

Before the
MAHARASHTRA ELECTRICITY REGULATORY COMMISSION
13th Floor, Centre No.1, World Trade Centre, Cuffe Parade, Mumbai - 400 005
Tel: 022-22163964/65/69 Fax: 022-22163976
E-mail: mercindia@merc.gov.in
Website: www.merc.gov.in / www.mercindia.org.in

Case No. 191 of 2014

In the matter of
Verification of compliance of Renewable Purchase Obligation targets by BEST
Undertaking for FY 2013-14

CORAM

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

Parties

1. Brihanmumbai Electric Supply & Transport Undertaking, Mumbai
2. Maharashtra Energy Development Agency, Pune
3. Maharashtra State Load Despatch Centre, Mumbai

Appearance

1. For BEST Undertaking : Shri. N. P. Jagaldas
2. For Impleaded Parties : Shri. Jayant Kulkarni, MSLDC
Dr. J. V. Torane, MEDA

ORDER

Date: 21st April, 2015

1. 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 the Brihanmumbai Electric Supply and Transport

Undertaking ('BEST'), a Distribution Licensee, for FY 2010-11 to FY 2015-16. The specified RPO targets are as below:

Year	<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 moto* Order dated July 1, 2010 in Case No. 21 of 2010, designated the Maharashtra Energy Development Agency (MEDA) 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 the auditors.

5. Vide its Order dated 6 March, 2014 in Case No. 181 of 2013 in *suo moto* proceedings regarding compliance of RPO targets of BEST cumulatively for three years, i.e. FY 2010-11, FY 2011-12 and FY 2012-13, the Commission directed as follows:

“33. Summary of Findings:

The Commission vide its earlier Order in Case No. 30 of 2013 had already relaxed/waived the Solar RPO targets as stipulated under Regulation 7.1 of the MERC (RPO-REC) Regulation 2010 for BEST for FY 2010-11 and FY 2011-12 and directed BEST to fulfill its solar RPO target on a cumulative basis by FY 2015-16.

The Commission noted that the BEST has fulfilled its Mini/micro hydro RPO target cumulatively by FY 2012-13.

The Commission also decides that no RPO Regulatory Charges shall be applicable on BEST for non fulfillment of RPO targets for Non-Solar during FY 2010-11, FY 2011-12 and FY 2012-13 provided that the same shall be fulfilled on cumulative basis in addition to the RPO target for FY 2013-14 before 31 March, 2014.”

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, i.e. cumulatively for four years FY 2010-11 to FY 2013-14, for the Distribution Licensees, including BEST. The RPO compliance details of BEST for FY 2010-11 to FY 2013-14 as submitted by MEDA is summarised as below:

Table-A: RPO Settlement data for BEST as furnished by MEDA

Item	FY 2010-11		FY 2011-12		FY 2012-13		FY 2013-14		Cumulative RPO (Surplus) / Short fall
	%	MU	%	MU	%	MU	%	MU	MU
		(a)		(b)		(c)		(d)	Z = (a)+(b)+(c)+(d)
Gross Energy Consumption	100	4847.79	100	4849.11	100	4914.00	100	4830.04	
Solar RPO Target	0.25	12.12	0.25	12.12	0.25	12.29	0.5	24.15	60.68
Solar RPO Met	0.00	0	0.00	0	0.00	0	0.47	22.86	22.86
Solar RPO (surplus)/shortfall	0.25	12.12	0.25	12.12	0.25	12.29	0.03	1.29	37.82
Non Solar RPO Target	5.75	278.75	6.75	327.31	7.75	380.84	8.5	410.55	1397.45
Non-Solar RPO Met	4.52	219.06	4.52	219.07	11.08	544.54	8.67	418.63	1401.30
Non-Solar RPO (surplus)/shortfall	1.23	59.69	2.23	108.24	(3.33)	(163.70)	(0.17)	(8.08)	(3.85)
Mini/Micro Hydro RPO Purchase Target (within Non-Solar RPO Target)	0.10	0.28	0.10	0.33	0.10	0.38	0.2	0.82	

Item	FY 2010-11		FY 2011-12		FY 2012-13		FY 2013-14		Cumulative RPO (Surplus) / Short fall
	%	MU	%	MU	%	MU	%	MU	MU
		(a)		(b)		(c)		(d)	Z = (a)+(b)+(c)+(d)
Mini/Micro Hydro RPO Target Met (within Non-Solar RPO Target)	0.00	0	0.00	0	0.64	2.44	1.63	6.71	
Mini/Micro Hydro RPO Target (within Non-Solar RPO Target) (surplus)/shortfall	0.10	0.28	0.10	0.33	(0.54)	(2.06)	(1.43)	(5.89)	

7. MEDA has submitted that BEST has fulfilled its Non-Solar RPO cumulatively by FY 2013-14 and Mini/micro RPO target for FY 2013-14, with surplus procurement of 3.85 MUs and 5.89 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 BEST and undertake necessary actions required in accordance with Regulation 12 of the RPO-REC Regulations. Accordingly, vide Notice dated 24 November, 2014, the Commission directed BEST to submit its response to the data furnished by MEDA within two weeks.

9. In response, vide its affidavit dated 17 December, 2014, BEST submitted as follows:

9.1 Additional 1.74 MUs of Solar power is to be considered during FY 2013-14 due to late receipt of relevant Generation Credit Notes (GCNs). The details of the GCNs have been submitted.

9.2. There is a minor change of 0.31 MUs in Mini/Micro Hydro power due to error in RPO data submitted to MEDA for FY 2013-14. In BEST's annual report to MEDA, 0.5974 MUs of Mini/Micro Hydro power was correctly mentioned in Form-3 of the monthly statement for September, 2013. However, in Form-1 of that report, it was erroneously mentioned as 0.2872 MUs, resulting in a difference of 0.31 MUs in Mini/Micro Hydro power as well as Non-Solar RPO.

9.3. There is a cumulative surplus of Non-Solar RPO of 4.03 MUs for the period from FY 2010-11 to FY 2013-14. The detailed statement of project-wise energy procurement from various Non-Solar RE sources during FY 2010-11 to FY 2013-14 has been submitted.

9.4 There is surplus of Mini/micro Hydro power RPO of 7.02 MUs for FY 2013-14. The detailed statement of project wise energy procurement from various Mini/micro Hydro Power sources during FY 2012-13 and FY 2013-14 has been submitted.

9.5 BEST is procuring Non-Solar Renewable Energy Certificates (RECs) to fulfill its Non-Solar RPO targets since FY 2010-11. BEST has procured 2.20 lakh Non-Solar RECs (220 MUs) during FY 2013-14. Through a combination of actual RE and RECs, BEST has been able to exceed its Non-Solar RPO for the period from FY 2010-11 to FY

2013-14. BEST has entered into Energy Purchase Agreements (EPAs) with developers like M/s Spark Green Energy (Ahmednagar) Pvt. Ltd. and Spark Green Energy (Satara) Ltd. to procure 50 MW of biomass-based Non-Solar RE on long term basis.

9.6 Regarding Solar RPO targets, there is a cumulative shortfall of 36.08 MUs for FY 2010-11 to FY 2013-14. BEST has entered into PPA with M/s Welspun Energy Maharashtra Pvt. Ltd. to procure 20 MW Solar power on long term basis. The project has been commissioned in October, 2013 and is supplying about 2.5 - 3.0 MUs of Solar energy per month to BEST.

9.7 In order to fulfill future Solar RPO, BEST has issued an Expression of Interest (EoI) in newspapers on 25 August, 2014 to procure 10 MW of Solar power on long term basis. The EoI was opened on 10 November 2014. Nine offers have been received and are being scrutinized.

9.8 Vide its Order dated 6 March, 2014 in Case No. 181 of 2013, the Commission has allowed BEST to meet its Solar RPO target on cumulative basis for the Control Period FY 2010-11 to FY 2015-16 by March, 2016. BEST is continuing to make efforts towards meeting its Solar RPO targets.

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 BEST. 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. The summary of RPO compliance of BEST for FY 2013-14 based on details submitted by MEDA and BEST 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

12. 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.

13. Vide letter dated 18 March, 2015, Power Exchange India Limited (PXIL) submitted that, with better forecasting and scheduling, a Distribution Licensee should be able to meet its obligations well in advance rather than resorting to last minute efforts in order

to avoid a penalty. Fulfilment 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.

14. 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 target.

15. 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 of the Distribution Licensees that Mini/Micro Hydro Projects are not available or that their developers did not respond to EoIs issued by the Licensees. Sufficient potential for Mini/Micro hydro projects exists in the State. However, due to connectivity issues at LT level of distribution network, such potential has largely not been exploited. Distribution Licensees should co-operate to harness the available Mini/Micro Hydro potential in Maharashtra.

Commission's Analysis and Ruling

16. The status of achievement of RPO targets by BEST, based on the details provided by MEDA and subsequent submissions by BEST, 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 BEST for FY 2013-14

(in MUs)

Item	FY 2010-11		FY 2011-12		FY2012-13		FY 2013-14		Cumulative RPO (Surplus) / Shortfall
	%	MU	%	MU	%	MU	%	MU	E=A+B+C+D
		A		B		C		D	
Gross Energy Consumption	100	4847.79	100	4849.11	100	4914.10	100	4830.04	
<u>Solar RPO</u>									
Target	0.25	12.12	0.25	12.12	0.25	12.29	0.50	24.15	60.68
Achievement	0.0	0.00	0.0	0.00	0.0	0.00	0.51	24.60	24.60
(Surplus) / Shortfall	0.25	12.12	0.25	12.12	0.25	12.29	(0.01)	(0.45)	36.08 Shortfall
<u>Non-Solar RPO</u>									
Target	5.75	278.75	6.75	327.31	7.75	380.84	8.50	410.55	1397.46
Achievement	4.52	219.06	4.52	219.07	11.08	544.54	8.67	418.82	1401.49
(Surplus) / Shortfall	1.23	59.69	2.23	108.24	(3.33)	(163.70)	(0.17)	(8.27)	(4.03) Surplus

Item	FY 2010-11		FY 2011-12		FY 2012-13		FY 2013-14		Cumulative RPO (Surplus) / Shortfall
	%	MU	%	MU	%	MU	%	MU	MU
		A		B		C		D	E=A+B+C+D
<u>Mini-Micro RPO (Within Non-Solar)</u>									
Target	0.10	0.28	0.10	0.33	0.10	0.38	0.20	0.82	
Achievement	0.0	0.00	0.0	0.00	0.64	2.44	1.71	7.02	
(Surplus) / Shortfall	0.1	0.28	0.1	0.33	(0.54)	(2.06)	(1.51)	(6.20)	Achieved

Note :() Indicates surplus achievement

17. The Commission notes that BEST has fulfilled its Non-Solar and Mini /Micro Hydro Power RPO targets (within the Non-Solar RPO targets), but not its Solar RPO target, for FY 2013-14. BEST has also fulfilled its cumulative Non-Solar RPO target by 2013-14. In fact, the Non-Solar and Mini/Micro Hydro RPO targets for FY 2013-14 have been exceeded by 4.03 MUs and 6.20 MUs respectively.

18. Regarding BEST's Solar RPO targets, the Commission had directed in its Order dated 6 March, 2014 in Case No 181 of 2013 as follows:

“33. Summary of Findings:

The Commission vide its earlier Order in Case No. 30 of 2013 had already relaxed/waived the Solar RPO targets as stipulated under Regulation 7.1 of the MERC (RPO-REC) Regulation 2010 for BEST for FY 2010-11 and FY 2011-12 and directed BEST to fulfill its solar RPO target on a cumulative basis by FY 2015-16.”

19. The Commission notes the efforts being made and action being taken by BEST to fulfill its Solar RPO target, and its difficulties in achieving it so far. Along the same lines as directed by the Commission in its earlier Order in Case No. 181 of 2013, the Commission directs BEST to make up for past shortfalls, including the shortfall in FY 2013-14, by fulfilling its Solar RPO target on a cumulative basis by the end of FY 2015-16. If BEST is unable to procure sufficient Solar power for the purpose, it should meet the shortfall by purchase of Solar RECs to that extent before 31 March, 2016.

20. The Commission had decided in Case No. 181 of 2013 not to apply Regulatory Charges (under Regulation 12) on BEST for non-fulfillment of Solar RPO targets from FY 2010-11 to FY 2012-13, and that the cumulative shortfall should be 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.

21. 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.
22. 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.
23. 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.

Case No. 191 of 2014 stands disposed of accordingly.

Sd/-
(Deepak Lad)
Member

Sd/-
(Azeez M. Khan)
Member

Sd/-
(Chandra Iyengar)
Chairperson

ANNEXURE 1

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

(in MUs)

BEST RPO for FY 2013-14	Gross Energy Consumption	Solar RPO Target (0.5%)	Solar Achieve ment	Solar Target Shortfall/ (surplus)	Non- Solar Target (8.5%)	Non- Solar Achievem ent	Non- Solar Shortfall/ (Surplus)	Mini/Micro Hydro Target (0.2%) within Non- Solar RPO	Mini/Micro Hydro Achieveme nt within Non-Solar RPO	Mini/Micro Hydro Shortfall/ (Surplus)
As per MEDA	4830.04	24.15	22.86	37.82	1397.45	1401.30	(3.85)	0.82	6.71	(5.89)
As per BEST	4830.04	24.15	24.60	36.08	1397.46	1401.49	(4.03)	0.82	7.02	(6.20)

ANNEXURE 2

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

1. BEST
2. MEDA
3. Hydro Power Association (India)
4. Four Eyes Research (P) Ltd.
5. Power Exchange India Limited
6. Maharashtra Veej Grahak Sanghatana, 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-D
9. Shri. Bhaskar Sarkar, TPC-D
10. Shri. R. M. Ranade, TPC-D
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