

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 446/MP/2019

Coram:

**Shri P.K. Pujari, Chairperson
Shri I.S. Jha, Member**

Date of Order: 23rd April, 2020

In the matter of

Petition under Section 79 of the Electricity Act, 2003 and Article 13.2(b) of the Power Purchase Agreement dated 07.08.2007 and this Hon'ble Commission's Order dated 08.10.2018 in Petition No. 133/MP/2016 seeking provisional approval of the additional capital and operational expenditure on account of installation of various Emission Control System in compliance of Ministry of Environment, Forest and Climate Change Notification dated 07.12.2015 re: emissions.

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And

In the matter of

Sasan Power Limited (SPL),
C/o- Reliance Power Ltd,
3rd Floor, Reliance Energy Centre,
Santacruz East, Mumbai-400055

...Petitioner

Versus

1. MP Power Management Company Limited,
Shakti Bhawan, Jabalpur,
Madhya Pradesh-482008
2. Paschimanchal Vidyut Vitran Nigam Limited,
Victoria Park, Meerut – 250001,
Uttar Pradesh.
3. Purvanchal Vidyut Vitran Nigam Limited,
Hydel Colony, Bhikaripur,



Post-DLW, Varanasi – 221004,
Uttar Pradesh.

4. Madhyanchal Vidyut Vitran Nigam Limited,
4A-Gokhale Marg,
Lucknow – 226001,
Uttar Pradesh
5. Dakshinanchal Vidyut Vitran Nigam Limited
220 kV Vidyut Sub-Station,
Mathura Agra by-pass road,
Sikandra, Agra-282007, Uttar Pradesh
6. Ajmer Vidyut Vitran Nigam Limited
Hathi Bhata, City Power House,
Ajmer-305001, Rajasthan.
7. Jaipur Vidyut Vitran Nigam Limited
Vidyut Bhawan, Jaipur – 302005,
Rajasthan,
8. Jodhpur Vidyut Vitran Nigam Limited
New Power House, Industrial Area,
Jodhpur-342003, Rajasthan
9. Tata Power Delhi Distribution Limited
Grid Sub-station Building, Hudson Lines,
Kingsway Camp, New Delhi-110009
10. BSES Rajdhani Power Limited
BSES Bhawan, Nehru Place,
New Delhi-110019.
11. BSES Yamuna Power Limited
Shakti Kiran Building,
Karkardooma, Delhi – 110092
12. Punjab State Power Corporation Limited
The Mall, Patiala – 147001,
Punjab
13. Haryana Power Purchase Centre
Room No. 239, Shakti Bhawan,
Sector 6, Panchkula – 134109,
Haryana.
14. Uttarakhand Power Corporation Limited
Urja Bhawan, Kanwali Road,
Dehradun-248001, Uttarakhand.

...Respondent



Parties present:

Shri Amit Kapur, Advocate, SPL
Shri Yashaswi Kant, Advocate, SPL
Shri Abhimanyu Das, Advocate, SPL
Shri Kunal Singh, Advocate, TPPDL
Shri Nitin Kala, Advocate, TPDDL
Shri G. Umamathy, Advocate, MPPMCL
Ms, Pavitra B., Advocate, MPPMCL
Ms, Vaishnavi, Advocate, MPPMCL
Ms. Poorva Saigal, Advocate, Rajasthan & Haryana Discoms
Shri Rajiv Srivastava, Advocate, UPPCL
Ms. Swapna Seshadri, Advocate, PSPCL

ORDER

The Petitioner, Sasan Power Limited (SPL), is a generating company operating an Ultra Mega Power Project (hereinafter referred to as the Project) with installed capacity of 3960 MW (6x660MW) at Sasan, District Singrauli, Madhya Pradesh. The Respondents are procurers/ distribution licensees buying electricity generated from the above Project who have entered into Power Purchase Agreements (“PPAs”) with the Petitioner on 7.8.2007.

Background

2. On 23.11.2006, Ministry of Environment, Forests & Climate Change, Government of India (MoEF&CC) issued the environmental clearance to SPL for setting up and operating the Project. On 7.12.2015, MoEF&CC issued a Notification (hereinafter referred to as the 2015 Notification) which mandatorily required all thermal power plants to comply with the revised environmental norms (hereinafter referred to as the Revised Norms) on or before 6.12.2017 (i.e. within a period of 2 Years from the date of the 2015 Notification). The timeline for implementation of the Revised Norms was later revised by Central Pollution Control Board (CPCB) vide its letter dated 11.12.2017 and the same now stands as under:



Unit No.1	Unit No.2	Unit No.3	Unit No.4	Unit No.5	Unit No.6
30.09.2021	30.06.2021	31.03.2022	31.03.2022	31.12.2021	30.09.2021

3. SPL had filed Petition No. 133/MP/2016 before this Commission praying that introduction of the Revised Norms be declared as an event of “Change in Law” in terms of Article 13 of the PPA and to grant in-principle approval for the expenditure to be incurred by SPL for installation of Flue Gas De-Sulphurization (FGD) system in order to comply with the revised SO₂ emission norms specified by the 2015 Notification. This Commission vide Order dated 8.10.2018 in Petition No. 133/MP/2016 held that the introduction of the Revised Norms through the 2015 Notification is a Change in Law event and directed SPL to implement it in consultation with CEA and to approach this Commission for determination of increase in cost or/and revenue expenditure in accordance with the Guidelines to be issued by CEA. On 27.03.2019, CEA issued its “Advisory Report” regarding the Project detailing suggestive technology and estimated indicative cost for installation of FGD system. The instant petition has been filed for seeking in-principle approval of the capital expenditure to be incurred by SPL for installing FGD system to meet the revised emission norms of SO₂.

4. The main prayers of the Petitioner are as under:

- “(a) Approve the provisional total capital expenditure of Rs. 2434 Crores to be incurred by SPL due to installation of FGD;
- (b) Approve the recurring annual operating expenditure to be incurred by SPL due to installation of FGD, as provided in the instant petition,
- (c) Prescribe, devise and apply appropriate norms and mechanism for computing the adjustment in tariff to offset the additional investment and increase in operating costs due to MoEFCC Notification such that SPL is restored to the same economic position as if such Change in Law event had not occurred.
- (d) Permit the modification in formulae for Availability, Energy Charge and PLF on account of increased auxiliary consumption as detailed in the petition.



- (e) *Grant liberty to the Petitioner to approach this Hon'ble Commission by way of separate petition(s) for measures to comply with the Revised Norms which may be imposed on SPL subsequently.*
- (f) *Pass any such other and further reliefs as this Hon'ble Commission deems just and proper in the nature and circumstances of the present case."*

5. The Respondent No.1, 2-5, 6-8, 12 and 13 have filed their replies vide affidavits dated 27.2.2020, 11.3.2020, 7.1.2020, 6.2.2020 and 14.1.2020, respectively. The Respondent No. 9, 10, 11 and 14 have not filed reply to the petition. The Commission vide Record of Proceedings (ROP) dated 27.2.2020 directed the Petitioner to place on record the details of the tendering process initiated by it for awarding the various packages of FGD system. The Petitioner has filed rejoinder to the replies of the respondents and provided the information sought by the Commission vide affidavits dated 16.3.2020 and 11.3.2020, respectively.

Submissions of the Petitioner

6. The petitioner has made the following submissions vide its affidavit filed with the main Petition:

a) In terms of the 2015 Notification, norms applicable for units having capacity of 500 MW and above and installed between 1.1.2003 and 31.12.2016 (which are applicable for SPL), are as under:

- (i) All existing Cooling Tower based thermal power plants to ensure that specific water consumption is limited to a maximum of 3.5 m³/MWh.
- (ii) Emission limit for Particulate Matter limited to 50 mg/Nm³. In SPL's case, plant is designed for PM of maximum 50 mg/Nm³ as the condition for PM limit of 50 mg/Nm³ was specified in the Environment clearance for the Project.
- (iii) Oxides of Nitrogen emission limited to 300 mg/Nm³ (*new norm*).
- (iv) Sulphur Dioxide emission limited to 200 mg/Nm³ (*new norm*).
- (v) Mercury emission limited to 0.03 mg/Nm³ (*new norm*).



b) On 18.12.2018, SPL submitted the feasibility report regarding installation and operationalization of equipment for complying with the Revised Norms to CEA, as per the directions vide in order dated 8.10.2018 in Petition No. 133/MP/2016. On 31.1.2019, SPL submitted revised feasibility report incorporating comments of CEA on the feasibility report submitted earlier on 18.12.2018.

c) On 15.3.2019, Development Consultant Private Limited (“DCPL”), SPL’s technical consultant for bid evaluation finalized the Technical Evaluation Report of the ICB and on 21.3.2019, SPL completed the commercial negotiations with the technically qualified vendors.

d) On 27.3.2019, CEA issued its Advisory Report regarding the Project detailing suggestive technology and estimated indicative cost in installation of FGD system. The recommendations by CEA *inter-alia* were:

(i) As per the Feasibility Report, SPL has opted for the “Lime Stone based Wet FGD Technology”. Under this technology, the reagent source may be selected based on availability of limestone, limestone purity, cost and quality. Additionally, source of limestone should be chosen with life cycle cost analysis on handling and saleability of gypsum.

(ii) The maximum Additional Auxiliary Power Consumption for complete FGD system would be 1%. However, if the existing chimney is used, the requirement of Gas to Gas Heater (“GGH”) would have to be seen and the Additional Auxiliary Power Consumption with GGH (only if using old chimney) would be 0.3%.

(iii) The cost of retrofitting the FGD system for SPL ought to be discovered through open competitive bidding in consultation with the lead procurer. The lead procurer (to be invited by SPL) may participate in bidding process till final award of contract for installation of FGD system.

(iv) As regards indicative cost, the base capex cost would be Rs. 0.37 crore/ MW + Rs. 0.047 crore/MW (plant specific additional requirement for implementing FGD system such as electrical supply and ducting work).

(v) Further, requirement of additional land was indicated by SPL. However, SPL did not provide any cost of such land requirement. SPL is advised to approach the regulator at the appropriate stage for any cost implication on capex to assess land acquisition related cost.

(vi) The indicative cost is the ‘Base Cost’ and does not include Opportunity Cost (associated with generation loss due to interconnection of chimneys with absorber) and taxes/ duties. The indicative base cost is calculated considering a new chimney without GGH.



(vii) As regards Opportunity Cost, SPL was advised to minimize the interconnection time by taking suitable measures so that 'Opportunity Cost' may have least impact on tariff revision.

(viii) For Opex, the same would include reagent cost, additional water consumption associated with FGD system, manpower cost, APC. Opex should be kept as low as possible by reducing APC and producing good quality of saleable by-product.

e) On 17.5.2019, a meeting was held at MoEF&CC regarding adherence to environmental norms of NO_x for coal-based thermal power plants (TPPs). During the meeting it was, *inter-alia*, agreed in-principle to revise the NO_x norms from 300 mg/Nm³ to 450 mg/Nm³ for TPPs installed between 1.1.2004 and 31.12.2016. Pursuant to the Order dated 5.8.2019, in WP 13029 of 1985 pending before Hon'ble Supreme Court, MoEF&CC has filed an affidavit stating that a consensus has been reached between ECPA, MoP, CPCB, CEA, NTPC and MoEF&CC for revision of NO_x norms from 300 mg/Nm³ to 450 mg/Nm³ for thermal power plants installed between 1.1.2004 to 31.12.2016.

f) SPL's NO_x emission levels at normal operating conditions are within the proposed revised limits/ norms and accordingly, NO_x emission control measures are not being envisaged. In case the NO_x emission limits as proposed by MoEF&CC is not accepted by Hon'ble Supreme Court, SPL has submitted that it would approach the Commission for necessary approval, by way of separate petition.

g) On 31.5.2019, SPL convened a meeting of Procurers and made a presentation on implementation of FGD system at the Sasan UMPP including technology to be used, competitive bidding details for selection of EPC contractor, timelines, outcome of bidding process, CEA recommendations regarding technology, benchmark EPC costs (without taxes), etc. On 25.7.2019, MPPMCL wrote to all Procurers and SPL regarding the Procurers' meeting held on 31.5.2019 and enclosed the Minutes of Meeting held on 31.5.2019.

h) In terms of Article 13.2(b) of the PPA, SPL is entitled to be compensated for any increase in cost which would include additional capital cost incurred during the Operating Period. The change in law event being the 2015 Notification and consequent *inter-alia* installation of FGD system will lead to an increase in cost



for which SPL should be compensated.

i) The Regulation 11 of the CERC (Terms and Conditions of Tariff) Regulations 2019 (hereinafter referred to as the 2019 Tariff Regulations) , provide that a generating company or a transmission licensee undertaking any additional capitalization on account of force majeure or change in law events may file petition for in-principle approval for incurring such expenditure, with prior intimation to the Procurers along with underlying assumptions, estimates, and justifications for such expenditure. Furthermore, Regulation 29 of the 2019 Tariff Regulations provides that a generating company requiring to incur additional capital expenditure for compliance of the Revised Norms, shall file a petition for undertaking such capital expenditure and the Commission may grant approval after due consideration of various factors.

j) In the present case, huge capital cost is involved in implementation of FGD system. Introduction of the Revised Norms by MoEF&CC through the 2015 Notification and the time bound implementation of the same is a situation different from the standard change in law claims. As such, without provisional approval, it would be impossible for SPL to achieve financial closure for requisite funding.

k) Since provisional cost has been approved by CEA, the Commission may consider in-principle approval of the same. Since incurring such expenditure has not been envisaged in the PPA or the Competitive Bidding Guidelines, there is no regulatory certainty as regards the methodology of compensation for such expenditure to be incurred. This has resulted in lenders being apprehensive in extending credit to SPL.

l) The Revised Norms applicable for SPL and the consequent measures taken by SPL are as under:

Particulars	SPM	SO ₂	NOx	Mercury	Water
Revised/ New Norms	50 mg/Nm ³	200 mg/Nm ³	300 mg/Nm ³	0.03 mg/Nm ³	3.5 m ³ /MWh
Action Required	Already complying	FGD Installation in all Units	De-NOx system installation in all Units *	Already complying.	Already complying.



* MoEF&CC is in the process of revising the NOx limit to 450 mg/Nm³ from existing limit of 300 mg/Nm³. SPL does not require any retrofit for NOx control as per the proposed revised limit.

m) The impact on SPL on account of implementing the Revised Norms is on account of:

(i) Expenditure on account of installation of FGD system required to meet the Revised Norms.

(ii) Operation and Maintenance cost associated with the above System.

(iii) Increase in auxiliary consumption of the generating station due to installation of FGD system.

(iv) Disruption in power generation during the installation phase of the above systems.

n) The units at SPL are designed for firing of coal with GCV of 3700 – 4800 kCal/kg with sulphur content of 0.2%-0.5%. Assuming the lowest quality of coal used for operations, SOx in the flue gas is expected to be much higher than the limit of 200 mg/Nm³ notified by MoEF&CC. Hence, to reduce the SOx emission level below 200 mg/Nm³, De-SOx mitigation technology is required to be installed in all the units of Sasan UMPP.

o) Flue Gas Desulphurization (“FGD”) is the method to remove SO₂ from emitted gas after combustion and following methods are generally being used for flue gas desulphurization.

(i) Semi Dry/Dry FGD System

(ii) Wet FGD System.

(iii) Sea water FGD System (since sea is far away, hence this is not considered).

(iv) Ammonia Based FGD System.

(v) Sorbent Polymer Catalyst (SPC) Technology.

p) In order to select the appropriate FGD technology to be employed at the Project, the following factors are to be taken into consideration:

(i) Technical: Sulphur removal ability, reliability, space requirements, and reagent availability.



(ii) Economical: Capital cost, operating cost – Overall costs on life-cycle basis

(iii) Commercial: Reliable suppliers, reliability of technology, proven track record of the technology in the country, supplier guarantee

q) The qualitative comparison of the commercially available and proven technologies are as under:

Description	Dry FGD	Wet FGD	Ammonia Based FGD	SPC FGD Technology
Reagent	Quick Lime	Limestone	Ammonia	Not Required. SPC Modules are used
Byproduct	Landfill	Gypsum Saleable or landfill	Ammonium Sulphate saleable	Sulphuric Acid
Sulphur	<2.5%	< 6%	Cost effective for sulphur content>1.0%	High
Removal efficiency	70%-85%	>98%	> 98%	Not available
Space requirement adjacent to the chimney considering Booster fan, Absorber etc.	Larger due to requirement of Fabric filter retrofit	Absorber, ducting, booster fans can be accommodated adjacent to chimney & Limestone handling, preparation and by-product handling can be located suitably elsewhere in the plant	Absorber, ducting, booster fans can be accommodated adjacent to chimney & Ammonia generation/ storage, feed control, Absorber etc. and by-product handling can be located suitably elsewhere in the plant	Absorber & associated humidifier, ducting, booster fans can be accommodated adjacent to chimney
Lining in Stack	Required	Required	Required	Required
Pressure Drop in the system	More	Base	Base	Less
Wastewater Treatment	Not required	By waste water treatment plant	No Waste Water	Hazardous Sulphuric acid need to be neutralized
Features	Relatively low investment cost. Less water and power consumption	High efficiency Low cost reagent	Liquid Ammonia production and storage is Highly hazardous High Reagent, Drying, Storage, Packaging, Dispatch, Marketing cost	Lower capital cost, Lower operating cost, No reagent required, Water requirement is high
O&M cost	Higher	Base	Same as WFGD	Less
Capital Cost	Less	Base	Same as WFGD	Less
Aux. Power Consumption (%)	Less	1.7-2.2%	1.5 to 2.0%	Base
Installations in India	-	Numerous	NIL	NIL & very less worldwide. Not proven on large scale



r) Based on the evaluation of FGD technologies primarily on the basis of its suitability for the site of the Sasan UMPP, its proven track-record in the country, fuel flexibility, availability of reputed vendors, reagent cost, SO₂ removal efficiency, saleability/ disposal of by-product, safety and hazardous aspects etc, wet limestone-based FGD technology is found to be most optimum and suitable for the Project. Some of the major differentiators of Wet Limestone FGD system are as follows:

- (i) Wet limestone FGD system is widely accepted technology all over the world.
- (ii) NTPC which has highest installed capacity in India, is adopting wet limestone FGD system for majority of their power plants.
- (iii) Abundant availability of limestone.
- (iv) Transportation of limestone by Railway/ trucks and storage system similar to coal.
- (v) Space provision has already been kept for installation of FGD system as per the environmental clearance granted by MoEF&CC.
- (vi) Availability of market for by product (Gypsum) in nearby Cement/ Wall Board Industries which are located within Madhya Pradesh.
- (vii) Moreover, to meet any future stringent emission norms, the Wet Limestone FGD system can be upgraded with minor modifications.

s) The installation of FGD system would result in the higher auxiliary consumption as under:

- (i) Blockage of capacity required for generating additional auxiliary consumption which thereby impacts per unit capacity charges.
- (ii) Loss of Energy Charge to the extent of additional auxiliary consumption for FGD.
- (iii) Electricity duty & cess on Additional Auxiliary consumption.

t) CEA has recommended 1% Auxiliary consumption for SPL. Further, the installation of FGD system will also result in additional higher operating expenses towards purchase of raw material, consumables, waste water treatment, byproduct disposal, maintenance, working capital interest and insurance. The impact of high auxiliary consumption and additional operating expenses is captured in tariff impact working for FGD system. The broad breakup of the tariff working is as under:



(i) Levelized Fixed Cost (FC) – Rs. 0.17 / kWh

(ii) Levelized Variable Cost (VC)- Rs. 0.07/ kWh

u) SPL has decided to procure FGD system for all its units on EPC basis under a single package contract as per technical specification (Tender/ Bid doc. no. RPL-SUMPP-MEM-187-P-00006 R0). The tender is for retrofitting all the units of the Project which are commissioned and running at full load. SPL invited bids through International Competitive Bidding (“ICB”) for the FGD system complete with necessary equipment, components, systems, auxiliaries, appurtenances, accessories, spares, etc. including all associated civil and structural, electrical and control and instrumentation works and required interconnection with the existing system/ facilities.

v) On 28.9.2019, SPL published the Notice Inviting Tender (“NIT”) to set up FGD system on Engineering, Procurement & Construction (EPC) basis through International Competitive Bidding (ICB) in Business Standard (pan India), The AJ Lucknow Edition, Dainik Bhaskar, Singrauli Edition, Times of India and Maharashtra times.

w) Pursuant to the NIT dated 28.9.2019, 12 Bidders submitted the techno-commercial offer along with price-bid and qualifying requirements for FGD system. Based on technical specification and pre-bid clarifications, all 12 bidders had submitted offers for wet limestone FGD system. The technical offers of all the bidders were scrutinized in detail, based on technical specification and pre-bid clarifications. The techno-commercial evaluation was completed by DCPL. Thereafter, the commercial negotiations with technically qualified vendors were completed and vendor for award of contract has been finalized. Notice to Proceed for start of work shall be issued after achievement of financial closure.

x) On 30.3.2019, SPL selected CECEP, China pursuant to an international competitive bidding process as the vendor for installation of the FGD system. The Notice to Proceed will be issued by SPL after achieving financing tie-up for capex to be incurred. SPL has approached the consortium of lenders led by State Bank of India (“SBI”) for funding of the FGD system. However, SBI has informed SPL that it would be unable to sanction the loan amounts required unless there is a



regulatory approval of the capital cost and revenue expenditure to be incurred by SPL and its consequential tariff impact. Accordingly, SPL is filing the present Petition seeking provisional approval of the costs to be incurred in setting up and operating the FGD system to be installed in the Project.

y) SPL would have to install FGD system in all the units of the Project at cost of:

(i) One-time capital expenditure of approximately Rs.2434 Crore, which includes FGD system and its associated system, EPC cost, Interest during Construction (“IDC”), Project Management and Pre-operative expenses. The break-up of the costs is as under:

Description	Rs. in Crore
FGD system including Limestone unloading storage, conveying system and Gypsum handling and storage system	2,062
Project Management & Engineering cost	50
Pre-Operative Expenses	36
Interest during construction (IDC)	285
Total Project Cost for FGD System	2,434

(ii) Recurring operational expenditure on an annual basis of approximately Rs. 202.56 crore towards purchase of raw material, consumables, waste water treatment, by-product disposal, maintenance, additional auxiliary consumption, working capital interest and insurance, etc.

(iii) Adverse financial impact due to depressed/ lower performance parameters of the Project if any due to such modifications.

Submissions of the Respondents

7. The Respondent No.1, 2 to 5, 6 to 8, 12 and 13 vide affidavits dated 27.2.2020, 11.3.2020, 7.1.2020, 6.2.2020 and 14.1.2020, respectively have mainly submitted the following:

a) Despite clear denial to grant in-principle approval of the project cost by the Commission vide Order dated 8.10.2018 in Petition No. 133/MP/2016, the Petitioner has again filed the present Petition seeking provisional approval of the



total project cost on the ground that the State Bank of India (the lead bank in the consortium of lenders) has informed the Petitioner that it would be unable to sanction the loan amounts required unless there is a regulatory approval of the capital cost and revenue expenditure to be incurred by the Petitioner.

b) The Commission has specifically directed the Petitioner in the aforesaid Petition to implement the Revised Norms and then approach the Commission for determination of increase in cost or/and revenue expenditure on account of implementation of such Change in Law. Despite this finding, re-agitating the same issue on account of the very same reasons, by way of the instant petition, is clearly hit by the principles of *res judicata*.

c) The Petitioner has claimed that this Commission ought to exercise regulatory powers under Section 79(1)(b) of the Electricity Act, 2003 (hereinafter referred to as the Act) and grant in-principle approval for the capital expenditure to be incurred by the Petitioner for installing the requisite systems to meet the revised norms. Such a course is not contemplated in the PPA and any relief can be provided as per terms of the PPA only. No such relief of grant of in principle approval of project cost can be granted based on Article 79(1)(b) of the Act. As per Article 13 of the PPA, compensation under change in law is payable only after the expenditure has been incurred. Thus, the Petition is premature at this stage.

d) The Petitioner's reliance on the provisions of the 2019 Tariff Regulations is misplaced. Regulation 2(a) of the 2019 Tariff Regulations explicitly states that the said regulation does not apply to generating stations or transmission systems whose tariff has been discovered through the process of tariff based competitive bidding in accordance with the guidelines issued by the Central Government under section 63 of Act. Thus, the instant Petition is not covered under provisions of the 2019 Tariff Regulations.

e) The Petitioner has drawn attention of the Commission to banks not providing loans to the power sector on account of problems of non-performing assets in banks. In view of this, the Petitioner has requested the Commission to exercise its regulatory powers under section 79 of the Act. The Petitioner has in a way requested the Commission to act as a substitute for what is essentially the



job of a banker. Section 61(b) of the Act clearly provides that “*the generation, transmission/distribution and supply of electricity are conducted on commercial principles.*”

f) Letter of Power Finance Corporation Ltd. (PFC) of 19.02.2020, written to SPL, which was handed over to the respondents during the hearing before this Commission on 27.02.2020, is nothing but an attempt by the Petitioner to secure guarantee of the procurers (respondents) through an order of this Commission “for consideration of sanction of debt by PFC.” PFC cannot abdicate its responsibility of financing of power sector projects. In the concluding line of its letter of the letter, PFC has treated the issue as being purely administrative by requesting the Petitioner “*to expeditiously obtain such approval from CERC and share the same with lenders at the earliest.*” The petition under reply, however, is to be adjudicated by the Commission by exercising powers under section 94 of the Act.

g) Seeking approval of provisional tariff because Indian Banks Association (IBA) has expressed “inability to fund power sector for installation of emission control equipment” through its letter to Association of Power Producers (APP) cannot be a ground for allowing prayers of the Petitioner. Indian Banks Association (IBA) is not a statutory body authorized to articulate policy matters on behalf of banks operating under the license of Reserve Bank of India.

h) The Reserve Bank of India (RBI), in June 2019, relaxed its circular of 12.02.2019, on resolution of stressed loans in the power sector. After Hon’ble Supreme court struck down the RBI circular of 12.02.2019, independent power producers (IPPs) cannot be treated as willful defaulters.

i) At this stage, prayers (b), (c) and (d) in the Petition are premature and should not be considered at all. The Petitioner should first implement the Revised Norms to comply with the 2015 Notification and then approach the Commission for consideration of its prayers in accordance with law and provisions of the PPA.

j) This Commission has already taken the view in several cases, including that of SPL, that the 2015 Notification is a ‘Change in Law’. However, computation of admissible amounts under ‘Change in Law’ cannot be made until certain basic



information is provided by the Petitioner. SPL has to first place on record the standards prescribed by CPCB and Madhya Pradesh Pollution Control Board ("MPPCB") as on the cut-off date. Even though the 2015 Notification amending Schedule-I of the Environment (Protection) Rules, 1986 came into force on 7.12.2015, CPCB and MPPCB may have prescribed certain parameters for SO₂ in so far as the SPL's Power Plant is concerned.

k) The issues related to water consumption, cooling tower, NO_x emissions and mercury emissions have not been claimed to have any impact. Therefore, for these items, the 2015 Notification is not a change in law event.

l) SPL is seeking in-principle approval of costs which has not even been incurred yet and, therefore, cannot be granted. In-principle approval of Change in Law has already been granted by the Commission and the same should be sufficient for SPL to undertake the work. The contention of SPL that the Lenders require regulatory approval and tariff impact is not reflected from the letter dated 11.4.2019 issued by SBI to the Petitioner. There is no reference to any requirement of approval by the Commission or Procurers. The contentions of SPL based on such alleged reluctance of the Lenders cannot be accepted.

m) The Central Electricity Authority is a technical body that, based on considerations and submissions of SPL, has provided a recommendation with regard to FGD system. The cost estimates provided by CEA are for Rs. 0.37 crores per MW as base cost which for 3960 MW translates to 1465.2 crores and further Rs. 0.047 crores per MW for plant specific additional requirement which is Rs. 186.12 crores. Both total to Rs. 1651.32 crores i.e. Rs. 0.417 crores per MW. The above costs are based on the price discovered during competitive bidding by central and state sector undertakings.

n) SPL has claimed the bid to be Rs. 0.40 crores per MW as a single contract price. As per the above, the total is only Rs. 1584 crores. However, SPL has claimed Rs. 2434 crores as capital cost which is Rs. 0.61 crores per MW which is substantially higher compared with the indicative cost of CEA. There is no explanation by SPL as to why the costs have increased as compared to CEA estimates.



o) In addition to retrofitting cost of Rs. 2062 crores, SPL has claimed additional expenditure on account of Project Management and Engineering, pre-operative expenses and IDC of the tune of Rs. 366 crores. These are exorbitant and unexplained. SPL's estimate of Rs. 2112 crores (before IDC and pre-operative expenses) is much higher than even the competitive bid price. Further, SPL has claimed interest on loan at 11.55% which is higher than 10.41% as claimed by CGPL in its petition filed before the Commission for in-principle approval of the capital expenditure for installation of FGD system. Claim of the petitioner may be scrutinized by the Commission based on documents submitted by CGPL.

p) The claim of pre-operative expenses is not justified considering the plant specific expenses are already included in Rs. 0.40 crores per MW. There is no basis for such claim nor any supporting documentation. SPL has claimed pre-operative expenses at 1.5%, but has not stated the amount of which this 1.5% is claimed.

q) It appears that SPL had negotiated with the vendors on technical qualification prior to the advisory report of CEA to SPL. SPL needs to confirm that the technical parameters as negotiated with the vendor are in line with the advisory report of CEA. In case SPL is seeks to deviate from the advisory report of CEA, the same needs to be presented to and approved by CEA.

r) SPL has proposed annual operating expenditure of Rs. 202.56 crores in respect of FGD system and the same is proposed to be passed on to consumers as variable charges of electricity. However, SPL has not provided the complete break-up of such annual cost like cost of consumables, its source, transportation cost and other expenditure etc. Further, by-product of wet FGD system is gypsum which has a commercial value and is salable in the market. The revenue earned through such sale need to be duly subtracted from the operating cost.

s) CEA, in its report for CGPL, has considered a total additional annual operational expenditure based on 2% of base cost. This was also considered by the Commission in the case of Adani Power Ltd. in Petition No. 104/MP/2017 and also admitted by SPL at Page 708 calculation. The 2% of 0.37 crores per MW



would translate to Rs. 29.304 crores for 3960 MW. Even if basic cost is considered as 0.42 crores/ MW, O&M cost @2% would work out to Rs. 33.264 crores. The higher estimate of the Petitioner at Rs. 42 crores is based on higher capital cost which is not backed by any justification and source of costs. Further the Petitioner is escalating the O&M costs, but escalation has not been provided by CEA or recognized by this Commission in Petition No. 104/MP/2017.

t) The opportunity cost cannot be considered at all. In any case, as per the PPA, the normative annual availability for SPL is 80% which means that SPL can coordinate its shutdown for installation of FGD system during the period of remaining 20% which is the allowed shutdown period. SPL cannot claim a longer shutdown period than the said 20% and cannot claim charges for more than 80% availability under the guise of opportunity costs. The PPA deals with the situations of lesser availability (i.e. less than 80%) only due to any force majeure reasons.

u) In any case, SPL has claimed 30 days for installation of FGD system which is higher than required time since most of the work related to installation of FGD system can be completed while the units are running. CEA in its advisory dated 27.3.2019 has directed SPL to minimize the inter-connection time. Inter-connections with the unit ducting can take place during the regular shut downs and NTPC has already established this at its Jhajjar and Dadri units. There is hardly any requirement of a shutdown. Therefore, cost of Rs. 208.90 crores on account of unit shutdown is unacceptable.

v) The compensation for impact has been allowed under Change in Law and the regulatory powers have to be exercised in terms of the PPA and the Guidelines of Central Government issued under Section 63 of the Act and not de hors the same. Even otherwise, the tariff impact for increase in capital cost has to be computed by way of the formula provided in the Article 13 of the PPA for increase in capacity charges due to increase in capital cost.

w) The PPA provides for any change of Rs. 50 crores in Capital Cost to be reflected in the change in the non-escalable capacity charges equal to 0.267%. Therefore, even if there is an increase of Rs. 2715 crores, the same would be



considered as 54 times change of Rs. 50 crores and therefore $54 \times 0.267\%$ i.e. 14.418% increase in non-escalable capacity charges.

x) The competitive bid process has not been done in consultation with the Procurers while as per CEA advisory, cost of retrofitting FGD system for the Project was to be discovered through open competitive bidding in consultation with the Lead Procurer. The Lead Procurer was required to participate in the complete bidding process till final award of the contract. As per the above advisory, MP Power Management Company being the lead procurer, should have been involved in the complete bidding process from beginning till the award of contract. However, as per information furnished in this petition, SPL has finalized the bidding process on its own and thereafter, only convened a meeting of procurers and made a presentation about the bidding process. Neither, the Lead Procurer nor any other procurer was ever invited or involved in the bidding process. This indicates that SPL intentionally kept procurers out of the bidding process.

y) As per the presentation made to procurers on 31.5.2019 regarding bidding process for retrofitting FGD system, 12 firms had submitted their bids in response to the advertisement by SPL in various newspapers on 28.9.2016. Ten (10) proposals were rejected after technical evaluation. The technical proposal of even BHEL which is premier power sector EPC contractor and a CPSU was rejected. Only two firms were shortlisted whose price bids were compared i.e. M/s CECEP, China and M/s Reliance Infrastructure Ltd. Finally, M/s CECEP, China has been selected as the vendor for installation of FGD system. This bidding process shows complete lack of competitiveness and transparency as the second firm is a sister concern of SPL. The price discovered through this competitive bidding is questionable and, therefore, not acceptable to the Procurers.

z) The increase of cost by nearly 50% of the original indicated cost by CEA is not justified. It may be possible that some of the components might not have been considered by CEA. However, an increase of 50% is not justified.

Rejoinder to the replies of the Respondents



8. The Petitioner has filed its rejoinder vide affidavit dated 16.3.2020 in respect of the replies of the Respondents and submitted as under:

a) MPPMCL's contention that SPL's claim is untenable on account of *res-judicata* as prayer for in-principle approval of cost was rejected in the 133/MP/2016 Order is misplaced. This Commission vide Order dated 22.7.2018 in Petition No. 98/MP/2017 had directed CEA to prepare suitable guidelines. Further, in the aforesaid Order, the Commission had directed SPL to approach this Commission for determination of increase in cost or/and revenue expenditure on account of implementation of the Revised Norms in accordance with the CEA Guidelines. Therefore, there is no case made out for *res-judicata*.

b) The reason for inclusion of provisions such as Regulation 11 and 29 of the 2019 Tariff Regulations is to emphasize that this Commission recognizes the fact that generating companies are required to incur additional capital expenditure for installation of FGD system and they should not face uncertainty with respect to regulatory approval and tariff recovery. Owing to the following factors, the lenders are reluctant to finance projects in the power sector without certainty in recovery:

- (i) Prevalent Stress in the sector.
- (ii) Inordinate delay in Regulatory approvals
- (iii) Exhaustion of bank exposure limit
- (iv) Outstanding dues from Discoms to generators
- (v) Risk relating to whether tariff compensation is sufficient to make FGD system implementation viable
- (vi) Risk relating to ability to recover costs in the intervening period between commissioning of FGD system and regulatory approval of tariff compensation.

c) It is in view of these factors that PFC has written to SPL seeking in-principle approval of the Commission and, therefore, SPL has filed the present Petition seeking *inter-alia* exercise of regulatory power by this Commission. This situation not provided in the PPA nor in the competitive bidding guidelines, this Commission may exercise its regulatory powers under Section 79(1)(b) of the Act and grant in-principle approval of the cost of setting up the FGD system, subject



to the same being tried up pursuant to a prudence check. Use of regulatory power is permitted in light of decision of the Hon'ble Supreme Court's in case of *Energy Watchdog vs. CERC & Ors.* reported as (2017) 14 SCC 80. MPPMCL's contention that regulatory powers cannot be exercised is erroneous and contrary to the Energy Watchdog Judgment of the Hon'ble Supreme Court.

d) UP Discoms' contention that PFC is abdicating its responsibility and that Order of the Commission in Petition No. 133/MP/2106 and CEA Guidelines ought to be enough for release of funds, is misplaced. UP Discoms cannot be permitted to take on itself the task of the financing institutions and submit as to what ought to qualify the threshold for lending to SPL. PFC has categorically written that in-principle approval of the capital cost and operation cost for implementation of the FGD system by this Commission is an essential requirement for sanction of loan.

e) UP Discoms' contention that the stringent conditions prescribed by the Circular dated 12.2.2018 issued by RBI do not apply as the same was struck down by the Hon'ble Supreme Court is misplaced. RBI has issued a fresh circular in June 2019 regarding stressed assets. Further, regardless of the said circular, PFC is not in a position to sanction debt to SPL. Therefore, SPL has approached this Commission seeking in-principle approval in order to obtain sanction for implementation of the Revised Norms and installation of the FGD system.

f) MPPMCL's contention that SPL is claiming different costs and is changing stands is misplaced. MPPMCL's reliance on the cost mentioned in the Detailed Feasibility Report submitted by SPL is erroneous. It is noteworthy that the Detailed Feasibility Report was submitted by SPL on 18.12.2018. However, the CEA Report which provided for estimated cost was provided to SPL only on 27.3.2019. The final cost claimed by SPL is within the recommendations of CEA. Further, MPPMCL's reliance on SPL's letter dated 05.03.2019 to SBI wherein total cost of Rs. 3596 crore is claimed is misplaced. SPL has provided a cost of Rs. 3596 crore to SBI which also includes cost towards De-NOx system. However, in the present Petition, SPL is claiming cost only qua installation of the FGD system which is within the recommendations of CEA.



g) This Commission in terms of Order dated 8.10.2018 in Petition No. 133/MP/2016 has already held that the 2015 Notification qualifies as a Change in Law event under the PPA and SPL is entitled to claim compensation. Before issuing this Order, the Commission had undertaken a comprehensive analysis and scrutiny. Therefore, PSPCL's contention that SPL ought to be directed to produce emission report as on COD to assess impact of the 2015 Notification is erroneous and ought to be rejected.

h) PSPCL's contention that SPL has claimed amounts in excess of CEA's recommendation of Rs 0.417 crores per MW is misplaced. The cost of Rs 366 crore claimed towards IDC, pre-operative expenses and Project management and Engineering Costs is not exorbitant. The lowest price discovered by SPL during the competitive bidding is Rs 0.40 crore/MW that is only towards hard cost of the Project i.e. excluding taxes and duties, cost associated with electrical supply system and does not take into account the Interest During Construction ("IDC"), pre-operative expenses & project management and engineering cost, etc. to be incurred by SPL. The following table shows comparison of recommendation of CEA and price quoted by selected EPC Contractor (M/s CECEP, China).

Sr. No.	Particulars	CEA recommendations (excluding taxes & duties and soft cost)	Cost claimed by the Petitioner (excluding taxes & duties and soft cost)
1	Base Cost of FGD system	Rs. 0.37 Cr/MW	Rs. 0.40 Cr/MW As per M/s. CECEP quote
2	Site Specific additional work- Extra flue gas ducting	Rs. 0.028 Cr/MW	
3	Site Specific additional work- Electrical supply system	Rs. 0.02 Cr/MW	Rs. 0.02 Cr/MW Not included in CECEP scope. Separate order to be placed
	Total hard cost	Rs. 0.42 Cr/MW	Rs. 0.42 Cr/MW

The following table represents visually various cost items and their comparison in CEA recommendation vis-a-vis SPL's claims:



Sr. No.	Description	CEA Recommendation	SPL's claims
1	Base cost	√	√
3	Taxes and Duties	X	√
5	Project Management & Engineering services	X	√
7	Interest During Construction	X	√
8	Pre-operative expenses	X	√

i) Therefore, taking into account the taxes and duties applicable for FGD system, IDC, pre-operative expenses and Project management and Engineering Costs, the total Project cost comes up to Rs. 2434 crores as detailed below:

Sr. No.	Description	Working	Unit	Amount
1	CEA recommendation for FGD		Rs. crore/MW	0.42
2	CEA recommendation for SUMPP FGD	Sr. No. 1 x 3960 MW	Rs. crore	1663
3	Taxes and Duties @24%	Sr. No. 2 x 24%	Rs. crore	399
4	FGD system hard cost	Sr. No. (1+2)	Rs. crore	2062
5	Project Management & Engineering services	Sr. No. 2 x 3%	Rs. crore	50
6	Total project cost without IDC and Pre-operative expenses	Sr. No. (4+5)	Rs. crore	2112
7	Interest During Construction	As per cash flow phasing	Rs. crore	286
8	Pre-operative expenses @ 1.5% of project cost	Sr. No (6+7) x 1.5%	Rs. crore	36
9	Total Project Cost of FGD	Sr. No. (6+7+8)	Rs. crore	2434

j) This Commission in Order dated 28.3.2018 in Petition No. 104/MP/2017 has noted that since requirement to install FGD system is consequence of a change in law event, O&M expenditure incurred for FGD system should be admissible such that the generating company is put into the same economic position as if change in law did not take place. Applying the said principle in the present case, cost of inputs required for operating the FGD system ought to be



allowed to SPL. Appellate Tribunal for Electricity (APTEL) in its judgement dated 19.04.2017 in Appeal No. 161 of 2015 titled Sasan Power Ltd vs CERC & Ors and judgment dated 13.11.2019 in Appeal No. 77, 136 and 324 of 2016 titled Sasan Power Ltd vs CERC & Ors has held that any increase in cost subsequent to the cut-off date on account of a change in law event is required to be allowed in terms of Article 13 of the PPA. In the present case, cost of limestone required for the FGD system ought to be reimbursed to SPL since the installation and operation of the FGD system is pursuant to an event of change in law.

k) HPPC has wrongly compared the parameters of the FGD systems and costs of CGPL and SPL. The interest rates are fixed by lenders on a case to case basis and there cannot be any comparison or normative benchmark for the same. In any case, CGPL generates power on the basis of imported coal and is cooled using saltwater. The technology employed by CGPL along with plant specific requirements is entirely different from SPL, which is a pit-head based project. Accordingly, there cannot be any comparison between SPL and CGPL.

l) HPPC's contention that SPL has not provided complete break-up of the annual operating expenditure is misplaced. Annual operating expenditure for FGD system including the estimated cost of inputs for each year of operation has been detailed in the Petition. Furthermore, the same has also been provided in the Detailed Project Report filed by SPL before CEA.

m) HPPC's has contended that O&M expenses @2% of the cost of FGD system (Rs. 2062 crore) is not justified and contrary to the findings of this Commission's Orders in Petition No. 104/MP/2017. CEA in its recommendation has not indicated any O&M cost for SPL's Project and that SPL has considered 2% of the capital cost of FGD system as O&M cost on basis of the following orders:

(i) The Commission vide order dated 28.3.2018 in Petition No. 104/MP/2017 allowed 2% of the capital cost of FGD system as O&M expenses; and

(ii) The Commission vide order dated 11.11.2019 in Petition No 152/MP/2019 allowed 2% of the capital cost of FGD system, as recommended by CEA, as O&M expenses.



n) Contention of HPPC that SPL ought to co-ordinate shutdown of its units for installation of FGD system in a manner which fits within the 20% margin available over and above normative availability of 80% is misplaced. The 20% margin is required to cover unplanned/ forced outages of the units as well as for annual/ capital overhauls of the units. Unit-wise outage required for interconnection of FGD system with the plant would not be matching with the schedule of planned outages of respective unit for annual/capital overhaul, overall availability of plant may come down below normative availability of 80%. Hence, the Petitioner ought to be compensated for loss of capacity charge due to such shortfall in achieving normative availability attributable to FGD system installation. SPL is also entitled to claim capacity charges, loss of incentive and arbitrage on account of shutdown of the units of the Project. In terms of Schedule 7 of the PPA, SPL is entitled to incentive for operations above 85% PLF. Since shutdown of the Project will be on account of an event of change in law i.e. introduction of Revised Norms, SPL ought to be restored to the same economic condition as if such change in law did not take place. SPL maintained an average PLF in excess of 90% from FY 2017-18 and, therefore, compensation for shutdown period for installation of FGD system ought to be premised on the actual impact and not on the basis of normative values of 80%.

o) HPPC has contended that the bidding process shows lack of competitiveness and transparency since one of the firms who participated in the bidding is SPL's sister concern. SPL has carried out the international competitive bidding process as per the existing industry practices and the bids were scrutinized by an independent third party i.e. DCPL, as per the technical criteria. Further, SPL's sister concern was not selected as the contractor. Thus, HPPC's allegations are baseless and ought to be rejected.

Written Submission by the Respondents

9. The Respondents have mainly reiterated the submissions in their reply. Some additional submissions are as under:

a) SPL has claimed Rs. 2434 crores as capital cost of which 24% is towards taxes and duties. It is very high and such costs cannot be considered for in-principle Approval stage. Further Sasan Power in Para 54 refers to cost of CEA



as 0.42 crores per MW whereas the award cost is only Rs. 0.40 crores per MW. Further, it is not clear if the bid initiated by Sasan Power was excluding the taxes and duties.

b) SPL should take consent from the beneficiaries before going under shutdown period for construction, installation and commissioning of the FGD system so that off peak period can be granted for shutdown. Further, capex and opex (opex in any case is an annual recurring cost) should be annualized in such a manner to avoid tariff shock the end users/customers.

Analysis and Decision

10. In the light of the submissions of the Petitioner, Respondents and documents placed on record, the following issues arise for our consideration:

Issue No.1: Whether provisional approval of capital expenditure can be granted to the petitioner for incurring proposed expenditure towards installation of FGD system?

Issue No.2: Whether additional O&M expenses and the relaxation in other operating norms due to installation of FGD system are admissible as claimed by the petitioner?

Issue No.3: What shall be the norms and mechanism for computing the adjustment in tariff corresponding to the additional investment and increase in the operating costs due to the 2015 Notification so as to restore the petitioner to same economic position as if such Change in Law event has not occurred?

11. We deal with the above issues in subsequent paragraphs.

Issue No. 1: Whether provisional approval of capital expenditure can be granted to the petitioner for incurring proposed expenditure towards installation of FGD system?

12. The petitioner, SPL has submitted that it had filed Petition No. 133/MP/2016 before this Commission praying that introduction of the Revised Norms be declared as event of Change in Law in terms of Article 13 of the PPA and requested that in-principle approval for the expenditure to be incurred by SPL in installing the FGD system in order to comply with the Revised Norms may be granted. This Commission vide Order



dated 8.10.2018 held that a) the introduction of the Revised Norms is a Change in Law event, b) SPL shall implement the revised norms as per the 2015 Notification in consultation with CEA and c) SPL shall approach this Commission for determination of increase in cost or/and revenue expenditure on account of the implementation of the Revised Norms in accordance with the Guidelines to be issued by CEA to give effect to the 2015 Notification and mode of recovery of the same through monthly tariff.

13. The relevant extracts of the Commission's order dated 8.10.2018 in Petition No. 133/MP/2016 with regard to 'Change in Law' event and in-principle approval are as under:

"43. We have considered the submissions of the Petitioner and Respondents. We have already come to the conclusion in the earlier part of this order that MoEFCC Notification, 2015 is in the nature of Change in Law in terms of Article 13.1.1 (i) of the PPA. Being mandatory statutory requirements, the revised environment norms in respect of thermal power plants have to be implemented by the Petitioner by 2022. The relevant provisions of the PPA as regards the principles for computation of relief and tariff adjustment payment on account of Change in Law are extracted as under:

"13.2 Application and Principles for computing impact of Change in Law

While determining the consequence of Change in Law under this Article 13, the Parties shall have due regard to the principle that the purpose of compensating the Party affected by such Change in Law, is to restore through Monthly Tariff Payments, to the extent contemplated in this Article 13, the affected Party to the same economic position as if such Change in Law has not occurred.

a) Construction Period

As a result of any Change in Law, the impact of increase/decrease of Capital Cost of the Project, in the Tariff shall be governed by the formula given below:

For every cumulative increase/decrease of each Rupees Fifty crore (Rs. 50 crore) in the Capital Cost over the term of this Agreement, the increase/decrease in Non Escalable Capacity Charges shall be an amount equal to zero point two six seven (0.267%) of the Non Escalable Capacity Charges. Provided that the Seller provides to the Procurers documentary proof of such increase/decrease in Capital Cost for establishing the impact of such Change in Law. In case of Dispute, Article 17 shall apply.

It is clarified that the above mentioned compensation shall be payable to either Party, only with effect from the date on which the total increase/decrease exceeds amount of Rs. fifty (50) crore.

b) Operation Period

As a result of Change in Law, the compensation for any increase/decrease in revenues or cost to the Seller shall be determined and effective from such date, as decided by



of this Order. At that stage, the Commission will determine the mode of recovery of the cost or/and revenue expenditure for the Petitioner through monthly tariff which shall be incurred for compliance with the MoEFCC Notification, 2015.”

xxxx

47. In our view, a mechanism also needs to be devised for addressing the issues like identification of suitable technology for each plant for implementation of ECS, its impact on operational parameters and on tariff, and the recovery of additional capital and operational cost. The Commission in the order dated 20.7.2018 in Petition No. 98/MP/2017 has directed the CEA to prepare guidelines specifying the following:

- (a) Suitable technology with model specification for each plant, with regard to implementation of new norms.
- (b) Operational parameters of the thermal power plants such as auxiliary consumption, O&M expenses, Station Heat Rate etc., consequent to the implementation of ECS.
- (c) Norms of consumption of water, limestone, ammonia etc., required for operation of the plants after implementation of ECS.
- (d) Any other detailed technical inputs.

xxxx

48. The Petitioner is accordingly directed to implement the revised norms for Sasan UMPP in consultation with CEA.”

14. It is observed that pursuant to the above decision of the Commission, the Petitioner approached CEA for approval of suitable technology. CEA vide letter dated 27.3.2019 has recommended suitable FGD technology and corresponding indicative cost for the petitioner’s Project. CEA also suggested that the FGD system installation should be done through the process of open competitive bidding in consultation with representative of the Lead Procurer and that Lead Procurer may be invited to participate in the bidding process. However, responsibility for adhering to timelines of relevant pollution control board was the responsibility of the Petitioner. Relevant extracts from CEA’s report as regards technology and cost aspects, are as under:

“TECHNOLOGY

I. Wet Lime stone Base FGD

In feasibility report, SPL has opted for “Lime stone based Wet FGD technology” In Lime stone based Wet FGD the reagent source may be selected based on the availability of limestone, limestone purity, cost and quality. Additionally, Source of Limestone should be chosen with life cycle cost analysis on handling and saleability of gypsum.



ENGINEERING ASPECTS

1. Absorber- Individual FGD for each unit.
2. Limit SO₂ below environment norms with up to 0.55% Sulphur content in coal.

.....

6. *Auxiliary Power Consumption- The maximum additional auxiliary power consumption for complete FGD facilities (limestone base FGD) will be maximum 1.0%. If the existing chimney is used, the requirement of GGH may be seen. The Additional Auxiliary Power Consumption with GGH (only if using old chimney) will be maximum 0.3%.*

INDICATIVE COST ESTIMATION

An indicative Base cost estimation is done by CEA in order to facilitate SPL determine the price for installation of FGD on the major heads of CAPEX and OPEX.

CAPEX

The indicative estimated cost for Limestone based FGD has been estimated Rs. 0.37 Cr./MW (BASE COST) +0.047 Cr./MW (plant specific additional requirement for implementing FGD such as electrical supply and ducting work)

SPL has also shown the possible requirement of additional Land acquisition for disposal of surplus gypsum (if any). However, SPL has not provided any cost of such land requirement in FR. SPL is advised to approach regulator at appropriate stage for any cost implication on CAPEX to assess land acquisition related cost.

This cost estimation is based on the price of equipment, infrastructure and related services discovered during transparent and open bidding being carried out by Central and State Sector Undertakings.

This indicative cost is the 'Base cost' only and does not include Opportunity cost (associated with generation loss due to interconnection of chimneys with the absorber) and Taxes and Duties. This indicative 'Base cost' is calculated considering new chimney without GGH.

The cost of retrofitting FGD for SPL should be discovered through open competitive bidding in consultation with lead procurer. The lead procurer (to be invited by SPL) may participate in bidding process till final award of FGD contract.

CHIMNEY & LINING

In feasibility report Sasan UMPP has opted for using existing chimney and converting it to wet stack instead of going for new wet stack. The existing chimney can be converted to wet and provided by fixing some appropriate corrosion protection lining.

15. Through prayers (a) and (b) in the instant Petition, the Petitioner has requested for provisional approval of capital expenditure of Rs. 2434 crores and also for approval of recurring annual operating expenditure on account of FGD system installation.



16. On the other hand, the Respondents have submitted that despite clear denial to grant in-principle approval of the project cost by this Commission vide Order dated 8.10.2018 in Petition No. 133/MP/2016, the Petitioner has again filed the present Petition seeking provisional approval of the total project cost. The Respondents have submitted that the Commission, in the earlier Petition No. 133/MP/2016, having categorically denied grant of in-principle approval due to non-existence of any such provision in the PPA, raising the same issues in the instant petition is hit by the principle of res judicata.

17. The Petitioner has submitted that it approached the consortium of lenders led by State Bank of India for funding of the FGD system. However, SBI informed SPL that it would be unable to sanction loan unless there is a regulatory approval of the capital cost, revenue expenditure to be incurred by SPL and consequential tariff impact. The Petitioner has submitted that the Financial Institutions, considering the substantial cost involved in FGD system installation and the problems of non-performing assets in the power sector, have expressed their inability to sanction loan to the Petitioner without regulatory approval. The Petitioner has enclosed a letter from IBA dated 8.8.2018 and another letter from PFC letter dated 19.2.2020. Extract of the PFC's letter to SPL is as under:

"This is in reference to your above-mentioned letter dated February 19, 2020 and deliberations of lender meet held on November 08, 2019, wherein implementation of FGD was discussed.

In regard to the above, it is informed that in-principle approval of Capital Cost and Operational Cost for implementation of the Flue Gas de-sulphurization (FGD) system by Hon'ble Central Electricity Regulatory Commission {CERC} is an essential requirement for consideration of sanction of debt by PFC. It is also requested that approval of an interim tariff effective with implementation of FGD to be tried-up subsequently on the basis of actuals, shall be critical to ensure timely debt servicing of above-said additional funding considering the cost competitiveness of the existing tariff being constrained for servicing of further debt required for implementation of proposed FGD.

In view of the above, Sasan Power Limited is requested to expeditiously obtain such approval from Hon'ble CERC and share the same with lenders at the earliest."



18. We have considered the submissions of the Petitioner and the Respondents. There has been material change in the situation as regards the Petitioner after the Commission issued orders in Petition No. 133/MP/2016 wherein request for in-principle approval was denied since no such provision existed in the PPA. As per directions of the Commission, the Petitioner approached CEA that has indicated the appropriate technology for installation of FGD system in the Project. CEA has also indicated tentative base cost for such installation. Through competitive bidding process, the Petitioner has selected a vendor for installation of FGD system. The Petitioner has approached financial institutions for loans where the banks through IBA have expressed difficulty in funding in view of prevailing situation in the power sector. Similar is the case with PFC that has informed the Petitioner that it needs comfort in terms of approval of the Commission so that there are no problems in debt servicing of loans that may be availed by the Petitioner. Commission is also conscious of the fact that the installation of FGD system in thermal power stations is being monitored by the Hon'ble Supreme Court. Any further delay in securing loan from financial institutions is likely to further delay installation of FGD system.

19. We also observe that the Ministry of Power has also recognised the problems being faced by generating companies on account of financial institutions seeking assurance of fund flow after installation of FGD system. The Ministry of Power, vide its letter dated 21.01.2020, addressed to Secretary to Forum of Regulators (who is also Secretary to the Commission), stated as under:

"2. A copy of the minutes of the meeting held in Ministry of Power on 21.10.2019 with Banks/Financial Institutions regarding issues related to financing of FGDs is enclosed wherein as per Para 4.2 inter alia mentioned as follows:

"IPPs requested that provisional tariff on account of FGD may be allowed as Banks are not willing to finance unless there is clear cut CERC orders on additional tariff, which could be possible only when FGD is commissioned. It was requested that based on the estimation of cost by CEA, CERC may fix provisional tariff after



allowing some discount (say 10%). Chairperson, CEA informed that they had drafted some norms on provisional tariff and it had been sent to CERC for consideration. Hon'ble Minister advised CEA to follow up with CERC and this issue may be taken up in the Forum of Regulators (FOR) meeting which could be convened at the earliest. The matter regarding fixation of provisional tariff on account of FGD installation may be discussed with CERC."

3. *In this regard, CEA has informed that:*

i. Financing of pollution control equipment is mainly an issue for the projects commissioned under section 63 of the Act.

ii. During discussion, CERC pointed out that a few generating companies, which have set up generating station under section 63 of the Act have filed petition for compensation due to change in law impacting revenue and cost during the operating period.

iii. CERC has already passed some orders in such petitions recommending requirement of installing additional equipment to meet revised environmental norms as change in law and giving liberty to the petitioner to approach to the commission for determination of revised norms.

iv. CERC was of the opinion that normally such assurance from regulator should be sufficient for the lenders to fund additional capital expenditure required to meet revised environmental norms.

4. *In view of the above, it is requested that the issue on 'provisional tariff' on account of installation of FGD, may be included as an Agenda for the next Forum of Regulators (FOR) meeting and the decision taken, therein, may be communicated to Ministry of Power, at the earliest."*

20. Further, the Ministry of Power vide its letter dated 20.04.2020 addressed to the Secretary of the Commission, has stated as under:

*"I am directed to refer to the meeting taken by Secretary (Power) through Video Conferencing on 09.04.2020 (copy of the meeting are enclosed as **Annex-I**) and this Ministry's letter of even number dated 21.01.2020 (copy enclosed as **Annex-II**) with regard to taking up the matter with Forum of Regulators on the above mentioned subject. It was observed that CERC was also contemplating to amend the Tariff Regulations 2019-24 to provide for norms for installation of FGDS for complying with the environmental operating norms as Change in Law.*

2. In the above mentioned meeting held on 09.04.2020, it was recommended that in view of the stipulated timelines decided by the Hon'ble Supreme Court for installation of FGDS, investment approval may be accorded by CERC at the earliest possible on applications of FGDS submitted by Gencos based on the CEA's benchmark cost and indicative technologies so as to facilitate funding of banks/ FIs. It was also felt that upon completion of the installation of FGD or a month before the completion of installation, the applications for fixation/revision of tariff may be filed and CERC would, as far as possible, dispose them in a time frame of 3 months so that the Gencos are not cash strapped and the lenders feel assured. Similar process may also be taken up by CERC with SERCs.

3. Accordingly, CERC is requested to take necessary action and devise a mechanism vide which applications of Gencos for installation of FGD as per norms of CEA, gets



decided by the Appropriate Commission within a period of three months for Investment approval. The same is expected to facilitate assurance for lenders on their lending to Gencos for installation of FGD.

4. This issue with the approval of Hon'ble Minister of State (IC) Power and NRE."

21. The Respondents have further submitted and raised concerns about various elements of the provisional capital cost claimed by the Petitioner. They have submitted that the costs are higher than the recommendations of CEA and that certain items even though not envisaged in CEA recommendations, have been claimed by the Petitioner. Per contra, the Petitioner has submitted that the base rate for installation of FGD system has been discovered through international competitive bidding process that has been scrutinized by an independent third-party (DCPL) as per technical criteria. The Petitioner has also submitted that the costs claimed by the Petitioner are in line with CEA recommendations.

22. We note that consequent upon order dated 08.10.2018 of the Commission in Petition No. 133/MP/2016, the Petitioner approached CEA and the CEA vide its letter dated 27.3.2019 has made recommendations as regards cost for installation of FGD system for the Project. On 30.3.2019, pursuant to an international competitive bidding process, SPL selected M/s CECEP, China as qualified vendor for installation of the FGD system. The break-up of capital expenditure for the wet limestone based FGD system for the Project claimed on the basis of bidding results when compared with CEA recommended cost is as under:

Sr. No.	Description	SPL Capex Estimate (Rs. crore)	SPL Capex Estimate (Rs. crore/MW)	CEA's Indicative Cost (Rs. crore/MW)
1.1	FGD main package (as per international competitive bid) USD 231,910,345(@ Rs. 69/ USD)	1600.18	0.404	0.37
1.2	Electrical power supply and duct work (estimated)	79.2	0.020 ^s	0.047
2	Total FGD EPC Basic Cost	1679.38	0.424	0.417



Sr. No.	Description	SPL Capex Estimate (Rs. crore)	SPL Capex Estimate (Rs. crore/MW)	CEA's Indicative Cost (Rs. crore/MW)
2 (a)	Claimed amount is Rs.1663 @ of Rs. 0.42 crore/MW i.e. after rounding off of CEA recommended base cost of Rs. 0.417 crore/MW	1663	0.420	0.417
3	Taxes and Duties (@24% of base cost as per CEA recommendation)	399	0.1007	-
4	Total FGD system Hard Cost 4=2(a)+3	2062	0.52	0.417
5	Project Management & Engineering Services (@3% of base cost as per CEA recommendation)	50	0.012	-
6	Total project cost without IDC and Pre-operative expenses	2112	0.54	-
7	Interest During Construction	286	-	-
8	Pre-operative expenses @ 1.5% of project cost [8 = (6+7) * 1.5%]	36	0.01	-
9	Total Project Cost of FGD	2434	0.615	0.417

\$ SPL has claimed expenditure only for 'Electrical Power Supply 'as expenditure for duct work is included in the FGD Main Package

23. We note that CEA in its recommendations (quoted at paragraph 14 of this order) has stated that:

"....The indicative estimated cost for Limestone based FGD has been estimated Rs. 0.37 Cr./MW (BASE COST) +0.047 Cr./MW (plant specific additional requirement for implementing FGD such as electrical supply and ducting work)This cost estimation is based on the price of equipment, infrastructure and related services discovered during transparent and open bidding being carried out by Central and State Sector Undertakings.....This indicative cost is the 'Base cost' only and does not include Opportunity cost (associated with generation loss due to interconnection of chimneys with the absorber) and Taxes and Duties.....".

It is thus clear that the cost recommended by CEA is an indicative cost that is primarily based upon rates of such installation by Central/ State PSUs. CEA has also stated that the costs are 'base cost' only.

24. Even otherwise, it is not possible to indicate exact cost that can be discovered through a competitive bidding process and that is the reason CEA has only recommended the indicative cost. The generating companies such as the Petitioner are required to discover the price through international competitive bidding process.



We are also aware that in recent times, bids for installation of FGD system have been floated by other generating stations as well and these may lead to change in prices of FGD system in the international market. Therefore, while approving costs of installation of FGD system, the Commission needs to take into account the recommendations of CEA and the discovered cost through international competitive bidding process and then take a view as to reasonableness of costs.

25. Issue regarding CEA recommended cost has been dealt with by the Commission in the matter of Maithon Power Ltd. in Petition No. 152/MP/2019. Though the tariff in case of Maithon Power Ltd. is determined as per provisions of Section 62 of the Act, while in the instant case, tariff has been determined as per Section 63 of the Act, the principles as regards costs recommended by CEA and the prices discovered in competitive bidding process remain the same. Relevant extract of the Order dated 11.11.2019 is as under:

“21. As regards the estimated expenditure, it is observed that there is difference of Rs.0.32Cr/MW (Rs.0.740-Rs.0.420) between the estimate of CEA and the petitioner. CEA has indicated that its estimates are indicative only and the petitioner shall go for open competitive bidding. This difference is due to the fact that CEA has not considered cost towards “Fire protection and detection” package, IDC, IEDC and GST @18% considered by the petitioner and also attributable to difference in cost towards “FGD main package” and “Opportunity cost.”

22. It is observed that for the two packages i.e. “FGD main package” and “Electrical power supply package”, cost discovered through competitive bidding by the petitioner is Rs.0.438 Crore/MW, which is higher by Rs.0.101 Crore/MW in comparison to CEA cost of Rs.0.337 Crore/MW, including spares. This difference of Rs0.101 Crore/MW gets reduced to Rs.0.058 Crore/MW compared to the revised base cost considered by CEA in its report dated 21.02.2019. CEA, in its report dated 21.02.2019, has increased the base cost of FGD system from Rs. 0.362 crore/MW to Rs.0.405 Crore/MW based on the prices discovered by various thermal plants.

23. Considering the above facts and recognizing that the cost considered by CEA is indicative only and the cost claimed by the petitioner has been discovered based on open competitive bidding, Commission allows the cost claimed by the petitioner for the two packages i.e. “FGD main package” and “Electrical power supply package”.



Therefore, the Commission needs to treat the cost recommended by CEA as indicative cost and ensure that a transparent international competitive bidding process has been followed, so that prices discovered are reasonable.

26. We now proceed to compare the costs in the instant case as claimed by the Petitioner when compared with CEA recommended costs. It is clear from the table at paragraph 19 that the cost of Rs.1600.18 crore towards “FGD main package”, works out to Rs. 0.404 crore/MW (including expenditure towards site specific duct work) as against the CEA’s indicative figure of Rs.0.37 crore/MW (without site specific duct work). For site specific “Electrical power supply package”, cost claimed by the petitioner on estimated basis is Rs. 0.02 crore/MW which is yet to be awarded as against Rs. 0.047 crore/MW as per CEA recommendations. The overall cost comes to Rs.0.424 crore/MW for “FGD main package” and site specific requirements. The Petitioner, for the purpose of provisional approval, has claimed this cost @Rs. 0.42 crore/MW (total cost at Rs. 1663 crores) as against CEA recommended base cost of Rs. 0.417 crore/MW. In our view, there is hardly any difference in the costs claimed by the Petitioner vis-à-vis that indicated by CEA as regards the “FGD main package”.

27. The Respondents have raised objections for costs other than that for the “FGD main package”, claiming that they are on the higher side or even exorbitant. We note that apart from the cost of Rs. 1663 crores for the “FGD main package”, the Petitioner has claimed Rs. 771 crores towards other components such as taxes and duties (Rs. 399 crores); expense towards project management & engineering services (Rs. 50 crores); interest during construction (Rs. 286 crores); and pre-operative expenses (Rs. 36 crores). The Petitioner has submitted that taxes and duties @24% of base cost and expense towards project management & engineering services @3% of base cost are based upon CEA recommendations. Thus, while the provisional cost of Rs. 1663



crores for “FGD main package” claimed by the Petitioner is almost same as that recommended by CEA, the costs claimed towards taxes and duties (Rs. 399 crores) and expense towards project management & engineering services (Rs. 50 crores) are based on percentage of base cost as per CEA recommendations. As regards claim towards interest during construction (Rs. 286 crores), it is a verifiable cost that is consequential to installation of FGD system. The only item that is not covered under CEA recommendations is the claim towards pre-operative expenses. Such cost can be allowed only after proper justification by the Petitioner and after prudence check by the Commission, once the FGD system is installed.

28. An allegation of the Respondents is that the bidding process was vitiated since one of the sister concerns of the Petitioner was the short-listed bidder. We note from submissions of the Petitioner that the bid has been awarded to a vendor by the name of M/s CECEP, China and that the bids were scrutinized by an independent third party (DCPL). Moreover, the Petitioner’s sister company was not selected as the vendor. Also, the cost discovered is in line with CEA’s recommendations. Therefore, we are not inclined to go into this issue any further.

29. In view of the above, the Commission accords approval to the petitioner for following capital cost on provisional basis:

Sr. No.	Description	SPL Capex Estimate (Rs. Cr)	SPL Capex Estimate (Rs. Cr/MW)	Capex allowed (Rs. Cr/MW)
1.1	FGD main package	1663	0.40	0.40
1.2	Electrical power supply package		0.02	0.02
2	Total FGD EPC Basic Cost	1663	0.42	0.42

30. The Commission also allows the petitioner to claim expenditure towards IDC, taxes & duties, FERV (if any) and expenditure towards project management & engineering services at actuals after commissioning of the FGD system, which may be



allowed after prudence check. As regards pre-operative expenses, the cost may be allowed subject to proper justification for such expense and after prudence check by the Commission.

Issue No. 2: Whether additional O&M expenses, the relaxation in other operating norms due to installation of FGD system and Opportunity Cost are admissible as claimed by the petitioner?

31. The petitioner has claimed that installation of FGD system will also result in additional operating expenses towards purchase of raw material, consumables, waste water treatment, by-product disposal, maintenance, working capital interest and insurance. The impact of higher auxiliary consumption and additional operating expenses will have impact on the Tariff. The petitioner has also prayed for the opportunity cost for the period of shutdown (required for installation of FGD system) and the associated revenue loss for the same.

Additional O&M expenses

32. The Petitioner has claimed recurring operational expenditure of approximately Rs. 202.56 crore per annum for FGD system towards purchase of raw material, consumables, waste water treatment, by-product disposal, maintenance, additional auxiliary consumption, working capital interest and insurance, etc. The extracts of CEA's advisory report dated 27.3.2019 with regard to additional O&M expenses is as under:

“OPEX

Operating cost (OPEX) will include Reagent cost, Additional water consumption associated with FGD, Manpower Cost, Auxiliary Power Consumption, By-product handling and revenue earned through disposal of by-product. The OPEX should be kept as low as possible by reducing Auxiliary Power Consumption and producing good quality of saleable by-product.”

33. The Commission has dealt similar matter in case of Adani Power Ltd. in order dated 28.3.2018 in petition no 104/MP/2017. It was decided that the additional O&M



expenses provisionally be considered @2% per annum of the capital cost of FGD system. Relevant Para is extracted below:

“49. Pending the prescription of norms by CEA, we allow the O&M expenses provisionally at the rate of 2% per annum of the capital cost of FGD, subject to adjustment in the light of the norms to be prescribed by CEA.”

34. It is observed from the above that CEA has provided the factors to be considered for additional O&M but has not provided the quantification of the additional O&M in regard to SPL. Therefore, the claim of the petitioner for allowing O&M expenditure is provisionally allowed @2% of the capital cost of FGD system at this stage. We direct the petitioner to submit the O&M expenses relating to FGD system on actual basis at the time of filling the petition for determination of tariff on commissioning of the FGD system.

Operational norms:

35. The Commission is yet to specify operational norms in respect of systems to be commissioned for meeting Revised Norms. In absence of notified operational norms, Commission allows increased auxiliary consumption of 1% as recommended by CEA subject to revision based on the norms specified by the Commission, if any. This allowed increase in auxiliary consumption by 1% is allowed for the modification in formulae for Availability, Energy Charge and PLF on account of increased auxiliary consumption.

36. CEA, in its report, has observed that the generating station may be allowed to recover the opportunity cost towards shutdown of the generating units for interconnection of chimney with the absorber. However, CEA has not specified number of days for which units would have to be shutdown for interconnection of FGD system with the chimney. CEA has opined that shutdown period can be minimized by taking suitable measures. It is, however, observed that the Petitioner's claim is based on the



shutdown period of 30 days. The Commission is of the view that beneficiaries and the petitioner shall plan the interconnection of FGD system with main plant by synchronizing it with annual overhaul. Therefore, the Commission is not considering the opportunity cost at this stage. However, the same would be considered on actual number of days of shutdown after prudence check to the effect that the Petitioner has tried to synchronize the interconnection of FGD system with annual overhaul and has consulted the beneficiaries in this respect.

Issue No.3: What shall be the norms and mechanism for computing the adjustment in tariff corresponding to the additional investment and increase in the operating costs due to the 2015 Notification so as to restore the petitioner to same economic position as if such Change in Law event has not occurred?

37. Article 13.2 of the PPA reads as follows in the instant case:

13.2 Application and Principles for computing impact of Change in Law

While determining the consequence of Change in Law under this Article 13, the Parties shall have due regard to the principle that the purpose of compensating the Party affected by such Change in Law, is to restore through Monthly Tariff Payments, to the extent contemplated in this Article 13, the affected Party to the same economic position as if such Change in Law has not occurred.

a) Construction Period

As a result of any Change in Law, the impact of increase/decrease of Capital Cost of the Project in the Tariff shall be governed by the formula given below:

For every cumulative increase/decrease of each Rupees Fifty crores (Rs.50 crores) in the Capital Cost over the term of this Agreement, the increase/decrease in Non Escalable Capacity Charges shall be an amount equal to zero point two six seven (0.267%) of the Non Escalable Capacity Charges. Provided that the Seller provides to the Procurers documentary proof of such increase/decrease in Capital Cost for establishing the impact of such Change in Law. In case of Dispute, Article 17 shall apply. It is clarified that the above mentioned compensation shall be payable to either Party, only with effect from the date on which the total increase/decrease exceeds amount of Rs. Fifty (50) crores.

b) Operation Period

As a result of Change in Law, the compensation for any increase/decrease in revenues or cost to the Seller shall be determined and effective from such date, as decided by the Central Electricity Regulatory Commission whose decision shall be final and binding on both the Parties, subject to rights of appeal provided under applicable Law.



38. It is observed that clause 13.2(a) of the PPA provides for compensation methodology to be applied to the non-escalable capacity charges if a Change in Law event results in increase in capital cost during the construction period. However, for the Change in Law events which occur during the operation period e.g. the instant change in law event requiring installation of FGD system at the generating station of the petitioner, clause 13.2(b) of the PPA has left it to the Commission to arrive at the compensation for any increase/ decrease in revenues or cost. Also as per Clause 13.2 of the PPA, *“the purpose of compensating the Party affected by such Change in Law, is to restore through Monthly Tariff Payments, to the extent contemplated in this Article 13, the affected Party to the same economic position as if such Change in Law has not occurred”*. Thus, the Petitioner is required to be restituted to the same economic position as if the Change in Law event had not occurred.

39. We note that few other similar petitions have been filed by other generating companies in respect of their generating stations wherein tariff has been determined through the tariff based competitive bidding route under Section 63 of the Act. PPAs in their case also contain similar provisions as clause 13.2(b) of the instant Petition i.e. there is no explicit provision with regard to methodology for compensation for Change in Law events which occur during the operation period. In their case too, the PPAs have left it for the Commission to decide at the compensation for any increase/ decrease in revenues or cost on account of change in law during the operation period. Since the FGD system is required to be installed by all thermal generating stations as per the 2015 Notification, several more such Petitions are likely to be filed by generating companies for determination of compensation on account of change in law during operation period. Therefore, it would be appropriate to adopt a uniform compensation mechanism in respect of all such generating stations.



40. We have approved provisional capital cost and other costs related to installation of FGD system that is likely to provide enough comfort to financial institutions. However, we recognise that certainty of stream of cash flow in form of tariff is likely to give further comfort to these financial institutions and that it is also equally important for the procurers as well as sellers to know the tariff implications on account of installation of FGD system.

41. Therefore we direct staff of the Commission to float a staff paper at the earliest on the issue of compensation mechanism and tariff implications on account of the 2015 Notification in case of those thermal power plants where the PPA does not have explicit provision for compensation mechanism during the operation period and the PPA requires the Commission to devise such mechanism, inviting comments from all the stakeholders.

42. With regard to prayer (e) of the Petition, the Petitioner may approach this Commission by way of separate petition(s) as and when the norms are notified by MoEF&CC.

43. Petition No. 446/MP/2019 is disposed of in terms of above.

Sd/-
(I.S. Jha)
Member

Sd/-
(P. K. Pujari)
Chairperson

