

West Bengal Electricity Regulatory Commission

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West Bengal Electricity Regulatory Commission (Cogeneration and Generation of Electricity from Renewable Sources of Energy) (First Amendment), Regulations, 2020

STATEMENT OF REASONS

Dated: 20.12.2020

1. Introduction

The West Bengal Electricity Regulatory Commission (hereinafter referred as ‘WBERC’ or ‘the Commission’), in exercise of its power under section 181 and in compliance with the requirement of previous publication under sub-section (3) of section 181 of the Electricity Act, 2003, published the draft West Bengal Electricity Regulatory Commission (Cogeneration and Generation of Electricity from Renewable Sources of Energy) (First Amendment), Regulations, 2020 (hereinafter referred as the “draft RE First Amendment 2020”) on its website and invited suggestions/objections/comments vide public notice No WBERC/Regulations-64/20-21/6011 dated 15.09.2020 published in 6 nos of leading newspapers on 16.09.2020. The last date of submission of suggestions/ objections/ comments was 25.09.2020 (upto 5 P.M.).

2. Objective and background of the draft RE First Amendment 2020

As per Section 86 (1) (e) of the Electricity Act, 2003 (“EA 2003” or “the Act”), the State Electricity Regulatory Commissions have been assigned the function of promoting co-generation and generation of electricity from renewable sources of energy by providing suitable measures for connectivity with the grid and sale of electricity to any person, and also specify, for purchase of electricity from such sources, a percentage of the total consumption of electricity in the area of a distribution licence. Clause (h) of section 61 of the Electricity Act also specifies for promotion of co-generation and generation of electricity from renewable sources of energy. The West Bengal Electricity Regulatory Commission had accordingly notified the West Bengal Electricity Regulatory Commission (Cogeneration and Generation of Electricity from Renewable Sources of Energy) Regulations, 2006 under Notification No.28/WBERC dated 04.05.2006, which was subsequently repealed and replaced during 2008, then 2010 and finally in 2013 by West Bengal Electricity Regulatory Commission (Cogeneration and Generation of Electricity from Renewable Sources of Energy) Regulations, 2013 under Notification No.50/WBERC dated 22.03.2013 (hereinafter referred as Principal Regulations).

In pursuance with section 86(1)(e) of the Act, Commission has specified renewable purchase obligation in the Principal Regulations. However, considering the growing environmental concern and promotion of renewable energy it is found suitable to review the RPO target for the State of West Bengal considering the State specific issues. It is also felt necessary to harness the roof-top solar potential of the State to its fullest capacity.

In the meantime, the Government of India (GoI) set an ambitious target to achieve 40 GW of cumulative installed capacity of Grid Connected Rooftop Solar PV (GRPV) systems by 2022. In order to achieve this target, a strategic combination of Top-Down impetus and Bottom-Up execution approach was initiated, in which GoI, in partnership with the State Governments, adopted a number of measures to promote the rooftop solar sector. Tariff Policy 2016 also proposes a high target for solar power purchase by 2022. The Forum of Regulator (FOR) has also published the “Report on Metering Regulation and Accounting Framework for Grid Connected Rooftop Solar PV In India” in April 2019, and recommended the revised framework and Model Regulations.

To facilitate the renewable energy journey of the State of West Bengal considering the guidelines of Tariff Policy 2016 and decreasing price of Grid Connected Rooftop Solar PV (GRPV) systems amendment to the existing Renewable Energy Regulations of WBERC for overall benefit of the State is felt necessary. Accordingly, the Commission published the draft RE First Amendment 2020 on 11.06.2020.

Subsequently, the Commission issued a suo-motu order in Case No SM-24/20-21 dated 02.09.2020 regarding applicability of fossil fuel-based cogeneration on RPO compliance. Considering the suo-motu order dated 02.09.2020, the Commission in supersession of the earlier draft dated 11.06.2020 notified a fresh draft for RE First Amendment 2020 vide public notice No WBERC/Regulations-64/20-21/6011 dated 15.09.2020.

3. Analysis of the Suggestions / objections / comments received on the draft RE First Amendment 2020:

The Commission received suggestions/objections/comments from 22 -stakeholders including distribution licensees, generating company, cogeneration plant, solar firms, Confederations of West Bengal Trade Associations and some individuals within the specified time limit. Names of the stakeholders who provided suggestions/objections within due time line are specified in Annexure-1. The Commission, after detailed analysis and due consideration of the issues raised by the stakeholders on the draft RE First Amendment 2020, finalised the West Bengal Electricity Regulatory Commission (Cogeneration and Generation of Electricity from Renewable Sources of Energy) (First Amendment), Regulations, 2020

(herein after referred as “RE First Amendment 2020”) for notification in the Kolkata Gazette Extraordinary. The proposed regulations, suggestions/objections/comments received from the various stakeholders and the rationale /decisions of the Commission thereon have been discussed in the succeeding paragraphs.

4. Regulation 1:

4.1 Proposed in Draft RE First Amendment 2020:

“1. *Short Title, extent and commencement:*

(i) *These Regulations may be called the West Bengal Electricity Regulatory Commission (Cogeneration and Generation of Electricity from Renewable Sources of Energy) (First Amendment) Regulations, 2020.*

(ii) *These extend to the whole of West Bengal.*

(iii) *These shall come into force on the date of their publication in the Official Gazette.”*

4.2 Comments Received: No specific comments / suggestions received from the stakeholders.

4.3 Provision in RE First Amendment 2020: In absence of any comments/suggestions/objections from the stakeholders the draft regulation is retained.

5. Definition of ‘Eligible Consumer’ after Clause (xi) in regulation 2.1:

5.1 Proposed in Draft RE First Amendment 2020:

“(xi) (A) ‘Eligible Consumer’ means a consumer of electricity in the area of supply of the distribution licensee who has installed or proposes to install a solar PV generating system, having a capacity of 1 kW and above, on a roof-top or any other mounting structure in his premises, to meet all or part or no requirement of electricity of his own use, and to supply to such distribution licensee on net-metering / net-billing basis using the same network. This shall include a consumer catering to a common load such as a Housing Society.”

5.2 Comments Received:

(a) Comments from CESC Limited:

Threshold capacity requirement:

Reducing the threshold capacity requirement to 1 kW will impose severe strain on the electricity network impacting power quality, injection of harmonics, voltage and reactive energy related problems and electrical safety issues.

CESC requested for undertaking detailed studies before changing the threshold capacity. The threshold capacity may be aligned with the contract load eligibility criteria.

5.3 Analysis and Decision of the Commission:

Regarding submission of CESC Ltd., the Commission observes that, Principal Regulations provide for a minimum threshold limit for a grid connected solar rooftop as 5 kW installed capacity. In the draft RE First Amendment 2020, it has been proposed to reduce the limit to 1 kW to achieve the objective of harnessing the solar roof-top potential in the State as far as possible, as roof-top solar is one of the major potential RE sources in the State of West Bengal. Further, Government of India under Central Financial Assistance (CFA) scheme has allowed capital subsidy to residential households for roof-top solar installation capacity of 1 kW to 10 kW. With the reduced limit as proposed in the draft, consumers in the State can avail such facility. Commission also noted that many of the SERCs have already introduced the minimum threshold limit of grid connected solar PV to 1 kW.

Further a detailed simulation based technical study has been conducted by Forum of Regulators (FOR) on various conditions of voltage level, DT loading, feeder type, etc. In the FOR “Report on Metering Regulation and Accounting Framework for Grid Connected Rooftop Solar PV In India” in April 2019 [FOR Report 2019] after simulation analysis the following has been observed:

“When permitted distribution generation capacity is not more than the sanctioned load/contract demand, aggregate PV power plant capacity (AC nominal power of inverter) that can be connected to a network can be up to 100% of DT capacity, even under worst case scenario(s), i.e. with 0% running load, considering feeder’s thermal capacity as the deciding factor. [pg -82 of the Report]”

Accordingly, considering the safety and reliability of distribution network maximum limit of installed capacity is restricted to the sanctioned load or the contract demand of the consumer.

5.4 Provision in RE First Amendment 2020:

The draft regulation is retained.

6. Definition of ‘Net Billing Arrangement’ after Clause (xix) in regulation 2.1:

6.1 Proposed in Draft RE First Amendment 2020:

“(xix) (A) ‘Net Billing Arrangement’ means an arrangement under which energy generated from solar PV generating system of an eligible consumer is purchased by the distribution licensee and the distribution licensee raises the bills on the consumer for his consumption at the approved grid tariff, after giving credit for total electricity sold out to the distribution licensee against a pre-determined tariff;

6.2 Comments Received: No specific comments / suggestions received from the stakeholders.

6.3 Provision in RE First Amendment 2020: In absence of any comments/suggestions/objections from the stakeholders the draft regulation is retained.

7. Definition of ‘Net Billing Connection Agreement’ after Clause (xix) in regulation 2.1:

7.1 Proposed in Draft RE First Amendment 2020:

“(xix) (B) ‘Net Billing Connection Agreement’ means an agreement entered into by a distribution licensee and an eligible consumer for executing a Net Billing arrangement;

7.2 Comments Received: No specific comments / suggestions received from the stakeholders.

7.3 Provision in RE First Amendment 2020: In absence of any comments/suggestions/objections from the stakeholders the draft regulation is retained.

8. Definition of ‘Net Meter’ after Clause (xix) in regulation 2.1:

8.1 Proposed in Draft RE First Amendment 2020:

“(xix) (C) ‘Net Meter’ means a bi-directional energy meter, which is capable of recording both the import and export of electricity;”

8.2 Comments Received: No specific comments / suggestions received from the stakeholders.

8.3 Provision in RE First Amendment 2020: In absence of any comments/suggestions/objections from the stakeholders the draft regulation is retained.

9. Definition of ‘Net Metering Arrangement’ after Clause (xix) in regulation 2.1:

9.1 Proposed in Draft RE First Amendment 2020:

“(xix) (D) ‘Net Metering Arrangement’ means an arrangement under which a solar PV generating system with net meter installed at an eligible consumer’s premises, delivers surplus electricity, if any, to the distribution licensee subject to the stipulations explained at Schedule-1;”

9.2 Comments Received: No specific comments / suggestions received from the stakeholders.

9.3 Provision in RE First Amendment 2020: In absence of any comments/suggestions/objections from the stakeholders the draft regulation is retained.

10. Definition of 'Net Metering Connection Agreement' after Clause (xix) in regulation 2.1:

10.1 Proposed in Draft RE First Amendment 2020:

"(xix) (E) 'Net Metering Connection Agreement' means an agreement entered into by a distribution licensee and an eligible consumer for executing a Net Metering Arrangement;"

10.2 Comments Received:

(a) M/s Alien Solar, Mr Ahsim Ali, Mr. Chiranjib Nayek, Mr. Anirban Samanta, Mr. Biswajit Maity, Mr. Subham Hazra and Mr. Avishek Maity inter-alia submitted the following:

There should be a specified time limit within which the distribution licensee shall provide with the net metering connection to the consumer for their solar PV system. Also, there shouldn't be any restriction with provision of net meter based on the financial model availed for the solar PV system being installed by the consumer of the distribution licensee.

10.3 Analysis and Decision of the Commission:

The Commission appreciates the concern raised by the stakeholders regarding timely implementation / providing net-metering connection by the distribution licensees. The issue has already been addressed in regulation 16.9 of the proposed draft amendment by way of developing detailed procedure by distribution licensees. In the detail procedure, licensees shall provide the manner and timeline for processing the applications from eligible consumers along with standard formats. Licensees will submit the detailed procedure before the Commission for approval within 30 days from notification of the amendment.

Regarding financial model, the Commission observes that, for net-metering and net-billing purpose eligible consumer has to have an agreement with connected distribution licensee. It is the choice of the consumer to select his developer, even distribution licensee can also act as a developer / facilitator. This regulation does not restrict any third-party developer but at the end of the day the energy transaction from roof-top solar-PV plant to grid is between the consumer and the distribution licensee.

10.4 Provision in RE First Amendment 2020:

The draft regulation is retained.

11. Definition of 'Renewable Energy Sources' for Clause (xxiii) in regulation 2.1:

11.1 Proposed in Draft RE First Amendment 2020:

“(xxiii) ‘Renewable Energy Sources’ means sources such as small hydro, wind, solar including its integration with combined cycle, biomass, bio fuel cogeneration, urban or municipal waste and other such sources as approved by the MNRE;”

11.2 Comments Received: No specific comments / suggestions received from the stakeholders.

11.3 Provision in RE First Amendment 2020: In absence of any comments/suggestions/objections from the stakeholders the draft regulation is retained.

12. Definition of 'Renewable Purchase Obligation' for Clause (xxv) in regulation 2.1:

12.1 Proposed in Draft RE First Amendment 2020:

“(xxv) ‘Renewable Purchase Obligation’ or ‘RPO’ means the obligation of purchase of electricity from renewable energy sources by a distribution licensee in pursuance to section 86 (1) (e) of the Act which is detailed out in regulations 3.1 to 3.4 of these regulations;”

12.2 Comments Received:

(a) Comments from WBSEDCL:

The generation from Fossil fuel-based co-generation should be considered as RE sources as per Principal Regulations since these co-generation power plants are main sources to meet RPO and many PPAs have been executed with such generators for this purpose with the approval of WBERC and supplying around 600-800 MU annually in West Bengal.

If distribution licensee has to meet RPO from other than above co-generation sources, it will create additional burden on the consumers of the State if WBSEDCL continues to purchase power as per the PPA executed with above co-generators with the approval of WBERC.

Further APTEL vide Order dated 16.04.2019 in case no 146 of 2017 has stated that both the co-generation and renewable energy have to be promoted in terms of section 86 (1)(e) of the Act. Further Industries in the State who have installed Fossil fuel-based co-generation to power plant to use Industrial waste gas / heat (by product) to reduce pollution level of environment and meet WBPCB guidelines to run the industry, will also suffer. Hence fossil fuel co-generation may be kept to meet RPO as per existing Regulation to promote co-generation. If not agreed, such

purchase may be allowed to meet RPO to avoid purchase of additional RE power till expiry of existing PPA with co-generators, alternately PPAs may be annulled.

(b) Comments from CESC:

1. CESC proposed that, deletion of the word “cogeneration” may be avoided. CESC submitted that, cogeneration, irrespective of nature of fuel used is an energy efficient measure and may be retained as a source for fulfilment of RPO for 2020-21.
2. CESC submitted an exhaustive legal note on the full Bench judgment of the Hon'ble Appellate Tribunal for Electricity ('Hon'ble Tribunal') dated 2nd December 2013 passed in *Lloyds Metal & Energy Ltd. vs. Maharashtra Electricity Regulatory Commission & Anr.* bearing Appeal No. 53 of 2012 and subsequent order of Hon'ble Tribunal in JSW Steel case (Appeal No. 278 of 2015 dated 02.01.2019). CESC requested the Commission to take a composite view in this regard. **The detail note of CESC Ltd. is enclosed in Annexure-2.** The major points highlighted by CESC in brief are mentioned below:

A. In the Lloyds case, the Hon'ble Tribunal was called upon to decide the following question of law:

“Whether the Distribution Licensees could be fastened with the obligation to purchase a percentage of its consumption from co-generation irrespective of the fuel used under Section 86(1)(e) of the Act 2003.”

- B. Hon'ble Tribunal concluded the question stated above in negative. However, CESC submitted that, the process adopted by the Hon'ble Tribunal in Lloyds case on interpretation of Section 86(1)(e) is unsustainable. Further the decision in Lloyds case is in contradiction with decision in JSW Steel and similar case by the Hon'ble Tribunal.
- C. In JSW Steel (Appeal No. 278 of 2015 dated 02.01.2019) and similar cases, the Hon'ble Tribunal has ruled that a captive consumer who meets his power needs from cogeneration is not required to meet Renewable Purchase Obligation ('RPO') under Section 86(1)(e) by procuring power from a renewable energy source, notwithstanding the nature of fuel used for such cogeneration. In other words, electricity generated from a fossil fuel-based cogeneration has been held to be legally acceptable, sufficient and at par with electricity generated from renewable energy sources so as to meet RPO.
- D. The law declared by Hon'ble Tribunal in Lloyds case is restricted to facts of the said case, and in particular to the Renewable Purchase Obligation Regulations and Renewable Energy Tariff Regulations applicable to the State of Maharashtra.

E. Furthermore, and even otherwise, it must also be underscored that this Commission is not bound to follow Hon'ble Tribunal's judgment while framing the Regulations under Section 181 of the Act. CESC quoted the following dictum of Hon'ble Supreme Court in ***PTC India Ltd. v. CERC, (2010) 4 SCC 603***:

"51. In Narinder Chand Hem Raj v. Lt. Governor, H.P. [(1971) 2 SCC 747] this Court has held that power to tax is a legislative power which can be exercised by the legislature directly or subject to certain conditions. The legislature can delegate that power to some other authority. But the exercise of that power, whether by the legislature or by the delegate will be an exercise of legislative power. The fact that the power can be delegated will not make it an administrative power or adjudicatory power. In the said judgment, it has been further held that no court can direct a subordinate legislative body or the legislature to enact a law or to modify the existing law and if courts cannot so direct, much less the tribunal, unless power to annul or modify is expressly given to it"

Therefore, bringing the proposed changes through Draft Regulations only in a bid to comply with the decision of Hon'ble Tribunal in Lloyds case does not meet the requirements for exercise of legislative powers by this Commission.

- F. The definition of 'cogeneration' contained in Section 2(12) of the Act is fuel-agnostic. Cogeneration can be from fossil fuel or non-fossil fuel. Act does not make any distinction between a fossil fuel-based cogeneration and one based on non-fossil fuel. That being the case, it is not legally permissible for this Commission (while following Lloyds case or otherwise) to draw such an artificial distinction for any purposes under the Act, including for construing distribution licensee's purchase obligation under Section 86(1)(e). Such action is an essential legislative function resting with the Parliament.
- G. It must also be acknowledged and appreciated that 'cogeneration and generation of electricity from renewable sources of energy' is a composite phrase that appears in both Section 61(h) as well as in Section 86(1)(e). It cannot be read in a disjointed manner while determining distribution licensee's purchase obligation under Section 86(1)(e).
- H. In light of the foregoing submissions, it is respectfully stated that the existing definition of Renewable Purchase Obligation contained in Clause (xxv) of Reg. 2.1 of the Principal Regulations is absolutely legal and in line with the provisions of the parent Act as contained in Section 86(1)(e).
- I. It is further submitted that in the case of co-generation specific amendments of the regulations, no legal expediency or regulatory exigency for amendment excepting

deference to comply with the Hon'ble Tribunal's judgment in Lloyds case could be observed, without considering the subsequent judgments, which have, *inter alia*, interpreted the Lloyds judgment.

- J. Hence, in light of the submissions made hereinabove, it is submitted that the amendments proposed in the Draft Regulations with respect to cogeneration may be omitted.

12.3 **Analysis and Decision of the Commission:**

The Commission observes that, the issue of renewable purchase obligation (RPO) in terms of section 86(1)(e) of the Electricity Act 2003 using fossil fuel-based co-generation has already been decided by the Hon'ble Tribunal in the Lloyd case. Hon'ble Tribunal in its final Judgement dated 02.12.2013 clarified as below:

*"Upon conjoint reading of the provisions of the Electricity Act, the National Electricity Policy, Tariff Policy and the intent of the legislature while passing the Electricity Act as reflected in the Report of the Standing Committee on Energy presented to Lok Sabha on 19.12.2002, we have come to the conclusion that a distribution company cannot be fastened with the obligation to purchase a percentage of its consumption from fossil fuel based co-generation under Section 86(1)(e) of the Electricity Act, 2003. **Such purchase obligation 86(1)(e) can be fastened only from electricity generated from renewable sources of energy.** However, the State Commission can promote fossil fuel-based cogeneration by other measures such as facilitating sale of surplus electricity available at such co-generation plants in the interest of promoting energy efficiency and grid security, etc."*

Accordingly, the Commission in this proposed draft has limited the purchase obligation only from electricity generated from renewable sources of energy. Further to promote fossil fuel-based cogeneration it is proposed under draft regulation 4.2 that distribution licensees may purchase such power at mutually agreed price subject to ceiling price specified in these regulations.

Regarding submission of WBSEDCL related to tariff burden, the Commission observes that the ceiling price specified for co-generation plants in the existing regulation is Rs. 3.34/kWh which is lower than the average power purchase cost of the licensee. The landed cost becomes more economical as these distributed generators are generally connected to the distribution network and does not incur any CTU/STU losses and charges. These distributed generators rather help to reduce the distribution losses.

Regarding the submission of CESC Ltd, the Commission observes that, this is not the right forum to discuss the merit of the judgement of Hon'ble Tribunal. However, the Commission finds no contradiction between judgment in the Lloyds case and JSW case as the Lloyds case is related to RPO

on distribution licensee and JSW is related to obligation to a cogenerating plant. Thus, CESC's submission of considering electricity generated from a fossil fuel-based cogeneration at par with electricity generated from renewable energy sources so as to meet RPO is not found tenable at this point. At the same time, the regulation amply clarifies that any other source, as may be approved by MNRE under renewable category, will automatically qualify to meet the RPO.

12.4 Provision in RE First Amendment 2020:

The draft regulation is retained.

13. Clause (xxxvi) in regulation 2.1:

13.1 Proposed in Draft RE First Amendment 2020:

Clause (xxxvi) of regulation 2.1 of the Principal Regulations is proposed to be deleted.

13.2 Comments Received: No specific comments / suggestions received from the stakeholders.

13.3 Provision in RE First Amendment 2020: In absence of any comments/suggestions/objections from the stakeholders the draft regulation is retained.

14. Clause (xxxvii) in regulation 2.1:

14.1 Proposed in Draft RE First Amendment 2020:

Clause (xxxvii) of regulation 2.1 of the Principal Regulations is proposed to be deleted.

14.2 Comments Received: No specific comments / suggestions received from the stakeholders.

14.3 Provision in RE First Amendment 2020: In absence of any comments/suggestions/objections from the stakeholders the draft regulation is retained.

15. Regulation 3.1:

15.1 Proposed in Draft RE First Amendment 2020:

"3.0 Renewable Purchase Obligation (RPO) Target:

3.1 All efforts shall be made to meet the targets in the table below by purchase of electricity and/or generation of electricity from renewable energy sources by the distribution licensees, person using power from captive power plant of 1 MW and above and open access consumers, expressed as percentage of their total consumption of electricity in the area of supply of the distribution licensee in a year during the years 2020-21 to 2022-23:

year	Minimum quantum of purchase (in %) of total consumption from Renewable energy sources		
	Solar	Non- Solar	Total
2020-21	3.00	9.00	12.00
2021-22	4.50	10.00	14.50
2022-23	6.00	11.00	17.00

The obligation will be on total consumption of electricity excluding consumptions met from hydro sources of power other than small hydro sources:

Provided that distribution licensee shall compulsorily procure 100% power generated from waste to Energy plants in their respective supply area:

Provided further 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 purchased beyond specified Non-Solar RPO for that particular year:

Provided further that on achievement of Non-Solar RPO compliance to the extent of 85% and above, remaining shortfall if any, can be met by excess Solar energy purchased beyond specified Solar RPO for that particular year:

Provided further that for distribution licensee such target obligation indicated hereinbefore in the above table shall be considered on the basis of summated energy available as detailed in regulation 3.4 of these regulations.

Provided further that for the purpose of renewable purchase obligation the power purchases under the power purchase agreements already entered into by the distribution licensees from renewable energy sources and consented to by the Commission shall continue to be made till their present validity, even if the total purchases under such agreements exceed the percentage as specified in regulation 3.1 of these Regulations. ”

15.2 **Comments Received:**

(a) Comments from WBSEDCL:

Present RPO trajectory is high & unachievable considering low potential of RE power in West Bengal i.e. low wind intensity, low solar radiation, absence of bio-mass based and bio fuel based or other type of RE sources. Further during last 3 years, it has been experienced that repeated tenders for purchasing power from RE sources have failed to fetch adequate response from bidders and as a result RPO target cannot be achieved. Hence it is prayed to reduce the RPO target.

To provide 24x7 power supply, WBSEDCL has already tied up sufficient conventional power in last two years for getting supply in next 3 years or more. In the meantime , due to outbreak of

COVID 19 and continuing restriction on commercial and industrial and other activities by Government, system demand has drastically got reduced and therefore existing sources of conventional power is being backed down. It is expected that this condition will continue even after lifting of restriction and considerable time may require to bring back normalcy in commercial, industrial & other operation.

As already a few months have passed in 2020-21 and considering present situation as stated above, it is prayed not to impose high RPO target for 2020-21 to 2022-23 for solar and reduce the RPO target of solar power and Non-solar power since availability of RE power in the State is lesser. Further purchase from outside State after backing down the existing power will burden consumers.

Obligation for solar and non-solar should be total consumption after adjustment of consumption made from (i) RE power, (ii) hydro sources (iii) generation of pumping power.

Since the availability of RE power in the State is lesser, there should not be any compulsion of procuring 85% from any particular RE sources.

Considering the justification/ explanation given in 2.1 (xxv), fossil fuel co-generation may be kept to meet RPO as per existing Regulation to promote co-generation. If not agreed, such purchase may be allowed to meet RPO to avoid purchase of additional RE power till expiry of existing PPA with co-generators, alternately PPAs may be annulled.

Above RPO target from 2020-21 onwards is realistically projected below:

Under above circumstances, Proposed Minimum percentage of total consumption of electricity after adjustment of consumption from RE power, Hydro & Pumped storage is proposed as follows:.

	Solar	Including Solar
2020-21	0.5%	4%
2021-22	1.0%	4.5%
2022-23	1.5%	5%

(b) Comments from CESC Limited:

1. Other obligated entities:

Open access consumers: The Commission designated open access consumers and persons using power from captive power plant of 1 MW as obligated entities who will meet RPO as mentioned in the table given. CESC appreciated inclusion of Open Access consumers and captive plant owners as Obligated Entities. However, RPO obligation for Open Access

consumers who also chose to remain consumer of distribution licensees should be limited to their Open Access requirement. For example, a dual mode consumer with energy drawal in open access mode of 100 units and energy drawal in consumer mode of 200 units should be responsible for fulfilling RPO corresponding to 100 units drawal in open access mode. Similar provision may also be specified clearly for consumers using captive power plant.

Also, open access consumers should not be allowed to install distributed renewable generating sources without informing the distribution licensee.

2. Users of Captive Power Plants (CPP):

As per Ministry of Power notification No.30/04/2018-R&R dated 01.02.19 wherein it is clarified that RPO of CPP may be pegged at the RPO level applicable in the year in which CPP was commissioned. The Commission may clarify whether the proposed provision of regulation shall be in line with the above MOP notification.

3. Separate Targets for Solar / Non-solar with limited fungibility

The Commission has proposed fungibility only beyond 85% fulfilment of solar / non-solar purchase obligations. CESC submitted that artificial distinction between various renewable sources may be dispensed with and the Commission may specify only the overall renewable purchase obligation target, leaving the decision of arriving at the optimum source-wise mix to the decision of respective licensees.

The energy mix of the year 2019-20 in India shows that 79% of the generation mix came from the non-renewable sources. Though Government of India has set up an ambitious target but actual capacity addition has lagged the target. Also, the generation from solar and non-solar holds almost similar percentage in the previous year. In this actual scenario, the distinction between solar and non-solar RPO targets may not be practical. One single Renewable power purchase target would be effective considering the actual capacity addition over the years. The optimistic approach of setting high RPO target on obligated entities to pull the renewable capacity addition in the Country, ignoring the actual scenario, will only burden the end-consumers. The Company apprehends that the country does not have sufficient renewable energy capacity commensurate with the proposed RPO target.

4. Solar RPO target:

The Commission introduced net billing arrangement enabling the consumers selling entire energy generated to the distribution licensee. Net billing arrangement will also address the problem of fixed cost under-recovery and undue burdening of other small consumers.

But the target specified for the next three years is extremely difficult to achieve. As per their estimate, around 200 MW to 450 MW solar capacity would be needed for the Company in the next three years to meet the solar RPO target. As against this, the projected roof-top solar capacity for 2022-23 is only 45 MW, i.e 1/10th of the requirement.

In absence of adequate roof-top solar capacity, the licensee will have to arrange for such capacity from solar auctions being organized by agencies like SECI etc. Since the projects have construction timeline of about one and half years from the date of conducting auction, it is unlikely that tying-up solar capacity in near future will result in actual flow of solar energy in to the CESC system.

To procure power from renewable sources, CESC issued advertisements in widely circulated papers seeking suitable offers. But the impact on average tariff was not favourable and the offers obtained were not in line with market reality. Necessary documents are already in the records of the Commission. The responses are not favourable enough.

5. Non-Solar RPO target:

In case of non-solar, there is very little possibility of adequate projects coming up within the area of supply of Kolkata. In this scenario, it was already difficult in the previous periods to meet non-solar RPO. The increased target will only deteriorate the scenario. The licensee will have to arrange for such capacity from wind or other auctions being organized by agencies like SECI etc. Since the projects have construction timeline of about one and half years from the date of conducting auction, it is unlikely that tying-up such renewable capacity in near future will result in actual flow of renewable energy in to the CESC system. Though the Commission allowed the very limited swapping of solar and non-solar RPO, but both the targets appear to be unachievable.

Though the State has potentials in small-hydel and biomass generation, the potential areas of such projects are beyond the licensed area of CESC, and as such the area distribution licensee(s) operating in such place(s) are at an advantageous position in tying up such power for fulfilment of their own RPO. A number of options enumerated under Regulation 3.4 are not available to CESC. This non-availability / poor availability is established by the fact that CESC did not receive any response to its series of press advertisements seeking renewable / cogeneration power, especially non-solar power.

The possible reason behind poor response on the advertisements for procurement of solar / renewable power issued could be that solar insolation and wind power density in West Bengal are not that sufficient to make such projects sufficiently attractive.

6. Presently CESC is facing COVID-19 pandemic which has its devastating impact worldwide and in every sector. Power sector is no exception. Nationwide lockdown has caused delay in power projects construction work. There is an uncertainty about the upcoming energy transition model. Also, the renewable energy sector is heavily dependent on import of the necessary materials. It will have an impact in the long run. In view of this, target of aggressive renewable capacity addition and RPO may not be achievable, rather a cautious and pragmatic approach towards RPO and renewable capacity addition target will be win-win for all stakeholders.
7. More than 5 months of the financial year 2020-21 have passed and it will be impossible for any licensee to meet the intended targets for this year due to the pandemic situation. Under the circumstances, CESC requested the Commission to revise the targets from the next year i.e. 2021-22 considering the submissions made in the previous paragraphs.

8. Grid integration issues:

With high renewable energy target and lack of available renewable capacity within the licensed area and in the State, the distribution licensees will have to procure a significant part of their demand from outside of the State.

Detailed study needs to be undertaken to understand the availability of transmission capacities to handle such enormous renewable power interchange, impact on grid stability and load generation balance. It is submitted that to accommodate large quantum of infirm renewable power in the grid, balancing act needs to come from conventional generation sources considering their efficiencies and associated cost implications. It is estimated that on an average, one unit of the Budge Budge Generating Station will have to operate below the technical minimum level for 6 hours every day during August 2020 to March 2021 period. Such part load operation of efficient conventional generation units is expected to continue in future years as well due to even higher proposed RPO. Suitable incentive needs to be introduced to encourage flexible operation of conventional generating stations. Also, adequate compensation for degradation in efficiency parameters (station heat rate, additional oil consumption for number of start-ups beyond a certain specified level and auxiliary energy consumption), additional operation and maintenance expenses and capital expenditure would be necessary to ensure proper upkeep of the thermal generating stations.

Moreover, since the regulations of the Commission do not specify any deviation settlement charge for 'must run' renewable energy generating stations, impact on other stakeholders for ensuring grid stability will become significantly higher. The Commission may make suitable amendment in regulation 8 of these Regulations.

Therefore, the Commission may keep the RPO target at the existing level and any upward revision may be taken up after conducting detailed study on the above-mentioned aspects.

9. Exclusion of Hydro:

As per the proposed draft amendment, large hydro power sources are not recognized as a source to meet RPO. The obligation will be calculated by excluding the consumption from hydro power sources. Hydro power has already been recognized as renewable power by Government of India. Therefore, CESC submitted that the Commission considers fulfilment of non-solar RPO through consumption of energy from large hydro power sources. Large hydro power is considered as renewable source of energy across the globe and the Commission may also acknowledge hydro sources, irrespective of capacity as legitimate source for fulfilment of non-solar RPO. CESC submitted that instead of specifying a separate target for hydro sources, acknowledging such sources for fulfilment of non-solar RPO will be an equitable approach for the consumers and the environment.

Also, with hydro power, accommodating infirm solar and wind sources will be easier. The recent pan India lights off event highlights the importance of having flexible generating sources such as Hydro. The report on Pan India Lights Off Event (9 PM 9 Minutes) on 5th April 2020, Impact on Indian Power System published in May 2020 also stated that the synchronous condenser capability of hydro machines needs to be harnessed because of the fact that when the penetration of renewable energy increases, the availability of synchronous machines in the system would reduce, leading to less inertia and sharp changes in grid frequency in case of any contingency. Also, from grid stability point of view, generation sources with high ramp-up / ramp-down rates would be essential to accommodate infirm solar/ wind energy and hydro sources are essential for these purposes.

10. Renewable Energy Certificates (REC) as an option to fulfil RPO

The central electricity regulatory commission introduced REC, denoting the environmental attributes of renewable energy, already injected in the grid. These are tradable in power exchanges. RECs could be an option to meet RPO if the Commission allows such certificates for fulfilment of RPO. With REC as an option to meet RPO target, the adverse impact on State grid will be minimized.

11. State level Pool of renewable energy:

A State level pool could be implemented for the obligated entities. Renewable energy generated within the State may be considered to be notionally consumed by the obligated entities in proportion of their respective RPO requirement.

12. Bundling of energy:

If a distribution licensee purchase power from another party, whose power procurement mix contain renewable and/or cogenerations sources, the same proportion of such renewable energy may be allowed to be passed on notionally to the buyer licensee. This would be in the consumers' interest as majority of such sources are of small capacity and distributed in nature. This option would keep the consumers' end tariff at a lower level. It would also encourage development of renewable source.

13. Allowing cogeneration for RPO fulfilment irrespective of nature of source

14. Procurement of 100% energy from waste to energy plants in the licensed area:

As per the proposed draft amendment, distribution licensees have to purchase entire energy generated from the waste to energy plants in their licensed area. The binding nature of the clause may limit available power sale options for the generator.

(c) Comments from IPCL:

Solar energy generated or purchased in excess of solar renewable purchase obligation may be accounted towards meeting the non-solar renewable purchase obligation. Provided further that on achievement of Solar RPO compliance to the extent of 75% and above, remaining shortfall if any, can be met by excess Non-Solar energy purchased beyond specified Non-Solar RPO for that particular year, similarly on achievement of Non-Solar RPO compliance to the extent of 75% and above, remaining shortfall if any, can be met by excess Solar energy purchased beyond specified Solar RPO for that particular year.

Also, Credit for excess RE purchase may be allowed to be adjusted in the year of shortfall within either preceding or succeeding control period.

In case of Hybrid RE power, percentage of corresponding Solar & non-solar energy mix varies project wise and location wise based on strength of renewable energy potential.

This will allow flexibility in power purchase from RE source. This will help the licensee to incur the minimal cost subject to availability and market dynamics while promoting renewable energy in their energy mix.

15.3 Analysis and Decision of the Commission:

From the submissions of different stakeholders mentioned in paragraph 15.2 above following major concerns are observed:

- A. Achievability of proposed RPO trajectory considering low potential of RE power in West Bengal, particularly in previous years licensees experienced inadequate response from bidders.

Commission admits that, West Bengal is not so called RE rich State, but at the same time Commission recognises the responsibility to reduce the overall carbon foot-print in the State. To harness the available potential of roof-top solar, the minimum threshold limit has been reduced from 5 KWp to 1 kWp and all category of consumers are allowed for grid-connected solar PV, subject to technical feasibility. Commission further noted that, several solar and wind projects are coming across the country at a very competitive price and ISTS loss and charges being zero, licensees should try to source such power to fulfil its RPO. In the draft amendment, it is mentioned that licensee shall endeavour to purchase power from SECI or bided under competitive bidding guidelines in terms of section 63 of the Act. Considering the enhanced scope of roof-top solar upto 1 kW and proposed participation in national RE market, Commission observes that, the RPO target proposed in draft is quite achievable.

- B. Issue of already tied up conventional power under existing PPAs:

The Principal Regulations provide for a total RPO target of 6% for 2017-18 and subsequently 1% annual increase. Thus for 2019-20 it comes to 8% as per existing provision of the Principal Regulations on the overall consumption of licensee. Now in the draft amendment overall RPO target for 2020-21 has been proposed as 12% i.e 4% increase in 2020-21 and then only 2.50% annual increase in 2021-22 and 2022-23. Further with new provision of excluding consumption from hydro sources, the impact of increased purchase for RE is even lower in respect of total consumption. Considering annual sales growth of the licensees, such additional power purchase is not going to affect the already tied up conventional power.

- C. Proposal for revision of RPO target:

WBSEDCL has proposed to limit the solar RPO target upto 1.50% and non-solar RPO target upto 5.00% by 2022-23 against the proposed target of solar and non-solar of 6.00% and 11.00% respectively by 2022-23 in the draft. WBSEDCL submitted the reasons of limited availability of RE source in the State and already tied up PPAs. CESC Ltd also suggested to revise the RPO trajectory.

The Commission here observes that promotion of RE is associated to a greater objective of greener environment for us and our future generation. Though there are some difficulties and initial hurdles, all will have to strive for reducing carbon foot-print. The issue raised by licensees regarding limited RE source in the State and existing PPAs are already discussed in details in the previous paragraphs. Moreover, at present the solar and wind price determined through

competitive biddings are comparable with conventional sources and even lower in some cases. Further with waiver of ISTS charges and losses, the impact on tariff due to RPO will be minimum.

It is further noted that in-terms of Tariff Policy 2016, appropriate commission has to specify the minimum percentage in terms of section 86(1)(e) of the Act and long-term trajectory for renewable purchase will be specified by MOP in consultation with MNRE. Relevant paragraph of Tariff Policy 2016 is reproduced below:

“6.4(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.”

Accordingly, MOP, GoI vide order dated 14.06.2018 has notified solar target as 10.50% and non-solar target as 10.50% for 2021-22. However, the Commission has adopted a balanced approach to protect the interest of both sides and proposed a gradual increase in the RPO trajectory of the State to match it with MoP target in near future, considering the gradual increase in system as well as load growth. The proposed percentage of RPO specified by the Commission is the minimum percentage and any licensee can endeavour to achieve the target notified by the MoP, GoI.

D. Considerable time of 2020-21 has been passed and reduced demand due to covid-19 pandemic.

Commission admits that a considerable time of 2020-21 has already been passed and demand of the licensees has badly affected by the spread of Covid-19 pandemic. Under these circumstances, the Commission finds it logical to compute the renewable purchase obligation as per this revised RPO rate proportionate to the balance period of 2020-21 from the date of publication of this RE First Amendment 2020. The impact of Covid-19 regarding fulfilment of RPO will be suitably dealt during FPPCA and APR.

E. Purchase of Fossil fuel-based co-generation power to fulfil RPO target:

Commission has already cleared its stand in paragraph 12.3 above.

F. RPO obligation for Open Access consumers who also chose to remain consumer of distribution licensees should be limited to their Open Access requirement.

Commission agrees to this proposal submitted by CESC Ltd. and accordingly decides to incorporate a suitable provision in the regulation.

G. Issue of RPO obligation of Captive Power Plant:

CESC Ltd requested to clarify whether, RPO of CPP may be pegged at the RPO level applicable in the year in which CPP was commissioned in line with clarification issued by Ministry of Power notification No.30/04/2018-R&R dated 01.02.2019.

The Commission in this regard observes that, Ministry of Power, Government of India has subsequently made further clarification vide notification dated 01.10.2019 regarding RPO compliance of CPP commissioned prior to 01.04.2016 and commissioned after 01.04.2016. The commission appreciates the suggestion of CESC Ltd and accordingly modifies the draft.

H. Issue of Fixed cost under-recovery in net-metering:

CESC Ltd has expressed its concern over fixed cost recovery by the licensee in case of net-metering arrangement. The Commission is well aware that under the present two-part tariff structure the entire fixed cost to maintain the distribution network is not recovered under the demand charge component of retail tariff. Rather a part of such fixed cost is recovered through energy charge component. Thus, the Commission in the Principal Regulations has limited the adjustment on net metering upto 90% of total consumption of electricity by a consumer, in order to ensure recovery of minimum energy charge by the licensee to compensate its fixed cost burden. The same principle is maintained in the draft Regulation.

I. Separate target for solar and non-solar with limited fungibility across sources:

Some of the stakeholders have opposed the segregation of solar and non-solar targets under renewable purchase obligation. It is also suggested that full fungibility across RE sources would enhance economic efficiency of adoption of clean energy options. The Commission observes that Tariff Policy 2016 requires to specify separate minimum target for solar RPO by the SERCs. Further, in terms of Tariff Policy 2016 GoI has to specify the long-term RPO trajectory. Accordingly, GOI in its order no 23/03/2016-R&R dated 14.06.2018 notified separate target for solar and non-solar RPO with limited fungibility between solar and non-solar RPO to ensure their respective compliance (beyond 85%). Thus, the Commission finds it suitable to provide solar and non-solar targets separately in line with national policy.

J. Not considering large hydro from the definition of Renewable Energy:

Stake holders expressed their concern for not mentioning large hydro sources under the Renewable Energy definition and not allowing it for non-solar RPO fulfilment. In this regard Commission observes that, definition of renewable energy should be aligned across the country

and include the sources as specified by MNRE. The proposed definition in the draft amendment is reproduced below:

'Renewable Energy Sources' means sources such as small hydro, wind, solar including its integration with combined cycle, biomass, bio fuel cogeneration, urban or municipal waste and other such sources as approved by the MNRE;''

From the proposed definition it is clear that whenever MNRE approves large hydro source as RE sources, the same will automatically include under RE as per the definition.

Further, in terms of paragraph 6.4(1) of the National Tariff Policy 2016, Ministry of Power, GoI is empowered for projecting the long-term growth trajectory for RPO in consultation with MNRE. MoP, GoI vide order no 23/03/2016-R&R dated 14.06.2018 has categorically excluded consumption made from hydro power source from total consumption for renewable purchase obligation purpose.

Considering the present RPO status and to limit the tariff impact, the Commission has proposed RPO trajectory for the State lower than the uniform trajectory proposed by MoP, GoI. However, the Commission decides to follow the same principle.

K. Impact of huge RE integration in the grid reliability and issue of balancing power:

Stakeholders have raised their concern over grid reliability and stability issue due to RE integration including RE import outside the State. Renewable energy specially from solar and wind being intermittent in nature it imposes certain challenges over grid management. However, with aid of advanced technologies near accurate forecasting of solar and wind energy are quite possible now-a days. There always remains a requirement of balancing power especially for solar and wind. Commission observes that 5% spinning reserve is already allowed in the Tariff Regulations and further with introduction of real-time market sourcing of balancing power becomes quite easier. The Commission further observes that, with proper long-term planning in consultation with STU the corridor availability and grid reliability issues can be solved. In this respect the Commission notes that except WBSEDCL all other distribution licensees do not have sufficient long-term access contract with STU. Thus, a proper co-ordinated planning with STU, use of advance technologies, etc will help to overcome the number of hurdles. Regarding harmonics and other disturbances, the draft categorically in clause (h) of regulation 7.2 specified for compliance of limits specified in IEGC and IEEE technical standard. It is the responsibility of the distribution licensee to ensure the compliances before allowing grid connectivity. The Commission will also monitor the issues on a regular basis and come out with practice directions or orders as and when necessary.

L. Adoption of REC Mechanism:

CESC Ltd submitted that, RECs could be an option to meet RPO if such certificates are allowed for fulfilment of RPO. CESC Ltd. further submitted that, with REC as an option to meet RPO target, the adverse impact on State grid will be minimized.

Commission observes that, REC mechanism is also being identified as one of the possible ways for RPO obligation in the Tariff Policy 2016. Thus, considering the suggestion of CESC Ltd., the Commission finds it suitable to allow REC purchase as a last resort to fulfil the RPO. [

M. State level pool of Renewable Energy:

CESC Ltd. proposed for a State level pool for the obligated entities. Renewable energy generated within the State may be considered to be notionally consumed by the obligated entities in proportion to their respective RPO requirement.

The Commission welcomes this innovative idea of the stakeholder, but this requires identification of sources, an independent body to maintain the pool, fixing proper payment security mechanism and above all a government policy. As the issue is not under the purview of present draft such mechanism could not be considered during framing of RE First Amendment 2020.

N. Bundling energy:

CESC Ltd. submitted that, if the distribution licensee's power purchase from another license, whose power procurement mix contain renewable and/or cogenerations sources, the same proportion of such energy may be allowed to be passed on notionally to the buyer licensee.

Commission observes that, in regulation 3.7 of the Principal Regulations already provides similar provision, in case, one distribution licensee purchases power from another distribution licensee. The relevant regulation is reproduced below for ready reference:

"3.7 Notwithstanding anything contained contrary to any other regulations, energy purchased by any distribution licensee from another distribution licensee within the State at a purchase price approved by the Commission in the tariff order of the purchasing distribution licensee where part of such purchase is considered as purchased as renewable and/or cogeneration energy as agreed by both the parties in the concerned PPA, then such part of the energy procured will be considered for RPO determination and in such case the capping price under regulation 6.0 of these regulations will not become applicable."

O. Banking and rollover of RPO:

IPCL suggested that credit for excess RE purchase may be allowed to be adjusted in the year of shortfall within either preceding or succeeding control period.

The Commission appreciates the suggestion of IPCL. But there are two sides of the coin i.e banking of excess RPO during a year to allow credit in the subsequent years and at the same time question of rollover of the shortfall RPO to the next year will appear. Considering the present shortfall of overall RPO in the State by most of the licensees the Commission does not find it suitable to incorporate any provision of banking and rollover of RPO to the subsequent financial year. Further a limited fungibility between solar and non-solar sources has been proposed in the draft to take care of small variances of RE generation.

15.4 **Provision in RE First Amendment 2020:**

"3.0 Renewable Purchase Obligation (RPO) Target:

3.1 All efforts shall be made to meet the targets in the table below by purchase of electricity and/or generation of electricity from renewable energy sources by (i) the distribution licensees, (ii) a person using power from own captive power plant based on conventional fossil fuel with installed capacity of 1 MW and above, and (iii) open access consumers, expressed as percentage of their total consumption of electricity in a year during the years 2020-21 to 2022-23:

year	Minimum quantum of purchase (in %) of total consumption from Renewable energy sources		
	Solar	Non- Solar	Total
2020-21	3.00	9.00	12.00
2021-22	4.50	10.00	14.50
2022-23	6.00	11.00	17.00

RPO target(s) stipulated above are minimum target(s) to be achieved. Obligated Entity shall endeavour to achieve RPO target notified by the Government of India from time to time:

Provided that, the obligation will be on total consumption of electricity excluding consumptions met from hydro sources of power other than small hydro sources:

Provided further that distribution licensee shall compulsorily procure 100% power generated from waste to Energy plants located in their respective supply area:

Provided further 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 purchased beyond specified Non-Solar RPO for that particular year:

Provided further that on achievement of Non-Solar RPO compliance to the extent of 85% and above, remaining shortfall if any, can be met by excess Solar energy purchased beyond specified Solar RPO for that particular year:

Provided further that for distribution licensee such target obligation indicated hereinbefore in the above table shall be considered on the basis of summated energy available as detailed in regulation 3.4 of these Regulations:

Provided further that for the purpose of renewable purchase obligation the power purchases under the power purchase agreements already entered into by the distribution licensees from renewable energy sources and consented to by the Commission shall continue to be made till their present validity, even if the total purchases under such agreements exceed the percentage as specified in regulation 3.1 of these Regulations:

Provided further that notwithstanding anything contained contrary to any other regulations, for Captive Power Plant commissioned before 01.04.2016, RPO shall be at the level of applicable RPO as mandated for 2015-16. For captive power plant commissioned from 01.04.2016 onwards, the RPO level as mandated by the Commission or RPO target set by Government of India whichever is higher for the year of commissioning of captive power plant will be applicable. In case of any augmentation of the capacity, the RPO for augmented capacity shall be the RPO applicable for the year in which the augmented capacity is commissioned:

Provided further that, for open access consumers also drawing power in consumer mode from a licensee, the RPO is restricted to the open access purchase only:

Provided further that for the year 2020-21, the minimum target set in the table above shall be applicable from the date of publication of these amendment regulations on the consumption for the balance period of the year."

Further in line with paragraph (L) of above analysis the following clause (viii) is added at the end of regulation 3.4 of the Principle Regulations:

"(viii) As a last resort to fulfil RPO obligation, distribution licensee may purchase solar and non-solar REC, as the case may be.

16. Regulation 3.2:

16.1 Proposed in Draft RE First Amendment 2020:

“3.2 The quantum of obligation is with regard to the energy input in the system of the licensee(s) after adjustment of losses. For subsequent years (from 2023-24 and onwards) the Commission in terms of clause (e) of sub-section (1) of section 86 of the Act, will specify the RPO trajectory through separate order.”

16.2 Comments Received:

(a) Comments from WBSEDCL:

The quantum of obligation with regard to the energy input in the system of the licensee(s) for sale of power to the consumers is,

- (i) total input less input from RE power and
- (ii) then adjustment of losses & input used for other than sale to consumer and
- (iii) then deduction of consumption from hydro and generation from pump storage.

(b) Comments from IPCL:

The quantum of RPO obligation for DISCOM will be with respect to the input energy injected by the RE source for both open access consumers & directly connected to DISCOM grid. Like it is mentioned for distribution losses, similarly the renewable energy which is being considered as a part of STU loss at injection end or drawl end of open access, such amount of energy against STU losses shall also be considered while calculating the RPO of the distribution licensee.

16.3 Analysis and Decision of the Commission:

In terms of clause (e) of subsection (1) of section 86 of the Electricity Act 2003, RPO is on the total consumption of electricity in the area of a distribution licensee. Subsequently in terms of Tariff Policy, while specifying long-term projection the Government of India's vide letter dated 14.07.2018 specified that, consumption met from hydro sources of power other than small hydro sources shall be excluded from the total consumption for arriving at RPO obligation. Thus, it is clear that the 'base value' for RPO computation will be total consumption reduced by consumption met from hydro sources and RPO percentage will be applicable on such 'base value'. From this regulation 3.2 it is clear that the quantum of obligation of RE purchase (i.e in regard to the energy input in the system of distribution licensee) shall be computed with adjustment of losses. It is further observed that, pumped storage is not to be considered at par with hydro power stations for the purpose of regulation 3.1, as input energy for pumped storage is basically electrical energy and not from a renewable source.

16.4 Provision in RE First Amendment 2020:

“3.2 The quantum of obligation is with regard to the energy input in the system of the distribution licensee(s) after adjustment of losses. For subsequent years (from 2023-24 and onwards) the Commission in terms of clause (e) of sub-section (1) of section 86 of the Act, will specify the RPO trajectory through separate order.

17. Regulation 3.3:

17.1 Proposed in Draft RE First Amendment 2020:

Regulation 3.3 of the Principal Regulations is proposed to be deleted.

17.2 Comments Received: No specific comments / suggestions received from the stakeholders.

17.3 Provision in RE First Amendment 2020: In absence of any comments/suggestions/objections from the stakeholders the draft regulation is retained.

18. Regulation 3.4; Regulation 3.7; Regulation 3.9 and Regulation 3.13:

18.1 Proposed in Draft RE First Amendment 2020:

The phrases “renewable and / or cogeneration”, “renewable or cogeneration” and “cogeneration and / or renewable” are to be replaced by the word “renewable” in regulation 3.4, 3.7, 3.9 and 3.13.

18.2 Comments Received:

(a) Comments from WBSEDCL:

Considering the justification/ explanation given in 2.1 (xxv), fossil fuel co-generation may be kept to meet RPO as per existing Regulation to promote co-generation. If not agreed, such purchase may be allowed to meet RPO to avoid purchase of additional RE power till expiry of existing PPA with co-generators, alternately PPAs may be annulled.

(b) Comments from CESC:

CESC requested to allow cogeneration for RPO fulfilment irrespective of nature of source in line with their comment given in Paragraph 12.

18.3 Analysis and Decision of the Commission:

The matter has already been discussed in detail at paragraph 12.3 above.

18.4 Provision in RE First Amendment 2020:

The draft regulation retained.

19. Clause (iv) of Regulation 3.4:

19.1 Proposed in Draft RE First Amendment 2020:

"iv) purchasing renewable energy from any generator through open access at a mutually agreed price within the capping price as mentioned in regulation 6.0 or through power exchange at market determined price or from Solar Energy Corporation of India Limited (SECI) at competitively determined price or from other sources where tariff is discovered in accordance with section 63 of the Act;"

19.2 Comments Received: No specific comments / suggestions received from the stakeholders.

19.3 Provision in RE First Amendment 2020: In absence of any comments/suggestions/objections from the stakeholders the draft regulation is retained.

20. Regulation 3.5:

20.1 Proposed in Draft RE First Amendment 2020:

"3.5 To meet the RPO distribution licensees shall make advertisement in at least two widely published national English daily newspapers and at least one widely published Bengali daily newspaper every year. Distribution licensees shall also actively participate in the portal made by Government for purchase of renewable energy through competitive biddings or endeavour to purchase renewable power through government agencies like SECI where tariff is discovered through competitive bidding in pursuance of section 63 of the Act."

20.2 Comments Received: No specific comments / suggestions received from the stakeholders.

20.3 Analysis and Decision of the Commission: Though no comment /suggestion / objection has been received, but it is observed that in addition to publication in newspapers if the licensees also update their publication in their respective website, it would reach more people without any additional expenditure. Thus, the draft is modified to that extent.

20.4 Provision in RE First Amendment 2020:

"3.5 To meet the RPO distribution licensees shall make advertisement in at least two widely published national English daily newspapers and at least one widely published Bengali daily newspaper every year and upload a copy of such advertisement in their respective website. Distribution licensees shall also actively participate in the portal made by Government for purchase of renewable energy through competitive biddings or endeavour to purchase renewable power

through government agencies like SECI where tariff is discovered through competitive bidding in pursuance of section 63 of the Act."

21. Regulation 3.10:

21.1 Proposed in Draft RE First Amendment 2020:

"3.10 The energy drawal by any open access customer in the area of distribution licensee through purchase of such energy from any renewable source in excess of its own RPO shall be considered for meeting the RPO of the distribution licensee. The energy generated by the consumer from roof-top solar system under net-metering or net billing arrangement, if such consumer is not an obligated entity under regulation 3.1, shall also be considered for meeting the RPO of the distribution licensee. The renewable energy which is being considered as a part of distribution loss during wheeling through the distribution network of any licensee at injection end or drawal end of open access or as intervening network and for which in the wheeling agreement of open access such loss is accounted in kind or price then such amount of energy against distribution loss shall also be considered while calculating the RPO of the distribution licensee."

21.2 Comments Received:

(a) Comments from WBSEDCL:

At present there is no platform from where Distribution Licensee may account for the quantum of excess RE power purchased by open access customer above its RPO target on monthly basis to make programme of purchase of RE power to meet RPO target. Modality for accounting such excess RE power purchased by open access customer needs to be established so that distribution licensee can account for it.

(b) Comments from CESC Limited:

The sentence may be reworded as

"The energy drawal by any open access customer in the area of distribution licensee through purchase of such energy from any renewable and/or cogeneration source in excess of its own RPO shall be considered for meeting the RPO of the distribution licensee. The energy generated by the consumer from roof-top solar system under net-metering or net billing arrangement shall also be considered for meeting the RPO of the distribution licensee in the following manner:

- 1) the entire generated energy when such consumer is not an obligated entity under regulation 3.1, and
- 2) the energy generated by the consumer from roof-top solar system in excess of its own RPO when such consumer is an obligated entity under regulation 3.1. The renewable and/or cogeneration energy which is being considered as a part of distribution loss during wheeling through the distribution network of any licensee at injection end or drawal end of open access or as intervening network and for which in the wheeling agreement of open access such loss is accounted in kind or price then such amount of energy against distribution loss shall also be considered while calculating the RPO of the distribution licensee.”

CESC requested to allow cogeneration for RPO fulfilment irrespective of nature of source in line with their comment given in Paragraph 12.

Commercial mechanism for the energy generated by the consumer from rooftop solar system:

Though the Commission has proposed to implement AMI metering arrangement to capture solar generation from roof-top sources, but the panels are normally located at various locations inside consumer premises and are connected at multiple points with the consumers’ internal electrical network. Installing AMI for each such installation will be an extremely costly proposition. Moreover, meter reading of all such generation meters by the licensee will entail huge opex and would be time consuming. Data capturing and storing will also draw considerable capex. Therefore, the Commission may allow arriving at the solar generation figure with an appropriate Capacity Utilisation Factor in absence of which, providing the generation figure in the electricity bill, as proposed by the Commission will be extremely difficult. The Commission may specify a minimum Capacity Utilisation Factor level to ensure that the distributed generation sources are operating efficiently.

21.3 Analysis and Decision of the Commission:

From the submissions of different stakeholders mentioned in paragraph 21.2 above the relevant issues are discussed hereinunder one by one:

A. Accounting of excess RE by OA consumer/captive generators and its modality:

CESC Ltd suggested that energy generated by a consumer from roof-top solar PV in excess of its own obligation may be considered for meeting RPO of distribution licensee. The Commission considers the proposal of CESC Ltd. However, if any RE power is registered for renewable energy certificate, that shall not be considered for RPO purpose. Further, as RPO target is annual

based, hence licensee shall consider the excess renewable purchase / generated by an obligated entity /consumer only after completion of the financial year. The draft regulation is modified accordingly.

WBSEDCL in its submission proposed to finalise the modality for accounting RE power purchase by open access customer for proper implementing the proposed regulation. The Commission observed that, it is not only required to capture the excess power purchase but also to monitor the fulfilment of RPO obligation by open access customers and person using power from captive power plant. At present, SLDC has been designated as Nodal Agency for State in terms of WBERC (Procedure for Accreditation of a Renewable Generation Project for REC Mechanism) Regulations, 2013, but its role is limited to accreditation and recommending the RE projects for registration of REC. It is not possible for SLDC to collect the information of those RE projects who are not opted for REC.

The Commission observes that open access customers or person availing power from captive RE generators are generally connected to the network of distribution licensee and by way of their connectivity there is established communication channel between such consumers and distribution licensee. Thus, distribution licensee can easily collect the required information as well as monitor RPO compliance of such obligated entities. Hence, suitable provisions are incorporated in this amendment to empower the distribution licensees under the regulation till some specific entity or agency is designated for this purpose. It is also found prudent that, RE power used by any person from RE based captive plant, shall come under the RPO meet by the distribution licensee in whose area of supply it is located.

B. Proposal for minimum capacity utilisation factor:

CESC Ltd. suggested to consider a minimum CUF to be specified by the Commission for accounting the generation from solar roof-top PV in order to avoid the cost of meter reading and installation of meters in each of the interconnecting point, in case roof-top solar-PVs are connected at multiple points with the consumers' internal electrical network. The Commission observes that in a geographically diversified State like West Bengal identifying a minimum CUF is not a feasible solution. Further the draft proposes to follow CEA metering regulations and CEA technical standards for metering and connectivity of solar-PV system. As the generation for solar-roof top in excess of obligation of the consumer, if any, will meet the RPO of the licensee, it is for the own benefit of the licensee to take generation meter reading. Moreover, with AMI facility the cost of meter-reading will be low.

21.4 Provision in RE First Amendment 2020:

"3.10 The renewable energy drawal by any open access customer or a person using power from own captive power plant based on conventional fossil fuel with installed capacity of 1 MW and above, in the area of distribution licensee in excess of its own RPO shall be considered for meeting the RPO of the distribution licensee. The energy generated by the consumer from roof-top solar system under net-metering or net billing arrangement, in excess of its renewable purchase obligation as per regulation 3.1 of these Regulations, shall also be considered for meeting the RPO of the distribution licensee. The open access customers and the person using power from own captive power plant based on conventional fossil fuel with installed capacity of 1 MW and above, shall quarterly submit a report containing actual consumption, energy sourced through open access / from captive plant, purchase / sourcing from renewable energy sources and solar & non-solar RPO compliance to the connected distribution licensee. The renewable energy which is being considered as a part of distribution loss during wheeling through the distribution network of any licensee at injection end or drawal end of open access or as intervening network and for which in the wheeling agreement of open access such loss is accounted in kind or price then such amount of energy against distribution loss shall also be considered while calculating the RPO of the distribution licensee:

Provided that if any renewable energy is registered for renewable energy certificate, that energy shall not qualify for fulfilment of RPO:

Provided further that licensee shall consider the excess renewable purchase / generated by an entity /consumer obligated under regulation 3.1 after completion of the financial year subject to annual RPO fulfilment of the obligated entity/ consumer:

Provided further that, renewable energy drawl by a user of renewable based captive power plant shall be considered for meeting the RPO of the distribution licensee in whose area of supply such user is located."

22. Regulation 3.11:

22.1 Proposed in Draft RE First Amendment 2020:

Regulation 3.11 of the Principal Regulations is proposed to be deleted.

22.2 Comments Received: No specific comments / suggestions received from the stakeholders.

22.3 Provision in RE First Amendment 2020: In absence of any comments/suggestions/objections from the stakeholders the draft regulation is retained.

23. Regulation 4.0:

23.1 Proposed in Draft RE First Amendment 2020:

"4.0 Consequence of Non-Compliance of RPO:

In case of non-fulfilment of RPO, Commission may suo-motu or on the basis of any application initiate proceedings under section 142 of the Act if it is established that Licensee has not complied with regulation 3.5"

23.2 Comments Received:

(a) Comments from CESC:

CESC requested to allow cogeneration for RPO fulfilment irrespective of nature of source in line with their comment given in Paragraph 12.

(b) Comments from IPCL:

The condition of minimum purchase requirement for the Distribution Licensee would not be applicable under Force Majeure Conditions such as war, strike, lockout, riots act of god or natural calamity etc. so as enable the Distribution Licensee to maintain the supply to its consumers and public services under emergency conditions. DISCOMs should not be penalised for not meeting the RPO target in such conditions (force majeure).

DISCOMs should be allowed with incentives on over achievement of RPO target.

23.3 Analysis and Decision of the Commission:

The Commission observes that, the issue of co-generation power as submitted by CESC Ltd has already been discussed in paragraph 12.3 above.

Regarding the proposal of IPCL, the Commission observes that publication of advertisement in newspaper & website and participation in Government portal for procurement of RE power during a year as required under regulation 3.5 is no way going to be affected by any Force Majeure conditions.

It is observed that RE purchase obligation has a major role towards reducing carbon footprint as well as a concern of national policy. Thus, instead of limiting it within the scope of proceeding under this section 142 of the Act, the Commission finds it suitable to keep the options open for dealing with non-fulfilment of RPO. Thus it is decided to delete regulations 4.0 and 4.1.

23.4 Provision in RE First Amendment 2020:

Regulation 4.0 of the Principal Regulations shall be deleted.

24. Clause (i) and (iii) of Regulation 4.1:

24.1 Proposed in Draft RE First Amendment 2020:

The phrase 'renewable and cogeneration' shall be replaced by the word 'renewable' in clause (i) and (iii) of regulation 4.0.

24.2 Comments Received:

(a) Comments from WBSEDCL:

Considering the justification/ explanation given in 2.1 (xxv), fossil fuel co-generation may be kept to meet RPO as per existing Regulation to promote co-generation. If not agreed, such purchase may be allowed to meet RPO to avoid purchase of additional RE power till expiry of existing PPA with co-generators, alternately PPAs may be annulled.

24.3 Analysis and Decision of the Commission:

In line with discussion- in para 23.3 above it is decided to delete regulation 4.1 of the Principal Regulations. Thus the clause i) to (v) of regulation 4.1 stand deleted. .

24.4 Provision in RE First Amendment 2020:

Regulation 4.1 of the Principal Regulations shall be deleted.

25. Regulation 4.1 of the Principal Regulations shall be deleted **Regulation 4.2 to be inserted after Regulation 4.1:**

25.1 Proposed in Draft RE First Amendment 2020:

"4.2 Purchase of Power from fossil fuel-based co-generation plants:

Distribution licensee may purchase energy from conventional fossil-fuel based co-generation plant located in its area of supply at a mutually agreed price subject to the ceiling price specified in these Regulations. However, purchase of electricity from fossil fuel-based co-generation plant would not qualify for fulfilment of RPO."

25.2 Comments Received:

(a) Comments from WBSEDCL:

WBSEDCL reiterated that, considering the justification/ explanation given in 2.1 (xxv), fossil fuel co-generation may be kept to meet RPO as per existing Regulation to promote co-generation. If not agreed, such purchase may be allowed to meet RPO to avoid purchase of additional RE power till expiry of existing PPA with co-generators, alternately PPAs may be annulled.

(b) Comments from CESC:

The Commission in SM-24/20-21 dated 2 September 2020 has also held that cogeneration needs to be promoted under the Electricity Act, 2003. Even after acknowledging such generation sources as energy efficient, mandating sale of fossil fuel-based cogeneration energy only to the area distribution licensee will significantly reduce the available options of power sale by such generating stations and ultimately will discourage investments in this energy efficient technology. The proposed mandate of the Commission of limiting the option of sale of fossil fuel-based cogeneration energy only to the area distribution licensee is against the principle of promoting cogeneration as enshrined in section 86 (1) (e) of the Electricity Act, 2003.

(c) Comments from IPCL:

It is humbly submitted that the disqualification of purchase of electricity from fossil fuel-based co-generation plant from being considered under RPO may be kept in abeyance till next financial year.

Discoms prepare and operationalize their power purchase plan well before the start of the financial year. Therefore, for the year 2020-21, the Discoms have already procured /scheduled the electricity for almost half of the current financial year. In case, the disqualification is made effective immediately, it won't be possible to make up for the deficiency in procurement already carried out/ planned from such source in the current financial year for RPO fulfilment. Therefore, this regulation may be made effective from next financial year.

However, it is humbly submitted that even fossil fuel-based cogeneration also contributes to greenhouse gas abatement. Cogeneration using CHP is considered under green technology. Therefore, fossil fuel-based cogeneration may kindly be continued to consider under the ambit of RE.

(d) Comments from Electrosteel:

Electrosteel requested to continue to keep waste heat power generation as cogeneration and renewable source of energy and would continue to qualify for RPO obligation as considered in WBERC (Cogeneration and generation of Electricity from renewable source of energy) Regulation 50/ WBERC dated 23.03.2013 and Reference No. WBERC/Regulation-64/20-

21/5729 dated 11.06.2020. Encouragement for this type generation has been given all along and should be continued.

25.3 Analysis and Decision of the Commission:

From the submissions of different stakeholders mentioned in paragraph 25.2 above the relevant issues are discussed hereinunder one by one:

A. Consideration of fossil fuel-based cogeneration for meeting RPO:

The electricity generated from fossil fuel-based cogeneration cannot be considered for meeting the RPO obligation for the licensees. The issue has already been discussed in detail in paragraph 12.3 above citing the legal interpretation made by Hon'ble APTEL in its final judgement in the Lloyds case.

B. Promotion of fossil fuel-based co-generation under section 86(1)(e):

Hon'ble Tribunal in its final Judgement dated 02.12.2013 inter-alia clarified that, the State Commission can promote fossil fuel-based cogeneration by other measures such as facilitating sale of surplus electricity available at such co-generation plants in the interest of promoting energy efficiency and grid security, etc. Accordingly, to promote fossil fuel-based cogeneration it is proposed under draft regulation 4.2 that distribution licensees may purchase such power at mutually agreed price subject to ceiling price specified in these regulations. The ceiling price for co-generation is also specified in the Principal Regulations. The Commission observes that, it will help the co-generation plants to sale their surplus power to the distribution licensee. Further, considering the present ceiling price of Rs 3.34 /kWh it is also a better proposition for the distribution licensees to purchase power from the co-generation plants. However, the co-generation plants are free to sale their generation through competitive bidding route.

C. Limiting the option of sale of fossil fuel-based:

CESC Ltd pointed out that the proposed draft limits the option of sale of fossil fuel-based cogeneration energy only to the area of distribution licensee. The Commission appreciates the concern raised by the licensee and finds it suitable to allow the facility to purchase through negotiated route within the ceiling tariff for all the fossil fuel-based co-generation plants located in the State. The draft is modified accordingly.

25.4 Provision in RE First Amendment 2020:

"4.2 Purchase of Power from fossil fuel-based co-generation plants:

Distribution licensee may purchase energy from conventional fossil-fuel based co-generation plant located in the State at a mutually agreed price subject to the ceiling price specified in these Regulations. However, purchase of electricity from fossil fuel-based co-generation plant would not qualify for fulfilment of RPO."

26. Regulation 5.3:

26.1 Proposed in Draft RE First Amendment 2020:

"5.3 Notwithstanding anything contained to the contrary in any other regulations, the solar power shall be purchased through competitive bidding only except purchase from solar-PV system of eligible consumers. However, the solar power purchased from any source under JNNSM bundled power or SECI which are selected through competitive bidding, will not be required to go through any separate competitive bidding by the licensee."

26.2 Comments Received:

(a) Comments from CESC:

Applicability of Section 62 for power procurement:

To procure power from renewable sources, advertisements were issued in widely circulated newspapers. No suitable offers were received. The impact on average tariff was coming out to be greater than 2 paise per kWh. In the scenario of falling solar tariff trend, competitive bidding is the preferred route to procure solar power for the overall benefit of consumers. However, CESC requested the Commission to retain procurement through Section 62 of the Electricity Act, 2003 also, as the discovered tariff through competitive bidding may exhibit a radical shift in the future. Under Section 62 of the Electricity Act, 2003, the Commission will also have an option to look into the power purchase mechanism.

(b) Comments from HEL:

The Government of India has set up an ambitious target of renewable capacity addition, and achieving this target may get severely affected if we resort to capacity addition only through competitive bidding. Competitive bidding is appearing to be a consumer-friendly route for renewable capacity addition at present, but discovered tariff may show radical shift in the future. In this scenario, HEL submitted that tariff determination under section 62 of the Electricity Act, 2003 may be retained for renewable power procurement

26.3 Analysis and Decision of the Commission:

Promoting competition and efficiency are the key features of the Electricity Act 2003. The Tariff Policy 2016 also suggests to procure power from renewable energy sources through competitive bidding to keep the tariff low. The relevant paragraph is reproduced below:

“6.4(2) States shall endeavor to procure power from renewable energy sources through competitive bidding to keep the tariff low, except from the waste to energy plants. Procurement of power by Distribution Licensee from renewable energy sources from projects above the notified capacity, shall be done through competitive bidding process, from the date to be notified by the Central Government.

However, till such notification, any such procurement of power from renewable energy sources projects, may be done under Section 62 of the Electricity Act, 2003. While determining the tariff from such sources, the Appropriate Commission shall take into account the solar radiation and wind intensity which may differ from area to area to ensure that the benefits are passed on to the consumers.”

The Ministry of Power on 03.08.2017 has notified competitive bidding guideline for procuring solar power for capacity 5MW and above. Further, considering the present development of solar market and the discovered solar rate under the competitive bidding, Commission finds it suitable to allow purchase of solar power under competitive bidding route for overall benefit of the sector.

However, for the small solar projects below 5MW within the State, who cannot participate in the competitive bidding process under present guideline, the Commission finds it suitable to allow purchase of power from such solar plant through feed-in-tariff as to be notified by the Commission from time to time. Till such notification is made by the Commission, tariff for purchase of power by distribution licensee within the State from solar power plant below 5MW will be determined on case to case basis.

It is further observed that, the issue of net-metering and net-billing has already been dealt under schedule-1 and schedule -2 of the draft amendment respectively. Hence, specifying further conditions of dealing with injection of solar power by grid connected eligible consumer under this regulation is found redundant and thus avoided.

The Commission in line with the above decision finds it suitable to modify the draft regulation accordingly.

26.4 Provision in RE First Amendment 2020:

“5.3 Notwithstanding anything contained to the contrary in any other regulations, distribution licensee shall purchase solar power through competitive bidding only except purchase from grid-connected solar projects below the notified capacity for competitive bidding located within

the State. However, the solar power purchased from any source under JNNSM bundled power or SECI which are selected through competitive bidding or from power exchange, will not be required to go through any separate competitive bidding by the licensee:

Provided that purchase of power from grid-connected solar projects below the notified capacity for competitive bidding located within the State shall be within the limit of feed-in-tariff to be notified by the Commission from time to time. Till such notification is made by the Commission tariff for such solar projects will be determined by the Commission on case to case basis."

27. Paragraph (c) of Clause (v) of Regulation 6.1:

27.1 Proposed in Draft RE First Amendment 2020:

"(c) Solar PV Generation System can be installed for injecting into the distribution system of a licensee by any eligible consumer in its premises:

Provided that total installed capacity in such premises does not exceed the sanctioned load (in kW) or contract demand (in kVA) of the consumer, as applicable:

Provided also that eligible consumers under domestic category upto sanctioned load / contract demand of 6 kW and all eligible consumers under agriculture category may set up solar PV system under the Net Metering Arrangement specified in Schedule-1 of these Regulations:

Provided further that eligible consumers, other than domestic category having sanctioned load / contract demand more than 6 kW and agriculture category, may set up the solar PV system only under Net Billing Arrangement specified in Schedule-2 of these Regulations:

Provided further that Net Metering Arrangement or Net Billing Arrangement, as the case may be, shall be permitted by the distribution licensee on a non-discriminatory basis and distribution transformer-wise or feeder-wise 'first come first serve' basis to eligible consumers:

Provided further that for the solar-PV generating system, which are already connected with the distribution network under Net-Metering Arrangement shall continue with the existing accounting and settlement mechanism."

27.2 Comments Received:

(a) Comments from WBSEDCL:

Domestic consumers should be kept under net-billing system to avoid complication due to switching over from net metering facility to net billing facility with the enhancement of load beyond 6 KW and there is possibility of losing cross subsidy from big domestic consumers.

Govt school which is presently getting net metering facility under different Govt. Scheme should continue. Agriculture pumpset under L& MV category may be provided net-metering facility.

Accordingly, this provision should also be revised as follows:

"Provided further that eligible consumers, other than Govt. School and agriculture category (pumpset) under L& MV category, may set up the solar PV system only under Net Billing Arrangement specified in Schedule-2 of these Regulations: -----"

Further FIT under Net billing system should be less than the minimum energy charge of all consumer categories under net billing system of WBSEDCL (including DPL area) and should be at par with the rate discovered through competitive bidding.

In case consumers under Net Billing system resorts to unlawful drawal of solar power directly from solar panel before capturing of entire solar generation, then net billing facility will be withdrawn immediately for violation of agreement.

(b) Comments from CESC:

1. Upper limit of installing solar capacity:

As per the proposed draft regulations, the upper limit of installing solar PV projects is the contract load. There is uncertainty whether a consumer is allowed to reduce contract load after installing a certain capacity equal to the contract load. It might be possible that the consumer may want to reduce the connected load due to some reasons. We humbly submit that the option of downward revision of contract demand may kindly be withdrawn for consumers who have installed solar capacities under net metering / net billing arrangement.

Therefore, we suggest that installed capacity for net metering and net billing should be limited to contract load of the consumer subject to the adherence of 50% of feeder/ distribution transformer capacity cumulatively.

2. Eligibility criteria of the consumers:

As per the proposed draft amendment, domestic consumers up to contract load of 6 kW and all agriculture category consumers, may install solar PV under net metering arrangement. Other consumers apart from domestic category having contract load more than 6 kW, are eligible for only net billing arrangement. CESC understands that the remaining consumers will not be allowed either net metering or net billing arrangement.

The consumers with sanctioned load / contracted demand of 6 kW consume significant amount of electricity and allowing such consumers the benefit of net metering will affect fixed cost recovery resulting in burdening of marginal consumers. The lifeline consumers have been defined by the Commission as consumers with sanctioned load / contract demand

of 0.3 kW, which is only 5% of the proposed threshold. CESC requested the Commission to specify the threshold sanctioned load / contract demand at 2 kW, which is sufficient to take care of normal essential loads including one air-conditioning unit. Also, CESC requested the Commission to allow net billing arrangement for all consumers including domestic category having contract load more than 2 kW.

Any rooftop solar capacity addition by existing net metered consumers will be considered as per the proposed new provision of the draft amendment regulations.

(c) Comments from M/s SGPL and M/s RM LLP:

M/s SGPL, M/s RM LLP along with other similar firms involved in the roof top solar industry of West Bengal have been able to generate interest from commercial & industrial (C&I) clients due to commission's favourable net meter policy. This policy has shown growth in the roof top solar installations and generated employment in the renewable energy industry. This regulation has also made it affordable for the small and MSME businesses (commercial and industrial) of West Bengal to invest in installing solar power solutions in their premises.

The contents of the new proposed regulation give the C&I clients the only option of gross meter which will make solar power extremely expensive and uneconomical for the C&I, MSME and small business customers. Since this customer segment is about 95% of total on-grid rooftop solar installations in West Bengal (except Government installations), the local suppliers and service providers of the renewable energy industry will be hit badly. This will lead to sharp drop in solar roof top installations in the State coupled with huge job loss in the renewable energy industry.

The new proposed regulation will not only affect the players in the renewable energy but also the MSMEs of the State who want to reduce their power costs by installing solar power plants in their premises.

They have requested to reconsider the contents of the new proposed regulation and continue to provide net meter facility to C&I customers.

(d) Comments from M/s Green Sun:

For eligible consumers under domestic category, the upper limit of maximum contract demand of 6 kW to be increased to 20 kW.

Green Sun also suggested to continue with the net metering facility for commercial and industrial consumers. The facility of net billing arrangement might not go well with the industrial and

commercial consumers as it will increase the pay back period many folds, which in turn will reduce the demand for solar PV installations at their premises. The solar industry will take a big hit in State of West Bengal.

(e) Comments from Confederation of West Bengal Trade Associations:

The new regulation will make solar power extremely expensive and uneconomical for the C&I, MSME and small business customers. Since this customer segment is about 95% of total on-grid rooftop solar installations in West Bengal (except Government installations), the local suppliers and service providers of the renewable energy industry will be hit badly. This will lead to sharp drop in solar rooftop installations in the State coupled with huge job loss in the renewable energy industry.

In 2019 Maharashtra Electricity Regulatory Commission tried to implement a similar policy, but could not do so due to strong objections raised by the stakeholders.

(f) Comments from M/s JSPL:

M/s JSPL has given an objection regarding not providing 'Net-Metering' facility other than domestic consumers and apprehended that it will be detrimental to the solar EPC business. Without net-metering facility small and medium scale industries will not be interested to install solar power plant. It is generally observed that the C&I consumers are the major segment who are aggressively installing rooftop solar systems taking advantage of tariff difference on account of cross-subsidies.

Fundamental drivers for rooftop solar are becoming more compelling by the day and the Government has shown a very strong to drive growth in this sector. It is already offering a generous mix of capital subsidies, tax incentive and cheaper debt financing schemes for the sector. The Government is also substantially ramping up demand in the public sector. All these efforts will fail to produce the desired results unless net-metering policy framework is urgently reformed. International examples show that effective net-metering implementation can increase the growth of rooftop segment.

The commercial and industrial clients won't install rooftop solar as yet unless they have continuous consumption, and that is not the reality. With net billing, the Government is saying that consumers should invest to set up the unit and sell power at a lower tariff to the grid, which the grid can then sell back to consumers at a higher tariff. Uttar Pradesh has already removed net metering and now, no new rooftop solar projects are coming up there and vendors have stopped operating in that market.

Net metering has been a cornerstone of the rooftop solar market in India and around the world. Any effort to dilute or weaken net metering regulations would be inconsistent with India's stated goal of increasing solar capacity, and rooftop solar capacity in particular. Rooftop solar projects have clear benefits over other forms of power generation, in terms of air pollution, land use, and transmission losses. However, without net metering, many such rooftop solar projects would not be financially viable.

(g) Comments from M/s. Alien Solar, Mr. Siddhartha Maiti, Mr. Arif Hossain, Mr. Swarnadeep Phadikar, Mr. Ahsim Ali, Mr. Anirban Samanta, Mr. Chiranjib Nayek, Mr. Biswajit Maity, Mr. Subham Hazra, Mr. Devdeep Mukherjee, Mr. Palash Khan and Mr. Avishek Maity:

1. Consumers other than domestic category having connected load more than 6 kW will be able to set up PV system only under Net Billing Agreement.

This new regulation will make solar power uneconomical for commercial and industrial consumers. MSME and small businesses are the driving force of on-grid/ grid-connected rooftop solar systems and contribute around 90% of total rooftop solar installations in West Bengal. If this segment of consumers can not see the benefit of solar power system, the contribution of West Bengal in the fight against global warming and climate change will slow down drastically.

2. Restricting the system size of solar PV system to the contract demand as proposed in the draft shall reduce the capacity that can be installed by a consumer. As per the current regulation, there is no such capping with respect to contract demand and changing this shall affect the installation volume in the State. Their recommendation would be to maintain the regulation as per the current order.

27.3 Analysis and Decision of the Commission:

From the submissions of different stakeholders mentioned in paragraph 27.2 above the relevant issues are discussed hereinunder one by one:

A. Upper limit of installing solar capacity:

CESC Ltd suggested to limit the contract load of the consumer subject to the adherence of 50% of feeder/ distribution transformer capacity cumulatively. On the contrary consumers submitted that, restricting the system size of solar PV system to the contract demand will reduce the capacity that can be installed by a consumer. The same issue was again highlighted by the stakeholders against regulation 7.2 regarding technical feasibility. The proposal for restricting the installed capacity upto the sanctioned load or contract demand of the consumer is purely on

technical reason to ensure that maximum capacity to be allowed under safe grid operation. The Commission finds it suitable to discuss the issue while analysing regulation 7.2 regarding technical feasibility.

B. Eligibility criteria of the consumers for net-metering and net-billing under proposed draft:

The draft proposes that, all eligible consumers under domestic category having contract demand upto 6 kW and agricultural consumers are eligible under net-metering arrangement and rest of the consumer categories shall come under net-billing arrangement.

In this respect, WBSEDCL submitted that, allowing net-metering to domestic category upto 6 kW, there is a possibility for losing cross-subsidy from big domestic consumer. WBSEDCL suggested to consider only Government school and agriculture category (pumpset) of L&MV consumers under net-metering. For all other consumers WBSEDCL proposes for net-billing.

CESC Ltd submitted that, the benefit of net metering will affect fixed cost recovery resulting in burdening of marginal consumers. Thus, CESC proposed to allow net billing arrangement for all consumers including domestic category having contract load more than 2 kW.

On the contrary the consumers, Confederation of West Bengal Trade Associations, M/s SGPL, M/s RM LLP, M/s Green Sun, M/s JSPL, M/s. Alien Solar, Mr. Siddhartha Maiti, Mr. Arif Hossain and others have raised their concern for not allowing net-metering facility to commercial and industrial consumers. They have unequivocally submitted that, new regulation will make solar power extremely expensive and uneconomical for the C&I, MSME and small business customers. Since this customer segment is about 95% of total on-grid rooftop solar installations in West Bengal (except Government installations), the local suppliers and service providers of the renewable energy industry will be hit badly. This will lead to sharp drop in solar rooftop installations in the State coupled with huge job loss in the renewable energy industry. It is reiterated that, the Government initiatives of capital subsidies, tax incentive, cheaper debt financing schemes to promote this sector will fail to produce the desired results unless net-metering policy framework is urgently reformed. It is submitted that, any effort to dilute or weaken net metering regulations would be inconsistent with India's stated goal of increasing solar capacity, and rooftop solar capacity in particular.

M/s JSPL submitted that, Uttar Pradesh has already removed net metering and now, no new rooftop solar projects are coming up there and vendors have stopped operating in that market. Confederation of West Bengal Trade Associations mentioned that, in 2019 Maharashtra Electricity Regulatory Commission tried to implement a similar policy, but could not do so due to strong objections raised by the stakeholders. M/s Green Sun proposed that, for eligible consumers

under domestic category, the upper limit of maximum contract demand of 6 kW to be increased to 20 kW.

The Commission observes that, in the State of West Bengal possibility of large solar projects is not at sight, in the near future, thus the State has to focus on development of roof-top solar with a benign policy to meet the solar RPO target. Further roof-top solar being a decentralised generation and owned by the consumers themselves, it will reduce the overall distribution loss, which will be beneficial to the licensees as well as consumers. It is of no doubt that, net-metering facility will give strong commercial signal to encourage commercial, industrial and other high-end consumers as net-metering will be more economical option for them. The economic leverage under net-metering mainly arises from avoidable cross-subsidy surcharge, which is much more than the cost of solar roof-top for high-end consumer. As the cross-subsidy surcharge is adjusted with the tariff of weaker section of the society, any reduction of cross-subsidy surcharge recovery will result in tariff hike to the low end domestic and agriculture consumers, which has been highlighted by the licensees in their comments. So, it is a very critical issue to make a balance between the interest of overall consumer segment and promotion of roof-top solar. In this regard, the Commission observes that, for low end consumers allowing net-metering, irrespective of consumer category, will encourage a vast consumer category to install solar roof-top at the same time cross-subsidy loading to these consumers are much less and such distributed generation will help to reduce distribution loss. So, it will be beneficial for both licensee and consumers. For high-end consumers allowing net-metering under present cross-subsidy regime will directly affect the tariff structure. Thus, for high end consumers, irrespective of consumer category, the net-billing arrangement is proposed. Under net-billing, the cost of solar roof-top is ensured as a generic tariff and consumers also avails the benefit of the grid as a universal storage, where they inject during daytime and get power during evening & night hours. Thus net-billing mechanism is sufficient to get back the financial cost of the solar PV system.

In line with the above analysis and considering the recent Draft Rules published by the Government of India in this regard, the Commission finds it suitable to allow net-metering for consumers having contract demand upto 5kW and net-billing for consumers having contract demand above 5kW. However, for agriculture category of consumers, irrespective of contract load they may be allowed under net-metering, as there is no cross-subsidy impact in their case.

Regarding fixed cost recovery under net-metering the views of Commission has already been elucidated in sub-paragraph (H) of paragraph 15.3 above.

C. Issues related to change in contract demand:

WBSEDCL raised their concern for switching over from net metering facility to net billing facility with the enhancement of load of consumers. In this regard the Commission observes that, the net-metering and net-billing facility is linked with the contract demand of the consumer. So, switching over will happen only when consumer changes its contract demand. However, in that case cost of meter etc. are to be borne by the consumer.

CESCL Ltd. submitted that, the option of downward revision of contract demand may be withdrawn for consumers who have installed solar capacities under net metering / net billing arrangement. In this regard Commission observes that, it is the right of consumer to reduce their contract demand as per their requirement, which cannot be withdrawn due to installation of solar capacity. However, regarding CESC's concern of excess injection by such consumers, the Commission observes that in net-metering and net-billing mechanism such excess injection from solar-PV will ultimately help the licensee to meet its RPO obligation.

CESC Ltd further suggested that, any rooftop solar capacity addition by existing net metered consumers will be considered as per the proposed new provision of the draft amendment regulations. The Commission agrees with the proposal of CESC Ltd and decides to modify the regulation accordingly.

D. Feed-in tariff (FIT) under Net billing system:

WBSEDCL suggested that, the feed-in-tariff should be less than the minimum energy charge and should be at par with the rate discovered through competitive bidding. In this regard the Commission is of the view that, feed-in-tariff will be determined considering the applicable provisions of the law and taking suggestions / objections from the stakeholders.

E. Unlawful drawal of solar power directly from solar panel:

WBSEDCL suggested that, in case consumers under Net Billing system resorts to unlawful drawal of solar power directly from solar panel before capturing of entire solar generation, then net billing facility will be withdrawn immediately for violation of agreement. The Commission agrees with the proposal and decides to modify the regulation accordingly.

27.4 Provision in RE First Amendment 2020:

“(c) Solar PV Generation System can be installed for injecting into the distribution system of a licensee by any eligible consumer in its premises:

Provided that total installed capacity in such premises does not exceed the sanctioned load (in kW) or contract demand (in kVA) of the consumer, as applicable:

Provided also that eligible consumers having sanctioned load/ contract demand upto 5 kW may set up solar PV system under the Net Metering Arrangement specified in Schedule-1 of these Regulations and eligible consumers, except agriculture consumers, having sanctioned load/ contract demand above 5 kW may set up the solar PV system only under Net Billing Arrangement specified in Schedule-2 of these Regulations. All eligible agriculture consumers may set up solar PV under Net Metering Arrangement:

Provided further that Net Metering Arrangement or Net Billing Arrangement, as the case may be, shall be permitted by the distribution licensee on a non-discriminatory basis and distribution transformer-wise or feeder-wise 'first come first serve' basis to eligible consumers:

Provided further that for the solar-PV generating system, which are already connected with the distribution network under Net-Metering Arrangement shall continue with the existing accounting and settlement mechanism. However, in case of any roof-top solar capacity addition by existing net-metered consumers, they will be treated freshly for eligibility under net-metering or net-billing as per these Regulations:

Provided further that in case consumers under Net Billing system resorts to unlawful drawal of solar power directly from solar panel before capturing of entire solar generation, then net billing facility will be withdrawn immediately for violation of agreement."

28. Regulation 7.2:

28.1 Proposed in Draft RE First Amendment 2020:

"7.2 Interconnection of solar PV system of eligible consumer:

- (a) Solar PV sources of eligible consumers as mentioned in regulation 6.1(v)(c) of these regulations shall generally be allowed connectivity at the same voltage level at which the consumer has been given supply by the distribution licensee or any other voltage of the distribution system of the licensee as considered technically and financially suitable by the licensee:*

Provided that, the cumulative capacity of solar-PV generating systems allowed to be interconnected with the distribution network (feeder/distribution transformer) shall not exceed 100% of the feeder and/or distribution transformer capacity, as applicable:

Provided that HT consumer may install and connect its solar PV system at its LT bus bar provided the Net Meter shall be installed on the HT side of the consumer's transformer.

- (b) The distribution licensee shall ensure the interconnection of the solar-PV generating system of eligible consumer with its network conforming to the specifications, standard and other provisions specified in the Central Electricity Authority (Technical Standards for Connectivity of the Distributed Generation Resources) Regulations 2013.*
- (c) The consumer shall be responsible for safe installation, operation, maintenance and rectification of any defect of the solar-PV generating system up to the point of net meter, beyond which the responsibility of safe operation, maintenance and rectification of any defect in the system, including the net meter, shall be that of the distribution licensee.*

- (d) *The distribution licensee shall have the right to disconnect the solar-PV generating system at any time in the event of threat/damage from such renewable energy system to its distribution system to prevent any accident or damage, without any notice. The distribution licensee shall call upon the consumer to rectify the defect within a reasonable time.*
- (e) *The solar-PV generating system must be capable of detecting an unintended islanding condition. The system must have anti-islanding protection to prevent any feeding into the grid in case of failure of supply or grid. Applicable IEC/IEEE technical standards shall be followed to test islanding prevention measure for grid connected inverters.*
- (f) *The consumer may install grid interactive renewable energy system with or without battery backup:*

Provided that if the consumer prefers setting up of solar-PV generating system with battery backup (full load backup/partial load backup), the inverter shall have appropriate arrangement to automatically prevent the battery power to flow into the grid in the absence of grid supply in addition to manual isolation switch that shall also have to be provided.

- (g) *The solar-PV generating system shall be equipped with an automatic synchronization device:*

Provided that the solar-PV generating system using inverter shall not be required to have separate synchronizing device if it is inherently built into the inverter.

- (h) *The inverter shall have the features of filtering out harmonics and other distortions before injecting the energy into the system of the distribution licensee. The Total Voltage Harmonic Distortion (THD) shall be within the limits specified in the Indian Electricity Grid Code (IEGC)/IEEE technical standards.*
- (i) *The Net Metering Arrangement shall include a single-phase or a three-phase Net Meter, as per the existing supply arrangement of the eligible consumer, located at the point of inter-connection as would be ascertained by the distribution licensee. The solar-PV generation meter and net meter shall be procured and installed by the distribution licensee against the cost to be borne by the consumer. However, if any consumer wishes to procure the meter(s) with standard specification(s) to be set by the distribution licensee, he may procure and present that/those to the distribution licensee for testing and installation:*

Provided that, if the eligible consumer is within the ambit of Time-of-Day ('ToD') Tariff, notwithstanding anything to the contrary contained elsewhere in any other Regulations of the Commission, the Net Meter installed shall be capable of recording ToD consumption and generation:

Provided that, in case of Net Billing arrangement a check meter of appropriate class shall be installed by the distribution licensee for the solar-PV generation meter:

Provided that All meters shall comply with the CEA (Installation and Operation of Meters) Regulations, 2006 and subsequent amendments thereof and the meters shall have Advanced Metering Infrastructure (AMI) facility with RS 485 (or higher) communication port:

Provided further that distribution licensee shall be responsible for the testing, installation and maintenance of the metering equipment, and its adherence to the applicable standards and specifications.”

28.2 Comments Received:

(a) Comments from WBSEDCL:

Consumer may be allowed to procure generation meter only as consumer meter is purchased by WBSEDCL as per approved service connection procedure of WBERC.

Hence following modification is prayed:

If any consumer wishes to procure the meter(s) with standard specification(s) to be set by the distribution licensee, he may procure generation meter with the permission of Distribution licensee and present that/those to the distribution licensee for testing and installation.

(b) Comments from CESC:

1. Restrictions on DT capacity:

To maintain continuity of supply, the network is designed and operated in a way to achieve ring-main system. In such a system, the entire load of a particular Distribution Transformer (DT) is often catered through an adjoining DT during outage of that particular DT.

Let it be assumed that DT1 and DT2, having equal capacity (kVA), are connected with solar PV cells with 100% of their rated capacity. In the event of outage of DT1, the load of the DT1 will be shifted to DT2, when the summated capacity of solar PV cells connected to the DT2 will become 200%.

Further, incorporation of solar PV sources close to 100% of DTR/ feeder capacity may result in significant voltage variations (high voltage during solar energy injection and low voltage during energy drawl) at the consumers' premises. Addition of renewable energy sources in the network will result in harmonics injection, beyond the permissible limit, in the distribution network.

To circumvent the above problem, CESC proposed that the cumulative capacity of solar-PV generating systems allowed to be interconnected with the distribution network (feeder/distribution transformer) shall not exceed 50% of the feeder and/or distribution transformer capacity, as applicable.

2. Furnishing certificate of fitness:

Consumers installing grid integrated roof-top solar need to furnish certificate of fitness conforming to correct operation of islanding, generation of harmonics and other Power Quality parameters as per limits specified in IEC/IEEE technical standards, periodically. Testing may be arranged by the eligible consumers on their own. Licensee may witness and arrange separate testing in case of any requirement for verification.

3. Presence of harmonics beyond the limits specified in the IECG/IEEE may be treated as “the event of threat/damage” under regulation 7.2 (d), and the utility shall have the right to disconnect the solar PV generating system.

4. **Metering Infrastructure:**

With a view to standardizing the metering systems within the utility’s network, meter(s) need to be procured by the utility. This will obviate various database related ambiguities during installation, replacement etc. Consumer shall bear all the cost including meters (Net Meter, Generation Meter(s) and Check Meter(s)) those relating to grid connectivity of Solar PV Gen System under net metering / net billing, as the case may be.

Also, since the meters need to have AMI facility, meters along with the communication module, installed at each of these prosumers should be able to seamlessly and bi-directionally “talk” to the utility’s Head End System (HES), through a communication system, in sync with the utility’s own chosen communication (cellular, RF-Mesh, PLC etc.) media so that the utility may have full visibility and control (manageability). This shall also help in mitigating consumer’s complaints / disputes related to solar generation / billing on net consumption through data analysis from the remote.

Procuring meter/ communication technology by the Utility shall also avoid unnecessary costs pertaining to integration and maintenance of various network devices that may have been required if the consumer is given rights to procure smart meter and to choose the remote communication technology.

Although, the meters along with the CTs and PTs, if necessary and the communication infrastructure (to be termed as meters and accessories herein after) shall be procured/arranged by the utility, responsibility (also the cost, if applicable) of installation of metering arrangement shall have to be borne by the consumer under supervision of the utility. O&M specific to the meters and accessories shall be licensee’s responsibility but necessary access and support during maintenance/rectification of the metering/communication system shall be provided by the consumer. Therefore, we propose that consumer shall bear all the cost including meter (Net Meter, Generation Meter, check meter etc.) relating to grid connectivity

of Solar PV System under net metering / net billing, as the case may be. The licensee shall procure and install the required metering arrangement. Operation and maintenance of meter(s) shall be licensee's responsibility.

Remote communication technology shall be chosen by the utility. So, the proviso "Provided that All meters shall comply with the CEA (Installation and Operation of Meters) Regulations, 2006 and subsequent amendments thereof and the meters shall have Advanced Metering Infrastructure (AMI) facility with RS 485 (or higher) communication port." may be rephrased as

"Provided that all meters shall comply with the CEA (Installation and Operation of Meters) Regulations, 2006 and subsequent amendments thereof and the meters shall have Advanced Metering Infrastructure (AMI) facility."

5. Optional check meter:

Check meter installation should be optional for less than 100 kW solar generating systems.

6. In view of the potential proliferation of solar PV generation in a particular utility served licensed area, for maintaining grid stability, in the interest of all stakeholders, smart inverters, to be installed by each of these eligible consumers, should be able to seamlessly and bi-directionally "talk" to the utility's control room, through a communication system, in sync. with the utility's own chosen communication (cellular, RF-Mesh, PLC etc.) system / approved by the utility, so that, the utility may have "full visibility and control (manageability)" over the eligible consumer's solar generation, in real time, in meeting the local demand-supply gap, at a micro-local level, dynamically.

28.3 Analysis and Decision of the Commission:

From the submissions of different stakeholders mentioned in paragraph 27.2 above the relevant issues are discussed hereinunder one by one

A. Restrictions on Distribution Transformer (DT) capacity:

CESC Ltd submitted that, under ring-main system DTs are often required to cater entire load of adjoining DT. Thus, CESC apprehends that if two DTs are connected with solar PV cells upto 100 % of their rated capacity, then in the event of outage of one DT summated solar capacity to remaining DT will become 200%. CESC also submitted that incorporation of solar PV sources close to 100% of DTR/ feeder capacity may also result in significant voltage variations (high voltage during solar energy injection and low voltage during energy drawl) at the consumers'

premises. On the above consideration CESC Ltd proposed to limit the cumulative capacity of solar-PV generating systems upto 50% of the feeder and/or distribution transformer capacity.

In this regard the Commission likes to refer the simulation based technical study conducted by Forum of Regulators (FOR) on various conditions of voltage level, DT loading, feeder type, etc. In the FOR “Report on Metering Regulation and Accounting Framework for Grid Connected Rooftop Solar PV In India” in April 2019 [FOR Report 2019] after simulation analysis the following has been observed:

“When permitted distribution generation capacity is not more than the sanctioned load/contract demand, aggregate PV power plant capacity (AC nominal power of inverter) that can be connected to a network can be up to 100% of DT capacity, even under worst case scenario(s), i.e. with 0% running load, considering feeder’s thermal capacity as the deciding factor. [pg -82 of the Report]”

From the said FOR report it is also observed that, MNRE proposes to increase DT loading to 100% by MNRE in order to utilize the DT capacity. Relevant excerpts from the note published by MNRE are reproduced below:

“Annexure 1: Mandatory Reforms to be undertaken by the DISCOMs
... 4. PV system capacity limitation due to distribution transformer (DT) capacity:

Several DISCOMs already allow connecting RTS to 80% of the DT capacity. But the allowable PV capacity connected to a DT should be 100% of the DT’s capacity. This is because the DT should be used to its fullest capacity, and also solar PV would typically not exceed 85% of its nameplate DC capacity. If the DT is unable to step-up power in the reverse direction, the DISCOM should make the necessary modifications/replacements to it”

Considering the suggestion of MNRE and the simulation-based analysis of safe limit by FOR the commission finds it suitable to allow installed capacity upto sanctioned load and cumulative installation of Grid Connected Rooftop solar PV system upto 100% of DT / Feeder capacity. However, practically under ring-main system DTs are loaded considering an overall safe network margin and the draft suggests to limit the connected capacity upto the sanctioned load.

B. Furnishing certificate of fitness:

CESC Ltd proposed for periodic testing and furnishing certificate of fitness conforming to the technical parameters related to operation and power quality by the consumers. The Commission appreciates the concern raised by CESC Ltd. However, it seems to be difficult for a consumer to arrange all such testing. Thus, the Commission is of the view that, there shall be option with the

consumer to arrange such testing by themselves or request the connected distribution licensee to conduct all such testing for which consumer will pay the cost. For this purpose, distribution licensee shall get a cost schedule approved by the Commission and display it in its website. The Commission accordingly decides to modify the proposed draft regulation.

C. Harmonics:

CESC Ltd. suggested that, presence of harmonics beyond the limits specified in the IEGC/IEEE may be treated as “the event of threat/damage” under regulation 7.2 (d), and the utility shall have the right to disconnect the solar PV generating system. The Commission agrees with the proposal and decides to amend the draft regulation accordingly.

D. Meter and metering infrastructure:

WBSEDCL proposed that consumers may be allowed to procure generation meter only as consumer meter is purchased by WBSEDCL as per approved service connection procedure of WBERC. The Commission agrees to the submission of WBSEDCL and decides to modify the draft accordingly.

The draft amendment proposes that for net-billing arrangement a check-meter to be installed provided by the distribution licensee for solar-generation meter. CESC Ltd proposes that such check meter installation should be optional for less than the 100 kW solar generating systems.

The Commission observes that, for net-billing arrangement generation check meter plays a vital role in case any defect arises in the main meter. Computation of solar generation based on notional CUF, etc in case of defect in main generation meter would raise unnecessary litigations. Thus the Commission prefers to continue with the proposed draft in this regard.

CESC Ltd also proposed for advance technology for meters, inverters, communication system etc. for smooth and seamless operation. In this regard the Commission observes that in terms of section 73 of the Electricity Act 2003, Central Electricity Authority (CEA) is responsible to specify the technical standards, safety requirements and conditions for installation of meters. The Commission has directed to comply with the relevant regulations of CEA along with some additional requirement necessary for safe operation of the grid and proper energy accounting. In case licensee finds it suitable to introduce any advance technology, same can be installed by the licensee at their cost or if supported by Government. Commission is not in favour of imposing any additional burden on the consumers especially eligible consumers under financial scheme of Government to get subsidy limited to the GoI benchmarked cost. Thus, any additional cost will be detrimental for promotion of roof-top solar.

- E. Change in language: Commission also finds it suitable to modify languages in some clauses for better expression of clarity without changing the content.

28.4 Provision in RE First Amendment 2020:

“7.2 Interconnection of solar PV system of eligible consumer:

- (a) Solar PV sources of eligible consumers as mentioned in regulation 6.1(v)(c) of these Regulations shall generally be allowed connectivity at the same voltage level at which the consumer has been given supply by the distribution licensee or any other voltage of the distribution system of the licensee as considered technically and financially suitable by the licensee:*

Provided that, the cumulative capacity of solar-PV generating systems allowed to be interconnected with the distribution network (feeder/distribution transformer) shall not exceed 100% of the feeder and/or distribution transformer capacity, as applicable:

Provided that HT consumer may install and connect its solar PV system at its LT bus bar provided the Net Meter shall be installed on the HT side of the consumer's transformer.

- (b) The distribution licensee shall ensure the interconnection of the solar-PV generating system of eligible consumer with its network conforming to the specifications, standard and other provisions specified in the Central Electricity Authority (Technical Standards for Connectivity of the Distributed Generation Resources) Regulations 2013 and its subsequent amendments thereof.*
- (c) The consumer shall be responsible for safe installation, operation, maintenance and rectification of any defect of the solar-PV generating system up to the point of net meter, beyond which the responsibility of safe operation, maintenance and rectification of any defect in the system, including the net meter, shall be that of the distribution licensee as per the provisions specified in the Central Electricity Authority (Measures relating to Safety and Electricity Supply) Regulations, 2010 and its subsequent amendments thereof.*
- (d) The distribution licensee shall have the right to disconnect the solar-PV generating system at any time in the event of threat/damage from such renewable energy system to its distribution system to prevent any accident or damage, without any notice. The distribution licensee shall call upon the consumer to rectify the defect within a reasonable time.*
- (e) The solar-PV generating system must be capable of detecting an unintended islanding condition. The system must have anti-islanding protection to prevent any feeding into the grid in case of failure of supply or grid. Applicable IEC/IEEE technical standards shall be followed to test islanding prevention measure for grid connected inverters.*
- (f) The consumer may install grid interactive renewable energy system with or without battery backup:*

Provided that if the consumer prefers setting up of solar-PV generating system with battery backup (full load backup/partial load backup), the inverter shall have appropriate arrangement to automatically prevent the battery power to flow into the grid in the absence of grid supply in addition to manual isolation switch that shall also have to be provided.

(g) *The solar-PV generating system shall be equipped with an automatic synchronization device:*

Provided that the solar-PV generating system using inverter shall not be required to have separate synchronizing device if it is inherently built into the inverter.

(h) *The inverter shall have the features of filtering out harmonics and other distortions before injecting the energy into the system of the distribution licensee. The Total Voltage Harmonic Distortion (THD) shall be within the limits specified in the Technical Standards for Connectivity of the Distributed Generation Resources (Amendments), 2019 of CEA and its subsequent amendments thereof and Indian Electricity Grid Code (IEGC)/IEEE technical standards:*

Provided that, if the presence of harmonics is beyond the limits mentioned above it may be treated as "the event of threat/damage" under regulation 7.2 (d) of these Regulations, and the utility shall have the right to disconnect the solar PV generating system.

(i) *The consumers who have-installed grid-connected roof-top solar generator under net-metering / net-billing arrangement shall have to furnish certificate of fitness conforming to correct operation of islanding, generation of harmonics and other Power Quality parameters as per limits mentioned above. Consumer can arrange such testing by their own in presence of representative of distribution licensee or request the connected distribution licensee for arranging such tests on cost basis. The periodicity and the procedure for such testing will be specified in the detailed procedure developed by the licensee under regulation 16.9 of these Regulations. The cost for such testing will be uploaded in the website of the distribution licensee.*

(j) *The Net Metering Arrangement shall include a single-phase or a three-phase Net Meter, as per the existing supply arrangement of the eligible consumer, located at the point of inter-connection as would be ascertained by the distribution licensee. The solar-PV generation meter and net meter shall be procured and installed by the distribution licensee against the cost to be borne by the consumer. However, if any consumer wishes to procure the generation meter(s) with standard specification(s) to be set by the distribution licensee, he may procure and present that/those to the distribution licensee for testing and installation:*

Provided that, if the eligible consumer is within the ambit of Time-of-Day ('ToD') Tariff, notwithstanding anything to the contrary contained elsewhere in any other Regulations of the Commission, the Net Meter installed shall be capable of recording ToD consumption and generation:

Provided that, in case of Net Billing arrangement a check meter of appropriate class shall be installed by the distribution licensee for the solar-PV generation meter against the cost to be borne by the consumer:

Provided that All meters shall comply with the CEA (Installation and Operation of Meters) Regulations, 2006 and subsequent amendments thereof and the meters shall have Advanced Metering Infrastructure (AMI) facility with RS 485 (or higher) communication port:

Provided further that distribution licensee shall be responsible for the testing, installation and maintenance of the metering equipment, and its adherence to the applicable standards and specifications."

29. Regulation 8.0, 8.1 and 8.2:

29.1 Proposed in Draft RE First Amendment 2020:

The phrase 'unscheduled interchange' was proposed to be substituted with the phrase 'deviation settlement'.

29.2 Comments Received:

- (a) **Comments from CESC:** Appropriate framework on forecasting, scheduling and imbalance handling for infirm power sources may be notified to ensure grid discipline and non-socialization of cost of deviation of infirm renewable sources to other stakeholders. Particularly as the deviation and settlement mechanism has been made stringent over time, socialization of cost attributable to one set of stakeholders to other stakeholders will have immense financial impact. Moreover, deviation and settlement process for infirm generation sources are already in place. Therefore, the Commission may introduce suitable modification in these regulations.
- (b) **Comments from HEL:** The extant regulations of the Commission do not impose deviation charges on "must run" renewable sources. In order to accommodate large quantum of infirm renewable energy, it is apprehended that socialization of such deviation charges will impact other stakeholders adversely. The Commission may introduce robust mechanism for scheduling, forecasting, procedures to settle deviation of infirm renewable sources in the wake of the proposed RPO trajectory.

29.3 Analysis and Decision of the Commission:

The Commission observes that in terms of regulation 8.2 of Principal Regulations only bio-mass plant, co-generation plant and municipal solid waste plants (MSW) with capacity of 10 MW and above and open access customers from these plants are under ABT mode and subject to UI mechanism. All other renewable energy sources are treated as must run in regulation 8.1 and are exempted from UI. As Deviation Settlement Mechanism (DSM) has replaced the erstwhile UI mechanism, the amendment proposes to substitute the phrase 'unscheduled interchange' with the phrase 'deviation settlement' keeping rest of the provisions of Principal Regulations intact.

The Commission exempted such infirm RE sources from DSM to promote RE in the State. The Commission observes that, except few licensees-owned solar plants, such infirm RE sources are yet to be developed in the State. However, the Commission notes the observation of stakeholders regarding proper forecasting, scheduling and applicability of DSM on the RE sources which are infirm in nature.

29.4 Provision in RE First Amendment 2020:

The draft regulation retained.

30. Insertion of Regulation 16.9 after Regulation 16.8:

30.1 Proposed in Draft RE First Amendment 2020:

“16.9 Each distribution licensee shall, within 30 days, prepare a detailed procedure for receiving and disposal of applications for connectivity of the solar-PV generating system of the eligible consumer and submit it before the Commission for approval. The detailed procedure shall specify the standard formats and procedure for application, manner & timeline, model net-metering and net-billing connection agreement for processing the application and granting connectivity. After granting connectivity the eligible consumer has to enter into a Net Billing Connection Agreement or a model Net Metering Connection Agreement with the distribution licensee, as the case may be.”

30.2 Comments Received:

(a) Comments from CESC Ltd:

To facilitate net metering or net billing arrangement, registration fee or application fee should be specified. As the Utility shall be responsible for carrying out site inspections for checking technical feasibility for connection of the net metering/ billing arrangement at the consumers' premises, it is proposed that registration / application fee be applicable for all net metering/ net billing applications.

30.3 Analysis and Decision of the Commission:

The suggestion of CESC Ltd is appreciated. However, it is found suitable to finalise the application fees as a part of detail procedure. Further, considering the decision in sub-paragraph (B) of paragraph 22.3 the draft regulation is modified to that extent

30.4 Provision in RE First Amendment 2020:

“16.9 Each distribution licensee shall, within 30 days, prepare a detailed procedure for receiving and disposal of applications for connectivity of the solar-PV generating system of the eligible consumer and submit it before the Commission for approval. The detailed procedure shall specify the application fees, standard formats and procedure, manner & timeline for processing the application and granting connectivity, manner and process for applying for certificate of fitness, model net-metering and net-billing connection agreement for processing the application and granting connectivity. After granting connectivity the eligible consumer has to enter into a Net Billing Connection Agreement or a Net Metering Connection Agreement with the distribution licensee, as the case may be.”

31. Insertion of Schedule 1 after Regulation 20.2:

31.1 Proposed in Draft RE First Amendment 2020:

“Schedule-I: Net Metering – Energy Accounting and Settlement

1. *The accounting of electricity exported and imported by the eligible consumer shall become effective from the date of notification of these Regulations or date of connectivity of the solar PV generating system with the distribution network, whichever is later.*
2. *The distribution licensee shall undertake meter reading of both, the solar PV generation meter and the net meter, for all eligible consumers, according to the regular metering cycle.*
3. *For each billing period, the distribution licensee shall make the following information available on its bill to the eligible consumer:*
 - a) *Quantum of solar-PV generation recorded in the generation meter;*
 - b) *Electricity injected in the grid in the billing period, including opening and closing balance;*
 - c) *Electricity supplied by the distribution licensee in the billing period, including opening and closing balance;*
 - d) *Net billed electricity, for which a payment is to be made by the consumer;*
 - e) *Excess electricity carried forward from the last billing period;*
 - f) *Excess electricity carried forward to the next billing period.*
4. *Any excess energy injected from the roof-top solar PV sources being more than 90% of the consumption of energy by that consumer(s) from the licensee's supply in each billing period shall be carried over to the next billing period within that year.*
5. *Slab tariff, as per applicable tariff order under the Tariff Regulations, shall be applicable for the net energy supplied by the licensee in a billing period if the supplied energy by the licensee is more than the injected energy by the roof-top solar PV sources of the consumer(s) after taking into account the quantum of energy, if any, carried forward from earlier billing period(s) of that year.*
6. *Notwithstanding anything to the contrary contained elsewhere in any other Regulations of the Commission, in case the consumer is within the ambit of time of day tariff, as determined by the Commission from time to time, the following process shall be followed:*
 - *Electricity consumption in any time block (e.g., peak hours, off-peak hours, etc.) shall be first compensated with the electricity generation in the same time block;*
 - *Any excess generation over consumption in any time block in a billing cycle shall be accounted for in a manner, as if the excess generation occurred during the immediately lower tariff time block;*

- *This process will continue till all consumption in lower tariff blocks is set off against solar-PV generation.*
- 7. *At the end of the year, if the total energy supplied by the licensee to the consumer(s) for that year is found to be less than the energy injected by the roof-top solar PV sources of that consumer(s) for that year, the licensee shall not pay any charge to the consumer(s) for that net energy injected by the consumer(s), in excess of 90% of consumption of that consumer(s) from the licensee's supply in that year and the same shall be treated as unwanted / inadvertent injection.*
- 8. *At the beginning of each year, cumulative carried over injected energy will be reset to zero.*
- 9. *Regardless of availability of excess electricity with the eligible consumer during any billing period, the consumer will continue to pay all other charges such as fixed/demand charges, government levy, etc.*
- 10. *The distribution licensee shall accept the power as per the useful life of the solar-PV generating system, unless the eligible consumer ceases to be a consumer of the distribution licensee or the solar-PV generating system is abandoned earlier.*
- 11. *In case the eligible consumer leaves the system or changes the supply licensee, the excess electricity shall be considered as inadvertent injection by the distribution licensee.*

31.2 **Comments Received:**

(a) Comments from WBSEDCL:

Both the generation and consumer meters should be installed at one location in easily accessible area within pilfer proof box with sealing arrangement as per relevant provisions of Electric Supply Code.

The infrastructure upto meter from solar panel should be separately developed by the consumers at his cost including installation of transformer, metering switchgear or breaker with panel etc for HV consumers to record generation of solar panel..

In case of defect of generation meter, supplied by the consumers, it may be replaced by Distribution licensee against realisation of cost of meter. Till then net-metering and net billing facility will remain suspended.

Regarding Paragraph 6 of Schedule-1, WBSEDCL stated that

The following provision is beneficial for DISCOM, however as per observation of IT, it will bring complication in software.

Any excess generation over consumption in any time block in a billing cycle shall be accounted for in a manner, as if the excess generation occurred during the immediately lower tariff time block;

(b) Comments from CESC:

1. The solar generations sources installed in the premises of a single consumer including the existing net-metered consumers should be integrated and connected to a single meter for measuring generation. It should be placed at an accessible location near the existing tariff meter (Licensee's cut-out / MCB / Switchgear). Also, smart inverters, to be installed by each of these prosumers (eligible consumers), should be able to seamlessly and bi-directionally "talk" to the utility's control room, through a communication system, in sync.
2. As an alternative, CESC suggested that suitable capacity utilisation factor may be allowed to be used to determine solar generation from distributed net metered consumers, where meters are located inside the premises of the consumers and are not accessible to the licensees for meter reading.
3. Energy accounting for partial open access consumers with net metering will become extremely complex. CESC requested the Commission to allow only net billing for partial open access consumers.
4. The Commission may allow distribution licensees to recover charges per month per meter from the net-metered consumers for meter reading and associated activities of setting up of infrastructure for data communication, complex energy accounting and deviation settlement processes as mentioned in regulation 11.2.
5. **ToD facility under net metering arrangement:**

WBERC Tariff Regulations, 2011 prohibits consumers who are under ToD metering framework, to install solar generating sources. Therefore, net metering arrangement for the ToD consumers may not be allowed.
6. In the alternate, CESC submitted that as per Clause 6 of Schedule 1, the provision of carry forward of excess energy more than 90% of consumption from licensee to next billing cycle for net-metered consumers will not be applicable for time-of-the-day net-metered consumers. Hence, the condition of carry forward of excess energy beyond 90% of consumption from licensee may be introduced under Clause 6.

7. CESC welcomed the provision of adjustment of excess energy in a time block to the immediately lower tariff block, subject to the above 90% condition. However, it may be clarified that under no circumstances, energy settlement will take place in any higher tariff time block.
8. As the Commission has allowed grid connected battery storage, ToD consumers may store energy during off-peak hours and inject such energy during the peak hours. Net metering for such consumers therefore may not be allowed.

(c) Comments from IPCL:

For Paragraph 7 of Schedule-1, IPCL stated that

The electricity consumption in any time block (e.g., peak hours, off-peak hours, etc.) shall be first compensated with the electricity generation in the same time block. Any excess generation over consumption in any time block in a billing cycle shall be carried forward/adjusted to the corresponding time block in the subsequent month for adjustment purpose.

31.3 Analysis and Decision of the Commission:

The major issues raised by the stakeholders are discussed and analysed below one by one.

A. Location and installation of meters:

Regarding suggestions of the stakeholders on location and specification of the meters, the Commission observes that, the matter has already been discussed in details. The Commission reiterates that the conditions for installation of meters will be in line with CEA metering Regulations and amendment thereof as already specified under regulation 7.2 of these regulations.

B. Cost of infrastructure upto meter from solar panel:

WBSEDCL suggested that, infrastructure upto meter from solar panel should be separately developed by the consumers at his cost including installation of transformer, metering switchgear or breaker with panel etc for HT consumers to record generation of solar panel.

Commission has already mentioned under 2nd proviso of clause (a) of regulation 7.2 of the proposed draft amendment clearly that HT consumer may install and connect its solar PV system at its LT bus bar provided the Net Meter shall be installed on the HT side of the consumer's transformer. Beyond meter the cost is already borne by the consumers. Providing separate set of infrastructures will only increase the cost.

C. Regarding defect / inaccessibility of generation meter:

WBSEDCL suggested that, till the meter is replaced net-metering and net billing facility will remain suspended. CESC Ltd. also proposed for considering capacity utilisation factor when meters are not accessible.

The matter has been discussed in detail under regulation 7.2 above. The Commission reiterates that meters are to be provided with AMI facilities and it is the responsibility of licensee to install check meter against generation meter at the cost of the consumer as per regulation 7.2(i) of the draft regulation.

D. Net-billing for open access consumers:

CESC Ltd submitted that, energy accounting for partial open access consumers with net metering will become extremely complex. Accordingly, CESC requested to allow only net billing for partial open access consumers.

The Commission observes that, open access has been allowed to consumers with connected load exceeding 1 MW. Thus, such consumer will by default fall under net-billing category as per the proposed amendment.

E. Meter-reading charges:

CESC Ltd. suggested to allow distribution licensees to recover charges per month per meter from the net-metered consumers for meter reading and associated activities of setting up of infrastructure for data communication, complex energy accounting and deviation settlement processes as mentioned in regulation 11.2.

The Commission observes that, distribution licensees have to collect the meter-reading of the consumers in any case. Net-meters with AMI facility will rather make the job easy. Further, any excess generation is going to help distribution licensee to fulfil their RPO. Thus, at this stage Commission does not find it suitable to impose any separate meter reading charges except that is recoverable from a consumer as per tariff order. However, the Commission will review the issue after analysing the impact, when a sizable number of consumers get connected under net-metering and net-billing arrangement.

F. ToD facility under net metering arrangement:

CESC Ltd submitted that, WBERC Tariff Regulations, 2011 prohibits consumers who are under ToD metering framework, to install solar generating sources. Therefore, net metering arrangement for the ToD consumers may not be allowed.

The Commission observes that, the draft amendment provides for net-metering to TOD consumers with a 'notwithstanding' clause. Commission is of view to amend the Tariff Regulations in this regard during subsequent amendment.

31.4 Provision in RE First Amendment 2020:

The draft regulation retained with minor change in language for better expression of clarity without changing content.

32. Insertion of Schedule 2 after Regulation 20.2:

32.1 Proposed in Draft RE First Amendment 2020:

"Schedule-2: Net Billing – Energy Accounting and Settlement

1. *Net billing is the arrangement where solar-PV generating system is:*
 - a) *Installed to serve a specific consumer;*
 - b) *Connected on the distribution licensee side on the consumer meter;*
 - c) *Selling power to a distribution licensee under Power Purchase Agreement;*
2. *The distribution licensee shall enter into Power Purchase Agreement at a generic tariff to be determined by the Commission:*
Provided that the tariff stipulated in the Power Purchase Agreement shall be constant for the entire duration of the agreement.
3. *Entire quantum of electricity generated by the solar-PV generating system shall be procured by the distribution licensee.*
4. *The distribution licensee shall raise bill on the consumer in accordance with the following equation:*

$$\text{Energy Bill of consumer} = \text{Fixed Charges} + \text{other applicable charges and levies} + (\text{EDL} \times \text{TRST}) - (\text{ERE} \times \text{TPPA}) - \text{Billing Credit};$$

Where:

 - a) *Fixed Charges means the Fixed/Demand Charges as applicable to the consumer category as per the applicable retail supply Tariff Order;*
 - b) *Other charges and levies mean any other charges such as municipal tax, cess, etc.;*
 - c) *ERE means the energy units recorded for the billing period by the Renewable Energy Generation Meter;*
 - d) *TPPA means the energy charges as per the Power Purchase Agreement signed between the consumer and the distribution licensee, in accordance with paragraph (2) above;*
 - e) *EDL means the energy units supplied (i.e., Gross Electricity Consumption by the consumer) by the distribution licensee as recorded by the consumer meter for the billing period;*
 - f) *TRST means the applicable retail supply tariff of the concerned consumer category as per the applicable retail supply Tariff Order of the Commission;*
 - g) *Billing Credit is the amount by which the value of Renewable Energy generation in a particular month is more than the value of all other components of consumer bill.*
5. *In case the consumer is subjected to time of day tariffs, energy bill ($\text{EDL} \times \text{TRST}$) shall be computed accordingly.*
6. *In case ($\text{ERE} \times \text{TPPA}$) is more than ($\text{Fixed charges} + \text{other applicable charges and levies} + (\text{EDL} \times \text{TRST})$), utility shall give credit of amount equal to difference (Billing Credit), which shall be carried forward to the next billing cycle within a financial year.*

7. *At the end of the financial year, if there is any outstanding Billing Credit, it shall not be paid by the distribution licensee.*
8. *For each billing period, the distribution licensee will make the following information available on its bill to the consumer:*
 - a) *Generation recorded in generation meter;*
 - b) *Electricity injected by the solar PV plant in the grid in the billing period, including opening and closing balance;*
 - c) *Electricity supplied by the distribution licensee in the billing period, including opening and closing balance;*
 - d) *Billing Credit carried forward from the last billing period;*
 - e) *Billing Credit carried forward to next billing period."*

32.2 **Comments Received:**

(a) Comments from WBSEDCL:

1. Regarding Paragraph 1 of Schedule-2, WBSEDCL stated that

Both the generation and consumer meters should be installed at one location in easily assessable area within pilfer proof box with sealing arrangement as per relevant provisions of Electricity Supply Code.

The infrastructure upto meter from solar panel should be separately developed by the consumers at his cost including installation of transformer, metering switchgear or breaker with panel etc for HV consumers to record generation of solar panel..

In case consumers under Net Billing system resorted to unlawful drawal of solar power directly from solar panel before capturing of entire solar generation, then net billing facility will be withdrawn immediately for violation of agreement.

2. Regarding Paragraph 2 of Schedule-2, WBSEDCL stated that

Generic tariff under Net billing system should be less than the minimum energy charge of consumer categories under net billing system of WBSEDCL (including DPL area) and should be at par with the rate discovered through competitive bidding all India basis.

3. Regarding Paragraph 4 of Schedule-2, WBSEDCL stated that

The distribution licensee shall raise bill on the consumer in accordance with the following equation:

Energy Bill of consumer = Fixed Charges + other applicable charges, subsidy, rebate and levies + (EDLxTRST) - (ERE * TPPA) -Billing Credit;

(b) Comments from CESC:

1. Power purchase rate under net billing arrangement

In India, over the years solar tariff has fallen to a lower level. The trend indicates that the solar tariff discovered under competitive level has achieved grid parity. In 2017, it reached a record low level of Rs. 2.44 per kWh. In this scenario, CERC also stopped determining solar tariff from the year 2017-18. CERC will decide project specific tariff for solar PV plants.

The Commission has also instructed that solar power shall be purchased through competitive bidding only. CESC requested the Commission that the rate under net billing arrangement should have parity with the tariff discovered under competitive bidding. It would help all the consumers in turn by reducing the total power purchase cost.

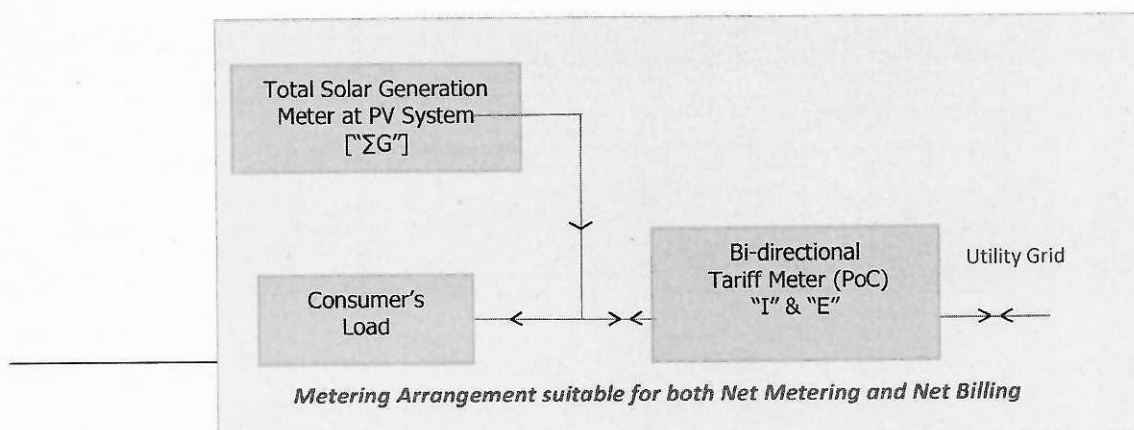
The purchase rate for consumers installing distributed generation sources under net billing scheme utilizing capital grant /subsidies may be altered suitably so that the benefit of capital grant/subsidies is passed on to all the consumers and the particular prosumer (eligible consumer) does not unduly get benefitted. Similar adjustment mechanism should also be in place for net metered consumers.

2. Metering arrangement for net billing:

As per the draft regulation, the entire power generated by the RE sources, under Net Billing condition, shall be fed to the distribution utility grid. However, connectivity with the grid shall invite technical and other challenges in many cases.

In view of the above, in the interest of the consumers, it is proposed that the consumers shall use the power generated by their RE sources for their own requirement and excess power, if any, shall be fed to the grid through the consumer meter, as shown in the following schematic diagram.

As per the schematic diagram, the metering arrangement will remain same for both Net Billing and Net Metering consumers. The billing modality for the respective consumers shall be taken care by the utility billing system. Proposed Metering Arrangement:



$$EDL = I + [\Sigma G - E]$$

Where I = Import of energy as recorded by tariff meter and

E= Export of energy as recorded by the tariff meter and

ΣG = Summated energy generated by all different RE sources, in the same premises as recorded by the respective generation meter(s) / check meter(s).

3. Separate accounting under net billing mechanism:

The entire power generated by the consumer under net billing arrangement will be purchased by the licensee. This will be effected through a power purchase agreement. Licensees have to maintain two separate accounting records. It would be easier for consumers and also feasible for licensee to have different statements, rather than a single one. Netting off these two separate transactions may create accounting problems, problems related to Government duty applicability etc. and therefore may be considered as two separate transactions, billing, and payment mechanism. The information as mentioned in the clause 8 in Schedule 2 will be adhered to in each billing period, as directed.

4. Minimum generation under net billing arrangement:

Under net billing arrangement, there should be a limit of minimum generation. The solar PV source under net billing arrangement, must supply a minimum energy generated. The draft regulations should cover the supply limit and consequences for non-compliance.

5. The Commission may allow distribution licensees to recover charges per month per meter from the net-billed consumers for meter reading and associated activities of setting up of infrastructure for data communication, complex energy accounting and deviation settlement processes as mentioned in regulation 11.2.

(c) Comments from IPCL:

Regulation may offer the clarity on tenure and generic tariff movement. It is proposed that the levelised tariff /generic tariff may be fixed for the entire term or useful life of the projects commissioned during a specified control period as the Power purchase agreement to be applicable for both long term as well as medium/short term arrangement.

32.3 Analysis and Decision of the Commission:

- A. The Commission observes that the issues raised by WBSEDCL regarding meter location, separate HT installations, minimum charge, unlawful drawal have already been discussed and decided above.
- B. WBSEDCL also suggested to modify the formula of net-billing by replacing the phrase 'other applicable charges and levies' with the phrase "other applicable charges, subsidy, rebate and levies". The Commission observes that, though the phrase "other applicable charges and levies" in the draft was intended to cover everything, but incorporating the words subsidy, rebate will enhance the clarity. Thus, the Commission finds it suitable to modify the draft accordingly.
- C. Suggestion of CESC Ltd regarding price of solar energy under net-billing has already been discussed under sub-para (E) of paragraph 27.3 above. Issue of meter reading and associated charges has also been discussed in paragraph 31.3(E) above.
- D. CESC Ltd suggested that, the power purchase rate for consumers installing distributed generation sources under net billing scheme utilizing capital grant /subsidies may be altered suitably so that the benefit of capital grant/subsidies is passed on to all the consumers and the particular prosumer does not get unduly benefitted. The Commission does not find this in line with the Government Policy. Rather the Commission observes that, such subsidy is for promoting usage of green power and further benefits of cleaner environment are shared with all. Further with distributed generation, transmission and distribution loss will be reduced, which will in-turn reduce the overall power purchase cost.
- E. CESC Ltd. suggested to alter the philosophy and metering arrangement of net-billing system in line with the net-metering with a difference in billing method. The Commission is of the view that, there should be a consistency in principle across the country for smooth implementation of renewable energy policy of Government of India and the State Government. Accordingly, the net-billing arrangement proposed by Forum of Regulators has been considered. Thus, the suggested net-billing model by CESC is not accepted at this stage.
- F. CESC Ltd. also proposes for separate accounting system for injection of energy by consumer and supply of energy to consumer for easiness of accounting. The Commission observes that, licensees are free to manage their internal accounts either as a single account or multiple accounts. The draft Regulation specifies the minimum information to be shared with the consumers as a part of their bills.
- G. CESC Ltd. proposes for a limit of minimum generation under net billing arrangement which should be the must supply condition. However, CESC has not provided any reason against their

submission. Further in this initial stage of promotion of roof-top net-billing system in the State, the Commission does not find this proposal suitable.

- H. Regarding suggestion of IPCL for fixed levelised tariff for entire useful life of the projects instead of tenure of PPA. The Commission observes that suggested modification by IPCL will not change the essence of the amended regulation rather will help to avoid any future complications. Thus, the Commission finds it suitable to consider the suggestion and decides to modify the regulation.

32.4 Provision in RE First Amendment 2020:

“Schedule-2: Net Billing – Energy Accounting and Settlement

1. Net billing is the arrangement where solar-PV generating system is:
 - a) Installed to serve a specific consumer;
 - b) Connected on the distribution licensee side on the consumer meter;
 - c) Selling power to a distribution licensee under Power Purchase Agreement.
2. The distribution licensee shall enter into Power Purchase Agreement at a generic tariff to be determined by the Commission:

Provided that the generic tariff of the projects commissioned during a specified year shall be fixed for the entire useful life of the project.
3. Entire quantum of electricity generated by the solar-PV generating system shall be procured by the distribution licensee.
4. The distribution licensee shall raise bill on the consumer in accordance with the following equation:

Energy Bill of consumer = Fixed Charges + other applicable charges, subsidy, rebates and levies + (EDL x TRST) - (ERE x TPPA) – Billing Credit;

Where:

 - a) Fixed Charges means the Fixed/Demand Charges as applicable to the consumer category as per the applicable retail supply Tariff Order;
 - b) Other charges and levies mean any other charges such as municipal tax, cess, etc.;
 - c) ERE means the energy units recorded for the billing period by the Renewable Energy Generation Meter;
 - d) TPPA means the energy charges as per the Power Purchase Agreement signed between the consumer and the distribution licensee, in accordance with paragraph (2) above;
 - e) EDL means the energy units supplied (i.e., Gross Electricity Consumption by the consumer) by the distribution licensee as recorded by the consumer meter for the billing period;
 - f) TRST means the applicable retail supply tariff of the concerned consumer category as per the applicable retail supply Tariff Order of the Commission;
 - g) Billing Credit is the amount by which the value of Renewable Energy generation in a particular month is more than the value of all other components of consumer bill.
5. In case the consumer is subjected to time of day tariffs, energy bill (EDL x TRST) shall be computed accordingly.
6. In case (ERE x TPPA) is more than (Fixed charges + other applicable charges, subsidy, rebates and levies + (EDL x TRST)), utility shall give credit of amount equal to difference (Billing Credit), which shall be carried forward to the next billing cycle within a financial year.

7. *At the end of the financial year, if there is any outstanding Billing Credit, it shall not be paid by the distribution licensee.*
8. *For each billing period, the distribution licensee will make the following information available on its bill to the consumer:*
 - a) *Generation recorded in generation meter;*
 - b) *Electricity injected by the solar PV plant in the grid in the billing period, including opening and closing balance;*
 - c) *Electricity supplied by the distribution licensee in the billing period, including opening and closing balance;*
 - d) *Billing Credit carried forward from the last billing period;*
 - e) *Billing Credit carried forward to next billing period."*

33. Additional Comments:

33.1 Comments Received from WBSEDCL:

- (i) Cap price of grid connected Solar PV power plants needs to be reduced from Rs 8.90 / kwh considering the rate discovered through competitive bidding in Regulation 6.1 (v). It should be at par with rate discovered through competitive bid.
- (ii) CERC has stopped issuing notification as mentioned in the Principal Regulations since 01/04/2014, hence this provision should be deleted from Regulation 6.1 (i), (ii), (iv) (ii), 6.5 (b) (ii) and 6.6 (b) (ii).

Analysis and decision of the Commission: The suggestions / comments of WBSEDCL is appreciated, but these are out of scope of the present amendment. The Commission is in a process of detailed review of RE regulations including review of cap price, where these issues will be suitably considered.

33.2 Comments from CESC:

- (i) Regulation 11.2 may suitably be modified and the phrase "meter rent" may be deleted. Meter rent will be applicable as stipulated in the Tariff Order. Meter reading charges may be kept at Rs. 2000 per month to make it consistent and for ease of operation. Needless to mention where meters are procured at the cost of the consumers, meter rent will not be applicable.

(ii) Consumers with pending arrears:

The consumers with pending arrears should not be allowed net metering / net billing.

(iii) Charges for grid support for distributed generation sources:

As the solar generators (RE sources) installed are capable of meeting only the Active power requirement, therefore the reactive power requirement of the prosumers load shall be met by the Utility, even when the prosumer is not importing any active power from the grid.

It is therefore proposed that 'rebate/ surcharge on power factor' be incorporated as one of the billing parameters for net billing prosumers. The AMI meters shall be capable of measuring the reactive power flow.

The Solar generators (RE sources) shall remain synchronized with the Utility's grid for the operation. It is therefore proposed that grid Connectivity/ parallel operation charges on the prosumer be specified for the necessary support from the Utility with respect to grid connectivity/ synchronization. CESC requested the Commission to specify grid connectivity charge and parallel operation charge.

(iv) Green/ Renewable energy surcharge:

The impact on retail tariff to meet higher RPO obligation as proposed in the draft regulations may be determined separately as the consumers should also be made aware of their share in advancement of renewable energy. A surcharge named Renewable Energy Surcharge, with monthly mechanism for passing on the same to the consumers may be considered. This surcharge may be separately reflected in the consumer's bill as well.

(v) Requirement of detailed studies:

RE penetration may disrupt the demand pattern due to proliferation of intermittent energy sources. In order to study and analyze various anticipated impacts of RE penetration on the distribution network, the following system studies may be performed:

- a) Active and Reactive Load Flow Studies: RE penetration will introduce mostly real power component into the grid that may alter the reactive power flow. Active and reactive load flow studies may be conducted to estimate voltage levels and power factors under various conditions at different points on the network.
- b) Study on Harmonics: THD of Voltage and current may be observed at different points on the network to arrive at network operational discipline.
- c) Study of protection - related aspects: Protection device ratings, settings and scheme of co-ordination between fuses and over-current relays on different sections of the feeders may be studied.

- d) Study on battery storage of distributed solar sources and its impact on load flow and protection system.

Analysis and decision of the Commission: Regarding the above suggestions / comments of CESC Ltd. the Commission observes the followings:

- In Tariff order Commission specifies meter rent for consumers, whereas in regulation 11.2 of the principal regulations meter rent for open access customer are specified.
- The recovery of pending arrears has been dealt in the Supply Code. Thus, it is not found appropriate to link roof-top solar integration of consumer with the pending arrear as promotion of solar roof-top has greater environmental benefit to the entire society as a whole.
- At this nascent stage of roof-top solar integration in the State, Commission does not find it suitable to burden it with grid support charge neither the green energy surcharge can be estimated at this stage. However, the Commission finds it suitable to conduct periodical study on the impact of solar-integration in the State as suggested by CESC Ltd.

33.3 Comments from IPCL:

- (i) IPCL proposed to modify or delete regulation 3.13 of the Principal Regulations in line with proposed deletion of regulation 3.3 in the draft RE First Amendment 2020..
- (ii) The generation of energy from wind, solar, small hydro, wind & solar hybrid power and Municipal solid waste shall not be subjected to “Merit order Despatch principles”
- (iii) It is further proposed to introduce the provision wherein excess procurement of RE above RPO target may be either adjusted with the shortfall in any control period or may be converted into REC, or any mechanism in line with MNRE guidelines issued from time to time.

Analysis and decision of the Commission: Regarding the above suggestions / comments of IPCL the Commission observes the followings:

- Regarding suggestion of modification of regulation 3.13 of the Principle regulations, the Commission appreciate the observation of IPCL. The term ultimate target has already been deleted in the draft amendment and in the draft amendment it is suggested to ensure fulfilment of RPO by way of purchasing renewable power through competitive bidding or within the capped price specified in the Regulations. Thus, the provisions under regulation 3.13 is found redundant and is decided to be deleted.

- The issue of merit-order-despatch vis-à-vis must-run plant has already been specified in regulations 8.1 and 8.2 of the Principal Regulations.
- Issue of carry forward of excess RE purchase has already been analysed and decided in clause "O" of para 15.3 above.

33.4 Comments from HEL:

Generation Flexibility and part load operation

In absence of adequate peaking power stations, successful large-scale renewable integration depends almost entirely on flexibility of conventional power generation sources. Presently, in India, 75% of energy comes from thermal sources as per the reports published by the Central Electricity Authority (CEA). It is evident that to accommodate infirm renewable energy, gradual reduction in contribution from thermal sources will take place. But as the renewable power (comprising primarily of wind and solar in India) is infirm in nature and energy storage in India is still in nascent stage, thermal generating stations will have to exhibit high operational flexibility. Detailed study is required to analyse the techno-commercial impact of renewable penetration and flexible operation of thermal generating stations. The role of flexibility of thermal generation is crucial for extensive integration of renewable power. Suitable incentive needs to be introduced to encourage flexible operation of conventional generating stations. Also, adequate compensation for degradation in efficiency parameters (station heat rate, additional oil consumption for number of start-ups beyond a certain specified level and auxiliary energy consumption), additional operation and maintenance expenses and capital expenditure would be necessary to ensure proper upkeep of the thermal generating stations. The report on "Flexible Operation of Thermal Power Plant for Integration of Renewable Generation" by the CEA also iterates that fair compensation should be provided for flexible generation since additional capital and operational expenditures are required under the new regime. It is apprehended that accommodating large quantum of renewable energy in 2020-21, when electricity demand has already been affected adversely due to ongoing Covid-19 pandemic, HEL may be required to be operated at a lower plant load factor, accommodating number of unit start-ups, shut-downs. It appears that one unit of HEL will go below the technical minimum of 55% on an average of 12 hours a day and will operate at technical minimum for average 2 hours a day from August 2020 to March 2021. HEL submitted the anticipated load pattern of HEL for the period. The problem would get even more accentuated since more than 2 months have already elapsed from their previous communication dated 10 July 2020. The issue of part-load operation and units even going below technical minimum will also be

relevant in future years due to even higher renewable contribution as per the proposed amendment.

The requirement of load cycling shall induce fatigue stresses in the Boiler and Turbines and can lead to premature failures and increased maintenance costs. The assessment of true costs due to long term damages on account of cyclic loading is difficult to ascertain. The load cycling will also impact environmental parameters due to combustion instability, inherently associated during such load ramping. However, the immediate impact on fuel costs due to poor heat rate, higher auxiliary power and additional start-up fuel costs will significantly affect all the thermal generators. Further, additional capital expenses shall be necessary for upgradation of the units (by incorporation of Automatic Mill Scheduler, Fatigue Monitoring of Boilers etc.) to support such frequent load ramping operations.

Thus, it is respectfully submitted that well-designed mechanisms be implemented that accurately reward generators for providing flexible generation to the grid. Moreover, in order to accommodate large quantum of infirm energy in the grid, the Commission may introduce "Ancillary Services" at the State level. However, conventional generation units should not be instructed to operate below 55% load under any circumstances. Acknowledging renewable energy certificates for fulfilment of RPO may also obviate the problem of part load operation to some extent.

Analysis and decision of the Commission: The concern raised by HEL regarding the issues of flexible thermal generation are appreciated but those are outside the scope of the present draft amendment. The Commission will suitably consider these issues through amendment of relevant regulations or by issuing specific order as may be found appropriate.

33.5 Comments from Green Sun:

- (i) Mandatory generation of electricity from renewable energy sources by all establishments having a contract demand of more than 500 kW. The minimum quantum of energy to be generated can be kept at the same level as mentioned in Point No. 7 of the draft.
- (ii) Giving incentive to industry by way of reduction of demand charge to the tune of 50% of applicable demand charges on installation of renewable energy devices. The said 50% deduction to be given in proportion to the installed capacity of renewable energy devices compared with the contract demand of the consumer.

The suggestion of 50% deduction in demand charges was also proposed in the incentives part in point number 11.4.1 of Policy on cogeneration and generation of electricity from Renewable Energy Sources published on 05.06.2012.

(iii) Installation of solar power plant on ground be made eligible for net metering.

Analysis and decision of the Commission: The Electricity Act 2003 under section 86(1)(e) has specified the method of promoting RE by providing connectivity to the grid and specifying RPO. Thus, the proposals under (i) and (ii) above are not found in line with the Act. Under the definition of eligible consumer installation of solar PV mounted on any other mounting structure has been included. However, the eligibility under net-metering or net-billing depends upon fulfilment of criteria specified in regulation 6.1(v)(c) of the proposed amendment.

33.6 Comments from Mr. Alien Solar, Mr. Ahsim Ali, Mr. Anirban Samanta, Mr. Chiranjib Nayek, Mr. Biswajit Maity, Mr. Subham Hazra, Mr. Devdeep Mukherjee and Mr. Avishek Maity:

Open access projects should be encouraged by the State as this shall enhance the installed capacity from the C&I consumers thereby pushing the growth of sustainable energy for the State.

Analysis and decision of the Commission: The concern raised by the stakeholders are appreciated but this is out of the scope of the existing draft amendment. The Commission has already notified the Open Access Regulations specifying the manner and details of open access.

33.7 Comments from Mr. Palash Khan:

i). The Thermal Power plant produces a lot of carbon footprint. Since renewable energy have much less carbon footprint, it is necessary to incentivize renewable energy (especially solar and wind energy) until 2030. The rate at which DISCOMs purchase electricity from solar power plant through PPA should always be higher than the purchase rate of electricity from thermal power plant. Any solar tender bid quoting the tariff rate less than that of the thermal power plant should be thoroughly rejected.

ii). Any PPA done by the DISCOM should be respected throughout the whole time period of the contract. Any deviation from the PPA, regarding the rate of power purchase and/ or period of contract, can hamper the renewable energy adoption.

Analysis and decision of the Commission: The suggestion of rejecting solar tender only for the reason that it affords less tariff than that of thermal plant is not tenable. The suggestion under (ii) is well accepted but it is not under the scope of present amendment.

33.8 Provision in RE First Amendment 2020:

As decided under paragraph 33.3 above regulation 3.13 of the Principal Regulations is deleted.

Annexure-1

List of stakeholders who submitted comments and suggestions within due timeline:

1. West Bengal State Electricity Distribution Company Limited (WBSEDCL)
2. CESC Limited (CESC)
3. India Power (IPCL)
4. Haldia Energy Limited (HEL)
5. Electrosteel Castings Limited (Electrosteel)
6. Symphony Gases (Pvt.) Ltd. (SGPL)
7. Resolute Metallic LLP (R M LLP)
8. Jupiter Solar Power Limited (JSPL)
9. M/s Green Sun
10. M/s Alien Solar
11. Confederations of West Bengal Trade Associations
12. Mr. Siddhartha Maiti
13. Mr. Arif Hossain
14. Mr. Swarnadeep Phadikar
15. Mr. Ahsim Ali
16. Mr. Anirban Samanta
17. Mr. Chiranjib Nayek
18. Mr. Biswajit Maity
19. Mr. Subham Hazra
20. Mr. Devdeep Mukherjee
21. Mr. Palash Khan
22. Mr. Avishek Maity

Annexure-2

Detail submission of CESC on the decision of the Hon'ble Appellate Tribunal for Electricity ('Hon'ble Tribunal') dated 2nd December 2013 passed in *Lloyds Metal & Energy Ltd. vs. Maharashtra Electricity Regulatory Commission & Anr.* bearing Appeal No. 53 of 2012.

A. In the Lloyds case, the Hon'ble Tribunal was called upon to decide the following question of law:

"Whether the Distribution Licensees could be fastened with the obligation to purchase a percentage of its consumption from co-generation irrespective of the fuel used under Section 86(1)(e) of the Act 2003."

B. In order to determine purchase obligation of distribution licensee from cogeneration plant under Section 86(1)(e) of the Electricity Act, 2003 ('Act'), the Hon'ble Tribunal has referred to and relied upon the following, viz.: (a) Report of the Standing Committee on energy on the Electricity Bill presented to Lok Sabha on 19.12.2002 [@ para 11]; (b) National Electricity Policy [@ para 12 to para 22]; (c) Tariff Policy [@ para 23 to para 29]; and (d) provisions of the Act [@ para 30 to para 32]. The Hon'ble Tribunal has further referred to the Renewable Purchase Obligation Regulations and Renewable Energy Tariff Regulations framed by the Maharashtra Electricity Regulatory Commission (@ para 35 to para 37) to decide the issue in hand in the legal and factual backdrop in which it arose.

C. With the aid of the afore-described sources and in consideration of the position ascertainable therefrom, Hon'ble Tribunal answered the question stated at para 4 above in negative. As already noticed, the finding, thus, returned by the Hon'ble Tribunal in Lloyds case is the basis of the suo-motu order passed by this Commission and that of the amendments proposed by way of the present Draft Regulations.

D. In our respectful submission, the process adopted by the Hon'ble Tribunal in Lloyds case on interpretation of Section 86(1)(e) is unsustainable. Thus, the comprehensive meaning and import of Section 86(1)(e) has not been ascertained, inasmuch as the interpretation was in the context of the State of Maharashtra.

E. To start with, the reference made by Hon'ble Tribunal to the Report of the Standing Committee on Electricity Bill for ascertaining the legislative intent behind Electricity Act was unwarranted and improper. It is well-settled that the starting point in the statutory interpretation is statute itself and if the language of the statute is clear and unambiguous, there is no need to look outside the statute. Furthermore, as the Hon'ble Supreme Court has held in *Nemai Chandra Kumar v. Mani Square Ltd., (2015) 14 SCC 203*, the intention of the legislature is primarily to be gathered from the language used in the statute. Hon'ble Court referred to the following observation from its

judgment in *Dental Council of India v. Hari Prakash*, (2001) 8 SCC 61 which eloquently states the law in this regard:

"7. The intention of the legislature is primarily to be gathered from the language used in the statute, thus paying attention to what has been said as also to what has not been said. When the words used are not ambiguous, literal meaning has to be applied, which is the golden rule of interpretation."

In view of the plain language of Section 86(1)(e), there was no occasion or reason for the Hon'ble Tribunal to travel beyond it to gather the intention of the legislature.

- F. Next, the fact that the Hon'ble Tribunal has referred to and relied upon provisions of National Electricity Policy ('NEP') and Tariff Policy to interpret Section 86(1)(e) is against cherished canons of statutory interpretation. Hon'ble Tribunal has proverbially put the cart before the horse inasmuch as NEP and Tariff Policy are subordinate or delegated legislation that have been issued under Section 3 of the Act and, therefore, could not be employed to construct the parent Act. The legal principle in this regard has been explained as follows in Halsbury's Laws of England (3rd Edn.) Vol. 36 at page 401, which was also accepted by Hon'ble Supreme Court in *Hotel Balaji v. State of A.P.*, 1993 Supp (4) SCC 536:

"606. Consideration of subordinate legislation as aid to construction. — Where a statute provides that subordinate legislation made under it is to have effect as if enacted in the statute such legislation may be referred to for the purpose of construing a provision in the statute itself. Where a statute does not contain such a provision, and does not confer any power to modify the application of the statute by subordinate legislation, it is clear that subordinate legislation made under the statute cannot alter or vary the meaning of the statute itself where it is unambiguous, and it is doubtful whether such legislation can be referred to for the purpose of construing an expression in the statute, even if the meaning of the expression is ambiguous."

- G. Lastly, the law declared by Hon'ble Tribunal in Lloyds case is restricted to facts of the said case, and in particular to the Renewable Purchase Obligation Regulations and Renewable Energy Tariff Regulations applicable to the State of Maharashtra. It is important to highlight here that the Renewable Energy Sources under the Renewable Purchase Obligation Regulations issued by State Commission in Lloyds case did not include fossil fuel based cogeneration. In the same vein, these Regulations did not provide for any purchase obligation of the distribution licensees from fossil fuel based cogeneration. The validity of these Regulations could not have been gone into by the Hon'ble Tribunal in its appellate jurisdiction, which was bound to give effect to the same. Hence, the finding of Hon'ble Tribunal in Lloyds case has to be understood in its peculiar factual context and such finding cannot be said to be a declaration of law *in rem*.

- H. Moreover, and without prejudice to the forgoing, it is also important to note that in view of the subsequent decision of Hon'ble Tribunal in *JSW Steel (M/s JSW Steel Ltd. v. TNERC* in Appeal No. 278 of 2015 dated 02.01.2019) and the line of cases that it follows case can be held to be conclusively and comprehensively declaring the law with respect to purchase obligation of distribution licensee under Section 86(1)(e) of the Act.
- I. In *JSW Steel* and similar cases, the Hon'ble Tribunal has ruled that a captive consumer who meets his power needs from cogeneration is not required to meet Renewable Purchase Obligation ('RPO') under Section 86(1)(e) by procuring power from a renewable energy source, notwithstanding the nature of fuel used for such cogeneration. In other words, electricity generated from a fossil fuel-based cogeneration has been held to be legally acceptable, sufficient and at par with electricity generated from renewable energy sources so as to meet RPO. This, in our respectful, submission is not in consonance with Hon'ble Tribunal's finding in *Lloyds* case wherein fossil fuel-based cogeneration was excluded from being used to fulfil RPO. The apparent incongruity between these two sets of Hon'ble Tribunal's judgments is further amplified when read in light of the law laid down by Hon'ble Supreme Court in *Hindustan Zinc Ltd. v. Rajasthan Electricity Regulatory Commission, (2015) 12 SCC 611* holding that RPO under Section 86(1)(e) is qua 'total consumption in the area of distribution licensees', and that the total consumption of electricity in the area of distribution licensee would include the distribution licensee, open access consumers and captive consumers. Hence, if one follows Hon'ble Tribunal's rulings then a cogeneration powered captive consumer can meet its RPO from fossil fuel, but a distribution licensee cannot purchase power from fossil fuel-based cogeneration to meet its RPO. In our respectful submission the Hon'ble Tribunal's decision in *Lloyds* case is *ex facie* irreconcilable with its own judgments in *JSW Steel* and similar line of subsequent cases. The conflicting and mutually destructive interpretation of Section 86(1)(e) taken by Hon'ble Tribunal, at the least, makes its findings in *Lloyds* case uncertain and legally tenuous.
- J. Furthermore, and even otherwise, it must also be underscored that this Commission is not bound to follow Hon'ble Tribunal's judgment while framing the Regulations under Section 181 of the Act. It should be appreciated that doctrine of stare decisis is a rule of judicial discipline that is applicable in judicial sphere alone. While discharging legislative functions and in its legislative exercise of powers to frame regulations, this Commission is not bound by the doctrine of stare decisis and, therefore, does not have to follow the decision of Appellate Tribunal. The only guiding light for the Commission while framing subordinate legislation / regulation is the provisions of the Act itself. The salutary statutory mandate under Section 181 for the Commission is to ensure that the regulations framed by it are consistent with the Act. It may also be useful to remember here the following dictum of Hon'ble Supreme Court in *PTC India Ltd. v. CERC, (2010) 4 SCC 603*:

"51. In Narinder Chand Hem Raj v. Lt. Governor, H.P. [(1971) 2 SCC 747] this Court has held that power to tax is a legislative power which can be exercised by the legislature directly or subject to certain conditions. The legislature can delegate that power to some other authority. But the exercise of that power, whether by the legislature or by the delegate will be an exercise of legislative power. The fact that the power can be delegated will not make it an administrative power or adjudicatory power. In the said judgment, it has been further held that no court can direct a subordinate legislative body or the legislature to enact a law or to modify the existing law and if courts cannot so direct, much less the tribunal, unless power to annul or modify is expressly given to it"

Therefore, bringing the proposed changes through Draft Regulations only in a bid to comply with the decision of Hon'ble Tribunal in Lloyds case does not meet the requirements for exercise of legislative powers by this Commission.

- K. In the Draft Regulations, it is proposed to substitute clause (xxv) of Reg. 2.1 of the Principal Regulations with the following:

*"xxv) 'Renewable Purchase Obligation' or 'RPO' means the obligation of purchase of electricity from **renewable energy sources** by a distribution licensee in pursuance to section 86 (1) (e) of the Act which is detailed out in regulations 3.1. to 3.4 of these regulations;"*

- L. Clause (xxv) of Reg. 2.1 of the Principal Regulations presently provides as follows:

*"xxv) 'Renewable Purchase Obligation' or 'RPO' means the obligation of purchase of electricity from **renewable and cogeneration sources** by a distribution licensee in pursuance to section 86 (1) (e) of the Act which is detailed out in regulations 3.1 to 3.9 of these regulations;"*

- M. The Draft Regulations also seek to substitute the definition of 'Renewable Energy Sources'. The existing definition reads as follows:

"xxiii) 'Renewable source' means renewable electricity generating sources such as small hydro generating station, wind, solar, bio-mass based on 100% producer gas on combustion route, urban / municipal waste, industrial waste, geothermal, tidal, ocean thermal energy conversion (OTEC) or other such sources as approved by the MNRE;"

The new definition proposed in the Draft Regulations is as under:

*"(xxiii) 'Renewable Energy Sources' means sources such as small hydro, wind, solar including its integration with combined cycle, biomass, **bio fuel cogeneration**, urban or municipal waste and other such sources as approved by the MNRE;"*

- N. In the Draft Regulations, a new Regulation has been inserted as below:
- "4.2 Distribution licensee may purchase energy from conventional fossil-fuel based co-generation plant located in its area of supply at a mutually agreed price subject to the ceiling price specified in these Regulations. However, purchase of electricity from fossil fuel-based co-generation plant would not qualify for fulfilment of RPO."*
- O. It is respectfully submitted that by excluding 'cogeneration' from definition of 'Renewable Purchase Obligation', by including 'bio fuel cogeneration' within the new definition of 'Renewable sources', and by introducing Regulation 4.2, this Commission is essentially seeking to eliminate fossil fuel-based cogeneration from being utilized by a distribution licensee to meet its purchase obligation under Section 86(1)(e). It is our respectful submission that the same is not as per the statute.
- P. The definition of 'cogeneration' contained in Section 2(12) of the Act is fuel-agnostic. Cogeneration can be from fossil fuel or non-fossil fuel. Act does not make any distinction between a fossil fuel-based cogeneration and one based on non-fossil fuel. That being the case, it is not legally permissible for this Commission (while following Lloyds case or otherwise) to draw such an artificial distinction for any purposes under the Act, including for construing distribution licensee's purchase obligation under Section 86(1)(e). Such action is an essential legislative function resting with the Parliament.
- Q. It must also be acknowledged and appreciated that '*cogeneration and generation of electricity from renewable sources of energy*' is a composite phrase that appears in both Section 61(h) as well as in Section 86(1)(e). It cannot be read in a disjointed manner while determining distribution licensee's purchase obligation under Section 86(1)(e).
- R. In light of the foregoing submissions, it is respectfully stated that the existing definition of Renewable Purchase Obligation contained in Clause (xxv) of Reg. 2.1 of the Principal Regulations is absolutely legal and in line with the provisions of the parent Act as contained in Section 86(1)(e).
- S. It is further submitted that in the case of co-generation specific amendments of the regulations, no legal expediency or regulatory exigency for amendment excepting deference to comply with the Hon'ble Tribunal's judgment in Lloyds case could be observed, without considering the subsequent judgments, which have, *inter alia*, interpreted the Lloyds judgment.
- T. In our respectful submission, this Commission instead of going solely by the decision of Hon'ble Tribunal in Lloyds case could have independently taken a composite view of the issues and might have undertaken a Regulatory Impact Assessment ('**RIA**') of the proposed amendments. RIA is

'a systemic approach to critically assess the positive and negative effects of proposed and existing regulations and non-regulatory alternatives', applied before a law is drafted and passed. An RIA identifies the problem that requires government action, defines regulatory objectives, examines alternative approaches (including non-legislative alternatives), and assesses the cost and benefit on the economy, environment and society. It is not clear if such an exercise was undertaken by the Commission before proposing amendments in the Principal Regulations with respect to cogeneration. In particular, the impact on cogeneration assets and resources of West Bengal could have featured in the assessment study.

- U. Hence, in light of the submissions made hereinabove, it is respectfully submitted that the amendments proposed in the Draft Regulations with respect to cogeneration may be omitted.

Sd/- x x x

(PULAK KUMAR TEWARI)
MEMBER

Sd/- x x x

(DURGADAS GOSWAMI)
MEMBER

Sd/- x x x

(SUTIRTHA BHATTACHARYA)
CHAIRPERSON

Dated: 20.12.2020