

Ref.: APMuL/CERC/03102020
Date: 03.10.2020

To

The Secretary
Central Electricity Regulatory Commission
3rd and 4th Floor, Chanderlok Building
36 Janpath, New Delhi -110001

Sub.: Comments on Staff Paper on Mechanism for Compensation for Competitively Bid Thermal Generating Stations for Change in Law on account of Compliance of the Revised Emission Standards of the Ministry of Environment, Forest and Climate Change, Government of India (MoEF&CC).

Dear Sir,

With reference to the comments invited by the Hon'ble Commission vide Public Notice No. EN-(01)/8/2020-CERC dated 05.09.2020 on the above mentioned Staff Paper, we hereby submit our comments on the same with a request to kindly take the same on record.

Thanking You,

Yours Sincerely,

For **Adani Power (Mundra) Limited**



Authorized Signatory

Encl: As mentioned above

Comments on Staff Paper on Mechanism for Compensation for Competitively Bid Thermal Generating Stations for Change in Law on account of Compliance of the Revised Emission Standards of the Ministry of Environment, Forest and Climate Change, Government of India (MoEF&CC)

Sr. No.	Clause No.	Relevant Extract	Comments
1.	Clause 1.4 (Page 6)	1.4. The Commission, for installation of ECS (like FGD system), vide order dated 23.4.2020 in Petition No. 446/MP/2019 and vide subsequent orders in other petitions, has provisionally allowed capital cost based on cost discovered through competitive bidding process, indicative cost notified by Central Electricity Authority (CEA) and prudence check of the cost claimed. While approving provisional capital cost, certain cost components like taxes and duties, IDC and management cost have not been considered, with the observation that these components shall be allowed after prudence check after the installation of FGD system. Similarly, as regards opportunity cost i.e. revenue/ tariff which may not be available to the generator during the period of plant shutdown for integration of the FGD system with the generating station, it has been decided that the same would be considered after installation of FGD system.	<ul style="list-style-type: none"> • It is submitted that considering revenue recovery for the shutdown period for FGD installation on ex post facto basis will create uncertainty over the recovery. Therefore, to remove uncertainty it may be necessary to specify that the Generators would be entitled for Deemed Capacity Charges, however, the period for which the recovery would be allowed will be decided on a case to case basis subject to prudence check by the Commission. • Further, during the shutdown period for FGD integration the generators would be subject to additional charges for short / non- lifting of coal under the FSA with coal companies. It is submitted that such charges should also be allowed for recovery from the beneficiaries in accordance with the restitution principle in terms of the Section 63 PPAs.
2.	Clause 1.6 (CERC order dated 18.05.2020 in Petition No. 210/MP/2019) (Pg- 6) a) Depreciation and useful life (4.3 to 4.9, Pg 16-19)	We understand that in several cases, the useful life of the FGD system, the remaining useful life of the generating station and term of the PPA would not be the same. It is further clarified that while the cost recovery for the FGD system would be spread over the useful life of the FGD system or the remaining useful life of the generating station, the Respondents shall be	<ul style="list-style-type: none"> • It appears the proposal in staff paper was made considering the generating stations as a going concern even after the completion of the existing PPA tenure. Aligning with this proposal, it is necessary to consider that in case the beneficiary terminates the PPA before the existing PPA tenure is completed or does not extend the PPA tenure upto the

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		liable to pay the compensation as granted by this Commission only for the remaining term of the PPAs.	<p>useful life of FGD system, or terminates the extended PPA prior to completion of useful life of FGD, as the case may be, the beneficiary shall fully compensate the generator towards the un-recovered cost of installation of such FGD system.</p> <ul style="list-style-type: none"> Besides, the additional cost on account of emission control mechanism shall be excluded from MOD stack in line with the directives issued by MOP.
3.	Clause 4.9 (Page 19) Depreciation	4.9. Based on the above, life of 25 years has been considered for ECS. Accordingly, 90% (considering salvage value of 10%) of additional capital expenditure on account of installation of ECS is proposed to be recovered by the generating company in 25 years as depreciation {straight line method @3.6% (90%/25) per year} starting from ODe of ECS.	<ul style="list-style-type: none"> The Staff Paper proposes recovery of entire depreciation over the useful life of the ECS. However, the CERC Tariff Regulations, 2019-24 applicable for calculation of Depreciation as per Tariff Regulations 2019-24 read as under: <p><i>“33 (5) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-I to these regulations for the assets of the generating station and transmission system:</i></p> <p><i>Provided that the remaining depreciable value as on 31st March of the year closing after a period of 12 years from the effective date of commercial operation of the station shall be spread over the balance useful life of the assets.”</i></p>

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			<ul style="list-style-type: none"> Accordingly, it is submitted that the calculation of depreciation for FGD / ECS should also be calculated in line with the CERC Tariff Regulations, 2019-24.
4.	Clause 4.11(b)(a)- Additional O&M Expenses (AREo&m)(Pg-20)	<p>The Commission, in some of the orders, has allowed provisional first year O&M expenses @2% of capital expenditure for installation of FGD (excluding IDC and FERV) admitted by the Commission after prudence check. On similar lines, it is proposed that additional O&M expenses (AREo&m) for first year may be allowed @2% of additional capital expenditure (ACEECS) for installation of ECS (excluding IDC and FERV), admitted by the Commission after prudence check. For subsequent years, the first year O&M expenses (AREo&m) may be escalated @3.5% or any other escalation rate as may be specified by the Commission.</p>	<ul style="list-style-type: none"> First year O&M expense should be allowed at minimum 5% of capital expenditure for installation of FGD (excluding IDC and FERV) instead of 2% as proposed in staff paper as the HIGH cost is incurred towards <ul style="list-style-type: none"> i) consumable, stores, spares and repair & maintenance expenditure. ii) Personal expenses and contractual manpower iii) Other administrative and operating cost. The FGD System is exposed to highly corrosive environment created by the low pH & high chlorides. This results in very high maintenance and high consumption of spares & consumables. The spare holding, storage and maintaining cost is thus also higher. Consumables used would also be higher than plant not operating in this type of environment. Quite a few components, such as the ones mentioned below, have a much shorter life due to the corrosive environment in which they operate. <ol style="list-style-type: none"> 1. Booster Fan – The problem of erosion and corrosion of fan blades leading to high

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			<p>vibration, frequent replacement of Oil hoses & filters and damage to fan casing rubber lining are experienced. This gives rise to high cost of material and services used.</p> <p>2. GGH Baskets - Corrosion and erosion of GGH elements will require changing of baskets.</p> <p>3. Scrubber - There are frequent replacement of Nozzles & Packing's, failure of mist eliminator pump, failure of bellows due to acidic nature of the ash which historically results in high material and Maintenance services cost.</p> <p>4. Dampers & Ducts - Some failure/damage to duct supports occur thereby necessitating replacement and damage to anti-corrosive coating due to erosion by ash. Again resulting in higher cost of material and services.</p> <ul style="list-style-type: none"> • Moreover, annual increase in minimum wages by several states goes way beyond 5%. In addition to the above, cost of spares, consumables & associated services have increased by more than 10% per annum. Hence, O&M cost escalation per annum required shall be at least by 5%. Further, any

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			increase in O&M will be paid only after prudence check hence, keeping the limit of the same on the lower side will deny the admissibility of the claim permanently.
5.	Clause 4.11(b)(a)- Additional O&M Expenses (AREo&m)(Pg-20)	-	<ul style="list-style-type: none"> Disposal cost of Gypsum along with transportation cost to be reimbursed at actuals after prudence check. As all thermal stations will install FGD's, market for Gypsum sale may become thin & Gypsum disposal may become a big challenge. Hence this Gypsum disposal cost shall form part of the additional O&M expenses.
6.	Clause 4.14 – Interest on Working Capital (Page 21)	<p>4.14. Working capital may include:</p> <p>i) Cost of limestone or reagent towards stock for 20 days corresponding to the normative annual plant availability factor and advance payment for 30 days towards cost of reagent for generation corresponding to the normative annual plant availability factor;</p> <p>ii) Operation and maintenance expenses in respect of emission control system for one month and maintenance spares @20% of operation and maintenance expenses in respect of emission control system; and</p> <p>iii) Receivables equivalent to 45 days of supplementary capacity charge and supplementary energy charge for sale of electricity calculated on the normative annual plant availability factor.</p>	While the staff paper provides for a mechanism of computing the incremental working capital towards FGD system, it does not specify any mechanism to compute the interest on such incremental working capital. It is presumed that the same would be on the lines of the regular interest on working capital norms as per MYT Regulations however, it is requested that the same be clarified.

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7.	Clause 4.14(i)(pg-21)	Cost of limestone or reagent towards stock for 20 days corresponding to the normative annual plant availability factor and advance payment for 30 days towards cost of reagent for generation corresponding to the normative annual plant availability factor;	Landed price of limestone or the reagent at the generating station shall be considered. 30 days' stock of Limestone/ Reagents should be considered for the computation of working capital.
8.	Clause 4.11(pg-20)	4.11. Accordingly, additional capital expenditure on installation of emission control system is proposed to be serviced on Net Fixed Assets (NFA) basis (value of fixed assets reducing each year by the depreciation value) @ weighted average rate of interest of loans raised by the generator or at the rate of Marginal Cost of Lending Rate of State Bank of India (for one year tenor) plus 350 basis points, as on 1st April of the year in which emission control system is put into operation, whichever is lower.	<ul style="list-style-type: none"> • ECS project is a standalone financial projects which would not be completely funded by debt financing from Banks/ other Financial Institutions. • Most of the IPPs are stressed financially due to various reasons not attributable to them Their networth is already eroded. Under these circumstances infusing equity expecting return at less than 15.5% would make the financial closure very difficult. This would also be discriminatory with respect to Section 62 Tariff determination principles. • Developers or TPPS have to bring in necessary equity. If the developers are required to inject Equity, then they would expect risk adjusted returns which would be in excess to that being granted to debt, which in present Regulations is pegged at 15.5% for new projects. • Since the RoE is allowed on the expenditure incurred towards installation of generating station, in the same way RoE should be allowed on installation of FGD for Section 63 PPAs also as FGD is the part of the generating station.

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			<ul style="list-style-type: none"> As per CERC Tariff Regulations, 2019 (First Amendment) RoE is allowed on installation of FGD. However the same has not been considered in the study report for the generating stations whose tariff has been discovered and adopted under Section 63 of the Electricity Act, 2003. The same treatment should be given to all the generating stations irrespective of same being under Section 62 of 63 of the Electricity Act, 2003. The PPA provides for "Restitutionary Principle" which says that in the event of Change in Law the affected party should be compensated such as to bring the affected party to the same economic position as if no change in law has occurred. This principle has been upheld by Supreme Court in Energy Watchdog (EWD) Judgment dated 11.04.2017. As submitted above, the expenditure cannot be entirely debt funded, the equity has to be infused. Therefore, if RoE on the investment is not allowed to affected party then it would not lead to complete restitution and the principle set-out in EWD judgment will not be implemented. Thus equity return shall also be considered while devising additional Supplementary Annual Capacity Charges (SACC).

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			<ul style="list-style-type: none"> In any case, if the ROE is proposed to be restricted to the rate of interest of loans, the said rate of interest should be the higher of the actual weighted average rate of interest or the SBI PLR plus 200 basis points.
9.	Clau/se 3.1(a)Pg- 13	One-time capital expenditure towards plant and machinery for installation of ECS;	Initial spares as a percentage of project cost shall be allowed. This cost of initial spares shall be part of the total capital expenditure / total project cost.
10.	Clause 4.18 and 4.19 (page 22)	<p>D) Additional Auxiliary Energy Consumption (AUXECS):</p> <p>4.18. The ex-bus energy charges quoted by the generating company will undergo change due to additional auxiliary energy consumption on account of installation of ECS. This is explained using the illustration given below.</p> <p>.....</p> <p>4.19. The Revised Contracted Capacity after installation of the ECS can be arrived at as follows: $CC_{Revised} = CC_{Org} \times (1 - AUX_{Total}) / (1 - AUX_{Org})$ where $AUX_{Total} = AUX_{Org} + AUX_{ECS}$.</p>	<ul style="list-style-type: none"> The formula to compute the Auxiliary Consumption as the difference between installed capacity and contracted capacity may not stand correct in some cases where there are multiple units in a generating station and entire installed capacity of certain units is contracted under a PPA by meeting the auxiliary power requirement of such units from other units of the power station. Therefore, it is necessary to clarify that the proposed formula in staff paper would not apply to cases as mentioned above. In such cases, Installed Capacity of the entire power station and aggregate contracted capacity of all PPAs needs to be considered for deriving the Auxiliary Power Consumption. Further is also needs to be clarified that in case the entire installed capacity of a unit is contracted under PPA, auxiliary consumption can be met from other units.

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11.	Timelines for tariff determination	Not specified in the Staff Paper	<ul style="list-style-type: none"> The petition for determination of tariff may be allowed to be filed six months prior to scheduled commissioning of ECS so that the additional tariff is paid from the month in which ECS is commissioned.