

**MADHYA PRADESH ELECTRICITY REGULATORY COMMISSION  
BHOPAL**

**Sub: - Petition under Section 86 of the Electricity Act, 2003 *inter alia* seeking declaration with regards to applicability of “Change in Law” provisions contained in the PPA dated 11.05.2005 and PSA dated 30.05.2005 read with Implementation Mechanism for the PPA and PSA, in respect of the MoEFCC notification dated 07.12.2015, to enable the petitioner to comply with the same.**

**Petition No. 21 of 2021**

**ORDER**

**(Hearing through video conferencing)  
(Date of Hearing: 26<sup>th</sup> October' 2021)  
(Date of Order: 29<sup>th</sup> November' 2021)**

**M/s. LANCO Amarkantak Power Ltd.**  
Lanco House, Plot No. 397, Udyog Vihar,  
Phase-III, Gurgaon- 122 016 (Haryana)

**Petitioner**

**Vs.**

- 1. M.P. Power Management Company Ltd., Jabalpur**  
Shakti Bhawan, Rampur, Jabalpur – 482008 (M.P.)
- 2. M/s. PTC India Ltd.**  
2<sup>nd</sup> Floor, NBCC Tower, 15, Bhikaji Cama Place,  
New Delhi – 110 006

**Respondents**

Shri Deepak Khurana, Advocate and Shri Anil Sharma appeared on behalf of the petitioner.  
Shri Manoj Dubey, Advocate and Shri Shailendra Janardan appeared on behalf of the Respondent No. 1 (MPPMCL).  
Shri Ravi Kishore, Advocate appeared on behalf of the Respondent No.2 (PTC).

M/s. LANCO Amarkantak Power Ltd. has filed the subject petition under Section 86 of the Electricity Act, 2003 seeking declaration with regard to applicability of “Change in Law” provisions in the PPA dated 11.05.2005 (read with its Implementation Mechanism dated 24.11.2012) and PSA dated 30.05.2005 (read with its Implementation Mechanism dated 26.11.2012) for approval of Additional Capital Expenditure on account of installation of various Emission Control Systems (ECS) in compliance with the Environment (Protection) Amendment Rules, 2015 dated 7.12.2015 (hereinafter referred to as "the MoEFCC Notification") notified by the Ministry of Environment, Forests and Climate Change (MoEFCC), Government of India.

2. The petitioner M/s Lanco Amarkantak Power Limited is a generating company having established a coal based thermal power station with capacity of 300 MW i.e. Unit No. 1 at Pathadi

village, Korba District, Chhattisgarh. The Unit No. 1 of the petitioner's power plant achieved date of commercial operation (COD) on 09.04.2010.

3. The Respondent No. 1 i.e. MP Power Management Company Limited (MPPMCL) is a wholly owned company of the State of Madhya Pradesh and is the holding company of the three distribution companies in the State of Madhya Pradesh. The Respondent No. 2 i.e. PTC India Limited (Power Trading Corporation of India Ltd) is a public limited company incorporated under the Companies Act, 1956. PTC is an inter-state Trading Licensee under Section 14 of the Electricity Act, 2003 and was granted a license for trading in electricity by the Central Electricity Regulatory Commission.

4. The petitioner entered into a Power Purchase Agreement (PPA) dated 11.05.2005 with the Respondent No. 2 for sale of power of 300 MW from the Power Station for a period of 25 years. Thereafter, the Respondent No. 2 entered into a back-to-back Power Sale Agreement (PSA) dated 30.05.2005 with Madhya Pradesh State Electricity Board for further sale of the aforesaid 300 MW power purchased from the petitioner. The said PSA is now vested with MP Power Management Company Limited i.e. Respondent No. 1.

5. Vide letter dated 14.01.2008, the petitioner terminated the PPA with the Respondent No. 2 and thereafter the Respondent no. 2 vide its letter dated 10.08.2009 terminated the PSA with Madhya Pradesh State Electricity Board due to some dispute's arose in PPA. Meanwhile, the petitioner and the Respondents amicably resolved their above said disputes of termination and accordingly they signed a Settlement Agreement dated 16.10.2012. In terms of the Settlement Agreement, the petitioner and Respondent No. 2 entered into an Implementation Mechanism for PPA dated 24.12.2012 containing modified terms and conditions of the PPA. The Respondent No. 1 and 2 entered into an Implementation Mechanism for PSA dated 26.11.2012 containing modified terms and conditions of the PSA.

6. The Ministry of Environment, Forest and Climate Change ('MoEFCC') issued a Notification dated 07.12.2015 notifying the Environment Protection Rules, 2015, which came into force from the date of its publication in the Official Gazette i.e. from 08.12.2015. By way of the said notification, the MOEFCC has specified certain standards to be met by thermal power plants on various parameters such as Particulate Matter (PM), Sulphur Dioxide (SO<sub>2</sub>), Oxides of Nitrogen (NO<sub>x</sub>), Mercury (Hg) and Water Consumption. The petitioner has filed this petition for approval of additional capital expenditure to be incurred for compliance with the new environmental norms.

7. Earlier, the petitioner had filed Petition No. 31 of 2017 before this Commission seeking declaration with regard to "Change in Law" provisions in the PPA and the PSA in respect of the MoEFCC notification dated 07.12.2015, to enable the petitioner to comply with the same. Vide order

dated 13.10.2017, the aforesaid petition No. 31 of 2017 was disposed of by this Commission with the following observations:

*“The Commission has observed that the petition was filed on 22.07.2017 and the petitioner has not appeared in last two motion hearings for admission of the subject petition and seeking postponement by one month. The Commission is not inclined to keep the subject petition pending for admission for such a long time. The petitioner is directed to approach the Commission with a fresh petition as and when the petitioner is in a position to attend the hearing. ----.”*

8. By way of this petition, the petitioner has now approached the Commission with the following prayer:

- a) *Approve the applicability of the MoEFCC notification dated 07.12.2015 as Change in Law in accordance with “Change in Law” Provisions under the PPA & PSA read with the respective Implementation Mechanisms and the applicable Regulations;*
- b) *Pass an Order granting approval to:*
  - i. *Capital Cost of approx. Rs 323.48 Crore along with O&M cost of approx. Rs. 15.12 Crore per annum expected to be incurred by the Petitioner’s Project towards installation & O&M of the FGD and associated system as specified in the Feasibility Report prepared by External Consultant, apart from the Cost incurred towards financing/interest and other incidental expenditure thereto during the construction period; however, the actual cost of retrofitting of FGD and Associated Systems shall be discovered through open competitive bidding, which may be lower or higher than the above specified cost estimates;*
  - ii. *Increase in Auxiliary Energy consumption of about 1% due to installation & O&M of additional FGD systems for the purpose of computation of tariff;*
  - iii. *Time period of about 15 days outage of the Unit required for interconnection during the installation and commissioning of the FGD and associated system which shall be considered as deemed availability under the PPA for the purpose of payment of capacity charges;*

9. In the subject petition, the petitioner broadly submitted the following:

- 1) *The Ministry of Environment, Forest and Climate Change (‘MoEFCC’) issued a Notification dated 07.12.2015 notifying the Environment Protection Rules, 2015, which came into force from the date of their publication in the Official Gazette i.e. from 08.12.2015. By way of the said notification, the Central Government has specified certain standards to be met by thermal power plants on various parameters such as Water Consumption, Particulate Matter, Sulphur Dioxide (SO<sub>2</sub>), Oxides of Nitrogen (NO<sub>x</sub>), Mercury (Hg) and Water Consumption.*

- 2) *It would be relevant to mention herein that main plants & equipments of the Power Station (which came into commercial operation w.e.f. 09.04.2010) were designed, engineered and procured in the year 2005-06. The construction thereof had commenced during 2006-09, and as such the designs/manufacturing of the equipments were based on the then prevailing norms for environmental emissions. That being so, in view of the changed environmental norms as notified by the MoEFCC vide its aforementioned notification dated 07.12.2015, the Power Station requires upgradation and which in turn would lead to additional investment in the Plant and equipment. The said position was notified by Petitioner to both the Respondents herein vide its letter dated 21.03.2016, being a notice for Change in Law.*
- 3) *In pursuance of the aforementioned Notification dated 07.12.2015, a Special TCC meeting of the 'Western Regional Power Committee' ('WRPC') was convened in Mumbai to discuss the agenda of Phasing out thermal generating units in the Western Region which did not have space for installation of Flue Gas Desulfurization ('FGD') for compliance of new MoEFCC Norms of SO<sub>x</sub> emissions. A perusal of the Minutes of the said meeting would show that the Generators raised a concern that for installation of FGD they would have to incur heavy expenditure, with the cost of power also to increase because of increase in Auxiliary Power consumption and O & M Cost – to which the said generators were advised to raise the said concerns with the CERC or the State commission, CEA, MoP. The said Minutes also, inter-alia, enlisted the thermal generating Units which had been planned to be phased out. The said List, however, inadvertently mentioned the thermal power station of Petitioner herein.*
- 4) *With reference to the aforesaid Minutes of Special TCC, the Petitioner herein vide its letter dated 24.04.2017 brought to the attention of WRPC that the name of its thermal Power station had been wrongly mentioned in the list of units to be phased out. It was expressly brought out therein that Petitioner's thermal Power Plant had enough space available for installation of the proposed FGD and other associated system. Accordingly, it was requested to correct the same in the records and to communicate the same to the concerned CEA.*
- 5) *In the meantime, the Petitioner, in furtherance of its aforementioned Notice dated 21.03.2016, once again brought to the notice of the Respondents herein of Change of Law vide its letter dated 22.04.2017. By the said letter, Petitioner brought to the Notice of the Respondents, the changes brought out by the Amended Norms vis-à-vis the Old Norms, and the upgradation of equipment required to comply with the Environmental standards set out by the MoEFCC. Accordingly, by way of the said letter, the Petitioner sought the necessary support and needful actions of the Respondent No. 1 to enable the Petitioner to comply with the new Environmental norms and enable Petitioner to continue supplying power to the Respondent.*

- 6) *The Respondent No. 1, in its reply dated 08.05.2017, in utter disregard to all the aforesaid, sought to state that the aforementioned MoM dated 05.04.2017 could not be said to be a “Change of Law” under Article 12 of the PPA. The Respondent No. 1, by seeking to erroneously cite reference to the Companies Act, 2013, averred that the changes/alterations to be carried out by the Petitioner to ensure environmental sustainability fall within its Corporate Social Responsibilities, and as such the notice of “Change in Law” was not acceptable to it.*
  
- 7) *The Petitioner addressed a suitable response dated 19.05.2017 to the Respondent No. 1’s aforesaid letter dated 08.05.2017 bringing out the aforementioned gamut of facts as also the patent fallacies in the objections sought to be taken by Respondent. At the outset, the Petitioner in its letter dated 19.05.2017 brought to the Respondent No. 1’s kind notice that the name of its thermal power station was inadvertently mentioned in the list of units to be phased out in the MoM dated 05.04.2017, and for which the Petitioner had also addressed a letter dated 24.04.2017 to WRPC. That apart, the Petitioner also pointed out the erroneous interpretation & reference of Respondent No. 1 to the MOM dated 05.04.2017 of WRPC as the reason for the Petitioner to claim “Change in Law”. In this regard, the Petitioner expressly reaffirmed that its claim of “Change in Law” was based in the MoEFCC Notification and not on the aforesaid MoM, as wrongly stated by Respondent No. 1. In support thereof, the Petitioner while citing reference to the definition of “Change in Law” under the PPA, reiterated that the notification of MoEFCC, bringing out change in the Environmental norms/standards, qualifies as a Change in Law and was required to be implemented, and that non-compliance of which would result in violation of the terms and conditions of the Environmental Clearance/ approval granted to the Petitioner and which in turn would result in the Petitioner not being able to obtain consent to operate & continue the operations of the plant.*
  
- 8) *Apart from the above, the Petitioner herein also addressed to the erroneous reference & reliance placed by Respondent No. 1 upon the Corporate Social Responsibilities of the Petitioner under the Companies Act to deny acceptance of “Change in Law”. In this regard, the Petitioner pointed out that the activities mentioned in the Corporate Social Responsibilities under the Companies Act are general in nature and are applicable to all Companies irrespective of the nature of business in they operate, whereas the proposed mandatory activity of installation and operation of new/additional equipment’s, required by MoEFCC to reduce emission norms, are much beyond the scope of activities pertaining to Corporate Social Responsibilities leading to huge financial/commercial implications, and such could not by any stretch of imagination be covered under the Corporate Social Responsibilities. It was further stated the revised MoEFCC norms were statutory in nature, and therefore expenditure to be incurred for compliance thereof would necessarily fall within under the “Change in Law” provisions of the PPA read with Implementation Mechanism for PPA and the corresponding provisions of the PSA read with Implementation Mechanism for PSA. Accordingly, in view of all the above, the Petitioner*

*requested the Respondents to re-evaluate and reconsider its decision and provide necessary consent with regards to applicability of “Change in Law” Provisions for the MoEFCC notification dated 07.12.2015, to enable the Petitioner to comply with the same, and to in turn continue to supply power on long term basis.*

- 9) *The Petitioner herein had instituted Petition No. 31 of 2017 seeking inter alia declaration with regard to “Change in Law” provisions in the PPA dated 11.05.2005 read with Implementation Mechanism for the PPA dated 24.11.2012 and PSA dated 30.05.2005 read with Implementation Mechanism for the PSA dated 26.11.2012, in respect of the MoEFCC notification dated 07.12.2015, to enable the Petitioner to comply with the same and to in turn continue to supply power on long term basis. Vide order dated 13.10.2017, the said petition was disposed of by this Hon’ble Commission with liberty to the Petitioner to approach the Hon’ble Commission with a fresh petition.*
- 10) *Further to the above, the Central Government through Ministry of Power, Govt. of India vide its letter dated 30.05.2018 addressed to the Chairperson, Central Electricity Regulatory Commission, with copies to Chief Secretaries and Principal Secretary/Secretary (in charge of Energy) of all State Governments and Union Territory Administrations, has already decided that the said MoEFCC notification dated 07.12.2015 is of the nature of “Change in Law” which is also applicable to the Petitioner. The Petitioner is accordingly filing the present Petition before this Hon’ble Commission. That the present proceeding has been initiated under Section 86 of the Electricity Act, 2003.*
- 11) *As stated hereinabove, the cause of action arose on 07.12.2015, 23.03.2016, 05.04.2017, 22.04.2017, 24.04.2017, 08.05.2017, 13.10.2017 and 30.05.2018. The cause of action is continuing and subsisting as the Petitioner still awaits the necessary approval & consent with regards to applicability of “Change in Law” provisions for the MoEFCC notification dated 07.12.2015, to enable the Petitioner to comply with the same, and to in turn continue to supply power on long term basis.*
- 12) *That the Commission has the jurisdiction to adjudicate the present petition under Section 86 of the Electricity Act, 2003. This Hon’ble Commission is the Appropriate Commission under the PPA entered into between the Petitioner and Respondent No. 2 and the PSA entered into between the Respondents read with Implementation Mechanism(s) for the PPA and the PSA. The power is being supplied in the State of Madhya Pradesh which is the ultimate consumer of the power. Further, the Hon’ble Commission vide its order dated 01.12.2012 had earlier accorded its approval to the process of power procurement from the Power Station under the Settlement Agreement dated 16.10.2012 and Implementation Mechanism for PPA dated 24.11.2012 and Implementation Mechanism for the PSA dated 26.11.2012 filed by the Respondent No. 1. The Hon’ble Commission had approved the power procurement price. The power is being supplied to licensee within the jurisdiction of this Hon’ble Commission.*

- 13) It is submitted that the Hon'ble APTEL in Appeal No. 327 of 2018, Appeal No. 338 of 2018 and Appeal No. 51 of 2019, filed separately by the Petitioner, Respondent No. 1 and Respondent No. 2 has passed a common judgment and order dated 19.08.2020 holding that this Hon'ble Commission has jurisdiction to determine tariff and directing this Hon'ble Commission to determine the tariff and pass consequential order as expeditiously as possible in a period of three months from the date of pronouncement of the said judgment. In view of the Hon'ble APTEL order dated 19.08.2020, this Hon'ble Commission has jurisdiction to adjudicate the present petition under Section 86 of the Electricity Act, 2003.
- 14) Much after the date of the PPA/ PSA as also the date of commencement of power supply, the Ministry of Environment, Forest and Climate Change ('MoEFCC') issued a Notification dated 07.12.2015 notifying the Environment Protection Rules, 2015, which came into force from the date of their publication in the Official Gazette i.e. from 08.12.2015. By way of the said notification, the Central Government has specified certain standards to be met by thermal power plants on various parameters such as Water Consumption, Particulate Matter, Sulphur Dioxide (SO<sub>2</sub>), Oxides of Nitrogen (NO<sub>x</sub>), Mercury (Hg) and Water Consumption. The following are the comparative Norms under the Environment (Protection) Act and Rules, 1986 and the Norms as per Environment (Protection) Amendment Rule, 2015 is tabulated below:

Parameters	Norms under the Environment (Protection) Act and Rules, 1986	Norms as per Environment (Protection) Amendment Rules, 2015 As applicable for the Petitioners Plant
Water consumption	None	3.5 m <sup>3</sup> /MWh
Sulphur Dioxide (SO <sub>2</sub> )	None	600 Mg/Nm <sup>3</sup>
Oxides of Nitrogen (NO <sub>x</sub> )	None	300 Mg/Nm <sup>3</sup>
Suspended Particulate Matter	50-150	50 Mg/Nm <sup>3</sup>
Mercury	None	0.03 Mg/Nm <sup>3</sup>

- 15) It is submitted that the Petitioner has conducted a detailed feasibility study of its current emissions from the plant. Based on the baseline emissions of the plant, only SO<sub>2</sub> reduction is required. NO<sub>x</sub> and Hg reduction is not required for the Petitioner plant. A summary of the Pollutants percentage reduction required is given below:

POLLUTANTS	UNIT 1
	CURRENT COAL
PM, % Reduction Required	Not Required
SO <sub>2</sub> , % Reduction Required	67.23
NO <sub>x</sub> , % Reduction Required	Not Required

<i>Hg, % Reduction Required</i>	<i>Not Required</i>
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Hence, SO<sub>2</sub> reduction technology/equipment needs to be installed for the plant of Petitioner.

16) With regards to the aforesaid, it is submitted that the Petitioner engaged an external consultant M/s Black & Veatch Ltd. to provide the Petitioner with the necessary information for selection of the most appropriate SO<sub>2</sub> removal technologies that addresses site-specific considerations and supports the project objectives of fuel flexibility and emissions control requirements as set forth by MoEFCC. M/s Black & Veatch Ltd. has prepared a Feasibility Report (FR) on the impact of installing and operating the aforesaid FGD and associated system installation for the Petitioner's thermal power project (2x300 MW). The said FR provides a detailed analysis of the FGD and associated systems required to be installed to comply with the revised norms, the process to be followed for installation and other indicative capital cost & operating cost details for both the Units of the Petitioner. For the present Petition, the indicative capital cost and operating cost for Unit 1 have been considered at 50% of the overall cost indicated in the FR for the Project (2x300 MW). The timeline considered for completing the installation and commissioning of FGD is planned to be carried out in a time span of 24 months from the date of award of contract.

17) A comparative analysis of the standards/norms existing prior to the MoEFCC Notification dated 07.12.2015 vis-à-vis the revised norms introduced by the said notification are briefly stated as under:

**A. Sulphur Dioxide (SO<sub>x</sub>) Emissions**

- As brought out above, prior to the MoEFCC Notification dated 07.12.2015, no norms were specified with regards to SO<sub>x</sub> emission from the Thermal Power Plants. No such requirement was specified in the environmental clearances granted by MOEF for the Petitioner's Project and accordingly the Petitioner did not consider any cost towards the same in the capital cost of the Petitioner's Project. However, the Amendment Rules stipulate that SO<sub>x</sub> Emissions from the Project is to be kept below 600 mg/NM<sup>3</sup>. With the current quality of domestic coal being fired at Petitioner project, the SO<sub>x</sub> emission is expected to be higher than the norms specified in the Amendment Rules.
- It is submitted that the Petitioner has conducted a detailed feasibility study of the different technologies like Wet FGD, Ammonia based FGD, SemiDry FGD etc. and

*the different technically feasible combinations of aforementioned technologies and has come to the conclusion that only Wet FGD would be the most cost effective in meeting the category 2 limits i.e. 600 mg/Nm<sup>3</sup>. The Wet FGD life-cycle capital cost is significantly below all the other SO<sub>2</sub> reduction system options that were considered. Therefore, the Petitioner is required to install Flue Gas Desulfurization (“FGD”) and associated equipment’s as part of the Project to meet the MOEFCC compliance.*

- *It is submitted that installation of the FGD will also lead to an increase in auxiliary power consumption of the Unit in the range of 1% which needs to be considered by the Hon’ble Commission for the purpose of computation of Tariff.*
- *It is submitted that an economic analysis of making technical changes in the existing stack vis-a-vis the option of installing a new stack was done in the FR, in which it was concluded that opting for a new stack for Wet FGD is cheaper than making technical changes in the existing stack. For the purpose of tie-up of the new FGD system with the existing plant, about 15 days of outage per Unit is considered. Outage duration has been considered to be available as and when required. It is submitted that non-availability of the Unit due to installation activities of the FGD System be considered as Deemed Availability for the purpose of making payment of Fixed charges to the Petitioner.*
- *The indicative capital cost for the Wet FGD systems include the following features:*
  - (i) *Flue Gas Desulfurization Vessels and Associated Equipment*
  - (ii) *Reagent preparation system and byproduct dewatering system*
  - (iii) *Wastewater treatment system*
  - (iv) *New stack with borosilicate glass lining for acid corrosion protection*
  - (v) *Flue Gas Ductwork*
  - (vi) *Draft System Stiffening*
  - (vii) *Tanks, Pumps, and Interconnecting Piping*
  - (viii) *Bulk Material Handling Equipment for limestone and byproduct*
  - (ix) *Raw Water Treatment System*
  - (x) *New centrifugal ID fans, VFDs and supporting equipment*
  - (xi) *Auxiliary Transformers and Electrical equipment*
  - (xii) *Plant specific extra requirements*
- *The Annual O&M costs for the Wet FGD technologies consist of the following cost categories:*
  - (i) *Operating labor costs*
  - (ii) *Maintenance materials and labor*

- (iii) Reagent
- (iv) Byproduct disposal (including fly ash)
- (v) Auxiliary power
- (vi) ID or booster fan power costs
- (vii) Service water costs

The costs of reagent (limestone), byproduct disposal, and auxiliary power are variable annual costs that differ with the amount of SO<sub>2</sub> removed.

- A Summary of Cost Estimates for Wet FGD Technology & Associated Systems for Unit 1 (50% of total cost) as specified in the Feasibility Report is given in the table below:

<i>Item Description</i>	<i>Cost Estimate (50% of total cost) in Rs. Cr</i>
<i>Capital Costs</i>	<i>₹ 323.48</i>
<i>O&amp;M Costs per Annum</i>	<i>₹ 15.12</i>

Note- The above cost is excluding Interest during Construction and generation loss due to shut down required for construction.

The actual cost of retrofitting of FGD and Associated Systems shall be discovered through open competitive bidding, which may be lower or higher than the above specified cost estimates.

**B. Oxides of nitrogen emission**

- It is submitted that the Amendment Rules stipulate that Oxides of Nitrogen emission is to be kept below 450mg/NM<sup>3</sup>.
- It is submitted that the Petitioner has conducted a preliminary assessment which indicates that it is already in compliance with the aforesaid condition.
- It is submitted that the Petitioner reserves its right to approach this Hon'ble Commission in the event that any additional measures need to be implemented involving additional installation cost and /or operating cost to comply with the aforesaid condition.

**C. Mercury emission limited to 0.03mg/NM<sup>3</sup>**

- It is submitted that the Amendment Rules stipulate that Mercury emissions are to be limited to 0.03 mg/NM<sup>3</sup>.
- It is submitted that the Petitioner has conducted a preliminary assessment which indicates that it is already in compliance with the aforesaid condition.

- *It is submitted that the Petitioner reserves its right to approach this Hon'ble Commission in the event that any additional measures need to be implemented involving additional installation cost and /or operating cost to comply with the aforesaid condition.*

**D. Maximum specific water consumption of all existing Cooling Tower bases plants to be reduced to 3.5M<sup>3</sup>/MWh**

- *Prior to the MoEFCC Notification dated 07.12.2015, there was no restriction on consumption of water. However, under the Amendment Rules, the maximum water consumption for all existing Cooling Towers based plants, such as that of the Petitioner is limited to 3.5M<sup>3</sup>/MWh.*
- *It is submitted that the Petitioner has conducted a preliminary assessment which indicates that it is currently in compliance with the aforesaid condition. Further, upon installation of the wet FGD system (required for meeting the SO<sub>2</sub> emission norms), the water consumption would continue to remain within the limit prescribed in the Amendment Rules.*
- *It is submitted that the Petitioner reserves its right to approach this Hon'ble Commission in the event any additional measures need to be implemented involving additional installation cost and /or operating cost to comply with the aforesaid condition.*

**E. Particulate Matter Emission limited to 50 mg/Nm<sup>3</sup>.**

- *It is submitted that the Amendment Rules stipulate that the particulate matter emissions is to be limited below 50 mg/Nm<sup>3</sup>.*
- *It is submitted that the Petitioner has conducted a preliminary assessment which indicates that it is already in compliance with the aforesaid condition.*

18) *In view of the aforementioned, the Petitioner humbly submits that the aforementioned Notification dated 07.12.2015 is a Change in Law event within the meaning of the PPA read with Implementation Mechanism for PPA and the corresponding provisions of the PSA read with Implementation Mechanism for PSA. Further, in as much as, the Petitioner has to incur additional expenses for the compliance of Notification dated 07.12.2015, there is a change in economic position of the Petitioner. In view of the aforementioned, the Petitioner is to be compensated and relegated to the same economic position as if the change in law did not occur.*

19) *That in view of the above facts, the Petitioner is filing the present Petition to obtain approval of the Appropriate Commission i.e. this Hon'ble Commission regarding the applicability of "Change in Law" Provisions for the MoEFCC notification dated 07.12.2015 pertaining to installation of FGD systems, to enable the Petitioner to comply with the same, and in turn continue to supply power on long term basis. It is submitted that*

*the Petitioner reserves its right to approach this Hon'ble Commission in the event that any additional measures need to be implemented involving additional installation cost and /or operating cost to comply with the aforesaid condition.*

- 20) *It is submitted that a bare perusal of the definition of the term 'Change in Law' under the PPA read with Implementation Mechanism for PPA and the corresponding provisions of the PSA read with Implementation Mechanism for PSA vis-a-vis the changes brought about by the Amended Rules, as detailed hereinabove, would show that the latter qualifies as a "Change-in-Law event". The notification dated 07.12.2015 issued by the MoEFCC has revised the norms/parameters for emission of Particulate Matter as compared to the norms/parameters existing on the COD of the Petitioner's Project. Further, the said notification has introduced additional limits for the Power Project as regards the emission norms for Sulphur Dioxide, Oxides of Nitrogen, the amount of cooling water to be used per unit, installation of Cooling Tower. It is thus clear that the notification issued by the MoEFCC constitutes a Change in Law event under the PPA and has substantial impact on the capital cost and operational cost of the Project. In the light of the above, it is submitted that Article 12 of the PPA provisions for the additional cost being incurred on account of the additions/modifications etc. to be added to the Capital Cost subject to approval by the Hon'ble Commission. The said approval would be fundamental for determining the tariff recovery based on such additional investment and for securing financing from financial institutions. In the absence of such approvals, the implementation and/ or compliance of the MoEFCC Notification would be practically impossible.*
- 21) *A bare perusal of the aforementioned definition of "Change in Law" event, would make it clear that the Notification dated 07.12.2015 is a Change in Law event within the terms of the PPA between the parties. Even otherwise, in terms of the letter dated 30.05.2018 issued by the Government of India in exercise of the powers conferred under Section 107 of the Electricity Act, 2003, wherein it has issued directions to the Hon'ble Central Commission too, clearly provides that the issuance of the Notification dated 07.12.2015 is a Change in Law event. The issue pertaining to MOEFCC Notification, being a Change in Law event, is no more res integra, in this regard, it is submitted that the Hon'ble Appellate Tribunal for Electricity, the Hon'ble Central Commission and various other State Electricity Regulatory Commissions have time and again held that the issuance of the Notification dated 07.12.2015 by the MOEFCC is a Change in Law event.*
- 22) *It is also submitted that the Petitioner has been supplying power at a regulated tariff to Respondent No. 2 for onward supply to the Respondent No. 1 with the power procurement price/tariff approved/being determined by this Hon'ble Commission. It is pertinent to mention that Regulation 14 of the CERC (Terms and Conditions of Tariff), Regulations, 2014-19 also provide for additional capitalisation on account of Change in Law or compliance of an existing law. The Regulation 20 of the MPERC (Terms & Conditions for Determination of Generation Tariff), Regulations, 2012, notified on 28.12.2012 as well as*

*Regulation 20 of the MPERC (Terms & Conditions for Determination of Generation Tariff), Regulations, 2015, notified on 01.01.2016 also provide for additional capitalisation on account of Change in Law or compliance of an existing law.*

- 23) *It is submitted that that the Amendment Rules issued by the MoEFCC has changed the very basis on which the Petitioner had conceived and set up the aforementioned Power Project. The applicable environment norms at the time of installation/commissioning of the Petitioner's Project have undergone a substantial change by virtue of MoEFCC's notification dated 07.12.2015, as detailed above, which require the Petitioner to undertake substantial and major capital works and modifications in order to continue to operate its Project and continue to supply the power under the PPA. Such capital works and modifications would require substantial capital expenditure during the 'Operating Period' apart from recurring Operational expenditure. It would also lead to increase in cost due to change in operational parameters. In this regard, the initial assessment of expenditure required (capital expenditure and operational expenditure) for complying with the revised norms prescribed in the MoEFCC Notification is quite substantial. To incur an expenditure of such magnitude, the Petitioner would be required to arrange for funds from the lenders. It is in the aforesaid factual backdrop, that the Petitioner herein has filed the present Petition under Section 86 of the Electricity Act seeking regulatory certainty qua the treatment of such costs and in principal approval of the capital cost to be incurred by the Petitioner for installation, operation and maintenance of the FGD and associated Systems. The estimated capital cost for installation of Wet FGD Technology & Associated Systems for Unit 1 as specified in the Feasibility Report is approx. Rs. 323.48 Cr. along with O&M cost of approx. Rs. 15.12 Cr. per annum. The above cost excludes Interest During Construction and generation loss due to shut down required for construction. Further, the actual cost of retrofitting of FGD and Associated Systems shall be discovered through open competitive bidding, which may be lower or higher than the above specified cost estimates.*
- 24) *It is submitted that the expenditure to be incurred by the Petitioner in order to comply with the MoEFCC notification ought to be allowed to be recovered as pass through in the tariff inasmuch as the same is occasioned by a change in law and in the nature of a statutory expense and therefore beyond the control of the Petitioner. The Petitioner has no option but to incur the said cost. The objective behind the Electricity Act, 2003 and the Tariff Policy also includes ensuring the viability of the generators and in order to maintain the viability of the Petitioner. Non-recovery of cost incurred on the Project will make the Project unviable thereby resulting in the asset becoming stranded. This would defeat the objectives of the Electricity Act, 2003 and the Tariff Policy, inasmuch as substantial expenditure is required to be incurred to undertake the works in compliance with the MoEFCC notification to adhere to the revised norms. Not only would it require one time capital expenditure, there would be impact on the recurring Operation and Maintenance Costs as well as increase in Auxiliary Consumption etc. This in turn would lead to increase in the cost of generation of power. Accordingly, it becomes important to have a regulatory*

*certainty of the treatment to be given to such costs. Furthermore, in order to arrange the funds from lenders to undertake the works, an in-principle approval from the regulatory is required in order to ensure that the cost so incurred would be recovered from the tariff. This is important to ensure funding from the lenders in the absence of which, the compliances to be done in terms of the MoEFCC notification would be rendered virtually impossible. Therefore, it is of utmost importance for the Petitioner to approach this Hon'ble Commission with the present petition to have certainty in the matter.*

- 25) *It is submitted that the Minutes of meeting of the WRPC, supports the case of the Petitioner herein, in as much as, a bare perusal of the same would show that the Generators raised a concern that for installation of FGD they would have to incur heavy expenditure, with the cost of power also to increase because of increase in Auxiliary Power consumption and O & M Cost – to which the said generators were advised to raise the said concerns with the CERC or the State commission, CEA, MoP.*
- 26) *It is submitted that Respondent No. 1 herein has sought to accord an erroneous interpretation & misconceived reference to the MOM dated 05.04.2017 of WRPC as the reason for the Petitioner to claim “Change in Law”. In this regard, it is submitted that the Petitioner’s claim of “Change in Law” was based in the MoEFCC Notification and not on the aforesaid MoM, as wrongly stated by Respondent. In support thereof, it is submitted that in context of the definition of “Change in Law” under the PPA, the notification of MoEFCC, bringing out change in the Environmental norms/standards, qualifies as a Change in Law – which would be required to be implemented, and that non-compliance result in violation of the terms and conditions of the Environmental Clearance/approval granted to the Petitioner and which in turn would result in the Petitioner not being able to obtain consent to operate & continue the operations of the plant.*
- 27) *Apart from the above, it is submitted that Respondent No. 1 has also sought to erroneously refer & rely upon the Corporate Social Responsibilities of the Petitioner under the Companies Act to deny acceptance of “Change in Law”. In this regard, it is submitted that the activities mentioned in the Corporate Social Responsibilities under the Companies Act are general in nature and are applicable to all Companies irrespective of the nature of business in they operate, whereas the proposed mandatory activity of installation and operation of new/additional equipment’s, required by MoEFCC to reduce emission norms, are much beyond the scope of activities pertaining to Corporate Social Responsibilities leading to huge financial/commercial implications, and such could not by any stretch of imagination be covered under the Corporate Social Responsibilities. It is further submitted that the revised MoEFCC norms are statutory in nature, and therefore expenditure to be incurred for compliance thereof would necessarily fall within under the “Change in Law” provisions of the PPA and the PSA.*

- 28) *That the Petitioner is entitled to approval & consent with regards to applicability of “Change in Law” Provisions for the MoEFCC notification dated 07.12.2015, to enable the Petitioner to comply with the same, and to in turn continue to supply power on long term basis. It is most respectfully submitted that in case the Petitioner is not adequately secured in such manner, the same would not only be gravely prejudicial to the Petitioner but would also defeat the object of the Electricity Act, 2003.*
- 29) *That the Petitioner shall be suffering on account of absence of approval & consent with regards to applicability of “Change in Law” Provisions for the MoEFCC notification dated 07.12.2015, which in turn shall prejudice the large consumers of the State of Madhya Pradesh.*
- 30) *The Central Government through Ministry of Power, Government of India vide its letter dated 30th May 2018 addressed to the Chairperson, Central Electricity Regulatory Commission with copies to Chief Secretaries and Principal Secretary/Secretary (in charge of Energy) of all State Governments and Union Territory Administrations, in exercise of the power conferred under Section 107 of the Electricity Act, 2003, has declared that the said MoEFCC notification dated 07.12.2015 in the nature of Change in Law, which would also be applicable to the Petitioner.*

10. The petitioner has filed following documents with the subject petition:

<b>S. No.</b>	<b>Documents</b>
1.	Copy of the Power Purchase Agreement dated 11.05.2005
2.	Copy of the PSA dated 30.05.2005
3.	Copy of the Settlement Agreement dated 16.10.2012
4.	Copy of the Implementation Mechanism for PPA dated 24.12.2012 entered into between Petitioner and Respondent no. 2
5.	Copy of the Implementation Mechanism for PSA dated 26.11.2012
6.	Copy of the Order 01.12.2012 passed by this Commission
7.	True copy of the MoEFCC Notification dated 07.12.2015
8.	Copy of letter dated 21.03.2016
9.	Copy of the Minutes of Meeting dated 05.04.2017 of the WRPC
10.	Copy of letter dated 24.04.2017
11.	Copy of the Notice dated 22.04.2017
12.	Copy of Respondent No. 1’s letter dated 08.05.2017
13.	Copy of the Petitioner’s letter dated 19.05.2017
14.	Copy of order dated 13.10.2017 passed by this Commission in Petition No. 31 of 2017
15.	Copy of the letter dated 30.05.2018 issued by the Ministry of Power.
16.	Copy of Feasibility Report (FR) prepared by M/s Black & Veatch Ltd.

17. Copy of the notification dated 19.10.2020 issued by MoEFCC

**Proceeding:**

11. At the motion hearing held on 20<sup>th</sup> July' 2021, the petition was admitted. Vide daily order dated 23<sup>rd</sup> July' 2021, the petitioner was directed to serve copy of subject petition on the Respondents. The Respondents were directed to file their replies to the subject petition within four weeks. The petitioner was also asked to file rejoinder by the 31<sup>st</sup> August' 2021.

12. At the next hearing held on 7<sup>th</sup> September' 2021, Ld. Counsel who appeared for Respondent No. 1 sought further 10 days' time for filing reply to the subject petition.

13. At the hearing held on 26<sup>th</sup> October' 2021, the Commission had observed the following:

- i. By affidavit dated 17<sup>th</sup> September' 2021, the Respondent No. 1 (MPPMCL) filed reply to the subject petition.
- ii. By affidavit dated 9<sup>th</sup> October' 2021, the petitioner filed rejoinder to the above reply filed by Respondent No. 1 (MPPMCL).
- iii. Ld. Counsels who appeared for the parties concluded their arguments.

14. Having heard the parties, vide daily order dated 28<sup>th</sup> October' 2021, the case was reserved for order.

**Respondent No. 1 submission:**

15. Respondent No. 1 (M.P. Power Management Company Ltd.) in its reply dated 17<sup>th</sup> September' 2021 has submitted the following:

- i. *“That, a Special TCC meeting of WRPC was held on 05-04-2017 to discuss the single point agenda of Phasing out of the generating units which do not have a space for installation of the FGD for compliance of new MOEF norms of SOx emissions. In the said meeting, the Units No. 1 and 2 of the Petitioner have been planned to be phased out with effect from December, 2020 and any exemption to this can only be given by the Central Electricity Authority or the Ministry. The Petitioner has submitted that its name was inadvertently included in the said list of Units to be phased out for want of sufficient space for installation of the FGD. The Petitioner has neither got the said entry in Annexure B to the said MoM dated 05-04-2017 nor has challenged the same and got it set-aside. The Petitioner has also not obtained necessary waiver in this regard from the CEA or from the Ministry. Therefore, for the present, the said MoM is to be read and considered in the way as the same are contained in Annexure P/9 (pages no. 323 to 337) of the petition. In the facts and circumstances and to save the precious time of the Hon'ble Commission, it may be considered to defer the further hearings of the case on merits till the Petitioner obtains necessary waiver in relation to the said MoM dated 05-04-2017.*

- ii. *That, Regulation 8 of the MPERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2020, in general, provides In-principle Approval in Specific circumstances. Further, Regulation 31 of the aforesaid Regulations, 2020 provides provisions for Additional Capitalization on account of Revised Emission Standards.*
- iii. *That, a conjoint reading of the two regulations (Regulation 8 and Regulation 31) would make it clear that Regulation 8 only provides in general for in-principal approval of Additional Capitalization on account of change in law events or force majeure conditions with a ceiling limit of 10% of the estimated expenditure over the Admitted Capital Cost or Rs. 100 crores whichever is lower. Whereas, the Regulation 31, in particular, provides for additional capitalization on account of revised standards for emission. Regulation 31 requires various additional and specific information, viz., details of proposed technology as specified by the CEA, scope of work, phasing of expenditure, schedule of completion, estimated completion cost including foreign exchange, if any, detailed computation of indicative impact of tariff to the beneficiaries and any other information considered to be relevant by the generating company, to be furnished by the Generating Company while making a proposal for such additional capitalization. The Petitioner has failed to provide a detailed Cost Estimates, phasing of expenditure and computation of indicative impact on tariff to the answering respondent.*
- iv. *That, under para 4 (xx) of the petition, the Petitioner has merely stated that a 67.23% of reduction would be required for SO<sub>2</sub> emission. The current SO<sub>2</sub> emission of the Unit, as assessed in the independent feasibility report submitted by the Petitioner, is based on the internal combustion calculations based on coal data as against the actual SO<sub>2</sub> emission in current scenario. The basis of calculations are not based on actuals but is an assessment based on assumptions. Such a basis of assessment is faulty and not acceptable. Accordingly, the presently assessment to bring down the SO<sub>2</sub> emission by 67.23% is not acceptable and is disputed.*
- v. *That, the notification dated 07.12.2015 issued by MoEFCC contains direction to comply with various Emission Control Norms regarding Water Consumption, Particulate Matter, Sulphur Dioxide (SO<sub>2</sub>), Oxides of Nitrogen (NO<sub>x</sub>) and Mercury (Hg) within a specified period in unison and not individually in a phased manner. Further, the petition has been submitted in the matter of approval of additional expenditure on installation of various Emission Control System, however, ongoing through the petition it is explicit that it relates to only reduction of Sulphur Dioxide reduction whereas other Emission Control Norms have been not incorporated in this petition. This is highly arbitrary on the part of the petitioner to propose implementation of only one parameter of the notification dated 07.12.2015. The Regulation 31 of 2020 Tariff Regulations provides for compliance of revised Emission Standards and in the said Regulation it is nowhere mentioned that fragmentary implementation of revised Emission Standard will be admitted and therefore the instant petition may not be admissible and may kindly be dismissed at the onset.*

- vi. *That, the Petitioner has not provided any basis for estimating the increase in auxiliary power consumption by 1% on installation of FGD. The feasibility report is also silent on this aspect. Hence, the said increase in auxiliary consumption is disputed.*
- vii. *That, the Petitioner proposes to altogether replace the existing stack as against making changes in the same. The aspect of decapitalization of the existing stag has not factored anywhere in present estimates and its impact on tariff has also not been worked out.*
- viii. *That, the Petitioner has estimated increase in Capital Costs and Annual O&M Costs at Rs. 323.48 crore and Rs. 15.12 crore respectively, but has failed to provide any data and basis of arriving at such costs. In absence of such basis, the present estimates are disputed. As against the CAPEX of Rs. 323.48 crore claimed by the Petitioner, the recent cost estimation discovered through open competitive bidding for the projects already awarded for Wet Lime based FGD for a 300 MW Unit, have been indicated at Rs. 130.50 crore by the learned CEA for recent period of 21<sup>st</sup> February, 2019 onwards. The Petitioner's estimates are too high sided as compared to the estimates of CEA. The CAPEX and corresponding O&M Costs estimated by the Petitioner need to be brought down to reasonable standards. The O&M Costs should be restricted to not more than 2% of the CAPEX (excluding IDC & IEDC).*
- ix. *That, the time span / implementation plan of 24 months, required for completing the installation and commissioning of new FGT is a very long period. The extraordinary long time span will tend to significantly increase the CAPEX. Further, keeping the Unit under outage for 15 days or so is also a mere estimate without any basis.*
- x. *That, in the facts and circumstances of the case, the Hon'ble Commission may be pleased to defer the further hearing of present petition till the Petitioner obtains due waiver regarding phasing out of its Unit as considered in MoM dated 05-04-2017 of WRPC meeting. The Hon'ble Commission may further, for reasons of the petition suffering necessary requisites of Regulation 31 of the Tariff Regulations, be pleased to dismiss the same or in the alternate direct the Petitioner to file a duly constituted petition, for proper, just and fair adjudication of present dispute."*

### **Petitioner's Rejoinder:**

16. The petitioner by affidavit dated 9<sup>th</sup> October' 2021 filed rejoinder to the aforesaid reply filed by the Respondent No. 1 broadly mentioning the following:

#### **“Phasing Out Plan of the Petitioner's Power Plant**

- i. *Respondent No. 1 has relied upon the Minutes of Meeting ('MOM') dated 05.04.2017 and has averred that the Petitioner has not challenged the said MOM wherein the Plant of the Petitioner is shown to be phased out. In this regard, it is submitted that Ministry of Environment, Forest and Climate Change ('MoEF&CC') vide its Notification dated 31.03.2021 has modified its earlier Notification dated 07.05.2015. The relevant provisions of the Notification is extracted hereunder:*

“(i) A task force shall be constituted by Central Pollution Control Board (CPCB) comprising of representative from Ministry of Environment and Forest and Climate Change, Ministry of Power, Central Electricity Authority (CEA) and CPCB to categorise thermal power plants in three categories as specified in the Table-I on the basis of their location to comply with the emission norms within the time limit as specified in column (4) of the Table-I, namely: -

Sl. No.	Category	Location/Area	Timelines for Compliance	
			Non retiring units	Retiring units
1	Category A	Within 10 km radius of National Capital Region or cities having million plus population <sup>1</sup> .	Upto 31 <sup>st</sup> Dec. 2022	Upto 31 <sup>st</sup> Dec. 2022
2	Category B	Within 10 km radius of Critically Polluted Areas <sup>2</sup> or Non-attainment cities <sup>2</sup>	Upto 31 <sup>st</sup> Dec. 2023	Upto 31 <sup>st</sup> Dec. 2025
3	Category C	Other than those included in category A and B	Upto 31 <sup>st</sup> Dec. 2024	Upto 31 <sup>st</sup> Dec. 2025

ii. It is further submitted that the task force so constituted, in view of the Notification dated 31.03.2021, convened its 3<sup>rd</sup> meeting and the minutes of the same were circulated vide letter dated 27.08.2021, wherein the list of categorization of the Power Plants was also enclosed therewith. In the same letter, State Pollution Control Boards ('SPCBs') have been requested to provide their comments on the categorization by 10.09.2021. Additionally, the power plants/Utilities have also been asked by WRPC to send their comments on the above categorization by 06.09.2021. Further, in the same letter, Central Pollution Control Board has advised CEA to provide a report in this regard by 10.09.2021. In the list of categorization of the Plant, the Petitioner's Plant has been listed in Category C (Sr. No. 160 and 161). Accordingly, in view of the same, the timelines for compliance of emission standards by the Petitioner is upto 31.12.2024. In view of the above, it is abundantly clear that the Power Plant of the Petitioner has not been phased out/is not to be phased out, and the Petitioner is obligated to implement the amendments brought about in the MoEF&CC Notification dated 07.12.2015, in a time bound manner. Copy of the letter dated 27.08.2021 is annexed herewith and marked as Annexure-B. This fortifies the Petitioner's submission that the Plant of the Petitioner was wrongly included in the list enclosed with the minutes of meeting dated 05.04.2017 of the WRPC. In any event in view of the letter dated 27.08.2021, the previous list with MOM dated 05.04.2017 is redundant. The objection of the Respondent No. 1 is unmerited and wholly misconceived.

**Regulation 8 and Regulation 31 of the MPERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2020**

- iii. Respondent No. 1 has placed reliance on Regulation 8 and Regulation 31 of the MPERC Tariff Regulations, 2020, and has contended that for in-principle approval of additional capitalization on account of Change in law events, there is a ceiling limit of 10% of the estimated expenditure over the capital cost or Rs. 100 Crores, whichever is lower.
- iv. In this regard, it is submitted that Regulation 8 provides that the Petitioner may file for in principle approval for incurring any additional capitalization on account of change in law event if the estimated expenditure exceeds 10% of the admitted capital cost of project or Rs. 100 Crores, whichever is lower. The admitted capital cost earlier approved by this Hon'ble Commission vide its order dated 01.12.2012 passed in Petition No. 78/2012 was Rs. 1236.40 Crore for the 300 MW Unit of the Petitioner. Accordingly, as per Regulation 8, the lowest of 10% of Rs. 1236.40 Crore i.e. Rs. 123.64 Cr. or Rs. 100 Crore, will be Rs. 100 Crore. The Petitioner is required to incur estimated expenditure of approx. Rs. 323.48 Crore (exceeding Rs. 100 Crore as required under the Regulation 8) on installation of FGD systems to comply with revised emission standards set by MOEF & CC and therefore, has filed the present Petition. The present Petition is thus in compliance with the aforesaid Regulation of this Hon'ble Commission.

**Regulation 31 of MPERC Tariff Regulations, 2020 – Details to be furnished**

- v. Respondent No. 1 has referred to Regulation 31 of the MPERC Tariff Regulations, 2020 to aver that the Petitioner has not provided detailed cost estimates, phasing expenditure and computation of indicative impact on tariff. In this regard, it is submitted that the aforesaid averment of Respondent No. 1 is factually incorrect. The Petitioner has filed the Feasibility Report filed along with the Petition (Annexure P-16) wherein detailed Cost Estimates are provide (at Pages 375 to 383 of the Petition). It is further submitted that the Petitioner herein has provided all the relevant information/ data available and necessary for consideration of the present Petition and granting in in principle approval. Any other additional data/ information, if necessary, would become available after the norms of operation as well as norms for fixed charges are finalized and decided. It is further submitted that the necessary information is contained in the detailed Feasibility Report so filed along with the Petition at Annexure P-16

**SO<sub>2</sub> emissions from the Plant of the Petitioner**

- vi. Respondent No. 1 has averred that current SO<sub>2</sub> emission of the Petitioner's Plant is based on internal combustion calculations based on coal data as against actual SO<sub>2</sub> emissions. Respondent No. 1 has further averred that the basis of the assessment is faulty and not acceptable. In this regard, it is submitted that the averments of the Respondent No. 1 are wholly vague, baseless and unsubstantiated. Along with the Feasibility Report, the Petitioner has furnished the current emissions from the Plant of the Petitioner as well (Page 359 to 360 of the Petition). In any event, the Petitioner is filing the actual test results for the tests conducted by M/s SGS India Pvt. Ltd. herewith. In this regard, it is submitted that based on the test results the SO<sub>2</sub> emissions are found to be 1830 mg/ Nm<sup>3</sup>. It is an admitted position that in terms of the MoEF&CC

*Notification, the Petitioner's Plant falls under Category-II and thus, has to maintain 600 mg/Nm<sup>3</sup>. In view of the above, the Petitioner is required to bring the SO<sub>2</sub> emission down by 67.23% as provided in the Petition. Therefore, the purported objection raised by the Respondent No. 1 on the assessment by the Petitioner is misconceived and erroneous..*

***Other Emission Norms provided in MoEF&CC Notification dated 07.12.2015***

vii. *Respondent No. 1 has submitted that the Notification dated 07.12.2015 relates to following:*

- (i) Quantum of Water Consumption*
- (ii) Emission Limits for Sulphur Dioxide*
- (iii) Emission Limits for Nitrogen Oxide*
- (iv) Emission Limits for Mercury*
- (v) Emission of Suspended Particulate Matter*

*Respondent No. 1 has contended that the Petitioner has proposed implementation of only one component, i.e., emission limits for Sulphur Dioxide, in this regard, it is reiterated & reaffirmed that based on the actual test results conducted by SGS, the Petitioner is compliant with the other Emission Limits apart from Sulphur Dioxide. That the norms to be achieved as per Notification dated 07.12.2015 and the actual emission from the Petitioner's Power Plant as per SGS's Report is provided herein below:*

<i>Parameters</i>	<i>Norms as per Env. (Protection) Amendment Rules, 2015 As applicable for the Petitioners Plant</i>	<i>Emission from the Petitioners Plant as per the report of SG's</i>
<i>Water consumption</i>	<i>3.5 m<sup>3</sup>/MWh</i>	<i>2.43 m<sup>3</sup>/MWh</i>
<i>Oxides of Nitrogen (NO<sub>x</sub>)</i>	<i>450 Mg/Nm<sup>3</sup></i>	<i>392 Mg/Nm<sup>3</sup></i>
<i>Suspended Particulate Matter</i>	<i>50 Mg/Nm<sup>3</sup></i>	<i>39 Mg/Nm<sup>3</sup></i>
<i>Mercury</i>	<i>0.03 Mg/Nm<sup>3</sup></i>	<i>0.0169 Mg/Nm<sup>3</sup></i>

*As brought out above, the Petitioner is in compliance with other norms stipulated in the MoEF&CC Notification dated 07.12.2015. In view of the above, the Petitioner is complying with all the components under the Notification dated 07.12.2015, as stipulated therein.*

***Auxiliary Power Consumption upon installation of FGD***

viii. *Respondent No. 1 has averred that the Petitioner has not provided any basis for estimating the increase in auxiliary power consumption by 1% on installation of FGD. In this regard, it is submitted that as per Regulation 25.2 of its Central Electricity Regulatory Commission (Terms and Conditions of Tariff) (First Amendment Regulations), 2020 notified on 25.08.2020 and effective from the date of publication in the official Gazette, the additional auxiliary consumption is stipulated at 1% for Wet Limestone based FGD system. In view of the same, the additional auxiliary consumption may be accordingly allowed. Copy of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) (First Amendment Regulations), 2020 is annexed herewith and marked as Annexure-D.*

**Installation of a new stack**

- ix. Respondent No. 1 has averred that the Petitioner has sought to replace the existing stack as against making changes in the same. Respondent No. 1 has further averred that the aspect of decapitalization of existing stack has not been factored anywhere in the present estimates. In this regard, it is submitted that the Flue gas velocity of the existing stack is 25 m/s to 28 m/s. The high flue gas velocity decreases the life of the stack liner and impacts the neighborhood with rainout. Further, lining of the existing stack will require an outage of 5 to 6 months which will in turn increase the loss of generation of the Plant. The aforesaid aspect has also been considered by the Central Electricity Authority in their Standard Technical Specification for Retrofit of Wet Limestone based Flue Gas Desulphurization System, which too recommends construction of new stack instead of making changes in the existing stack. As brought out above, using of the existing stack will require an outage of around 5 to 6 months, however, the Petitioner to reduce the time of outage is proposing to install a separate new stack with estimated outage of only 15 days, thereby saving a significant amount of generation loss. In view of the above, the Petitioner has rightly provided for the new stack. It is further submitted that the issue of decapitalization raised by the Respondent No. 1 is misconceived inasmuch as both the stacks will be in use.

**CEA's estimation of capital cost**

- x. Respondent No. 1 has averred that the Petitioner has failed to substantiate the costs submitted by it in its Petition and thus, has sought to dispute the costs submitted by the Petitioner. Further, Respondent No. 1 has vaguely averred that as against the CAPEX of Rs. 323.48 Crores claimed by the Petitioner, the recent cost estimation discovered through open competitive bidding for the Projects already awarded have been indicated at Rs. 130.50 Crores by the Central Electricity Authority. Further, Respondent No. 1 has submitted that the O&M Costs should be restricted to not more than 2% of the CAPEX (excluding IDC and IEDC).
- xi. At the outset, it is submitted that the averments made by the Petitioner in the present paragraph are absolutely vague and unsubstantiated, in as much as Respondent No. 1 has failed to even aver the basis of the purported costs of Rs. 130.50 Crores. Even otherwise, even as per the own averment of the Respondent, the purported figure is for the year 2019-20 and thus, the same does not reflect the current prevailing scenario as regards the cost for the installation of FGD and therefore the same cannot be cited as some sort of benchmark and as material, which could be of any relevance/assistance to this Hon'ble Commission. In the current prevailing scenario, the said data and material is wholly extraneous. It is submitted that M/s Black & Veatch has collected information/data pertaining to the prices in the contracts already awarded by NTPC in the year 2020 for its similar size Units in the country, which is reproduced here as follows:

<b>Vendor</b>	<b>Client</b>	<b>Plant</b>	<b>No. of Units</b>	<b>MW Size</b>	<b>Total MW</b>	<b>Price (INR Crore)</b>	<b>Price (in INR Lakhs/MW)</b>

<i>BHEL (MHPS Japan)</i>	<i>NTPC</i>	<i>Nabinagar</i>	<i>4</i>	<i>250</i>	<i>1000</i>	<i>621</i>	<i>62.10</i>
<i>BHEL (MHPS Japan)</i>	<i>NTPC</i>	<i>Bhilai</i>	<i>2</i>	<i>250</i>	<i>500</i>	<i>362</i>	<i>72.40</i>
<i>GE (Alstom/own)</i>	<i>NTPC</i>	<i>Unchahar</i>	<i>5</i>	<i>210</i>	<i>1050</i>	<i>690</i>	<i>65.71</i>
<i>MHPS India (Hitachi Japan)</i>	<i>NTPC</i>	<i>Muzaffarpur</i>	<i>2</i>	<i>195</i>	<i>390</i>	<i>483</i>	<i>123.85</i>
<i>Thermax (Marsulex USA)</i>	<i>NTPC</i>	<i>Barauni</i>	<i>2</i>	<i>250</i>	<i>500</i>	<i>512</i>	<i>102.40</i>

<i>Maximum Price</i>	<i>123.85</i>
<i>Minimum Price</i>	<i>62.10</i>
<i>Average Price</i>	<i>85.29</i>

*Considering the above prices discovered in the competitive bidding contracts given by NTPC to different vendors for its different power plants, M/s Black & Veatch has arrived at the tentative cost figures for LAPL's 2x300 MW (considering plant specific extra requirements) which have been provided in its final feasibility report. In view of the above, the prices provided by the Petitioner are arrived at only after considering the relevant prices in the contemporaneous times.*

*xii. Further, it is submitted that M/s Black & Veatch is one of consulting company specializing in infrastructure development in power, oil and gas, water, telecommunications, government, mining, data centers, smart cities and banking and finance markets in the world. M/s Black & Veatch has more than 100 offices worldwide and has executed projects in more than 100 countries on six continents. M/s Black & Veatch have prepared the feasibility report so filed with the Petition and have provided a detailed capital cost estimate along with the cost for Operation and Maintenance at Appendix C of the feasibility report (Page no. 409 to 413 of the present Petition). It would be pertinent to note herein that the EPC Cost of the Wet FGD system for the Petitioner's Plant is Rs. 85 Lakhs/ MW (without taxes and landfill costs). Further, it is pertinent to mention herein that the L-1 Bidder in the last opened bid for installation of Wet FGD EPC in Haryana Power Generation Corporation Limited's Deen Bandhu Chhotu Ram Thermal Power Project, Yamuna Nagar (2 x 300 MW) was of Rs. 91.7 Lakhs/ MW (without taxes and landfill costs) in March, 2021. Further, the L-1 in the last opened bid for Neyveli Lignite Corporation (NLC), Neyvelli TPS-II consisting of 7 x 210 MW and 2 x 250 MW stood at the rate Rs. 87.8 Lakh/ MW (without taxes and landfill costs) in June, 2021. In view of the aforementioned, it is clear that the cost estimate given by the Petitioner is correct, justified and fair as the prices stated above pertain to the contracts awarded in the year 2020-21 and 2021-22 for similar size Units in the country and all assertions to the contrary are belied from the above position.*

*xiii. Respondent No. 1 has prayed that the O&M expenses shall be considered at 2% of the Capital Cost. In this regard, it is submitted that the Feasibility Report provides for estimation of O&M*

expenses of approx. Rs. 15 Crores/annum for O&M expenses, considering certain assumptions. Accordingly, this Hon'ble Commission may be pleased to allow the O&M expenses at Rs. 15 Crores/annum.

- xiv. Without prejudice to the aforementioned, it is submitted that subsequent to the submission of the aforementioned Feasibility Report on 29.01.2021, the Central Electricity Authority addressed a letter dated 24.02.2021 to various State Utilities, wherein, the CEA acknowledged the difficulties faced by power utilities due to difference in the earlier three years old cost estimation and increase in the project cost of the FGD system due to sudden hike in demand of FGD equipment, shortage of indigenous manufacturing capacity, import restriction from prior reference country etc. In view of the above, CEA is in the process of reviewing its Guidelines/Advice on FGD cost and Technology.

**Time period for completion and Outage Period**

- xv. Respondent No. 1 has averred that the implementation period of 24 months required for completing the installation and commissioning of FGD is a very long period. At the outset, it is submitted that the aforesaid averment by the Respondent No. 1 is absolutely baseless, unsubstantiated and vague. Without prejudice to the aforementioned, it is submitted that in the Instruction to Bidders for Installation of the FGD package in various Plants of NTPC Limited, NTPC India Limited has provided for 30 months for installation and commissioning of FGD. In view of the above, the time period of 24 months quoted by the Petitioner is a reasonable time period and any averment to the contrary is denied.
- xvi. Respondent No. 1 has averred that the prayer for shut down of the Plant of the Petitioner for a period of 15 days should be rejected as the same is without any basis. In this regard, it is submitted that the averments of Respondent No. 1 are vague, unsubstantiated and misconceived. In this regard, it is submitted that apart from making a vague averment that the time period for 15 days shall be rejected, the Respondent No. 1 has failed to give any reason for the same, on this ground alone the objection of the Respondent No. 1 shall not be considered. Further, it is an admitted position that the Petitioner has to comply with the norms under the MoEF&CC Notification dated 07.12.2015. It is further an admitted position that for compliance with the said norms, the Petitioner has to install a Wet FGD system in its Power Plant. At this juncture, it would be pertinent to note that as per the Standard Technical Specification for Retrofit of Wet Limestone Based Flue Gas Desulphurization ('FGD') System issued by the Central Electricity Authority, it is estimated that outage/ shutdown of 30 days is stipulated. However, the Petitioner has considered only 15 days outage time for inter connections of Wet FGD with the Power Plant of the Petitioner. Thus, the prayer of the Petitioner for permitting outage for 15 days is reasonable in fact lower than what has been recommended by the Central Electricity Authority. Copy of the relevant pages of the Standard Technical Specification for Retrofit of Wet Limestone Based Flue Gas Desulphurization System issued by the Central Electricity Authority, New Delhi are annexed herewith and marked as 'Annexure-G'.

- xvii. *Further, it is submitted that in terms of the MoEF&CC notification dated 31.03.2021, the Petitioner has to strictly comply with the timelines so provided under the MoEF&CC notification dated 31.03.2021 failure to comply with the same may lead to levy of environment compensation/penalty ranging from 5 paise to 10 paise per unit of electricity generated by power generating plants. Accordingly, there is an urgency in matter and the same merits indulgence from this Hon'ble Commission.*

### **Analysis of the petition**

#### **Legal Provisions:**

17. The subject petition has been filed by the petitioner for in-principle approval of additional capitalization to be incurred to comply the environmental norms notified by MOEFCC for thermal power stations. Therefore, let us see the provisions of MOEFCC notifications issued in this regard.

- i. In exercise of the powers conferred by Sections 6 and 25 of the Environment (Protection) Act, 1986, (hereinafter referred to as "the 1986 Act"), MoEFCC vide its Notification No. S.O. 3305(E) dated 7.12.2015 has amended the Environment (Protection) Rules, 1986, introducing revised standards for emission of environmental pollutants to be followed by all existing and under construction thermal power plants (TPPs). As per the MoEFCC Notification dated 7.12.2015, all TPPs were mandatorily required to comply with the revised emission control norms within a period of two years from the date of the MoEFCC Notification. Subsequently, vide notification dated 1.4.2021, the thermal power stations have been categorized in A, B and C category and the deadline for compliance of the revised emission control norms for different categories has been revised to December' 2022 to December' 2025 by the MoEFCC.
- ii. By way of the aforesaid notification dated 07.12.2015, the MOEFCC has specified certain standards to be met by thermal power plants on various parameters such as Water Consumption, Particulate Matter, Sulphur Dioxide (SO<sub>2</sub>), Oxides of Nitrogen (NO<sub>x</sub>), Mercury (Hg) and Water Consumption. The norms prescribed by the MoEFCC vide Notification dated 7.12.2015 are as follows:

<i>Sr. No.</i>	<i>Industry</i>	<i>Parameter</i>	<i>Standards</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
<i>5A.</i>	<i>Thermal Power Plant (Water consumption limit)</i>	<i>Water consumption</i>	<i>All plants with once Through Cooling (OTC) shall install Cooling Tower (CT) and achieve specific water consumption up to maximum of 3.5 m<sup>3</sup>/MWh within a period of two years from the date of publication of this notification.</i>

			<p><i>All existing CT-based plants reduce specific water consumption up to maximum of 3.5 m<sup>3</sup>/MWh within a period of two years from the date of publication of this notification.</i></p> <p><i>New plants to be installed after 1<sup>st</sup> January, 2017 shall have to meet specific water consumption up to maximum of 2.5 m<sup>3</sup>/MWh and achieve zero waste water discharged</i></p>
25	<b>Thermal Power Plant</b>	<b>TPPs (units) installed before 31<sup>st</sup> December, 2003*</b>	
		Particulate Matter	100mg/Nm <sup>3</sup>
		Sulphur Dioxide (SO <sub>2</sub> )	600 mg/Nm <sup>3</sup> (Units Smaller than 500 MW capacity units) 200 mg/Nm <sup>3</sup> (for units having capacity of 500 MW and above)
		Oxides of Nitrogen (NO <sub>x</sub> )	600 mg/Nm <sup>3</sup>
		Mercury (HG)	0.03 mg/Nm <sup>3</sup> (for units having capacity of 500 MW and above)
		<b>TPPs (units) installed after [1<sup>st</sup> January, 2004], up to 31<sup>st</sup> December, 2016*</b>	
		Particulate Matter	50 mg/Nm <sup>3</sup>
		Sulphur Dioxide (SO <sub>2</sub> )	600 mg/Nm <sup>3</sup> (Units Smaller than 500 MW capacity units) 200 mg/Nm <sup>3</sup> (for units having capacity of 500 MW and above)
		Oxide of Nitrogen (NO <sub>x</sub> )	300 mg/Nm <sup>3</sup>
		Mercury (Hg)	0.03 mg/Nm <sup>3</sup>
		<b>TPPs (units) to be installed from 1<sup>st</sup> January, 2017**</b>	
		Particular Matter	30mg/Nm <sup>3</sup>
		Sulphur Dioxide (SO <sub>2</sub> )	100mg/Nm <sup>3</sup>
Oxides of Nitrogen (NO <sub>x</sub> )	100mg/Nm <sup>3</sup>		
Mercury(Hg)	0.03mg/Nm <sup>3</sup>		

- iii. The water consumption norms for Thermal Power Plants (TPPs) with Once Through Cooling (OTC), existing CT-based TPPs and new TPPs commissioned after 1.1.2017 were specified in the MoEFCC Notification. Further, norms for particulate matter, Sulphur Dioxide (SO<sub>2</sub>), Oxides of Nitrogen (NO<sub>x</sub>) and Mercury (Hg) for TPPs commissioned before 31.12.2003; TPPs commissioned after 1.1.2004 and up to 31.12.2016; and TPPs commissioned after 1.1.2017 were also specified. Subsequently, vide Notification G.S.R. 662(E) dated 19.10.2020, the MoEFCC relaxed the norms of NO<sub>x</sub> for TPPs commissioned during the period 1.1.2004 and 31.12.2016 from 300 mg/Nm<sup>3</sup> to 450 mg/Nm<sup>3</sup> .

iv. Vide Notification No. 243(E) dated 1.4.2021, MoEFCC has extended the time limit, for implementation of the emission control system to comply with the revised emission control system through the Environment (Protection) Amendment Rules, 2021. The said Notification also provides for constitution of task force and environment compensation for operating TPPs beyond the specified timelines. The relevant portion of the Notification dated 1.4.2021 is reproduced below:

i. “A task force shall be constituted by Central Pollution Control Board (CPCB) comprising of representative from Ministry of Environment and Forest and Climate Change, Ministry of Power, Central Electricity Authority (CEA) and CPCB to categorise thermal power plants in three categories as specified in the Table-I on the basis of their location to comply with the emission norms within the time limit as specified in column (4) of the Table-I, namely:

Sl. No.	Category	Location/Area	Timelines for Compliance	
			Non retiring units	Retiring units
(1)	(2)	(3)	(4)	(5)
1	Category A	Within 10 km radius of National Capital Region or cities having million plus population <sup>1</sup> .	Upto 31 <sup>st</sup> Dec. 2022	Upto 31 <sup>st</sup> Dec. 2022
2	Category B	Within 10 km radius of Critically Polluted Areas <sup>2</sup> or Non-attainment cities <sup>2</sup>	Upto 31 <sup>st</sup> Dec. 2023	Upto 31 <sup>st</sup> Dec. 2025
3	Category C	Other than those included in category A and B	Upto 31 <sup>st</sup> Dec. 2024	Upto 31 <sup>st</sup> Dec. 2025

ii. The thermal power plant declared to retire before the date as specified in column (5) of Table-I shall not be required to meet the specified norms in case such plants submit an undertaking to CPCB and CEA for exemption on ground of retirement of such plant:

Provide that such plants shall be levied environment compensation at the rate of rupees 0.20 per unit electricity generated in case their operation is continued beyond the date as specified in the Undertaking;

iii. there shall be levied environment compensation on the non-retiring thermal power plant, after the date as specified in column (4) of Table-I, as per the rates specified in the Table-II, namely:-

Table-II

<i>Non-Compliant operation beyond the Timeline</i>	<i>Environmental Compensation (Rs. per unit electricity generated)</i>		
	<b><i>Category A</i></b>	<b><i>Category B</i></b>	<b><i>Category C</i></b>
<i>0-180 days</i>	<i>0.10</i>	<i>0.07</i>	<i>0.05</i>
<i>181-365 days</i>	<i>0.15</i>	<i>0.10</i>	<i>0.075</i>
<i>366 days and beyond</i>	<i>0.20</i>	<i>0.15</i>	<i>0.10.”</i>

18. In the subject petition, the petitioner submitted that its thermal power station falls under category – ‘C’ and therefore, the time line for compliance with new environmental norms is 31<sup>st</sup> December’ 2024.

19. Some relevant provisions under MPERC (Terms and Conditions for determination of Generation tariff) Regulations, 2020 applicable for the control period FY 2019-20 to FY 2023-24 are as under:

- i. Definition of ‘Change in Law’ under Regulation 3.1(11) of the MPERC Generation Tariff Regulations, 2020 is as follows:

**‘Change In Law’** means occurrence of any of the following events:

- (i) *enactment, bringing into effect or promulgation of any new Indian law, or*
- (ii) ***adoption, amendment, modification, repeal or re-enactment of any existing Indian law, or***
- (iii) *change in interpretation or application of any Indian law by a competent court, Tribunal or Indian Governmental Instrumentality which is the final authority under law for such interpretation or application, or*
- (iv) *change by any competent statutory authority in any condition or covenant of any consent or clearances or approval or licence available or obtained for the project, or*
- (v) *coming into force or change in any bilateral or multilateral agreement/treaty between the Government of India and any other Sovereign Government having implication for the generating station regulated under these Regulations;*

- ii. Regarding the in-principle approval of the additional capitalization under change in law events or force majeure conditions, Regulation 8 of the aforesaid MPERC Generation Tariff Regulations, 2020 provides as under:

**“In-principle Approval in Specific circumstances:**

*8.1 The generating company undertaking any additional capitalization on account of change in law events or force majeure conditions may file petition for in-principle approval for incurring such expenditure after prior notice to the beneficiaries or the long term customers, as the case may be, along with underlying assumptions, estimates and justification for such*

*expenditure if the estimated expenditure exceeds 10% of the admitted capital cost of the project or Rs.100 Crore, whichever is lower.”*

- iii. With regard to additional capitalization on account of Revised Emission Standards, Regulation 31 of the MPERC Generation Tariff Regulations, 2020 provides as under:

**“31. Additional Capitalization on account of Revised Emission Standards:**

*31.1 A generating company requiring to incur additional capital expenditure in the existing generating station for compliance of the revised emission standards shall share its proposal with the beneficiaries and file a petition before Commission for undertaking such additional capitalization.*

*31.2 The proposal under clause above shall contain details of proposed technology as specified by the Central Electricity Authority, scope of the work, phasing of expenditure, schedule of completion, estimated completion cost including foreign exchange component, if any, detailed computation of indicative impact on tariff to the beneficiaries, and any other information considered to be relevant by the generating company.*

*31.3 Where the generating company makes an application for approval of additional capital expenditure on account of implementation of revised emission standards, the Commission may grant approval after due consideration of the reasonableness of the cost estimates, financing plan, schedule of completion, interest during construction, use of efficient technology, and such other factors as may be considered relevant by the Commission.*

*31.4 After completion of the implementation of revised emission standards, the generating company shall file a petition for determination of tariff. Any expenditure incurred or projected to be incurred and admitted by the Commission after prudence check based on reasonableness of the cost and impact on operational parameters shall form the basis of determination of tariff.”*

20. The petitioner has sought in-principle approval for additional capitalization to be incurred for installation of flue gas de-sulphuration (FGD) system in compliance new environmental norms notified by the MOEFCC in accordance with ‘Change in Law’ provisions under PPA and PSA. Therefore, let us look into the relevant provisions related to ‘Change in Law’ in the PPA read with Implementation Mechanism for PPA. These provisions under PSA read with Implementation Mechanism for PSA are also similar. The provisions under Article 12 of PPA are as under

*“12.1.1. (i) “Change in Law” means “the enactment, bringing into effect, adoption, promulgation, amendment, modification or repeal, after approval of procurement process including the price by the Appropriate Commission, of any statute, decree, ordinance or other law, regulation, notice, circular, code, rule or direction by any Governmental*

*Instrumentality or a change in its interpretation by a Competent Court of law, tribunal, government or statutory authority or any of the above regulations.”*

**12.2 Tariff Adjustment Payment for Change in Law**

**12.2.1** *If a Change in Law results in the Company's revenue or costs directly attributable to the Project being decreased or increased by one percent of the Fixed Tariff Payment or more in a Tariff Year, during Operation Period, the Tariff Payment to the Company shall be increased or decreased in accordance with Article 10.6.*

**12.2.2** *The Company or PTC, as the case may be, shall provide the other Party with a certificate stating that the adjustment in the Tariff Payment is directly as a result of the Change in Law and shall provide supporting documents to substantiate the same. And, such certificate shall correctly reflect all increases or decreases till the date of such certificate. The procedure for claiming Change in Law by either Party shall be as set out in Article 10.6.5.*

**12.2.3** *The adjustment in Monthly Fixed Tariff Payment for reasons attributable to Article 12.2.1 shall be effective from:*

- (i) the date of adoption, promulgation, amendment, re-enactment or repeal of the Law;*
- (ii) the date of order/judgment of the Competent Court, if the Change in Law is on account of a change in interpretation of Law;*
- (iii) the date of impact resulting from the occurrence of Article 12.1.1(ii).*

**12.3 Appeal against Change in Law**

*If the results stated in (a), (b) or (c) of Article 12.1.1(ii) are brought about by a change in the interpretation of Law by a court or tribunal that does not qualify as a Competent Court, the Company agrees that it shall, at its own cost, appeal against such order/judgment up to the level of the appropriate Competent Court.*

*If the Company does not appeal against such order/judgment within three (3) Months, PTC may upon receipt of a legal opinion from an industry recognised expert contest it on the Company's behalf and recover legal costs and other expenses from the Company, for such appeal.*

*Notwithstanding anything contained above, any Change in Law and subsequent revision of Tariff shall be effective only after approval of Appropriate Commission. PTC shall take necessary steps to obtain the approval from the Appropriate Commission within thirty (30) days from the date of receipt of claim for Change in Law payment from the Company. However, imposition of any new Tax or revision in the prevailing Taxes on generation and sale of electricity, shall be reimbursed by PTC to the Company, on submission of supporting documents like Government/Regulatory notification, orders etc. by the Company.*

*Similarly, the relevant provisions of the PSA read with Implementation Mechanism for PSA are reproduced here as follows:*

*12.1 The provisions and effect of a Change in Law affecting the Project and the tariff payments under the PPA shall apply to this Agreement. In the event a Change in Law notice is issued by the Company to PTC, PTC shall, in turn, forward such notice to the Purchaser after it receives notice of such Change in Law event from the Company. PTC shall respond to such Change in Law notices after receipt of written consent or disagreement from the Purchaser. In all such cases, the Purchaser shall notify in writing its consent to or disagreement with such notice to PTC within a period of fifteen (15) days of receipt of such notice from PTC. If the Purchaser does not respond within such fifteen (15) day period, then the Purchaser shall be deemed to have agreed with such request for adjustments pursuant to such Change in Law*

*12.3 .....*

*Notwithstanding anything contained above, any Change in Law and subsequent revision of tariff shall be effective only after approval of Appropriate Commission. Purchaser shall take necessary steps to obtain the approval from the Appropriate Commission within thirty (30) days from the date of receipt of claim for Change in Law payment from PTC. However, imposition of any new Tax or revision in the prevailing Taxes on generation and sale of electricity, shall be reimbursed by Purchaser to PTC, on submission of supporting documents like Government/Regulatory notification, orders etc. by PTC.”*

21. Vide letter dated 30.5.2018, the Ministry of Power issued directions to the Central Commission under Section 107 of the Electricity Act, 2003 to consider the additional cost due to installation of environmental control system as a pass through in tariff and has decided that the said MoEFCC notification dated 07.12.2015 is “Change in Law”.

**Commission’s Observations and Findings:**

22. The petitioner has sought in-principle approval of the Commission for additional capital expenditure likely to be incurred and operating cost for thermal power stations on applicability of “Change in Law” provisions under PPA and PSA for compliance of the new environmental norms (for installation of FGD systems) notified by MOEFCC vide notification dated 07.12.2015.

23. The petitioner submitted that in view of the new environmental norms as notified by the MoEFCC, its Power Station requires upgradation and which in turn would lead to additional capital expenditure in the plant and equipments. Vide letter dated 21.03.2016, the petitioner issued notices under

‘Change in Law’ to both the Respondents in accordance to provisions under PPA. Vide its letter dated 22.04.2017, the petitioner once again brought to the notice of the Respondents for Change of Law.

24. In response to the aforesaid notices, the Respondent No. 1 in its reply dated 08.05.2017 had stated that the changes/alterations to be carried out by the petitioner to ensure environmental sustainability fall within its Corporate Social Responsibilities, and the aforesaid notice of “Change in Law” was not acceptable to it.

25. The petitioner has submitted the following:

- (i) The main plants & equipments of the Power Station were designed and procured in the year 2005-06. The construction thereof had commenced during 2006-09, and as such the designs/manufacturing of the equipments were based on the prevailing norms for environmental emissions. In view of the changed environmental norms as notified by the MoEFCC vide its aforementioned notification dated 07.12.2015, the Power Station requires upgradation and which in turn would lead to additional investment in the Plant and equipment.
- (ii) The petitioner has conducted a detailed feasibility study through consultant for its current emissions from the plant and based on the baseline emissions of the plant, only SO<sub>2</sub> reduction of approximately 67% with reference to existing emission is required to meet the new norm of 600 mg/NM<sub>3</sub>. NO<sub>x</sub>, Hg and water consumption are within the limit and no reduction is required for the power plant. Hence, SO<sub>2</sub> reduction technology/equipment like Flue Gas Desulphurization (FGD) is required to be installed for petitioner’s power plant.
- (iii) Based on the feasibility study of the different technologies, the petitioner has come to the conclusion that only Wet FGD would be the most cost effective in meeting the category 2 limits i.e. 600 mg/Nm<sub>3</sub>. The Wet FGD life-cycle capital cost found significantly lower than all the other SO<sub>2</sub> reduction system options that were considered. The petitioner is required to install Flue Gas Desulfurization (“FGD”) and associated equipment’s as part of the Project to meet the MOEFCC compliance. The petitioner has filed the estimated capital cost for installation of Wet FGD Technology & Associated Systems for Unit 1 as specified in the Feasibility Report. This cost is about Rs. 323.48 Cr. along with O&M cost of about Rs. 15.12 Cr. per annum. The above cost excludes Interest During Construction and generation loss due to shut down required for construction. The actual cost of retrofitting of FGD and Associated Systems shall be discovered through open competitive bidding.
- (iv) The installation of FGD would not only require one time capital expenditure but there would be impact on the recurring Operation and Maintenance Costs as well as increase in Auxiliary

Consumption. This in turn would lead to increase in the cost of generation of electricity. Accordingly, it becomes important to have a regulatory certainty of the treatment to be given to such costs. Moreover, in order to arrange the funds from lenders to undertake the works, **an in-principle approval** from the Regulator is required in order to ensure that the cost so incurred would be recovered through the tariff. This is important to ensure funding from the lenders, in the absence of which the compliances to be done in terms of the MoEFCC notification would be rendered virtually impossible.

26. Central Electricity Authority (CEA) was entrusted with planning and coordination for implementation of ECS notified by MoEFCC. CEA alongwith Regional Power Committees formulated a phasing plan up to 2024. CEA vide letter dated 21.2.2019 recommended various technologies to comply with revised emission control norms as specified by the MoEFCC Notification. Further, CEA on 7.2.2020 issued 'Advice on FGD Technology selection for different unit size'. As per the Advisory, TPPs are required to select the appropriate FGD technology based on parameters like SO<sub>2</sub> removal efficiency, units' size, balance plant life and the geographical location of TPPs.

27. The Respondent No. 1 (MPPMCL) in response on the subject petition has broadly submitted the following issues:

- i. Respondent No. 1 has referred TCC meeting of WRPC which was held on 05.04.2017 to discuss the Phasing out of the generating units which do not have a space for installation of the FGD for compliance of new MOEFCC norms of SO<sub>x</sub> emissions. In the said meeting, the Units No. 1 and 2 of the petitioner power plant have been planned to be phased out with effect from December, 2020 and any exemption to this can only be given by the CEA or the Ministry. In view of the above circumstances, the Respondent No.1 has requested to defer the matter till the petitioner obtains necessary waiver in relation to the said MoM dated 05.04.2017.
- ii. Respondent No. 1 while referring Regulations 8 and 31 of the MPERC (Terms and Conditions for determination of Generation Tariff) Regulations, 2020 submitted that the Regulation 8 only provides in-principle approval of Additional Capitalization on account of 'change in law' events or force majeure conditions with a ceiling limit of 10% of the estimated expenditure over the Admitted Capital Cost or Rs. 100 crores whichever is lower whereas, the Regulation 31 of the aforesaid Regulations provides for additional capitalization on account of revised standards for emission.
- iii. MPPMCL further submitted that the Regulation 31 requires various additional and specific information, viz., details of proposed technology as specified by the CEA, scope of work, phasing of expenditure, schedule of completion, estimated completion cost including foreign

exchange, if any, detailed computation of indicative impact of tariff to the beneficiaries and any other information considered to be relevant by the generating company while making a proposal for such additional capitalization. As contended by the Respondent No. 1, the petitioner has failed to provide a detailed Cost Estimates, phasing of expenditure and computation of indicative impact on tariff.

- iv. As per the contention of the Respondent No. 1, the petitioner has not provided any basis for estimating the increase in auxiliary power consumption by 1% on installation of FGD.
- v. The Respondent No.1 stated that the subject petition is related to only reduction of Sulphur Dioxide whereas, other Emission Control Norms have not been incorporated in this petition. The Respondent No.1 further submitted that Regulation 31 of 2020 Tariff Regulations provides for compliance of revised Emission Standards and it is nowhere mentioned in the said Regulation that fragmentary implementation of revised Emission Standard will be admitted and therefore the instant petition may not be admissible and may kindly be dismissed at the onset.
- vi. With regard to replacement of the existing stack, the aspect of decapitalization of the existing stack has not been factored in and its impact on tariff has also not been worked out in the petition.
- vii. The petitioner's cost estimates are too high as compared to the estimates of CEA. The O&M Costs should be restricted to not more than 2% of the Capex (excluding IDC & IEDC).
- viii. The time span / implementation plan of 24 months, required for completing the installation and commissioning of new FGD is a very long period. The extraordinary long-time span will tend to significantly increase the Capex. Further, the estimated time of 15 days to keep the Unit under outage also has no basis.

28. In response to the aforesaid objections raised by the Respondent No. 1, the petitioner in its rejoinder has submitted the following:

- i. In compliance to the MOEFCC Notification dated 31.03.2021, a task force convened its 3<sup>rd</sup> meeting and the minutes of the same were circulated vide letter dated 27.08.2021, wherein the list of categorization of the Power Plants was also enclosed therewith. In the same letter, State Pollution Control Boards ('SPCBs') have been requested to provide their comments on the categorization by 10.09.2021. Additionally, the power plants/Utilities have also been asked by WRPC to send their comments on the above categorization by 06.09.2021. Central

Pollution Control Board has advised CEA to provide a report in this regard by 10.09.2021. In the list of categorization of the Plant, the petitioner's Plant has been listed in Category C. Accordingly, in view of the same, the compliance of emission standards by the petitioner has to be made by 31.12.2024.

- ii. It is abundantly clear that the Power Plant of the petitioner has not been phased out/is not to be phased out, and the petitioner is obligated to implement the amendments brought about in the MoEF&CC Notification dated 07.12.2015 in a time bound manner. The Plant of the petitioner was wrongly included in the list enclosed with the minutes of meeting dated 05.04.2017 of the WRPC. In any event, the previous list with MOM dated 05.04.2017 is redundant in view of the letter dated 27.08.2021 issued by WRPC subsequently.
- iii. With regard to Regulation 8 referred by the Respondent No. 1, the petitioner has submitted that the admitted capital cost earlier approved by this Commission vide its order dated 01.12.2012 passed in Petition No. 78/2012 was Rs. 1236.40 Crore for its 300 MW Unit No. 1. Accordingly, as per Regulation 8, the lowest of 10% of Rs. 1236.40 Crore i.e. Rs. 123.64 Cr. or Rs. 100 Crore, will be Rs. 100 Crore. The Petitioner is required to incur estimated expenditure of approx. Rs. 323.48 Crore (exceeding Rs. 100 Crore as required under the Regulation 8) on installation of FGD systems to comply with revised emission standards therefore, the present petition is in compliance with the aforesaid Regulation.
- iv. Regarding compliance of the Regulation 31 of the MPERC Tariff Regulations, 2020, the petitioner has submitted that all the relevant details are filed in the Feasibility Report along with this petition wherein detailed Cost Estimates have been provided. The petitioner further submitted that it has provided all the relevant information/ data available and necessary for consideration of the present petition for granting in-principal approval.
- v. With regard to compliance of the other environmental parameters, the petitioner has filed the norms to be achieved as per Notification dated 07.12.2015 and the actual emission from the petitioner's Power Plant as below:

Parameters	Norms as per Environment (Protection) Amendment Rules, 2015 As applicable for the petitioners Plant	Emission from the petitioners Plant as per the report of SG's
Water consumption	3.5 m <sup>3</sup> /MWh	2.43 m <sup>3</sup> /MWh
Oxides of Nitrogen (NO <sub>x</sub> )	450 Mg/Nm <sup>3</sup>	392 Mg/Nm <sup>3</sup>
Suspended Particulate Matter	50 Mg/Nm <sup>3</sup>	39 Mg/Nm <sup>3</sup>
Mercury	0.03 Mg/Nm <sup>3</sup>	0.0169 Mg/Nm <sup>3</sup>

In view of the above, the petitioner is complying with all other parameters (except SO<sub>2</sub>) under the Notification dated 07.12.2015 as stipulated therein.

- vi. In order to reduce the time of outage the petitioner has proposed to install a separate new stack with estimated outage of only 15 days, thereby saving a significant amount of generation loss. It is further submitted that the issue of de-captalization raised by the Respondent No. 1 is misconceived in as much as both the stacks will be in use.
- vii. Regarding the cost estimate, the petitioner has submitted the following details of the prices in the contracts already awarded by NTPC in the year 2020 for its similar size Units in the country discovered through the competitive bidding:

(Rs. In Crore)	
Maximum Price	123.85
Minimum Price	62.10
Average Price	85.29

Considering the above prices discovered in the competitive bidding contracts given by NTPC to different vendors for its different power plants, M/s Black & Veatch, consultant has arrived at the tentative cost figures for petitioner's 2x300 MW which have been provided in its final feasibility report. In view of the above, the prices provided by the petitioner are arrived at only after considering the relevant prices in the contemporaneous times. The petitioner has also mentioned that the EPC Cost of the Wet FGD system for the petitioner's Plant is Rs. 85 Lakhs/MW (without taxes and landfill costs).

- viii. Regarding the implementation period of 24 months required for completing the installation and commissioning of FGD, the petitioner submitted that in the instruction to Bidders for Installation of the FGD package in various Plants, NTPC India Limited has provided for 30 months for installation and commissioning of FGD. In view of the above, the time period of 24 months is reasonable. With regard to shut down of plant, the petitioner submitted that as per the Standard Technical Specification for Retrofit of Wet Limestone Based Flue Gas Desulphurization ('FGD') System issued by the Central Electricity Authority, it is estimated that outage/ shutdown of 30 days is stipulated. However, the Petitioner has considered only 15 days outage time for inter connections of Wet FGD with the Power Plant of the Petitioner.

29. In view of the above observations and on perusal of the submissions made by both the parties, the Commission has noted the following:

- i. Regarding the phasing out the unit, vide its letter dated 24.04.2017, the petitioner brought to the notice of WRPC that the name of its thermal Power station had been wrongly mentioned in the list of units to be phased out. In the letter, petitioner contended that its thermal Power Plant had enough space available for installation of the proposed FGD and other associated system. Accordingly, it was requested by the petitioner to correct the same in the records and to

communicate the same to the CEA. The Commission further noted that in the list of categorization of the Plant, the petitioner's Plant has been included in Category 'C' and the timelines for compliance of emission standards by the petitioner is upto 31.12.2024. Therefore, the contention of the Respondent No. 1 that 'the subject petition is not maintainable on the basis of the WRPC minutes dated 24.04.2017' is not considered and the subject petition is found maintainable.

- ii. In compliance to clause 12.1 of the PPA and PSA, after notification for new environment norms issued by the MOEFCC, the petitioner issued notice to the Respondent No. 1 for additional capital expenditure to be incurred for compliance the same. On response, the Respondent No. 1 replied that it is the social responsibility of the petitioner under the Companies Act 2013. Perusal of the definition of "Change in Law" event makes it clear that the MOEFCC Notification dated 07.12.2015 is a Change in Law event within the terms of the PPA between the parties. Further, Ministry of Power, Government of India in exercise of the powers conferred under Section 107 of the Electricity Act, 2003, has issued directions vide letter dated 30.05.2018 to the Central Commission to provide that the issuance of the MOEFCC Notification dated 07.12.2015 is a 'Change in Law' event. Therefore, compliance to the new environmental norms and capital expenditure to be incurred in this regard shall fall under the change in law.
- iii. Estimated capital expenditure (Rs. 323.48 Crore) to be incurred by the petitioner in compliance to the new environment norms is more than the 10 % of the capital cost approved by the Commission (Rs. 1236.40 Crore) for Unit No. 1 and which is more than the Rs. 100 Crore as required under the Regulation 8 of the MPERC Generation Tariff Regulations, 2020, for in-principle approval of the additional capital expenditure. Further, the petitioner filed the feasibility report prepared by the consultant incorporating most of the details required under Regulation 31. Regarding the indicative tariff, the consultant in the feasibility report has submitted the following:

*"At this stage, due to non-finalization of norms for both fixed charges and variable charges by the CERC/SERC's for implementation of emission control system, the resultant impact on tariff can not be ascertained and it shall be as determined by the Commission based on the notified norms for both fixed and variable charges in due course of time."*
- iv. Regarding Respondent No. 1 contentions that the estimated capital cost is more than the cost standardised by CEA, the Commission observed that capital cost estimate for installation of FGD as submitted by the petitioner is based on the feasibility report of the consultant and cost discovered through bidding process for other thermal power projects. Further, the CEA had estimated the cost of FGD three years back when there was no requirement of FGD in the country. Looking to the current situation, the CEA is in the process of reviewing its Guidelines/Advice on FGD cost and Technology.

- v. The petitioner has identified and proposed wet limestone based FGD systems for reduction in SO<sub>2</sub> emissions taking into consideration the effectiveness, availability and cost. The petitioner has submitted that except the SO<sub>2</sub> emission, its power plant is fulfilling the other environmental parameters notified by the MOEFCC, therefore, in-principle approval shall be limited only for installation of FGD to meet the SO<sub>2</sub> emission norms.
- vi. At this stage, the Commission is not scrutinizing the hard cost component towards proposed FGD installation. The Commission is not inclined to deal with other issues also like O&M expenses, Auxiliary Consumption, shut down time etc. at this stage since it would be appropriate to deal with these issues while processing the petition for determination of tariff to be filed by the petitioner after installation and commissioning of the FGD in light of the provisions under MPERC Generation Tariff Regulations 2020.

30. In order to get supplementary tariff for FGD installation in future, the petitioner would require to file all relevant details and documents in terms of the Regulation 31 of the MPERC Generation Tariff Regulations, 2020 with the petition after commissioning of FGD system. The petitioner shall file all relevant details with the petition for determination of tariff/true-up like cost discovered through competitive bidding, copy of work orders to different vendors, loan agreement along with terms and conditions of loan, detailed calculation for actual IDC, Auditor's certificate for actual expenditure, FGD Commission certificate, details of actual SO<sub>2</sub> emission after FGD is commissioned and updated Asset-cum-Depreciation register incorporating FGD components.

31. In view of the observations and findings, the Commission hereby accord "in-principle approval" for installation of FGD under the provisions of MPERC Generation Tariff Regulations, 2020. The Commission would like to state that the actual hard cost includes IDC, IEDC, indirect cost, taxes and duties and plant specific costs of the wet FGD installation shall be dealt in the petition to be filed by the petitioner for determination of supplementary tariff after commissioning of the FGD system and capitalization in Annual Audited Accounts, in accordance to the Regulations, 2020. Accordingly, the petitioner is directed to file separate petition for determination of tariff after commissioning and capitalization of FGD system in accordance to the provisions under MPERC Generation Tariff Regulation, 2020.

With the above observations and findings, the subject petition No. 21 of 2021 is disposed of.

**(Shashi Bhushan Pathak)**  
Member

**(Mukul Dhariwal)**  
Member

**(S.P.S Parihar)**  
Chairman