

FGD Capex: Catch 22 for thermal GENCOs?

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Flue-gas desulfurization (FGD) implementation is one of the important issues in thermal power sector entailing large capex of around Rs.1 lakh crore over the next few years. Recovery of this capex shall entail additional burden on discoms in terms of increase in power procurement cost of around Rs.0.16/kWh while the overall impact on discoms' average power purchase cost (APPC) is expected to be around Rs.0.05/kWh.

Lenders' reluctance towards financing the FGD projects, regulatory uncertainty over recouping of cost incurred as well as opex which will be more pronounced in case of plants without long-term power purchase agreements (PPA) and time taken by regulators to approve the capex has made the implementation progress sluggish.

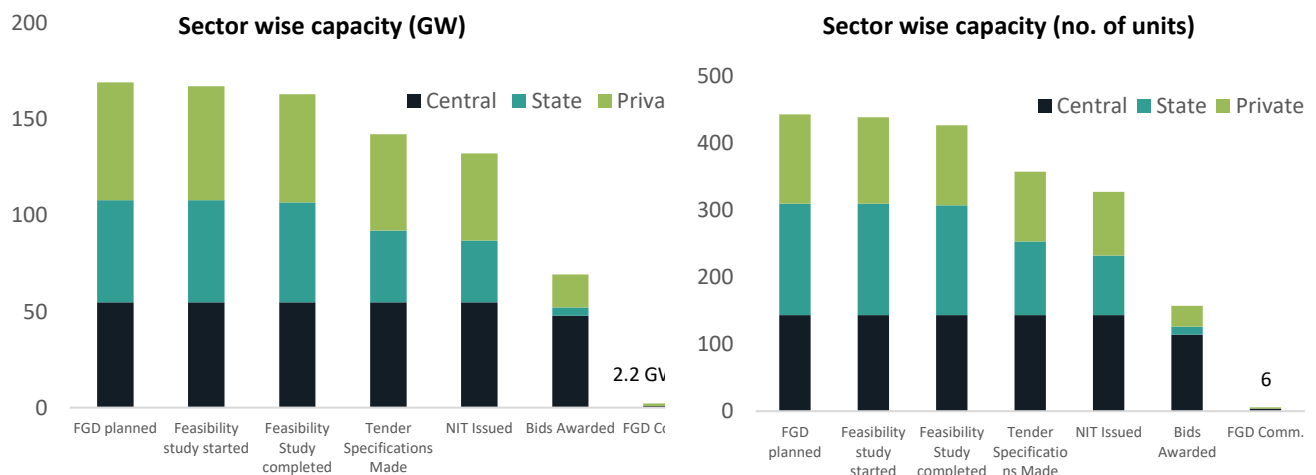
With the increasing emphasis of Government of India (GoI) on clean energy and increasing significance of renewable energy sector in the total energy pie, possibility of downgrade in the merit order for thermal power dispatches cannot be ruled out due to cost pressures because of FGD implementation.

CARE Ratings believes that a quick resolution of all the issues including timely tariff approvals shall enable thermal generators (gencos) to mitigate fund-raising challenges. Furthermore, to stem any potential stress on the financial risk profile of thermal gencos it is important to judiciously frame policy for utilisation of clean energy cess, in a way which is credit neutral for the gencos and simultaneously light on retail tariffs.

Little progress on FGD implementation:

The GoI has identified 442 thermal power plants for FGD implementation with an aggregate capacity of around 170 GW spread under central, state, and private sector. There has been little progress in FGD installations with only six plants having an aggregate capacity of 2.2 GW, representing only 1% of identified capacity completing FGD installation as of August 31, 2021.

Furthermore, in the central sector, FGD implementation is progressing at a faster pace wherein bids have been awarded for around 87% of the identified capacity whereas, the progress is very sluggish with only 8% and 28% in the state and the private sector respectively.



Source: Central Electricity Authority (CEA)

Considering the challenges faced by the industry which resulted in sluggish implementation, Ministry of Environment, Forest, and Climate Change (MoEFCC) in March 2021, relaxed the timelines for compliance with the emission norms based on the location and the extent of population in the vicinity of the plant in a phase-wise manner from December 2022 to December 2024 with strict penal provisions in case of non-compliance.

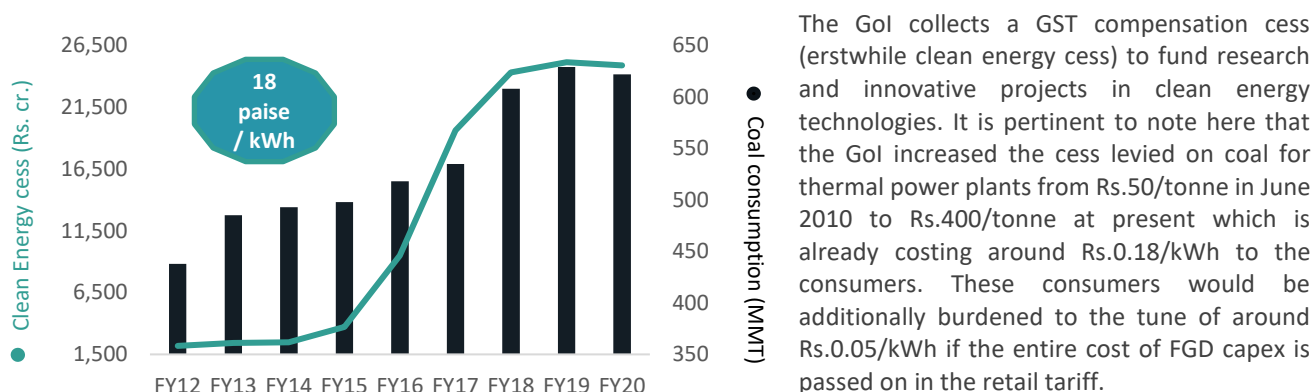
Impact of FGD implementation on Discoms

As indicated in the table below the FGD cost is expected to be in the range of Rs.0.30 crore/MW to Rs.0.70 crore/MW having corresponding varying scale of impact on power procurement cost for the Discoms.

FGD cost (Rs. Crore/MW)	Increase in thermal power cost (Rs./kWh)	APPC impact (Rs./kWh)
0.30	0.09	0.03
0.40	0.12	0.04
0.50	0.16	0.05
0.60	0.19	0.06
0.70	0.22	0.07

Source: CEA, Forum of Regulators, CARE estimates

The cost incurred on FGD is assumed to be recovered over the useful life of emission control equipment (ECE) which is considered as 25 years¹. However, most of the plants requiring FGD capex have balance useful life of less than 25 years which makes the cost recovery a bigger challenge and securing debt financing even tougher. Further, for plants with no long term PPA in place, there is ambiguity over the recovery of cost in merchant tariffs.



Source: Forum of Regulators

Amidst the uncertainties over the regulator agreeing to the tariff compensation towards FGD installation, it is relevant to note few of the solutions which are being deliberated:

1. Forum of Regulators has suggested on the utilisation of accumulated clean energy cess to fund the discoms such that higher power procurement cost on account of FGD implementation is not passed on to the end users.
2. Ministry of Power has proposed to consider exempting the cess on the power plants that follow the FGD norms.
3. One of the suggestions is that the National Clean Energy Fund (a fund created out of the cess collected) extends subsidized loans to the gencos for funding the FGD capex.

No material development on the above solutions is visible. The stand of GoI to plough back the accruals from clean energy cess to counterbalance the burden on discoms remains to be seen. If implemented, it has the potential to smoothen the process of tariff approval as it would not entail any burden on end users.

¹ As per Staff Paper on Compensation mechanism for Emission Control System published in September 2020

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