

Before the
MAHARASHTRA ELECTRICITY REGULATORY COMMISSION
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Case No. 120 of 2022

Petition for seeking approval for procurement 300 MW Solar Power from Solar Energy Corporation of India Limited (SECI) from proposed ISTS connected Solar PV Power Plants linked with Solar Manufacturing Plant for meeting the RPO of BEST

Brihanmumbai Electric Supply and Transport Undertaking (BEST) Petitioner

Solar Energy Corporation of India Limited (SECI)

Maharashtra State Transmission Utility (STU)

}
}Respondent

Coram

Sanjay Kumar, Chairperson
I.M. Bohari, Member
Mukesh Khullar, Member

Appearance:

For the Petitioner : Mr. N.N.Chaougule (Rep.)
For the Respondent : Ms. Tanya Sareen (Adv.)
Mr. Rajeev Bhole (Rep.)

ORDER

Date: 30 November 2022

1. BEST has filed the present Petition on 14 June 2022 under Section 86(1)(b) of Electricity Act 2003 and Regulation 21.1 of MERC (Multi Year Tariff) Regulations, 2019 seeking approval

for procurement 300 MW Solar Power from Solar Energy Corporation of India Limited (SECI) from proposed ISTS connected Solar PV Power Plants linked with Solar Manufacturing Plant for meeting the RPO of BEST.

2. BEST's major prayers are as follows:

“

- i. *To admit the Petition under Section 86(1)(b) of Electricity Act 2003 and Regulation 21.1 of MERC (Multi Year Tariff) Regulations, 2019.*
 - ii. *To approve draft Power Sale Agreement (PSA) to be executed between BEST and SECI for procurement of 300 MW Solar Power as per Regulation 21.1 of MERC (Multi Year Tariff) Regulations, 2019.*
 - iii. *To approve the procurement of quantum of 300 MW Solar Power by BEST from SECI at Rs. 2.71 per unit which includes a fixed tariff of Rs. 2.54 per unit discovered through competitive bidding plus SECI's trading margin of Rs. 0.07 per unit plus additional risk premium of Rs 0.10 per unit due to not covered under State Government Guarantee for 25 years.*
 - iv. *To consider the procurement of such Solar power towards meeting the Solar RPO and Non solar of BEST.*
 - v. *To direct Maharashtra STU to issue necessary NOC for firming up the Long term access of this 300 MW Solar power through SECI.*
 - vi. *To direct Maharashtra STU to complete the schemes as mentioned in conditional NOC dated 10.05.2022 issued to BEST so as to flow 400 MW Solar Wind Hybrid power from March 2023 onwards.*
- ...”

3. BEST in its Case has stated as follows:

- 3.1 A Manufacturing linked Solar Tender was put to auction by SECI. 12 GW ISTS Connected Solar Projects were issued Letters of Awards (LoAs) in 4 Tranches of 3GW each. Commercial Operation of Tranche-1 Projects are expected by April-2024 and thereafter subsequent Tranche 2, 3 & 4 in April-2025, April-2026 and April-2027 respectively depending upon the signing of PPA & PSA.
- 3.2 SECI has issued the LoA to M/s Adani Green Energy Four Limited (Adani Green) on 10 December 2019 and addendum to LoA on 08 June 2020 for setting up of 6000 MW ISTS

connected Solar PV Power plants linked with 1500 MW (per annum) Solar Manufacturing Plant.

- 3.3 Further, SECI has also issued the LoA to M/s Azure Power India Private Limited (Azure) on 10 December 2019 and addendum to LoA on 23 July 2020 for setting up of 2000 MW ISTS connected Solar PV Power plants linked with 500 MW (per annum) Solar Manufacturing Plant as per the terms and conditions contained in the RfS.
- 3.4 SECI vide its letter dated 30 March 2022 informed BEST that as per the Assessment Report, the capacity of around 300 MW solar power may be procured by BEST based upon the load requirements by 2025. SECI requested BEST to provide its consent for procurement of 300 MW solar power at the rate of Rs. 2.61 per unit (including trading margin of SECI at Rs. 0.07 per unit). In this transaction, SECI will act as an Intermediary Procurer, and it shall enter into a PPA with the Solar Power Developers (SPDs) and also enter into a Power Sale Agreement (PSA) with the End Procurer i.e. BEST. The PSA shall contain the relevant provisions of the PPA on a back-to-back basis. The trading margin, as notified by the Appropriate Commission (or in the absence of such notification, as mutually decided between the Intermediary Procurer and the End Procurer), shall be payable by the End Procurer to the Intermediary Procurer.
- 3.5 As per MERC (Renewable Purchase Obligation, its Compliance and Implementation of Renewable Energy Certificate Framework) Regulations, 2019 (RPO Regulations, 2019), the RPO targets for the control period FY 2020-21 to FY 2024-25 are as below:

Year	Quantum of purchase (in %) from RE sources (in terms of energy equivalent in kWh)		
	Solar	Non-Solar	Total
2020-21	4.50%	11.50%	16.00 %
2021-22	6.00%	11.50%	17.50 %
2022-23	8.00 %	11.50%	19.50 %
2023-24	10.50%	11.50%	22.00 %
2024-25	13.50%	11.50 %	25.00 %

3.6 **BEST's tie up with solar generators to fulfill the RPO:**

3.6.1 Tie up with M/s Walwhan Solar MH Ltd (20 MW) to fulfill Solar RPO:

To fulfill solar RPO, BEST has entered into long term PPA with M/s Walwhan Solar MH Ltd (Earlier M/s Welspun Energy Maharashtra Pvt. Ltd.) Mangalwedha, Solapur in the year 2013 to procure 20 MW Solar energy on long term basis. The project has been commissioned in October 2013 and is supplying 31.5 MUs of Solar energy per annum to BEST.

3.6.2 Tie up of 400 MW Solar Wind Hybrid power by BEST with SECI

BEST has also tied up 400 MW Hybrid power from SECI at tariff of Rs. 2.41/unit discovered through competitive bidding plus its trading margin of 7 paise/unit for 25 years. The declared CUF of SECI's proposed Solar Wind Hybrid project is approximately 40 % which will give more output per MW per annum. The expected generation from 400 MW tie up of Wind Solar Hybrid power will be as shown in the table below:

Hybrid Power Developers	Project Capacity	Declared Energy	BEST's Share				
	(MW)	(Mus)	400	BEST's share in MW		Expected generation at 100 %	
				Solar	Wind	Solar (MUs)	Wind (MUs)
ABC Renewable Energy Private Limited	380	1388.29	136.94	102.84	34.10	348.91	151.38
Adani Renewable Energy Holding Eight Limited	600	1927.10	216.22	160.06	56.16	473.51	220.97
AMP Energy Green Private Limited	130	484.32	46.85	33.65	13.19	126.30	48.23
Total	1110	3799.71	400	296.55	103.45	948.73	420.58
				400		1371.00	

Post approval of the Commission, BEST has signed PSA with SECI on 25 June 2021. The above projects are scheduled to be commissioned in March 2023.

3.7 Difficulties in securing Grid Connectivity with regards to 400 MW Hybrid power procurement from SECI:

- 3.7.1 SECI vide its letter dated 09 August 2021 informed BEST to submit No Objection Certificate (NOC) from Maharashtra State Transmission Utility (STU) for firming up of Long Term Access (LTA) grant by POWERGRID.
- 3.7.2 In this regard, BEST has made several correspondence with STU from August 2021 to February 2022 (7 months) and requested to issue necessary NOC in the prescribed format for firming up the LTA for Solar Wind Hybrid power from AMP Energy Green Eight Private Limited, ABC Renewable Energy (RJ-03) Private Limited and Adani Hybrid Energy Jaisalmer Five Limited.
- 3.7.3 STU vide its email on 21 February 2022 informed that presently there is no Available Transmission Capacity (ATC) margin available in the CTU-STU network. However, to enhance the ATC of Maharashtra, certain schemes are under execution & under planning /approval stage. STU decided to issue conditional NOC to the applicants based on Indemnity Bond.

3.7.4 BEST submitted Indemnity Bond to STU on 29 April 2022. Accordingly, STU vide its letter dated 10 May 2022, has issued conditional NOC subject to completion of schemes and availability of spare capacity.

3.8 Historical Trend of BEST's RPO fulfillment till FY 2020-21:

3.8.1 The Commission had issued the Order in Case No. 50 of 2021 dated 07 September 2021 in the matter of verification of compliance of RPO targets by BEST Undertaking for FY 2018-19 and FY 2019-20. In the said Order, the Commission has approved the cumulative surplus of solar RPO of 2.92 MU, non-solar RPO of 7.43 MU and Mini Micro Hydro RPO of 13.15 MU till FY 2019-20.

3.8.2 BEST has fulfilled its Solar and Non solar RPO till FY 2020-21 by procuring RE power on long term basis, short term basis, procuring RECs and solar energy generation from Net metering consumers, from G-DAM and G-TAM as follows:

Year	Solar RPO Target %	Solar Target in MUs	Solar RPO Achieved (MU)	Solar RPO achieved in %	Cumulative Shortfall/(Surplus) MUs#
2020-21	4.50%	147.77	144.860	4.41	(0.00)
Year	Non-Solar RPO Target %	Non-Solar Target in MUs	Non-Solar RPO Achieved (MU)	Non-Solar RPO achieved in %	Cumulative Shortfall/(Surplus) MUs#
2020-21	11.50%	377.64	370.20	11.27%	(0.00)

Adjusted with previous years surplus

3.9 BEST's RPO fulfillment from FY 2020-21 to FY 2024-25:

3.9.1 As per the RPO target set out by the Commission, the actual RPO achieved by BEST in FY 2020-21 and FY 2021-22 and the RPO fulfillment envisaged by BEST from FY 2022-23 to FY 2024-25 is as follows:

Particulars	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
	Actual		Estimated		
Target					
Energy Requirement at G-T Interface as per MERC MYT Order dt 30.03.2020 (Case No. 324 of 2019)	4,050.12	4,407.20	5,095.15	5,142.99	5,191.85
Energy from TPC-G Hydro power (MERC Order for TPC-G in Case No. 300 of 2019)	766.56	784.71	752.2	752.2	752.2
Net Energy Requirement at G-T Interface	3,283.55	3,622.49	4,342.95	4,390.79	4,439.65
Solar RPO %	4.50%	6.00%	8.00%	10.50%	13.50%
Solar RPO in MU	147.76	217.35	347.44	461.03	599.35

Particulars	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
	Actual		Estimated		
Non-Solar RPO %	11.50%	11.50%	11.50%	11.50%	11.50%
Non-Solar RPO in MU	377.61	416.59	499.44	504.94	510.56
Total RPO	525.37	633.94	846.88	965.97	1109.91
Availability in Mus					
Solar Welspun Energy Maharashtra Ltd.	31.91	31.5	31.5	31.5	31.5
Solar energy from Net Metering Consumers	6.55	9.20	8.84	13.26	19.9
Solar RE purchased in Mus from Power Exchange	0.00	19.79	0	0	0
Solar REC purchased	106.39	50.61	0	0	0
Non-Solar REC purchased	370.18	159.02	0	0	0
Non solar RE purchased	0	0.57	0	0	0
Solar energy from proposed Hybrid (solar +wind) project of SECI	0	0	0	948.73	948.73
Total availability of solar energy	144.85	111.10	40.34	993.49	1000.13
Non-Solar energy from proposed Hybrid (solar +wind) project of SECI	0	0	0	420.58	420.58
Total availability of Non solar energy	370.18	159.59	0.00	420.58	420.58
Solar RPO carry forward	-2.91	0.00	106.25	413.35	0
Non-Solar RPO carry forward	-7.43	0.00	256.99	756.43	721.68
Total Solar RPO	144.85	217.35	453.69	874.38	599.35
Total Non solar RPO	370.18	416.59	756.43	1261.37	1232.24
Shortfall					
Solar RPO Shortfall in MUs	0.00	106.25	413.35	-119.11	-400.78
15 % of total RPO	78.81	95.09	127.03	144.90	166.49
Non-Solar RPO Shortfall in MUs	0.00	256.99	756.43	840.79	811.66
Transfer of surplus solar RPO up to 15 % of total RPO	0	0	0	119.11	166.49
Non-Solar RPO Shortfall after adjusting surplus solar energy in MUs	0.00	256.99	756.43	721.68	645.17

3.10 BEST's Solar energy requirement to fulfill RPO from FY 2025-26 to FY 2029-30:

Considering various assumptions such as target of 40 % of total renewable energy, 25 % of solar RPO, 15 % Non-solar RPO by the end of FY 2029- 30, 1 % growth rate in energy requirement and revision of RPO targets, the Solar power requirement till FY 2029-30 is as follows:

Particulars	As per MERC (RPO-REC) Reg, 2019 and MERC MYT Order dated 30.03.2020			Projection					Assumptions
	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	
Energy Requirement at G<T Periphery excluding Hydro(MUs)	4351.06	4398.9	4447.76	4499.68	4552.12	4605.08	4658.57	4712.60	Considering 1 % YOY growth from FY 2024-25 onwards

Particulars	As per MERC (RPO-REC) Reg, 2019 and MERC MYT Order dated 30.03.2020			Projection					Assumptions
	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	
Solar RPO	8.00%	10.50%	13.50%	17.00%	21.00%	22.50%	24.00%	25.00%	Considering total 40 % RE target by FY 2029-30, BEST has assumed 25 % solar RPO by the end of FY 2029-30
Solar RPO in Mus	348.08	461.88	600.45	764.95	955.94	1036.14	1118.06	1178.15	
Solar power requirement (MW) (considering 28 % CUF)	142	189	245	312	390	423	456	481	Considering 2.45 Mus per annum at 28 % CUF

3.11 Demand- Supply gap of BEST Undertaking:

BEST has existing PPAs with TPC (G) for 676.69 MW and with Manikaran Power Ltd. for 100 MW. PPAs are valid for a period of five years from 1 April 2019 to 31 March 2024. BEST has worked out demand-supply position as below:

Sr. No.	Power Project / Agency	Type of Source	Tariff (Rs/Unit)	BEST's Contracted Capacity (MW)				
				FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
A	DEMAND (MW)							
	Peak Load projected in MYT Petition			963.16	968.18	973.23	978.3	983.4
B	SUPPLY (MW)							
PPA-1	TPC-G U5,7,8 & Hydro	Hydro/Thermal	4.51	676	676	676	676	
PPA-2	Walwhan Solar MH Limited	Solar PV	8.56	20	20	20	20	20
PPA-3	Manikaran Power Limited	Thermal	4.37	100	100	100	100	
PPA -4	Solar Energy Corporation of India (SECI)	Solar Wind Hybrid	2.48				400	400
	Total Supply			796	796	796	1196	420
	Demand-Supply Gap/(Surplus) in MW			167.16	172.18	177.23	-217.7	563.4

3.12 Rationale for accepting SECI's offer to tie up 300 MW of solar power:

3.12.1 Certainty of Projects:

Currently ISTS projects are facing challenges in connectivity in solar rich states i.e. Rajasthan and Gujarat (location of most low tariff projects) and there is a significant queue for connectivity of projects already bided out. These Solar projects on offer, have already secured Stage II connectivity.

3.12.2 Basic Customs Duty Protection:

The following proposal of MNRE to impose BCD on solar cells and modules has been notified through MNRE OM dated 09 March 2021.

Items	CTH	Upto31.03.2022	w.e.f.01.04.2022
Solar Module	85414012	0%	40%
Solar Cell	85414011	0%	25%

As per suo-moto commitment by SPD, there will not be any revision in their final offered tariff i.e. Rs 2.54/ kWh in case of imposition of BCD up to 40% on Modules and up to 25% on Cells). Further, no Change in Law on account of BCD will be claimed by either party, as per the MNRE OM dated 09 March 2021.

3.12.3 **Transmission Losses:**

Bidding under this tender concluded before 15 January 2021, so transmission loss is exempted. All tenders after 15 January 2021 shall attract transmission loss. Impact of transmission loss is approximately Rs 0.08/kWh to 0.10/kWh.

3.12.4 **Domestic Self Reliance:**

With 90% of Solar Modules currently being imported from overseas, there is an urgent need to reduce dependence on import for energy security of India. Manufacturing capacity setup in this tender, shall result in 15% such imports being replaced by production from India, helping country to achieve its goal of 'Atmanirbhar Bharat'.

3.12.5 **Useful to fulfil Solar and Non solar RPO target of Current and Future period shortfall:**

BEST will receive solar energy from FY 2024-25 onwards, which will be useful to fulfill BEST's future Solar and Non solar RPO. Further, as per Regulation 7.3 of RPO Regulation, 2019, Obligated Entity can use surplus Solar energy up to 15% of total RPO target to meet short fall in non-Solar RPO target and vice-versa. Therefore, surplus solar energy from this plant up to 15 % of total RPO target can be utilized for meeting the shortfall of Non solar RPO from FY 2024-25 onwards.

3.12.6 **Reduce short-term power purchase quantum:**

Purchase of 300 MW Solar power will significantly reduce BEST's short-term power purchase quantum thereby hedging BEST from volatility of short-term prices. Further, the short-term power is being replaced with long term power with fixed tariff for 25 years even there will not be any escalation in price because of inflation.

3.12.7 Solar generation coincides with BEST's load curve:

The Commission issued the Order on 06 April 2022 in Case No. 46 of 2022 in the matter of BEST's Petition for approval of tariff discovered through competitive bidding process for short term bilateral power purchase for the period from April 2022 to June 2022. The Commission in its Order has categorically mentioned that BEST's short-term power requirement is for the period of 9.00 to 17.00 Hrs which is coinciding with solar energy generation window. As solar power is now available at much cheaper tariff than conventional sources, BEST should have taken efforts to contract such cheap power.

3.12.8 Useful to meet Demand-Supply gap of BEST Undertaking

BEST's peak load projection by the end of FY 2024-25 is 983 MW. Considering BEST's existing tie up with TPC-G, Manikaran, Walwhan Solar MH Ltd and current PSA with SECI (400 MW Solar Wind Hybrid power), the solar power from this plant can be useful to meet the Demand-Supply gap of BEST Undertaking.

3.13 Payment Security Mechanism as per PSA:

3.13.1 Letter of Credit (LC) as per clause 6.4(A) of PSA:

The Letter of Credit shall have a term of twelve (12) Months and shall be reviewed every 6 months, in the month of January and July and revised w.e.f. April and September for an amount equal to:

- i. for the first Contract Year, equal to 110% of the estimated average monthly billing;
- ii. for each subsequent Contract Year, equal to 110% of the average of the monthly Tariff Payments of the previous Contract Year.

3.13.2 State Government Guarantee as per clause 6.4(B) of PSA:

The Buying Entity is mandated to extend the State Government Guarantee, in a legally enforceable form, such that there is adequate security, both in terms of payment of energy charges and termination compensation if any. In cases where the Buying Entity is not able to provide the State Government Guarantee, the Buying Entity shall pay to SECI an additional risk premium of Rs 0.10/kWh, which shall be credited to the payment security fund maintained by the SECI.

3.13.3 BEST is not covered by the State Government Guarantee, the BEST shall have to pay to SECI an additional risk premium of Rs 0.10/kWh, which shall be credited to the payment security fund maintained by the SECI.

3.14 Applicable Tariff as per clause 5 of PSA:

3.14.1 From SCD and subject to the provision of the Article 6.7, the Buying Entity shall pay the fixed tariff of Rs. 2.54/ kWh plus trading margin of Rs. 0.07/ kWh for the entire term of this agreement.

3.14.2 Regarding the impact of change in GST, SECI vide its letter dated 03 June 2022 informed that it is difficult to currently determine the impact of change in GST rate for solar power projects as it will be dependent on multiple factors including, the exact indirect tax structure applicable as on the date of invoicing for the capital equipment, cost of such equipment, quantity finally procured and other factors. However, only for the purpose of information of Buying Entity, the impact based on current assessment of some of these factors is likely to be in the range of Rs. 0.10 – 0.12/kWh if discounted as tariff.

3.14.3 Further, BEST is not covered by the State Government Guarantee, the BEST Undertaking shall have to pay SECI an additional risk premium of Rs 0.10/kWh, which shall be credited to the payment security fund maintained by the SECI as per clause of 6.4 (B) of PSA.

3.14.4 Due to the above factors, the applicable tariff is increased to Rs. 2.71 per unit (2.54 + 0.07 + 0.10). Further in case of any change in GST rates, these changes in GST rates may lead to change in tariff.

3.15 Procedural Aspects:

3.15.1 BEST to file a petition before the Commission for approval of Power Sale Agreement (PSA), quantum of power and SECI's trading margin for RE power procurement from these three projects.

3.15.2 SECI will submit the petition before CERC u/s 63 of the Electricity Act 2003 for adoption of Tariff.

3.15.3 After getting the approval from the Commission, PSA will be executed between SECI and BEST, and PPA between SECI and successful developers.

4. STU in its Reply dated 13 July 2022 stated as follows:

4.1 As per the discussion in 62nd Meeting of Western Region Constituents dated 27 August 2021

regarding LTA and connectivity applications in Western Region, WRLDC informed that the present ATC of Maharashtra is 9760 MW.

(In MW)

TTC	TRM	ATC
10060	300	9760

- 4.2 From 01 July 2022, WRPC has revised the Central Sector Power allocation for Maharashtra from 6953.96 MW to 6281.04 MW. The NOC proposals received at STU for grant of LTA to CTU network till date Considering all above, Available ATC Margin details are as below:

Present ATC of Maharashtra (X)	9760 MW
Total LTA operationalized (As on 01.07.2022) (Y)	9847.87 MW
Available ATC Margin (A) = (X-Y)	0 MW (-87.87 MW)
LTA Granted but not operationalized (B)	1400 MW
NOC issued but LTA not granted (C)	686 MW (Conditional NOCs)
NOC applications under process (D)	683 MW (Proposed NOCs of subject applicants)
ATC Requirement by strengthening CTU-STU lines (B+C+D-A)	2856.87 MW

4.3 **Total LTA Operationalized:**

Central Share allocation to Maharashtra (Firm+infir) and Central Generator Contracted:	7884.87 MW
LTA granted to Discoms by CTU (Old):	258 MW
NOCs issued by STU and LTA granted by CTU and operationalized for R.E. Power	1705 MW
Total LTA operationalized	9847.87 MW

4.4 **Conditional NOC issued by STU but LTA yet to be granted by CTU:**

From	To	Quantum (MW)
Tata Power Renewable energy Ltd (TPREL)	TPC-D	225
BEST (SECI)	BEST	400
M/s. Rewa Ultra Mega Solar Ltd. (RUMSL)	Central Railway	61
(C): Total		686

4.5 **NOC applications received and under process by STU:**

From	To	Quantum (MW)
M/s ACME Solar Holding Ltd.	MSEDCL	300
National Hydroelectric Power Corporation (NHPC)	MSEDCL	183
M/s. ReNew Solar power Pvt. Ltd.	MSEDCL	200
(D) : Total		683

4.6 Presently there is no ATC margin available in the CTU-STU network. STU furnished following schemes status which are being rolled out for enhancing ATC of Maharashtra:

Sr. No.	Scheme Particular	Scope of Work	Expected COD	Tentative Increase in ATC (In MW)	Current Status
1	HTLS Conversion	220 kV Boisar (PG) - Boisar (MSETCL) D/C line Conversion to HTLS	-	560	Commissioned
2	220 kV Solapur-Bale	220kV DCDC line from 220kV Solapur PG – Bale S/s: 40 ckt. Kms	Mar-23	281	One Ckt. Completed (140MW), 2nd Ckt will be completed by March 2023
3	220kV Yavatmal S/s	220kV DC line from Deoli (PGCIL) upto LILO pt. for 220 kV Yavatmal ss (Balance portion of Deoli (PGCIL) - Ghatodi)	Oct-22	281	Work in Progress
4	400 kV Parali (MS)	Upgradation of Existing 400 kV Parli (PG) to 400 kV Parli (Girawali) by HTLS Conductor	Jun-23	550	Proposal to PGCIL in Progress
5	400 kV Kudus	i) LILO on 220 kV Tarapur-Borivali & Boisar- Ghodbunder line at Kudus - 10 kms ii) LILO on 220 kV Padghe-Wada & 220 kV Kolshet-Wada at 400 kV Kudus - 10 km	Mar-23	500	Work in Progress (Forest Involvement and severe ROW issues).
6	400 kV Vikhroli	i) 400 kV Kharghar-Vikhroli D/C & M/C line with bays at Kharghar & Vikhroli (with conductor capacity of 2,000 MW) along with 400 kV Bus	Dec-22	750	Work in Progress

Sr. No.	Scheme Particular	Scope of Work	Expected COD	Tentative Increase in ATC (In MW)	Current Status
		<p>extension at 400 kV Kharghar end.</p> <p>ii) LILO on 400 kV Talegaon-Kalwa line at 400 kV Vikhroli GIS S/S with bays.</p> <p>iii) LILO of existing 220 kV Trombay - Salsette I & II and 220 kV Trombay – Salsette III & IV at 400/220 kV Vikhroli S/S. Installation of 1 x 125 MVAR 400 kV Bus reactor.</p> <p>iv) 400/220 kV GIS Substation with 3 x 500 MVA, 400/220 kV ICTs.</p> <p>v) a) Construction of 400 kV GIS & 220 kV GIS Buildings at Vikhroli. b) 220 KV spare Bays – 02 No's (suitable for 220/110 kV ICT's). c) 220 KV spare Bays – 02 No's (suitable for 220/110 kV ICT's).</p> <p>vi) Diversion of existing 110 kV Dharavi-Salsette via Vikhroli lines considering future 220 kV upgradation.</p>			
7	400 kV (GMR) Warora	(GMR) Evacuation of MSEDCL power (200 MW) from GMR Warora on STU network.	Jun-23	200	LOI Issued to M/s MD Transcon Pvt Ltd
8	400 kV Pimpalgaon	<p>i) LILO of 400 kV Aurangabad (PG) – Boisar (PG) – 5 KM</p> <p>ii) 2 X 500 MVA 400/220 kV ICT</p> <p>iii) 1 X 125 MVAR Reactor</p> <p>iv) 220 kV DCDC line to existing 220 kV</p>	Dec-24	500	MERC Approval received on 18.04.2022.

Sr. No.	Scheme Particular	Scope of Work	Expected COD	Tentative Increase in ATC (In MW)	Current Status
		Pimpalgaon Interconnection v) Reorientation of existing 220 kV D/C Nasik (GCR) – Pimpalgaon S/S at existing 400 kV Pimpalgaon S/S vi) LILO of 132 kV Ozhar – Chandwad at 132 kV Ranwad 2nd Ckt stringing of Pimpalgaon Ranwad line			
Total				3622 MW	

- 4.7 Conditional NOCs are applicable subject to completion of above strengthening projects of CTU-STU network & availability of ATC margin with obligation to Indemnity Bond.
- 4.8 With reference to prayer clause (v) in the Petition, it is submitted that, STU hasn't received any further application from BEST for issuance of NOC for 300 MW solar power through SECI.
- 4.9 With reference to prayer clause (vi) in the Petition, it is submitted that, STU is continuously monitoring the project schemes being implemented for strengthening of CTU-STU network and also directing concerned transmission licensees to ensure completion of the same on or before their scheduled COD.
5. **BEST in its Rejoinder dated 02 August 2022 to STU's Reply stated as follows:**
- 5.1 BEST in the present Petition has categorically prayed for directions to Maharashtra STU to issue necessary NOC for firming up the Long Term Access of proposed 300 MW Solar power procurement through SECI and complete the schemes as mentioned in conditional NOC dated 10 May 2022 issued to BEST so as to ensure the flow 400 MW Solar Wind Hybrid power from SECI from March 2023 onwards.
- 5.2 While issuing conditional NOC on 10 May 2022, STU has mentioned only four ongoing schemes which are to be completed to enhance the ATC margin of Maharashtra. However, STU in its reply dated 13 July 2022, has mentioned eight ongoing schemes which are to be completed to enhance the ATC margin of Maharashtra.

BEST has submitted that additional four schemes are not included in the Indemnity Bond

submitted by BEST to STU. Therefore, as soon as the strengthening projects of CTU-STU network of four schemes are completed as mentioned in conditional NOC and ATC margin is available, NOC will be applicable to the BEST. STU cannot add any further schemes after submitting Indemnity Bond by BEST.

- 5.3 As per STU's Reply, STU has issued conditional NOC to three applicants of capacity 686 MW but LTA yet to be granted by CTU. Also, STU has issued NOC to six applicants of quantum 1400 MW, LTA is granted by CTU but projects are not yet operationalized. Details of the same are as follows:

Sr. No.	From	To	Quantum (MW)	Likely date of commissioning of project
1	M/s. Avikiran Solar I India Pvt. Ltd. (Erstwhile BLP Energy Pvt. Ltd.)	MSEDCL	100	Not mentioned by STU
2	M/s. ACME Solar holdings Ltd.	MSEDCL	300	October-2021
3	M/s. Inox Wind Infrastructure Services Ltd.	MSEDCL	100	Not mentioned by STU
4	M/s. Inox Wind Ltd.	MSEDCL	50	Not mentioned by STU
5	M/s. Adani Renewable energy Park Rajasthan Ltd. (RCEPL Hybrid Power One Ltd.)	AEML-D	700	Not mentioned by STU
6	M/s. Tata Power Renewable energy Ltd.	TPC -D	150	Not mentioned by STU
	Total		1400 MW	

- 5.4 It is expected that once the validity of NOC issued to applicants gets over and if the projects are not materialized, STU should cancel the NOC and should ask the applicant to apply for fresh NOC. In that case, all new application should be considered on first come first serve basis. The spare capacity should be used to issue NOC to the first three applicants i.e. Tata Power Renewable Energy Ltd (225 MW), BEST Undertaking (400 MW) and Central Railway (61 MW).
- 5.5 STU should review the earlier NOCs granting LTA and should cancel the NOC if the validity has lapsed. This spare capacity due to the lapsed validity shall be allotted to the applicants who have been issued conditional NOCs.

6. **SECI in its Reply dated 18 August 2022 stated as follows:**

- 6.1 On 25 June 2019, SECI issued the RfS document for 'Selection of Solar Power Developers for Setting up of ISTS Connected Solar PV Power Plants linked with Setting up of Solar Manufacturing Plant under Global Competitive Bidding'. The RfS Document has been

prepared in line with the Guidelines for Tariff based Competitive Bidding Process for procurement of power from Grid Connected Solar PV Power Projects notified on 03 August 2017 (along with amendments and clarifications) by the Government of India.

- 6.2 In pursuance to the RfS Document, the bids were submitted, the successful bidders for establishing the projects were selected and SECI issued the LoA to the selected bidders for the procurement of solar power from such SPDs for onward sale on back-to-back basis to Buying Entities/Distribution Companies.
- 6.3 The nature of the transactions involved in the present matter is inter-state operations. The Project(s) shall be located in the State of Rajasthan and the supply of power shall be to the State of Maharashtra. The power procured from the project(s) shall be supplied to BEST under the PSA to be signed with SECI upon the approval being granted by the Commission. SECI will sign the PPA with SPD after signing of PSA with BEST.
- 6.4 The PPA and PSA in matters of Tariff will be governed by Section 79 (1) (b) of the Electricity Act, 2003, there being a composite scheme for generation and sale in more than one State. Reference is made to the decision of Hon'ble Supreme Court in '*Energy Watchdog case –v- Central Electricity Regulatory Commission & Ors. (2017) 14 SCC 80.*
- 6.5 The Central Electricity Regulatory Commission (CERC) vide Order dated 02 April 2022 in Petition No.286/AT/2021 (for adoption of tariff of solar power projects to be set up in pursuance of the Manufacturing linked Solar Scheme) filed by SECI under Section 63 of Electricity Act, 2003, has categorically held that SECI has been able to enter into PPA for a total capacity of 8900 MW i.e. 1900 MW under Package-I and 7000 MW under Package-II to Package-IV. Since SECI was in the process of identifying and finalizing the PSAs for balance capacity of 3100 MW, the CERC deemed appropriate to restrict adoption of tariff only with respect to the quantum for which PPA has been executed with SPDs for supply of power to the identified distribution licensees through PSA with SECI. Further, SECI has been given liberty to approach the CERC for the adoption of tariff for remaining capacity 'once such capacity is tied up and PPAs and PSAs for such capacity are executed'.
- 6.6 Further, CERC is the Appropriate Commission having the jurisdiction in respect of Trading Margin of SECI in view of the following aspects:
 - 6.6.1 SECI has been granted Inter-State Trading License by the CERC for undertaking trading in whole of India in terms of section 79(1)(e) read with Section 14 and Section 15 of the Electricity Act.
 - 6.6.2 Trading of an Inter-State Trading Licensee is governed by Section 79 (1) (e) and Section

79(1)(j) of the Electricity Act, 2003 and the CERC exercises jurisdiction.

- 6.6.3 The PPAs and PSA will be governed by Section 79 (1) (b) of the Electricity Act, there being a composite scheme for generation and sale in more than one State conferring jurisdiction on CERC.
- 6.6.4 The Central Commission vide its Order dated 02 April 2022 has held that ‘Distribution licensees have agreed to a trading margin of Rs.0.07/kWh as agreed in the PSAs, which is in consonance with Regulation 8(1)(d) of the Trading Licence Regulations’. For reference, SECI relied upon the Appellate Tribunal for Electricity’s (APTEL’s) Judgment dated 02 July 2021 in Appeal No.52 of 2021 & Connected Appeal in the matter of ‘Solar Energy Corporation of India Limited –vs- Delhi Electricity Regulatory Commission & Ars’.
- 6.7 The additional risk premium of Rs.0.10/kWh payable by BEST as part of Payment Security Mechanism in terms of Article 6.4 B consistent with the provision of the Guidelines notified by Government of India.
- 6.8 SECI has requested the Commission to approve the procurement of Solar Power under the PSA to be executed between BEST and SECI at the tariff of Rs 2.54/kWh i.e. tariff of individual projects identified for supply of solar power to BEST and in addition thereto a Trading Margin of Rs.0.07/kWh. Further, in terms of the Guidelines and the draft PSA (forming part of bidding documents), the additional risk premium of Rs.0.10/kWh is payable by BEST to SECI on account of not being covered by Tripartite Agreement (TPA) nor by the State Government Guarantee.
- 7. STU in its Additional submission dated 14 September 2022 has stated as follows:**
- 7.1 STU has issued the conditional NOC to BEST considering the time frame required to complete these schemes as mentioned in conditional NOC.
- 7.2 Presently, there is no ATC margin available in the CTU-STU network and as per STU’s Reply dated 13 July 2022 there are 8 nos. of schemes which are under pipeline/planning on urgent basis for enhancing ATC of Maharashtra.
- 7.3 Some of the schemes mentioned by STU in its reply dated 13 July 2022 before the Commission, are not included in the conditional NOC issued to BEST, as the target dates for completion of these schemes are before March 2023.
- 7.4 After completion of these schemes, the applicants who have applied before the application for NOC by BEST will get the LTA from CTU. The schemes being completed before March 2023 were considered in earlier NOC issued by STU to other entities considering their project

completion and their application for issuance of NOC. Conditional NOCs are applicable subject to completion of strengthening projects of CTU-STU network & availability of ATC margin.

7.5 Following is the status of NOC issued to the six applicants.

Sr. No.	Name of Consumer	Generator	Distribution Licensee	Validity Period	Date of Issue	Quantum of power (in MW)	Status
1.	Avikiran Solar India Pvt.Ltd. (Erstwhile BLP Energy Pvt. Ltd.	Wind	MSEDCL	25 year from Scheduled Commissioning Date	02-05-2019	100	LTA granted and operationalized. Out of 285 installation capacity 165 MW is commissioned. 58.2 MW is scheduled to MSEDCL (Maharashtra).
2.	Acme Solar Holding Ltd	Solar	MSEDCL	25 year from Scheduled Commissioning Date	30-12-2019	300	LTA granted and yet to be operationalized, will be operationalised by Jan 2024
3.	Inox Wind Infrastructure Services Ltd	Wind	MSEDCL	25 year from Scheduled Commissioning Date	02-05-2019	100	LTA granted and yet to be operationalized, will be operationalised by Aug 2023
4.	Inox Wind Ltd.	Wind	MSEDCL	25 year from Scheduled Commissioning Date	18-11-2019	50	LTA yet to be granted by CTU.
5.	Adani Renewable energy Park Rajasthan ltd. (RCEPL Hybrid power One Ltd.)	Hybrid	AEML-D	25 year from Scheduled Commissioning Date	21-09-2020	700	LTA granted and yet to be operationalized, will be operationalised by Oct 2022
6.	Tata Power Renewable Energy Ltd.	Solar	TPC-D	25 year from Scheduled Commissioning Date	25-09-2020	150	LTA granted and yet to be operationalized, will be operationalised by Oct 2022
Total						1400	

8. At the E-hearing held on 11 October 2022:

8.1. Representative of BEST re-iterated the rationale for proposed power procurement arrangement.

- 8.2. Advocate of the SECI informed that as per its discussion with selected SPDs, presently it is in position to offer only 234 MW as against 300 MW capacity. BEST submitted that once revised offer is received then SECI, it will provide its consent.
- 8.3. Representative of STU mentioned that for envisaged procurement of 300 MW, BEST has not applied for its NOC for grid connectivity. Further, it is open to the option for review of NOCs granted earlier if projects are not coming up.
- 8.4. Based on material placed on record and arguments made, the Commission directed SECI to submit additional submission on the factual position of its offer of 234 MW to BEST instead of 300 MW.

9. **SECI in its Additional submission dated 8 November 2022 stated as follows:**

- 9.1 Inter-State Transmission (ISTS) charges and losses are waived for the Manufacturing Scheme as per the Ministry of Power's Orders dated 23 November 2021 and 30 November 2021 but the same is yet to be notified by CERC through appropriate Regulations. In case the ISTS transmission charges and/or losses are levied by the CERC through its Appropriate Regulations, BEST has informed that it would not agree to bear any such ISTS transmission charges and/or losses. BEST has agreed to bear only intra-state transmission charges and/or losses.
- 9.2 In such a scenario, SECI has requested both the generators- Adani Green and Azure to consider and shift the delivery point from ISTS injection point to CTU-STU periphery of Maharashtra to address concerns of BEST. The same has been accepted by Adani Green vide communication dated 30 May 2022.
- 9.3 The capacity available from the two generators- Adani Green and Azure in aggregate is 300 MW for resale to BEST. As Azure has not given confirmation, the quantum of power available to BEST is 234 MW out of 300 MW to be supplied from Adani Green. Vide letter dated 02 November 2022, BEST has agreed to finalize the procurement of 234 MW which is available from Adani Green.
- 9.4 SECI will sign PPA with SPD- Adani Green for purchase and sale of 234 MW after signing of PSA with BEST for the said capacity. Applicable Tariff for 234 MW under the PSA will be Rs.2.54/kWh plus Trading margin of Rs.0.07/kWh as before.
- 9.5 The jurisdiction being exercised by the State Commission under section 86 (1)(b) of the Electricity Act,2003 in cases where the regulatory jurisdiction of the transaction is vested in the CERC, is limited namely as provided under Rule 8 of the Electricity Rules, 2005. Rule 8 of the

Electricity Rules, 2005 read as under:

“

8. Tariffs of generating companies under section 79.- The tariff determined by the CERC for generating companies under clause (a) or (b) of subsection (1) of section 79 of the Act shall not be subject to re-determination by the State Commission in exercise of functions under clauses (a) or (b) of sub-section (1) of section 86 of the Act and subject to the above the State Commission may determine whether a Distribution Licensee in the State should enter into Power Purchase Agreement or procurement process with such generating companies based on the tariff determined by the CERC.” (Emphasis added)

Commission’s Analysis and Rulings

10. BEST under the instant Petition has sought approval for procurement of 300 MW Solar Power from proposed ISTS connected Solar PV Power Plants linked with Solar Manufacturing Plant for meeting the Solar and Non-solar RPO.
11. The Commission notes that during the hearing dated 11 October 2022, SECI has categorically submitted that it is in position to supply only 234 MW of Solar power instead of 300 MW. BEST has agreed with the revised proposal in hearing itself and provided its consent subsequently on vide letter dated 02 November 2022. Considering this development, the Commission deems it fit to evaluate the Petition considering quantum of proposed procurement to the extent of 234 MW Solar power.
12. Before discussing the rationale of proposed procurement, it is necessary to highlight the following major events with reference to SECI’s tender for ISTS connected Solar PV Power Plants linked with Solar Manufacturing Plant:
 - 12.1. On 25 June 2019, SECI floated RfS document for selection of Solar Power Plant Developers for setting up of 6 GW ISTS connected Solar PV power plants linked with setting up of 2 GW (per annum) Solar manufacturing plant under Global Competitive Bidding as per Guidelines dated 3 August 2017. RfS document has been amended vide Amendments dated 11 October 2019 and 7 November 2019.
 - 12.2. On 10 December 2019, SECI issued LoAs to the selected bidders and offered additional capacity of 2000 MW Solar PV Plant linked with 500 MW Solar Manufacturing plant (Cell & Module) at the tariff of Rs.2.92 per unit under Green Shoe option.
 - 12.3. Accordingly, total of 12000 MW of Solar PV Power Projects awarded through competitive bidding. Project capacity has been divided into 4 packages of 3000 MW each.

- 12.4. For Package I (3000 MW), on 15 July 2021 Adani Green and Azure Power furnished an undertaking offering reduction in quoted tariff from 2.92 per unit to Rs.2.54 per unit. For Package II, III and IV Adani Green and Azure Power vide their respective undertaking dated 3 November 2021 reduced the quoted tariff to Rs.2.42 per unit.
- 12.5. SECI approached CERC for adoption of tariff vide Petition No.286/AT/2021 under Section 63 of Electricity Act, 2003. The CERC vide Order dated 02 April 2022 has categorically held that SECI has been able to enter into PPA for a total capacity of 8900 MW (i.e. 1900 MW under Package-I and 7000 MW under Package-II to Package-IV). Since SECI was in the process of identifying and finalizing the PSAs for balance capacity of 3100 MW, the CERC restricted adoption of tariff only with respect to the quantum for which PPA has been executed with SPDs for supply of power to the identified Distribution Licensees through PSA with SECI. Further, SECI has been given liberty to approach the CERC for the adoption of tariff for remaining capacity once such capacity is tied up and PPAs and PSAs for such capacity are executed.
13. With above background and submissions made during proceeding, the Commission frames following issues for its consideration:
- Quantum of power procurement to be allowed to BEST;
 - Competitiveness of the rate proposed for approval;
 - Cross-over of technology specific RPO target;
 - Available ATC Margin.

The Commission's ruling on above issues is provided in the subsequent paragraphs:

14. Issue A: Quantum of Power Procurement to be allowed to BEST

- 14.1. BEST in its Petition has stated it has existing PPAs with TPC (G) for 676.69 MW and with Manikaran Power Ltd. for 100 MW. PPAs are valid for a period of five years from 1 April 2019 to 31 March 2024. For sufficing the procurement, BEST has worked out following demand-supply matrix by considering peak load projections from its MYT Petition.

	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
Demand (Peak load projected in MTY Petition) MW	936.16	968.18	973.23	978.3	983.4
TPC-G	676	676	676	676	
Walwhan Solar MH Ltd.	20	20	20	20	20
Manikaran Power Ltd.	100	100	100	100	
SECI Solar+Wind Hybrid				400	400

Supply in MW	796	796	796	1196	420
Gap/Surplus MW	167.16	172.18	177.23	(217.7)	563.4

- 14.2. The Commission notes that in its MYT Order (Case No.324 of 2019) dated 30 March 2020 it has categorically observed that in case of continuing arrangement with TPC-G, BEST would have to approach the Commission well before the expiry of its PPA for its extension or otherwise. In case of M/s Manikaran Power Limited, PPA period is of 5 years from 1 April 2019 to 31 March 2024. Accordingly, demand-supply scenario presented by BEST is justified.
- 14.3. Further, the Commission in its Order in Case No.46 of 2022 dated 6 April 2022, while allowing short term power procurement, has directed BEST Undertaking to undertake holistic study of its power procurement planning with objective to reduce dependency on short term power and contract cheaper renewable energy source. Relevant part of said Order is reproduced below:

“
9.3 Having ruled as above, the Commission would like to note that MYT Order was issued on 30 March, 2020 and the Commission has considered RE power as per RPO targets in ARR from FY 2022-23 onwards. Thus, BEST had 24 months for contracting such RE power. But BEST has delayed the process and 400 MW wind-hybrid PSA is approved on 26 April, 2021 which has led to unavailability of RE power in most of FY 2022-23 as against projected in MYT Order. Had BEST expedited the process, such situation would not have arisen. Further, it is also important to note that BEST’s short-term power requirement is for the period of 9.00 to 17.00 hrs which is coinciding with solar energy generation window. As solar power is now available at much cheaper tariff than conventional sources, BEST should have taken efforts to contract such cheap power. Considering all these aspects, the Commission directs BEST Undertaking to review its power procurement planning in holistic manner so as to source cheapest available power to meet load requirement of its consumers. Such holistic study should be completed within 3 months clearly stipulating action to be taken in timebound manner. Copy of such Report shall be submitted to the Commission within 3 months from date of this Order.” (Emphasis added)

Accordingly in present Petition, BEST Undertaking has holistically reviewed its demand-supply position and has proposed to tie up solar power which is coinciding with its peak load requirement.

- 14.4. Apart from above, the Commission notes that MERC RPO Regulations, 2019 stipulates RPO trajectory till FY 2024-25. Whereas Ministry of Power vide its Order dated 22 July 2022, stipulated the **long-term growth trajectory of RPO** as follows:

RPO Targets:

Year	Wind RPO	HPO	Other RPO	Total RPO
FY 22-23	0.81%	0.35%	23.44%	24.61%
FY 23-24	1.60%	0.66%	24.81%	27.08%
FY 24-25	2.46%	1.08%	26.37%	29.91%
FY 25-26	3.36%	1.48%	28.17%	33.01%
FY 26-27	4.29%	1.80%	29.86%	35.95%
FY 27-28	5.23%	2.15%	31.43%	38.81%
FY 28-29	6.16%	2.51%	32.69%	41.36%
FY 29-30	6.94%	2.82%	33.57%	43.33%

- (a) Wind RPO shall be met only by energy produced from Wind Power Projects (WPP) commissioned after 31st March 2022.
- (b) HPO shall be met only by energy produced from LHPs (including PSPs), commissioned after 8 March 2019.
- (c) Other RPO may be met by any RE projects not mentioned in (a) and (b) above.

MERC RPO Regulations, 2019 clearly stipulate that Distribution Licensee shall endeavor to achieve total RPO target notified by the Central Government and for doing so it will get incentive of Rs 0.25 per kWh for RE procured above the minimum percentage specified in Regulation 7 up to the percentage notified by the Central Government.

14.5. The quantum proposed to be procured by BEST is not exceeding the long term RPO trajectory specified by MoP. Further, the peak demand periods of BEST coincide with the solar generation period proposed in the petition. Also, BEST is entitled to replace its costly long term power as and when the issue of extension of the PPAs with TPC-G is considered. Considering these factors, the proposed quantum of 234 MW of Solar power procurement seems to be justified.

15. Issue B: Competitiveness of the rate proposed for approval.

15.1 The Commission notes that proposed 234 MW power procurement is based on competitive bidding process initiated by SECI for setting up of 6 GW ISTS connected Solar PV power plants linked with setting up of 2 GW (per annum) Solar manufacturing plant under Global Competitive Bidding as per Guidelines dated 3 August 2017.

15.2 SECI has offered solar power at the rate of Rs. 2.61/kWh (including trading margin of SECI at Rs. 0.07 per unit). Further, as BEST is not covered by the State Government Guarantee, BEST shall have to pay an additional risk premium of Rs 0.10/kWh, which shall be credited to the payment security fund maintained by the SECI. With regards to impact of change in GST rates, SECI vide its letter dated 03 June 2022 intimated that the impact based on current assessment is likely to be in the range of Rs. 0.10 – 0.12/kWh.

15.3 As said Solar project is inter-state project, any contractual issues including adoption of tariff is within the jurisdiction of the Central Commission. The scope of present proceedings is governed by Rule 8 of the Electricity Rules, 2005 which is reproduced below:

“
8. Tariffs of generating companies under section 79.- *The tariff determined by the CERC for generating companies under clause (a) or (b) of subsection (1) of section 79 of the Act shall not be subject to re-determination by the State Commission in exercise of functions under clauses (a) or (b) of sub-section (1) of section 86 of the Act and subject to the above the State Commission may determine whether a Distribution Licensee in the State should enter into Power Purchase Agreement or procurement process with such generating companies based on the tariff determined by the CERC.” (Emphasis added)*

In the present case, the tariff of Rs. 2.54/kWh (for Package I) has been discovered through transparent process of competitive bidding and such tariff has been adopted by CERC vide its Order dated 02 April 2022 in Petition No.286/AT/2021. Therefore, scope of present proceeding is to determine whether BEST Undertaking be allowed to execute PSA at the tariff adopted by CERC.

15.4 The Commission notes that SECI has allocated the power from Package I of the Tender. BEST could have pursued SECI for allocating the solar power from Package II, III and IV for which tariff is Rs.2.42/kWh, which is lower than Rs. 2.54/kWh offered from Package I. Neither SECI nor BEST submitted the details of unsubscribed capacity of Package II, III and IV of the Tender. The Commission is presuming that BEST Undertaking has accepted offer of Rs. 2.52 /kWh after exhausting possibilities of allocation of power from Package II,III and IV. However, in case BEST Undertaking is yet to do that and still there is un-tied up capacity at tariff of Rs. 2.42/kWh is available, BEST Undertaking shall approach SECI for such capacity before going ahead with proposal in present petition.

15.5 Subject to above, the Commission notes that Rs. 2.54/kWh + trading margin of 0.07/kWh and additional risk premium of Rs. 0.10/kWh i.e. total rate of Rs. 2.71/kWh is lower than the recently concluded Solar Tenders of MSEDCL which has discovered following tariff:

For 500 MW Solar Projects (Phase VII)	Rs.2.90/kWh-Rs.2.91/kWh
For 500 MW Solar Projects (Phase VIII)	Rs.2.82/kWh-Rs.2.83/kWh

Considering market trends, the tariff offered by SECI seems to be competitive and is reflective of market rates.

- 15.6 The Commission notes that trading margin of Rs. 0.07/kWh and additional risk premium of Rs. 0.10/kWh (in lieu of non-availability of Government Guarantee) is in accordance with Government of India's Guidelines dated 3 August 2017 as amended on 22 October 2019 for Tariff Based Competitive Bidding process for Procurement of Power from Grid Connected Solar PV Power Projects. Hence, the Commission allows the same.
- 15.7 The Commission also notes that delivery point has been changed to Maharashtra STU and solar developer has undertaken not to charge any impact of Change in Law on account of change in Basic Custom Duty.
- 15.8 The Commission also highlights that composite rate of Rs. 2.71/unit (Rs.2.54 +Rs.0.07+ Rs.0.10) which is lower than variable cost of some of the contracted Thermal Stations and also lower than short term power being procured from other sources, such excess power would only help BEST to reduce its total power procurement cost. Also, with increasing trajectory of RPO targets, such excess contracted RE would be used to meet future RPO targets.
- 15.9 The Commission approves the draft PSA to be executed between BEST and SECI for procurement of 234 MW solar power project at the total rate of Rs 2.71/unit.

16. Issue C: Cross-over of technology specific RPO target

- 16.1. The Commission notes that BEST in its Petition at Prayer Clause (iv) has prayed to consider surplus solar power procurement for fulfillment of Solar RPO and non-Solar RPO. BEST has presented a scenario wherein it has considered transfer of surplus Solar energy to settle non-solar RPO to the extent of 15% of total RPO.
- 16.2. It is pertinent to note that RPO Regulations, 2019 provides for such settlement and relevant Regulations reads as below:

“
*7.3 Obligated Entity can use surplus Solar energy upto 15% of total RPO target to meet short fall in non-Solar RPO target and vice-versa ;
Provided that Obligated Entity by providing detailed justification may seek prior approval of the Commission for adjusting more than 15% surplus energy from one category against short fall in other RPO category.”*

Further, while justifying Cross-over of technology specific Renewable Purchase Obligation target, the Commission noted following in its Statement of Reasons:

“
The Commission, in the EM of Draft RPO-REC regulations, 2019 had reasoned out the flexibility to the Obligated Entities in procuring RE to meet their RPO targets, which was in accordance with the MoP's notification dated 14 June, 2018. Further, to meet any

exigency, the Commission proposed that Obligated Entities may approach the Commission with adequate justification for allowing crossover of technology specific RPO beyond 15%. As Solar has achieved the tariff parity, the Commission is of the opinion that Obligated Entities need to be allowed the flexibility in procurement of RE which is suitable for their load curve thereby minimizing expenses on energy balancing requirement.” (Emphasis added)

Thus, above Regulations enables the Commission to allow cross-over of RPO beyond 15% based on justification submitted by the Obligated Entity.

16.3. Although existing Regulations enables approval for cross-over of RPO beyond 15%, it is important to note that proposed power procurement would be materialized only from FY2024-25. The Commission has already initiated the process to amend its Regulations to make it consistent with the recent Rules and Orders issued by the Ministry of Power, Govt of India. In para 14.4 above, MoP’s Order dated 22 July 2022 on long term growth trajectory of RPO has been summarized. As per the said trajectory, except Wind RPO and HPO, all other technologies including Solar has been clubbed into ‘Other RPO’. The Commission will be considering it appropriately while amending its stipulated RPO trajectory. BEST Undertaking may file its suggestion during that process.

16.4. In view of above, at this point of time, the Commission is not considering BEST’s request for allowing RPO cross-over beyond 15% and the same will be considered holistically in the process initiated by the Commission while aligning the RPO trajectory for the state with that of MoP..

17. **Issue D: Available ATC Margin**

17.1. BEST has informed that STU is issuing NOC subject to completion of certain schemes and availability of spare capacity. At present the Available Transmission Capacity (ATC) at CTU-STU network is not adequate. BEST pointed out that STU has issued NOC to six applicants of quantum 1400 MW and LTA has been granted by CTU but projects have not yet been operationalized. BEST has suggested that once the validity of NOC issued to applicants is completed and if the projects are not materialized, STU should cancel the NOC and should ask the applicant to apply for a fresh NOC. Spare capacity should be made available to others based on the date of application.

17.2. The Commission notes that BEST has correlated this issue with its earlier experience in securing grid connectivity to 400MW Hybrid power project from SECI.

17.3. STU in its reply submitted following details of Available ATC Margine:

Present ATC of Maharashtra	9760 MW
Total LTA operationalized (as on 01 July 2022)	9847.87 MW
Available ATC Margine	0 MW (-87.87 MW)
ATC by strengthening CTU-STU lines	2856.87W

As per STU, for enhancement of ATC, 8 schemes are under execution. Timelines for said strengthening schemes is between December-22 to December-24. STU has also submitted the details of six applicants of quantum 1400 MW to whom LTAs have been granted by CTU but projects have not yet been operationalized. During hearing, representative of STU has stated that it is open to option of review of NOC granted earlier if projects are not coming up.

- 17.4. The Commission notes the concerns of BEST regarding the STU issuing conditional NOC subject to completion of 4 schemes for grant of LTA and later on mentioning in its NOC the necessity of 8 schemes instead of 4. As a planning authority, it is expected that STU refrains from such changes since the transmission capacity availability is one of the key factors in sourcing cheaper power. The Commission also notes from the submission of STU that the last scheme (out of the eight schemes) is likely to be completed by December 2024 after which it will be able to issue LTAs to all the concerned stake holders who have been issued conditional NOCs.
- 17.5. The Commission opines that for promotion of RE, it is necessary to clear the transmission system bottlenecks and increase the ATC. STU needs to play a proactive role in timely completion of transmission projects so as to enable sourcing of power in the most economic manner. While addressing similar issue in Case No.32 of 2022 (Petition of Adani Electricity Mumbai Ltd.-Distribution seeking approval for Long Term procurement of power qua 1000 MW (500 MW + additional 500 MW under green shoe option) from grid connected RE Power Projects, complemented with Power from Coal based Thermal Power Projects on RTC basis), the Commission vide its Order dated 1 November 2022 has held as follows:

“
15.18 The Commission notes that monitoring of implementation of Transmission schemes is important in order to ensure the availability of reliable power at competitive rate. The scheme for 400 kV Vikhroli Project is being monitored by the Monitoring Committee appointed by the Commission under suo Moto Order dated 28 May 2021 in Case No. 202 of 2020. Similar credible monitoring is necessary for rest of the schemes mentioned by STU for enhancing ATC of Maharashtra. The Commission notes that under Regulation 7.1 (a) of the MERC (State Grid Code) Regulations, 2020, the Maharashtra Transmission Committee (MTC) is responsible for planning and monitoring timely execution of transmission projects in the Maharashtra State including Mumbai area. Accordingly, it is directed that the MTC, in close co-ordination with STU and CTU, shall ensure implementation of these schemes as per the planned targeted timeframes. These schemes should form part of agenda items

of Grid Co-ordination Committee to ensure that there is a due monitoring for implementation of these schemes which would ensure availability of long term contracted power to Discoms of the Maharashtra.

15.19 STU is also directed to periodically review the validity of NOC/ LTA issued by it and it may take necessary steps, in consultation with the project developers and procurer, in case it is observed that the project against which the NOC/LTA has been issued, has not materialized.” (Emphasis added)

The above dispensation is squarely applicable to the present case as well.

18. Hence, the following Order:

ORDER

1. Case No. 120 of 2022 is partly allowed.
2. The Commission accords its approval to the Brihanmumbai Electric Supply and Transport Undertaking’s proposal for procurement of 234 MW wind-solar hybrid power from Solar Energy Corporation of India Limited at tariff of Rs. 2.54/unit discovered through competitive bidding plus its trading margin of 7 paise/unit for 25 years and additional risk premium of 10 paise/unit subject to verification as directed in para 15.4.
3. The Commission approves the draft Power Supply Agreement to be executed between Brihanmumbai Electric Supply and Transport Undertaking and Solar Energy Corporation of India Limited for procurement of 234 MW solar power project.
4. The power procured from Solar Energy Corporation of India Limited shall be considered for meeting the Solar Renewable Purchase Obligation requirement of Brihanmumbai Electric Supply and Transport Undertaking.
5. STU is directed to review the validity of NOC/ LTA issued by it and it may take necessary steps, in case it is observed that the project against which the NOC/LTA has been issued, has not materialized.
6. Post signing of the Power Supply Agreement by parties, copy of the same shall be submitted for records of the Commission.

Sd/-
(Mukesh Khullar)
Member

Sd/-
(I.M. Bohari)
Member

Sd/-
(Sanjay Kumar)
Chairperson


(Abhijit Deshpande)
Secretary

