Balu Ugale

The Brihan Mumbai Electric Supply & Transport Undertaking

(OF THE BRIHAN MUMBAI MAHANAGARPALIKA)

TELEPHONE : (022) 22856262
FAX : (022) 22851244

ADDRESS ALL COMMUNICATION BY TITLE NOT BY NAME

BEST BHAVAN,
BEST MARG,
POST BOX NO. 192.
MUMBAI - 400 001.

OUR REF. : CER/MERC/ 174 /2016

DATE : 15 DEC 2016

MERC		
Inward No: 4037	Date 15/12/16	
Chairman	Member	Member
Secretary	Dir (EE)	Dir (T)

15/12/16

Secretary (MERC)
Maharashtra Electricity Regulatory Commission
13th Floor, Centre No. 1, World Trade Centre
Cuffe Parade, Colaba, Mumbai-400 005.

Sub: Verification and Compliance of Renewable Purchase Obligation targets of BEST for FY 2015-16 as specified under MERC (RPO-REC) Regulations, 2010
--Submission of BEST's reply on affidavit

Ref: MERC/RE Cell/RPO/2015- 16/00913 dated 2nd November, 2016

Sir,

Hon'ble Commission, vide its letter dated 2nd November, 2016 referred above, in the matter of verification and compliance of RPO for FY 2015-16 as specified under MERC (RPO-REC) Regulations, 2010 has directed BEST to submit its replies to the questions raised in the aforesaid letter on Affidavit.

Accordingly, BEST Undertaking is herewith submitting its replies to the questions raised in the aforesaid letter dated 2nd November, 2016 on Affidavit.

Thanking you,

Yours faithfully,

Sd/-

(R.D. Patsute)
Chief Engineer
(Regulatory)

Encl.: Affidavit (Original + 6 copies)

CER/MERC/ 174 /2016

15 DEC 2016

Copy forwarded to:-

The Director (Tariff)
Maharashtra Electricity Regulatory Commission
13th Floor, Centre No. 1, World Trade Centre
Cuffe Parade, Colaba, Mumbai-400 005.

Ref: MERC/RE Cell/RPO/2015- 16/00913 dated 2nd November, 2016

Sir,

This has reference to the RPO compliance letter referred above. BEST has herewith filed reply with Hon'ble Commission.

Thanking you,

Yours faithfully,

(R.D. Patsute)
Chief Engineer
(Regulatory)

Encl.: Copy of the Affidavit

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Secretary (MERC)
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Yours faithfully,

(R.D. Patsute)
Chief Engineer
(Regulatory)

Encl.: Affidavit (Original + 6 copies)

BEFORE THE HON'BLE

MAHARASHTRA ELECTRICITY REGULATORY COMMISSION

FILING NO.: _____

CASE NO.:

1. IN THE MATTER OF: Verification and Compliance of RPO Targets of BEST Undertaking for FY 2015-16 as specified under MERC (Renewable Purchase Obligation, its Compliance and Implementation of REC Framework) Regulations, 2010

And

IN THE MATTER OF : Mumbai Municipal Corporation constituted under the Mumbai Municipal Corporation Act, 1888 through the General Manager, Brihanmumbai Electric Supply and Transport Undertaking, an Undertaking wholly owned by Mumbai Municipal Corporation, having their office at BEST Bhavan, BEST Marg, Colaba, Mumbai-400 001.

2. *Affidavit verifying the application*

I, Rajendra D. Patsute aged 49 years, son of Dadaram Patsute, having my office at BEST Undertaking, Colaba, Mumbai 400 001 do solemnly affirm and say as follows:

2.1 I am the Chief Engineer (Regulatory) of Brihanmumbai Electric Supply and Transport Undertaking, the applicant in the above matter and am duly authorized to make this affidavit.

2.2 The statements made in the enclosed submissions are based on the information received from the concerned officers of the Undertaking and I believe them to be true.

2.3 I say that there are no proceedings pending in any Court of Law/Tribunal or Arbitrator or any other authority wherein the deponent 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.

NOTARY GOVT. OF INDIA S.M.H. ZAIDI Mumbai & Thane Dist. Regn. No. 3640

15 DEC 2016

I solemnly affirm at Mumbai on this 15 December 2016 that the contents of the above affidavit are true to my knowledge, no part of it is false and nothing material has been concealed there from.

Deponent

BEFORE ME

S. M. H. ZAIDI
NOTARY 15/12/16
Government of India
Mumbai & Thane Dist.

15 DEC 2016

REGISTER SERIAL NO. 2672
PAGE NO. 83 DATE 15 DEC 2016

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BEFORE THE HON'BLE

MAHARASHTRA ELECTRICITY REGULATORY COMMISSION

FILING NO.: _____

CASE NO.:

IN THE MATTER OF: Verification and Compliance of RPO Targets of BEST Undertaking for FY 2015-16 as specified under MERC (Renewable Purchase Obligation, its Compliance and Implementation of REC Framework) Regulations, 2010

And

IN THE MATTER OF : Mumbai Municipal Corporation constituted under the Mumbai Municipal Corporation Act, 1888 through the General Manager, Brihanmumbai Electric Supply and Transport Undertaking, an Undertaking wholly owned by Mumbai Municipal Corporation, having their office at BEST Bhavan, BEST Marg, Colaba, Mumbai-400 001

The petitioner named above respectfully showeth under:

1. The Municipal Corporation of Greater Mumbai is a Municipal Corporation, duly constituted under the Mumbai Municipal Corporation Act, 1888. The Municipal Corporation of Greater Mumbai is also a local authority under Part IX A of the constitution of India. The Municipal Corporation of Greater Mumbai, under the provisions of the Mumbai Municipal Corporation Act, 1888, has an Undertaking known as the Brihanmumbai Electric Supply and Transport Undertaking (of the Municipal Corporation of Greater Mumbai) [hereinafter referred to; for sake of brevity, as "BEST"]. BEST, as such, is a statutory Undertaking of a local authority.

2. BEST is a Municipal/public utility, which has been and is providing two essential services in the City of Mumbai, namely, (i) mass public transportation in the City of Mumbai as well as its extended suburbs, and (ii) distribution or supply of electricity in the Island City of Mumbai (i.e. the area from Colaba up to Mahim and Sion).

3. (A) BEST is a "distribution licensee" under the present Electricity Act, 2003. BEST, under the Maharashtra Electricity Regulatory Commission (Specific Conditions of Distribution License applicable to Brihanmumbai Electric Supply & Transport Undertaking of the Municipal Corporation of Greater Mumbai) Regulations, 2007, is authorized and required to distribute or supply electricity in the area of supply specified therein, in accordance with the provisions of the Electricity Act, 2003.

(B) BEST, being a statutory Undertaking of the Municipal Corporation of Greater Mumbai is also encompassed by the definition of a "Local Authority" under Section 2(41) of the Electricity Act, 2003.

4. Hon'ble Commission, vide letter dated 2nd November, 2016, in the matter of Verification and Compliance of Renewable Purchase Obligation targets of BEST for FY 2015-16 as specified under MERC (Renewable Purchase Obligation, its Compliance and Implementation of REC framework) Regulations, 2010 has directed BEST to submit its replies to the questions raised in the letter on affidavit within two weeks from the date of the letter. Accordingly, BEST submits as follows:

5. The RPO settlement data for FY 2010-11 to FY 2015-16 is verified and corrected statement is given below:

Table A: RPO settlement data for BEST for FY 2010-11 to FY 2015-16

Item	FY 2010-11		FY 2011-12		FY2012-13		FY 2013-14		FY 2014-15		FY 2015-16		Cumulative
	%	MU	%	MU	%	MU	%	MU	%	MU	%	MU	MU
Metered Energy at TPC-G to BEST T- D interface		4638.85		4642.89		4703.59		4621.58		4699.26		**4859.77**	28165.94
Transmission Loss as per SLDC web site	4.31		4.25		4.12		4.09		3.89		3.92		
Gross Energy at G-T Interface		4847.83		4848.85		4905.87		4818.68		4889.43		**5057.81**	29368.46
Solar													
RPO Target	0.25%	12.12	0.25%	12.12	0.25%	12.26	0.50%	24.09	0.50%	24.45	0.50%	25.29	110.34
RPO Achieved	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.51%	24.60	1.08%	53.03	0.65%	**32.88**	110.51
RPO (-Surplus / Shortfall)	0.25%	12.12	0.25%	12.12	0.25%	12.26	-0.01%	-0.51	-0.58%	-28.58	-0.15%	**-7.59**	**-0.17**

Non-Solar													
RPO Target	5.75%	278.75	6.75%	327.30	7.75%	380.20	8.50%	409.59	8.50%	415.60	8.50%	429.91	2241.36
Non-Solar RE		218.91		218.07		104.65		198.82		242.62		298.70	1281.77
Non-Solar REC		0.15		1.00		439.88		220.00		176.00		125.00	962.03
Non-Solar RPO Achieved	4.52%	219.06	4.52%	219.07	11.10%	544.53	8.69%	418.82	8.56%	418.62	8.38%	**423.70**	2243.80
RPO (-Surplus / Shortfall)	1.23%	59.69	2.23%	108.23	-3.35%	-164.33	-0.19%	-9.23	-0.06%	-3.02	0.12%	**6.21**	**-2.45**

Mini / Micro Hydro													
RPO Target	0.10%	0.28	0.10%	0.33	0.10%	0.38	0.20%	0.82	0.20%	0.83	0.20%	0.86	3.50
RPO Achieved	0.00%	0.00	0.00%	0.00	0.64%	2.44	1.71%	7.02	1.76%	7.32	0.29%	1.23	18.01
RPO (-Surplus / Shortfall)	0.10%	0.28	0.10%	0.33	-0.54%	-2.06	-1.51%	-6.20	-1.56%	-6.49	-0.09%	**-0.37**	**-14.51**

Total RPO													
Total RPO Target in Mus		290.87		339.42		392.47		433.68		440.05		**455.20**	2351.69
Total RPO Achieved in Mus		219.06		219.07		544.53		443.42		471.65		**456.58**	2354.31
RPO (-Surplus / Shortfall)		71.81		120.35		-152.06		-9.74		-31.60		**-1.38**	**-2.62**

Note:-

- For FY 2010 & FY 2011-12, T<>D energy taken as per approved in MYT petition in case no 26 of 2013 and gross energy at G-T Interface is calculated considering transmission Loss as per MSLDC web site dt 01.11.2016 for FY 2010-11 & FY 2011-12
- For FY 2012-13 to FY 2014-15, gross energy at G-T Interface is taken as per MERC Order dt. 28.10.2016 in case no 33 of 2016
- For FY 2015-16, energy at T<>D interface is taken on actual basis and gross energy at G-T Interface is calculated considering transmission Loss as per MSLDC web site.

6. As directed by the Hon'ble Commission, BEST submits its point-wise replies as follows:

a) ***BEST should verify the RPO settlement details for FY 2015-16, as submitted by MEDA and highlight discrepancies, if any, along with proper justification.***

i) **Discrepancies in Gross Energy Requirement:**

BEST confirms the RPO settlement details for FY 2015-16 as mentioned in Table-A above. While submitting the data to MEDA, the gross energy at G-T interface estimated by BEST worked out to 5058.14 MUs.

NOTARY
S.M.H. ZAIDI
Mumbai & Thane Dist.
Regn. No. 3640
INDIA

Now while calculating the Gross Energy Consumption at G-T interface for FY 2015-16, BEST has taken actual gross energy measured at T<>D interface as 4859.77 MUs and by applying actual InSTS Loss of 3.92% for FY 2015-16 as per MSLDC web site, gross energy requirement at G-T Interface is worked out as 5057.81 MUs. Therefore while arriving at RPO target for FY 2015-16, BEST has considered gross energy requirement at G-T Interface as 5057.81 MUs instead of 5058.14 MUs as submitted by MEDA.

ii) **Discrepancies in actual procurement of Solar Energy:**

BEST's standalone Solar RPO target for FY 2015-16 was 25.29 MUs only. However BEST had procured total 32.88 MUs (additional 7.59 MUs) in FY 2015-16 to fulfill the solar RPO target on a cumulative basis from FY 2010-11 to FY 2015-16 as directed by Hon'ble Commission vide its order dated 17th April 2013 in Case no. 30 of 2013 and order dated 24th April 2015 in Case no. 191 of 2014 . Out of total 32.88 MUs, BEST has purchased 31.50 MUs on long term basis from M/s Welspun Energy Maharashtra Pvt. Ltd and 1.38 MUs on short term basis to fulfill the cumulative Solar RPO up to FY 2015-16.

Earlier BEST had informed MEDA that BEST had purchased 31.50 MUs of solar energy in FY 2015-16.However after purchasing additional solar energy of 1.38 MUs on short term basis to fulfill the cumulative Solar RPO up to FY 2015-16, BEST vide its mail dated 20.08.2016 had informed MEDA that BEST had purchased total solar energy of 32.88 MUs in FY 2015-16.Therfore there is a difference of 1.38 MUs of solar energy in MEDA's submission and actual solar energy purchased.

iii) **Discrepancies in total RPO achieved and shortfall (surplus):**

As gross energy requirement at G-T Interface for FY 2015-16 is revised to 5057.81 MUs on actual basis, the total RPO target and RPO achieved in FY 2015-16 is calculated as 455.20 MUs and 456.58 MUs respectively. BEST's standalone Non - Solar RPO target for FY 2015-16 was 429.91 MUs instead of 429.94 MUs as submitted by MEDA. Also BEST's shortfall of Non - Solar RPO target for FY 2015-16 was 6.21 MUs instead of 6.61 MUs as submitted by MEDA. Therefore BEST confirms that BEST has fulfil total RPO target of FY 2015-16 with a surplus of 1.38 MUs instead of shortfall of 0.0358 MUs as shown in MEDA's submission.

b) BEST should submit the status of Solar, non-Solar RPO compliance including Min-Micro Hydro RPO compliance as per the directives of the Commission vide Orders in Case No.181 of 2013, Case No.191 of 2014 and Case No. 17 of 2016 along with detailed statement for project wise energy procurement in MUs from all solar, non-Solar including Min-Micro Hydro generating projects and project wise contracted solar, non-Solar including Min-Micro Hydro power capacity in MW during FY 2010-11 to FY 2015-16.

Status of Solar RPO compliance:

i. Hon'ble Commission, vide its order dated 17th April 2013 in Case no. 30 of 2013 has 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 fulfil the solar target on a cumulative basis by FY 2015-16.

ii. Hon'ble Commission, vide its Order dated 24th April 2015 in Case no. 191 of 2014 in the matter of Verification and Compliance of Renewable Purchase Obligation targets by BEST Undertaking for FY 2013-14 as specified under MERC (Renewable Purchase Obligation, its compliance and Implementation of REC framework) Regulations, 2010 directed 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.

iii. BEST's standalone Solar RPO target for FY 2015-16 was 25.29 MUs only. However BEST had procured total 32.88 MUs (additional 7.59 MUs) in FY 2015-16 to fulfill the solar RPO target on a cumulative basis from FY 2010-11 to FY 2015-16 as directed by Hon'ble Commission. Out of total 32.88 MUs, BEST has purchased 31.50 MUs on long term basis from M/s Welspun Energy Maharashtra Pvt. Ltd and 1.38 MUs on short term basis to fulfill the cumulative Solar RPO up to FY 2015-16. BEST's total Solar RPO target from FY 2010-11 to FY 2015-16 was 110.39 MUs and BEST confirms that BEST has achieved cumulative Solar RPO target up to FY 2015-16 with a surplus of 0.12 MUs as indicated in table below:

FY	Gross Energy in MUs	% Solar RPO	RPO Target (MUs)	Welspun Energy (MUs)	Short Term Contract (MUs)	Standalone RPO Achieved (MUs)	Standalone Surplus / Shortfall (MUs)	Cumulative Surplus / Shortfall in MUs
2010-11	4847.83	0.25	12.12	0	0	0	12.12	12.12
2011-12	4848.85	0.25	12.12	0	0	0	12.12	24.24
2012-13	4905.87	0.25	12.26	0	0	0	12.26	36.51
2013-14	4818.68	0.5	24.09	16.66	7.94	24.60	-0.51	36.00
2014-15	4889.43	0.5	24.45	34.28	18.74	53.03	-28.58	7.43
2015-16	5057.81	0.5	25.29	31.5	1.38	32.88	-7.59	**-0.17**
Total			**110.34**	82.44	25.00	**110.51**		

iv. Detailed statement of project wise energy procurement from various solar RE sources from FY 2010-11 to FY 2015-16 are enclosed herewith as Annexure A. Detailed statement of project wise contracted solar RE power from FY 2010-11 to FY 2015-16 are enclosed herewith as Annexure B.

Status of Non-Solar RPO compliance:

i BEST's standalone Non - Solar RPO target for FY 2015-16 was 429.91 MUs and BEST has achieved the target of 423.70 MUs by the way of purchasing Non-solar energy and Non-solar RECs. BEST confirms that BEST has a standalone shortfall of Non-solar RPO by 6.21 MUs for FY 2015-16 as indicated in Table-A above.

ii In case no. 191 of 2014 in the matter of Verification and Compliance of Renewable Purchase Obligation Cumulative targets for FY 2013-14, the Hon'ble Commission was requested to allow BEST to carry forward BEST's surplus non-solar RPO at the end of FY 2013-14 to FY 2014-15. Hon'ble Commission, vide its Order dated 21st April, 2015, has disposed off the matter. However Hon'ble Commission has not mentioned anything regarding our prayer to allow BEST to carry forward BEST's surplus Non-solar RPO at the end of FY 2013-14 to FY 2014-15.

iii Hon'ble Commission was again requested to consider the cumulative Non-solar surplus of 4.48 MUs from FY 2010-11 to FY 2014-15 towards Non-solar RPO compliance for FY 2015-16 in case no. 17 of 2016 in the matter of Verification and Compliance of Renewable Purchase Obligation Cumulative targets for FY 2014-15. Since BEST has not received the order before closing period of FY 2015-16, BEST has considered this Non-Solar surplus of 4.48 MUs to fulfill the Non-Solar RPO for FY 2015-16.

iv Hon'ble Commission has issued the order in this matter vide case No. 17 of 2016 dated 20.04.2016 and given the ruling as follows:

"BEST has sought to carry forward and set off the Non-Solar RPO surplus achieved in FY 2014-15 and earlier years against its target for subsequent years. The Commission notes that, as pointed out by IWPA, the CERC REC Regulations (Third Amendment) dated 30 December, 2014 provides Distribution Licensees the option to obtain tradeable RECs against the excess over the RPO target by applying to the Central Agency for issue of

RECs provided certain conditions are met. The Commission notes that, in pursuance of its Order dated 11 January, 2016 in Case No 39 of 2015, the Secretariat of the Commission has issued a certificate in the prescribed format to enable Reliance Infrastructure Ltd. to approach the Central Agency in respect of the excess over its Solar and Non-Solar RPO targets in FY 2013-14. ***BEST should explore this option in the first instance.*** *"*

v BEST in its letter Ref. No. CER/129/2016 dated 3rd August 2016 submitted to Hon'ble Commission, BEST has stated that BEST has procured RECs and not RE power in excess of its RPO for FY 2014-15. BEST had purchased Non-Solar RECs in the last trading session i.e.in March 2014 and March 2015 to overcome the shortfall up to March and fulfilled the RPO of respective years. Also due to the revision in InSTS loss by SLDC after the last trading session, a Non-Solar surplus of 4.48 MUs is increased to 5.89 MUs as follows:

Year	Gross Energy in MU's	Non-Solar RPO target in %	Target in MU's	NON-Solar RPO achieved			Standalone shortfall / (surplus) (MU)	Cumulative Shortfall/ (Surplus) MU's
				Energy (MU)	REC (MU)	Total RE achieved (MU)		
2010-11	4847.79	5.75	278.75	218.91	0.148	219.06	59.69	59.69
2011-12	4848.97	6.75	327.31	218.07	1.00	219.07	108.24	167.93
2012-13	**4906.17***	7.75	**380.23***	104.65	439.88	544.53	**(164.31)***	**3.62***
2013-14	**4822.04***	8.50	**409.87***	**198.94***	220.00	**418.94***	**(9.07)***	**(5.44)***
2014-15	4919.66	8.50	418.17	242.62	176.00	418.62	(0.44)	**(5.89)***
2015-16	5058.14	8.50	429.94	298.70	125.00	423.70	6.25	**0.36**

vi Since it is not possible to precisely estimate the RE obligation by March of financial year when RPO compliances is to be fulfilled, there is a possibility of shortage or spill over. Considering this aspect MERC in its MERC (Renewable Purchase Obligation, its compliance and REC framework Implementation) Regulations, 2016 has provided a variation band of ± 5% of the RPO targets. The excess renewable energy for FY 2014-15 is precisely because of the same reason.

Since BEST has excess RECs and not RE power, BEST vide its letter Ref. No.CER/129/2016 dated 3rd August 2016, requested Hon'ble Commission to allow BEST to carry forward the cumulative surplus Non-solar RPO up to FY 2014-15 of 5.89 MUs to FY 2015-16 to enable BEST to reduce Non-solar RPO for FY 2015-16 to that extent.

vii Now while calculating the energy requirement at G-T interface for FY 2015-16, BEST has taken actual gross energy consumption at T<>D interface as 4859.77 MUs and by applying actual InSTS Loss of 3.92% for FY 2015-16 as per MSLDC web site, gross energy requirement at G-T Interface is worked out as 5057.81 MUs. Therefore while arriving at RPO target for FY 2015-16, BEST has considered gross energy requirement at G-T Interface as 5057.81 MUs. Also for FY 2010-11 & FY 2011-12, energy at T<>D interface is taken as approved in MYT petition in case no 26 of 2013 and gross energy at G-T Interface is calculated considering transmission Loss as per MSLDC web site dt 01.11.2016 for FY 2010-11 & FY 2011-12.For FY 2012-13 to FY 2014-15, gross energy at G-T Interface is taken as per MERC Order dt. 28.10.2016 in case no 33 of 2016.Cumulative shortfall/surplus from FY 2010-11 to FY 2015-16 as shown in table below:

Year	Gross Energy in MU's	Non-Solar RPO target in %	Target in MU's	NON-Solar RPO achieved			Standalone shortfall / (surplus) (MU)	Cumulative Shortfall/ (Surplus) MU's
				Energy (MU)	REC (MU)	Total RE achieved (MU)		
2010-11	4847.83	5.75	278.75	218.91	0.148	219.06	59.69	59.69
2011-12	4848.85	6.75	327.30	218.07	1	219.07	108.23	167.92
2012-13	4905.87	7.75	380.20	104.65	439.88	544.53	-164.33	3.59
2013-14	4818.68	8.5	409.59	198.82	220	418.82	-9.35	-5.76
2014-15	4889.43	8.5	415.60	242.62	176	418.62	-3.02	-8.66
2015-16	5057.81	8.5	429.91	298.7	125	423.7	6.21	-2.45
Total	**29368.47**		**2241.36**	**1281.77**	**962.028**	**2243.80**	**-2.45**	

viii From the above table it is observed that after adopting the approved gross energy at G-T interface for FY 2012-13 to FY 2014-15, taking revised transmission loss figures uploaded on SLDC website for FY 2010-11 and FY 2011-12, the cumulative surplus from FY 2010-11 to FY 2014-15 works out to be 8.66 MUs instead of 5.89 MUs as worked out earlier and submitted to Hon'ble Commission.

BEST requests Hon'ble Commission to kindly consider the revised figures calculated by BEST based on the gross energy at G-T interface approved by Hon'ble Commission, revised transmission loss figures uploaded on SLDC website and allow BEST to carry forward the cumulative surplus of Non-solar RPO up to FY 2014-15 of 8.66 MUs to FY 2015-16.

ix BEST would like to mention here that BEST has considered the cumulative surplus of Non-solar RPO up to FY 2014-15 of 8.66 MUs to fulfill the RPO target for FY 2015-16 and balance RPO shortfall of FY 2015-16 is met by purchasing Non-Solar RECs during the last trading session of FY 2015-16 i.e.in the month of March 2016. BEST hereby confirms that BEST's standalone shortfall of Non-solar RPO for FY 2015-16 is 6.21 MUs. However considering the cumulative surplus of Non-solar RPO up to FY 2014-15 of 8.66 MUs, BEST hereby confirms that BEST has achieved the cumulative target of Non-solar RPO for the control period FY 2010-11 to FY 2015-16 with a surplus of 2.45 MUs. BEST's total Non-Solar RPO target from FY 2010-11 to FY 2015-16 is 2241.36 MUs and BEST confirms that BEST has achieved cumulative Non-Solar RPO target of 2243.80 MUs as indicated in above table.

x Detailed statement of project wise energy procurement from various Non-solar RE sources from FY 2010-11 to FY 2015-16 are enclosed herewith as **Annexure C.** Detailed statement of project wise contracted Non-solar RE power from FY 2010-11 to FY 2015-16 are enclosed herewith as **Annexure D**

Status of Min-Micro Hydro RPO compliance:

i. BEST confirms that BEST's standalone Mini/micro Hydro RPO target for FY 2015-16 was 0.86 MUs and BEST has achieved Mini/micro Hydro RPO of 1.23 MUs with a surplus of 0.37 MUs. BEST further confirms that BEST has achieved cumulative Mini/micro Hydro RPO of 18.01 MUs from FY 2010-11 to FY 2015-16 as against the target of 3.50 MUs with a cumulative surplus of 14.51 MUs as indicated in above table.

ii. Detailed statement of project wise energy procurement from various Mini/micro Hydro power sources from FY 2010-11 to FY 2015-16 is enclosed herewith as **Annexure E.** Detailed statement of project wise contracted Mini/micro Hydro power sources FY 2010-11 to FY 2015-16 is enclosed herewith as **Annexure F.**

Status of Total Cumulative RPO (including Solar, Non - Solar and Mini/micro Hydro):

i. BEST confirms that BEST's standalone RPO target including Solar, Non - Solar and Mini/micro Hydro for FY 2015-16 is 455.20 MUs and BEST has achieved RPO target of 456.58 MUs with a surplus of 1.38 MUs.

ii. BEST further confirms that BEST's Cumulative RPO target including Solar, Non - Solar and Mini/micro Hydro from FY 2010-11 to FY 2015-16 is 2351.69 MUs and BEST has achieved Cumulative RPO target of 2354.31 MUs with a surplus of 2.62 MUs.

c) ***BEST should submit detailed list of actions and efforts undertaken by it, prior to and during FY 2015-16 to ensure compliance RPO targets in respect of Solar RPO, Non-Solar RPO and Mini-Micro Hydro RPO for FY 2015-16.***

The detailed list of actions and efforts undertaken by BEST prior to and during FY 2015-16 to ensure compliance of RPO targets in respect of Solar, Non-solar and Mini/micro hydro power are as follows:

i. On 30.04.2008, BEST filed Case No. 45 of 2008 before Hon'ble Commission, for approval of methodology of the EOI advertised on 03.09.2007, as a competitive bidding method for long term procurement of RE. The Hon'ble Commission, by Order dated 21.11.2008 passed in said Case No. 45 of 2008, rejected the Petition filed by BEST on the ground of various infirmities making it not maintainable. The relevant Para 22 of said Order dated 21.11.2008 held, as follows:

"As is evident, there are infirmities in the Petition submitted by BEST, which cannot be covered by citing paucity of time. In view of this, the Petition filed by BEST is not maintainable and therefore stands rejected. However, the Commission grants liberty to BEST to file an appropriate Petition to seek the Commission's prior approval on the deviations contained in the bidding documents in accordance with the procedure prescribed by the "Guidelines for Determination of Tariff by Bidding Process for Procurement of Power by Distribution Licensees". Moreover, BEST can always procure renewable energy as per rates and other terms approved by the Commission in its respective Orders as detailed in the table below, which are applicable for all licensees in the State of Maharashtra, and meet its RPS obligation."

ii. On 20.03.2009, BEST appointed a consultant for preparation of competitive bidding document for long term power procurement from RE sources, to implement aforesaid Order dated 21.11.2008 passed by the Hon'ble Commission in Case No. 45 of 2008 filed by BEST. Thereafter, on 20.01.2010, BEST submitted vide Case No. 101 of 2009 to the Hon'ble Commission, competitive bidding documents for long term power procurement from RE sources for approval. The Hon'ble Commission, by Order dated 30th November 2012 granted liberty to BEST to file an appropriate Petition for any deviation, after the Ministry of Power has notified the final Standard Bidding Guidelines for procurement of power from Renewable Energy Sources.

iii. In the meantime, BEST had been and is procuring RE by duly and publicly inviting Expression of Interest from RE generators to meet its RPS Obligations. Following table indicates the details regarding various Expression of Interest (EoIs) advertised by BEST since FY 2007-08:

EoI Summary					
Sr. No.	Expression Of Interest Advt. on	No of offers	Suitable offer	Not-Suitable	MU offered
1	3rd Sept'2007	2	2	0	300 MUs from Spark Green
2	30th Nov'2007	1	1	0	31
3	26th June, 2008	23	9	14	6
4	16th Jan 2009	11	6	5	21
5	4th Aug'2009	5	5	0	93
6	15.May.2010	13	3	10	4
7	01 Sep. 2010	31	18	13	134
8	15. Feb-2011	49	12	37	220
9	15.Dec-2011	4	0	4	0
10	13. April-2012	10	6	4	345
11	08.Oct-2012	9	3	6	474
12	01 Jan-2013	8	2	6	499

iv. Based on the responses to the EoIs, BEST issued Letter of Intent (LoIs) to all the eligible RE generators/traders by adhering to the MERC (RPO-REC) Regulations, 2010 and procured RE during FY 2010-11 to FY 2013-14.To meet RPO target for FY 2014-15 and FY 2015-16, BEST continued some of the short term contracts by issuing Letter of Intent (LoIs).

v. Hon'ble Commission, vide Order dated 26th December 2012 in Case no. 100 of 2012 in the matter of Verification and Compliance of Renewable Purchase Obligation targets by BEST Undertaking for FY 2010-11 and FY 2011-12 as specified under MERC (Renewable Purchase Obligation, its compliance and Implementation of REC framework) Regulations, 2010 directed BEST to fulfill the shortfall in RPO targets for both Solar and Non-Solar (including mini/micro hydro targets) for FY 2010-11 and FY 2011-12 and RPO targets for FY 2012-13 cumulatively before 31 March, 2013. Hon'ble Commission further directed BEST to consider availability of Non-Solar RECs, as one of the options amongst various available options, for fulfillment of its cumulative shortfall in Non-Solar RPO targets for FY 2010-11 and FY 2011-12.

vi. BEST started procuring Non-solar RECs as early as FY 2010-11 by procuring 148 RECs (0.148 MU). During FY 2011-12, BEST procured 1000 RECs (1 MU of RE). Further to order of Hon'ble Commission in Case no. 100 of 2012, BEST, procured 4,39,884 RECs (439.884 MUs) during FY 2012-13 for fulfillment of cumulative Non-solar RPO for FY 2010-11 to FY 2012-13. Continuing this, BEST procured 2, 20,000 Non-solar RECs (220 MUs) during FY 2013-14, 1, 76,000 Non-solar RECs (176 MUs) during FY 2014-15 and 1, 25,000 Non-solar RECs (125 MUs) during FY 2015-16. By combination of actual renewable power and RECs, BEST has been able to surpass its Non-solar RPO for a period from FY 2010-11 to FY 2015-16. Following table summarizes BEST's REC procurement during the period from FY 2010-11 to FY 2015-16:

FY	No of Non-solar RECs procured	Total Non-solar MU's
2010-11	148	0.148
2011-12	1,000	1
2012-13	439,884	439.884
2013-14	220,000	220
2014-15	176000	176
2015-16	125000	125

d) BEST should submit the details for long term RE procurement plan for meeting the RPO targets for FY 2016-17.

i BEST has entered into long term EPA with developers like M/s Spark Green Energy (Ahmednagar) Pvt. Ltd. and Spark Green Energy (Satara) Ltd. to procure total 50 MW (25 MW each) of biomass-based Non-solar RE on long term basis for fulfillment of

non-Solar RPO. The first unit of 12.5 MW capacity at Ahmednagar plant has been commissioned in Jan'2016. It is expected that the first unit of 12.5 MW of Satara project will be commissioned in the second half of FY 2016-17 and the other two units each of 12.5 MW of Ahmednagar & Satara to be expected to commission in the next financial year. We have also Short Term contracts of about 225 MUs of Non-solar RE for FY 2016-17.

ii BEST has entered into long term PPA with M/s Welspun Energy Maharashtra Pvt. Ltd. in the year 2013 to procure 20 MW Solar energy on long term basis for fulfillment of Solar RPO. The project has been commissioned in October 2013 and is supplying about 2.5 to 3.0 MUs of Solar energy per month to BEST.

iii MERC has notified MERC (Renewable Purchase Obligation, its Compliance and REC framework implementation) Regulations, 2016. RPO target of the year FY 2016-17 to FY 2019-20, is shown in the table below:

Year	Quantum of purchase (in %) from RE sources (in terms of energy equivalent in kWh)		
	Solar	**Non-Solar**	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 %

iv Based on the RE power tied up by BEST through long term PPA and short term contract for FY 2016-17, BEST's estimated shortfall of Solar RPO, Non-Solar RPO and Mini Micro Hydro for FY 2016-17 is given below:

Shortfall		**FY 2016-17**
Solar RPO	Mus	19.97
Non Solar RPO	Mus	278.18
Mini Micro Hydro	Mus	0

v BEST has decided to fulfil the RPO for FY 2016-17 as per the existing method with long term and short term contracts available with BEST and the remaining shortfall will be met by purchasing RECs from Power Exchanges.

7. In view of above, BEST respectfully prays that the Hon'ble Commission may be pleased to:

i) Condone the delay of 27 days in filing the replies to the letter dated 02.11.2016

ii) Consider the actual solar energy of 32.88 MUs purchased by BEST in FY 2015-16 to fulfill the solar RPO target on a cumulative basis from FY 2010-11 to FY 2015-16 as directed by Hon'ble Commission vide its order dated 17th April 2013 in Case no. 30 of 2013 and order dated 24th April 2015 in Case no. 191 of 2014.

iii) Allow BEST to carry forward BEST's cumulative surplus of Solar RPO of 0.17 MUs up to FY 2015-16 to FY 2016-17.

iv) Consider the surplus of Non-solar RPO up to FY 2014-15 i.e. 8.66 MUs to fulfill the Non-solar RPO of FY 2015-16.

v) Allow BEST to carry forward BEST's cumulative surplus of Non-Solar RPO of 2.45 MUs up to FY 2015-16 to FY 2016-17.

vi) Grant the liberty to BEST Undertaking to add/change/modify/alter this affidavit and make further submissions as may be required at future date.

vii) Pass such further and other orders as the Hon'ble Commission may deem fit and proper keeping in view of the facts and circumstances of the case.

(R.D. Patsute)
Chief Engineer (Regulatory)
For Brihanmumbai Electric Supply and Transport Undertaking

NOTARY
S.M.H. ZAIDI
Mumbai & Thane Dist.
Regn. No. 3640
GOVT. OF INDIA

Annexure- A

Detailed statement for project wise energy procurement in MUs from various Solar RE sources

(FY 2010-11 TO FY 2015-16)

Detailed statement for project wise energy procurement in MUs from various Solar RE sources

FY 2010-11				
Sr.No.	SOURCE		Energy at delevery Point	Energy at InSTS
	Nil	-	-	-
Total			0.0000	0.0000

FY 2011-12				
Sr.No.	SOURCE		Energy at delevery Point	Energy at InSTS
	Nil	-	-	-
Total			0.0000	0.0000

FY 2012-13				
Sr.No.	SOURCE		Energy at delevery Point	Energy at InSTS
	Nil	-	-	-
Total			0.0000	0.0000

FY 2013-14				
Sr No	SOURCE		Energy at delevery Point	Energy at InSTS
	NAME	Type	in MU's	in MU's
1	WELSPUN Energy Maharashtra Pvt. Ltd.	Solar PV	16.6584	16.6584
2	Hemant Group (PVSP-03)	Solar PV	1.2345	1.2345
3	Gangadhar Narsingadas Agrawal (PVSP-20)	Solar PV	0.8002	0.8002
4	Saidpur Jute Co. Ltd. (PSVP-19)	Solar PV	0.4636	0.4636
5	G. I. Energies (PSVP-17)	Solar PV	0.4548	0.4548
6	Agrawal Minerials Goa Pvt. Ltd. (PSVP-10)	Solar PV	3.2476	3.2476
7	Patel Wood Syndicate (PSVP-06)	Solar PV	0.6618	0.6618
8	New Patel Saw Mill (PSVP-05	Solar PV	0.4118	0.4118
9	Dr. D.H. Patel. (PSVP004)	Solar PV	0.4207	0.4207
10	Advik Hi-Tech Pvt Ltd (PSVP-16)	Solar PV	0.2473	0.2473
	Total		**24.60**	**24.60**

FY 2014-15				
Sr No	SOURCE		Energy at delevery Point	Energy at InSTS
	NAME	Type	in MU's	in MU's
1	WELSPUN Energy Maharashtra Ltd.	Solar PV	34.28	34.28
2	Govindram Shobaram &Co	Solar PV	0.95	0.95
3	Patel Wood syndicate	Solar PV	1.57	1.57
4	New Patel Saw Mill	Solar PV	1.57	1.57
5	Dr. D.H. Patel	Solar PV	1.62	1.62
6	Agrawal Minaral Goa Pvt Ltd.	Solar PV	6.06	6.06
7	Gangadhar Narsingdas Agrawal	Solar PV	1.52	1.52
8	Saidpur Jute Co Ltd.	Solar PV	0.89	0.89
9	Triveni Sangam & Trading Pvt. Ltd.	Solar PV	1.75	1.75
10	Parekh Medisales Pvt. Ltd.	Solar PV	0.94	0.94
11	G.I. Energies.	Solar PV	0.93	0.93
12	Saraswati Industries.	Solar PV	0.94	0.94
	Total		**53.03**	**53.03**

FY 2015-16				
Sr No	SOURCE		Energy at delevery Point	Energy at InSTS
	NAME	Type	in MU's	in MU's
1	WELSPUN Energy Maharashtra Ltd.	Solar PV	32.88	32.88

Annexure- B

Detailed statement for project wise Contracted Solar RE power in MW during.

(FY 2010-11 TO FY 2015-16)

Annexure- B

Project wise contracted Solar RE power in MW

FY 2010-11			
Sr. No.	Developer / Trader	Type of Source	Cap (M.W.)
1	Nil	-	0.00
	Total		0.00

FY 2011-12			
Sr. No.	Developer / Trader	Type of Source	Cap (M.W.)
1	Nil	-	0.00
	Total		0.00

FY 2012-13			
Sr. No.	Developer / Trader	Type of Source	Cap (M.W.)
1	Nil	-	0.00
	Total		0.00

FY 2013-14			
Sr. No.	Developer / Trader	Type of Source	Cap (M.W.)
1	M/s. Welspun Energy Maharashtra	Solar-PV	20.00
2	Hemant Group (PVSP-03)	Solar PV	1.20
3	Gangadhar Narsingadas Agrawal (PVSP-20)	Solar PV	1.00
4	Saidpur Jute Co. Ltd. (PSVP-19)	Solar PV	0.60
5	G. I. Energies (PSVP-17)	Solar PV	0.60
6	Agrawal Minerials Goa Pvt. Ltd. (PSVP-10)	Solar PV	4.00
7	Patel Wood Syndicate (PSVP-06)	Solar PV	1.00
8	New Patel Saw Mill (PSVP-05	Solar PV	1.00
9	Dr. D.H. Patel. (PSVP004)	Solar PV	1.00
	Total		30.40

FY 2014-15			
Sr. No.	Developer / Trader	Type of Source	Cap (M.W.)
1	M/s. Welspun Energy Maharashtra	Solar-PV	20.00
2	Patel Wood Syndicate	Solar-PV	1.00
3	Dr. D.H.Patel.	Solar-PV	1.00
4	New Patel Saw Mill	Solar-PV	1.00
5	Saidapur Jute Co. Ltd.	Solar-PV	0.60
6	Triveni Sangam Holdings & Trading Co. Pvt. Ltd.	Solar-PV	1.20
7	G.I. Energies.	Solar-PV	0.60
8	Agrawal Minerals (Goa) Pvt. Ltd.	Solar-PV	4.00
9	Gangdhar Narsingdas Agrawal	Solar-PV	1.00
10	Parekh Medisales Pvt Ltd.	Solar-PV	0.60
11	Saraswati Industries	Solar-PV	0.60
12	Govindram Shobharam & Co.	Solar-PV	0.60
	Total		32.20

FY 2015-16			
Sr. No.	Developer / Trader	Type of Source	Cap (M.W.)
1	M/s. Welspun Energy Maharashtra	Solar-PV	20.00

Annexure- C

Detailed statement for project wise energy procurement in MUs from various Non-Solar RE sources

(FY 2010-11 TO FY 2015-16)

Annexure- C

Detailed statement for project wise energy procurement in MUs from various Non-Solar RE sources

FY 2010-11				
Sr.No.	SOURCE		Energy at delevery Point	Energy at InSTS
	NAME	Type	MUs	MUs
1	LSECIL	Bagasses	50.53	50.53
2	M/s Celerity Power	Small Hydro	18.54	17.43
3	SDSSSKL	Bagasses	0.86	0.86
4	LSECIL - AGRO	Bagasses	7.16	6.73
5	Ugar Sugar Works Ltd	Bagasses	11.34	11.34
6	Vishvnath Sugar Ltd (14 MW)	Bagasses	10.40	10.40
7	Hiranyakeshi SSK Ltd	Bagasses	14.83	14.86
8	Ind SynergyLtd (TPTCL)	Wind	0.25	0.24
9	Varroc Engineering,	Wind	0.39	0.36
10	Varroc Engineering,	Wind	0.50	0.47
11	Savita Chemicals Ltd.	Wind	2.03	1.90
12	Savita Chemicals Ltd.	Wind	0.98	0.92
13	Savita Chemicals Ltd.	Wind	0.26	0.24
14	Deccan Ind Explosive Pvt.	Wind	0.18	0.17
15	AJANTA Ltd,	Wind	6.84	6.43
16	AJANTA Ltd,	Wind	6.39	6.01
17	Khuda Gawah Invest Pvt. Ltd,	Wind	0.38	0.36
18	Nalini Properties Pvt. Ltd,	Wind	0.48	0.45
19	Sagar Agengies Pvt. Ltd,	Wind	0.41	0.38
20	Sharada Erectors Pvt. Ltd,	Wind	0.00	0.00
21	Sharada Erectors Pvt. Ltd	Wind	0.00	0.00
22	Weizmann Ltd, PH II,	Wind	7.13	6.70
23	Weizmann Ltd, PH I	Wind	7.42	6.98
24	Kohinoor Power co.	Wind	2.15	2.02
25	Laxmi Metal Pressing Work	Wind	0.44	0.42
26	Malpani Developer	Wind	0.37	0.35
27	M/s.Poonawalla Finvest & Agro Pvt.Ltd.	Wind	0.32	0.30
28	M/s.Simone Poonwalla Const&Stud Pvt.Ltd.	Wind	0.33	0.31
29	M/s.Serum international Ltd.	Wind	0.03	0.03
30	Varroc Engineering,	Wind	0.82	0.77
31	Sun. n. Sand,	Wind	2.86	2.69
32	Varroc Engineering,	Wind	0.97	0.91
33	Yashshri Press	Wind	0.06	0.06
34	M/s. Sharada Const & Invest Co.	Wind	0.41	0.39
35	M/s.Vaman Prestressing Co. Ltd.	Wind	0.46	0.43
36	Karma Energy Ltd PH I	Wind	6.67	6.27
37	Karma Energy Ltd PH II	Wind	6.57	6.18
38	Sun. n. Sand Hotel (Shirdi),	Wind	1.33	1.25
39	Shraddha Energy,	Wind	0.45	0.42
40	Shraddha Energy,	Wind	0.58	0.55
41	Sun. n. Sand Hotel,	Wind	1.91	1.80
42	Abhay Shah, (Global)	Wind	0.36	0.34
43	Hindustan Distilleries, (Global)	Wind	0.41	0.39
44	M/s. Jayshree Polymers,	Wind	0.46	0.43
45	Patan Ltd.	Wind	0.43	0.40
46	Patankar Ltd,	Wind	0.50	0.47
47	Padmavati WEPL,	Wind	0.52	0.49
48	Sangram Patil,	Wind	0.48	0.46
49	Dharamsi & Dharamsi	Wind	0.49	0.47
50	Standard Greases Pvt Ltd	Wind	0.44	0.41
51	Indo Enterprises,	Wind	1.87	1.76
52	Hindustan Distilleries,	Wind	0.73	0.69
53	M/s. Jayshree Polymers,	Wind	0.48	0.45
54	M/s. Ramdevbaba Steel Pvt Ltd.	Wind	1.40	1.32
55	Jivraj Tea Co	Wind	0.11	0.10
56	M/s. Jivraj Tea & Ind Ltd	Wind	0.75	0.71
57	M/s. Sable Waghire &co pvt Ltd.	Wind	0.48	0.45
58	M/S Jivraj Tea Ltd	Wind	0.74	0.70
59	Sumitinath Enterprise	Wind	0.47	0.44
60	Garden Court	Wind	0.48	0.45
61	Naren Traders & Consultants.	Wind	0.47	0.44
62	Global Energy Godawat	Wind	0.11	0.10
63	Global Sunjay Godawt	Wind	0.09	0.08
64	Global Godawat	Wind	0.21	0.19
65	Global Sunjay Godawt	Wind	0.11	0.11
66	Global Godawat	Wind	0.49	0.46
67	Global Godawat	Wind	0.49	0.47
68	Global B.S. Channabassappa & Sons	Wind	0.42	0.39

Sr.No.	SOURCE		Energy at delevery Point	Energy at InSTS
69	Global Shyadri Ind	Wind	0.59	0.56
70	Global Laxmi Rikshwa Body Co	Wind	0.42	0.39
71	Champion Jointing Pvt Ltd.	Wind	0.11	0.10
72	Khanna Ind Pipe Pvt Ltd	Wind	0.32	0.30
73	Dristi Ind Ltd	Wind	0.44	0.41
74	Om Wind Farm	Wind	0.28	0.26
75	Yashshri Press	Wind	0.48	0.45
76	Phoenix Enterprise	Wind	0.46	0.43
77	Phoenix Enterprise	Wind	0.36	0.34
78	Rucha Engineers pvt Ltd	Wind	0.48	0.46
79	Umesh M Dashrati	Wind	0.32	0.30
80	Suvi Rubber	Wind	0.24	0.22
81	Rubberex Ind Pvt Ltd	Wind	0.23	0.22
82	Punit Construction (GLOBEL)	Wind	0.51	0.48
83	Punit Const Co (GLOBEL)	Wind	0.54	0.51
84	Kwality Tobaacco Product (Global) S-102	Wind	0.73	0.69
85	SakalPaper -I (Global)	Wind	0.55	0.52
86	SakalPaper -II (Global)	Wind	0.68	0.64
87	J.M. Ind (Global)	Wind	0.81	0.76
88	V.L. Patel(Global)	Wind	0.23	0.22
89	Surana Venture Ltd	Wind	2.16	2.03
90	Laxmi Ind (Global)	Wind	0.66	0.62
91	Amarshwara Ind (Global)	Wind	1.04	0.97
92	B.S. Chanapabasapa (Global)	Wind	2.17	2.04
93	D.K. Engg (Global)	Wind	1.08	1.01
94	H.H. Patel &co(Global)	Wind	0.70	0.66
95	Osho Devlopers(Global)	Wind	0.35	0.33
96	Gajanan Tower Pvt Ltd (Global)	Wind	0.68	0.64
97	Topaz Investment (Global)	Wind	2.38	2.23
98	Sheela Shivraj(Global)	Wind	0.48	0.46
99	Sai Prem Decloper (Global)	Wind	0.44	0.41
100	Shraddha Energy & Infra (Global)	Wind	8.52	8.01
101	Purushottam Lohia (Global)	Wind	0.00	0.00
102	Ushdev International Ltd (Global)	Wind	1.79	1.68
103	LAP Finance & Consultant Pvt Ltd.	Wind	1.34	1.26
104	Rucha Engineers pvt Ltd	Wind	0.08	0.07
105	Navlakha Translines	Wind	0.47	0.44
106	Medilink Services	Wind	0.69	0.64
107	Navlakha Transline	Wind	0.42	0.39
108	R. M. Dhariwal (GLOBEL)	Wind	0.06	0.06
109	Sunjay Ghodavat (GLOBEL)	Wind	0.05	0.05
110	Sunjay Ghodavat IND (GLOBEL)	Wind	0.01	0.01
111	Dhariwal Ind Ltd (GLOBEL)	Wind	0.24	0.23
112	Jayshree Polymer (GLOBEL)	Wind	0.11	0.10
113	Premier Sales (Globel)	Wind	0.04	0.04
114	D.J. Malpani (GLOBAL)	Wind	0.01	0.01
115	Malpani Tea Corporation (GLOBAL)	Wind	0.03	0.03
116	Sargam Retails (GLOBEL)	Wind	0.01	0.01
117	G B Rubber Product (GLOBEL)	Wind	0.01	0.01
118	Sargam Retails MTR -II (GLOBEL)	Wind	0.01	0.01
119	Subhash B. Mutha. (GLOBEL)	Wind	0.04	0.04
120	S.K. Parikh (GLOBEL)	Wind	0.01	0.01
121	Canpex Chemical Pvt Ltd (GLOBEL)	Wind	0.03	0.03
122	D. J. Malpani Mtr-II (GLOBEL)	Wind	0.01	0.01
123	Sahydri Ind (Global)	Wind	0.23	0.21
124	J.V. PATEL (Global)	Wind	0.12	0.12
125	S.V. PATEL (Global)	Wind	0.10	0.10
126	V.L.PATEL (Global)	Wind	0.09	0.09
127	Siddhayu Ayurvedik (GLOBEL)	Wind	0.69	0.65
128	Metalek Techno (GLOBEL)	Wind	0.09	0.08
129	Laxmi Ind (Global)	Wind	0.07	0.06
130	R. M. Dhariwal (GLOBEL)	Wind	0.09	0.08
131	B.S.C. Textile. (GLOBEL)	Wind	0.02	0.01
132	B.S.Channapabassapa. (GLOBEL)	Wind	0.02	0.02
133	Vandana /Textile (GLOBEL)	Wind	0.02	0.02
134	Umang Textile (GLOBEL)	Wind	0.02	0.02
135	Rajeev Govind Joshi (GLOBEL)	Wind	0.01	0.01
136	Vishnu Textile (GLOBEL)	Wind	0.02	0.02
137	B.S.Channapabassapa. (GLOBEL)	Wind	0.01	0.01
138	Laxmi Metal Pressing (GLOBEL)	Wind	0.01	0.01
139	Laxmi Rikshaw Body (GLOBEL)	Wind	0.02	0.02
140	Bhanudas G Raibage. (GLOBEL)	Wind	0.07	0.06
141	Mahabal Auto (GLOBEL)	Wind	0.07	0.07
142	Veer Bhandareshwar ?Floor Mill (GLOBEL)	Wind	0.05	0.05

Sr.No.	SOURCE		Energy at delevery Point	Energy at InSTS
143	B.S.C. Textile (GLOBEL)	Wind	0.04	0.04
144	Jadhao Gears Pvt Ltd (GLOBEL)	Wind	0.10	0.10
145	Kawality Tabaco (GLOBEL)	Wind	0.06	0.06
146	Balkrishna Sizing Ind (GLOBEL)	Wind	0.05	0.05
147	Sridevi Trading Co (GLOBEL)	Wind	0.04	0.04
148	Kiran Energy Infra (GLOBEL)	Wind	0.09	0.08
149	Pragati Agency (GLOBEL)	Wind	0.07	0.07
150	Tejas Sizers (GLOBEL)	Wind	0.04	0.04
151	G.I.Energies (GLOBEL)	Wind	0.04	0.04
152	S.K. Shivraj (GLOBEL)	Wind	0.05	0.05
153	Gujrat Tea Traders (GLOBEL)	Wind	0.08	0.08
154	Jathar Textile (GLOBEL)	Wind	0.05	0.05
155	Shradhha Energy & Infra (GLOBEL)	Wind	0.12	0.11
156	Sayahdri Ind Ltd (GLOBEL)	Wind	0.43	0.40
157	Sayahdri Ind Ltd (GLOBEL)	Wind	0.23	0.21
158	V L Patel (GLOBEL)	Wind	0.07	0.07
159	Shradhha Energy & Infra Mtr-II (GLOBEL)	Wind	0.09	0.08
160	Deccan Ind Explosives (GLOBEL)	Wind	0.04	0.03
161	Jivraj Tea Co (GLOBAL)	Wind	0.02	0.01
162	Dr Anil P. Hirvani (GLOBAL)	Wind	0.02	0.02
163	Sunako Trading (GLOBAL)	Wind	0.01	0.01
164	Sai Associates (GLOBAL)	Wind	0.01	0.01
165	Gangamai Ind & Const Ltd (GLOBEL)	Wind	0.06	0.06
166	Star Flexi- Pack Ind (GLOBEL)	Wind	0.01	0.01
167	Laxmi Rickshwa Body (GLOBEL)	Wind	0.01	0.01
168	Gharrkul Ind (GLOBEL)	Wind	0.03	0.03
169	Dhariwal Ind Ltd (GLOBEL)	Wind	0.38	0.36
170	Bothra Agro Eq Ltd. (GLOBEL)	Wind	0.03	0.03
171	Suzlon Tower & Stractur Ltd. (GLOBEL)	Wind	0.20	0.19
	REC Non-Solar		0.148	0.148
	Total		227.37	219.06

FY 2011-12

Sr No	SOURCE		Energy at delevery Point	Energy at InSTS
	NAME	Type	MUs	MUs
1	TPTCL-(LOKMANGAL)	Bagasses	32.05	32.05
2	TPTCL-(LOKMANGAL AGRO)	Bagasses	4.56	4.29
3	TPTCL-(CELERITY)	Small Hydro	9.14	8.59
4	TPTCL-(A.A. Energy)	Biomass	41.86	41.69
5	TPTCL-(Yash Agro Energy Ltd)	Biomass	26.06	23.70
6	TPTCL- (Pioneer Distilleries Ltd)	Biogass	3.91	4.13
7	TPTCL- (Indra Power Gen Ltd)	Biomass	14.69	14.69
8	Knowledge Infra (RR Energy)	Biomass	28.00	28.00
9	GEPL (Jamkhandi Sugar)	Bagasses	2.46	2.43
10	Knowledge Infra (Godawari)	Bagasses	22.33	22.33
11	TPTCL-Shri Nakoda Ispat Ltd	Biomass	36.16	36.16
	REC Non-Solar		1.00	1.00
	TOTAL		222.22	219.07

FY 2012-13

Sr No	SOURCE		Energy at delevery Point	Energy at InSTS
	NAME	Type	MUs	MUs
1	TPTCL-(LOKMANGAL AGRO)	Bagasses	7.00	6.58
2	TPTCL- (Pioneer Distilleries Ltd)	Biogas	5.61	5.27
3	TPTCL- (A.A. Energy)	Biomass	7.66	7.66
4	RETL - Greata Energy	Biomass	56.48	56.48
5	Urjankur- Global Energy	Bagasses	14.60	14.60
6	RETL - Urjankur Warna power	Bagasses	11.63	11.63
	REC Non-Solar		439.884	439.884
	TOTAL (A)		542.86	542.10

FY 2013-14

Sr No	SOURCE		Energy at delevery Point	Energy at InSTS
	NAME	Type	in MU's	in MU's
1	TPTCL-(LOKMANGAL AGRO)	Bagasse	6.7530	6.3481
2	TPTCL-(Pioneer)	Bio-gas	3.8724	3.7050

Sr.No.	SOURCE		Energy at delevery Point	Energy at InSTS
3	RETL (Greta Energy)	Biomass	101.6944	101.6944
4	RETL (Maharashtra Vidyut Nigam)	Biomass	49.6880	49.6880
5	RETL (Yash Agro Energy Ltd)	Bagasse	26.9080	25.5101
6	TPTCL (A.A. Energy)	Biomass	4.8546	4.8546
	RE		193.77	191.80
	REC		220.00	220.00
	Total RPO		413.77	411.80

FY 2014-15				
Sr No	SOURCE		Energy at delevery Point	Energy at InSTS
	NAME	Type	in MU's	in MU's
1	Pioneer Distilleries Ltd.	Bio-gas	2.10	1.97
2	Greta Energy Ltd	Biomass	98.68	98.68
3	Maharashtra Vidyut Nigam Ltd	Biomass	70.13	70.13
4	A.A. Energy	Biomass	16.93	16.93
5	GMT Mining & Power	Biomass	8.71	8.71
6	Lokmangal Agro Ltd	Bagasse	10.10	9.49
7	Yash Agro Energy Ltd	Bagasse	30.42	28.60
8	Sahyadri Renewable Energy Pvt Ltd.	Small Hydro	0.86	0.79
	RE		237.94	235.30
	REC Non-Solar		176.00	176.00
	BEST Total RPO		413.94	411.30

FY 2015-16				
Sr No	SOURCE		Energy at delevery Point	Energy at InSTS
	NAME	Type	in MU's	in MU's
1	Lokmangal Agro Ltd	Bagasse	10.04	9.44
2	Pioneer Distilleries Ltd.	Bio-gas	0.50	0.47
3	Yash Agro Energy Ltd	Biomass	41.09	38.62
4	Greta Energy Ltd	Biomass	108.67	108.67
5	A.A. Energy	Biomass	64.95	64.95
6	GMT Mining & Power	Biomass	69.29	69.29
7	Shyadri Renewable Energy Pvt Ltd.	Small Hydro	0.50	0.46
8	Spark Green Energy Pvt Ltd (Ahemednagar)	Biomass	5.58	5.58
	RE		300.61	297.47
	REC Non-Solar		125.00	125.00
	BEST Total RPO		425.61	422.47

Annexure- D

Detailed statement for project wise Contracted Non-Solar RE power in MW during.

(FY 2010-11 TO FY 2015-16)

Annexure- D

Project wise contracted Non-Solar RE power in MW

FY 2010-11			
Sr. No.	Developer / Trader	Type of Source	Cap (M.W.)
1	M/s. TPTCL	Bagasses	3.00
2	M/s. TPTCL	Bio-gas	4.73
3	M/s. TPTCL	Small Hydro	7.00
4	M/s. TPTCL	Bagasses	15.00
5	M/s. TPTCL	Bagasses	3.00
6	M/s. TPTCL	Bagasses	10.00
7	M/s. Savita Oil Technologies Ltd.	Wind	2.25
8	M/s. Savita Oil Technologies Ltd.	Wind	2.25
9	M/s.Varroc Engineering Pvt. Ltd.	Wind	1.00
10	M/s. D.J. Malpani	Wind	1.75
11	M/s.Varroc Engineering Pvt. Ltd.	Wind	1.05
12	M/s.Varroc Engineering Pvt. Ltd.	Wind	1.05
13	M/s.Varroc Engineering Pvt. Ltd.	Wind	1.00
14	M/s. Deccan Industrial Explosives	Wind	0.35
15	M/s. Ajanta Limited	Wind	4.90
16	M/s. Sun N Sand Hotels Pvt. Ltd.	Wind	2.00
17	M/s. Nalini Properties Pvt. Ltd.	Wind	0.35
18	M/s. Khuda Gawah Investments Pvt. Ltd.	Wind	0.35
19	M/s. Sagar Agencies Pvt. Ltd.	Wind	0.35
20	M/s.Simone Poonwalla Const&Stud Pvt.Ltd.	Wind	0.35
21	M/s.Serum international Ltd.	Wind	0.75
22	M/s.Poonawalla Finvest & Agro Pvt.Ltd.	Wind	0.35
23	M/s. Savita Oil Technologies Ltd.	Wind	6.00
24	M/s. Khuda Gawah Investments Pvt. Ltd.	Wind	0.35
25	M/s. Nalini Properties Pvt. Ltd.	Wind	0.35
26	M/s.Varroc Engineering Pvt. Ltd.	Wind	1.05
27	M/s. Usha Compu-Tel Pvt. Ltd.	Wind	0.50
28	M/s. Usha Electronics	Wind	1.00
29	M/s. Sun N Sand Hotels Pvt. Ltd.	Wind	1.20
30	M/s. Sun N Sand Hotels Pvt. Ltd.	Wind	1.00
31	M/s. Abhay K. Shah	Wind	0.35
32	M/s. Shradda Energy & Infra Projects Pvt Ltd	Wind	1.75
33	M/s. Shradda Energy & Infra Projects Pvt. Ltd	Wind	1.40
34	Shri Padmawati Wind Energy Pvt. Ltd.	Wind	0.35
35	M/s Patankar Wind Farms Pvt. Ltd.	Wind	0.35
36	M/s Patan Wind Energy Ltd.	Wind	0.35
37	M/s Hindustan Distilleries	Wind	0.35
38	M/s Vaman Prestressing Company Ltd.	Wind	0.35
39	M/s. Dharamsi & Dharmsi oil pvt Ltd	Wind	0.35
40	M/s Hindustan Distilleries	Wind	0.70
41	M/s Indo Enterprises Pvt Ltd	Wind	1.40
42	M/s. Jayashree Polymers Pvt. Ltd	Wind	0.35
43	M/s. Karma Energy Ltd	Wind	4.50
44	M/s. Karma Energy Ltd	Wind	4.50

Sr. No.	Developer / Trader	Type of Source	Cap (M.W.)
45	Sangram Patil	Wind	0.35
46	M/s Standard Greases Pvt Ltd	Wind	0.35
47	M/s Jivraj Tea Ltd	Wind	1.00
48	M/s Jivraj Tea Ltd	Wind	0.35
49	M/s Jivraj Tea Ltd	Wind	1.00
50	M/s Sumatinath Enterprises.	Wind	0.35
51	M/s. Shree Ramdeobaba Steel Pvt Ltd.	Wind	1.00
52	M/s. Sable Waghire & Co Pvt Ltd.	Wind	0.35
53	M/s. Jayashree Polymers Pvt. Ltd	Wind	0.35
54	M/s. Garden Court Distilleries Pvt Ltd.	Wind	0.35
55	M/s. Ajanta Limited	Wind	5.25
56	M/s. Savita Oil Technologies Ltd.	Wind	0.75
57	M/s Champion Jointing Pvt Ltd.	Wind	0.35
58	M/s. Disti Industries Ltd.	Wind	0.35
59	M/s. Naren Traders & Consultant.	Wind	0.35
60	M/s. TPTCL	Wind	1.15
61	M/s. TPTCL	Wind	1.15
62	M/s. Sagar Agencies Pvt. Ltd.	Wind	0.35
63	M/s. Global Energy Pvt Ltd.	Wind	0.35
64	M/s. Global Energy Pvt Ltd.	Wind	0.35
65	M/s. Global Energy Pvt Ltd.	Wind	0.35
66	M/s. Global Energy Pvt Ltd.	Wind	0.35
67	M/s. Global Energy Pvt Ltd.	Wind	0.23
68	M/s. Global Energy Pvt Ltd.	Wind	0.69
69	M/s. Global Energy Pvt Ltd.	Wind	0.35
70	M/s. Global Energy Pvt Ltd.	Wind	0.35
71	M/s. Global Energy Pvt Ltd.	Wind	0.35
72	M/s. Global Energy Pvt Ltd.	Wind	0.35
73	M/s. Global Energy Pvt Ltd.	Wind	0.23
74	M/s. Global Energy Pvt Ltd.	Wind	1.38
75	M/s. Global Energy Pvt Ltd.	Wind	1.38
76	M/s. Global Energy Pvt Ltd.	Wind	1.38
77	M/s. Phoenix Enterprises	Wind	0.35
78	M/s. Phoenix Enterprises	Wind	0.35
79	M/s. Yashshree Press Comps Pvt Ltd	Wind	0.23
80	M/s. Yashshree Press Comps Pvt Ltd	Wind	0.35
81	M/s. Om Wind Farms	Wind	0.35
82	M/s. Global Energy Pvt Ltd.	Wind	4.80
83	M/s. Rucha Engineering Pvt Ltd.	Wind	0.35
84	M/S. Umesh M. Dashrathi.	Wind	0.35
85	M/S. Khanna Ind Pipe Pvt Ltd.	Wind	0.35
86	M/s. Rucha Engineering Pvt Ltd.	Wind	0.23
	Total		**122.26**

Sr. No.	Developer / Trader	Type of Source	Cap (M.W.)
	FY 2011-12		
Sr. No.	**Developer / Trader**	**Type of Source**	**Cap (M.W.)**
1	TPTCL-(LOKMANGAL)	Bagasses	8.50
2	TPTCL-(LOKMANGAL AGRO)	Bagasses	1.80
3	TPTCL-(CELERITY)	Small Hydro	3.50
4	TPTCL-(Yash Agro)	Biomass	7.00
5	TPTCL-(A.A. Energy)	Biomass	9.00
6	TPTCL-(Pioneer)	Bio-gas	4.73
7	TPTCL-(Indra Power)	Biomass	8.50
8	TPTCL-(Biomass Power)	Bio-gas	11.20
9	TPTCL-(Nakoda Ispat)	Biomass	10.50
10	Knowledge Infrastructure (R.R.Energy)	Biomass	13.50
11	Global (Jamkhandi Sugar)	Bagasses	5.00
12	Global (Nandi)	Bagasses	7.00
13	Shalivahan Biomass Project	Biomass	9.00
14	Shalivahan Greeg Energy Ltd	Biomass	13.50
15	Hema Sri Power Ltd	Biomass	11.34
16	M/s. Nalini Properties Pvt. Ltd.	Wind	0.35
17	M/s. Khuda Gawah Investments Pvt. Ltd.	Wind	0.35
	Total		**124.77**

	FY 2012-13		
Sr. No.	**Developer / Trader**	**Type of Source**	**Cap (M.W.)**
1	TPTCL-(LOKMANGAL AGRO)	Bagasse	5.00
2	TPTCL-(Pioneer)	Bio-gas	5.00
3	Krishna Valley Power Pvt Ltd.	Small Hydro	1.00
4	Shyadri Renewable Energy Ltd.	Small Hydro	1.00
5	Global Energu (URJANKUR)	Bagasse	10.00
6	RETL (Urjankur Warna Power)	Bagasse	9.50
7	RETL (Greta Energy)	Biomass	13.50
	Total		**45.00**

Sr. No.	Developer / Trader	Type of Source	Cap (M.W.)
	FY 2013-14		
Sr. No.	**Developer / Trader**	**Type of Source**	**Cap (M.W.)**
1	TPTCL-(Pioneer)	Bio-gas	2.20
2	RETL (Greta Energy)	Biomass	13.50
3	Sahyadri Renewable Energy Ltd.	Small Hydro	1.50
4	RETL (GMT Minning)	Biomass	9.00
5	RETL (Maharashtra Vidyut Nigam)	Biomass	9.00
6	Shalivahana green Energy Ltd	Biomass	12.00
7	Shalivahan Biomass Power	Biomass	7.00
8	RETL (Yash Agro)	Biomass	7.00
9	Ratnagiri Wind Power Project Pvt Ltd.	Wind (Gr-I)	36.80
10	TPTCL (A.A. Energy)	Biomass	9.00
	Total		**107.00**
	FY 2014-15		
Sr. No.	**Developer / Trader**	**Type of Source**	**Cap (M.W.)**
1	Sahyadri Renewable Energy Pvt Ltd.	Small Hydro	1.50
2	Lokmangal Agro Ltd	Bagasse	4.00
3	Pioneer Distilleries Ltd.	Bio-gas	2.20
4	Yash Agro Energy Ltd	Biomass	7.00
5	Greta Energy Ltd	Biomass	13.50
6	Maharashtra Vidyut Nigam Ltd	Biomass	9.00
7	GMT Mining & Power Pvt Ltd.	Biomass	9.00
8	A.A. Energy	Biomass	9.00
	Total		**55.20**

	FY 2015-16		
Sr. No.	**Developer / Trader**	**Type of Source**	**Cap (M.W.)**
1	M/s Spark Green Energy Ahemednagar Pvt Ltd	Biomass	12.50
2	Lokmangal Agro Ltd	Bagasse	4.00
3	Pioneer Distilleries Ltd.	Bio-gas	2.20
4	Yash Agro Energy Ltd	Biomass	7.00
5	Greta Energy Ltd	Biomass	13.50
6	GMT Mining & Power Pvt Ltd.	Biomass	9.00
7	A.A. Energy	Biomass	9.00
8	Sahyadri Renewable Energy Pvt Ltd.	Small Hydro	1.50
	Total		**58.70**

Annexure- E

Detailed statement for project wise energy procurement in MUs from various Mini-Micro Hydro RE sources

(FY 2010-11 TO FY 2015-16)

Annexure- E

Detailed statement for project wise energy procurement in MUs from various Mini-Micro RE sources

FY 2010-11				
Sr.No.	Source Name	Source Types	Energy Procured at Seller End inMUs	Energy at InSTS in Mus
1	Nil		0.00	0.00
	Total		0.00	0.00

FY 2011-12				
Sr.No.	Source Name	Source Types	Energy Procured at Seller End inMUs	Energy at InSTS in Mus
1	Nil		0.00	0.00
	Total		0.00	0.00

FY 2012-13				
Sr No	SOURCE		Energy Procured at Seller End	Energy at InSTS
	NAME	Type	MUs	MUs
1	Krishna Valley Power (Vajra-2)	Mini Hydro	2.68	2.44
	TOTAL		2.68	2.44

FY 2013-14				
Sr No	SOURCE		Energy Procured at Seller End	Energy at InSTS
	NAME	Type	MUs	MUs
1	Krishna Valley Power Pvt Ltd.	Mini Hydro	7.72	7.02
	TOTAL		7.72	7.02

FY 2014-15				
Sr No	SOURCE		Energy Procured at Seller End	Energy at InSTS
	NAME	Type	MUs	MUs
1	Krishna Valley Power Pvt Ltd.	Mini Hydro	8.04	7.32
	TOTAL		8.04	7.32

FY 2015-16				
Sr No	SOURCE		Energy Procured at Seller End	Energy at InSTS
	NAME	Type	MUs	MUs
1	Krishna Valley Power Pvt Ltd.	Mini Hydro	1.35	0.12
	TOTAL		1.35	0.12

Annexure- F

Detailed statement for project wise Contracted Mini-Micro Hydro RE power in MW during.

(FY 2010-11 TO FY 2015-16)

Annexure- F

Project wise contracted Non-Solar Mini-Micro Hydro RE power in MW

FY 2010-11			
Sr. No.	Developer / Trader	Type of Source	Cap (M.W.)
1	Nil	Mini Hydro	0.00
	Total		0.00

FY 2011-12			
Sr. No.	Developer / Trader	Type of Source	Cap (M.W.)
1	Nil	Mini Hydro	0.00
	Total		0.00

FY 2012-13			
Sr. No.	Developer / Trader	Type of Source	Cap (M.W.)
1	Krishna Valley Power Pvt Ltd.	Mini Hydro	1.00
	Total		1.00

FY 2013-14			
Sr. No.	Developer / Trader	Type of Source	Cap (M.W.)
1	Krishna Valley Power Pvt Ltd.	Mini Hydro	1.00
	Total		1.00

FY 2014-15			
Sr. No.	Developer / Trader	Type of Source	Cap (M.W.)
1	Krishna Valley Power Pvt Ltd.	Mini Hydro	1.00
	Total		1.00

FY 20115-16			
Sr. No.	Developer / Trader	Type of Source	Cap (M.W.)
1	Krishna Valley Power Pvt Ltd.	Mini Hydro	1.00
	Total		1.00