Inputs to Staff Paper on

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

<u>By</u>

Mahatma Gandhi Thermal Power Plant, Jhajjar Power Limited (CLP India)

Clause 4 (A) Additional Capital Expenditure (ACEECS); Sub-Clause 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."

CLP Suggestion:

Majority of the power plants installing environment control system (ECS) as a result of ratification of new environment norms in 2015 have PPAs left for less than 25 years. With the large-scale advent of renewable power and the impetus provided by the Government to the renewable sector, there is huge uncertainty associated which future of coal fired power plants. This makes financing of ECS almost impossible as per the proposed provisions.

It is therefore proposed that power plants may be allowed to recover the additional capital expenditure due to FGD within the remaining life of the ongoing PPAs or 15 years (whichever is more). The Project proponent should be compensated based on standard norms generally adopted by CERC for approving capacity charges for Section 62 projects (i.e. based on 70:30 debt/equity, regulated ROE principles etc.) to enable them to crystalize financing of FGD capital investment.

Clause 4 (B) (a) Additional O&M Expenses (AREo&m):

"4.13. 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 esclated @3.5% or any other escalation rate as may be specified by the Commission. The above O&M expenses may subsequently be reviewed based on actual O&M expenses of ECS installed at various generating stations."

CLP Suggestion:

While 2% of capital cost may be a suitable O&M norm for entire power plant in general where (a) capital cost is very high and (b) the asset is predominantly of civil and electro-mechanical nature. Such plant endures operation for a long term with moderate deterioration and maintenance.

It may be appreciated that, the wet FGD systems to be installed at power plants are primarily chemical based units. Since the FGD process involves handling of chemical substances that are highly corrosive in nature, plant & equipment will undergo a significant & frequent maintenance regimen. The FGD plants also require multi-faceted operational activities to keep them operating continually. Therefore, a higher level of O&M expenditure should be provided to fully compensate the operator.

It is also to be noted that, Plants will be installing FGD units at different time intervals and they might have to incur significantly different amounts of capital expenditures depending upon the market price

prevailing at the time of capital investment. However, O&M expenditure to be incurred to operate & maintain an FGD system for the same capacity is likely to be similar.

Therefore, linking the O&M expenditure to capital expenditure may not truly/correctly reflect/compensate the operator. In view of the above, we request CERC to develop a "FGD O&M Cost per MW" norm to be applied for all power plants. This is akin to what is being done for compensating O&M costs of thermal power plants under the cost plus regime (Sec. 62). While doing so, CERC may need to take into account the (a) capital expenditure norms for FGD - recommended by CEA and (b) other O&M cost elements including the cost of water to be consumed for FGD operation.