

BEFORE THE MAHARASHTRA REGULATORY COMMISSION, MUMBAI

Filing No: _____
Case No. 296 of 2019

Date: 6th January 2020

IN THE MATTER OF

Petition filed by Maharashtra State Power Generation Company Ltd (MSPGCL) for true up of FY 2017-18 and FY 2018-19, provisional true up for FY 2019-20 and approval of Multi Year Tariff (MYT) for the Control Period of FY 2020-21 to FY 2024-25.

Maharashtra State Power Generation Company Ltd **Petitioner**

Prayas (Energy Group), Pune **Participant in public process/ Applicant**

SUBMISSION FROM PRAYAS (ENERGY GROUP)

MSPGCL has filed a petition for the final true-up of FY 2017-18 and FY 2018-19, provisional true up for FY 2019-20 and approval for the MYT Control Period of FY 2020-21 to FY 2024-25. A public notice dated 16th December 2019 was issued by MSPGCL in the matter seeking public comments. The notice also stated that a public hearing would be held in the matter on the 8th of January 2020. We request MERC to consider our submissions and accept them on record.

1 Background and Context

MSPGCL has installed capacity of 13.4 GW of which 76% is coal based. As evinced by the submissions of MSPGCL, the company had to face multiple challenges in the 3rd Control Period including issues with coal availability and quality, which contributed to its rising variable costs and poor performance. This, in turn meant that many of the plants were backed down by the DISCOM and the LDC. In order to manage operations, the company has already undertaken coal tolling and has also proposed coal beneficiation among other initiatives. Our submissions focussed on the necessity of such initiatives at a time when MSEDCL is forced to procure high cost short-term power to meet its demand rather than depend on contracted capacity. Further, the submission also presents analysis showing that the claims of MSPGCL regarding the extent of shortages are untenable. The submission also presents ideas to ensure medium-term integrated planning of MSEDCL and MSPGCL to ensure efficient management of under-utilised capacity.

2 Relaxation in Availability norms

MSPGCL has requested a relaxation in availability norms for many plants. This request is unjustified and we request the Commission to disallow such a claim. The reasons for the same are presented below.

2.1 Coal shortage not uncontrollable and inconsistent evidence questions veracity of claim

For most plants, MSPGCL states coal shortage, or low coal materialization, as the major reason for reduced availability. For example, this is cited as a reason for low availability for Bhusawal units 3, 4, 5, Chandrapur, Koradi, Parli and Khaperkheda units 1-4. Tables 4 and 5 of the MSPGCL petition list the coal materialization as only 58% and 64% in the years 2017-18 and 2019 respectively. However, this is untenable for two reasons.

2.1.1 MSPGCL claim not supported by data in petition and CEA reports

Data does not bear out the figures of coal materialization given in Tables 4 and 5.

Firstly, the MSPGCL petition itself mentions different amounts for firm linkage in Section 8.2 of the petition.

Secondly, the Central Electricity Authority (CEA), an arm of the Ministry of Power, provides data about coal allocation, receipt and stock at power plants around the country as part of the monthly coal statement. It should be noted that, typically this data is provided to the CEA by power generating companies, i.e. MSPGCL in this case.

MSPGCL also included imported coal as a source of linkage coal in Table 5 of its petition. It is not clear why imported coal is considered as linkage coal.

Table 1 provides coal allocation/linkage and receipt data for 2017-18 and 2018-19 based on these alternative sources. As can be seen, the coal materialization figures show a marked improvement in these cases – ranging from 65% to 83% for 2017-18, and 78% to 87% for 2018-19.

Table 1: Inconsistencies in reporting of coal linkage and variations in coal materialisation (%) from various sources

Coal linkage (MT)	2017-18	2018-19	Coal materialization (%)		2017-18	2018-19
			Linkage	Receipt		
Tables 4,5	51.224	56.639	Tables 4, 5	Tables 4, 5	58%	64%
Section 8.2	45.83	45.83	Section 8.2	Tables 4, 5	65%	79%
CEA	39.591	41.589	CEA	Tables 4, 5	75%	87%
Coal receipt	2017-18	2018-19	Section 8.2	CEA	72%	78%
Tables 4, 5	29.782	36.249	CEA	CEA	83%	86%
CEA	33.035	35.893				

2.1.2 Shortages to be addressed via provisions of FSA, cost of business risk not to be borne by consumers

Procurement of coal and honouring of coal supply contracts is a business risk of the procurer, MSPGCL. This has been clearly cited in Para 14 of the Commission's order in Case No. 151 of 2017, the relevant part of which is reproduced below.

“MYT Regulations, 2015 do not recognise shortage of coal as uncontrollable factor. Upon consideration of all the factors, the Commission is of the view that the lower than normative availability of thermal stations of MSPGCL due to fuel shortage is part of its business risk for which appropriate contingency plan should have been in place and so executed in time. In order to deepen accountability of the generating companies for arranging supply of fuel to run their plant and in this regard to honour the

sanctity of the norms fixed for availability, Commission does not find it appropriate to amend the MERC MYT Regulations, 2015. It would not be proper to consider the normative Availability same as actual Availability for the purpose of recovery of AFC during the coal shortage period when the responsibility of arranging coal supply squarely rests with the generating company. MSPGCL can pursue the matter of coal shortage and the associated business losses with coal supplier as per the provisions of Fuel Supply Agreement.”

Coal shortages are not recognised as an uncontrollable factor even in MERC MYT Regulations, 2019. Given this, MSPGCL cannot seek to pass on the costs arising of contractual non-adherence of its supplier (if any) to its consumer MSEDCL, and eventually, power consumers of Maharashtra. Moreover, MSEDCL is forced to buy expensive short-term power in order to make up for the shortfall from MSPGCL, further increasing the cost of power in the state. Therefore, we request the Commission to disallow any dilution in availability norms on account of coal shortage.

2.2 Persistent water shortage need to be addressed by MSPGCL

MSPGCL has claimed water shortage as another reason for lesser availability for Chandrapur units 3-7 and Paras units 3-4. Procurement of water for power generation is also the responsibility of the generator and its failure to do so cannot be the cause for burdening electricity consumers with increased costs. This is particularly so given that the water shortage problem has been experienced for many years now. Indeed, the Commission had taken a similar position in its order in Case No. 196 of 2017, the relevant part of which is reproduced below.

“6.4.15 As regards water shortage for power generation, the Commission, in the final true-up for FY 2015-16 and FY 2016-17 has not allowed the recovery of full AFC at actual Availability and not considered the actual performance parameters without sharing of gains and losses for Parli, in light of the Appeal (No. 281 of 2017) pending before the APTEL. In line with that approach, the Commission does not accept the prayer of MSPGCL to allow the consequential relief of water shortage for power generation at Chandrapur and Paras as sought by MSPGCL.”

Therefore, we request the Commission to disallow any relaxation in availability norms on account of water shortage, as it would unfairly burden electricity consumers with increased costs.

3 Procurement of coal through MoUs, e-auctions or imports to be disallowed

In view of the points elaborated below, we submit to the Commission that there are no grounds for MSPGCL to seek imports of coal or procurement of coal through MoUs, e-auctions and other means, and request the Commission to disallow any such requests at this point.

3.1 Unrealistic assumptions for generation

MSPGCL has projected the likely generation from its existing coal-based plants in Table 68 of the petition based on normative availability and PLF. However, it should be noted that most of its units and plants have not been scheduled sufficiently to reach the normative PLF for many years now. Indeed, nationally, it is now well established that PLFs of coal-based plants will be much lower than they have been in the past, and normative PLF levels of 80% or more are highly unlikely to be achieved. Actual data submitted by MSPGCL itself shows that for 2017-18 and 2018-19 (Table 2 of the petition), its PLF was only 53.68%

and 52.89% respectively¹. Thus, PLFs in the range of 60% - 65% are much more likely if MSPGCL continues to sell all its power to MSEDCL. Given this, the coal-based generation projected by MSPGCL from its existing plants is likely to be unrealistic, and hence so is its coal requirement projection.

3.2 Issues with assumptions of calorific value of coal

MSPGCL has presented the estimated coal requirement for the next MYT period (2020-21 to 2024-25) in Table 68 of its petition. This comes to about 53 MT per year, for the unrealistic assumption of generation as mentioned above. In this Table, the coal requirement has been estimated based on the approved SHR, normative availability and PLF, and an assumed calorific value for coal of 3300 kcal/kg. However, MSPGCL’s petition also states (in Section 8.2, below Table 69) that

“The coal supply agreement with WCL (2009) provides for supply of D/E Grade of coal and the subsequent FSA signed in 2017 provides for supply of G8-G10 grades. FSA with MCL (2009) provides supply of F Grade coal and subsequent FSA provides for supply of G10-G13 grade. Similarly, FSA with SECL provides for supply of G10-G12 grades and SCCL is expected to supply washery grade coal.”

Based on the above statement and the contracted quantities from different sources provided in Table 69 of the petition, the weighted average GCV of coal contracted by MSPGCL (assuming that washery grade coal is equivalent to G12 grade) is in excess of 4500 kcal/kg. This is illustrated in Table 2.

Table 2: Calculated Average GCV based on MSPGCL submissions on FSA grade coal from various companies

Coal company	FSA quantity (MTPA)	FSA grade	Min GCV (kcal/kg)	Max GCV (kcal/kg)	Average GCV (kcal/kg)
WCL	32.53	D-E; G8-G10	4301	5200	4750.5
MCL	4.98	F; G10-G13	3401	4600	4000.5
SECL	6.69	G10-G12	3701	4600	4150.5
SCCL	1.63	Washery	3701	4000	3850.5
Total	45.83	Weighted average GCV			4549.4

It is pertinent to note that MSPGCL itself has used a calorific value of 4601 kcal/kg for coal from WCL while computing the imputed savings from coal usage optimization presented in Section 8.4.

Using an average calorific value of 4500 kcal/kg, the quantity of coal required for the generation projected by MSPGCL comes down to 39.1 MTPA. In comparison, MSPGCL has stated (Table 69) that it has firm contracts with various coal companies for 45.83 MTPA – which is well above its annual requirement. Therefore, MSPGCL should procure coal of the required quantity and quality based on its firm contracts, and there is no need for coal imports or procurement of coal through MoUs, e-auctions etc.

3.3 Improvement in coal quality due to third party sampling

In its petition, MSPGCL has stated (Section 9.3.1) that as-received GCV of coal is much lower than 4500 kcal/kg and is closer to the 3300 kcal/kg assumed in the calculations. However, similar to the issue of

¹ These PLF figures include the Uran gas-based plant, but removing it will not change the overall figures significantly.

coal supply shortage, this is part of the contractual risk taken by MSPGCL and it is its responsibility to procure coal of the quality that has been contractually agreed upon. Moreover, it is widely understood now that with the introduction of third-party sampling by reputed agencies such as CIMFR, the challenges regarding quality of coal supply that existed earlier have considerably eased. Therefore, it is untenable that MSPGCL should estimate coal requirements at a much lower calorific value than it is contractually obliged to get from coal companies.

4 Coal tolling or case IV bidding

4.1 Need to establish necessity of undertaking coal tolling

It is curious how MSPGCL simultaneously claims a shortage of coal and indulges in Case IV bidding to supply coal to other generating companies. This is all the more surprising, considering that now there is full flexibility of using all the coal allocated to a generating company at any of its plants. Moreover, such case IV bidding has taken place completely opaquely without any regulatory scrutiny. Ideally, MSPGCL should have optimized coal allocation among all its plants keeping in mind their variable cost and position in the MOD stack. Such allocation could have helped improve the availability of relatively lower cost plants such as Khaperkheda Station and Chandrapur Unit 8 and 9 which were reported to have faced coal shortages as shown in Table 3.

Table 3: Plants which could have benefitted from allocation of coal from Bhusawal and Nashik TPS

Particulars for FY19	Normative availability (%)	Actual Availability (%)	Reason provided by MSPGCL for low availability	Actual Variable charge (Rs./kWh)
Khaperkheda Unit 1 to 4	85%	52.80%	Poor coal receipt	2.38
Khaperkheda Unit 5	85%	72.54%	Poor coal receipt	2.31
Chandrapur Unit 8 and 9	85%	77.64%	Poor coal receipt	2.40

Only after exhausting all avenues of such allocation as well as third party sale of power, could MSPGCL consider Case IV bidding, if at all, against the benchmark price of the variable cost of the costliest plant after the optimization process. It is not at all clear from the petition that this has taken place.

4.2 No passthrough of any additional costs arising of such arrangements should take place

MSPGCL has stated (5.2.12.d of the petition) that it may want to pass on the costs arising out of such a bidding process in the future. This is completely unacceptable as the whole purpose of undertaking case IV bidding, if at all, was to reduce the costs of power purchase and not to increase them. Given this lack of transparency and concerns around case IV bidding, we request that

- a) The Commission should disallow any costs arising out of case IV bidding – now or in the future.
- b) All future case IV bidding should only be allowed under regulatory scrutiny and through a public process, to ascertain that the case IV bidding is indeed required and does result in better coal utilization and therefore, cost reduction for consumers.

5 Questionable requirement for Coal beneficiation

MSPGCL has said (Section 8.2. of the petition) that it aims for beneficiation of ~17 MT of coal which will effectively improve coal materialization to 100% from some coal companies. Coal materialization is understood to be the share of contracted coal that was actually received. Since coal beneficiation is likely to result in a *reduction* of the quantity of coal received, it is not at all clear how coal beneficiation can lead to improvement in coal materialization.

MSPGCL has stated that beneficiation is likely to improve coal quality by 500-600 kcal/kg and the yield would be 72% - 85%. Therefore, on an average, even with the lower quality of coal that MSPGCL claims to receive (3300 kcal/kg), one kg of raw coal (i.e. 3300 kcal) would only result in about 3000 kcal of beneficiated coal $((3300 + 550) * 79\%)$ on average. This is to be expected since some energy would be lost in the reject coal. Therefore, this is desirable only if it helps to reduce other costs such as transportation costs and/or MSPGCL can get some revenue for the coal rejects. But MSPGCL's petition states that about half the coal it intends to beneficiate would be WCL coal, whose transport distances are low, suggesting that it is unlikely to result in significant cost savings.

MSPGCL has provided no details whatsoever of the beneficiation contract with M/s MSMC. In particular, there are no details regarding the price to be paid to MSMC, the guarantees that are provided regarding the quality and quantity of beneficiated coal, the ownership and terms regarding the coal rejects, and the mechanisms and provisions to ensure that the contractual provisions are met.

Given all these infirmities with the MSPGCL proposal for beneficiation, we request the Commission to not approve of any coal beneficiation plans and any costs associated with it, until MSPGCL provides a full cost-benefit analysis for the coal beneficiation, including the contractual details with MSMC. Any costs incurred due to the beneficiation of coal, whose benefits are highly uncertain, should not be passed on to consumers.

6 Consideration of coal on “as received basis” to be disallowed

In Section 7.1 of the petition, MSPGCL has requested a reconsideration of the norms of calculating moisture loss for GCV. As per MSPGCL estimates, this is likely to have a huge impact (to the tune of 10% of the variable cost) on an annual basis. We submit that the issue of adjusting for moisture content of coal, and pricing related to it, is also part of the contractual agreement between the coal supplier and coal consumer (MSPGCL). The Commission has also clearly taken a position that it is MSPGCL's responsibility to ensure that it receives the right quantity of coal. As submitted above, with the introduction of third-party sampling by agencies such as CIMFR, coal quality challenges are also mostly a thing of the past. Therefore, it is MSPGCL's responsibility to ensure that it gets adequate quantity of coal of the GCV as contracted for, and we request the Commission to not consider MSPGCL's request to change the GCV computation methodology.

7 Adherence to new environmental norms:

7.1 Evidence of delay in execution of proposed plan

It is important to note that the environmental regulations were notified in December 2015 and since then, the issue has been raised in the public hearing regarding Case No. 46 of 2017 and subsequently in Case No. 196 of 2017. In response to queries during the last MYT process, MSPGCL has submitted a plan,

which was to ensure compliance by all its TPPs by March 2021. In the present petition MSPGCL has submitted a revised outline of the proposed FGD installation plan to adhere to the new environmental norms proposed by the Ministry of Environment, Forests and Climate Change. Table 3 compares the two submissions and highlights the fact that there are slippages on the part of MSPGCL. MSPGCL should provide reasons for the slippage in the timelines for each unit, especially given the fact that the compliance must be completed before 2022.

Table 4: Comparison of timelines submitted by MSPGCL in the MTR process (3rd Control Period) and the current petition

Units	Expected Completion reported in Case No. 196 of 2017	Expected completion reported in Case No. 296 of 2019
Koradi Unit 8	September 2020	2022-23
Koradi Unit 9	March 2020	2022-23
Koradi Unit 10	September 2019	2022-23
Chandrapur Unit 5	March 2021	2022-23
Chandrapur Unit 6	March 2021	2022-23
Chandrapur Unit 7	March 2021	2022-23
Chandrapur Unit 8	December 2020	2022-23
Chandrapur Unit 9	March 2020	2022-23
Bhusawal Unit 4,5	March 2021	2022-23
Khaperkheda Unit 5	March 2021	2022-23
Paras Unit 3,4	March 2021	2022-23
Parli Unit 6,7	March 2021	2022-23
Parli Unit 8	March 2021	2022-23
Khaperkheda Unit 1 to 4	March 2021	2022-23
Koradi Unit 6	October 2018	2022-23
Koradi Unit 7	March 2020	2022-23

Considering such delays, any cost arising due to loss of generation on account of MSPGCL's inability to meet the modified deadline should be summarily disallowed.

7.2 Need to ensure timely compliance and disallow capitalisation after deadline

The Commission should ensure that, for each unit/plant, MSPGCL has evaluated all possible alternative technologies and solutions to meet the proposed norms, and selected the most economical option, rather than opting for an FGD for all units/plants as a default option. Moreover, the chosen technologies should help meet all the proposed norms including water-related norms.

MSPGCL has stated that the time for compliance to the new norms is March 2021 (Section 9.4.1). However, the FGD installation plan that it has proposed continues up to 2022-23. This suggests that MSPGCL does not intend to comply with the norms within the specified timeline. We submit that, since this is an important matter of complying with a law to curb environmental pollution which affects public health, **the Commission should not allow any capitalization related to installation of FGD or other pollution control equipment to comply with the new environmental norms beyond the deadline as stated (March 2021).**

7.3 Need to initiate in-principle capex approval for all units before April 20

We also suggest that the Commission must ensure that MSPGCL submits in-principle approval petitions for all the units/plants and the Commission approves them after due scrutiny in the next 3 to 4 months, without which it would be impossible to meet the deadline.

8 Suo motu process for ensuring smooth commissioning of pollution control equipment (PCE)

It is understood that not just MSPGCL but all thermal plants in the state will need to comply with amended environmental regulations. For this purpose, TPPs need to upgrade or install Pollution Control Equipment (PCE), such as Flue Gas Desulphurisation technology (FGD), Electro Static Precipitators (ESP), and Selective Catalytic Reduction (SCR).

In addition to having impacts on costs, compliance to the revised norms will also be time intensive and require some shutdown period during installation. The duration of the shutdown depends on the technology to be implemented at the plant. For example, technologies such as FGD and SCR, can take around 18 months for construction and installation. The shutdown period required for the installation of PCE will impact generation, and in case large number of projects require shutdown closer to the compliance deadline, then there is danger of such large scale shutdown affecting electricity supply and grid safety.

In order to be able to adhere to the MoEFCC norms by the prescribed time, timely regulatory approval for additional capital expenditure toward PCE installation is critical. Concrete steps towards meeting the revised norms, such as securing financing, issuing orders, and construction, can only begin after the Commission grants approval for such capital expenditure. This necessitates a mechanism for the timely approval of costs for PCE, which in turn will contribute to adherence to the schedule.

Currently, approvals for installation are dealt with on a case-by-case basis, which is likely to impose a lot of burden on the Commission. Therefore, as submitted by us in the earlier MYT, we once again request the Commission to undertake a suo motu process to evaluate the status of compliance with the said MOEFCC regulations and also to formulate least cost plan for this purpose. Through such suo motu process, the commission should also formulate a well-coordinated plan detailing out the shut-down schedules for installation & commissioning of various emissions control systems for all the thermal power stations in the state. Such a regulatory mechanism should aim to:

- a. Facilitate expeditiously meeting the new environmental norms
- b. Provide regulatory certainty to generators and spur investment in installing PCE
- c. Provide comfort to lenders regarding the recovery of costs incurred for PCE
- d. Significantly reduce MERC's burden in dealing with cost approvals on a case-to-case basis
- e. Incentivize generators to comply with the norms in a timely manner, and ensure safety of the grid and adequacy of electricity supply

This would ensure a timely and smooth transition to the new norms and the state will not suffer from any shortages and/or high cost short-term power purchase as a result of this change.

9 Need for reporting on development of Gare Palma II

MSPGCL has indicated (Section 8.3.c) that it is in the process of developing its captive mine at Gare Palma II for future coal supplies. It has also stated that, according to the Ministry of Coal, the designated

End Use Project for the mine cannot be changed but it can use the coal in Koradi units 11 and 12 after obtaining permission to do so under the Coal Mines (Special Provisions) Rules. However, it is not clear whether MSPGCL has approached the Ministry of Coal for such permission, in order to comply with the directives of the Commission to use Gare Palma II coal in Koradi units 11 and 12.

As per the current status of development of Gare Palma II, it appears that many steps remain to be undertaken or completed, such as completion of land acquisition, and obtaining environmental and forest clearance. Indeed, MSPGCL has had to seek a year's extension for the validity of the ToR for environmental clearance. Moreover, on 27th December 2019, the Ministry of Coal has cancelled the allocation of the Bhivkund coal block to MSPGCL² for lack of progress even 11 years after allocation of the block. Given these circumstances, we believe that it is imperative that MSPGCL publishes regular reports, say every quarter, on the status of development of the Gare Palma II mine on its website in an easily accessible and processable form. This will enable the Commission and citizens to track the progress of development of this mine and its ability to meet future coal needs of MSPGCL. Therefore, we request the Commission to direct MSPGCL to publish such information on its website.

10 Ensure submission of fuel utilisation plan as per MYT regulations

MSPGCL provides some details of how it has tried to optimize the mix of fuel leading to savings in fuel cost (Section 8.4). Regulation 40 of the MERC (Multi-year tariff) regulations, 2019, requires that the generating company has to submit a variety of information including the forecast of fuel requirement for each station; the details of the contracted source, quantity and availability from such sources; the use of optimum mix of fuel; plan for swapping fuel source to optimize cost; and the net cost savings in variable cost of each unit, if any, after optimization. Regulation 40 is reproduced below for reference.

40. Fuel Utilisation Plan

*40.1 The Generating Company shall prepare and submit Fuel Utilisation Plan for the Control Period commencing on April 1, 2020, along with the Petition for determination of Tariff for the Control Period from April 1, 2020 to March 31, 2025, in accordance with **Part A** of these Regulations, to the Commission for approval.*

40.2 The Fuel Utilisation Plan should ensure that fuel quantum is allocated to different generating Stations/Units in accordance with the merit order of different generation Stations/Units in terms of variable cost:

Provided that the fuel allocation should be such that, subject to system and other constraints, the least cost generating Stations/Units are operated at maximum availability and other generating Stations/Units are operated at maximum availability thereafter in the ascending order of variable cost

40.3 The Fuel Utilisation Plan shall comprise the following:

- (a) Forecast of fuel requirement for each unit/station;*
- (b) Details of contracted source, annual contracted quantity, estimated availability from contracted sources and resultant shortage of fuel, if any, for each unit/station;*
- (c) Use of optimum mix of fuel;*
- (d) Alternate arrangement for meeting shortage of fuel along with impact on variable cost of unit/station;*

² See https://coal.nic.in/sites/upload_files/coal/files/curentnotices/de-allocation-of-coal-blocks.pdf

(e) Plan for swapping of fuel source for optimising the cost, if any, along with detailed justification and cost savings;

(f) Net cost savings in variable cost of each unit, if any, after optimum utilisation of Fuel:

Provided that the forecast or estimates for the Control Period from FY 2020-21 to FY 2024-25 shall be prepared for **each month (emphasis added)** over the Control Period:

Provided further that Fuel Utilisation Plan shall be prepared based on past data and reasonable assumptions for future.

The data formats shared by MSPGCL as part of the petition do not contain the above information that are mandated by Regulation 40. Moreover, they do not clearly specify how much coal was reallocated from which unit(s) to which unit(s), and how this resulted in cost savings, if any. Therefore, we request that the Commission direct MSPGCL to submit such information for each month in compliance with Regulation 40.3. Further, we also urge the Commission to ensure compliance of Regulation 40.6 by MSPGCL which is reproduced below:

40.6 A Generating Company shall maintain data of actual performance of Unit/Station wise Fuel Utilisation vis-à-vis Fuel Utilisation plan approved by the Commission, along with justification for variation between approved and actual fuel utilisation plan and, shall put up such data within fifteen days from the end of each month, on the internet website of the Generating Company.

11 Underestimation of fait accompli variable costs

Despite significant increase in variable costs for most plants between FY18 and FY19, MSPGCL estimates moderate increase in variable charges for the 4th Control Period. This is shown in Table 5.

Table 5: Growth in actual and projected variable costs of MSPGCL generators

Station	FY18	FY19	YoY Growth rate	FY20	FY21	FY22	FY23	FY24	FY25	5 yr Growth rate
Bhusawal Unit 3	3.33	3.62	9%	4.09	4.04	4.17	4.29	4.42	4.55	2%
Chandrapur Unit 3 to 7	2.13	2.38	12%	2.78	2.84	2.93	3.02	3.11	3.20	3%
Khaperkheda Unit 1 to 4	2.13	2.38	12%	2.78	2.84	2.93	3.02	3.11	3.20	3%
Koradi Unit 6, 7	4.04	3.85	-5%	3.62	3.07	3.17	3.26	3.36	3.46	-1%
Nashik Unit 3 to 5	3.21	3.36	5%	3.60	3.38	3.48	3.59	3.69	3.80	1%
Paras Unit 3, 4	2.55	2.65	4%	3.16	3.02	3.11	3.20	3.30	3.40	1%
Parli Unit 6, 7	3.25	3.73	15%	3.38	3.88	3.99	4.11	4.24	4.36	5%
Khaperkheda Unit 5	2.16	2.31	7%	2.77	2.63	2.71	2.79	2.87	2.96	1%
Bhusawal Unit 4, 5	2.65	2.78	5%	3.13	3.31	3.41	3.51	3.61	3.72	4%
Koradi Unit 8 to 10	2.64	3.03	15%	3.06	2.49	2.56	2.64	2.72	2.80	-2%
Chandrapur Unit 8,9	2.20	2.40	9%	3.11	2.67	2.75	2.83	2.91	3.00	-1%
Parli Unit 8	3.66	3.66	0%	3.82	3.72	3.83	3.95	4.06	4.19	2%

Source: Compiled from various formats in Annexure 11 of MSPGCL petition

The modest increase in variable charges assumed for the control period despite rapid increase for most plants seems untenable. While MSPGCL has clearly stated that it has assumed a 3% per annum increase in coal prices (which is also reflective of historical price increase) the assumption made for transport costs, which accounts for a major part of the landed price of coal has not been stated in the petition. Railway earnings per ton km of coal have increased by 11% per annum between FY11 and FY18. Given past trends, this rate of increase would be expected to continue in the near future. MSPGCL should clarify assumptions made for transport cost increase during the control period and the Commission should also consider an increase in transport costs while approving the variable costs for the control period.

Without such estimations during the tariff process, there will be an underestimation of fait-accomplis costs which will be recovered subsequently by MSPGCL through fuel adjustment charges or via tariff increase during the Mid Term Review, along with carrying costs. However with better estimation of such fait accomplis costs, the burden of carrying costs which ultimately has to be borne by consumers can be reduced.

12 Impact of capacity addition and retirement

As per MSPGCL's capacity addition plan approved by the Commission, MSPGCL expects 1320 MW to come online at Koradi by FY23 and 660 MW units at Bhusawal by FY24. Within the 4th control period, MSPGCL also plans to retire 1050 MW of capacity (Bhusawal Unit 3, Chandrapur Unit 3 and Nashik Unit 3 to 5). In fact, 80% of the 1050 MW is to be retired by FY22 while the new units are expected to come online only in subsequent years. However, the petitions do not consider generation, coal requirement and cost impact due to the addition of the new capacity and neither does it consider the reduction in coal allocation, costs and generation due to the retirement planned. For example, even though Nashik Station is planned to be retired by FY21, the petitions consider generation and cost from this high cost capacity until FY25. It must be ensured that the capacities planned for retirement are retired the moment the new capacity comes online to ensure that the benefits of efficient operation and passed onto consumers.

13 Need for regular reporting of capacity in the pipeline

Given the issues with capitalisation and project completion in the recent past, it is imperative that MSPGCL provide monthly updates on the progress with the capacity in the pipeline, specifically the replacement units at Koradi and Bhusawal planned to be completed within the 4th Control Period.

Currently there is no information on the capacity currently in the pipeline available on MSPGCL's website. The reporting will also be in compliance with Regulation 40 of the MYT Regulations and will help in better planning.

It is suggested that the Commission direct the DISCOMs to submit information on pipeline capacity in the following format (Table 6) on their website on a monthly basis.

Table 6: Suggested format for monthly status report on capacity in the pipeline

A. Details of Plant							
Name of Plant		Unit		Planned Capacity		Location	
Original Expected commissioning date							
Current expected commissioning date							
Reasons for slippage							
B. Status of Major Project Milestones (with relevant documentation, letters, agreements)							
Board Approval							
Land Acquisition							
Forest Clearance							
Environment Clearance							
Fuel Arrangements							
Fuel Source							
Fuel Grade							
Fuel Quantity							
Water Arrangements							
Transport, Coal Handling Arrangements							
Financial tie-up							
Financial closure							
C. Status of Construction (BTG and BOP)							
Tender Awarded							
Construction initiated on							
Capitalisation completed by							
Date of CoD							
D. Finances (Rs. Cr)							
Estimated cost							
Cumulative expenditure from start date							

14 No Extension of cut-off date for Chandrapur 8-9, Koradi 8, 9, 10 and Parli 8

The delays in capitalisation of the approved capital expenditure for Chandrapur Unit 8 and 9, Koradi Units 8,9 10 and Parli 8 are reported by MSPGCL to be due to termination of contracts with the now bankrupt M/s Lanco Infratech and M/s Sunil HiTech and re-initiation of the tendering process. The issue was also raised by MSPGCL in Case No. 59 of 2017, Case No. 77 of 2018 and Case No.196 of 2017 where the Commission did not provide any relaxation on the cut-off date.

With the approval of extension of the cut-off date, the burden of interest during construction (IDC) payable by consumers will increase even though the business risk of appointing the contractors was taken by MSPGCL. In fact in Case No.59 of 2017, the Commission also observes that the delay is also due to reasons within the control of MSPGCL. The relevant section is quoted below:

3. 10.8... “From the correspondence submitted by MSPGCL, it appears that slackness in BTG and BoP works was observed from the very initial stages. It was also observed that there was little coordination between the BTG and BoP works, due to which interrelated works were affected due to non-availability of inputs for further works. This was further aggravated with the financial difficulties of the BoP contractor.

3.10.9 From the submissions made and the material furnished, the Commission finds that the delay in project execution was not due to any sudden or unforeseen activities that affected MSPGCL or its contractors. The slackness in project execution was noticed from the initial stages, at which even adequate manpower was not mobilised for taking up the works. Hence, the Commission is of the view that to that extent the delay was partly within and partly outside the control of MSPGCL.

Therefore, to ensure that consumers do not continue to bear the burden of time and cost-overruns for delays which were partly within the control of MSPGCL, it is submitted that no extension on cut-off dates are allowed.

15 Specification of high and low demand seasons, peak and off-peak hours

As per the MYT regulations, the SLDC should declare High and Low Demand Season six months in advance after stakeholder consultation. As the MYT period would commence from April 2020, it is imperative that SLDC declare the seasons to enable better planning. Further, regulation 50.3 of the MYT regulations specify the hours of Peak and Off-Peak periods during a day shall be declared by the SLDC at least a week in advance. The impact on capacity charges due to daily variations, if any, could be passed through via fuel surcharges.

16 Interest on working capital to be computed as per Commissions regulations

The interest on working capital allowed by the Commission in the ARR is in order to meet a normative working capital requirement to ensure operations of MSPGCL. In reality, the working capital requirement as well as the interest expenses and the interest rate incurred may be much higher. The intent of the regulations is such that the cost of such borrowing is not passed onto consumers. Regulation 32.2 (b) of the MERC MYT Regulations specify that:

Rate of interest on working capital shall be on normative basis and shall be equal to the Base Rate as on the date on which the Petition for determination of Tariff is filed, plus 150 basis points:

Provided that for the purpose of Truing-up for any year, interest on working capital shall be allowed at a rate equal to the weighted average Base Rate prevailing during the concerned Year plus 150 basis points.

Thus the regulations make it clear that the normative interest rate rather than the actual interest rate is to be allowed in the ARR. The Commission should therefore disallow MSPGCL's claim to allow passthrough of higher rate of interest on working capital.

17 No provision for additional auxiliary consumption for part loading and backing down

MSPGCL has stated that the major reasons for high auxiliary consumption as compared to the norms are due to backing down, partial loading, outages as well as coal and water shortages. In this context, MSPGCL has sought a relaxation in the auxiliary consumption norms based on CEAs recommendation to CERC during the process of finalising the CERC tariff regulations.

It is pertinent to point out that the recommended degradation in auxiliary consumption for every 10% reduction in PLF has not been accepted by the CERC even while other recommendations provided by CEA have been accepted. It is also unclear if such a recommendation is based on a detailed study undertaken by CEA as the references for the same have not been cited.

MERC has notified the MYT regulations for the 4th Control Period keeping in mind the notification of the MYT regulations by CERC. It is suggested that the norms notified in the regulations continue to operate for the Control Period and that MSPGCL be strongly encouraged to explore other avenues for sale of its 'surplus power' to avoid backing down.

18 Need for a joint action plan for management of surplus capacity

As mentioned earlier, MSPGCL continues to project its generation, coal requirement and costs based on a normative PLF assuming that the power will be scheduled by MSEDCL. However, in reality about 4 GW of MSPGCL capacity is being backed down every year. As MSEDCL is procuring power from various sources, MSPGCL generation currently only accounts for 1/3rd of the power procurement by the DISCOM. The extent of backing down might increase even further in the 4th Control Period with the RPO obligation of 25% which MSEDCL has to meet by FY25.

As MSEDCL has not submitted its petition along with detailed estimations of load and power procurement for the control period, it is challenging to estimate the extent of backing down which MSPGCL has to face.

As part of the tariff process, MSEDCL and MSPGCL should present a joint action plan for management of capacity which will be under-utilised in the control period. The joint action plan should be based on the following analysis by MSEDCL and MSPGCL:

- Disaggregated estimations of demand by MSEDCL such that it accounts for daily, seasonal variations based on reasonable assumptions
- Monthly estimation of available capacity, of MSPGCL, Central Generation Stations and Private plants along with procurement and availability of renewable energy. Such estimations can also be based on coal availability with MSPGCL.
- Extent of backing down or reduced utilisation of MSPGCL plants especially if certain capacity would be not required for durations longer than ten days at a time

Based on such assessments, the joint action plan should specify capacity and durations for which MSEDCL will not retain its right to recall thereby enabling MSPGCL to sell un-utilised power via the DEEP portal, power exchanges and even via medium-term competitive bidding if possible. The gains from such sale can even be shared with MSEDCL as prescribed by the National Tariff Policy. Given the changes in MSEDCL's sales mix and power procurement options, such steps will be necessary to enable MSPGCL to continue its operations.

--XX--