



# West Bengal State Electricity Distribution Company Ltd.

(A Government of West Bengal Enterprise)

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Regulation Cell

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**Memo. No. : REG/CERC/Draft Regulation/456(i)**

**Date : 30.04.2020**

To  
The Secretary,  
Central Electricity Regulatory Commission,  
3rd & 4th Floor, Chandernagore Building,  
36, Janpath, New Delhi

Sub: Preliminary comments/suggestions/objections on draft CERC (Terms and Conditions of Tariff) (First Amendment) Regulations, 2020.

Ref: i) Public Notice issued under Memo No. L-1 /236/2018/CERC dated 01.04.2020.  
ii) WBSSEDCL letter dated 27.04.2020 to CERC.

Sir,

With reference to the above WBSSEDCL has already requested for grant of extension of time for submission of comments/suggestions/objections upto 31.05.2020 due to Nation wide lock-down for outbreak of COVID-19 vide letter dated 27.04.2020.

However, despite facing difficulties due to lock-down, a preliminary comments/suggestions/objections has been prepared and attached herewith for your consideration. We will submit our final comments/suggestions/objections for further consideration subsequently, on extension of period of submission of comments/suggestions/objections on the above draft Regulations.

Encl: As stated

Yours faithfully,

Sd./-  
(S. Mukhopadhyay)  
Chief Engineer  
Regulation Cell

**Memo. No. : REG/CERC/Draft Regulation/456 (i)**

**Date : 30.04.2020**

Copy to:

1) The Additional Chief Secretary, Department of Power, Govt. of West Bengal

Chief Engineer  
Regulation Cell

**Preliminary Comments/Suggestions/Objections by West Bengal State Electricity Distribution Company Ltd. (WBSEDCL)**  
**on Draft CERC (Terms and Conditions of Tariff) (First Amendment) Regulations, 2020**

**A. INTRODUCTION**

1. On 01.04.2020, this Hon'ble Commission issued a Public Notice under Section 178(3) of the Electricity Act, 2003 ("Act") read with Section 23 of the General Clauses Act, 1897 ("Public Notice"), seeking comments / objections / suggestions to the Draft Central Electricity Regulatory Commission (Terms and Conditions of Tariff) (First Amendment) Regulations, 2020. The following submissions / comments / objections / suggestions are being submitted pursuant to the Public Notice.

2. Date of submission of comments/suggestions/objections on the above draft Regulations is 30.04.2020 vide the Public Notice dated 01.04.2020 issued by CERC. WBSEDCL vide letter dated 27.04.2020 requested CERC for grant of extension of time for submission of comments/suggestions/objections upto 31.05.2020 due to Nation wide lock-down for outbreak of COVID-19.

3. However, despite facing difficulties due to lock-down, a preliminary comments/suggestions/objections has been prepared and attach herewith for your consideration. We will submit our final comments/suggestions/objections for further consideration subsequently, on extension of period of submission of comments/suggestions/objections on the above draft Regulations.

**B. COMMENTS / OBJECTIONS / SUGGESTIONS TO THE DRAFT REGULATIONS**

<b>Sl. No.</b>	<b>Draft Regulation</b>	<b>WBSEDCL Comments/ Suggestion/ Objections</b>
<b>1</b>	Definitions: A new clause, namely, Clause (6a) shall be inserted after clause (6) of Regulation 3 of the Principal Regulations as under:	<b>In 1st para, clause no should be (5a) and (5) (not Clause (6a) and (6))</b>

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	<p>“(5a) <b>Auxiliary energy consumption for emission control system</b> ' or 'AUXe' in relation to a period in case of coal or lignite based thermal generating station means the quantum of energy consumed by auxiliary equipment of the emission control system of the coal or lignite based thermal generating station;”</p>	
2	<p>Definitions: A new clause, namely, Clause (15a) shall be inserted after clause (15) of Regulation 3 of the Principal Regulations as under:</p> <p>“(15a) <b>„Date of Operation’ or ‘ODe’</b> in respect of an emission control system means the date of putting the emission control system into use after meeting all applicable technical and environmental standards, certified through the Management Certificate duly signed by an authorised person, not below the level of Director of the generating company;”</p>	<p><b>For clarity, Generating Company should certify as follows in support of date of operation of FGD.</b> “(15a) <b>Date of Operation’ or ‘ODe’</b> in respect of an emission control system means the date of putting the emission control system into use after meeting all applicable technical and environmental standards <b><u>to comply with the revised emission standards vide the Environment (Protection) Amendment Rules, 2015 dated 7th December, 2015 (“the 2015 Rules”) notified by Ministry of Environment, Forest &amp; Climate Change (MoEFCC) applicable to coal or lignite based thermal power plants (TPPs)</u></b>, certified through the Management Certificate duly signed by an authorised person, not below the level of Director of the generating company;”</p>
3	<p>Definitions: A new clause, namely, Clause (20a) shall be inserted after Clause (20) of Regulation 3 of the Principal Regulations as under:</p> <p>“(20a) <b>“emission control system”</b> means a set of equipment or devices required to be implemented in the coal or lignite based thermal generating station to meet the revised emission standards;”</p>	<p>“(20a) <b>“emission control system”</b> means a set of equipment or devices required to be implemented in the coal or lignite based thermal generating station to meet the revised emission standards <b><u>as per “the 2015 Rules”</u></b>.”</p>
4	<p>Definitions:</p>	<p>“(48) <b>‘Plant Load Factor’ or ‘(PLF)’</b> in relation to a thermal generating station or unit thereof for a given period means the</p>

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	<p>Clause (48) of Regulation 3 of the Principal Regulations shall be substituted as under:  “(48) ‘Plant Load Factor’ or ‘(PLF)’ in relation to a thermal generating station or unit thereof for a given period means the total sent out energy corresponding to scheduled generation during the period, expressed as a percentage of sent out energy corresponding to installed capacity in that period and shall be computed in accordance with the following formula:    <math display="block">PLF = 10000 \times \frac{\sum^N SG_i}{[N \times IC_x (100 - AUX_n - AUX_{en})]} \%</math>   .....”</p>	<p>total sent out energy corresponding to scheduled generation during the period, <b><u>if emission control system in operation and complying revised emission standards as per “the 2015 Rules”</u></b>, expressed as a percentage of sent out energy corresponding to -----</p>
5	<p><b>3. Amendment of Regulation 8 of the Principal Regulations:</b>  3.1. In Clause (1) of Regulation 8 of the Principal Regulations, the words “including emission control system, wherever applicable,” shall be inserted in first line after the words “generating station” and before the words “may be”;</p>	<p>3.1. In Clause (1) of Regulation 8 of the Principal Regulations, the words “including emission control system, wherever applicable, <b><u>(i.e if emission control system in operation and complying with the revised emission standards as per “the 2015 Rules”)</u></b>” shall be inserted in first line after the words “generating station” and before the words “may be”;</p>
6	<p>3.2. In Clause (4) of Regulation 8 of the Principal Regulations, the words “on submission of the completion certificate by the Board of the generating company” shall be substituted by the words “in accordance with the application filed under 4<sup>th</sup> proviso to clause (1) of Regulation 9 of these regulations.”</p>	<p><b>Clause 8(4) should be as follows:</b>  Assets installed for implementation of the revised emission standards shall form part of the existing generation project and tariff thereof shall be determined separately on submission of the completion certificate by the Board of the generating company <b><u>regarding emission control system into use after meeting all applicable technical and environmental standards to comply with the revised emission standards as per “the 2015 Rules applicable to coal or lignite based thermal power plants (TPPs)”</u></b>.</p>

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7	<p><b>4. Amendment to Regulation 9 of the Principal Regulations:</b>  4.1. A new proviso, namely, Fourth Proviso shall be added to Clause (1) of Regulation 9 of the Principal Regulations as under:</p> <p>“Provided also that the generating company shall file an application for determination of supplementary tariff for the emission control system installed in the coal or lignite based thermal generating station in accordance with these regulations not later than 60 days from the date of operation of such emission control system.”</p>	<p><b>No Comment</b></p>
8	<p><b>5. Amendment of Regulation 14 of the Principal Regulations::</b>  5.1. In Clause (2) of <u>Regulation 8</u> of the Principal Regulations, the words “Supplementary capacity charges for additional capitalisation” shall be substituted with the words “Supplementary tariff consisting of Supplementary capacity charges”.</p>	<p>Regulation no should be 14 (not Regulation 8)</p> <p>In Clause (2) of Regulation <b>14</b> of the Principal Regulations, the words “Supplementary -----</p>
9	<p><b>6. Amendment of Regulation 15 of the Principal Regulations.:</b>  6.1. The existing clause of Regulation 15 of the Principal Regulations shall be re-numbered as Clause (1).</p>	<p><b>No Comment</b></p>
10	<p>6.2. In re-numbered Clause (1) of Regulation 15 of the Principal Regulations, the words “based on capital cost,” shall be inserted after the words “communication system”.</p> <p>"Capacity Charges: The capacity charges shall be derived on the basis of annual fixed cost. The Annual Fixed Cost (AFC) of a generating station or a transmission system including communication system <u>based on capital cost</u> shall consist of the following components:"</p>	<p>It is experienced that the capital cost of the generation projects in many cases has increased substantially for delay which should not be passed on the consumers of the beneficiary (Discom) unless Discoms are allowed to exit from agreement due to high project cost. Hence amendment proposed:</p> <p>"Capacity Charges: The capacity charges shall be derived on the basis of annual fixed cost. The Annual Fixed Cost (AFC) of a generating station or a</p>

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		<p>transmission system including communication system <u>based on capital cost as per DPR approved by CEA till prudence check by the Commission on exercising the option of Discom to exit PPA due to increase of project cost</u> shall consist of the following components:"</p>
<p><b>11</b></p>	<p>6.3. A new Clause, namely Clause (2) shall be added after there-numbered Clause(1) of Regulation 15 of the Principal Regulations as under:</p> <p><b>“(2) Supplementary Capacity Charges:</b> Supplementary capacity charges shall be derived on the basis of the Annual Fixed Cost for emission control system (AFCe). The Annual Fixed Cost for the emission control system based on capital cost shall consist of the components as listed at (a) to (e) of Clause (1) of this Regulation.”</p>	<p>Implementation of FGD is a mandate to provide a pollution less environment for better living &amp; also to continue thermal generation where sufficient return is already allowed to generators. Further, Consumers of DISCOMs un general are facing severe economic crisis due to large scale loss of business, un-employment &amp; less income due to reduction of bank rate etc and thus they should not be further burdened due to additional capitalization on account of implementation of FGD for environment norms and thus generating companies should not allowed any further ROE, [Generator should invest from its existing profit (ROE)], and any further O&amp;M cost for better future of the society and continuity of its generation.</p> <p>Interest on working capital should be allowed actual rate of loan which should not be more than MCLR rate of State Bank of India (Bank rate with additional 350 basic points over MCLR rate can not be allowed on normative basis since already sufficient ROE is allowed to Generating and transmission companies).</p> <p>Hence <b>Modification suggested as follows:</b></p> <p><b>“(2) Supplementary Capacity Charges:</b> Supplementary capacity charges ----- Annual Fixed Cost for emission control system (AFCe). The Annual Fixed Cost for the emission control system</p>

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		based on capital cost shall consist of the components as listed <b>at (b) to (d) of</b> Clause (1) of this Regulation.”
12	<p><b>7. Amendment of Regulation 16 of the Principal Regulations:</b> 7.1. The words “as per Regulation 43 of these regulations” shall be inserted at the end of the second proviso to Regulation 16 of the Principal Regulations.</p> <p>"Provided further that the supplementary energy charges, if any, on account of meeting the revised emission standards in case of a thermal generating station shall be determined separately by the Commission <i>as per Regulation 43 of these regulations.</i>"</p>	<b>No Comment</b>
13	<p><b>8. Amendment of Regulation 18 of the Principal Regulations:</b> 8.1. A new clause, namely Clause (6) shall be added after Clause (5) of Regulation 18 of the Principal Regulations as under:</p> <p>“(6) Any expenditure incurred for the emission control system during the tariff period as may be admitted by the Commission as additional capital expenditure for determination of supplementary tariff, shall be serviced in the manner specified in clause (1) of this Regulation.”</p>	<p><b>As explained against new clause 15 (2) at SI No.11, following Modification of clause 18 (6)is suggested:</b></p> <p>“(6) Any expenditure incurred for the emission control system during the tariff period as may be admitted by the Commission as additional capital expenditure for determination of supplementary tariff, shall be serviced in the manner specified in clause (1) of this Regulation <i>where no return on equity (ROE) will be allowed for investing equity for establishment of emission control system.</i>”</p>
14	<p><b>9. Amendment of Regulation 21 of the Principal Regulations:</b> 9.1. In Clause (5) of Regulation 21 of the Principal Regulations, the words “either in entirety on in part” shall be substituted with the words “either in entirety or in part”.</p>	<b>No Comment</b>
15	9.2. A new clause, namely, Clause (6) shall be added after Clause (5) of Regulation 21 of the Principal Regulations as	<b>As explained against new clause 15 (2) at SI No.11,</b>

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	<p>under:</p> <p>“(6) For the purpose of Clauses (4) and (5) of this Regulation, IDC on actual loan and normative loan infused shall be considered.”</p>	<p><b>following Modification of clause 21 (6)is suggested:</b></p> <p>“(6) For the purpose of Clauses (4) and (5) of this Regulation, IDC on actual loan <del>and normative loan</del> infused shall be considered.”</p>
16	<p><b>10. Amendment of Regulation 23 of the Principal Regulations:</b></p> <p>10.1. A new Proviso, namely, Proviso (iii) shall be added after Proviso (ii) to Regulation 23 of the Principal Regulations as under:</p> <p>“(iii) where the emission control system is installed, the norms of initial spares specified in this regulation for coal or lignite based thermal generating station as the case may be, shall apply.”</p>	<p><b>No Comment</b></p>
17	<p><b>11. Amendment of Regulation 29 of the Principal Regulations</b></p> <p>11.1. A new clause, namely, Clause (5) shall be added after Clause (4) of Regulation 29 of the Principal Regulations as under:</p> <p>“(5) Un-discharged liability, if any, on account of emission control system shall be allowed as additional capitalization during the year it is discharged, subject to prudence check.”</p>	<p><b>No Comment</b></p>
18	<p><b>12. Amendment of Regulation 30 of the Principal Regulation:</b></p> <p>12.1. In the first proviso under Clause (2) of Regulation 30 of the Principal Regulations, the words “excluding additional capitalization due to Change in Law,” shall be deleted and at the end of the said proviso, the words and expressions “or in the absence of actual loan portfolio of the generating station or the transmission system, the weighted average rate of interest of the generating company or the transmission licensee, as the case may be, as a whole, shall be</p>	<p><b>As explained against new clause 15 (2) at SI No.11, following Modification of 30 (2) &amp; first proviso under clause 30 (2)is suggested:</b></p> <p><b>Clause 30 (2):</b> "Return on equity shall be computed at the base rate of 15.50% for thermal generating station <u>other than emission control system,</u> transmission system including communication system and run-of river hydro generating station, and at the base rate of</p>



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	considered;" shall be added.	16.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run-of river generating station with pondage:"  <b>First proviso under clause 30 (2):</b> "Provided that return on equity in respect of additional capitalization, <u>other than emission control system</u> , after cut-off date beyond the original scope excluding additional capitalization due to Change in Law, shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system;"
19	12.2. A new clause, namely, Clause (3) shall be added after Clause (2) of Regulation 30 of the Principal Regulations, as under: “(3) The return on equity in respect of additional capitalization due to emission control system shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or in the absence of actual loan portfolio of the generating station, the weighted average rate of interest of the generating company as a whole shall be considered;”	<b>As explained against new clause 15 (2) at SI No.11, this clause is not required inclusion anymore.</b>
20	<b>13. Amendment of Regulation 32 of the Principal Regulations:</b> 13.1. A new clause, namely, Clause (5a) shall be inserted after Clause (5) of Regulation 32 of the Principal Regulations as under:  “(5a) The rate of interest on loan for emission control system shall be the weighted average rate of interest of actual loan portfolio of the emission control system or in the absence of actual loan portfolio, the weighted average rate of interest of the	<b>As explained against new clause 15 (2) at SI No.11, following Modification of 32 (5a) is suggested:</b>  “(5a) The rate of interest on loan for emission control system shall be the weighted average rate of interest of actual loan portfolio of the emission control system <del>or in the absence of actual loan portfolio, the weighted average rate of interest of the generating company as a whole</del> shall be considered.”

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	generating company as a whole shall be considered.”	
21	<p><b>14. Amendment of Regulation 33 of the Principal Regulations:</b></p> <p>14.1. A new clause, namely, Clause (9) shall be added after Clause (8) of Regulation 33 of the Principal Regulations as under:</p> <p>“(9) The depreciation of the emission control system shall be computed from its date of operation for the balance useful life or extended life of the generating station, as the case may be.”</p>	<p>Emission control system should be installed where life of thermal power plant will be extended, if old, after necessary techno-economic study and where sufficient life is left (for new plant) so that such system can be used for entire life. 14.1. Hence <b>following Modification of new clause 33 (9) is suggested:</b></p> <p>“(9) The depreciation of the emission control system shall be computed from its date of operation for <u>the entire life of the emission control system which shall be either equal to the balance</u> useful life <u>of thermal power plant as per Regulation</u> or extended life of the generating station <u>as per approval of CEA</u>, as the case may be.”</p>
22	<p><b>15. Amendment of Regulation 34 of the Principal Regulations:</b></p> <p>15.1. A new clause, namely, Clause (aa) shall be inserted after Clause (a) of Regulation 34 of the Principal Regulations as under:</p> <p>“(aa) For emission control system of coal or lignite based thermal generating stations:</p> <p>(i) Cost of limestone or reagent towards stock for 20 days corresponding to the normative annual plant availability factor;</p> <p>(ii) Receivables equivalent to 45 days of supplementary capacity charge and supplementary energy charge for sale of electricity calculated on the normative annual plant availability factor;</p> <p>(iii) Operation and maintenance expenses in respect of emission control system for one month;</p> <p>(iv) Maintenance spares @ 20% of operation and</p>	<p>Interest on working capital shall be applicable during the period, when <u>emission control system in operation and complying revised emission standards as per “the 2015 Rules”</u>,</p> <p><b><u>Hence following modification of clause 34 (aa) is suggested:</u></b></p> <p>“(aa) For emission control system of coal or lignite based thermal generating stations <u>during the period, when emission control system in operation and complying revised emission standards as per “the 2015 Rules”</u>:</p> <p>(i) Cost of limestone or reagent towards stock for 20 days ----- plant availability factor;</p> <p>(ii) Receivables equivalent to 45 days of supplementary capacity charge and supplementary energy charge ----- plant availability factor;</p>

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<p>maintenance expenses in respect of emission control system.”</p>	<p><del>(iii) Operation and maintenance expenses in respect of emission control system for one month;</del> <del>(iv) Maintenance spares @ 20% of operation and maintenance expenses in respect of emission control system.”</del></p> <p>Interest on working capital should be allowed actual rate of loan which should not be more than MCLR rate of State Bank of India (Bank rate with additional 350 basic points over MCLR rate can not be allowed on normative basis since already sufficient ROE is allowed to Generating and transmission companies).</p> <p><b><u>As explained above, following modification of clause 34 (3) &amp; (4) is suggested:</u></b></p> <p><del>(3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank actual rate of loan which shall be not more than MCLR rate of State Bank of India as on 1.4.2019 or as on 1st April of the year during the tariff period 2019-24 in which the generating station or a unit thereof or the transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later:</del> Provided that in case of truing-up, the rate of interest on working capital shall be considered <b><u>at bank actual rate of loan which shall be not more than MCLR rate of State Bank of India as on 1st April of each of the financial year during the tariff period 2019-24.</u></b></p> <p><del>(4) Interest on working capital shall be payable on normative basis notwithstanding that the generating company or the transmission licensee has not taken loan for working capital from any outside agency.</del></p>
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<p>23</p>	<p><b>16. Amendment of Regulation 35 of the Principal Regulations:</b> 16.1. At the end of the first sentence of first proviso under sub-Clause (6) of Clause (1) of Regulation 35 of the Principal Regulations, the words “and considering the norms of specific water consumption notified by the Ministry of Environment, Forest and Climate Change” shall be added.</p>	<p>No Comments</p>
	<p>16.2. Sub-Clause(7) of Clause (1) of Regulation 35 of the Principal Regulations along with its proviso shall be substituted as under:</p> <p>“(7) The operation and maintenance expenses on account of emission control system in coal or lignite based thermal generating station shall be 2% of the admitted capital expenditure (excluding IDC &amp; IEDC) as on the date of its operation, which shall be escalated annually at the rate of 3.5% during the tariff period ending on 31<sup>st</sup> March 2024:</p> <p>Provided that income generated from sale of gypsum or other by-products shall be reduced from the operation &amp; maintenance expenses.”</p>	<p><b>It has been experienced that in several cases there has been huge escalation of project cost where fixation of O&amp;M cost on % age basis is affecting the beneficiaries (A number of cases lodged at CERC/APTEL due to dispute regarding huge escalation of generation project cost).</b></p> <p>Further no additional O&amp;M shall be allowed for installation of emission control system because it is mandate to continue thermal generation complying <u>“the 2015 Rules”</u> where <u>sufficient ROE is already allowed.</u> Hence following modification of Sub-Clause(7) of Clause (1) of Regulation 35 of the Principal Regulations is suggested:</p> <p><i><b>“There will no</b></i> additional operation and maintenance expenses on account of implementation of revised emission standards <del><b>shall be notified</b></del> separately.”</p> <p><b>Moreover, proviso of Sub-Clause(7) of Clause (1) of Regulation 35 of the Principal Regulations may be substituted as proposed in draft regulation.</b></p>
<p>24</p>	<p><b>17. Amendment of Title of Chapter 10 of the Principal Regulations:</b> 17.1. The Title of Chapter-10 shall be substituted as “COMPONENTS OF ENERGY CHARGE AND SUPPLEMENTARY CHARGE”.</p>	<p>No Comments</p>

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25	<p><b>18. Amendment of Regulation 37 of the Principal Regulations:</b> 18.1. The heading of Regulation 37 of the Principal Regulations shall be substituted as “Energy Charges and Supplementary Energy Charges”.</p>	No Comment
26	18.2. The words “and Supplementary Energy Charges” shall be added after the words “Energy Charges” in Regulation 37 of the Principal Regulations.	No Comment
27	<p><b>19. Amendment of Regulation 41 of the Principal Regulations:</b> 19.1. In Clause (2) of Regulation 41 of the Principal Regulations, the words “notified separately” shall be substituted by the words “as specified in Regulations 49 of these regulations”.</p>	No Comment
28	<p><b>20. Amendment of the title of Chapter-11 of the Principal Regulations:</b> 20.1. The title of Chapter-11 of the Principal Regulations shall be substituted as “COMPUTATION OF CAPACITY CHARGES, SUPPLEMENTARY CAPACITY CHARGES, ENERGY CHARGES AND SUPPLEMENTARY ENERGY CHARGES”.</p>	No Comment
29	<p><b>21. Amendment of Regulation 42 of the Principal Regulations:</b> 21.1. In the proviso under the formula under Clause (2) of Regulation 42 of the Principal Regulations, the words “or installation of emission control system, as the case may be” shall be inserted after the words “Renovation and Modernisation”.</p>	<p>The purpose of the mandate for pollution generation from thermal power plant will be defeated if such modification is allowed. <b>Hence there should not be any modification required for the proviso under the formula under Clause (2) of Regulation 42 of the Principal Regulations.</b></p>
	21.2. Clause (5) of Regulation 42 of the Principal Regulations along with the proviso of the said clause shall be substituted as under:-	<b>Plant Availability Factor for the month as per draft should be applicable during the period, when <u>emission control system in operation and complying revised</u></b>

	<p>“(5) The Plant Availability Factor for a Month ("PAFM") shall be computed in accordance with the following formula:</p> $PAFM = 10000 \times DCi[NxICx 100 - AUXn - AUXen]Ni = 1 \%$ <p>Where</p> <p>.....</p> <p>Note: DCi and IC shall exclude the capacity of generating units not declared under commercial operation. In case of a change in IC during the concerned period, its average value shall be taken.”</p>	<p><b><u>emission standards as per “the 2015 Rules”,</u></b></p> <p><b><u>Hence following modification is suggested:</u></b></p> <p>“(5) The Plant Availability Factor for a Month ("PAFM") when <b><u>emission control system in operation and complying revised emission standards as per “the 2015 Rules”</u></b> shall be computed in accordance with the following formula:</p> <p>-----</p>
<p><b>30</b></p>	<p><b>22. New Regulation 42A to be added in the Principal Regulations:</b></p> <p>22.1. A new regulation, namely, Regulation 42A shall be added after Regulation 42 of the Principal Regulations as under:</p> <p><b>“42A. Computation and Payment of Supplementary Capacity Charge for Coal or Lignite based Thermal Generating Stations:</b></p> <p>(1) The fixed cost of emission control system shall be computed on annual basis based on the norms specified under these regulations and recovered on monthly basis under supplementary capacity charge. The total supplementary capacity charge payable for a generating station shall be shared by its beneficiaries as per their respective percentage share or allocation in the capacity of the generating station. The supplementary capacity charge shall be recovered under two segments of the year, i.e. High Demand Season (period of three months) and Low Demand Season (period of remaining nine months), and within each season in two parts viz., Supplementary Capacity Charge for Peak Hours of the month</p>	<p>Capacity charges and supplementary capacity charges for Coal or Lignite based Thermal Generating Stations should be payable during the period, when <b><u>emission control system in operation and complying revised emission standards as per “the 2015 Rules”</u></b>, otherwise the purpose of the mandate for pollution generation from thermal power plant will be defeated</p> <p><b><u>Hence following modification is suggested:</u></b></p> <p>Computation and Payment of Capacity charges and Supplementary Capacity Charge for Coal or Lignite based Thermal Generating Stations shall be made applicable for the period, when <b><u>emission control system in operation and complying revised emission standards as per “the 2015 Rules”</u></b></p> <p><b><u>Hence necessary modification in the draft clause is requested.</u></b></p>

and Supplementary Capacity Charge for Off-Peak Hours of the month as follows:

Supplementary Capacity Charge for the Year ( $SCC_y$ ) =  
Sum of Supplementary Capacity Charge for three months of **High Demand Season** + Sum of Supplementary Capacity Charge for nine months of **Low Demand Season**

(2) The Supplementary Capacity Charge payable to a thermal generating station for a calendar month shall be calculated in accordance with the following formulae:

Supplementary Capacity Charge for the Month ( $SCC_m$ ) =  
Supplementary Capacity Charge for Peak Hours of the Month ( $SCC_p$ ) +  
Supplementary Capacity Charge for Off-Peak Hours of the Month ( $SCC_{op}$ )

Where,

.....

Provided that in case of generating station or unit thereof under shutdown due to Renovation and Modernisation, the generating company shall be allowed to recover O&M expenses and interest on loan due to emission control system only.

.....

(3) Any under-recovery or over-recovery of Supplementary Capacity Charge as a result of under-achievement or over-achievement, vis-à-vis the NAPAF in Peak and Off-Peak Hours of a Season (High Demand Season or Low Demand Season, as the case may be) shall not be adjusted with

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	<p>under-achievement or over-achievement, vis-à-vis the NAPAF in Peak and Off-Peak Hours of the other Season:</p> <p>Provided that within a Season, the shortfall in recovery of Supplementary Capacity Charge for cumulative Off-Peak Hours derived based on NAPAF, shall be allowed to be off-set by over-achievement of PAF, if any, and consequent notional over-recovery of Capacity Charge for cumulative Peak Hours in that Season:</p> <p>Provided further that within a Season, the shortfall in recovery of Supplementary Capacity Charge for cumulative Peak Hours derived based on NAPAF, shall not be allowed to be off-set by over-achievement of PAF, if any, and consequent notional over-recovery of Supplementary Capacity Charge for cumulative Off-Peak Hours in that Season.</p> <p>(4) Normative Plant Availability Factor for “Peak” and “Off-Peak” Hours in a month for the purpose of Supplementary Capacity Charge and Peak and Off-Peak hours shall be considered in the manner specified in Clause (3) of Regulation 42 of these regulations. The PAFM shall be worked out in accordance with Clause (5) of the Regulation 42 of these regulations.”</p>	
31	<p><b>23. Amendment of Regulation 43 of the Principal Regulations:</b></p> <p>23.1. At the end of the title heading of Regulation 43 of the Principal Regulations, the words “<b>and Supplementary Energy Charge for Coal or Lignite based Thermal Generating Stations:</b>” shall be added.</p>	No Comment



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32	23.2. In Clause (2) of Regulation 43 of the Principal Regulations, the words “and Supplementary Energy charge rate” shall be added after the words “Energy charge rate (ECR)”.	<b>No Comment</b>
33	23.3. The words “ECR” shall be inserted at the beginning of the title heading of sub-clause (a) of clause (2) of Regulation 43 of the Principal Regulations.	<b>No Comment</b>
34	<p>23.4. A new sub-clause, namely, sub-clause (aa) shall be inserted after sub-clause(a) of clause (2) of Regulation 43 of the Principal Regulations as under:</p> <p><b>“(aa) Supplementary ECR for coal and lignite based thermal generating stations:</b></p> <p>Supplementary ECR = (<math>\square</math>ECR) + (SRC x LPR / 1000)</p> <p>Where,</p> <p>(<math>\square</math>ECR) =Difference between ECR with revised auxiliary consumption with emission control system equivalent to (AUX<sub>n</sub> + AUX<sub>en</sub>) and ECR with normative auxiliary consumption as specified in these regulations and revised;</p> <p>SRC = Specific reagent consumption on account of revised emission standard (in gm /kWh);</p> <p>LPR = Weighted average landed price of reagent for emission control system (in Rs/kg)”.</p>	<p>Energy charges and Supplementary ECR for coal and lignite based thermal generating stations should be payable during the period, when <b><u>emission control system in operation and complying revised emission standards as per “the 2015 Rules”</u></b>, otherwise the purpose of the mandate for pollution generation from thermal power plant will be defeated</p> <p><b><u>Hence following modification is suggested:</u></b></p> <p>Computation and Payment of Energy charges and Supplementary ECR for Coal or Lignite based Thermal Generating Stations shall be made applicable for the period, when <b><u>emission control system in operation and complying revised emission standards as per “the 2015 Rules”</u></b></p> <p><b><u>Hence necessary modification in the draft clause is requested.</u></b></p>

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<p>35</p>	<p><b>24. Amendment of the Regulation 48 of the Principal Regulations:</b>                  24.1. In Clause (1) of Regulation 48 of the Principal Regulations, the words and expressions “supplementary capacity charge, supplementary energy charge, ”shall be inserted after the words “energy charge,”.</p>	<p>No Comment</p>										
<p>36</p>	<p><b>25. Amendments of Regulation 49 of the Principal Regulations:</b>                  25.1. A new sub-clause, namely, sub-clause (bb) shall be inserted after sub-clause (b) of Clause (E) of Regulation 49 of the Principal Regulations as under</p> <p>“(bb) Auxiliary Energy Consumption (AUX<sub>e</sub>) on account of emission control system of thermal generating stations:</p> <table border="1" data-bbox="231 844 955 1352"> <thead> <tr> <th data-bbox="241 852 756 974">Name of Technology</th> <th data-bbox="756 852 955 974">AUX<sub>en</sub> (as % of gross generation)</th> </tr> </thead> <tbody> <tr> <td colspan="2" data-bbox="241 974 955 1023"><b>(1) For reduction of emission of sulphur dioxide:</b></td> </tr> <tr> <td data-bbox="241 1023 756 1120">a) Wet Limestone based FGD system (without Gas to Gas heater )</td> <td data-bbox="756 1023 955 1120">1.0%</td> </tr> <tr> <td data-bbox="241 1120 756 1226">b) Lime Spray Dryer or Semi dry FGD System</td> <td data-bbox="756 1120 955 1226">1.0%</td> </tr> <tr> <td data-bbox="241 1226 756 1352">c) Dry Sorbent Injection System (using Sodium bicarbonate)</td> <td data-bbox="756 1226 955 1352">NIL</td> </tr> </tbody> </table>	Name of Technology	AUX <sub>en</sub> (as % of gross generation)	<b>(1) For reduction of emission of sulphur dioxide:</b>		a) Wet Limestone based FGD system (without Gas to Gas heater )	1.0%	b) Lime Spray Dryer or Semi dry FGD System	1.0%	c) Dry Sorbent Injection System (using Sodium bicarbonate)	NIL	
Name of Technology	AUX <sub>en</sub> (as % of gross generation)											
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	<table border="1"> <tr> <td>d) For CFBC Power plant (furnace injection)</td> <td>NIL</td> </tr> <tr> <td>e) Sea Water based FGD system (without Gas to Gas heater )</td> <td>0.7%</td> </tr> <tr> <td colspan="2"><b>(2) For reduction of emission of oxide of nitrogen :</b></td> </tr> <tr> <td>a) Selective Non-Catalytic Reduction system</td> <td>NIL</td> </tr> <tr> <td>b) Selective Catalytic Reduction system</td> <td>0.2%</td> </tr> </table>	d) For CFBC Power plant (furnace injection)	NIL	e) Sea Water based FGD system (without Gas to Gas heater )	0.7%	<b>(2) For reduction of emission of oxide of nitrogen :</b>		a) Selective Non-Catalytic Reduction system	NIL	b) Selective Catalytic Reduction system	0.2%		
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<b>(2) For reduction of emission of oxide of nitrogen :</b>													
a) Selective Non-Catalytic Reduction system	NIL												
b) Selective Catalytic Reduction system	0.2%												
37	<p>25.2. A new clause, namely Clause (F) shall be added after Clause (E) of Regulation 49 of the Principal Regulations as under:</p> <p>“(F) <b>Norms for consumption of reagent:</b> (1)The normative consumption of specific reagent for various technologies for reduction of emission of sulphur dioxide shall be as below:</p> <p><b>(a) For Wet Limestone based Flue Gas De-sulphurisation (FGD) system:</b> The specific limestone consumption (g/kWh) shall be worked out by following formula:</p> <p>[ 0.85 x K x SHR x S]/[CVPF x LP ]</p> <p>Where, S = Sulphur content in percentage,</p>	No Comment											

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<p>LP = Limestone Purity in percentage,</p> <p>SHR= Gross station heat rate, in kCal per kWh;</p> <p>CVPF = (a) Weighted Average Gross calorific value of coal as received, in kCal per kg for coal based stations less 85 Kcal/Kg on account of variation during storage at generating station;</p> <p>(b) Weighted Average Gross calorific value of primary fuel as received, in kCal per kg, per litre or per standard cubic meter, as applicable for lignite, based stations;</p> <p>Provided that value of K shall be equivalent to <math>(35.2 \times \text{Design SO}_2 \text{ Removal Efficiency}/96\%)</math> for units to comply with SO<sub>2</sub> emission norm of 100/200 mg/Nm<sup>3</sup> or <math>(26.8 \times \text{Design SO}_2 \text{ Removal Efficiency}/73\%)</math> for units to comply with SO<sub>2</sub> emission norm of 600 mg/Nm<sup>3</sup>;</p> <p>Provided further that the limestone purity shall not be less than 85%.</p> <p><b>(b) For Lime Spray Dryer or Semi-dry Flue Gas Desulphurisation (FGD) system:</b> The specific lime consumption shall be worked out based on minimum purity of lime (PL) as at 90% or more by applying formula <math>[0.90 \times 6 / \text{PL}(\%)]</math> gm/kWh;</p> <p><b>(c) For Dry Sorbent Injection System (using sodium bicarbonate):</b> The specific consumption of sodium bicarbonate shall be 12 gm per kWh at 100% purity.</p>	
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**(d) For CFBC Technology (furnace injection) based generating station:** The specific limestone consumption for CFBC based generating station (furnace injection) at 85% purity limestone (kg/kWh) shall be computed with the following formula:

$$[ 62.9 \times S \times \text{SHR} / \text{CVPF}] \times [0.85/ \text{LP}]$$

Where

S= Sulphur content in percentage,

LP = Limestone Purity in percentage,

SHR= Gross station heat rate, in kCal per kWh,

CVPF = (a) Weighted Average Gross calorific value of coal as received, in kCal per kg for coal based stations less 85 Kcal/Kg on account of variation during storage at generating station;

(b) Weighted Average Gross calorific value of primary fuel as received, in kCal per kg, per litre or per standard cubic meter, as applicable for lignite, based stations;

**(e) For Sea Water based Flue Gas Desulphurisation (FGD) system:** The reagent used is sea water, therefore there is no requirement for any normative formulae for consumption of reagent.

(2) The normative consumption of specific reagent for various technologies for reduction of emission of oxide of nitrogen shall be as below:

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	<p><b>(a) For Selective Non Catalytic Reduction (SNCR) System:</b> The specific urea Consumption of SNCR system shall be 1.2 gm per kWh at 100% purity of urea.</p> <p><b>(b) For Selective Catalytic Reduction (SCR) System:</b> The specific ammonia consumption of SCR system shall be 0.6 gm per kWh at 100% purity of ammonia.”</p>	
38	<p><b>26. Amendment to PART I of Annexure I of the Principal Regulations:</b> 26.1. In Row 16 of FORM 15 of Part I of Annexure I of the Principal Regulations, the formula “(12+13+14+15)” specified after the words “Total Transportation Charges” shall be substituted by the formula “(12+13-14+15)”</p>	No Comment
39	<p>26.2. In FORM 15 of Part I of Annexure I of the Principal Regulations, Column no. (5) shall be deleted and the heading “Domestic Source (1)” under column no. (4) shall be substituted by the words “Domestic Source “. Note 3 under Form 15 shall be substituted by “3. Details to be provided for type of coal i.e. Domestic, Imported and E-auction separately.”</p>	No Comment
40	<p>26.3. A new form namely, Form 16A shall be inserted after Form 16 of Annexure-I of Part I of the Principal Regulations.</p>	No Comment