

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 332/MP/2018

Coram:

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

Date of order: 28th of October, 2019

In the matter of:

Petition under Section 79 of the Electricity Act, 2003 read with Article 13 (Change in law) of the Power Purchase Agreements dated 6.2.2007 (Bid: 01) and 2.2.2007 (Bid: 02) executed between Gujarat Urja Vikas Nigam Limited and Adani Power (Mundra) Ltd. and the PPAs dated 7.8.2008 executed with Uttar Haryana Bijili Vitran Nigam Limited and Dakshin Haryana Bijili Vitran Nigam Limited in respect of mandatory installation of additional system in compliance with the Environment (Protection) Amendment Rules, 2015 issued by Ministry of Environment, Forest and Climate Change dated 7.12.2015 for thermal power stations.

And

In the matter of:

Adani Power (Mundra) Limited
Shikhar, Near Mithakhali Circle,
Navrangpura, Ahmedabad-380 009

.....Petitioner

Vs

1. Gujarat Urja Vikas Nigam Limited
Sardar Patel Vidyut Bhawan
Race Course Circle, Vadodara-390 007

2. Dakshin Haryana Bijili Vitran Nigam Limited
Through its joint forum
Haryana Power Purchase Centre
Shakti Bhawan, Sector-6,
Panchkula, Haryana-134 109

3. Uttar Haryana Bijli Vitran Nigam Limited
Through its joint forum
Haryana Power Purchase Centre



Parties Present:

For Petitioner : Shri Amit Kapur, Advocate, APML
Ms. Abiha Zaidi, Advocate, APML
Shri Mehul Rupera, APML

For Respondents : Ms. Anushree Bardhan, Advocate, GUVNL
Ms. Tanya Sareen, Advocate, Haryana Discoms

ORDER

The Petitioner, Adani Power (Mundra) Limited, has filed the present Petition under Section 79 of the Electricity Act, 2003 (hereinafter referred to as “the Act”) read with Article 13 of the Power Purchase Agreements dated 6.2.2007 and 2.2.2007 executed between the Petitioner and Gujarat Urja Vikas Nigam Limited and the Power Purchase Agreements dated 7.8.2008 executed between the Petitioner and Dakshin Haryana Bijli Vitran Nigam Ltd. and Uttar Haryana Bijli Vitran Nigam Ltd. (hereinafter referred to as the “Haryana Utilities”). The Petitioner has made the following prayers.

“a. Declare that the MoEF&CC Notification dated 07.12.2015 is an event of Change in Law under the provisions of the respective PPAs;

b. Declare that additional capital cost and operational cost alongwith expenses on account of generation loss, reduction in efficiency, deterioration of heat rate and other expense specified at Para 15&16 shall be considered on actual basis for change in law relief in terms of PPAs provisions to ensure that the Petitioner is brought to the same economic position as if such Change in Law event has not occurred;

c. Decide a suitable mechanism to compensate the Petitioner for Expenses mentioned in Prayer (b) above;

d. Condone delay in submission and any inadvertent omissions/ errors/ shortcomings, if any, in the Petition; and



e. *Permit the Petitioner to add/change/modify/alter this filing and make further submissions as may be required at a future date.*”

2. The Petitioner has set up a 4,620 MW Thermal Power Plant (hereinafter referred to as “Mundra Power Project”) in Special Economic Zone at Mundra, Gujarat consisting of four Units of 330 MW each in Phase I and II (Units 1 to 4) , two Units of 660 MW each in Phase III (Units 5 and 6) and three Units of 660 MW each in Phase IV (Units 7, 8 and 9). Pursuant to separate competitive bidding processes carried out by the Respondents, the Petitioner has entered into long term Power Purchase Agreements (“PPAs”) for supply of 1000 MW from Units 5 and 6 to GUVNL (“Bid-02”); 1000 MW from Units 1 to 4 to GUVNL (“Bid-01”); and 1,424 MW (712 MW each) from Units 7 to 9 to Haryana Discoms from Mundra Power Project.

3. On 7.12.2015, Ministry of Environment, Forest and Climate Change, Government of India (hereinafter referred to as “MoEF&CC”) notified the Environment (Protection) Amendment Rules, 2015 (herein after referred to as “2015 MoEF&CC Notification”) which mandatorily require all thermal power plants to comply with the revised norms within two years of the 2015 MoEF&CC Notification. The 2015 MoEF&CC Notification is extracted as under:

“S.O. 3305 (E).- In exercise of powers conferred by sections 6 and 25 of the Environment (Protection) Act, 1986 (29 of 1986), the Central Government hereby makes the following rules further to amend the Environment (Protection) Rules, 1986, namely:-

1. (1) These rules may be called Environment (Protection) Amendment Rules, 2015.

(2) They will come into force from the date of their publication in the Official Gazette.

2. In the Environment (Protection) Rules, 1986, in Schedule-I,



(a) after serial number 5 and entries relating to thereto, the following serial number and entries shall be inserted, namely:-

Sr. No.	Industry	Parameters	Standards
1	2	3	4
5A	Thermal Power Plant (Water consumption limit)	Water Consumption	<p>I. All plants with Once Through Cooling (OTC) shall install Cooling Tower (CT) and achieve specific water consumption upto maximum of 3.5 m³/MWh within a period of two years from the date of publication of this notification.</p> <p>II. All existing CT-based plants reduce specific water consumption upto maximum of 3.5 m³/MWh within a period of two years from the date of publication of this notification.</p> <p>III. New plants to be installed after 1st January 2017 shall have to meet specific water consumption upto maximum of 2.5 m³/MWh and achieve zero waste water discharged.”</p>

(b) for serial number 25, and the entries related thereto, the following serial numbers and entries shall be substituted:

Sr. No.	Industry	Parameters	Standards
1	2	3	4
25	Thermal Power Plant	TPPs (Units) installed before 31st December, 2003*	
		Particulate Matter	100 mg/Nm ³
		Sulphur Dioxide (SO ₂)	600 mg/Nm ³ (Units smaller than 500 MW capacity units) 200 mg/Nm ³ (for units smaller having capacity of 500 MW and above)
		Oxides of Nitrogen (NO _x)	600 mg/Nm ³



		Mercury (Hg)	0.03 mg/Nm ³ (for Units having capacity of 500 MW and above)
		TPPs (Units) installed after 1st January, 2003 upto 31st December 2016*	
		Particulate Matter	50 mg/Nm ³
		Sulphur Dioxide (SO ₂)	600 mg/Nm ³ (Units smaller than 500 MW capacity units) 200 mg/Nm ³ (for units smaller having capacity of 500 MW and above)
		Oxides of Nitrogen (NO _x)	300 mg/Nm ³
		Mercury (Hg)	0.03 mg/Nm ³
		TPPs (units) to be installed from 1st January, 2017**	
		Particulate Matter	30 mg/Nm ³
		Sulphur Dioxide (SO ₂)	100 mg/Nm ³
		Oxides of Nitrogen (NO _x)	100 mg/Nm ³
		Mercury (Hg)	0.03 mg/Nm ³

*TPPs (units) shall meet the limits within two years from the date of publication of this notification.

** Includes all the TPPs (units) which have been accorded environmental clearance and are under construction.”

4. The Petitioner has submitted that the amendment of environment norms is notified subsequent to cut-off dates under the respective PPAs and also fulfills all the criteria of being a change in law. The change in law event would require the Petitioner to make significant additional investments to meet the revised norms. Therefore, the Petitioner is entitled to be compensated in terms of the provisions of PPAs. Accordingly, the Petitioner has filed the present Petition seeking adjustment in tariff under the PPAs in order to offset the adverse financial consequences due to revision of the environmental norms through the 2015 MoEF&CC Notification. The Petitioner has submitted that the Commission in its order dated 28.3.2018 in Petition No. 104/MP/2017



has already approved compensation under Change in Law for additional capital cost, operational expenditure and auxiliary consumption on account of installation of Flue Gas De-Sulfurization (hereinafter referred to as “FGD”) for Units 7, 8 & 9 (3 x 660 MW) under Haryana PPAs.

Submissions of the Petitioner

5. The Petitioner has mainly submitted as under:

(a) The Mundra Power Project was designed based on norms for emission of environmental pollutants provided in Schedule I of the Environment (Protection) Rules, 1986 prevalent on or before the cut-off dates under respective PPAs.

(b) The cut-off dates associated with various PPAs along with dates of grant of Environment Clearance are as follows:

Particulars	GUVNL Bid-01 PPA	GUVNL Bid-02 PPA	Haryana PPAs
Cut-Off Date (7 days prior to bid deadline)	4.1.2007	26.12.2006	19.11.2007
PPA Date	6.2.2007	2.2.2007	7.8.2008
Date of Grant of Environment Clearance	13.8.2007 (Unit 1 and Unit 2) and 21.10.2008 (Unit 3 and Unit 4)	21.10.2008	20.5.2010

(c) The 2015 MoEF&CC Notification has amended the Environment (Protection) Rules, 1986. As per the 2015 MoEF&CC Notification, all thermal power plants, including the Mundra Power Project, were required to comply with the revised norms within a period of 2 (two) years.

(d) The amendment to environmental norms through the 2015 MoEF&CC Notification is subsequent to cut-off dates under the respective PPAs and, therefore, fulfills the criteria of being a change in law in terms of PPA provisions. Consequently, the Petitioner issued Change in Law notices on 30.5.2017 and



2.2.2016 to the Respondent 1 for GUVNL Bid-01 and GUVNL Bid-02 PPAs and to Respondents 2 and 3 for Haryana PPAs.

(e) Central Pollution Control Board (CPCB) vide letter dated 11.12.2017 addressed to the Petitioner has issued following directions for compliance with the revised norms:

"i That plant shall install / retrofit Electrostatic Precipitator (ESP) so as to comply PM emission limit immediately.

ii That plant shall install FGD by December 31, 2022, in unit 1-2, September 30, 2022 in unit 3-4 and June 30, 2022 & March 31, 2022 in unit 5&6 respectively so as to comply SO₂ emission limit.

iii That plant shall take immediate measure like installation of low NO_x burners, providing Over Fire Air (OFA) etc. and achieve progressive reduction so as to comply NO_x emission limit by the year 2022

The time line mentioned above (i to iii) for compliance of PM, SO₂, & NO_x emission limits shall be reviewed by CPCB within a period of three months and shall be brought down further considering the location specificity of the plant such as critical polluted area / closeness to habitation / urban area.

The time line for compliance of water consumption limit shall also be finalised in consultation of plants

M/s Mundra Thermal Power Station, Adani Power Ltd ensure compliance of directions mentioned above (i to iii) failing which action will be taken under the appropriate provisions of the Environment (Protection) Act, 1986."

(f) Central Electricity Authority (CEA) vide letter dated 10.4.2018 directed the Petitioner to submit a detailed feasibility report regarding the systems required to comply with the provisions of the 2015 MoEF&CC Notification. Accordingly, the Petitioner had appointed Tata Consulting Engineers (hereinafter referred to as "TCE") to prepare a Feasibility Report ("FR") covering aspects specified in the said letter.

(g) The estimated capital cost and annual operating expenditure for environment protection measures as per FR is as under:

Parameter as on Cut-Off Date	Parameters as per Amendment	Primary Schemes to be implemented to meet the Amended Rules	Total Capital Cost Estimate (Rs.)	Annual Operating Expenditure
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	Rules		in crore)	(Rs. in Crore / Year)
Suspended Particulate Matter (SPM)				
150 – 350 mg / Nm ³	50 mg / Nm ³	<ul style="list-style-type: none"> No additional abatement measures required for Units 3-9. Additional electrodes in existing ESP to be installed in Units 1 & 2 based on need 	8	-
Sulphur Dioxide (SO₂)				
None	Unit Size < 500 MW: 600 mg / Nm ³ Unit Size > 500 MW: 200 mg / Nm ³	<ul style="list-style-type: none"> FGD is already installed in Units 7-9 Limestone slurry sorbent based, wet type FGD with forced oxidation, having minimum SO₂ absorption efficiency of 95% is required for Units 1-6 	1853	144
Nitrogen Oxide (NO_x)				
None	300 mg / Nm ³	<ul style="list-style-type: none"> Combustion Tuning and SNCR is required for all units 	699	85
Total			2560	229

(h) Apart from the abovementioned capital cost related to primary schemes, capital cost of Rs. 525 crore is estimated towards Initial Spares, Engineering & Project Management Expenses, Transportation & Insurance Charges, Pre-Operative Expenses and Contingency margin, etc. These costs are exclusive of Rs. 1060 crore estimated towards Taxes and Duties, IDC & Financing Cost. Further, there would also be lost opportunity cost for shut down during implementation of the said schemes which is required to be reimbursed as per actual outage.

(i) A non-exhaustive list of estimated additional capital and operational expenses for implementation and operation of the schemes is as under:

- i. Additional Capital Expenditure (Rs. 2560 crore for All Units exclusive of Initial Spares, Engineering & Project Management Expenses, Transportation & Insurance Charges, Pre-Operative Expenses and Contingency margin, Taxes and Duties, IDC & Financing Cost etc.)



- ii. Additional Operational Expense (Rs 229 crore for 1st Year of Operation)
- iii. Increase in Auxiliary Energy Consumption (All Units)
- iv. Loss of generation during implementation of various schemes (All Units)
- v. Penalty under PPAs for shortfall in Availability and other consequences (All Units)
- vi. Start-up Cost, efficiency loss during Start-up and shut down during implementation (All Units)
- vii. PoC charges during shutdown / Implementation (Units 7, 8 & 9)
- viii. Deterioration in Heat Rate

(j) The Hon'ble Supreme Court in its Judgment dated 11.4.2017 in Civil Appeals No. 5399-5400 of 2016 has observed that if there is any change in consent, approval or license available or obtained for the project, otherwise than for the default of the seller, which results in any change in any cost of the business of selling electricity, then the said seller will be governed by the Change in Law provisions of the PPA.

(k) The underlying principle of Article 13 ("Change in Law") of the PPAs is to compensate the affected party in such a way that it is restored to the same economic position as if such Change in Law had not occurred.

(l) The Commission has allowed the 2015 MoEF&CC Notification prescribing the revised environmental norms in respect of thermal power plants as change in law in its order dated 17.9.2018 in Petition No. 77/MP/2016.

(m) Ministry of Power ("MoP"), Government of India in its letter dated 30.5.2018 has issued directions to the Commission under Section 107 of the Act with regard to the implementation of the revised environmental norms as per the 2015 MoEF&CC Notification.

(n) Further, MoP vide letter dated 27.8.2018 issued directions to the Commission under Section 107 of the Act that once an event has been declared as change in law by the Commission, the decision of the Commission will apply to all the cases ipso facto and no additional Petition would need to be filed.



6. The Petition was admitted on 8.1.2019. Haryana Utilities vide affidavit dated 31.1.2019 and GUVNL vide affidavit dated 15.2.2019 have filed their replies. The Petitioner filed its rejoinder to the above replies vide its affidavits dated 15.2.2019 and 25.2.2019 respectively.

Submissions of Haryana Utilities

7. Haryana Utilities, vide their joint reply dated 31.1.2019, have submitted as under:

(a) The present Petition is premature as compensation under Article 13 of the PPAs dated 7.8.2008 is only payable after the expenditure has been incurred. There is no provision under the PPA for in- principle approval.

(b) The claim under change in law already allowed in the past has also to be considered and reduced. The Commission has to take into consideration the requirement for various consents and clearances to be obtained and the conditions imposed therein and implications thereof need to be excluded from consideration of change in law under the 2015 MoEF&CC Notification.

(c) The Petitioner was aware as on the cut-off date that it was required to obtain various consents and clearances for the project and the Environment Authorities were entitled to impose conditions for such clearances and conditions. Therefore, if the environment clearance or consents provide for a condition on the operations of the Petitioner's project prior to the Amendment to the Rules, then the 2015 MoEF&CC Notification is not a Change in Law event.

(d) The 2015 MoEF&CC Notification can be considered as change in law only to the extent that it imposes new conditions or makes the existing conditions more stringent.

(e) Order dated 17.9.2018 in Petition No. 77/MP/2016 is not applicable in the present case as the said order pertains to Case 2 bidding where the Commission had proceeded on the basis that the Procurers were required to obtain the EC.



However, in the present case, the obligation to obtain the requisite consents and permissions and to comply with any environmental requirements is on the Petitioner.

(f) MoP letter dated 27.8.2018 relied upon by the Petitioner relates to change in law in respect of taxes and duties and not in respect of other change of law. Further, the specific terms of the PPA and the facts and circumstances of each generator should be considered before allowing the change in law.

(g) In the present case, the Petitioner has only claimed impact of the 2015 MoEF&CC Notification for emission limits for Nitrogen Oxide against the Haryana Discoms.

(h) Installation of Systematic Non-Catalytic Reduction ("SNCR") may not be required by the Petitioner, if the Petitioner can otherwise control its emissions to within 300 mg/Nm³.

(i) The Feasibility Report submitted by the Petitioner has considered NO_x at 511 mg/NM³ (design coal) and 673 (worst coal) (without any abatement) which is to be reduced to 300mg/NM³ by installation of SNCR. However, this has not been supported by any emission data and, therefore, cannot be considered.

(j) Technology and equipment already exist for combustion tuning and it is the responsibility of the Petitioner to ensure optimal utilization by way of tuning or any other modification. This was required to be done by the Petitioner as a prudent utility practice. With combustion tuning and synchronized operation, NO_x can be reduced by minimum of 45% with existing technology. It is necessary to consider the emission levels of the Petitioner to establish whether SNCR would be required and even if SNCR is required, the capacity would be much lower.

(k) The contents of the Feasibility Report are not admitted and the Commission may consider the prudence and appropriateness of the observations and recommendations in the said report.

(l) The Petitioner's claims of increase in cost cannot be considered at this stage in the absence of CEA report. Therefore, the Prayers (b) and (c) of the



Petitioner cannot be considered at this stage. Further, the Petitioner has claimed substantial costs in relation to the capital cost related to primary scheme which are allegedly related to Initial Spares, engineering & project management expenses, transportation & insurance charges, pre-operative expenses and contingency margin, etc, of Rs. 525 crore which are not admitted and cannot be allowed. Such costs are also claimed in addition to the taxes/ duties, IDC and financing cost. The claimed cost is more than 40% of the capital cost which cannot be considered as prudent or reasonable and cannot be admitted.

(m) The Petitioner has not separated the costs related to Haryana Distribution Companies {Units 7, 8 and 9} and costs related to Gujarat Urja Vikas Nigam Limited {Units 1 to 6} particularly when the unit sizes are different. Therefore, the same cannot be considered. There is no rationale for various claims made thereunder. In particular, the Petitioner is claiming deterioration in Heat Rate which has no relevance.

Reply of Gujarat Urja Vikas Nigam Ltd.

8. Gujarat Urja Vikas Nigam Ltd. (GUVNL), vide its reply affidavit dated 15.2.2019 has made identical submissions as made by Haryana Utilities. GUVNL has additionally submitted as under:

(a) The Petitioner is required to place on records the standards prescribed under Environment Protection Rules, 1986; by Central Pollution Control Board; and by Gujarat Pollution Control Board under Air (Prevention and Control of Pollution) Act, 1981 as applicable prior to the 2015 MoEF&CC Notification. Further, the effect of any change in law subsequent to the cut-off date should be restricted to incremental cost or additional expenditure on installation or up-gradation of the plant and equipment and not for the entire capital expenditure.

(b) The Petitioner could not have assumed that the clearances and consents would be unconditional. In this regard, the Commission has recognized that in



case of change in consents and clearances, there has to be an existing consent, which is subsequently changed. In this regard, GUVNL has placed its reliance on the Commission`s order dated 17.3.2017 in Petition No.157/MP/2015 (CGPL) and order dated 17.2.2017 in Petition No. 16/MP/2016 (Sasan Power Ltd).

(c) The Ministry of Power, vide letter dated 30.5.2018, has stated that there would not be a change in law if the measures were mandated or envisaged prior to the 2015 MoEF&CC Notification. The mandate and envisaging of measures are two different considerations and even if there is no specific mandate, the measures can still be envisaged. The term “otherwise envisaged” has to be given some meaning. Accordingly, once FGD is deemed to have been envisaged, even as per letter dated 30.5.2018 by Ministry of Power, the same cannot be considered for change in law impact. Even if the environmental clearance does not mandate installation of FGD, it may still envisage the installation/ retrofitting of FGD and in such cases also, there is no change in law with regard to FGD.

(d) Environment clearances dated 13.8.2007 and 21.10.2008 issued for Units 1 to 6 to the Petitioner mandated space provision for installation of FGD, if required at a later stage. Environment clearances also envisaged allocation of separate funds for implementation of environmental protection measures along with item-wise break-up and submission of year-wise expenditure to MoEF&CC. Only year-wise expenditure has to be reported to the Ministry of Power. As the funds earmarked need not be submitted, there cannot be any claim. Since the expenditure was not reported to the Ministry of Power, there was no need for allocation. If the Petitioner did not allocate funds, the same is to its account. This principle has been ratified by Punjab State Electricity Regulatory Commission in order dated 21.12.2018 in Petition No. 44 of 2017 filed by Talwandi Sabo Power Limited after considering the same conditions. Further, the Appellate Tribunal vide its judgment dated 21.1.2013 in Appeal No. 105 of 2011 in the case of JSW Energy Limited v. Maharashtra State Electricity Distribution Co. Ltd has considered this aspect and held that in view of the above conditions (identical conditions), FGD was already envisaged.



(e) The Commission has distinguished the above judgment in the case of Coastal Gujarat Power Limited and Sasan Power Limited (which also had similar conditions in environment clearance) on the basis that the same were Case 2 bids and it was up to Procurers to obtain the environment clearance. However, in the present case, the Petitioner was responsible to obtain the environment clearance, similar to JSW Steel. The Petitioner took the risk of participating in the bid without an environment clearance and without knowing the specific conditions.

(f) In Petition No. 104/MP/2017, the Commission had specifically distinguished the case of Adani Power Units 7 to 9 from JSW Steel on the basis that the original environment clearance issued to Adani Power Limited provided for the installation of FGD. However, since in the present case, environment clearance for Phase I and Phase II are identical to environment clearance for JSW Steel and considered by APTEL, the reason for the Commission to distinguish the decision of APTEL in JSW case is not applicable in the present case.

(g) As regards reduction in SPM and installation of ESP, the issue is restricted to Units 1 and 2 based on the assertion of the Petitioner that the norms for the said units were 150 mg/NM³ which has been reduced to 50 mg/NM³. This claim is not accepted and the Petitioner is required to produce all necessary consents and clearances in this regard.

Rejoinder of Petitioner

9. The Petitioner vide affidavits dated 15.2.2019 and 25.2.2019 has filed its rejoinders to the replies of Haryana Utilities and GUVNL respectively and has submitted as under:

(a) The Petitioner has approached the Commission seeking in-principle approval as substantial investment is required to carry out the capital works to meet the revised norms. The present Petition is filed to seek regulatory certainty *qua* the treatment of such costs and tariff impact for its recovery. The Commission



has already held the 2015 MoEF&CC Notification to be a Change in Law event in Petitions No. 98/MP/2017, 77/MP/2016 and 133/MP/2016. In-principle regulatory approval would be critical for arranging funds from the lenders.

(b) The cost/ expenditure claimed by the Petitioner are only indicative and based on preliminary studies carried out on behalf of the Petitioner. However, the actual adjustment of tariff will be based on actual expenditure subject to prudence check. The Petitioner will approach the Commission to seek relief based on the actual impact of the compliance towards revised environmental norms in due course, based on the recommendations of CEA and directions of the Commission in this regard.

(c) As regards applicability of CGPL's order, the observation of the Commission at para 34 of the Order is not limited to Case 2 bidding. Under Case-1 competitive bidding process, the project developers are required to identify inputs for the projects such as land, water and fuel, etc. However, the Change in Law provisions relate to laws and regulations prevailing at the time of bid submission and subsequent change in them for such identified inputs. Therefore, there is essentially no difference in applying the Change in Law provisions *vis-à-vis* a project set up under Case-1 bid or Case-2 bid. In any case, the Commission has not granted Change in Law to CGPL merely on the ground that the procurer was required to obtain the environmental clearance. The observation of the Commission on this aspect is to distinguish the case of CGPL from that of JSW (*JSW Energy vs. MSEDCL & Anr.* [reported as 2013 SCC Online APTEL 16]) for grant of FGD as Change in Law.

(d) Environmental clearance for Units 1 to 6) was granted to the Petitioner on 13.8.2007 and 21.10.2008. It is noteworthy that both these environmental clearances do not mandate installation of FGD. Environmental clearances only require the Petitioner to make provision for space for installation of FGD, if required at a later stage.

(e) While issuing order dated 28.3.2018 in Petition No. 104/MP/2017 granting installation of FGD being a consequence of Change in Law in relation to Units 7, 8



and 9 of the Petitioner's Project, the Commission has specifically observed that for Environment Clearance for Units 1 to 6, MOEF&CC did not raise any objection for earmarking any funds towards installation of FGD and that installation of FGD was not mandatory except provisions for the space. GUVNL's contention that the case of JSW is similar to that of the Petitioner is erroneous. The Commission has already dealt with and distinguished the case of JSW in its order dated 28.3.2018.

(f) The decision of Punjab State Electricity Regulatory Commission in order dated 21.12.2018 Petition No. 44 of 2017 denying installation of FGD under change in law is not binding on this Commission.

(g) As regards contention of the Respondents that the Petitioner was aware of the consents and clearance required for the project as on cut-off date and environment authorities were entitled to impose conditions for such clearances and conditions, similar objections was taken by Haryana Utilities with regard to the Petitioner's claim in Petition No. 104/MP/2017. However, the Commission by its order dated 28.3.2018 had rejected the objections of Haryana Utilities and allowed the Change in Law claims of the Petitioner.

(h) The Petitioner cannot bring the NO_x levels down to 300 Mg/Nm³ without installing SNCR equipment. The existing system i.e. Low NO_x Burner (LNB) presently installed at the project is not capable of controlling the emission levels to the levels specified in the 2015 MoEF&CC Notification. Tata Consulting Engineers (TCE), the consultant appointed by the Petitioner, recommended SNCR as the suitable technology on the basis that it is a post combustion control technology and would chemically treat the flue gas by reagent (25% aqueous ammonia) injection. The minimum designed NO_x reduction efficiency is specified based on the extent of NO_x abatement required, existing plant design parameters, flexibility of fuel firing at varied operating conditions, and to meet any further stringent emission norms in the future requiring greater extent of NO_x emissions abatement.

(i) The Commission in order dated 20.7.2018 in Petition No. 98/MP/2017 has held that, based on the guidelines and operational parameters decided by CEA, the Commission shall undertake prudence check and grant the tariff for the capital



and operational expenditure incurred for meeting the revised environmental norms in respect of the generating stations regulated by it. The Petitioner has requested for in-principle approval of the claims in the present Petition, in line with the order dated 28.3.2018 in Petition No. 104/MP/2017, subject to prudence check by the Commission.

10. The Petition was heard on 6.8.2019. During the course of hearing, learned counsel for the Respondents submitted that since the Hon'ble Supreme Court has recently terminated the GUVNL Bid-02 PPA, the Petitioner cannot claim change in law for Bid-02 PPA in the present Petition. In response, learned counsel for the Petitioner submitted that the Petitioner is evaluating the implications of the Hon'ble Supreme Court's decision upholding the termination of the GUVNL Bid-02 PPA and seeking advice. Accordingly, the Petitioner craved leave to approach the Commission at a later stage regarding the change in law impact on the GUVNL Bid-02 PPA and to formulate a mechanism to compensate the Petitioner for incurring the financial cost towards implementing the change in law.

11. The Petitioner, vide Record of Proceedings for the hearing dated 6.8.2019, was directed to submit the following information:

“(a) With regard to environment clearance dated 13.8.2007,

(i) Provide the item-wise breakup of funds allocated for implementation of environment protection measures and year-wise expenditure which was reported to the Ministry;

(ii) In view of the fact that environment clearance envisages that the cost shall be included as part of the project cost, the onus of proving that these item-wise costs were not factored at the time of bidding lies with the Petitioner. Accordingly, this Commission sought any relevant information to prove that the item-wise cost earmarked for environmental protection measures was not factored at the time of bidding of the project.



(b) With regard to environment clearance dated 21.10.2008, provide:

(i) Measures adopted to reduce the emission of SO₂

(ii) Measures adopted to ensure that at no point of time the ground level concentration of SO₂ in the impact zone exceed the prescribed limit;

(iii) Item-wise break-up of funds allocated for implementation of environment protection measure and year-wise expenditure which was reported to the Ministry of Power;

(iv) In view of the fact environment clearance envisages that the cost shall be included as part of the project cost, the onus of proving that these item-wise costs were not factored at the time of bidding lies with the Petitioner. Accordingly, submit any relevant information to prove that the item-wise cost earmarked for environmental protection measures was not factored at the time of bidding of the project.

(c) Breakup of the estimated cost submitted in Para 15 of the Petition and the methodology adopted to arrive at the estimated cost.

(d) Copy of CEA recommendations for the generating station in regard to Emission Control Technology to meet MOEF&CC norms, if any; and

(e) Comparison of the present case with JSW case.”

12. The Petitioner, vide affidavit dated 16.8.2019, has furnished the information called for. As regards allocation of funds sought in query (a)(i) above, the Petitioner has submitted that it had allocated Rs. 100 crore towards the fund for environmental protection measures for Phase-I and the same is also reflected in the environmental clearance dated 13.8.2007. The Petitioner has submitted year-wise expenditure as under:

(Rs. in Crore)

Phase I (2x330 MW) – EC dated 13.8.2007					
Particulars	2007-08	2008-09	2009-10	2010-11	Total
ESP	-	43.99	13.06	-	57.06
Chimney	9.68	6.83	8.88	0.89	26.28
Cooling Tower	-	5.74	10.53	-	16.27
AHP	-	3.17	8.81	0.05	12.03
ETP & STP	-	-	-	-	-



Phase I (2x330 MW) – EC dated 13.8.2007					
Green Belt	-	-	-	0.72	0.72
Total	9.68	59.73	41.29	1.66	112.36

13. In response to query (a)(ii) and b(iv), the Petitioner has submitted that the question whether the Petitioner was required to factor the cost for environmental protection at the time of bidding has already been considered by the Commission in the order dated 28.2.2018 in Petition No. 104/MP/2017. After taking note of detailed submissions made by the Petitioner, the Commission had observed that the Petitioner had not earmarked funds for installation of FGD for Phase I & II of the project in the year-wise expenditure submitted to MoEF&CC on environment protection measures and MoEF&CC had not raised any objections in this regard. Accordingly, the Commission had concluded that Petitioner could not have been expected to factor such cost in its bid.

14. As regards query (b)(i) relating to measures adopted to reduce the emission of SO₂, the Petitioner has submitted that, as per environmental clearance dated 13.8.2007, Sulphur content in coal to be used at the plant must not exceed 0.69% and as per environmental clearance dated 21.10.2008, the Sulphur content in the coal (to be used both for Phase-I and Phase-II) must not exceed 0.3%. In accordance with the conditions of EC, the Petitioner is procuring coal with Sulphur content not exceeding the prescribed limit.

15. As regards query (b)(ii), the Petitioner has submitted that it is using coal with Sulphur content that is within the prescribed limit as per environmental clearance dated 13.8.2007 and 21.10.2008. In addition to the above, the Petitioner is also carrying out



Ambient Air Quality Monitoring twice in a week through third party consultant in order to ensure that concentration of SO₂ remains within permissible limit.

16. In response to the query (b)(iii), the Petitioner has submitted that it had allocated Rs. 340 crore towards the fund for Environmental Protection Measures for Phase II and the same is also reflected in environmental clearance dated 21.10.2008. The year-wise expenditure submitted by the Petitioner is as under:

(Rs. in Crore)

Phase II (2X330 + 2X660) –EC dated 21.10.2008							
Particulars	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	Total
ESP	-	65.36	233.51	88.05	0.66	43.23	430.82
Chimney	5.35	13.91	37.23	47.40	3.45	10.67	118.02
Cooling Tower	-	0.07	5.61	89.07	0.06	9.67	104.48
AHP	0.21	-	3.86	20.08	2.17	2.99	29.31
ETP & STP	-	-	-	-	0.20	0.22	0.42
Green Belt	-	-	-	1.56	2.47	2.53	6.56
Total	5.56	79.35	280.22	246.16	9.01	69.30	689.60

17. As regards query (c), the Petitioner has submitted break up of estimated cost submitted in Para 15 of the Petition. The Petitioner has submitted that M/s Tata Consulting Engineers Ltd. was appointed to undertake feasibility study of De-SO_x and De-NO_x technology and to ascertain the estimated capital cost for implementation of the same. Accordingly, TCE has done the cost estimation based on its vendor base and prevailing market scenario in November 2017. However, it has been clarified that the cost estimation for construction and operation of FGD Plant and SNCR does not include: (i) Taxes & Duties, (ii) Interest during Construction, (iii) Financing Charges, (iii) Pre-operatives, (iv) Contingency, (v) Mandatory spares, (vi) Transportation, (vii) Insurance, and (viii) other incidental expenses.



18. In response to query (e), the Petitioner has submitted that the JSW case has no bearing on the present case. The Petitioner has submitted the comparison of JSW case with the present case as under:

JSW's case (APTEL)	Petitioner's case
1. Date of EC	
<p><u>EC for JSW was issued prior to the cut-off date: 17.5.2007 i.e. before the cut-off date (14.2.2008)</u></p>	<p><u>EC for APMuL was issued after the cut-off date:</u> (i) For PPA dated 6.2.2007 – ECs were issued on 13.8.2007 (for Units 1 and 2) and 21.10.2008 (for Units 3 and 4) i.e. after 4.1.2007 - the cut-off date (ii) For PPA dated 7.8.2008 (for Units 7,8, 9) - EC was issued on 20.5.2010– i.e. after 19.11.2007 – the cut-off date. [Note – (FGD already allowed in Order dated 28.3.2018 in Petition No. 104/MP/2017)]</p>
2. Different Questions of law	
<p>JSW's claim was premised on the plea that imposition of additional conditions in the EC shall entitle the party to Change in Law relief. Plea was rejected since the PPA does not recognize 'additional conditions' being imposed to the EC as a Change in Law event.</p>	<p>Petitioner claim's pertains to the Change in Law relief on account of promulgation of strict emission standards by means of an MoEF Notification having force of law. This Change in Law event claimed by the Petitioner, i.e. a 'notification' falls under the definition of Change in Law under Art. 13.1.1 of the PPA.</p>
3. Conditions under the EC	
<p>(a) Initial EC Conditions (17.5.2007) -The EC issued for JSW initially, was subject to additional safeguard measures as may be required. The measures were to be met by the project proponent at its own cost. This was in addition to the <u>space requirement</u>.</p> <p>Relevant conditions:-</p> <p><i>(ii) The detailed study regarding the impact on Alphonso mango and marine fisheries as recommended in the report of Dr. B.S. Konkan Krishi Vidyapith shall be undertaken. Based on the same, additional safeguard measures as may be required will be taken by the proponent. A copy of the report will be submitted to the Ministry. The cost towards undertaking the study and implementation of</i></p>	<p>(a) EC Conditions (13.8.2007 and 21.10.2018) - The EC granted to the Petitioner was not contingent on any 'anticipated' or 'likely' safeguard measures to be adopted to control the emission levels of SO₂ and NO_x.</p> <p>Relevant conditions in EC dated 13.8.2007: -</p> <p><i>(vi) Space provision shall be made for installation of FGD of requisite efficiency of removal SO₂, if required at a later stage.</i></p> <p><i>(xxiii) Separate funds should be allocated for implementation of environmental protection measures along with item-wise break up. The funds earmarked for the environment protection measures should not be diverted for other purposes and year-wise expenditure should be</i></p>



JSW's case (APTEL)	Petitioner's case
<p>safeguard measures, if any, will be borne by the project.</p> <p>(iii) Space provision shall be made for installation of FGD of requisite efficiency of removal of SO₂, if required at later stage.</p> <p>(xx) Separate funds should be allocated for implementation of Environmental protection measures along with item wise break up. These cost should be included as part of the project cost. The funds earmarked for the environment protection measures should not be diverted for other purposes and year-wise expenditure should be reported to the Ministry.”</p>	<p>reported to the Ministry.</p> <p>Relevant conditions in EC dated 21.10.2008:</p> <p>-</p> <p>(vi) Appropriate measures shall be adopted to reduce the emissions of SO₂. It shall also be ensured that at no point of time the ground level concentration of SO₂ in the impact zone exceeds the prescribed limit. The proponent shall also provide, now itself, adequate space for installation of FGD, if required at a later date.</p> <p>(xii) Space provision shall be made for installation of FGD of requisite efficiency of removal of SO₂, if required at later stage.</p> <p>(xxix) Separate funds shall be allocated for implementation of environmental protection measures along with item-wise break-up. These costs shall included as part of the project cost. The funds earmarked for the environmental protection measures shall not be diverted for other purposes and year-wise expenditure should be reported to the Ministry.</p>
<p>(b) Challenge to EC– The EC had to be re-examined on account of the likelihood of the Project causing damage to the ecology of alphonso mangoes and marine fisheries (in line with the principles of sustainable development and precautionary approach).</p> <p>(i) The initial EC was challenged before National Environment Appellate Authority (NEAA), which dismissed the challenge in Order dated 12.09.2008.</p> <p>(ii) Subsequently, a Writ Petition [<i>Balachandra Bhikaji Nalwade vs. Union of India & Ors.</i> 2009 SCC Online Del 2990] was filed before the Hon'ble Delhi High Court challenging the NEAA's Order claiming that the EC granted to JSW was (i) illegal; (ii)contrary to statutory provisions and precautionary principle; and (iii) based on unconfirmed data and assumptions. The Hon'ble Delhi High Court by its Order 18.9.2009, directed Expert Appraisal Committee to re-examine the Initial EC, considering the likelihood of the Project</p>	<p>(b) Challenge to EC - EC for the Petitioner was not challenged at any stage before any authority and was not subject to any re-examination.</p> <p>In fact, while granting the EC to the Petitioner, MOEF specified that no ecologically sensitive area is located within 10 km radius of the Petitioner's project.</p>



JSW's case (APTEL)	Petitioner's case
<p>causing damage to the ecology of alphonso mangoes and marine fisheries. (Para 32).</p> <p>(iii) Therefore, Initial EC had to be re-examined.</p>	
<p>(c) Re-examination</p> <p>(i) On 11.1.2010, the EAC conducted a meeting and re-examined the EC conditions, based on the directions of the Hon'ble Delhi High Court.</p> <p>(ii) On 16.4.2010, the MoEF issued a letter to JSW imposing 'additional conditions' including condition to install FGD prior to the commissioning of the project.</p> <p>(iii) Initial EC read with the additional conditions imposed by letter dated 16.4.2010 is the amended EC.</p>	<p>(c) NO re-examination.</p>
<p>(d) Amendment dated 16.4.2010 –</p> <p>(i) Amended EC imposed the FGD Condition <i>“Flue Gas Desulphurization System (FGD) shall be installed before commissioning of the project and action in this regard shall be submitted within three months to the Ministry”</i></p> <p>(ii) Mandate to install FGD was in the nature of 'additional conditions' being imposed in the EC dated 17.5.2007 issued prior to cut-off date (14.2.2008) not pursuant to any Change in Law event.</p> <p>(iii) MOEF letter imposing 'additional conditions' in the EC confirmed the Initial EC to the extent of specifying the stage of FGD installation.</p>	<p>(d) Amendments –</p> <p>(i) FGD condition was not imposed in the amendment to the ECs. The only amendment to the ECs of the Petitioner was by letter dated 13.4.2018 and for recording the name change from Adani Power Ltd. to Adani Power (Mundra) Ltd.</p> <p>(ii) Mandate to install FGD is on account of a Change in Law regarding permissible emission standards from the thermal power plants (pursuant to MOEF's Notification dated 7.12.2015).</p> <p>(iii) MOEF Notification, 2015 was the first time, FGD installation was mandated.</p>

Analysis and Decision

19. In light of the submission of the parties as recorded above, the following issues arise for our consideration:



(a) Issue No. 1: Whether MoEF&CC Notification qualifies to be considered as an event of Change in Law in terms of the PPAs dated 6.2.2007 and 7.8.2008 between the Petitioner and the Procurer Respondents?

(b) Issue No. 2: Whether the provisions of the PPAs with regard to notice have been complied with by the Petitioner?

(c) Issue No. 3: Whether the in-principle approval for additional capital expenditure can be granted for implementation of the event covered under Change in Law in terms of the PPA?

Issue No. 1: Whether MoEF&CC Notification qualifies to be considered as an event of Change in Law in terms of the PPAs dated 6.2.2007 and 7.8.2008 between the Petitioner and the Procurer Respondents?

20. The learned counsel for GUVNL argued that the Petitioner cannot claim change in law for GUVNL Bid-02 PPA as Hon'ble Supreme Court vide its order dated 2.7.2019 has allowed termination of the said PPA. On this issue, learned counsel for the Petitioner submitted that the Petitioner is in process of evaluating the implications of the said decision of Hon'ble Supreme Court and craved liberty to approach the Commission at a later stage in respect of change in law impact under GUVNL Bid-02 PPA. It is noted that GUVNL has filed the Petition No. 250/MP/2019 to recall the order dated 12.4.2019 in Petition No. 374/MP/2018 granting approval to the Supplementary Agreements dated 5.12.2018. In light of this, the issue for our consideration in this Petition is limited to change in law impact under GUVNL Bid-01 PPA (Units 1 to 4) and Haryana PPAs (Units 7 to 9).

21. The Petitioner has entered into PPA dated 6.2.2007 with GUVNL and PPAs dated 7.8.2008 with Haryana Utilities. Article 13 of the PPAs which deals with Change in Law is extracted as under:



GUVNL Bid-01 PPA

“ARTICLE 13 CHANGE IN LAW

13.1 Definitions

In this Article 13, the following terms shall have the following meanings:

13.1.1 "Change in law" means the occurrence of any of the following after the date, which is seven (7) days prior to the Bid Deadline:

- i. the enactment, bringing into effect, adoption, promulgation, amendment, modification or repeal, 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, taxes, duties charges, levies, etc., or*
- ii. the imposition by any Governmental Instrumentality, which includes the Government of the State where the project is located, of any material condition in connection with the issuance, renewal, modification, revocation or non-renewal (other than for cause) of any Consent after the date of this Agreement.*

that in either of the above cases

(a) results in any change with respect to any tax or surcharge or cess levied or similar charges by the Competent Government on water, primary fuel used by the generating plant, the generation of electricity (leviable on the final output in the form of energy), sale of electricity and,

(b) relating to consents/compliance pertaining to environment results in any change in costs or revenue;”

Haryana PPAs

“ARTICLE 13: CHANGE IN LAW

13.1 Definitions

In this Article 13, the following terms shall have the following meanings:

13. 1.1 "Change in Law" means the occurrence of any of the following events after the date, which is seven (7) days prior to the Bid Deadline:

(i) the enactment, bringing into effect, adoption, promulgation, amendment, modification or repeal, of any Law or (ii) a change in interpretation of any Law by a Competent Court of law, tribunal or Indian Governmental Instrumentality provided such Court of law, tribunal or Indian Governmental Instrumentality is final authority under law for such interpretation or (iii) change in any consents, approvals or licenses available or obtained for the Project, otherwise than for default of the Seller, which results in any change in any cost of or revenue from the business of selling electricity by the Seller to the Procurer under the terms of this Agreement;

but shall not include (i) any change in any withholding tax on income or dividends distributed to the shareholders of the Seller, or (ii) change in respect of UI Charges or frequency intervals by an Appropriate Commission.



Provided that if Government of India does not extend the income tax holiday for power generation projects under Section 80 IA of the Income Tax Act, upto the Scheduled Commercial Operation Date of the Power Station, such non-extension shall be deemed to be a Change in Law (applicable only in case the Seller envisaging supply from the Project awarded the status of "Mega Power Project" by Government of India).

13.1.2 "Competent Court" means:

The Supreme Court or any High Court, or any tribunal or any similar judicial or quasi-judicial body in India that has jurisdiction to adjudicate upon issues relating to the Project.

13.2 Application and Principles for computing impact of Change in Law

The Supreme Court or any High Court, or any tribunal or any similar judicial or quasi-judicial body in India that has jurisdiction to adjudicate upon issues relating to the Project.

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 Rs. 8,90,000,00 (Rupees eight crore ninety lakh only) Rupees of the Contracted Capacity in the Capital Cost over the term of this Agreement. the increase/decrease in Quoted Capacity Charges shall be an amount equal to zero point two two seven (0.227%) percent of the Quoted Capacity Charges. Provided that the Seller provides to the Procurer 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. 8,90,000,00 (Rupees eight crore ninety lakh only)

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 Appropriate Commission whose decision shall be final and binding on both the Parties, subject to rights of appeal provided under applicable Law."

Provided that the above mentioned compensation shall be payable only if and for increase/decrease in revenues or cost to the Seller is in excess of an amount equivalent to 1 % of Letter of Credit it in aggregate for a Contract Year."



22. The terms 'Law' and 'Indian Governmental Instrumentality' have been defined in the PPAs as under:

GUVNL Bid-01 PPA

"Law" means, in relation to this Agreement, all laws and Electricity Laws in force in India and would include any statute, ordinance, regulation, notice, circular, code, rule or direction, or any interpretation of any of them by a Governmental Instrumentality and also includes all applicable rules, regulations, orders, directions, notifications by a Governmental Instrumentality pursuant to or under any of them and shall include all rules, regulations, decisions directions and orders of the Appropriate Commission."

"Indian Governmental Instrumentality" means the Government of India, Government of Gujarat and any ministry, department, board, agency of other authority of Government of India of Government of Gujarat.

Haryana PPAs

"Law" means, in relation to this Agreement, all laws including Electricity Laws in force in India and any statute, ordinance, regulation, notification or code, rule, or any interpretation of any of them by an Indian Governmental Instrumentality and having force of law and shall further include all applicable rules, regulations, orders, notifications by an Indian Governmental Instrumentality pursuant to or under any of them and shall include all rules, regulations, decisions and orders of the Appropriate Commission."

"Indian Governmental Instrumentality" means the Government of India (GOI), Government of Haryana and ministry, department, body corporate, Board, agency or any other authority of GOI or Government of the State where the Project is located and include the Appropriate Commission;

23. As per the above definitions, law broadly means (a) all laws including/and Electricity Laws in force in India; (b) any statute, ordinance, regulation, notification, code, rule or their interpretation by an Indian Government Instrumentality; (c) includes all applicable rules, regulations, orders and any notifications by an Indian Government Instrumentality pursuant to or under any of them; and (d) all rules, regulations, decisions and orders of Appropriate Commission. Indian Government Instrumentality has been defined in the GUVNL Bid-01 PPA as "the Government of India, Government of Gujarat and any ministry, department, board, agency or other authority of Government of India or Government Gujarat". Indian Government Instrumentality has been defined in the



Haryana PPAs as “the Government of India (GOI), Government of Haryana and any ministry, department, body corporate, Board, agency or other authority of GOI or Government of the State where the Project is located and includes the Appropriate Commission”.

24. MoEF&CC is an Indian Government Instrumentality in terms of the PPA. The Environment (Protection) Rules, 1986 was issued by MoEF&CC in exercise of powers conferred under Sections 6 and 25 of the Environment (Protection) Act, 1986 which qualify as “law” in terms of the PPAs dated 6.2.2007 with GUVNL and dated 7.8.2008 with Haryana Utilities. The norms for emission of environmental pollutants to be complied with by the thermal power plants were prescribed in Schedule I of Environment (Protection) Rules, 1986. The cut-off date for GUVNL Bid-01 PPA (Unit 1 to 4) and Haryana PPAs (Unit 7 to 9) were 4.1.2007 and 19.11.2007 respectively. The Petitioner was expected to factor in the prevailing environmental norms while quoting its tariffs. MoEF&CC issued the environment clearances on 13.8.2007 (Units 1 and 2), 21.10.2008 (Units 3 and 4) and 20.5.2010 (Units 7, 8 and 9). Therefore, the Petitioner executed Mundra Power Project in accordance with the environment clearance issued by MoEF&CC and the prevailing environmental norms as per the Environment (Protection) Rules, 1986 and other applicable environment laws. The 2015 MoEF&CC Notification was notified on 7.12.2015 amending Schedule I of the Environment (Protection) Rules, 1986 which provided for revised parameters/ norms for water consumption, particulate matters, Sulphur Dioxide, Oxides of Nitrogen and Mercury in respect of thermal power plants. Since the 2015 MoEF&CC Notification, which seeks to revise the environmental norms prescribed in the Environment (Protection) Rules, 1986,



has been issued after the cut-off dates, the same qualifies as change in law event in terms of Article 13.1.1(i) read with Article 13.1.1(b) of the PPA dated 6.2.2007 (GUVNL Bid-01 PPA) and Article 13.1.1(i) of the PPAs dated 7.8.2008 (Haryana PPAs). Units 1 to 4 of Mundra Power Project achieved commercial operation on 4.8.2009, 20.3.2010, 4.8.2010 and 21.12.2010 respectively. Units 7, 8 and 9 of Mundra Power Project achieved commercial operation on 9.11.2011, 5.3.2012 and 11.5.2012 respectively. Therefore, the change in law events brought about through the 2015 MoEF&CC Notification shall also qualify as change in law during the operating period in terms of the PPAs dated 6.2.2007 (GUVNL Bid-01 PPA) and 7.8.2008 (Haryana PPAs).

25. Ministry of Power, Government of India in its letter dated 30.5.2018 has issued directions to the Commission under Section 107 of the Act with regard to the implementation of the revised environmental norms as per the 2015 MoEF&CC Notification dated 7.12.2015. The said letter is extracted as under:

*“No. 23/22/2018-R&R
Government of India
Ministry of Power*

*Shram Shakti Bhawan, Rafi Marg,
New Delhi, 30th May, 2018*

To,

*The Chairperson,
Central Electricity Regulatory Commission,
Chanderlok Building,
Janpath, New Delhi-110001*

Subject: Mechanism for Implementation of New Environmental Norms for Thermal Power Plants (TPP) supplying power to distribution licensees under concluded long term and medium term Power Purchase Agreement (PPA).

Sir,



Ministry of Environment, Forest and Climate Change (MoEFCC) has notified the Environment (Protection) Amendment Rules, 2015 on 7th December, 2015 thereby introducing revised emission standards for Thermal Power Plants (TPPs). The revised emission standards are applicable to existing as well as upcoming TPPs. To meet the revised emission standards, the TPPs would have to install or upgrade various emission control systems like Flue-gas desulfurization (FGD) system, Electro-Static Precipitators (ESP) system etc.

2. As per implementation plan prepared by Central Electricity Authority (CEA), the existing TPPs are required to comply with the new emission standards by the year 2022.

3. Implementation of revised emission standards would face challenges relating to stringent timelines, availability of suppliers and technology, shut down for longer periods, and revenue loss during shutdown. It would also have significant implications on the tariff agreed under the long term and medium term power purchase agreement (PPA) due to additional infrastructure and operational cost on account of large scale installations, renovations & retrofitting of existing plant and machinery to meet revised emission norms.

4. In view of the nature of cost involved in implementation of revised standards of emission and the provisions of Power Purchase Agreement, there is a need to develop the appropriate regulatory framework specifying the mechanism or enabling guidelines for providing regulatory certainty to the TPPs about recovery of such additional costs through tariff. It is important to ensure implementation of the revised standards of emission for TPPs for controlling pollution level in the larger public interest.

5. After considering all aspects and with due regard to the need for safeguards against environmental hazards, and accordingly to ensure timely implementation of new environment norms, the Central government has decided that-

5.1 The MOEFCC Notification requiring compliance of Environment (Protection) Amendment Rules, 2015 dated 7th December, 2015 is of the nature of Change in law event except in following cases:

(a) Power purchase Agreements of such TPPs whose tariff is determined under section 63 of the Electricity Act 2003 having bid deadline on or after 7th December, 2015; or

(b) TPPs where such requirement of pollutions control system was mandated under the environment clearance of the plant or envisaged otherwise before the notification of amendment rules;

5.2 The additional cost implication due to installation or up-gradation of various emission control systems and its operational cost to meet the new environment norms, after award of bid or signing of PPA as the case may be, shall be considered for being made pass through in tariff by Commission in accordance with the law.

5.3 The respective TPPs may approach the Appropriate Commission for approval of additional capital expenditure and compensation for additional cost on account of this Change in law event in respect of the Power Purchase Agreement entered under section 62 or section 63 of the Electricity act 2003.



5.4 For the TPPs that are under the purview of the Central Commission, the Commission shall develop appropriate regulatory mechanism to address the impact on tariff, and certainty in cost recovery on account of additional capital and operational cost, under concluded long term and medium term PPAs for this purpose.

6. The Central Government, in exercise of the power conferred under section 107 of the Electricity Act 2003 issues directions to the Central Electricity Regulatory Commission to implement the above decision of the Government. This direction is being issued to facilitate the smooth implementation of revised emission standards of the Environment (Protection) Amendment Rules, 2015 dated 7th December, 2015 for Thermal Power Plants in the larger public interest.

7. This issues with the approval of Minister of State (IC) for Power and NRE.

Yours faithfully

(Ghanshyam Prasad)
Chief Engineer”

26. The Central Government in exercise of power under Section 107 of the Act has declared that the 2015 MoEF&CC Notification requiring compliance of Environment (Protection) Amendment Rules, 2015 dated 7.12.2015 is of the nature of Change in law event except in cases (a) where the Power Purchase Agreements of such thermal power plants whose tariff has been determined under Section 63 of the Act having bid deadline on or after 7.12.2015; or (b) thermal power plants where such requirement of pollutions control system was mandated under the environment clearance of the plant or envisaged otherwise before the notification of amendment rules. In the case of the Petitioner, the cut-off date which was 7 days prior to bid deadline was 4.1.2007 for GUVNL Bid-01 PPA and 19.11.2007 for Haryana PPAs. Therefore, the case of the Petitioner does not fall within the first exception. As regards the second exception, at (b) above, Mundra Power Project meets some of the revised environment norms based on the environment approval and in respect of such norms, Change in Law is not admissible. In fact, the Petitioner has not claimed the relief under Change in Law on



account of revised norms for Water Consumption Limit, Particulate Matters (except for Units 1&2) and Mercury. The Petitioner has submitted that since MoEF&CC vide its Notification dated 28.6.2018 has relaxed norms for Water Consumption Limit, the stipulation in this regard as per the 2015 MoEF&CC Notification are not applicable for Mundra Power Project.

27. Next we consider the case of the Petitioner for Change in Law in respect of each of the revised parameters introduced through the 2015 MoEF&CC Notification and the comments/ objections of the Procurers thereon. The Petitioner has submitted the following snapshot of Change in Law claims in respect of Mundra Power Project:

S.No.	Parameter as on Cut-Off Date	Parameters as per Amendment Rules	Primary Schemes to be implemented to meet the Amended Rules
Suspended Particulate Matter (SPM)			
1	150 – 350 mg / Nm ³	50 mg / Nm ³	<ul style="list-style-type: none"> No additional abatement measures required for Units 3- 9. Additional electrodes in existing ESP to be installed in Units 1 & 2 based on need
Sulphur Dioxide (SO₂)			
2	None	Unit Size < 500 MW: 600 mg / Nm ³ Unit Size > 500 MW: 200 mg / Nm ³	<ul style="list-style-type: none"> FGD is already installed in Units 7-9 Limestone slurry sorbent based, wet type FGD with forced oxidation, having minimum SO₂ absorption efficiency of 95% is required for Units 1-6
Nitrogen Oxide (NO_x)			
3	None	300 mg / Nm ³	<ul style="list-style-type: none"> Combustion Tuning and SNCR is required for all units

(A) Particulate Matter

28. As regards Particulate Matter, the Petitioner has submitted that as on the cut-off date, the applicable standard for emission of Particulate Matter was 150 – 350 mg/Nm³ as per Sr. No. 25 of Schedule-I of Environment Protection Rules, 1986. The revised norm for Particulate Matters is 50 mg/Nm³. The Petitioner has submitted that no



additional abatement measures are required for Units 3 to 9. However, additional electrodes in existing ESP may need to be installed in Units 1 and 2, if required. GUVNL has submitted that the claim of the Petitioner is not acceptable as the Petitioner has not submitted the required documents pertaining to all necessary consents and clearances in this regard.

29. We have considered the submissions of the Petitioner and the Respondents. As on cut-off date, the norm for Particulate Matter as per Sr. No. 25 of Schedule-I of Environment Protection Rules, 1986 for generation capacity 210 MW and more was 150 mg/Nm³. However, MoEF&CC, by its environmental clearance dated 13.8.2007 for Units 1 and 2 of Mundra Power Project directed the Petitioner to install high efficiency Electrostatic Precipitator with efficiency of 99.9% to ensure that particulate emissions do not exceed 100 mg/Nm³. Therefore, the norm for Particulate Matter prescribed in the environmental clearance (100 mg/Nm³) for Units 1 and 2 was stringent than the norm as per Sr. No. 25 (150 mg/Nm³) of Schedule-I of Environment Protection Rules, 1986. The Petitioner has submitted that in order to comply with revised norms of 50 mg/Nm³ under 2015 MoEF&CC Notification, no additional abatement measures are required for Units 3 to 9. Thus, the Petitioner has not claimed change in law in respect of Units 3 to 9 of the Mundra Power Project as regards compliance with revised standards as per 2015 MoEF&CC Notification. However, the Petitioner has stated that additional electrodes in existing ESP may be required to be installed in Units 1 and 2, if needed, to comply with the revised norms. Having held that the 2015 MoEF&CC Notification is change in law, in our view, the Petitioner should take steps to comply with revised norms of Particulate



Matter as per 2015 MoEF&CC Notification in respect of Units 1 and 2, if needed, in consultation with CEA while keeping the Respondents informed.

(B) Sulphur Dioxide (SO₂)

30. The Petitioner has submitted that as on the cut-off date for GUVNL Bid-01 PPA i.e. 4.1.2007, there were no environment norms mandating/ envisaging installation of FGD by the Petitioner in order to control SO₂ emissions. Environmental clearance for Units 1 & 2) and for Units 3 to 6 was granted to the Petitioner on 13.8.2007 and 21.10.2008 respectively. The Petitioner has submitted that none of these environmental clearances mandate installation of FGD. Environmental clearances only require the Petitioner to make provision for space for installation of FGD, if required at a later stage. After the cut-off date, the 2015 MoEF&CC Notification has prescribed the limit of emission of Sulphur Dioxide up to 600 mg/Nm³ (with respect to Thermal Power Plants installed between 1.1.2003 and 31.12.2016, where the capacity of a Unit is below 500 MW) and up to 200 mg/Nm³ (with respect to Thermal Power Plants installed between 1.1.2003 and 31.12.2016, where the capacity of a Unit is 500 MW and above). Accordingly, it became incumbent upon the Petitioner to take steps to install FGD at its power plants (Units 1 to 4) for which the Petitioner shall have to incur additional capital expenditure. The Petitioner has submitted that its consultant, Tata Consulting Engineers, has recommended installation of limestone slurry sorbent based wet type FGD with forced oxidation, having minimum SO₂ absorption efficiency of 95%, for abatement of Sulphur Dioxide levels to meet the new MoEF&CC norms for Units 1 to 4.



31. *Per contra*, GUVNL has submitted that the 2015 MoEF&CC Notification can be considered a Change in Law only to the extent that it imposes new conditions or makes the existing conditions more stringent. GUVNL has contended that the claim of the Petitioner for installation of FGD is based on the premise that there was no stipulation or condition for installation of FGD prior to 2015 MoEF&CC Notification nor was such installation envisaged. Also, Ministry of Power vide direction to CERC under Section 107 of the Act communicated vide letter dated 30.5.2018 has stated that there would not be a change in law if the measures were mandated or envisaged prior to the Amendments dated 7.12.2015. Therefore, if the equipment were envisaged (even if not mandated) in the Consents and Clearances prior to 7.12.2015, the same would not be a change in law. GUVNL has submitted that the environmental clearances dated 13.8.2007 and 21.10.2008 issued for Units 1 to 4 to the Petitioner mandated space provision for installation of FGD, if required at a later stage and allocation of separate funds for implementation of environmental protection measures along with item-wise break-up and submission of year-wise expenditure to MoEF&CC. GUVNL has argued that only year-wise expenditure has to be reported to the Ministry of Power and the funds earmarked need not be submitted. Therefore, there cannot be any claim that since the expenditure was not reported to the Ministry of Power, there was no need for allocation. If the Petitioner did not allocate funds, the same is to its own account. GUVNL has relied on the judgment of APTEL in the case of JSW Energy Limited v. Maharashtra State Electricity Distribution Co. Ltd & another dated 21.1.2013 in Appeal No. 105 of 2011 to contend that APTEL has considered this aspect and held that in view of the above conditions (identical conditions), FGD was already envisaged. According to



GUVNL, in Petition No. 104/MP/2017, the Commission had specifically distinguished the case of Mundra Power Project Units 7 to 9 from that of JSW Energy Ltd. on the basis that the original environment clearance issued to Adani Power Limited had not provided for the installation of FGD. However, in the present case, environment clearance for Phase I and Phase II are identical to environment clearance for JSW Energy Ltd. and has been considered by the APTEL in its judgement dated 21.1.2013. Therefore, the reason for the Commission to distinguish the decision of the APTEL in JSW Energy Ltd. case is not applicable in the present case. GUVNL has further contended that the order dated 17.9.2018 in Petition No. 77/MP/2016 in regard to CGPL would not have any application to the present case since CGPL was awarded contract after a Case 2 bidding where the Commission has proceeded on the basis that the Procurers were required to obtain the environment clearance. But the present case being a Case-1 bid, the obligation to obtain the requisite consents and permissions and comply with any environmental requirements is on the Petitioner.

32. The Petitioner has refuted the submissions made by GUVNL and has submitted that the Commission in order dated 28.3.2018 in Petition No. 104/MP/2017 has already held that installation of FGD was not mandatory in terms of the ECs dated 13.8.2007 and 21.10.2008 granted to the Petitioner. The Petitioner has submitted that GUVNL's contention that the case of JSW is similar to that of the Petitioner is erroneous. The Petitioner has contended that the Commission has already dealt with and distinguished the case of JSW in its order dated 28.3.2018. As regards CGPL's order, the Petitioner has submitted that the Change in Law provisions relate to laws and regulations prevailing at the time of bid submission and subsequent change in them for such



identified inputs. Therefore, there is essentially no difference in applying the Change in Law provisions *vis-à-vis* a project set up under Case-1 bid or Case-2 bid.

33. We have considered the submissions of the Petitioner and the Respondents. The Commission had allowed pass through of costs on account of installation of FGD for Units 7, 8 and 9 for Haryana PPAs under change in law vide order dated 28.3.2018 in Petition No. 104/MP/2017. The Petitioner has, in the instant Petition, proposed installation of FGD for Units 1 to 4 i.e. for units linked to GUVNL Bid-01 PPA. The cut-off date for GUVNL Bid-01 PPA was 4.1.2007. The Petitioner received environment clearance for Units 1 & 2 on 13.8.2007 and for Units 3 & 4 on 21.10.2008 i.e. after the cut-off date (4.1.2007). Thus, as far as date of grant of environment clearance is concerned, the case of the Petitioner as regards GUVNL Bid-01 PPA (Units 1 to 4) is similar to Haryana PPAs (Units 7, 8 and 9) where environment clearance for Units 7, 8 and 9 was not available as on the cut-off date i.e. on 19.11.2007. Environment clearance for Units 7, 8 and 9 was granted by MoEF&CC on 20.5.2010 with a condition to install FGD. The Commission in its order dated 28.3.2018 in Petition No 104/MP/2017 filed by Adani Power (Mundra) Limited held as under:

“37. In view of the above, we hold that the condition in EC dated 20.5.2010 mandating installation of FGD for Phase III of the project of the Petitioner was the result of the revision of NAAQS vide MOE&F Notification dated 16.11.2009 and CPCB Notification dated 18.11.2009 which took place after the cut-off date and MOE&F and CPCB being India Government Instrumentalities, the said notifications constitute Change in Law in terms of the PPAs dated 7.8.2008 between the Petitioner and Haryana Utilities.”

34. GUVNL's objection is on applicability of judgment of APTEL in the case of JSW Energy Limited v. Maharashtra State Electricity Distribution Co. Ltd & another dated 21.1.2013 in Appeal No. 105 of 2011 in the present case. The issue of applicability of



JSW Energy Ltd. judgment has been dealt with by the Commission in order dated 28.3.2018 in Petition No. 104/MP/2017 as under:

*“36. In the case of JSW, the MOE&F granted EC to JSW on 17.5.2007, subject to various conditions and one of the conditions was provision of space for installation of FGD system for removal of SO₂, if required at a later stage and for allocation of separate funds for implementation of environmental protection measures. Thereafter, at the final stage of commissioning of the project of JSW, the MOE&F by letter dated 16.4.2010 imposed a condition that FGD system should be installed before the commissioning of the said project within a period of 23 months and conveyed its EC for the project, subject to compliance of safeguards and conditions mentioned in the said letter. MERC and Tribunal had rejected the claim of JSW on the ground that there was no change in law under Article 13 of the PPA, since the letter dated 16.4.2010 issued by MOE&F merely confirmed the requirement of installation of FGD intimated through letter dated 17.5.2007. The findings of the Tribunal in the case of JSW is that the EC dated 16.4.2010 is a mere confirmation of the earlier EC dated 17.5.2007 which is apparently based on the fact that the EC granted by MOE&F to JSW on 16.4.2010 makes reference of the EC granted by letter dated 17.5.2007 where there was a direction to make provisions for space for FGD. In the present case of the Petitioner, the EC granted by MOE&F on 20.5.2010 for Phase III was independent of the ECs granted by MOE&F on 13.8.2007 and 21.10.2008 respectively for Phases I and II of the project. **However, in case of Phase III, there was no prior EC as in case of JSW and EC dated 20.5.2010 was granted by MOE&F at the first instance mandating the installation of FGD.** The case of JSW is therefore distinguishable from the present case of the Petitioner and hence the judgment of the Tribunal dated 21.1.2013 cannot be made applicable in case of the Petitioner as contended by the Respondents/M/s Prayas.”*

35. It is noted that Maharashtra Electricity Regulatory Commission and APTEL rejected the claim of JSW on the ground that there was no change in law under Article 13 of the PPA, since the letter dated 16.4.2010 issued by MOE&F merely confirmed the requirement of installation of FGD intimated through letter dated 17.5.2007. APTEL in its judgment dated 21.1.2013 in Appeal No. 105 of 2011 in the case of JSW Energy Ltd. had observed that environment clearance dated 16.4.2010 was a mere confirmation of the earlier environment clearance dated 17.5.2007 which was apparently based on the fact that environment clearance granted by MOE&F to JSW Energy Ltd. on 16.4.2010 makes reference of environment clearance granted by letter



dated 17.5.2007 where there was a direction to make provisions for space for FGD. Further, it is further noted that the APTEL has recognised that environment clearance granted to JSW Energy Limited was conditional. Relevant portion of the judgment of ATEPL is extracted as under:

“37. According to the Appellant, FGD fund is not required to be included in the project cost. There is no merit in this substance.

38. Let us again refer to the conditions in the Environmental clearance dated 17.5.2007:

*“(ii) the detailed study regarding the impact of the project, if any, on Alphanso mango and marine fisheries as recommended in the report of Dr. B.S. Konkan Krishi Vidyapith shall be undertaken. Based on the same, additional safeguard measures as may be required will be taken by the proponent with prior approval of the Ministry of Environment and Forests. A copy of the report will be submitted to the Ministry. **The cost towards undertaking the study and implementation of safeguard measures if any, will be borne by the project.***

(iii) Space provision shall be made for installation of FGD of requisite efficiency of removal of SO₂, if required at later stage.

.....
(xx) Separate funds should be allocated for implementation of Environmental protection measures along with item wise break up. These cost should be included as part of the project cost. The funds earmarked for the environment protection measures should not be diverted for other purposes and year wise expenditure should be reported to the Ministry”

*39. So, the reading of the conditions in entirety referred to in the Environmental clearance would make it clear that there was a mandate with regard to the requirement of earmarking of funds for FGD as well. **The study to be carried out was specific to the case of the Appellant’s plant as it is recorded that the study is to be carried out in terms and the recommendations in the report of KKVD. This has been referred to in the order of the Delhi High Court while reference was made to the minutes of the 42nd Meeting of the Expert Appraise Committee.***

.....
46. It is a settled law that the terms of a contract have to be read as a whole and cannot be read in isolation. There is no change as sought to be claimed by the



Appellant. The mere intimation of the stage for installation of FGD is not a change in law or interpretation of law. We find that prior Environmental clearance granted was conditional and that the entire bid of the Appellant was on the basis of the representation of the Appellant is indicative of the fact that the FGD was required to be installed by the Appellant and the Appellant was well aware of the same.”

36. As per the above judgement, JSW Energy Ltd. had a conditional environmental clearance wherein environmental clearance mandated detailed study regarding the impact of the project, if any, on Alphanso mango and marine fisheries as recommended in the report of Dr. B.S. Konkan Krishi Vidyapith, whereas there was no such condition in environmental clearance granted to the Petitioner. Further, the present case is similar to the Gujarat Bid 01 PPA and Haryana PPAs, in terms of non-availability of environmental clearance(s) as on cut-off date, whereas JSW Energy Ltd had environmental clearance as on bid date with certain conditions stipulated therein. Thus, the environmental clearance granted to the Petitioner was not conditional and was independent of any specific study. Accordingly, in terms of the above decision of the Commission and order of APTEL, the case of JSW Energy Ltd., is distinguishable from the present case of the Petitioner. Therefore, the judgment of APTEL dated 21.1.2013 cannot be made applicable to Gujarat Bid 01 PPAs. The need for installation of FGD has arisen on account of the 2015 MoEF&CC notification dated 7.12.2015 vide which the Ministry has notified stringent norms to be complied by the thermal power generating stations within two years. The Petitioner has achieved COD and has been supplying power to GUVNL till date without FGD. While there were no norms specified for SOx emission by Thermal Power generating stations as on cut-off date, the SOx norms as per MoEF&CC notification is 600 mg / Nm³ for unit size less than 500 MW.



Therefore, for abatement of SO_x to meet the new norms the Petitioner has to install FGD for Unit 1 to 4. In this regard, based on a detailed consultative process amongst the various Government authorities and stakeholders, CPCB in exercise of the power vested under Section 5 of the Environment (Protection) Act, 1986, issued following for Mundra TPS vide letter dated 11.12.2017 for compliance with the revised norms:

“ i. That plant shall install / retrofit Electrostatic Precipitator (ESP) so as to comply PM emission limit immediately.

ii. That plant shall install FGD by December 31, 2022, in unit 1-2, September 30, 2022 in unit 3-4 and June 30, 2022 & March 31, 2022 in unit 5&6 respectively so as to comply SO₂ emission limit.

iii. That plant shall take immediate measure like installation of low NO_x burners, providing Over Fire Air (OFA) etc. and achieve progressive reduction so as to comply NO_x emission limit by the year 2022

The time line mentioned above (i to iii) for compliance of PM, SO₂, & NO_x emission limits shall be reviewed by CPCB within a period of three months and shall be brought down further considering the location specificity of the plant such as critical polluted area / closeness to habitation / urban area.

The time line for compliance of water consumption limit shall also be finalised in consultation of plants

M/s Mundra Thermal Power Station, Adani Power Ltd ensure compliance of directions mentioned above (i to iii) failing which action will be taken under the appropriate provisions of the Environment (Protection) Act, 1986.”

37. GUVNL has relied on Ministry of Power's letter dated 30.5.2018 to argue that if the equipment were envisaged (even if not mandated) in the Consents and Clearances prior to 7.12.2015, the same would not be a change in law. In this regard, GUVNL has submitted that the environment clearances dated 13.8.2007 and 21.10.2008 issued for Units 1 to 4 to the Petitioner mandated space provision for installation of FGD and allocation of separate funds for implementation of environmental protection measures along with item-wise break-up and submission of year-wise expenditure to MoEF&CC.



GUVNL has argued that only year-wise expenditure has to be reported to the Ministry of Power and the funds earmarked need not be submitted. Therefore, there cannot be any claim that since the expenditure was not reported to the Ministry of Power, there was no need for allocation. If the Petitioner did not allocate funds, the same is to its account. This aspect has also been dealt with by the Commission in the order dated 28.3.2018 in Petition No. 104/MP/2017 as under:

“30. Next we consider whether in terms of the ECs issued for Phase I & II of the project, it was mandatory for earmaking funds for installation of FGD. We notice that based on the proposal of the Petitioner for grant of EC for setting up 660 MW coal based power plant in Phase I and on the recommendations of the EAC, MOE&F had granted EC dated 13.8.2007 subject to the implementation of certain terms and conditions which include amongst others, the following:

“3. The proposal has been considered in accordance with para 12 of the EIA notification dated 14th September, 2006 read with para 2.2.1 (i) (a) of the Circular No. J-11013/41/2006- IA (II) (I) dated 13.10.2006. Based on the recommendations of the Expert Appraisal Committee for thermal power and coal mine projects, the Ministry of Environment & Forests hereby accords environmental clearance to the said project under the provisions of EIA notification 2006, subject to the implementation of the following terms and conditions:-

(i) to (v).....

(vi) Space provision shall be made for installation of FGD of requisite efficiency of removal of SO₂ , if required at later stage.

(vii) to (xxii).....

(xxiii) Separate funds should be allocated for implementation of environmental protection measures along with item-wise break-up. These cost should be included as part of the project cost. The funds embarked for the environment protection measures should not be diverted for other purposes and year-wise expenditure should be reported to the Ministry.

31. Referring to the provision (xxiii) above, the Commission in its order dated 6.2.2017 in Petition No. 156/MP/2014 had directed the Petitioner to place on record the year-wise expenditure submitted to MOE&F in compliance to the EC dated 13.8.2007 and 21.10.2008 for Phases I & II of the project. In response, the Petitioner had submitted the details of the year-wise expenditure on environmental protection measures in compliance with the EC dated 13.8.2007 and 21.10.2008 as under:



Phase I (2 x 330 MW) – EC dated 13.8.2007					
Particulars	07-08	08-09	09-10	10-11	Total
ESP	-	43.99	13.06	-	57.06
Chimney	9.68	6.83	8.88	0.89	26.28
Cooling Tower	-	5.74	10.53	-	16.27
AHP	-	3.17	8.81	0.05	12.03
ETP & STP	-	-	-	-	-
Green Belt	-	-	-	0.72	0.72
Total	9.68	59.73	41.29	1.66	112.36

Phase II (2 x 330 + 2 x 660) – EC dated 21.10.2008							
Particulars	07-08	08-09	09-10	10-11	11-12	12-13	Total
ESP	-	65.36	233.51	88.05	0.66	43.23	430.82
Chimney	5.35	13.91	37.23	47.40	3.45	10.67	118.02
Cooling Tower	-	0.07	5.61	89.07	0.06	9.67	104.48
AHP	0.21	-	3.86	20.08	2.17	2.99	29.31
ETP & STP	-	-	-	-	0.20	0.22	0.42
Green Belt	-	-	-	1.56	2.47	2.53	6.56
Total	5.56	79.35	280.22	246.16	9.01	69.30	689.60

32. It is evident from the above that the Petitioner had not earmarked funds for installation of FGD in the year-wise expenditure submitted to MOE&F on environmental protection measures in compliance with the ECs dated 13.8.2007 and 21.10.2008. It is pertinent to mention that MOE&F had also not raised any objections for not earmarking funds towards installation of FGD in terms of the ECs dated 13.8.2007 and 21.10.2008 respectively. **In this background, we are of the view that the installation of FGD in Phases I & II of the project was not mandatory, except for space provisions for FGD and the Petitioner could have reasonably assumed that similar condition would only be imposed for Phase III of the project. Accordingly, the Petitioner could not have been expected to factor the cost of installation of FGD in the bid for Phase III. We therefore conclude that the installation of FGD was not a mandatory requirement as on the cut-off date (19.11.2007) and was made mandatory post the cut-off date vide the EC dated 20.5.2010 granted to the Petitioner for Phase III (units 7 to 9) of Mundra UMPP.”**

38. In the above Order, the Commission had held that the installation of FGD in Phases I and II of the project was not mandatory, except for space provisions for FGD. This is also ratified by the fact that the Petitioner had included Rs. 100 crore only in the project cost submitted to MoEF&CC towards environmental protection measures for Units 1 and 2 and Rs. 340 crore in the project cost submitted for Units 2 to 6 (2x330



MW and 2×660 MW). The assessment of cost towards environmental protection measures in the project cost is mentioned in the environment clearances granted by MoEF&CC on 13.8.2007 and 21.10.2008. In compliance with the direction of the Commission in the RoP, the Petitioner has again submitted the year-wise expenditure reported to MoEF&CC on environmental protection measures in compliance with the environment clearances dated 13.8.2007 and 21.10.2008. The fact that no objection has been raised by MoEF&CC with regard to the expenditure earmarked in environment clearance and incurred for environment protection measures shows that FGD is not included in the expenditure under condition of allocation of separate funds in the environment clearances. If the cost of FGD had to be incorporated, MoEF&CC would have issued relevant directions in the environment clearances granted to the Petitioner for inclusion of cost of FGD in the project cost. Therefore, it cannot be said that the Petitioner was required to include the expenditure on FGD to be incurred in future if required at a later stage in terms of condition 3(xxiii) of the environment clearance dated 13.8.2007 and 3(xxix) of the environment clearance dated 21.10.2008. Accordingly, FGD was not envisaged either in the environment clearances or by the Petitioner in the bid submitted for GUVNL Bid 01 PPA.

39. In light of the above, the requirement of installation of FGD for compliance with the revised norms for sulphur dioxide in terms of the MoEF&CC Notification, 2015 is covered under Change in Law in terms of the GUVNL Bid-01 PPA dated 6.2.2007.



(C) Oxides of Nitrogen

40. The Petitioner has proposed installation of SNCR for abatement of emission of oxides of Nitrogen. The Respondents have submitted that installation of SNCR may not be required by the Petitioner, if the Petitioner can otherwise control its emissions to within 300 mg/Nm³ through combustion tuning or any other modification. With combustion tuning and synchronized operation, NOx can be reduced by minimum of 45% with existing technology.

41. In response, the Petitioner has submitted that it cannot bring the NOx levels down to 300 mg/Nm³ without installing SNCR equipment as the Low NOx Burner (LNB) presently installed at the project is not capable of controlling the emission levels to the levels specified in the Amended Rules. The Petitioner has further submitted that Tata Consulting Engineers, the consultant appointed by the Petitioner, recommended SNCR as the suitable technology on the basis that it is a post combustion control technology and would chemically treat the flue gas by reagent (25% aqueous ammonia) injection.

42. We have considered the submissions of the Petitioner and the Respondents. As on the cut-off date, there were no applicable standards limiting emission of Nitrogen Oxide. No emission norms were prescribed in the environment clearance. The Petitioner has installed the low NOx burner which, as per the submission of the Petitioner, cannot meet the new norm of 300 mg/Nm³ as per the 2015 MoEF&CC Notification. In our view, since environment clearance was made available to the Petitioner after the cut-off date and there was no emission standard in the Environment (Protection) Rules, 1986, the requirement towards meeting new emission norms for



NOx prescribed in 2015 MoEF&CC Notification will qualify under Change in Law. Based on the report of the TCE, the Petitioner has proposed to adopt Selective Catalyst Reduction technology for abatement of emission of NOx at Mundra Power Project. The Respondents have submitted that the combustion control technologies would be sufficient to bring the emissions within the control of 300 mg/Nm³. We are of the view that the Petitioner should decide the technology for abatement of emission of NOx in consultation with CEA while keeping the Respondents informed.

43. In view of the above discussion, we conclude that on account of the 2015 MoEF&CC Notification, the Petitioner is affected by Change in Law in terms of Article 13 of respective PPAs due to change in norms for 1) Particulate Matter (Units 1 and 2 of Mundra Power Project) for GUVNL Bid-01 PPA; 2) Sulphur Dioxide (SO₂) for GUVNL Bid-01 PPA; and 3) Oxides of Nitrogen (NO_x) for both the PPAs i.e. GUVNL Bid-01 PPA and Haryana PPAs.

Issue No. 2: Whether the provisions of the PPAs with regard to notice have been complied with by the Petitioner?

44. There is no specific provision for notification of change in law in GUVNL Bid-01 PPA. Article 13.3 provides for the “Notification of Change in Law” in Haryana PPAs. Article 13.3 of the Haryana PPAs is extracted as under:

Haryana PPAs

“13.3 Notification of Change in Law

13.3.1 If the Seller is affected by a Change in Law in accordance with Article 13.2 and wishes to claim a Change in Law under this Article it shall give notice to the Procurer of such Change in Law as soon as reasonably practicable after becoming aware of the same or should reasonably have known of the Change in Law.



13.3.2 Notwithstanding Article 13.3.1, the Seller shall be obliged to serve a notice to the Procurer under this Article 13.3.2 if it is beneficially affected by a Change in Law. Without prejudice to the factor of materiality or other provisions contained in this Agreement, the obligation to inform the Procurer contained herein shall be material. Provided that in case the Seller has not provided such notice, the Procurer shall have the right to issue such notice to the Seller.

13.3.3 Any notice served pursuant to this Article 13.3.2 shall provide, amongst other things, precise details of:

- (a) the Change in Law; and*
- (b) the effects on the Seller of the matters referred to in Article 13.2”*

45. As per the above provisions of Haryana PPAs, if the seller is affected by Change in Law under Article 13.2 and wishes to claim Change in Law under the said Article, it is required to give notice to the Procurer about the Change in Law as soon as reasonably practicable after becoming aware of the same. The 2015 MoEF&CC Notification was issued on 7.12.2015. This Notification has to be mandatorily implemented within a period of two years i.e. upto 2017 which has subsequently been extended till 2022. The Petitioner issued Change in Law notices dated 2.2.2016 to GUVNL (for Bid-01 PPA) and Haryana Utilities informing the procurers about stipulation of additional capex and opex requirement to comply with the new emission norms. Thereafter, the Petitioner has filed the present Petition. Since the Petitioner has given the notice about Change in Law to the Procurers vide its letters dated 2.2.2016, the Petitioner has complied with the requirement of notice under Article 13.3 of the Haryana PPA.



Issue No. 3: Whether the in-principle approval for additional capital expenditure can be granted for implementation of the event covered under Change in Law in terms of the PPA?

46. The Petitioner vide its rejoinder dated 26.2.2019 to reply filed by GUVNL has sought regulatory certainty/ in-principle approval of the additional investments to be made to secure finance from financial institutions. The aspect of in-principle approval for additional capital expenditure has been dealt with by the Commission in order dated 17.9.2018 in Petition No. 77/MP/2016 as under:

“44.....There is no concept of in-principle approval in the PPA, and we find no reason to accord such approval as prayed for by the petitioner. The consequential implementation of Change in Law and compensation will flow from the declaration and recognition that MoEFCC Notification is a Change in Law. However, we have already concluded that MoEFCC Notification, 2015 is in the nature of Change in Law in terms of the PPA as well as the directions issued by the Central Government under Section 107 of the Act. Further, the Change in Law will be applicable on those items of cost or revenue which the Petitioner has claimed and is approved by the Commission. The Petitioner shall implement the revised environment norms to comply with the MoEFCC Notification and approach the Commission for determination of the increase in cost or/and revenue expenditure on account of implementation of such Change in Law in terms of guidelines to be prepared by CEA as stated in para 47 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

“Summary of our Decisions

49. Summary of our decisions in this order are as under:

(a) MoEFCC Notifications, 2015 prescribing the revised environmental norms in respect of thermal Power plants which has been issued after the cut-off date of Mundra UMPP are in the nature of Change in Law in terms of the PPA dated 22.4.2007 and the MoP directions issued under Section 107 of the Act.

(b) The Petitioner has given notice regarding Change in Law arising out of MoEFCC Notification in terms of the PPA.



(c) The Petitioner is required to take steps to implement revised norms in respect of Sulphur Dioxide, Nitrogen Oxide and water consumption. The Petitioner has taken up the matter with MoEFCC for exemption from implementing the norms for water consumption and therefore, the implementation of the norms of water consumption shall be dependent on the decision of MoEFCC in this regard.

(d) Mundra UMPP meets the norms prescribed in MoEFCC Notification, 2015 with regard to particulate matters and mercury and accordingly, the Petitioner has not claimed the relief under Change in Law.

(e) The Commission has directed CEA vide its order dated 22.7.2018 in Petition No. 98/MP/2017 to prepare guidelines specifying the suitable technology for each plant and operational parameters such as auxiliary consumption, Station Heat Rate, O&M expenses, norms of consumption of water, lime stones etc. for implementation of revised environmental norms. The Petitioner shall implement the revised norms as per the MoEFCC Notification, 2015 in consultation with CEA.

(f) There is no provision for in-principle approval in the PPA. However, the Commission has decided that MoEFCC Notification, 2015 is in the nature of Change in Law. Accordingly, the Petitioner shall approach the Commission for determination of increase in cost or/and revenue expenditure on account of implementation of revised norms in accordance with the Guidelines to be issued by CEA and the mode of recovery of the same through monthly tariff.”

47. The above decision is also applicable in the instant case. Accordingly, the Petitioner is directed to implement the revised norms in consultation with CEA and approach this Commission for determination of increase in cost and/or revenue expenditure on account of implementation of revised norms in accordance with the CEA Guidelines and the mode of recovery of the same through monthly tariff. The Petitioner has submitted the copy of CEA recommendations for installation of FGD at Mundra Thermal Power Station as per the direction of the Commission in Record of Proceedings for the hearing held on 6.8.2019. It is observed that the CEA has not recommended any technology for installation of FGD in the report. Accordingly, the Petitioner is directed to approach the CEA to firm-up the technology to be used for installation of FGD. CEA may examine the proposal of the Petitioner in this regard and



submit its recommendation on the appropriate technology to be employed within four weeks.

48. Petition No. 332/MP/2018 is disposed of in terms of the above.

Sd/-
(I.S.Jha)
Member

sd/-
(Dr. M.K. Iyer)
Member

sd/-
(P.K. Pujari)
Chairperson

