

BEFORE THE HARYANA ELECTRICITY REGULATORY COMMISSION AT PANCHKULA

Petition No. - 56 of 2022

Date of Hearing : 22.12.2022  
Date of Order : 26.12.2022

In the Matter of

Haryana Electricity Regulatory Commission (Terms and Conditions for determination of Tariff from Renewable Energy Sources, Renewable Purchase Obligation and Renewable Energy Certificate) Regulation, 2021 (2nd Amendment) Regulations, 2022 – Suo-motu.

Present: -

Ms. Sonia Madan, Advocate, HPPC

Quorum

Shri R.K. Pachnanda  
Shri Naresh Sardana

Chairman  
Member

**ORDER**

**Brief Background**

1. In exercise of the powers conferred on it under Section 181 of the Electricity Act, 2003 and all other powers enabling it in this behalf, the Commission had notified the Haryana Electricity Regulatory Commission (Terms and Conditions for determination of Tariff from Renewable Energy Sources, Renewable Purchase Obligation and Renewable Energy Certificate) Regulation, 2021, which came into effect from the date of its notification in the Haryana Government Gazette i.e. 30.04.2021 (hereinafter referred to as HERC RE Regulations, 2021).
2. Existing provisions of Regulation 62 of the HERC RE Regulations, 2021 are as under:  
**“Renewable Purchase Obligation. –**

- (1) *Every obligated entity including distribution licensee, consumers owning captive power plant and open access consumers including short term open access consumers in Haryana, shall purchase energy from renewable energy sources under the Renewable Purchase Obligation (RPO) as under: -*

Year	Solar RPO*	Non Solar RPO			Total RPO
		HPO**	Other Non Solar RPO*	Total Non Solar RPO *	
2021-22	8.00%	0.00	3.00%	3.00%	11.00%
2022-23	9.00%	0.35%	5.00%	5.35%	14.35%
2023-24	10.00%	0.66%	6.00%	6.66%	16.66%
2024-25	To be specified	1.08%	To be specified	To be specified	To be specified
2025-26	later	1.48%	later	later	later

2026-27		1.80%		
2027-28		2.15%		
2028-29		2.51%		
2029-30		2.82%		

*\*\* HPO within Non Solar Renewable Purchase Obligation (RPO) means “Hydropower Purchase Obligation, to be met from purchase of power/Hydro Energy Certificates from Large Hydropower Projects having capacity of more than 25 MW (LHPs) which come into commercial operation after 08.03.2019.*

- (2) *RPO shall be calculated in energy terms as a percentage of total consumption of electricity excluding consumption met from RE sources and hydro sources (LHPs).*
- (3) *Solar RPO may be met by power produced from solar power plants — solar photo voltaic or solar-thermal.*
- (4) *Other Non-Solar RPO (excluding HPO), may be met from any renewable source other than solar and LHPs.*
- (5) *HPO benefits may be met from the power procured from eligible LHPs commissioned on and after 8.3.2019 and upto 31.03.2030 in respect of 70% of the total generated capacity for a period of 12 years from the date of commissioning. Free power is to be provided as per agreement with the State Government and that provided for Local Area Development Fund (LADF), shall not be included within this limit of 70% of the total generated capacity.*
- (6) *HPO liability of the State/ Discom could be met out of the free power being provided to the State from LHPs commissioned after 08.03.2019 as per agreement at that point of time excluding the contribution towards LADF if consumed within the State/Discom. Free power (not that contributed for Local Area Development) only to extent of HPO liability of the State/Discom, shall be eligible for HPO benefit.*
- (7) *In case the free power, as above, is insufficient to meet the HPO obligations, then the State would have to buy the additional hydro power to meet its HPO obligations or may have to buy the corresponding amount of Hydro Energy Certificate to meet the non-solar hydro renewable purchase obligations.*
- (8) *The Hydro Energy Certificate issued under the mechanism developed by CERC shall be valid instruments for the discharge of the HPO obligations.*
- (9) *The above HPO Trajectory shall be trued up on an annual basis depending on the revised commissioning schedule of Hydro projects.*
- (10) *Hydro power imported from outside India shall not be considered for meeting HPO.*

- (11) *On achievement of Solar RPO compliance to the extent of 80% 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 80% 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 80% 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.*
- (12) *RPO for fossil fuel based Captive Power Plants (CPP) of 5 MW and above including Fossil fuel based co-generation captive plant of 5MW and above, shall be pegged at the RPO level applicable in the year in which CPP is commissioned. However, RPO of such plants commissioned up to 2018-19 shall be pegged at RPO applicable for the FY 2018-19. As and when the company add to the capacity of the CPP, it will have to provide for additional RPO as obligated in the year in which new capacity is commissioned.*
- (13) *The DISCOMs, while complying with the RPO, shall ensure trade-off between REC & purchase of RE Power and take financial prudent action accordingly.*

*Provided further, such obligation to purchase renewable energy shall be inclusive of the purchases, if any, from renewable energy sources already being made by obligated entity concerned.*

*Provided also that the power purchases under the power purchase agreements for the purchase of renewable energy sources already entered into by the distribution licensees and consented to by the Commission shall continue to be made till validity of the Power Purchase Agreement approved by the Commission, even if the total purchases under such agreements exceed the RPO as specified in these regulations.”*

3. The Commission notes that the Ministry of Power (MoP), Government of India, has issued an order dated 22.07.2022 followed by a corrigendum dated 19.09.2022, specifying the Renewable Purchase Obligation (RPO) trajectory for the period from FY 2022-23 to FY 2029-30. Further, Solar/Wind Energy Storage Obligation have also been introduced. It has further specified that the State Commissions may consider notifying RPO trajectory

including HPO and Energy Storage Obligation trajectory for their respective States, over and above the specified RPO, HPO and Energy Storage Obligation trajectory. Thus, the trajectory determined by MoP is the minimum level of RPO to be determined by the State Commissions.

4. Accordingly, regulation 62 of the HERC RE Regulations, 2021, is proposed to be amended as under:

“(1) *Every obligated entity including distribution licensee, consumers owning captive power plant and open access consumers including short term open access consumers in Haryana, shall purchase energy from renewable energy sources under the Renewable Purchase Obligation (RPO) as under: -*

<b>Year</b>	<b>Wind RPO</b>	<b>HPO</b>	<b>Other RPO</b>	<b>Total RPO</b>
2023-24	1.60%	0.66%	24.81%	27.08%
2024-25	2.46%	1.08%	26.37%	29.91%
2025-26	3.36%	1.48%	28.17%	33.01%
2026-27	4.29%	1.80%	29.86%	35.95%
2027-28	5.23%	2.15%	31.43%	38.81%
2028-29	6.16%	2.51%	32.69%	41.36%
2029-30	6.94%	2.82%	33.57%	43.33%

- (a) **Wind RPO** shall be met only by energy produced from Wind Power Projects (WPPs), commissioned after 31<sup>st</sup> March 2022. Further, Wind RPO may also be met from the wind energy consumed over and above 7% of the total energy consumption, from WPPs commissioned till 31.03.2022.
- (b) **Hydro power Purchase Obligation (HPO)** are to be met from Large (LHPs) or Small Hydro Power Projects (SHPs) including Pumped Storage Projects (PSPs), commissioned after 8<sup>th</sup> March 2019.
- (c) **Other RPO** may be met by energy produced from any RE power project not mentioned in (a) and (b) above.
- (2) From F.Y. 2022-23 onwards, the energy from all Hydro Power Projects (HPPs) will be considered as part of RPO. Energy from all other HPPs including free power from HPPs, which does not form part of the HPO trajectory, will be considered as part of 'RPO' under category of 'other RPO'.
- (3) RPO shall be calculated in energy terms as a percentage of total consumption of electricity excluding consumption met from RE sources and hydro sources.

- (4) *HPO liability of the State/ Discom could be met out of the free power being provided to the State from HHPs commissioned after 08.03.2019 as per agreement at that point of time excluding the contribution towards LADF if consumed within the State/Discom. Free power (not that contributed for Local Area Development) only to extent of HPO liability of the State/Discom, shall be eligible for HPO benefit.*
- (5) *In case the free power, as above, is insufficient to meet the HPO obligations, then the State would have to buy the additional hydro power to meet its HPO obligations or may have to buy the corresponding amount of Renewable Energy Certificate corresponding to hydro power.*
- (6) *The Hydro Energy Certificate issued under the mechanism developed by CERC shall be valid instruments for the discharge of HPO obligations.*
- (7) *The above HPO trajectory shall be trued up on an annual basis depending on the revised commissioning schedule of Hydro projects. The HPO trajectory for the period between 2030-31 and 2039-40 shall be notified subsequently.*
- (8) *Hydro power imported from outside India shall not be considered for meeting HPO.*
- (9) *Any shortfall remaining in achievement of 'Other RPO' category in a particular year can be met with either the excess energy consumed from WPPs, commissioned after 31st March 2022 beyond 'Wind RPO' for that year or with excess energy consumed from eligible HHPs (including PSPs), commissioned after 8th March 2019 beyond 'HPO' for that year or partly from both. Further, any shortfall in achievement of 'Wind RPO' in a particular year can be met with excess energy consumed from Hydro Power Plants, which is in excess of 'HPO' for that year and vice versa.*
- (10) *RPO for fossil fuel based Captive Power Plants (CPP) of 5 MW and above including Fossil fuel based co-generation captive plant of 5MW and above, shall be pegged at the RPO level applicable in the year in which CPP is commissioned. However, RPO of such plants commissioned up to 2018-19 shall be pegged at RPO applicable for the FY 2018-19. As and when the company add to the capacity of the CPP, it will have to provide for additional RPO as obligated in the year in which new capacity is commissioned.*
- (11) *The DISCOMs, while complying with the RPO, shall ensure trade-off between REC & purchase of RE Power and take financial prudent action accordingly.*

*Provided further, such obligation to purchase renewable energy shall be inclusive of the purchases, if any, from renewable energy sources already being made by obligated entity concerned.*

*Provided also that the power purchases under the power purchase agreements for the purchase of renewable energy sources already entered into by the distribution licensees and consented to by the Commission shall continue to be made till validity of the Power Purchase Agreement approved by the Commission, even if the total purchases under such agreements exceed the RPO as specified in these regulations.*

- (12) *The following percentage of total energy consumed, excluding consumption met from RE sources and hydro sources, shall be solar/wing energy along with/through storage:*

<b>F.Y.</b>	<b>Storage (on Energy basis)</b>
2023-24	1.0%
2024-25	1.5%
2025-26	2.0%
2026-27	2.5%
2027-28	3.0%
2028-29	3.5%
2029-30	4.0%

- (13) *The Energy Storage Obligation specified above, shall be treated as fulfilled only when at least 85% of the total energy stored in the Energy Storage System (ESS), on an annual basis, is procured from renewable energy sources.*
- (14) *The Energy Storage Obligation to the extent of energy stored from RE sources shall be considered as a part of fulfilment of the total RPO also.*
- (15) *The Energy Storage Obligation shall be reviewed periodically considering the commissioning/operation of PSP capacity, to accommodate any new promising commercially viable Energy Storage technologies and also reduction in cost of Battery Energy Storage Systems (BESS).”*

5. Accordingly, the Commission issued a discussion paper containing the draft HERC RE Regulations, 2021 (2<sup>nd</sup> Amendment) Regulations, 2022 and invited comments/suggestions/objections from the stakeholders A public notice was given in the newspapers

dated 01.10.2022/02.10.2022 and also hosted on the website of the Commission, inviting comments on the draft amendment, latest by 25.10.2022.

6. In response, no written comments/suggestions/objections were received in the Commission by 25.10.2022. However, M/s. IEX and HPPC filed its comments, subsequently, through emails dated 27.10.2022 and 03.11.2022, respectively. Further, HAREDA, the State Nodal Agency for promotion of renewable energy in the State, vide its memo no. 1605 dated 09.12.2022, has submitted that it has no objection on the contents of proposed 2<sup>nd</sup> amendment to HERC RE Regulations, 2022.

7. Subsequently, a public hearing was held on 03rd November, 2022. Shri Jogendra Behera, Vice-President, M/s. IEX present during the hearing mainly reiterated the contents of their written submissions, which has been briefed as under: -

*“The Hon’ble Commission in clause 62 (3) of the draft regulation has proposed to compute Renewable energy obligation on the total consumption of electricity by an Obligated Entity excluding consumption met from Renewable Energy Sources and hydro sources.*

*In this context it is submitted that the Ministry of Power vide Order dated 22.07.2022 has provided the revised Renewable Purchase Obligation trajectory, wherein the Ministry has defined that Renewable Energy Obligation of the obligated entity(s) to be computed in energy terms as a percentage of total consumption of electricity. Relevant extract of Hon’ble Ministry Order is attached below:*

*“7. RPO shall be calculated in energy terms as a percentage of total consumption of electricity”*

*Thus, RE or hydro power is not to be deducted while computing RPO in energy terms.”*

8. Further, Smt. Sonia Madan, the learned advocate appearing on behalf of HPPC present during the hearing reiterated the following contents of their written submissions: -

8.1 That HPPC has recently entered into PSA dated 26.07.2022 with SECI for purchase of 150 MW solar wind assured peak power with Energy Storage System. As per the above arrangement estimated quantum of energy that will be supplied from Energy Storage System (ESS) in a year will be in the range of ~25 to 30 Million Units (MU) only. Further 150 MW assured peak power project shall be commissioned in Feb 2024. Thus, the Hon’ble Commission is requested to review the Energy Storage obligation for the State of Haryana.

8.2 That the energy storage system is not limited to solar & wind only rather pertains to any renewable energy. Further, Large Hydro Power Projects (LHPs) including Pumped Storage Projects (PSPs) having capacity more than 25 MW have been recognized as part of renewable energy. Reference is invited to clause 2(33) & 2(37) of the HERC RE Regulations 2021 which is reproduced as under: -

*“2(33) ‘Renewable energy with storage project’ means a combination of renewable energy project with storage or a combination of renewable hybrid energy project with storage at the same inter-connection point;*

*2(37) “Storage” means energy storage system utilizing methods and technologies like, solid state batteries, flow batteries, pumped storage, compressed air, fuel cells, hydrogen storage or any other technology, to store various forms of energy and to deliver the stored energy in the form of electricity;*

Therefore, energy storage in the proposed amendment ought not to be limited to storage of solar & wind only, but all the renewable energy (i.e. wind, solar, hydro or other) with any storage system as specified in HERC RE Regulations 2021 be considered for energy storage obligations.

8.3 The draft amendments provide for the draft amendment provides that Wind RPO may also be met from the wind energy consumed over and above 7% of the total energy consumption, from WPPs commissioned till 31.03.2022. The proposed amendment in clause is redundant as HPPC is likely to achieve 1115.3 MUs ending FY-2022-23 from the Wind Power projects commissioned before 31.03.2022 against the 7 % (i.e 3858 MUs) of the total consumption of 55123 MUs. As such, the Wind RPO may be considered only in line with the MoP notification dated 22.07.2022 and the provision that Wind RPO may also be met from the wind energy consumed over and above 7% of the total energy consumption, from WPPs commissioned till 31.03.2022 may not be included.

8.4 The draft amendments further provide that Small Hydro Power Projects (SHPs) commissioned after 08.03.2019 shall also be considered for achievement of HPO. In this regard it is submitted that LHP provides Scheduleable RE Power during peak time in winters due to pondage facility when there is requirement of power and the power available in IEX is costly during peak hours. On the contrary, in case of SHP the power can not be scheduled in the peak hours in winter season when there is requirement of Power. Further, POC charges are capacity based charges and as such these charges are



paid even for the duration and capacity when there is no availability of power from SHPs which result in unnecessary financial burden on the DISCOMs and in return on the consumers at large. Power from SHPs is generally available when there is surplus power available with the HPPC/DISCOMs. Thus, HPO may be considered only in line with the MoP notification dated 22.07.2022 and SHPs may not be included in HPO.

9. The Commission has considered the comments filed by HPPC and observes that HPPC is not aware of the corrigendum dated 19.09.2022 issued by the Ministry of Power, which has replaced the words 'LHPs (including PSPs)' in Para 5(b), 8, 9 and 14 and Para 6 of the notification dated 22.07.2022 with the following words: -

"Hydro Power Projects (including PSPs and Small Hydro Projects (SHPs))"

Similarly, the provision that Wind RPO may also be met from the wind energy consumed over and above 7% of the total energy consumption, from WPPs commissioned till 31.03.2022, has also been included in the corrigendum dated 19.09.2022 issued by the Ministry of Power.

Therefore, the Commission does not find any merit on the arguments of HPPC on these two issues. However, the Commission do agree with the arguments of HPPC that energy storage obligations may be allowed to be fulfilled through all the sources of renewable energy and it should not be restricted to solar/wind energy alone. Further, the energy consumed from Pumped Storage Projects (PSPs) having capacity more than 25 MW should also be counted towards the energy storage obligations.

Accordingly, Regulation 62 (12) is amended as under: -

*"(12) The following percentage of total energy consumed, excluding consumption met from RE sources and hydro sources, shall be renewable energy along with/through storage, including pumped storage projects (PSPs) having capacity more than 25 MW:"*

<b>F.Y.</b>	<b>Storage (on Energy basis)</b>
2023-24	1.0%
2024-25	1.5%
2025-26	2.0%
2026-27	2.5%
2027-28	3.0%
2028-29	3.5%
2029-30	4.0%

10. The Commission has considered the comments filed by M/s. IEX on the issue of deduction of RE and Hydro power from the total consumption of electricity, for the purpose of computation of RPO. The Commission has also perused the clause 6.4 of the National Tariff Policy, 2016, notified on 28.01.2016, which provides as under: -

**“6.4 Renewable sources of energy generation including Co-generation from renewable energy sources:**

*(1) Pursuant to provisions of section 86 (1)(e) of the Act, the Appropriate Commission shall fix a minimum percentage of the total consumption of electricity in the area of a distribution licensee for purchase of energy from renewable energy sources, taking into account availability of such resources and its impact on retail tariffs. Cost of purchase of renewable energy shall be taken into account while determining tariff by SERCs. Long term growth trajectory of Renewable Purchase Obligations (RPOs) will be prescribed by the Ministry of Power in consultation with MNRE.*

*Provided that cogeneration from sources other than renewable sources shall not be excluded from the applicability of RPOs.*

*(i) Within the percentage so made applicable, to start with, the SERCs shall also reserve a minimum percentage for purchase of solar energy from the date of notification of this policy which shall be such that it reaches 8% of total consumption of energy, excluding Hydro Power, by March 2022 or as notified by the Central Government from time to time.”*

Thus, National Tariff Policy, 2016 provides that RPO has to be fixed as percentage of the total consumption of energy excluding Hydro Power. Further, the purpose of imposing RPO obligation on the obligated entities is to promote renewable energy and reduce the consumption of fossil fuel based energy. Therefore, it would be illogical to impose RPO on the consumption of RE power and Hydro power.

11. Additionally, the Commission has also considered that the RPO trajectory specified by the Ministry of Power is from the FY 2022-23. However, Obligated Entities have already been given the RPO targets for the FY 2022-23 in accordance with the existing trajectory specified in the HERC RE Regulations, 2021. Further, it is a well settled law that regulatory amendments cannot be made with retrospective effect. Accordingly, the new RPO trajectory shall be applicable w.e.f. the FY 2023-24. Nonetheless, the obligated entities are allowed to opt to fulfill the RPO obligations for the FY 2022-23, along with the backlog, in accordance with the RPO trajectory specified in the MoP notification dated 22.07.2022

(Wind RPO: 0.81%, HPO: 0.35%, other RPO: 23.44% = Total RPO 24.61%), which will be considered as compliance of the RPO for the FY 2022-23.

12. In view of the above deliberations, the Commission approves the Haryana Electricity Regulatory Commission (Terms and Conditions for determination of Tariff from Renewable Energy Sources, Renewable Purchase Obligation and Renewable Energy Certificate) Regulation, 2021 (2nd Amendment) Regulations, 2022, as per annexure "A" attached to the present order.

The same be sent for Gazette Notification at the earliest.

This order is signed, dated and issued by the Haryana Electricity Regulatory Commission on 26.12.2022.

Date: 26.12.2022  
Place: Panchkula

(Naresh Sardana)  
Member

(R.K. Pachnanda)  
Chairman

**HARYANA ELECTRICITY REGULATORY COMMISSION  
BAYS NO. 33-36, SECTOR-4, PANCHKULA – 134112**

Notification

**Regulation No. HERC/53/2021/2nd Amendment/2022:** - The Haryana Electricity Regulatory Commission, in exercise of the powers conferred on it by section 181 of the Electricity Act 2003 (Act 36 of 2003) and all other powers enabling it in this behalf, after previous publication, makes the following regulations: -

**Chapter – 1  
General**

**1. Short title, commencement, extent of application and interpretation.**

- (1) These Regulations may be called the Haryana Electricity Regulatory Commission (Terms and Conditions for determination of Tariff from Renewable Energy Sources, Renewable Purchase Obligation and Renewable Energy Certificate) Regulations, 2021, (2nd Amendment) 2022.
- (2) These regulations shall come into force on the date of their publication in the Haryana Government Gazette.
- (3) These regulations shall extend to all grid connected renewable energy projects and obligated entities in the State of Haryana.

**2. Amendment of Regulation 62**

Regulation 62 shall be read as under: -

- (1) Every obligated entity including distribution licensee, consumers owning captive power plant and open access consumers including short term open access consumers in Haryana, shall purchase energy from renewable energy sources under the Renewable Purchase Obligation (RPO) as under: -

<b>Year</b>	<b>Wind RPO</b>	<b>HPO</b>	<b>Other RPO</b>	<b>Total RPO</b>
2023-24	1.60%	0.66%	24.81%	27.08%
2024-25	2.46%	1.08%	26.37%	29.91%
2025-26	3.36%	1.48%	28.17%	33.01%
2026-27	4.29%	1.80%	29.86%	35.95%
2027-28	5.23%	2.15%	31.43%	38.81%
2028-29	6.16%	2.51%	32.69%	41.36%
2029-30	6.94%	2.82%	33.57%	43.33%

- (d) **Wind RPO** shall be met only by energy produced from Wind Power Projects (WPPs), commissioned after 31<sup>st</sup> March 2022. Further, Wind RPO may also be met from the wind energy consumed over and above 7% of the total energy consumption, from WPPs commissioned till 31.03.2022.
- (e) **Hydro power Purchase Obligation (HPO)** are to be met from Large (LHPs) or Small Hydro Power Projects (SHPs) including Pumped Storage Projects (PSPs), commissioned after 8<sup>th</sup> March 2019.
- (f) **Other RPO** may be met by energy produced from any RE power project not mentioned in (a) and (b) above.
- (2) From F.Y. 2022-23 onwards, the energy from all Hydro Power Projects (HPPs) will be considered as part of RPO. Energy from all other HPPs including free power from HPPs, which does not form part of the HPO trajectory, will be considered as part of 'RPO' under category of 'other RPO'.
- (3) RPO shall be calculated in energy terms as a percentage of total consumption of electricity excluding consumption met from RE sources and hydro sources.
- (4) HPO liability of the State/ Discom could be met out of the free power being provided to the State from HPPs commissioned after 08.03.2019 as per agreement at that point of time excluding the contribution towards LADF if consumed within the State/Discom. Free power (not that contributed for Local Area Development) only to extent of HPO liability of the State/Discom, shall be eligible for HPO benefit.
- (5) In case the free power, as above, is insufficient to meet the HPO obligations, then the State would have to buy the additional hydro power to meet its HPO obligations or may have to buy the corresponding amount of Renewable Energy Certificate corresponding to hydro power.
- (6) The Hydro Energy Certificate issued under the mechanism developed by CERC shall be valid instruments for the discharge of the HPO obligations.
- (7) The above HPO trajectory shall be trued up on an annual basis depending on the revised commissioning schedule of Hydro projects. The HPO trajectory for the period between 2030-31 and 2039-40 shall be notified subsequently.
- (8) Hydro power imported from outside India shall not be considered for meeting HPO.

- (9) Any shortfall remaining in achievement of 'Other RPO' category in a particular year can be met with either the excess energy consumed from WPPs, commissioned after 31st March 2022 beyond 'Wind RPO' for that year or with excess energy consumed from eligible HHPs (including PSPs), commissioned after 8th March 2019 beyond 'HPO' for that year or partly from both. Further, any shortfall in achievement of 'Wind RPO' in a particular year can be met with excess energy consumed from Hydro Power Plants, which is in excess of 'HPO' for that year and vice versa.
- (10) RPO for fossil fuel based Captive Power Plants (CPP) of 5 MW and above including Fossil fuel based co-generation captive plant of 5MW and above, shall be pegged at the RPO level applicable in the year in which CPP is commissioned. However, RPO of such plants commissioned up to 2018-19 shall be pegged at RPO applicable for the FY 2018-19. As and when the company add to the capacity of the CPP, it will have to provide for additional RPO as obligated in the year in which new capacity is commissioned.
- (11) The DISCOMs, while complying with the RPO, shall ensure trade-off between REC & purchase of RE Power and take financial prudent action accordingly.

Provided further, such obligation to purchase renewable energy shall be inclusive of the purchases, if any, from renewable energy sources already being made by obligated entity concerned.

Provided also that the power purchases under the power purchase agreements for the purchase of renewable energy sources already entered into by the distribution licensees and consented to by the Commission shall continue to be made till validity of the Power Purchase Agreement approved by the Commission, even if the total purchases under such agreements exceed the RPO as specified in these regulations.

- (12) The following percentage of total energy consumed, excluding consumption met from RE sources and hydro sources, shall be renewable energy along with/through storage, including pumped storage projects (PSPs) having capacity more than 25 MW:

<b>F.Y.</b>	<b>Storage (on Energy basis)</b>
2023-24	1.0%
2024-25	1.5%
2025-26	2.0%
2026-27	2.5%
2027-28	3.0%
2028-29	3.5%

2029-30	4.0%
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- (13) The Energy Storage Obligation specified above, shall be treated as fulfilled only when at least 85% of the total energy stored in the Energy Storage System (ESS), on an annual basis, is procured from renewable energy sources.
- (14) The Energy Storage Obligation to the extent of energy stored from RE sources shall be considered as a part of fulfilment of the total RPO also.
- (15) The Energy Storage Obligation shall be reviewed periodically considering the commissioning/operation of PSP capacity, to accommodate any new promising commercially viable Energy Storage technologies and also reduction in cost of Battery Energy Storage Systems (BESS).