

Sachin Bayas

CENTRAL RAILWAY



Headquarters Office
Electrical Branch
2nd Fl., Parcel Office Bldg,
Mumbai CST – 400 001.
Tele: 54902 (Rly), 22621060
(MTNL)

E mail : dyceetrdcrly@gmail.com
cedecrly@gmail.com

No. LRE.233.P.8.MERC

Dated: 20.11.2018

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

Sub: Submission of Indian Railways seeking verification of compliance of Renewable Purchase Obligation Targets for FY 2017-18 as specified under RPO regulation-2016

Ref: MERC letter no. MERC/RE Cell/RPO/2017-18/1271 dated:25.10.2018

Dear Sir,

Please find enclosed herewith the submission of Indian Railways in the matter of verification of compliance of Renewable Purchase Obligation Targets for FY 2017-18 as specified under RPO regulation-2016.

DA: Affidavit (6+1) copies.

[Handwritten signature]

[Handwritten signature]
(S.K.Shukla) 20.11.18
Dy.CEE/TRD/HQ
/ CEE

6116 MERC 20-11-8		
Inward No:	Date:	
Chairman	Member	Member
Secretary	Executive Director	
Director (EE)	Director (T)	

BEFORE MAHARASHTRA ELECTRICITY REGULATORY COMMISSION
MUMBAI

IN THE MATTER OF:

Letter dated 25th October 2018 bearing reference no. MERC/RE Cell/RPO/2017-18/1271 from Secretary, MERC address to Indian Railways (IR) seeking verification of compliance of Renewable Purchase Obligation Targets of Indian Railways as a deemed Distribution Licensee, for FY 2017-18, as specified under RPO Regulations, 2016.

Affidavit in Reply on behalf of Indian Railways

I, S.K. Shukla, son of R.P. Shukla, presently, working as Deputy Chief Electrical Engineer, Traction Distribution/ Central Railway, CSMT Mumbai - 400 001, do hereby solemnly affirm and say as follows:

The present affidavit is filed by Indian Railways (IR) in response to Hon'ble Commission's letter dated 25th October 2018 referred herein above. The reply/confirmations/justification sought from IR is reproduced herein under;

1. Indian Railways should verify the RPO settlement details for FY 2017-18, as submitted by MEDA,(copy attached as Annexure with this letter) and highlight discrepancies, if any along with proper justification.

i. RPO settlement data of IR for FY 2017-18 as submitted by MEDA is as reproduced under;

Item	MU
Gross Energy Consumption	2419.6389
Solar RPO	
Target (2.0%)	48.3928
Achievement	0
Shortfall	48.3928
Non-Solar RPO	
Target (10.5%)	254.0621
Achievement	0
Shortfall	254.0621
Mini/Micro Hydro RPO (within Non-Solar)	
Target (0.2% of Non-Solar RPO)	0.5081
Achievement	0
Shortfall	0.5081



ii. It is submitted that MEDA has considered figures for FY 2017-18 as per submission of Indian Railways vide it's letter dated 25.06.2018.

2. Indian Railways should submit the details status of Solar, non-Solar RPO targets compliance including Mini-Micro Hydro RPO compliance of as per the directives of the Commission vide Orders in Case No. 173 of 2016 and case no. 211 of 2017, along with detailed statement for project wise energy procurement in MUs from all Solar,

non-Solar RE generating projects including Mini-Micro Hydro projects and project wise contracted Solar, non-Solar RE power capacity in MW including Mini-Micro Hydro projects, during FY 2015-16 and FY 2017-18.

- i. For FY 2015-16, the Solar obligation of IR was 0.50% amounting to 3.26 MUs, the Non-Solar obligation of IR was 8.50% amounting to 55.53 MUs and Mini/Micro Hydro RPO 0.2% amounting 0.11MUs (within Non-Solar RPO). For FY 2015-16, the Solar obligation of IR was 1.0% amounting to 22.821 MUs, the Non-Solar obligation of IR was 10.00% amounting to 228.211 MUs and Mini/Micro Hydro obligation of IR was 0.2% amounting 0.456MUs (within Non-Solar RPO) for FY 2016-17.
- ii. Indian Railways submits that Hon'ble commission in its order dated 23.07.2018 in case no. 211 of 2017 has allowed IR to meet its RPO shortfall for FY 2015-16 and FY 2016-17 by the end of FY 2018-19, to the extent that it has not already made up for it in FY 2017-18. Accordingly IR is in the process of entering agreement with M/s PTC India Ltd for purchasing RECs, to fulfill the RPO obligations.
- iii. Railway will endeavor to fulfill RPO obligation as specified by Honorable Commission within the stipulated time limit, i.e. March 2019.

3. Indian Railways should submit detailed list of actions and efforts undertaken by it prior to and during FY 2017-18 to ensure compliance of RPO targets in respect of solar RPO, Non-solar RPO and mini/micro hydro RPO for FY 2017-18.

The actions and efforts undertaken by IR to fulfill RPO targets are as under;

i) Non-solar RPO

a) Procurement of **54 MW** of wind power through Tariff based competitive bidding to fulfill non solar RPO of Indian Railways is under process. The CUF of this project is 22% and CR will get around 105 MUs per year from this project. Central Railway will avail this power on long term basis for 25 years. The bids have been opened and technical evaluation is under process. The commissioning period of this project is 18 months from the date of issue of LOA

b) Also, LOA has been issued by REMCL on behalf of Indian Railways to M/s Inox Wind Infrastructure Services Limited on 05.01.2018 for development of **6 MW** wind power project in Sangali, Maharashtra(Copy Enclosed). Accordingly, Central Railway has signed PPA for 6 MW wind power in Maharashtra with M/s Inox Wind Infrastructure Services Limited for a period of 25 years at the rate of Rs. 5.18 per unit. The commissioning period of this project is 12 months from the date of issue of LOA. CUF of this project is 20.5 % and with this CUF CR will able to fulfill its Non solar RPO upto 10.775 MUs (energy generated corresponding to CUF of 100%). Power from this proposed wind power project will be drawn at following draw points;



Sr. No.	State	Drawl point	Voltage level (in kV)
1	Maharashtra	Motibagh Workshop, Nagpur	11
2		CSTM Station Area	22
3		OSM Depot, Ajni (Nagpur)	11
4		Manmad	11
5		Bhusaval ORSS	11
6		Bhusaval NRSS	11

c) Remaining shortfall in non-Solar RPO will be fulfilled through the purchase of RECs.

ii) Solar RPO

a) The Indian Railways is planning to source power from upcoming solar park in Madhya Pradesh being developed by Rewa Ultra Mega Solar (RUMS) Ltd, a JV between Solar Energy Corporation of India (SECI) & Madhya Pradesh Urja Vikas Nigam Ltd.(MPUVNL). The capacity of this solar park being developed is 1050 MW out of which 400 MW power will be supplied to Indian Railways in various States. The power from solar park will be supplied under optimum scheduling method & limited to 207 MW (equivalent to 400 MW solar plant capacity). Out of 207 MW, 60 MW will be availed in Maharashtra by Indian Railways to fulfill it's Solar RPO targets. With the proposed capacity of 60 MW the number of solar units procured by Indian Railways will be 220 MUs per year which will be more than it's cumulative shortfall for year FY 2017-18 & FY 2018-19.

The status of this project is as under;

- MOU to be signed between Railway Energy Management Co. Ltd (REMCL) on behalf of Indian Railways and RUMS.
- NIT has been floated by RUMS on 07.10.2018.

b) Further, as a green power initiative CR is also implementing 10.67 MWp (in Maharashtra) Rooftop Solar Photovoltaic plants on roofs of various buildings such as office buildings, Station buildings, Hospital buildings etc. under Viability Gap Funding (VGF)/ Central Financial Assistance (CFA) scheme of MNRE. Accordingly, PPAs have been signed by Central Railway with M/s Azure power Rooftop Pvt. Ltd for 2.3 MWp (in Maharashtra) on 14.12.2017 and M/s Mytrah Surya Energy Pvt Ltd for 8.37 MWp (in Maharashtra) on 22.01.2018 for a period of 25 years under net metering arrangement with DISCOM (Copy of LOA is enclosed).

Hon'ble Commission is requested to consider the consumption of Central Railway from these Rooftop Solar Photovoltaic plants against fulfillment of solar RPO of Indian Railways as per clause no. 11.1 of MERC's Net Metering for Roof-top Solar Photo Voltaic Systems;

"11.1. The quantum of electricity consumed by the Eligible Consumer from the Roof-top Solar PV System under the Net Metering Arrangement shall qualify towards his compliance of Solar RPO, if such Consumer is an Obligated Entity."



(iii) Mini-Micro Hydro RPO

As there are very few generators/capacity available from Mini/Micro Hydro, commission is requested to allow Indian Railways to fulfill shortfall of Mini-Micro Hydro RPO through the purchase of non- Solar RECs.

4. Indian Railways should submit the details for long term RE procurement plan for meeting RPO targets for FY 2018-19

- i. Considering being a new licensee, IR has evaluated the available options for fulfillment of its RPO. IR is gradually increasing its power procurement under Open Access and in line with its power procurement plan also developing long term strategy for procurement of Renewable energy as mentioned in point no.(3)

In view of the above, Hon'ble Commission is requested to allow Indian Railways to meet its Non Solar and Solar RPO shortfall of FY 2015-16, FY 2016-17, FY 2017-18 & FY 2018-19 by the end of financial year 2019-20.



A handwritten signature in blue ink, appearing to be 'S.K. Shukla'.

(S.K. Shukla)
Deputy Chief Electrical Engineer,
(Traction Distribution)
Central Railway.

Place: Mumbai

Date:19.11.2018

VERIFICATION

I, S.K. Shukla, son of R.P. Shukla, presently, working as Deputy Chief Electrical Engineer, Traction Distribution/ Central Railway, CST Mumbai - 400 001, do hereby solemnly affirm and declare that whatever stated hereinabove is true and correct and I believe the same to be true and correct.

Solemnly Affirmed at Mumbai

Dated this 19th Day of November, 2018

Identified by me



Before Me



BEFORE ME

HEMANT JANGAM
NOTARY, GOVT. OF INDIA
MUMBAI, MAHARASHTRA

20 NOV 2018

Reg. No. 634
Sr. No. 2 Pg. No. 6
Date: 20 NOV 2018

