

**JOINT ELECTRICITY REGULATORY COMMISSION
FOR THE STATE OF GOA AND UNION TERRITORIES
GURUGRAM**

Quorum

Shri Alok Tandon, Chairperson

Smt. Jyoti Prasad, Member (Law)

Suo Moto Petition No. 61/2012

Date of Hearing: 6th & 7th November 2023

Date of Order: 10.04.2024

In the matter of:

Compliance of Joint Electricity Regulatory Commission (For the state of Goa and Union Territories) (Procurement of Renewable Energy) Regulations, 2010 regarding Renewable Purchase Obligation (RPO) and as amended from time to time.

And in the matter of:

- 1) Secretary (Power), UT of Andaman & Nicobar
- 2) Secretary (Power), UT of Puducherry
- 3) Secretary (Power), UT of Lakshadweep
- 4) Managing Director (DNHDDPDCL), UT of Dadra & Nagar Haveli and Daman & Diu
- 5) Secretary (Power), Government of Goa
- 6) Secretary (Power), UT of Chandigarh

Respondents Present.....

1. From A&N Islands

- a) Smt. Rizwana, Executive Engineer, Electricity Department, A&N Islands
- b) Smt. Usha Kapoor, Assistant Engineer, Electricity Department, A&N Islands

2. From Puducherry

- a) Shri M Ramesh, Executive Engineer, Electricity Department, Puducherry

3. From Lakshadweep

- a) Shri Dharwesh Khan, Executive Engineer, Electricity Department, Lakshadweep
- b) Shri Mohammad Kasim, Junior Engineer, Electricity Department, Lakshadweep

4. From Goa

- a) Shri. Shailesh Naik Burye, Superintending Engineer, Electricity Department, Goa
- b) Shri. Sayish G.N. Shirodkar, Junior Engineer, Electricity Department, Goa
- c) Shri Inian Sri Malan, Consultant, Electricity Department, Goa

5. From DNHDD

- a) Shri Chetan Bundela, Vice President, DNHDDPDCL
- b) Smt. Luna Pal, General Manager, DNHDDPDCL

6. From Chandigarh

- a) Shri Daleep Kumar, Executive Engineer, Electricity Wing of Engineering Department, Chandigarh

7. From Solar Energy Corporation of India Ltd. (SECI)

- a) Shri Aalok Singh, Manager, SECI
- b) Shri Dileep Kumar, Senior Engineer, SECI
- c) Shri Shubham Mishra, Senior Manager, SECI
- d) Shri Sandeep Reddy, Senior Manager, SECI

ORDER

The Commission has conducted the Suo Moto Hearing on 6th November 2023 for Andaman & Nicobar, Puducherry, and Lakshadweep & on 7th November 2023 for Goa, Dadra & Nagar Haveli and Daman & Diu, and Chandigarh in the matter of compliance of Joint Electricity Regulatory Commission (For the State of Goa and Union Territories) (Procurement of Renewable Energy) Regulations, 2010 regarding Renewable Purchase Obligation (RPO) as per Regulation 7 of the JERC (Procurement of Renewable Energy) Regulations, 2010, and as amended from time to time. The Commission has received data on RPO compliance for FY 2022-23 from all the Union Territories/State within its jurisdiction along with the action plan for FY 2023-24.

The detailed information received from the respondents has been taken on record. Accordingly, the following figures as per the submissions made by the respondents have been examined.

1. ELECTRICITY DEPARTMENT, U.T ANDAMAN & NICOBAR ISLANDS: Respondent No. 1

The report submitted by Respondent no. 1 has been examined. The RPO targets has been calculated based on the latest data of sales placed on record by the Respondent no. 1. The same is summarized below:

CUMULATIVE COMPLIANCE TILL FY 2022-23 INCLUDING BACKLOG: ANDAMAN & NICOBAR ISLANDS

RPO	Sales for FY 2022-23 in (MUs)	RPO Target to be Met for FY 2022-23		Cumulative Backlog as on 31-03-2022	Cumulative Target for FY 2022-23	RPO Compliance met for FY 2022-23				Standalone (Shortfall)/Excess for FY (2022-23)	Standalone (Shortfall)/Excess for FY (2022-23)	Cumulative (Shortfall)/Excess for FY (2022-23)	Cumulative (Shortfall)/Excess for FY (2022-23)
		3	4			5	(6=4+5)	7	8				
	MU	%	MU	MU	MU	Gen.	REC	PP	Total	MU	%	MU	%
Solar	284.01	9.00%	25.56	0.20	25.77	0.02	0.00	22.69	22.71	(2.85)	(11.14%)	(3.05)	(11.85%)
Non - Solar		9.00%	25.56	27.08	52.64	14.20	0.00	0.00	14.20	(11.36)	(44.45%)	(38.44)	(73.02%)
HPO		0.35%	0.99	0.00	0.99	0.00	0.00	0.00	0.00	(0.99)	(100.00%)	(0.99)	(100.00%)
Total		18.35%	52.12	27.28	79.40	14.22	0.00	22.69	36.91	(15.20)	(29.17%)	(42.49)	(53.51%)

It is observed that Respondent no. 1 has not been able to meet the Solar, Non-Solar and HPO Targets set for the FY 2022-23. Hence it has a cumulative shortfall of 42.49 MUs (3.05 MUs of Solar, 38.44 MUs for Non-Solar, and 0.99 MUs for HPO) at the end of FY 2022-23. The Commission after examining the compliance made, directs the Respondent no. 1 to make serious efforts to achieve 100% compliance including the backlog of 42.49 MUs (as on 31.03.2023).

The action plan and achievement till FY 2023-24 submitted by Respondent no. 1 are as tabulated below:

ACTION PLAN FOR FY 2023-24: ANDAMAN & NICOBAR ISLANDS

RPO Obligation	Sales for FY 2023-24 in (MUs)	RPO Target to be Met for FY 2023-24		Cumulative Backlog as on 31-03-2023	Cumulative Target for FY 2023-24	First Quarter (April 2023- June 2023) in MUs - Actual			Second Quarter (July 2023- September 2023) in MUs -Actual			Third Quarter (October 2023- December 2023) in MUs - Tentative			Fourth Quarter (January 2024- March 2024) in MUs - Tentative			Total RPO Compliance for FY 2023-24
		3	4			5	6	7	8	9	10	11	12	13	14	15	16	
1	2	3	4	5	(6=4+5)	7			8			9			10			(11=7+8+9+10)
	MU	%	MU	MU	MU	Gen	REC	PP	Gen	REC	PP	Gen	REC	PP	Gen	REC	PP	MU
Solar	291.11	10.00%	29.11	3.05	32.16	0.01	0.00	7.52	0.00	0.00	4.56	0.01	0.00	5.07	0.01	0.00	6.20	23.38
Non - Solar		9.25%	26.93	38.44	65.37	0.78	0.00	0.00	3.99	0.00	0.00	4.10	0.00	0.00	1.98	0.00	0.00	10.85
HPO		0.66%	1.92	0.99	2.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		19.91%	57.96	42.49	100.45	0.79	0.00	7.52	3.99	0.00	4.56	4.11	0.00	5.07	1.99	0.00	6.20	34.23

The Respondent no. 1 submitted that the Renewable Energy plan for A&N islands has been approved by MNRE & Hon’ble Lt. Governor. The implementation of RE plan in A&N islands shall be taken up in a phased manner as under:

- Target for the installation of 5 MW Roof-top Solar (RTS) plant under Phase-II of RTS Program by MNRE by March 2024.
- PPA executed with M/s Ijyarays Energy Pvt. Limited on 08.07.2021 with Scheduled Commissioning Date on 17.07.2024 for 4 MW floating Solar Power Plant.
- Installation of 50.8 MW & 60 MW of Solar Power Plant (target year of commissioning is 2026 and 2030 respectively in South Andaman)
- Installation of 13.5 MW of Solar Power Plant (target year of commissioning is 2027 in Nicobar)

Further, for Non-Solar and HPO targets, the Respondent submitted that A&N solely relies on the 5.25 MW Kalpong Hydro Power Plant. Non-availability of perennial resources like rivers, etc does not allow any expansion of such potential. The Respondent also submitted that to harness

wind power, a study is currently underway under the direction of the Ministry of Power, which requires significant time for the study and finalization of the project. Therefore, setting compliance targets in this category at this stage may not be feasible. Accordingly, the Respondent requested the Commission to grant exemption from past backlog and HPO targets.

The Commission raised specific queries to SECI regarding the upcoming Renewable Energy based power projects in Andaman & Nicobar. The representative from SECI submitted following:

- i. **4MW/20 MWh Battery Energy Storage Project at Dollygunj, Port Blair:** Draft tender document (Technical specification & BESPA) for selection of project Developer has been prepared in line with “Guidelines for Procurement and Utilization of Battery Energy Storage Systems as part of Generation, Transmission and Distribution assets, along with Ancillary Services” issued by the Ministry of Power vide Gazette Resolution dated 10th March 2022. After round of discussions between EDA&N, SECI and CEA, tender documents have been finalized. SECI shall share the final draft RfS document with EDA&N by 20.11.2023 for administrative approval of competent authority. After the approval, SECI shall publish the tender. It is proposed to complete the bidding process by Mar’ 24. Project may get commissioned by Mar-Apr’ 2025.
- ii. **3.8 MW of Solar PV Project with 2 MW/9 MWH storage capacity at Swaraj Island, 1.3 MW of Solar PV Project with 1 MW/5.1 MWH storage capacity at Shaheed Dweep and 5.7 MW Solar PV Project with 3MW/12MWH storage capacity at Little Andaman:** Draft tender document has been prepared in line with “Guidelines for Tariff Based Competitive Bidding Process for Procurement of Power from Grid Connected Solar PV Power Projects” issued by the Ministry of Power vide Gazette Resolution dated 28th July 2023. Same was shared with Electricity Department, A&N, vide email dated 03.10.2023, for comment and finalization. Technical details, i.e. power evacuation arrangement were sought from A&N, to be included in tender document. Same are awaited. Project located at Shaheed Dweep shall also requires CRZ clearance for which details has been sought from EDA&N. It is proposed to complete the bidding process by Mar’ 24. Project may get commissioned by Dec’ 25.
- iii. **Mithakari Project:** In the Revenue Deptt. report dated 19.04.2023 and Joint Inspection Report dated 21.04.2023 provided by EDA&N, it was highlighted that cumulative area designated for RE project in Mithakari (47 plots) is 40.13825 Ha. The complete area (all plots) within the boundary coordinates provided by ED-A&N has not been offered for solar project and offered plots are also not continuous. If continuous plots are offered than plant area may be utilized more optimally. The SPV capacity that can be accommodate in the offered plot is 29-30 MW approx., whereas, 40 MW capacity is planned at this location. SECI vide letters dated 22.06.2023 and 19.07.2023 and 05.10.2023 has requested EDA&N to discuss with concerned land/revenue Deptt. and provide the final project area that can be consider for Mithakari Project at the earliest. In response it was informed that SECI may go ahead with the area available as there is uncertainty with additional area. Project shall also require CRZ clearance. For preparation of EIA report, SECI has sought an offer from National Centre for Sustainable Coastal Management (NCSCM), Chennai. It is proposed to float the tender for said project by Mar’ 24. Project may get commissioned by Mar’ 2026.

- iv. **Stewartgunj Project:** In the Revenue Deptt. report dated 19.04.2023 and Joint Inspection Report dated 21.04.2023 provided by EDA&N, it was highlighted that cumulative area designated for RE project in Stewartgunj (28 plots in Govindpuram village) is 41.3580 Ha. No land parcel was offered. The area designated in the Govindpuram village is already proposed for sweet water lake. From the Google earth images, it can be seen that the water coverage is approx. 135 Ha- 140 Ha. The waterbody at Stewartganj appears to be under the jurisdiction of other revenue village/s (apart from Govindpuram) whose details are not provided. Amongst the submerged areas of Govindpuram villages, a number of plots are not earmarked for solar project. SECI vide letter dated 22.06.2023, 09.08.2023 and 05.10.2023 has requested EDA&N discuss with concerned land/revenue Dept. and provide the final project area that can be consider for Stewartgunj Project along with the other details, i.e. (a) Hyrography survey report, if any, (b) proposed Full Reservoir Level (FRL), Dead Storage Level (DSL), Minimum Drawdown Level (MDDL), and (c) proposed water spread at FRL, DSL, MDDL. Response awaited. Project shall also require CRZ clearance. For preparation of EIA report, SECI has sought an offer from National Centre for Sustainable Coastal Management (NCSCM), Chennai.

The Commission directs the Respondent to make all-out efforts to meet the targets of FY 2023-24 along with the backlog up to FY 2022-23 with the upcoming power plants and commitments signed up by the Respondent so that the Respondent is able to comply RPO targets failing which the Commission shall be constraint to initiate appropriate action. The Commission further directs the Respondent to provide all the relevant details pertaining to all the RE based projects to SECI so that the process for the aforementioned RE projects be expedited.

2. ELECTRICITY DEPARTMENT, U.T. PUDUCHERRY: Respondent No. 2

The report submitted by Respondent no. 2 has been examined. The RPO targets has been calculated based on the latest data of sales placed on record by the Respondent. The same is summarized below:

CUMULATIVE COMPLIANCE TILL FY 2022-23 INCLUDING BACKLOG: PUDUCHERRY

RPO	Sales for FY 2022-23 in (MUs)	RPO Target to be Met for FY 2022-23		Cumulative Backlog as on 31-03-2022	Cumulative Target for FY 2022-23	RPO Compliance met for FY 2022-23				Standalone (Shortfall)/Excess for FY (2022-23)	Standalone (Shortfall)/Excess for FY (2022-23)	Cumulative (Shortfall)/Excess for FY (2022-23)	Cumulative (Shortfall)/Excess for FY (2022-23)
		3	4			7	8	9	10				
1	2	3	4	5	(6=4+5)	7	8	9	10	(11=10-4)	(12=11/4)	(13=10-6)	(14=13/6)
	MU	%	MU	MU	MU	Gen.	REC	PP	Total	MU	%	MU	%
Solar	2838.75	9.00%	255.49	636.18	891.67	52.45	0.00	209.43	261.88	6.39	2.50%	(629.79)	(70.63%)
Non - Solar		9.00%	255.49	788.26	1043.75	0.00	0.00	107.55	107.55	(147.94)	(57.90%)	(936.20)	(89.70%)

HPO		0.35%	9.94	0.00	9.94	0.00	0.00	0.00	0.00	0.00	(9.94)	(100.00%)	(9.94)	(100.00%)
Total		18.35%	520.91	1424.44	1945.35	52.45	0.00	316.98	369.43	(151.48)	(29.08%)	(1575.92)	(81.01%)	

It is observed that Respondent no. 2 has not been able to meet the Solar, Non-Solar and HPO Targets set for the FY 2022-23. Hence it has a cumulative shortfall of 1575.92 MUs (629.79 MUs of Solar, 936.20 MUs for Non-Solar, and 9.94 MUs for HPO) at the end of FY 2022-23. The Commission after examining the compliance made, directs the Respondent no. 2 to make serious efforts to achieve 100% compliance including the backlog of 1565.98 MUs (as on 31.03.2023). Further, the Commission directs the Respondent to expedite the process of purchasing physical power available as submitted to fulfil the RPO targets for FY 2023-24.

The action plan and achievement till FY 2023-24 submitted by Respondent no. 2 are as tabulated below:

ACTION PLAN FOR FY 2023-24: PUDUCHERRY

RPO Obligation	Sales for FY 2023-24 in (MUs)	RPO Target to be Met for FY 2023-24		Cumulative Backlog as on 31-03-2023	Cumulative Target for FY 2023-24	First Quarter (April 2023- June 2023) in MUs - Actual			Second Quarter (July 2023- September 2023) in MUs -Actual			Third Quarter (October 2023- December 2023) in MUs - Tentative			Fourth Quarter (January 2024- March 2024) in MUs - Tentative			Total RPO Compliance for FY 2023-24	
		3	4			5	6	7	8	9	10	11	12	13	14	15	16		
1	2	%	MU	MU	MU	Gen	REC	PP	Gen	REC	PP	Gen	REC	PP	Gen	REC	PP	MU	
Solar	2894.75	10.00%	289.48	629.79	919.26	15.50	0.00	70.52	18.36	0.00	65.00	15.50	0.00	50.00	21.14	0.00	51.00	307.02	
Non - Solar		9.25%	267.76	936.20	1203.96	0.00	0.00	119.02	0.00	0.00	120.00	0.00	0.00	168.00	0.00	0.00	169.00	576.02	
HPO		0.66%	19.11	9.94	29.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		19.91%	576.34	1575.92	2152.26	15.50	0.00	189.54	18.36	0.00	185.00	15.50	0.00	218.00	21.14	0.00	220.00	883.04	

The Respondent no. 2 submitted that Puducherry Electricity Department (PED) has started receiving 100MW of Solar power from NTPC Solar since May 2022 and 134.21MW of wind power from August 2022 from the already signed Power Sale Agreements (PSA) with M/s SECI. PED further submitted that the remaining 50MW of Solar power and 106.43MW of Wind power, both from M/s SECI which was expected to be available from January 2023 got delayed due to Change in Law, litigation and ROW issues. PED expects that the 106.43MW of Wind RE energy would become available from the beginning of 3rd quarter of FY 2023-24 and 50MW Solar RE power from the 4th quarter of FY 2023-24. PED submitted that once the RE power from the 50 MW Solar and 106.43MW of Wind RE from SECI is available, the UT of Puducherry would be receiving additionally 399 MUs of RE energy during FY 2023-24 and as such it is expected that a total of 894 MUs would be accounted under RPO for FY 2023-24 which would be sufficient to meet the Standalone RPO obligation for FY 2023-24.

PED also submitted that from FY 2024-25, 910 MUs of RE power would be available to the UT of Puducherry from all the ISTS connected RE generators and local roof top/ground mounted solar plants. PED further submitted that the previous backlog of RPO of 1575.92 MUs as on 31.03.2023 would be partially fulfilled in a phased manner and the shortfall in the RPO obligation would be met through online purchase of RE Power/REC certificate.

For HPO targets, the Respondent submitted that Puducherry don't have any natural resource even to have micro hydro power plants. To comply with the HPO targets, the Respondent will procure hydro power from Kiru and Sawalkot hydro power projects located at Jammu & Kashmir, subject to confirmation and availability from NHPC. The Respondent submitted that PED is committed to fulfil RPO Compliance including backlog in a phased manner in the upcoming years.

The Commission is of the view that since the shortfall is huge, the Respondent should expedite the process of purchasing physical power on top priority so that the Respondent is able to comply RPO targets failing which the Commission shall be constraint to initiate appropriate action.

3. ELECTRICITY DEPARTMENT, LAKSHADWEEP: Respondent No. 3

The report submitted by Respondent no.3 has been examined. The RPO targets has been calculated based on the latest data of sales placed on record by the Respondent. The same is summarized below:

CUMULATIVE COMPLIANCE TILL FY 2022-23 INCLUDING BACKLOG: LAKSHADWEEP

RPO	Sales for FY 2022-23 in (MUs)	RPO Target to be Met for FY 2022-23		Cumulative Backlog as on 31-03-2022	Cumulative Target for FY 2022-23	RPO Compliance met for FY 2022-23				Standalone (Shortfall)/Excess for FY (2022-23)	Standalone (Shortfall)/Excess for FY (2022-23)	Cumulative (Shortfall)/Excess for FY (2022-23)	Cumulative (Shortfall)/Excess for FY (2022-23)
		3	4			7	8	9	10				
1	2	3	4	5	(6=4+5)	7	8	9	10	(11=10-4)	(12=11/4)	(13=10-6)	(14=13/6)
	MU	%	MU	MU	MU	Gen.	REC	PP	Total	MU	%	MU	%
Solar	57.00	9.00%	5.13	7.24	12.37	0.10	0.00	0.00	0.10	(5.03)	(98.05%)	(12.27)	(99.19%)
Non - Solar		9.00%	5.13	20.14	25.27	0.00	0.00	0.00	0.00	(5.13)	(100.00%)	(25.27)	(100.00%)
HPO		0.35%	0.20	0.00	0.20	0.00	0.00	0.00	0.00	(0.20)	(100.00%)	(0.20)	(100.00%)
Total		18.35%	10.46	27.38	37.84	0.10	0.00	0.00	0.10	(10.36)	(99.04%)	(37.74)	(99.74%)

The Commission observed that Respondent no. 3 has not been able to meet the RPO Targets for FY 2022-23 and has a cumulative shortfall of 37.74 MUs (12.27 MUs of Solar, 25.27 Mus of Non-Solar and 0.20 MUs of HPO).

The action plan and achievement till FY 2023-24 submitted by Respondent no. 3 are as tabulated below:

ACTION PLAN FOR FY 2023-24: LAKSHADWEEP

RPO Obligation	Sales for FY 2023-24 in (MUs)	RPO Target to be Met for FY 2023-24		Cumulative Backlog as on 31-03-2023	Cumulative Target for FY 2023-24	First Quarter (April 2023- June 2023) in MUs - Actual			Second Quarter (July 2023- September 2023) in MUs -Actual			Third Quarter (October 2023- December 2023) in MUs - Tentative			Fourth Quarter (January 2024- March 2024) in MUs - Tentative			Total RPO Compliance for FY 2023-24
		3	4			5	6	7	8	9	10	11	12	13	14	15	16	
1	2	3	4	5	(6=4+5)	7			8			9			10			(11=7+8+9+10)
	MU	%	MU	MU	MU	Gen	REC	PP	Gen	REC	PP	Gen	REC	PP	Gen	REC	PP	MU
Solar	53.60	10.00%	5.36	12.27	17.63	0.02	0.00	0.06	0.02	0.00	0.70	0.02	0.00	0.70	0.02	0.00	0.70	2.24
Non - Solar		9.25%	4.96	25.27	30.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HPO		0.66%	0.35	0.20	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total			19.91%	10.67	37.74	48.41	0.02	0.00	0.06	0.02	0.00	0.70	0.02	0.00	0.70	0.02	0.00	0.70

The Respondent No. 3 submitted that the installation work of new solar plant / augmentation of existing solar plant at Kavaratti, Agatti, Bangaram and Thinnakara (Total 1.95 MW capacity with 2.15 MWh BESS) has been awarded to M/s Suncourse Energy Ltd by SECI. The installation works at Agatti has been completed and at Kavaratti it is in the final stage. Hence by the end of this financial year, it will become fully operational and hence the Lakshadweep Electricity Department (LED) shall be able to meet the entire backlog by next few years. The remaining solar plants installation/augmentation work shall be expected to be completed within two years and there after LED can able to meet the backlog as well as yearly target of RPO obligations.

The Respondent further submitted that considering the isolation of Lakshadweep Island from main grid and standalone system, trading of RECs through Power exchange also make an additional burden to LED. Hence the Respondent requested the Commission to grant exemption to meet the RPO target by purchasing the required Renewable Energy Certificate.

The Commission raised specific queries to SECI regarding the status and plan for Renewable Energy based power projects. The representative from SECI submitted that the installation work of new solar plant and augmentation of existing solar plant at Kavaratti and Agatti (total 1.7 MW capacity with 1.4 MWh BESS) has been taken up by M/s SECI. The SPV Plants at Agatti (0.3 MW) has been commissioned on 21.07.2023 and SPV plant at Kavaratti (1.4 MW) has been commissioned on 03.11.2023. BESS part will be commissioned by 10.12.2023. SECI further

submitted that it has identified 160 numbers of Govt. Buildings for the installation of Rooftop Solar projects with a cumulative capacity of 2.75 MW. SECI shall also install 1.9 MW with 1.24 MWh BESS capacity at Androth, Amini, Kadmath and Bitra islands. The draft PPA regarding the said power projects have already been shared with the Lakshadweep Administration. SECI is also planning for the installation of floating solar power plants in Lakshadweep and has estimated a capacity of 11.25 MW (5.25 MW with 16MWh BESS at Agatti and 6 MW with 12 MWh BESS at Kavaratti) floating solar power projects. The DPR for the said projects have already been submitted to Lakshadweep Electricity Department.

The Commission directs the Respondent to expedite the installation of aforementioned RE based projects in Lakshadweep and to finalise the PPA and DPR as submitted by SECI to ensure the timely execution of the RE based projects in the UT of Lakshadweep. Further, the Commission is concerned about the non-achievement of the RPO targets and also noted that due to the year-on-year non-compliance, the total target at the end of FY 2023-24 including backlog is huge. The Commission directs the Respondent to make sincere efforts to comply with the RPO targets especially because it shall replace high-cost Diesel Generation failing which the Commission shall be constrained to initiate appropriate action.

4. ELECTRICITY DEPARTMENT, GOA: Respondent No. 4

The Respondent No. 4 submitted that 72.88 MUs of Wind power was misinterpreted by the same as Hydro- Power in FY 2016-17 and was not considered as a part of Non-Solar RPO. Accordingly, the Respondent (ED, Goa) has requested the Commission to adjust the said power of 72.88 MUs by adding it to Non-Solar RPO of FY 2022-23 for its compliance.

The report submitted by Respondent no.4 has been examined. The RPO targets has been calculated based on the latest data of sales placed on record by the Respondent. The same is summarized below:

CUMULATIVE COMPLIANCE TILL FY 2022-23 INCLUDING BACKLOG: GOA

RPO	Sales for FY 2022-23 in (MUs)	RPO Target to be Met for FY 2022-23		Cumulative Backlog as on 31-03-2022	Cumulative Target for FY 2022-23	RPO Compliance met for FY 2022-23				RPO Compliance after considering adjustment of Wind Power misinterpreted as Hydro Power in FY 2016-17	Standalone (Shortfall)/Excess for FY (2022-23)	Standalone (Shortfall)/Excess for FY (2022-23)	Cumulative (Shortfall)/Excess for FY (2022-23)	Cumulative (Shortfall)/Excess for FY (2022-23)
		3	4			12	8	9	10					
1	2	3	4	5	(6=4+5)	12	8	9	10	11	(12=10-4)	(13=11/4)	(13=10-6)	(14=13/6)
	MU	%	MU	MU	MU	Gen.	REC	PP	Total	MU	MU	%	MU	%
Solar	4374.09	9.00%	393.67	56.29	449.95	36.13	83.30	262.64	382.07	382.07	(11.60)	(2.95%)	(67.88)	(15.09%)

Non - Solar		9.00%	393.67	34.22	427.89	5.72	8.70	410.67	425.09	497.97	104.30	26.49%	70.08	16.38%
HPO		0.35%	15.31	0.00	15.31	0.00	0.00	15.68	15.68	15.68	0.37	2.42%	0.37	2.42%
Total		18.35%	802.65	90.51	893.16	41.85	92.00	688.99	822.84	895.72	93.07	11.60%	2.56	0.29%

The Commission has considered and examined the prayer of Respondent No. 4 regarding the adjustment of 72.88 MUs of Wind power which was misinterpreted as Hydro-Power in FY 2016-17 and was not considered as a part of Non-Solar RPO. Accordingly, the said quantum has been adjusted in the Non-Solar RPO of FY 2022-23 and the cumulative backlog as on 31.03.2023 for Non-Solar has been taken as NIL.

The action plan and achievement till FY 2023-24 submitted by Respondent no. 4 are as tabulated below:

ACTION PLAN FOR FY 2023-24: GOA

RPO Obligation	Sales for FY 2023-24 in (MUs)	RPO Target to be Met for FY 2023-24		Cumulative Backlog as on 31-03-2023	Cumulative Target for FY 2023-24	First Quarter (April 2023- June 2023) in MUs - Actual			Second Quarter (July 2023- September 2023) in MUs -Actual			Third Quarter (October 2023- December 2023) in MUs - Tentative			Fourth Quarter (January 2024- March 2024) in MUs - Tentative			Total RPO Compliance for FY 2023-24
		3	4			5	6	7	8	9	10	11	12	13	14	15		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
	MU	%	MU	MU	MU	Gen	REC	PP	Gen	REC	PP	Gen	REC	PP	Gen	REC	PP	MU
Solar	4570.01	10.00%	457.00	67.88	524.89	15.00	0.00	66.29	12.00	70.00	79.95	17.00	0.00	73.13	33.00	61.40	58.58	486.35
Non - Solar		9.25%	422.73	0.00	422.73	2.50	0.00	138.91	2.50	0.00	163.01	2.50	0.00	89.44	2.50	0.00	83.75	485.11
HPO		0.66%	30.16	0.00	30.16	0.00	0.00	0.00	0.00	0.00	29.59	0.00	0.00	0.00	0.00	0.00	0.00	29.59
Total		19.91%	909.89	67.88	977.77	17.50	0.00	205.20	14.50	70.00	272.55	19.50	0.00	162.57	35.50	61.40	142.33	1001.05

ED, Goa submitted that to fulfil the Solar RPO target for FY 2023-24, it shall procure Solar Power from long term tied up source such as SECI of 25 MW Quantum, Medium term tied up sources such as NVVNL of 6 MW quantum, Short Term market like G-TAM, traders, Generation within the state through Net metering/virtual metering, PM KUSUM etc and through RECs. ED, Goa further requested the Commission to adjust surplus power from Non-Solar sources to meet Solar RPO so that entire RPO target for FY 2023-24 can be fulfilled.

ED, Goa also submitted that to fulfil the Non-Solar RPO target for FY 2023-24, it shall procure Non-Solar Power from long term tied-up sources such as SECI Wind Tranche II, VI of 50 MW quantum each, Short term market like traders and Hindustan Waste treatment plant within state. For HPO targets, ED, Goa submitted that the same will be compiled through banking arrangement for FY 2023-24.

The Commission upon examining the action plan observed that Respondent no.4 will be able to meet its Non-Solar RPO compliance if it succeeds in executing the action plan as submitted. However, there may still be a shortfall of 38.54 Mus for the Solar RPO compliance and 0.57 MUs of HPO compliance as a result, there will be a shortfall in the total compliance. Hence the Commission directs the Respondent to make serious efforts to comply with the RPO targets.

5. DNHDDPDCL (U.T OF DADRA & NAGAR HAVELI AND DAMAN & DIU: Respondent No. 5

The Respondent No. 5 submitted that DNHDDPDCL started its operation in DNHDD w.e.f. from 01.04.2022. Being the first year of operations and considering huge backlog in RPO, the Respondent requested the Commission to allow the carry forward of cumulative shortfall of FY 2022-23. The Respondent further submitted that the erstwhile entities (DNHPDCL and Electricity Department Daman & Diu) had tied up 19.3 MW of Solar & 50 MW Wind (which is yet to be operational till date). Considering the huge backlog, DNHDDPDCL has procured around 348.29 MUs from G-TAM/G-DAM during FY 2022-23.

The report submitted by Respondent no.5 has been examined. The RPO targets has been calculated based on the latest data of sales placed on record by the Respondent. The same is summarized below:

CUMULATIVE COMPLIANCE TILL FY 2022-23 INCLUDING BACKLOG: DNHDD

RPO	Sales for FY 2022-23 in (MUs)	RPO Target to be Met for FY 2022-23		Cumulative Backlog as on 31-03-2022	Cumulative Target for FY 2022-23	RPO Compliance met for FY 2022-23				Standalone (Shortfall)/Excess for FY (2022-23)	Standalone (Shortfall)/Excess for FY (2022-23)	Cumulative (Shortfall)/Excess for FY (2022-23)	Cumulative (Shortfall)/Excess for FY (2022-23)
		3	4			7	8	9	10				
1	2	3	4	5	(6=4+5)	7	8	9	10	(11=10-4)	(12=11/4)	(13=10-6)	(14=13/6)
	MU	%	MU	MU	MU	Gen.	REC	PP	Total	MU	%	MU	%
Solar	9775.73	9.00%	879.82	1247.50	2127.32	0.00	0.00	222.82	222.82	(657.00)	(74.67%)	(1904.50)	(89.53%)
Non - Solar		9.00%	879.82	1343.47	2223.29	0.00	0.00	251.16	251.16	(628.66)	(71.45%)	(1972.13)	(88.70%)
HPO		0.35%	34.22	0.00	34.22	0.00	0.00	35.22	35.22	1.00	2.94%	1.00	2.94%
Total		18.35%	1793.85	2590.97	4384.82	0.00	0.00	509.20	509.20	(1284.65)	(71.61%)	(3875.62)	(88.39%)

It is observed that Respondent no. 5 has not been able to meet the Solar and Non-Solar Targets set for the FY 2022-23. Hence it has a cumulative shortfall of 3875.62 MUs (1904.50 MUs of Solar and 1972.13 MUs for Non-Solar) at the end of FY 2022-23. The Commission after examining

the compliance made, directs the Respondent no. 5 to make serious efforts to achieve 100% compliance including the backlog of 3875.62 MUs (as on 31.03.2023) expeditiously.

The Respondent submitted that they have invited bids for 150 MW Round-the-Clock (RTC) power from Renewable Energy sources for long term tie-up to meet the RPO shortfall. Accordingly, DNHDDPDCL will get energy of around 1,180 MUs per annum considering 90% CUF. The said project is expected to be commissioned by 30th June, 2025 and accordingly, power will be available from FY 2025-26 onwards. During FY 2023-24, DNHDDPDCL shall procure power from existing arrangements for solar power and G-TAM/G-DAM market. The Respondent further submitted that they would explore purchase of REC for the balance of RPO on standalone basis. While doing so, the Respondent would take into account overall impact of such REC on the consumer tariff as well.

The action plan and achievement till FY 2023-24 submitted by Respondent no. 4 are as tabulated below:

ACTION PLAN FOR FY 2023-24: DNHDD

Action Plan for FY 2023-24														
RPO	Sales for FY 2023-24 in (MUs)	RPO Target to be Met for FY 2023-24		Cumulative Backlog as on 31-03-2023	Cumulative Target for FY 2023-24	Purchase in H1 of FY 2023-24 (Actual)	Purchase in FY 2023-24 (Estimated)			Total RPO Compliance for FY (2023-24)	Standalone Shortfall/Excess for FY (2023-24)	Standalone Shortfall/Excess for FY (2023-24)	Cumulative Shortfall/Excess for FY (2023-24)	Cumulative Shortfall/Excess for FY (2023-24)
		3	4				5	(6=4+5)	7					
	MU	%	MU	MU	MU	MU	Own PPA	G-TAM/G-DAM	REC	MU	MU	%	MU	%
Solar	10203.81	10.00%	995.76	1904.50	2900.26	52.64	21.41	6.39	992.58	1073.02	77.26	7.76%	-1827.24	-63.00%
Non - Solar		9.25%	921.08	1972.13	2893.21	49.99	0.00	49.99	893.86	993.84	72.76	7.90%	-1899.37	-65.65%
HPO		0.66%	65.72	0.00	65.72	36.50	0.00	36.50	30.85	103.85	38.13	58.02%	38.13	58.02%
Total		19.91%	1982.56	3876.62	5859.18	139.13	21.41	92.88	1917.29	2170.71	188.15	9.49%	-3688.47	-62.95%

The Commission is concerned about the non-achievement of the RPO targets and also noted that due to the year-on-year non-compliance, the total target at the end of FY 2023-24 including backlog is huge. The Commission directs the Respondent to make sincere efforts to comply with the RPO targets failing which the Commission shall be constrained to initiate appropriate action.

6. ELECTRICITY DEPARTMENT, CHANDIGARH: Respondent No. 6

The report submitted by Respondent no.6 has been examined. The RPO targets has been calculated based on the latest data of sales placed on record by the Respondent. As per Regulation 3.2 of the JERC (Procurement of Renewable Energy) Regulations, 2010 (as amended from time to time), the mechanism for calculation of the minimum quantum of RPO of Renewable Energy (in KWh) is stipulated below:

“(3.2) RPO to be calculated in energy terms as a percentage of total consumption of electricity excluding consumption met from hydro sources (LHPs).”

Accordingly, the RPO targets has been calculated and the cumulative compliance made by the Respondent till FY 2022-23 has been summarized below:

CUMULATIVE COMPLIANCE TILL FY 2022-23 INCLUDING BACKLOG: CHANDIGARH

RPO	Sales for FY 2022-23 in (MUs)	RPO Target to be Met for FY 2022-23		Cumulative Backlog as on 31-03-2022	Cumulative Target for FY 2022-23	RPO Compliance met for FY 2022-23				Standalone (Shortfall)/Excess for FY (2022-23)	Standalone (Shortfall)/Excess for FY (2022-23)	Cumulative (Shortfall)/Excess for FY (2022-23)	Cumulative (Shortfall)/Excess for FY (2022-23)
		3	4			5	(6=4+5)	7	8				
	MU	%	MU	MU	MU	Gen.	REC	PP	Total	MU	%	MU	%
Solar	616.58	9.00%	55.49	0.00	55.49	0.00	0.00	57.27	57.27	1.78	3.20%	1.78	3.20%
Non - Solar		9.00%	55.49	0.00	55.49	0.00	0.00	131.90	131.90	76.41	137.69%	76.41	137.69%
HPO		0.35%	2.16	0.00	2.16	0.00	0.00	0.00	0.00	(2.16)	(100.00%)	(2.16)	(100.00%)
Total		18.35%	113.14	0.00	113.14	0.00	0.00	189.17	189.17	76.03	67.20%	76.03	67.20%

It is observed that Respondent no. 6 has achieved the Solar and Non-Solar RPO targets in excess by 1.78 MUs and 76.41 MUs respectively. The Commission appreciates the efforts of the Respondent in achieving the Solar & Non-Solar targets for FY 2022-23. Further, it is also

observed that Respondent no. 6 has not been able to meet the HPO targets for FY 2022-23 resulting in the shortfall of 2.16 MUs. Therefore, the Commission directs the Respondent to ensure the compliance of RPO targets including HPO.

The Respondent submitted that they will only be able to meet the HPO target for FY 2023-24 by purchasing the REC certificates and not through generation and power purchase. The Respondent requested the Commission to adjust the HPO compliance for FY 2023-24 with the overachievement of Solar and Non-Solar RPO compliance for FY 2023-24.

The Commission advised that the compliance should be as per proviso under Regulation 3.4 of the JERC (Procurement of Renewable Energy) Regulations, 2010 (as amended from time to time), which is stipulated below:

“[Provided that on achievement of Solar RPO compliance to the extent of 85% and above, remaining shortfall, if any, can be met by excess non-solar energy consumed beyond specified Non-Solar RPO for that particular year. Similarly, on achievement of Other Non-Solar RPO compliance to the extent of 85% and above, remaining shortfall if any, can be met by excess solar or eligible hydro energy consumed beyond specified Solar RPO or HPO for that particular year. Further, on achievement of HPO compliance to the extent of 85% and above, remaining shortfall, if any, can be met by excess solar or other non-solar energy consumed beyond specified Solar RPO or Other Non-Solar RPO for that particular year.]”

In view of the above, the adjustment of Solar and Non-Solar RPO over achievement cannot be made in the HPO under-achievement.

The action plan and achievement till FY 2023-24 submitted by Respondent no. 4 are as tabulated below:

ACTION PLAN FOR FY 2022-23: CHANDIGARH

RPO Obligation	Sales for FY 2023-24 in (MUs)	RPO Target to be Met for FY 2023-24		Cumulative Backlog as on 31-03-2023	Cumulative Target for FY 2023-24	First Quarter (April 2023- June 2023) in MUs - Actual			Second Quarter (July 2023- September 2023) in MUs -Actual			Third Quarter (October 2023- December 2023) in MUs - Tentative			Fourth Quarter (January 2024- March 2024) in MUs - Tentative			Total RPO Compliance for FY 2023-24
		3	4			5	6	7	8	9	10	11	12	13	14	15		
1	2	3	4	5	6	7			8			9			10			(11=7+8+9+10)
	MU	%	MU	MU	MU	Gen	REC	PP	Gen	REC	PP	Gen	REC	PP	Gen	REC	PP	MU
Solar	566.63	10.00%	56.66	0.00	56.66	0.00	0.00	5.55	0.00	0.00	2.55	0.00	0.00	3.21	0.00	0.00	45.96	57.27
Non - Solar		9.25%	52.41	0.00	52.41	0.00	0.00	52.56	0.00	0.00	37.81	0.00	0.00	18.01	0.00	0.00	23.52	131.90
HPO		0.66%	3.74	2.16	5.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Total	19.91%	112.82	2.16	114.97	0.00	0.00	58.11	0.00	0.00	40.36	0.00	0.00	21.22	0.00	0.00	69.48	189.17
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The Commission on analysing the data submitted by the Respondent for the action plan directed the Respondent to continue to achieve the Solar and Non-Solar RPO targets along with the HPO targets.

Ordered accordingly.

**Sd/-
(Jyoti Prasad)
Member (Law)**

**Sd/-
Alok Tandon
(Chairperson)**

Certified True Copy

**(S.D Sharma)
Secretary (I/c), JERC**