However, since TPC-D's license is expiring on 15 August, 2014, this relaxation will continue subject to grant of licence to TPC-D for distribution of electricity.”*
20. TPC has since been granted a Distribution Licence by the Commission vide its Order dated 14 August, 2014 in Case No. 90 of 2014. The Commission notes the efforts being made and action being taken by TPC to fulfill its Solar and Mini / Micro Hydro RPO targets, and the difficulties in achieving them so far. Along the

same lines as directed by the Commission in its earlier Order in Case No. 182 of 2013, the Commission directs TPC to make up for past shortfalls, including the shortfalls in FY 2013-14, by fulfilling its Solar and Mini/Micro Hydro RPO targets on a cumulative basis by the end of FY 2015-16. The Commission is not inclined to accept TPC's plea that it be allowed to make up for any persisting shortfall against its Mini/Micro Hydro RPO target by purchase of RECs in FY 2015-16 for the same reason as it had cited in earlier proceedings, namely that it would entirely subvert the purpose of specifying a separate target for purchase of such power.

21. The Commission had already decided earlier in Case No. 182 of 2013 not to apply Regulatory Charges (under Regulation 12) on TPC for non-fulfillment of Solar and Mini/Micro Hydro RPO targets during FY 2010-11 to FY 2012-13, and the shortfall was allowed to be cumulatively fulfilled by 2015-16. Considering the facts and circumstances, and along the same lines, the Commission is of the view that imposition of such Regulatory Charges is not called for in respect of the shortfall in FY 2013-14 either.
22. While appreciating the objective behind PXIL's suggestion that RPO targets be met on a quarterly rather than yearly basis, the Commission notes that the present RPO-REC Regulations specify annual targets. As regards purchase of RECs in the first quarter of the subsequent year to meet the shortfall that may become evident only after the end of a particular year, the Commission notes that it has so far been dealing with shortfalls by allowing, on merits, fulfillment of targets on a cumulative basis in subsequent years.
23. As regards the points made by the Hydro Power Association and Shri Vartak of Four Eyes Research Pvt. Ltd. concerning Mini and Micro Hydro Projects, the Commission has partly addressed some concerns in its Orders dated 27 October and 31 July, 2014 in Case Nos. 73 and 77 of 2014, respectively.
24. With regard to monitoring and dissemination of information, the Commission notes that the latest period for which data has been displayed on the MEDA website relates to the third quarter of FY 2013-14, with no data from the Maharashtra State Electricity Distribution Co. Ltd. The Commission directs that the Monitoring Committee constituted under Regulation 13.1 of the RPO-REC Regulations meet (including MEDA, and an officer of the Commission as invitee) to resolve issues relating to regular RPO compliance reporting and publication so that MEDA can fulfil the requirements under Regulations 9.3 to 9.6. MSLDC should submit the outcome of the meeting(s) to the Commission within 1 month.

The *suo moto* proceedings in Case No. 192 of 2014 stand concluded accordingly.

Sd/-
(Deepak Lad)
Member

Sd/-
(Azeez M. Khan)
Member

Sd/-
(Chandra Iyengar)
Chairperson

Annexure – 1

Summary of RPO compliance by TPC for FY 2013-14, as submitted by MEDA and TPC

(in MUs)

TPC (FY 2013-14)	Requirements @ InSTS (GEC)	Solar Target (0.5%)	Solar Achievement	Solar Shortfall/ (Surplus)	Non- Solar Target (8.5%)	Non-Solar Achievement	Non- Solar Shortfall/ (Surplus)	Mini/micro hydro RPO target within Non-Solar (0.2%)	Mini/Micro hydro Achievement within Non- Solar	Mini/micro hydro Shortfall/(Surplus)
As per MEDA (in MUs)	6843.95	34.22	5.68	28.54	581.74	587.10	(5.36)	1.16	0.00	1.16
As per TPC (in MUs)	6844.80	34.22	5.68	28.54	581.81	590.37	(8.56)	1.16	0.00	1.16

Annexure -2

A] List of persons who submitted written comments/suggestions or made oral submissions during the Public Hearing

1. TPC
2. MEDA
3. Hydro Power Association (India)
4. Four Eyes Research (P) Ltd.
5. Power Exchange India Limited
6. Maharashtra Veej Grahak Sanghatna, Ichalkaranji, Dist. Kolhapur (in respect of MSEDCL)

B] List of persons who attended the Public Hearing:

1. Shri. Abhijit Deshpande, MSEDCL
2. Shri Ram Dutonde, MSEDCL
3. Shri. P. H. Jambhulkar, MSEDCL
4. Shri. N. P. Jagaldas, BEST
5. Shri. M. M. Davare, BEST
6. Shri. V. K. Rokade, BEST
7. Shri. K. P. Khodke, BEST
8. Ms. Swati Mehendale, TPC
9. Shri. Bhaskar Sarkar, TPC
10. Shri. R. M. Ranade, TPC
11. Shri. Ghansham Thakkar, RInfra-D
12. Shri. Kishor Patil, RInfra-D
13. Dr. J. V. Torane, MEDA
14. Shri. Sugam Sangole, MEDA
15. Shri. Mahesh Vipradas, Indian Wind Energy Association (IWEA)
16. Shri. D. S. Kulkarni, Hydro Power Association (India)
17. Shri. Jayant Kulkarni, MSLDC
18. Shri. K. D. Daware, MSLDC
19. Shri. T. P. Vartak, Four Eyes Research (P) Ltd.
20. Shri. Anil Kale, PXIL
21. Shri. Prabhakar Narkar, Maharashtra Veej Grahak Sanghatna, Ichalkaranji, Kolhapur.
22. Shri Gautam Chopra, Bothe Windfarm Development Pvt. Ltd.
23. Shri. Harshad Gavkar, Bothe Windfarm Development Pvt. Ltd.
24. Shri. Jagdish F., Shalivahana Group