DHARIWAL INFRASTRUCTURE LIMITED

Comments on Draft Suo-Motu Order on the Mechanism of Compensation of Emission Control System in compliance with the Revised Emission Standards for Thermal Power Generating stations whose tariff is determined through competitive bidding under Section 63 of the Electricity Act, 2003

At the outset, Dhariwal Infrastructure Limited ("**DIL**") would like to thank the Hon'ble Central Electricity Regulatory Commission ("**Hon'ble Commission**") for bringing out the Draft Suo-Motu Order on Mechanism of Compensation on account of installation of Emission Control System ("**ECS**") in compliance with the Revised Emission Standards issued by Ministry of Environment, Forest & Climate Change ("**MoEFCC**"), Government of India, vide Environment (Protection) Amendment Rules, 2015 on 07.12.2015 in respect of the Thermal Power Generating stations whose tariff is determined through competitive bidding under Section 63 of the Electricity Act, 2003 (**"Draft Order"**) and providing the stakeholders an opportunity to provide comments/suggestions on the same. The comments and suggestions on behalf of DIL on the methodology proposed in Draft Order are provided in the following matrix for the kind perusal and consideration of the Hon'ble Commission.

Paragraph	Particulars	Comments and Suggestions
APPROPRIATE TIME TO APPROACH THE HON'BLE COMMISSION FOR DETERMINATION OF COMPENSATION		
No Provision	-	**We request the Hon'ble Commission to specify the process and the timelines for the developers/generators having PPAs under Section 63 of the Act to approach the Hon'ble Commission for approval of Capital Cost and determination of compensation under the Order. In our humble opinion, the Hon'ble Commission may specify the following:** **a) In-principle approval to be provided before the placement of the order for procurement of ECS, provided the Petition is filed by the applicant six months prior to such date.** **b) The developers may be allowed to claim 80% of the Fixed Charges claimed under the Petition for approval of Capital Cost and determination of compensation/supplementary tariff, from the date of commissioning of ECS till the date of final Order.**

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		c) Final Order may be passed within 6 months of filing the Petition post COD of the ECS.
ADDITIONAL CAPITAL EXPENDITURE (ACE_{ECS})		
Para 23	…. *The proposed Compensation Mechanism deals with the methodology to work out the compensation based on capital cost admitted by the Commission. The Commission expects that the hard cost of emission control system would be discovered through a process of transparent competitive bidding. An inclusion or exclusion of any other expenditure shall be decided on case to case basis. Once the capital cost is determined, the compensation mechanism can be made applicable to work out the compensation.*	**Apart from the hard cost, it is humbly submitted that the soft cost of ECS will also be an important part in the total capital cost. In view of the above, we humbly request the Hon'ble Commission to kindly also specify the elements of soft costs which would be considered by the Hon'ble Commission during the prudence check.** **Justification:** 1. There are many elements of soft costs which may be defined by the Hon'ble Commission in the Final Order. The costs towards Erection, Commissioning & Testing, Taxes & Duties, Pre-operating expenses and expenses towards project management should be included along with IDC and FERV. 2. It is submitted that the Hon'ble Commission in its Order dated 23.04.2020 in Petition No. 446/MP/2019 (Sasan Power Ltd.) has allowed Pre-operating Expenses and expenditure towards project management and engineering services at actuals.

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		3. Initial Spares under Additional Capital Expenditure should also be allowed to be recovered for an existing project as per CERC (Terms and Condition of Tariff) Regulations (First Amendment), 2020 as amended by the Hon'ble Commission for time to time. 4. Financing Charges and Insurance Charges should also be included under soft costs.
DEPRECIATION (DEP_E)		
Para 34	*We are of the view that the useful life of the generating station is to be considered 40 years in line with the Companies Act, 2013. The Commission has considered the useful life of the generating station based on life cycle of major equipment of thermal generating station. The life of emission control system has been considered as 25 years in line with the other major equipment of generating station. The Commission observes that as on today, there are no generation projects with competitively bid tariff which have completed more than 15 years of life. Therefore, based on 40 years of life of generating stations, in all cases 25 years of life of emission control system would be available for recovery of depreciation. Thus, the proposed approach for*	**We humbly request the Hon'ble Commission to kindly review the mechanism of depreciation recovery in the Draft Order and allow full recovery of depreciation on account of installation of ECS from the existing long-term procurers from its date of operation till the balance useful life of the generating station.** **<u>Justification</u>:** a) Capital Expenditure associated with compliance towards installation of ECS is highly capital intensive. Funding of such capital-intensive projects is difficult for majority of the developers without long-term loan from the banks/financial institutions. The recovery of depreciation provides the necessary cash flow for the developer to repay its debt. Hence, the recovery against depreciation should be adequate enough to meet such debt

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	recovery of depreciation in 25 years balances the interest of the generating companies and procurers.	servicing obligation till the time such debt obligations are outstanding for the developer. In our humble opinion, the depreciation should not be made uniform throughout the useful life of the Project. b) Further, the Hon'ble Commission has categorically mentioned that the liability for payment of fixed charges, pertaining to the installation of ECS on the present long-term beneficiaries, would be only upto the term of the PPA. Therefore, the recovery of the balance capital cost, post completion of the contracted tenure of long-term PPA becomes uncertain. Moreover, the Hon'ble Commission has extended the life of the generating stations by the number of years it has already completed operation. This implies that the developers, who have presently contracted their capacities under Section 63 of the Act, would be put under severe financial stress once the present tenure of their LT PPA is over as the proposed mechanism would become a double-edged sword for the developers. c) The useful life of a generating station cannot be extended beyond a pragmatic boundary based on the commissioning of the ECS. It is further submitted that the main plant equipment may not be able to run beyond 25 years of operation without fresh

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		investment in the form of R&M. Undertaking R&M works for bid-based projects at the end of 25 years will be futile.
COST OF ADDITIONAL CAPITAL EXPENDITURE (COC_E)		
Para 40	*The servicing of capital employed during each year of the contract period shall be worked out based on net fixed asset (derived by adjusting cumulative depreciation of emission control system) and interest rate of fund. The interest rate will be weighted average rate of interest on loans of the generating station including ECS or at the rate of Marginal Cost of Lending Rate of State Bank of India (for one year tenor) as on 1st April of the year under consideration plus 350 basis points, whichever is lower. The generating companies shall workout the applicable interest rate for the cost of capital employed towards emission control system for the year under consideration. The cost of capital employed during the year shall be worked out as follows:* $COC_{e(n)} = NFA_{(n)} \times WAROI_{(n)} / 100$ *Where* $NFA_{(n)} = ACE_e - [(n-1) X (DEP_e)]$	**We humbly request the Hon'ble Commission to kindly review the said provision in the Draft Order and align the same in accordance with the existing CERC (Terms and Condition of Tariff) (First Amendment) Regulations, 2020, i.e., with regard to Gross Fixed Asset (GFA), Normative Debt/Equity Ratio and Return on Equity (RoE) in the interest of desired growth of the power sector and providing level playing field for PPA's under Section 62 and Section 63 of the Electricity Act 2003 for compliance of installation of ECS.** **Justification:** a) It is submitted that there should not be equitable treatment of cost of Debt and cost of Equity which is in deviation to the financial principles. As per extant CERC Tariff Regulations, cost of debt is serviced through IDC before Commercial Operation Date (COD) of the asset and after COD through Interest on Loan. Further, loan provided by the lenders are protected under the law whereas the equity infused by the project developer is only entitled for return after COD of the asset, i.e., only after overcoming all the project encumbrances. Any cost overrun is

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		only allowed to the extent it is found prudent by the Hon'ble Commission and in case of disallowance of such cost overrun, the developers get adverse financial impact. Therefore, allowing return similar to debt would amount to denial of risk premium applicable to equity investments which would be contrary to the principles of commercial financing. b) Adoption of NFA approach for competitively bid projects will put such projects in a different platform than the cost-plus projects for whom this Hon'ble Commission has allowed cost of equity @ weighted average cost of debt subject to ceiling of 14% per annum vide CERC (terms & Conditions of Tariff) (First Amendment) Regulations 2020. Under the NFA approach, while the debt:equity ratio has not been specified, only the allowable cost of capital employed have been capped at @ SBI MCLR +350 basis points. Pertinently, the credit ratings of various developers are not high enough to secure long-term loan from banks/financial institutions at such low rate. In case the SBI MCLR further reduces till the year of commissioning of the ECS, the developers may find additional cost to be borne by them to fund the interest repayment. In our humble opinion, therefore, NFA approach will be unfair on the developers of competitively bid projects as this will deny not only reasonable returns to such

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		developer as well as they may not be able to generate adequate cash flow for meeting its debt service obligation. c) In view of above, it is submitted that compliance of emission norms would be requiring huge investment and in order to tie-up for financial arrangements amidst huge NPAs in the power sector. It is therefore crucial to have in place suitable norms which facilitate the funding and such curtailment would lead to delay in getting project funding. Further, irrespective of whether the generating station is tied up u/s 62 or 63 of the Act, the capital expenditure on account of ECS is triggered due to occurrence of a 'Change in Law' event. Therefore, the additional capital expenditure allowed to Section 62 projects also follow from the *principle of restitution* only. Hence, the Hon'ble Commission may at least allow the cost of equity @14% at par with the generation projects u/s 62 of the Act as stipulated in the CERC (terms & Conditions of Tariff) (First Amendment) Regulations 2020. d) In view of the above, we therefore suggest the Hon'ble Commission to align the said provision in accordance with the existing CERC (Terms and Condition of Tariff) (First Amendment) Regulations 2020 with regard to Gross Fixed Asset (GFA) approach, Normative Debt/Equity Ratio and Return on Equity

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		(RoE) approach in the interest of desired growth of the power sector and providing level playing field for PPA's under Section 62 and Section 63 of the Electricity Act 2003 for compliance of installation of ECS**.**
INCOME TAX		
No Provision	-	**We humbly request the Hon'ble Commission to allow the developers to recover income tax on the contribution to profit element arising out of the compensation through supplementary tariff in line with the provisions of CERC (Terms & Conditions of Tariff) Regulations 2019 read with its amendments**. **Justification**: It is submitted that the recovery of supplementary tariff due to investment in Additional Capital Expenditure for installation of ECS is likely to attract payment of income tax at the end of the year. Income tax can never be construed as a profit element and therefore should always be pass-through in tariff. Even under the principle of restitution, the developer is not restored back to the same economical position until and unless all the liabilities, including income tax, are provided for in the compensation mechanism. We therefore request the Hon'ble Commission to include appropriate

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		provision for recovery of actual income tax liability arising out of installation of ECS in the final compensation mechanism.
ADDITIONAL O&M EXPENSES ($O\&M_E$)		
Para 44	*Accordingly, we propose that the additional revenue expenses for operation and maintenance (O&Me) for the first two years of operation (including part financial year), shall be based on 2% of the additional capital expenditure (ACEe) for installation of ECS (excluding IDC and FERV) as admitted by the Commission, to be escalated at the rate of 3.5% per annum for the second year. The O&M expenses from the third year onward shall be as per norms and escalation rate determined separately by the Commission. The additional O&M expenses (O&Me) shall be worked out as follows:* *First Year: 2% of ACEe excluding IDC and FERV* *Second Year: 2% of ACEe escalated at the rate of 3.5%.* *Third Year onward: As per norms to be specified by the Commission.*	**We humbly request the Hon'ble Commission to include the provision for truing-up of O&M expenses on account of ECS for the first two years based on actual data and include the specific additional cost items due to installation of ECS under the O&M expenses.** **Justification**: a) We appreciate the view taken by the Hon'ble Commission regarding setting the O&M norms only after ascertaining the actual data for first two years of operation of the ECS. However, the Hon'ble Commission would appreciate that the ECS technologies would handle corrosive materials and the O&M costs are likely to be higher than normal plant O&M Expenses. Hence, the Hon'ble Commission may consider the entire capital cost (including IDC and FERV) as the value base for Normative O&M Expenses and include a provision for truing-up of the O&M Expenses for first two years while determining the O&M Expenses for third year onwards. In absence of any provision for truing-up, the developers may suffer huge loss due to less recovery of O&M

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		Expenses for the first two years. A provision for truing-up would provide adequate comfort to the developers and also help to assess the actual cost towards O&M Expenses of the ECS. b) Further, the Hon'ble Commission may also specify that the expenses under following heads should be treated under O&M Expenses: i. Additional Manpower Expenses, ii. Cost of Additional Water Consumption due to ECS, and iii. By-product Handling & Disposal Cost.
AUXILIARY POWER CONSUMPTION		
Para 55	*Accordingly, it is proposed that AUXo shall be considered based on normative auxiliary power consumption as prescribed by the Tariff Regulations of the Commission applicable as on seven days prior to the bid deadline or difference between installed capacity and power station's net capacity indicated in the respective PPA, whichever is lower….*	**We request the Hon'ble Commission to allow a normative increment in the AUX_o which is expected to rise due to various factors.** **Justification:** In addition to the auxiliary power consumed by the newly installed ECS (whose power consumption shall be guaranteed by the supplier), Auxiliary Energy Consumption of the main plant will increase due to the following reasons:

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		a) Additional power consumption is required on account of cooling water sourced from existing plant system for the new equipment. b) Additional power consumption is required on account of pumping and treatment of make-up water to ECS from the existing plant water system. c) Existing plants will require additional Auxiliary Energy Consumption on account of various common services for ECS. d) Due to acute scarcity of water at various locations, ECS will entail installation of RO plant/ZLD Crystallizer system. Operation of such system will require additional Auxiliary Energy Consumption. e) Uncertainty over purity of lime stone and Sulphur content of coal - while the in Auxiliary Energy Consumption will be dependent on the quality of limestone re-agent actually received as well as the coal quality and both are uncontrollable factors for the generators. Additional energy consumption may be required to meet the statutory emission limit based on actual operating conditions and plant PLF. f) Economies of scale play a key factor on account of consumption of common facilities for ECS. g) Auxiliary Energy Consumption of ECS will depend on operating PLF of the Units.

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		Hence, we request Hon'ble Commission to allow a suitable normative increment on account of increase in Auxiliary Energy Consumption (APC) of the main plant i.e. AUX_o in view of the above factors.
LANDED PRICE OF REAGENTS		
Para 61	*The reagent expenses for a month shall be calculated on month to month basis based on actual landed price. The landed price of reagent shall be worked out based on actual payment made by the generating company backed by the documentary proof.*	**We humble request the Hon'ble Commission may clarify to kindly consider the following elements while computing the monthly landed price of reagents:** **a) Transit and handling loss of reagents;** **b) Cost of Ultimate Analysis of Coal (for determination of Sulphur content),** **c) Handling cost, unloading charges, charges for third party sampling and applicable statutory charges for reagents, and** **d) Reagent Testing and Analysis charges.**
AVAILABILITY OF ECS		
Para 70	*…..* *Irrespective of the availability declaration by the generating station, if the generating company has operated the generating station without operation of the ECS for any period of time, the supplementary capacity charges shall be payable corresponding to the availability achieved by ECS only….*	**The Draft Order does not specify the details/methodology for separate assessment of availability of the ECS. We humbly request the Hon'ble Commission to clarify the methodology of declaration and calculation of availability of the ECS in order to remove any ambiguity regarding computation of availability and settlement of compensation of ECS with the beneficiaries.**

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SHUTDOWN PERIOD		
Para 75	*We have examined the suggestions. As regards the normative availability factors in annual shutdown period, the parties to the PPAs shall coordinate and plan the interconnection of emission control system with main plant by synchronizing it with the annual overhaul. The Commission is of the view that if the period of shut down exceeds beyond annual shutdown period factored in the normative availability under PPA, either on account of delay in timely completion of activities for interconnecting emission control system or lack of coordination, the consequential cost for the same cannot not be passed on to the consumers.*	**We humbly request the Hon'ble Commission to consider and include the following specific provision in the Draft Order as regards to availability during the period of installation of FGD system as stated below:** **a) No deduction of Capacity/Fixed Charges on account of non-availability of plant during the shutdown period required for installation and integration of FGD System with the main generating station/unit.** **Justification:** Availability of the generating unit may suffer during commissioning period of the ECS in view of teething troubles/additional shutdowns during commissioning phases as the plant O&M engineers have no experience of operating the ECS technologies. Further, such problems may be accentuated in view of the continuing pandemic due to COVID-19. Hence, we request the Hon'ble Commission, while calculating plant Annual Plant Availability Factor **("PAF")** for that particular year of commission of the ECS, availability loss due to shut down for integration of ECS or related forced outages post commissioning may be allowed to be excluded from the calculation

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		of actual plant availability so as to ensure recovery of fixed costs for the main plant.
OPEN CAPACITY		
Para 76	*A suggestion has been received for consideration of compensation mechanism for open capacity to provide all the generating stations, with and without emission control systems a level playing field. We are of the view that the risk associated with open capacity needs to be addressed by the concerned market player and therefore, we do not find need for any regulatory intervention for open capacity at this stage.*	**In view of the fact that securing funds for installation of ECS without regulatory intervention being practically impossible, it is humbly suggested and requested that the Hon'ble Commission may devise a suitable mechanism for recovery of the entire cost pertaining to those generating units having fully or partial un-tied capacity, for implementing ECS.** **Justification:** In view of the fact that there is a substantial thermal capacity in our country which are untied/partially tied and also the fact that compliance of environmental norms is mandatory, it is important to provide assurance to lenders for financing the capital cost of ECS of these untied capacity projects. A mechanism which can provide some visibility of recovery of tariff towards expenditure of FGD System can be assuring to the lenders. Else, without any mechanism for untied capacity of the generation projects, there is a high possibility of these thermal generating projects becoming completely redundant which obviously will be a national loss and a big shock to the original lenders and the economy.

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		Keeping this holistic picture in mind, it is proposed that the Hon'ble Commission may devise a suitable mechanism into place for recovery of cost of such un-tied/partially-tied capacities towards installation of FGD System. Further, the Hon'ble Commission may like to introduce some enabling provision in the proposed compensation mechanism for determination of in-principle cost of FGD System for such untied/partially tied projects.