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1. Short title and commencement	
Scope and extent of application.	
(1) These regulations shall apply in all cases where tariff for a generating station or a unit thereof and a transmission system or an element thereof is required to be determined by the Commission under section 62 of the Act read with section 79 thereof: Provided that any generating station for which agreement(s) have been executed for supply of electricity to the beneficiaries on or before 5.1.2011 and the financial closure for the said generating station has not been achieved by 31.3.2019, such projects shall not be eligible for determination of tariff unless fresh consent of the beneficiaries is obtained and furnished. (2) These regulations shall not apply to the following cases:- (a) Generating stations or inter-State transmission systems whose tariff has been discovered through tariff based competitive bidding in accordance with the guidelines issued by the Central Government and adopted by the Commission under section 63 of the Act; (b) Generating stations based on renewable sources of energy whose tariff is determined in accordance with the Central Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2017, as amended from time to time or any subsequent enactment thereof.	• MSEDCL welcomes the proviso with respect to fresh consent sought by beneficiaries in case of any delay in project. However, it is also stated that considering the surplus position of many State utilities, Beneficiaries may be provided right to waive off the capacity as allocated in case of such delay of project as due to such delay, Beneficiaries may have already undertaken some alternate arrangement. • However, linking the renewable energy source of energy tariff with FIT, the same will promote inefficiencies. • Also, the National Tariff policy, 2016, talks about promoting competitive bidding regime instead of cost-plus. This is a step in the right direction for promoting discipline and prudence among utilities for achievement of low cost power for all. • Hence, MSEDCL strongly recommends for migration towards competitive bidding regime.
Definitions and Interpretations.–	
'**Bank Rate'** means the one year marginal cost of lending rate (MCLR) of the State Bank of India issued from time to time plus 350 basis points;	MSEDCL welcomes the consideration of MCLR against the Base Rate as it reflects the actual Marginal Cost of Lending and has been replaced with Base Rate w.e.f 1st April 2016
'**Beneficiary** in relation to a generating station covered under clauses (a) or (b) of sub-section 1 of section 79 of the Act, means a distribution licensee who is purchasing electricity generated at such generating station by entering into a Power Purchase Agreement either directly or through a trading licensee on payment of fixed charges and variable charges by scheduling in accordance with the Grid Code:	Since in line with the Supreme Court Order dated 7th April 2016, any Generating station falling under composite scheme will fall under the jurisdiction of CERC, it is requested to modify the provision as per earlier clause: "Provided further that beneficiary shall also include any person who has been allocated capacity in any Inter-State

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Provided that where the distribution licensee is procuring power through a trading licensee, the arrangement should be secured through back to back power purchase agreement and power sale agreement: Provided further that beneficiary shall also include any person who has been allocated capacity in any generating station owned and controlled by the Central Government;	Generating Station"
'De-capitalisation' for the purpose of the tariff under these regulations, means reduction in Gross Fixed Assets of the project as admitted by the Commission corresponding to inter-unit transfer of assets or the assets taken out from service;	In case of inter-unit transfer, the transaction needs to be undertaken at fair arms length price and the benefit of the same to be provided to the Beneficiaries as the capital cost of the same is borne by the Beneficiaries at earlier stage.
'Force Majeure' for the purpose of these regulations means the event or circumstance or combination of events or circumstances including those stated below which partly or fully prevents the generating company or transmission licensee to complete the project within the time specified in the Investment Approval, and only if such events or circumstances are not within the control the generating company or transmission licensee and could not have been avoided, had the generating company or transmission licensee taken reasonable care or complied with prudent utility practices: (a) Act of God including lightning, drought, fire and explosion, earthquake, volcanic eruption, landslide, flood, cyclone, typhoon, tornado, geological surprises, or exceptionally adverse weather conditions which are in excess of the statistical measures for the last hundred years; or (b) Any act of war, invasion, armed conflict or act of foreign enemy, blockade, embargo, revolution, riot, insurrection, terrorist or military action; or (c) Industry wide strikes and labour disturbances having a nationwide impact in India; (d) Delay in obtaining statutory approval for the project except where the delay is attributable to project developer;	The additional clause included in Force Majeure i.e. Delay in obtaining statutory approval for the project except where the delay is attributable to project developer; may not be acceptable as the basic obligation of getting Statutory approval is on the Project Developer and the same needs to be preplanned before confirming any ScoD. In case such clause is considered, than Developer may have a levy to include all the statutory approvals which get delay under force majeure.
'GCV as received' means the GCV of coal or lignite as measured at the unloading point of the thermal generating station through collection, preparation and testing of samples from the loaded wagons, trucks, ropeways, Merry-Go-Round	• MSEDCL suggests benchmarking of specific coal consumption (Kg/ kWh) considering all the parameters which may affect electricity generation of the Specific /

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(MGR), belt conveyor and ship in accordance with the IS 436 (Part-1/ Section 1)-1964: Provided that the measurement of coal or lignite shall be carried out through Third party sampling to be appointed by the generating companies in accordance with the guidelines, if any, issued by Central Government; Provided further that samples of coal or lignite shall be collected either manually or through hydraulic augur or through any other method considered suitable keeping in view the safety of personnel and equipment: Provided also that the generating companies may adopt any advance technology for collection, preparation and testing of samples for measurement of GCV in a fair and transparent manner.	unit/ station/ technology to avoid the complications and to simplify the procedure for fuel cost ascertainment. • Also, GCV as received at Coal Mine and measured at unloading point may be different due to various reasons. As provided in the consultative paper, it was stated that the loss of GCV can take place on account of grade slippage at mine end, during transportation (transit with railway) and during storage (at generating stations). • Since the cost of slippage in grade of coal between the loading point and the site of generating station is ultimately passed on to the beneficiaries, this issue needs to be looked at in terms of risk allocation between the coal company, railways and the generating stations. • Energy Charge constituting about 60-70% of the total cost of generation tariff has major impact on cost to end consumers. Hence, any cost of slippage in grade of coal between the loading point and the site of generating station needs to be looked at in terms of risk allocation between the coal company, railways and the generating stations. • MSEDCL proposes standardizing GCV computation method on "As Billed' basis for procurement of coal both from domestic and international suppliers. • The regulations needs to highlight the impact of grade slippage and whole burden cannot be pass on to the beneficiaries and ultimately to the end consumers. • Also, there are instances whereby the coal goes to washery from the Coal mine end and then to the unloading point of the Generating Station. Therefore, to avoid and loss of GCV which is due to reason within the control of Generator, it is necessary to have a GCV check at mine end, washery end and unloading point.
'Input Price' means the price of coal or lignite sourced from the integrated	However a Cap is required to be introduced which says that

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mines at which the coal or lignite is transferred to the generating station for the purpose of computing the energy charges for generation and supply of electricity to the beneficiaries and determined in accordance with Chapter 9 of these regulations;	it shall not exceed the price as notified by CIL from time to time basis.
'Operation and Maintenance Expenses' or 'O&M expenses' means the expenditure incurred for operation and maintenance of the project, or part thereof, and includes the expenditure on manpower, maintenance, repairs and maintenance spares , consumables, insurance and overheads and fuel other than used for generation of electricity, water charges and security expenses;	O&M expense excludes fuel other than used for generation of electricity, water charges and security expenses. However, Security expenses which is considered as a pass through on actual basis may not be considered separately and needs to be a part of O&M Expenses as it is obligation of the developer under Prudent utility practices. In case the Security Expenses is excluded, the O&M Base cost resultantly reduces and required to be considered accordingly for projection of O&M cost during Control Period.
'Prudence Check' means scrutiny of reasonableness of capital expenditure incurred or proposed to be incurred by the generating company or transmission licensee, as the case may be;	The previous definition of Prudence Check provides the better clarity on the check to be undertaken for scrutiny of the capital cost and may thus be retained.
'Stabilization period' means the period commencing from the date of commencement of production upto date of achieving target capacity from the integrated mine as per approved mining plan;	The proviso needs to be included that the stabilization period shall not exceed the period as provided in the approved mining plan
'Useful life' in relation to a unit of a generating station, integrated mines, transmission system and communication system from the date of commercial operation shall mean the following (b) Integrated Mine of thermal generating station - As per approved Mining Plan (f) Hydro generating station including pumped Storage hydro generating stations - 40 years Provided that the extension of life of the projects beyond the completion of their useful life shall be decided by the Commission on case to case basis;	• Increasing the useful life would not only lead to better utilization of assets but will also mean easing the otherwise front loaded tariffs. • Establishing the useful life and residual value for computation of depreciation is must. Further, depreciation is a major component of annual fixed cost and has a bearing on the tariff set.
Chapter 2 – General	
Date of Commercial Operation: (1) The date of commercial operation of a generating station or unit thereof or a	• CoD definition has been now linked to the provisions of the Grid Code. • However, with respect to the transmission system, it is

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transmission system or element thereof and associated communication system shall be determined in accordance with the provisions of the Grid Code. (2) In case the transmission system or element thereof executed by a transmission licensee is ready for commercial operation but the interconnected generating station or the transmission system of other transmission licensee as per the agreed project implementation schedule is not ready for commercial operation, the transmission licensee may file petition before the Commission for approval of the date of commercial operation of such transmission system or element thereof: Provided that the transmission licensee seeking the approval of the date of commercial operation under this clause shall give prior notice to the generating company or the other transmission licensee and the long term customers of its transmission system, as the case may be, regarding the date of commercial operation; Provided further that the transmission licensee seeking the approval of the date of commercial operation of the transmission system under this clause shall be required to submit the following documents along with the petition: (a) Energisation certificate issued by the Regional Electrical Inspector under Central Electricity Authority; (b) Trial operation certificate issued by the concerned RLDC for charging element with or without electrical load; (c) Implementation Agreement, if any, executed by the parties; (d) Minutes of the coordination meetings or related correspondences regarding the monitoring of the progress of the generating station and transmission systems; (e) Notice issued by the transmission licensee as per the first proviso under this clause and the response; (f) Certificate of the CEO or MD of the company regarding the completion of the transmission system including associated communication system in all respects.	submitted that any delay in CoD of the transmission line due to delay in CoD of interconnected generating station or the transmission system of other transmission licensee, the Liquidated damages as specified in TSA needs to be recovered from such generating station or upstream transmission lines and may not be burden on the beneficiaries. It is required that in relation to Damages / Penalty to be paid needs to be in line with back to back arrangement so that the beneficiaries doesn’t suffer due to delay of generating station or Transmission system based on their PPA / TSA. • Therefore in case of any delay by any of the utilities (Genco/ Transco) which hinders the operation of other utility, then any penalty/ charges/ burden on account of such delays shall be levied from that utility.
Treatment of mismatch in date of commercial operation : (1) In case of	• As per the clause, any delay in Cod of Generating station,

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mismatch of the date of commercial operation of the generating station and the transmission system, the treatment of the transmission charges shall be determined as under: (a) Where the generating station has not achieved the commercial operation as on the date of commercial operation of the associated transmission system (which is not before the SCOD of the generating station) and the Commission has approved the date of commercial operation of such transmission system in terms of Regulation 5(2) of these regulations, the generating company shall be liable to pay the transmission charges of the associated transmission system in accordance with clause (5) of Regulation 14 of these regulations to the transmission licensee till the generating station or unit thereof achieves commercial operation; (b) Where the associated transmission system has not achieved the commercial operation as on the date of commercial operation of the concerned generating station or unit thereof, the transmission licensee shall make alternate arrangement for the evacuation from the generating station at its own cost, failing which, the transmission licensee shall be liable to pay the transmission charges to the generating company at the rate of the applicable transmission charges of the region as determined in accordance with the Sharing Regulations till the transmission system achieves the commercial operation. Provided that despite making alternative arrangement of evacuation, if the associated transmission system does not achieve the date of commercial operation within the six months of date of commercial operation of the generating station, the transmission licensee shall be liable to pay to the generating company the applicable transmission charges of the region as determined in accordance with the Sharing Regulations in addition to the above. (2) In case of mismatch of the date of commercial operation of the transmission system and the transmission system of other transmission licensee, the treatment of the transmission charges shall be determined as under:	the generating company shall be liable to pay the transmission charges till CoD and in case associated transmission system delay in CoD, the transmission licensee shall make alternate arrangement for the evacuation from the generating station at its own cost, failing which, the transmission licensee shall be liable to pay the transmission charges to the generating company at the rate of the applicable transmission charges • However, with respect to the transmission system, it is submitted that any delay in CoD of the transmission line due to delay in CoD of interconnected generating station or the transmission system of other transmission licensee, the Liquidated damages as specified in PPA needs to be recovered from such transmission licensee or upstream transmission lines and may not be burden on the beneficiaries. • It is required that in relation to Damages / Penalty to be paid needs to be in line with back to back arrangement so that the beneficiaries doesn't suffer due to delay of generating station or Transmission system based on their PPA / TSA. • For the issue of one entity being ready and other not i.e. Issue of acceptance of COD of transmission line if the generating project or upstream/ downstream transmission assets are not commissioned or vice-versa, even after the coordinated efforts, the entity (upstream/downstream) which is responsible for the delay must bear and compensate the others for the possible delay in COD i.e SCOD to ACOD in line with the PPA so as the Utility without any default remains revenue neutral.

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(a) Where an interconnected transmission system of other transmission licensee has not achieved the commercial operation as on the date of commercial operation of the transmission system (which is not before the SCOD of the interconnected transmission system) and the Commission has approved the date of commercial operation of such transmission system in terms of Regulation 5(2) of these regulations, the other transmission licensee shall be liable to pay the transmission charges of the transmission system in accordance with clause (5) of Regulation 14 of these regulations to the transmission licensee till the interconnected transmission system achieves commercial operation; (b) Where the transmission system has not achieved the commercial operation as on the date of commercial operation of the interconnected transmission system of other transmission licensee, the transmission licensee shall be liable to pay the transmission charges of such interconnected transmission system to the other transmission licensee and in the absence of transmission charges, at the applicable transmission charges of the region as determined in accordance with the Sharing Regulations till the transmission system achieves the commercial operation.	
Chapter 3 Tariff determination	
(1) Tariff in respect of a generating station may be determined for the whole of the generating station or unit thereof, and tariff in respect of a transmission system may be determined for the whole of the transmission system or element thereof or associated communication system: Provided that: (ii) In case of commercial operation of units of generating station or elements of the transmission system on or after 1.4.2019, the generating company or the transmission licensee shall file a consolidated petition, in accordance with the provisions of Procedure Regulations, combining all the units of the generating station or all elements of the transmission system which are **<u>anticipated to achieve the date of commercial operation during the next two</u>** months from the date of application;	• It is proposed that in case of part capacity tied-up and units corresponding to such part capacity cannot be identified, the tariff is proposed to be identified based on the pro-rata basis of the capacity. However, it is necessary that no undue cost burden of untied-up capacity is passed on to the tied-up capacity so as to void any unnecessary burden on beneficiaries. • The determination of tariff for additional capacities installed under expansion of existing infrastructure should be less than the discovered average tariff under competitive bidding regime of the last three years considering that the existing synergies (both operational and financial) could be captured. Also the cost of

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(2) Where only a part of the generation capacity of a generating station is tied up for supplying power to the beneficiaries through long term power purchase agreement, the units for such part capacity shall be clearly identified and in such cases, the tariff shall be determined for such identified capacity. Where the unit(s) corresponding to such part capacity cannot be identified, the tariff of the generating station may be determined with reference to the capital cost of the entire project, but tariff so determined shall be applicable corresponding to the part capacity contracted for supply to the beneficiaries; (3) In case of expansion of existing generating station, the tariff shall be determined for the expanded capacity in accordance with these regulations: Provided that the common infrastructure of existing generating station, shall be utilized for the expanded capacity and the benefit of new technology in the expanded capacity shall be extended to the existing capacity. (4) Assets installed for implementation of the revised emission standards shall form part of the existing generation project and tariff thereof shall be determined separately on submission of the completion certificate by the Board of the generating company. (5) Variable charge component of Tariff of the generating station sourcing coal or lignite from the integrated mine shall be determined based on the input price of coal or lignite, as the case may be, from such integrated mines: Provided that the generating company shall maintain the account of the integrated mine separately and submit the cost of integrated mine, in accordance with these regulations, duly certified by the Auditor. (6) Tariff of generating station using coal washery rejects developed by Central or State PSUs or Joint Venture between a Government Company and Company other than the Government Company shall be determined in accordance with these regulations:	common facilities and the land which is to be shared is allocated on the rational way for the existing and expansion capacity as the same creates synergies and lower tariff for the beneficiaries. • MSEDCL proposes facilitation of creation of pollution control systems through the green fund already created by GOI by levying clean energy cess. Discoms are already stressed and any further pass through of costs would further deteriorate their financial. • CERC through CEA may propose government of India to compensate the generating utilities towards creation of pollution control systems so as to reduce the burden on discoms and thereby end consumers. Further, any installation of pollution control equipments should be done with the prior consent of discoms. • The input price of the coal or lignite may not be allowed merely on the basis of the cost certified by the auditor but also a prudence check is required to be carried out by Commission to determine such input price. Also, the benchmark can be considered for the input price to control any inefficiency to be passed on to the beneficiaries. • With regards to GCV to be determined for the Coal Washery rejects, to avoid any undue burden on beneficiaries as the rejected coal may have a lower GCV resulting in higher variable charges, it is necessary to have benchmarking of specific coal consumption (Kg/ kWh) considering all the parameters which may affect electricity generation of the specific/ unit/ station/ technology to avoid the complications and to simplify the

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Provided that in case of Joint Venture between a Government Company and a Company other than Government Company, the shareholding of the company other than Government Company either directly or through any of its subsidiary company or associate company shall not exceed 26% of the paid up share capital; Provided further that the variable component of the tariff of such generating station or unit thereof shall be determined based on the fixed cost and the variable cost of the coal washery project; Provided also that the Gross Calorific Value of coal rejects shall be as measured jointly by the generating company and the beneficiaries in a mutually agreed manner;	procedure for fuel cost ascertainment
Application for determination of tariff:	
(1) The generating company or the transmission licensee may make an application for determination of tariff for new generating station or unit thereof or the transmission system or element thereof in accordance with the Procedure Regulations within **<u>60 days</u>** of the anticipated date of commercial operation: Provided that where the transmission system comprises various elements, the transmission licensee shall file an application for determination of tariff for a group of elements on capitalization of not less than 80% of the cost envisaged in the Investment Approval or Rs. 500 Crore, whichever is lower., as on the anticipated date of commercial operation; Provided further that the generating company or the transmission licensee, as the case may be, shall submit Auditor Certificate and in case of non-availability of Auditor Certificate, a certificate duly signed by an authorised person, not below the level of Director of the company, indicating the capital cost incurred as on the date of commercial operation and the projected additional capital expenditure for respective years of the tariff period 2019-24; Provided also that where interim tariff of the generating station or unit thereof	• It has been observed that the provisional / interim tariff and the final tariff may differ to the larger extent resulting in additional burden on the beneficiaries and therefore, it is necessary that the difference between the provisional / interim tariff and final tariff shall not exceed more than 20% and such additional cost may not be allowed as a passthrough. • The Regulations has considered the true up for the period 2014-19 in accordance with the CERC (Terms and Conditions of Tariff) Regulations, 2014. However, it is submitted that the true-up exercise may not be limited to only capital cost or additional capitalization but shall also consider with all the components of tariff and any efficiency needs to be shared with the beneficiaries. • With regards to the emission control system to be required to be installed, a benchmark needs to be pre-decided for the impact of the same on the variable and fixed cost. • In case of redetermination of the input for variable cost

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and the transmission system or element thereof including communication system has been determined based on Management Certificate, the generating company or the transmission company shall submit the Auditor certificate not later than 60 days from date of granting interim tariff. (2) In case of an existing generating station or unit thereof, or transmission system or element thereof, the application shall be made by the generating company or the transmission licensee, as the case may be, within a period of 180 days from the date of notification of these regulations, based on admitted capital cost including additional capital expenditure already admitted and incurred up to 31.3.2019 (either based on actual or projected additional capital expenditure) and estimated additional capital expenditure for the respective years of the tariff period 2019-24 along with the true up petition for the period 2014-19 in accordance with the CERC(Terms and Conditions of Tariff) Regulations, 2014. (3) In case of emission control system required to be installed in existing generating station as per revised emission standards, the application shall be made for determination of supplementary tariff (fixed charges or variable charge or both) based on the actual capital expenditure duly certified by the Auditor; (4) Where the generating company has the arrangement for supply of coal or lignite from the integrated mine(s) to one or more of its generating stations, the generating company shall file a petition for determination of the input price for the variable cost along with the tariff petitions for one or more generating stations in accordance with the provision of Chapter 9 of these regulations; Provided that the input for variable cost based on the integrated mines shall be re-determined on achieving the target capacity as per progressive mine plan based on the capital expenditure incurred upto the date of target capacity and additional capital expenditure incurred or projected to be incurred duly certified by the Auditors for the respective years of the tariff period 2019-24.	based on achieving the target capacity, the same may not exceed the earlier pre-determined price due to any reasons as the project has achieved the target capacity which needs to result in optimum utilization of the mine.
10. Determination of tariff:	

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(1) The generating company or the transmission licensee, as the case may be, shall file petition before the Commission as per Annexure-I of these regulations containing the details of underlying assumptions for the capital expenditure and additional capital expenditure incurred and projected to be incurred, wherever applicable. (3) If the information furnished in the petition is in accordance with these regulations and is adequate for carrying out prudence check of the claims made, the Commission may consider to grant interim tariff in case of new projects. (5) The Commission shall grant final tariff in case of existing and new projects, after considering the replies received from the respondents, and suggestions and objections, if any, received from the general public and any other person permitted by the Commission including the consumers or consumer associations. (6) The Commission may hear the petitioner, the respondents and any other person permitted including the consumers or consumer associations while granting interim or final tariff. (4) In case of the existing projects, the generating company or the transmission licensee, as the case may be, shall continue to bill the beneficiaries or the long term customers at the tariff approved by the Commission and applicable as on 31.3.2019 for the period starting from 1.4.2019 till approval of final tariff by the Commission in accordance with these regulations: (7) The difference between the tariff determined in accordance with clauses (3) and (5) above and clauses (4) and (5) above, shall be recovered from or refunded to, the beneficiaries or the long term customers, as the case may be, with simple interest at the rate equal to the bank rate prevailing as on 1st April of the respective year of the tariff period, in six equal monthly instalments. (8) Where the capital cost considered in tariff by the Commission on the basis of projected additional capital expenditure exceeds the actual additional capital expenditure incurred on year to year basis by more than 10%, the generating company or the transmission licensee shall refund to the beneficiaries or the	• It has been observed that the provisional / interim tariff and the final tariff may differ to the larger extent resulting in additional burden on the beneficiaries and therefore, it is necessary that the difference between the provisional / interim tariff and final tariff shall not exceed more than 20% and such additional cost may not be allowed as a passthrough. • Considering that the deviation is result of the tariff determination process undertaken by the Commission and submission made by the generator / licensee, the additional burden by way of 1.20 times of the bank rate in case of capital cost increased by 10% may not be considered as it is not within the control of the beneficiaries. The interest needs to be linked to Bank Rate as specified in Clause (7) and (9). The basic principle for cost incurred higher or below the projected CAPEX needs to be similar and therefore to be linked with bank rate. Also, the limit of 10% is required to be increased to 20%.

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long term transmission customers as the case may be, the tariff recovered corresponding to the additional capital expenditure not incurred, as approved by the Commission, along with interest at 1.20 times of the bank rate as prevalent on 1st April of the respective year. (9) Where the capital cost considered in tariff by the Commission on the basis of projected additional capital expenditure falls short of the actual additional capital expenditure incurred by more than 10% on year to year basis, the generating company or the transmission licensee shall recover from the beneficiaries or the long term customers as the case may be, the shortfall in tariff corresponding to difference in additional capital expenditure, as approved by the Commission, along with interest at the bank rate as prevalent on 1st April of the respective year.	
In-principle Approval in Specific circumstances:	
Truing up of tariff for the period 2014-19: The tariff of the generating stations and the transmission systems for the period 2014-19 shall be trued up in accordance with the provisions of Regulation 8 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 along with the tariff petition for the period 2019-24. The capital cost admitted as on 31.3.2019 based on the truing up shall form the basis of the opening capital cost as on 1.4.2019 for the tariff determination for the period 2019-24. **Truing up of tariff for the period 2019-24** : (1) The Commission shall carry out truing up exercise for the period 2019-24 along with the tariff petition filed for the next tariff period, for the following: a) the capital expenditure including additional capital expenditure incurred up to 31.3.2024, as admitted by the Commission after prudence check at the time of truing up; b) the capital expenditure including additional capital expenditure incurred up to 31.3.2024, on account of Force Majeure and Change in Law; (2) The generating company or the transmission licensee as the case may be, shall make an application, as per Annexure-I to these regulations, for carrying	• The Regulations has considered the true up for the period 2014-19 and 2019-24. However, it is submitted that the true-up exercise may not be limited to only capital cost or additional capitalization but shall also consider with all the components of tariff and any efficiency needs to be shared with the beneficiaries. • It has been observed that the provisional / interim tariff and the final tariff may differ to the larger extent resulting in additional burden on the beneficiaries and therefore, it is necessary that the difference between the provisional / interim tariff and final tariff shall not exceed more than 20% and such additional cost may not be allowed as a passthrough.

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out truing up exercise in respect of the generating station or a unit thereof or the transmission system or element thereof by 31.10.2024. (3) The generating company or the transmission licensee, as the case may be, may make an application for interim truing up of tariff in the year 2021-22, if the annual fixed cost increases by more than 20% over the annual fixed cost as determined by the Commission for the respective years of the tariff period. Provided that if the actual additional capital expenditure falls short of the projected additional capital expenditure allowed under provisions of Chapter 7 of these regulations, the generating company or the transmission licensee, as the case may be, shall not be required to file any interim true up petition for this purpose and shall refund to the beneficiaries or the long term customers, as the case may be, the excess tariff recovered corresponding to the projected additional capital expenditure not incurred under intimation to the Commission at the bank rate as on 1st April of the respective years. Provided further that the generating company or the transmission licensee shall submit the complete details along with the calculations of the refunds made to the beneficiaries or the long term customers, as the case may be, at the time of true up. (4) After truing up, if the tariff already recovered exceeds or falls short of the tariff approved by the Commission under these regulations, the generating company or the transmission licensee, shall refund to or recover from, the beneficiaries or the long term customers, as the case may be, the excess or the shortfall amount along with simple interest at the rate equal to the bank rate as on 1st April of the respective years of the tariff period in six equal monthly instalments.	
Computation of Capital cost and capital structure	
17. Debt-Equity Ratio: (1) For new projects, the debt-equity ratio of 70:30 as on date of commercial operation shall be considered. If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan: Provided that:	• As per draft Regulations, Plants running beyond useful life of 25 years will be eligible to claim depreciation and RoE on the balance NFA and equity after adjusting the accumulated depreciation with cumulative debt repayment. Accordingly, the regulations states that

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i. where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff: ii. the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment: iii. any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt : equity ratio. **Explanation-**The premium, if any, raised by the generating company or the transmission licensee, as the case may be, while issuing share capital and investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on equity, only if such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station or the transmission system. (2) The generating company or the transmission licensee shall submit the resolution of the Board of the company or approval of the competent authority in other cases regarding infusion of funds from internal resources in support of the utilization made or proposed to be made to meet the capital expenditure of the generating station or the transmission system including communication system, as the case may be. (3) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2019, debt-equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2019 shall be considered. (4) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2019, but where debt: equity ratio has not been determined by the Commission for determination of tariff for the period ending 31.3.2019, the Commission shall approve the debt : equity ratio in accordance with clause (1) of this Regulation. (5) Any expenditure incurred or projected to be incurred on or after 1.4.2019 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this	considering a plant running beyond useful life with original project cost of Rs100, regulated equity of Rs30, accumulated depreciation of Rs90 and zero debt (implying Rs70 of project debt has been repaid). The FY20-24 regulations allow RoE only on the difference of original regulated equity less the difference of accumulated depreciation and debt repaid or only on Rs10 (100-10) vs. Rs30 earlier • MSEDCL welcomes this provision but states that such assessment needs to be undertaken based on the operational efficiency of the plant post useful life and in case the overall efficiency has been reduced, then no RoE to be allowed and only actual fixed

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Regulation. (6) In case of generating station or a transmission system including communication system which has completed its useful life as on or after 1.4.2019, the accumulated depreciation as on the completion of the useful life less cumulative repayment of loan shall be utilized for reduction of the equity and depreciation admissible after the completion of useful life and the balance depreciation, if any, shall be first adjusted against the repayment of balance outstanding loan and thereafter shall be utilized for reduction of equity till the generating station continues to generate and supply electricity to the beneficiaries.	
Capital Structure :- **Computation of Capital cost:-** (1) The Capital cost of the generating station or the transmission system, as the case may be, as determined by the Commission after prudence check in accordance with these regulations shall form the basis for determination of tariff for existing and new projects. (2) The Capital Cost of a new project shall include the following: (a) the expenditure incurred up to the date of commercial operation of the project; (c) Any gain or loss on account of foreign exchange risk variation pertaining to the loan amount availed during the construction period; (i) Capital expenditure incurred on the ash utilisation, handling including transportation facility as a part of ash disposal of thermal generating station; (j) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of the generating station. (k) Expenditure on account of biomass handling equipment, if any, for co-firing; (l) Expenditure on account of emission control system necessary to meet the applicable emission standards of notified by Government; (m) Expenditure on account of fulfilment of any conditions for obtaining environment clearance for the project; (n) Expenditure on account of change in law and force majeure events.	• The approval of Capital Cost is the most critical aspect of tariff determination and hence inefficiencies on account of power producers shall not be allowed to pass through to the beneficiary discoms. • Higher capital cost allows the developer return on higher base of equity deployed. Determination of capital cost based on the actual cost as per the balance sheet of the regulated entities doesn't incentivize developers for taking cost cutting measures, hence, benchmarking of technology and capital needs to be done. Further, CERC shall take a note of the number of cases in which the commission has allowed a pass through of cost escalation to the discoms and hence the very idea of benchmarking the cost got failed. • Hence, compensation towards increase in cost due to factors owing to any change in law should only be considered and not any other acts except force majeure condition. • MSEDCL proposes facilitation of creation of pollution control systems through the green fund already created by GOI by levying clean energy cess. Discoms are already stressed and any further pass through of costs would

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(o) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries. (3) The Capital cost of an existing project shall include the following: (a) Capital cost admitted by the Commission prior to 1.4.2019 duly trued up by excluding liability, if any, as on 1.4.2019; (b) additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with these regulations; and (c) expenditure on account of renovation and modernisation as admitted by this Commission in accordance with these regulations; (d) capital expenditure on account of ash disposal including handling and transportation facility; (e) capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of generating station but does not include the transportation cost and any other appurtenant cost paid to the railway; (f) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries. **19. Prudence Check of Capital Expenditure:** The following principles shall be adopted for prudence check of capital cost of the existing or new projects: (1) In case of the thermal generating station and the transmission system, prudence check of capital cost shall include scrutiny of the capital expenditure, in the light of capital cost of similar projects based on past historical data, wherever available, reasonableness of financing plan, interest during construction, incidental expenditure during construction, use of efficient	further deteriorate their financial. • CERC through CEA may propose government of India to compensate the generating utilities towards creation of pollution control systems so as to reduce the burden on discoms and thereby end consumers. Further, any installation of pollution control equipments should be done with the prior consent of discoms. • In case of existing project, the additional cost in relation to ash disposal including handling and transportation facility and railway infrastructure may not be allowed if considered earlier. Also, in case such cost is not approved under total capital cost approval from Board as well as Commission, the similar arrangement may not be allowed to be considered for the existing project. • MSEDCL welcomes this proposal. Even the new tariff policy encourages competitive bidding to bring in the necessary prudence check which is lacking in the cost-plus regime. • Introduction of incentive mechanism for early completion and disincentive for slippage from scheduled commissioning seems to be the right measure to curtail cost. Further, the quantum of penalty for slippage from the scheduled time, cost and scope should be enough to enforce discipline on the developers. • With regards to delay, not attributable to generating company or transmission licensee, Commission needs to consider the approach as adopted by APTEL in Appeal No. 72 of 2010 whereby the same will be required to share with beneficiaries rather than burdening totally to beneficiaries. The APTEL Order has held the following:

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technology, cost over-run and time over-run, procurement of equipments and materials through competitive bidding and such other matters as may be considered appropriate by the Commission for determination of tariff: Provided that, while carrying out the prudence check, the Commission shall also examine whether the generating company or transmission licensee, as the case may be, has been careful in its judgments and decisions in execution of the project. (2) The Commission may, for the purpose of vetting of capital cost of hydro-electric projects, appoint an independent agency or an expert body: Provided that the Designated Independent Agency already appointed under the guidelines issued by the Commission under 2009-14 Regulations shall continue till completion of the assigned project. (3) The generating company or the transmission licensee, as the case may be, shall furnish the package wise capital cost for execution of the existing and new projects as per Annexure-I along with tariff petition for the purpose of creating a database of benchmark capital cost of various components. **Interest During Construction (IDC) and Incidental Expenditure during Construction (IEDC)** (1) Interest during construction (IDC) shall be computed corresponding to the loan from the date of infusion of debt fund, and after taking into account the prudent phasing of funds upto SCOD. (2) Incidental expenditure during construction (IEDC) shall be computed from	*"7.4. The delay in execution of a generating project could occur due to following reasons:* *i. due to factors entirely attributable to the generating company, e.g., imprudence in selecting the contractors / suppliers and in executing contractual agreements including terms and conditions of the contracts, delay in award of contracts, delay in providing inputs like making land available to the contractors, delay in payments to contractors / suppliers as per the terms of contract, mismanagement of finances, slackness in project management like improper co-ordination between the various contractors, etc.* *ii. due to factors beyond the control of the generating company e.g. delay caused due to force majeure like natural calamity or any other reasons which clearly establish, beyond any doubt, that there has been no imprudence on the part of the generating company in executing the project.* *iii. situation not covered by (i) & (ii) above.* *In our opinion in the first case the entire cost due to time over run has to be borne by the generating company. However, the Liquidated Damages (LDs) and insurance proceeds on account of delay, if any, received by the generating company could be retained by the generating company. In the second case the generating company could be given benefit of the additional cost incurred due to time over-run. However, the consumers should get full benefit of the LDs recovered from the contractors / suppliers of the generating company and the insurance proceeds, if any, to reduce the capital cost. In the third case the additional cost due to time overrun including the LDs and insurance proceeds could be shared between the generating company and the consumer. It would also be prudent to consider the delay with respect to some*

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the zero date, taking into account pre-operative expenses upto SCOD: Provided that any revenue earned during construction period up to SCOD on account of interest on deposits or advances, or any other receipts shall be taken into account for reduction in incidental expenditure during construction. (3) In case of additional costs on account of IDC and IEDC due to delay in achieving the SCOD, the generating company or the transmission licensee as the case may be, shall be required to furnish detailed justifications with supporting documents for such delay including prudent phasing of funds in case of IDC and details of incidental expenditure during the period of delay and liquidated damages recovered or recoverable corresponding to the delay in case of IEDC. (4) If the entire period of delay is not attributable to the generating company or the transmission licensee, IDC and IEDC beyond SCOD may be allowed after due prudence check and the liquidated damages, if any, recovered from the contractor or supplier or agency shall be adjusted in the capital cost of the generating station or the transmission system, as the case may be. (5) If the delay is attributable either in entirety on in part to the generating company or the transmission licensee or its contractor or supplier or agency, in such cases, IDC and IEDC beyond SCOD may be disallowed after due prudence check either in entirety or on pro-rata basis corresponding to the period of delay not condoned and the liquidated damages, if any, recovered from the contractor or supplier or agency shall be retained by the generating company or the transmission licensee, as the case may be. **Controllable and Uncontrollable factors:** The following shall be considered as controllable and uncontrollable factors leading to cost escalation, IDC and IEDC of the project : (1) The "controllable factors" shall include but shall not be limited to the following: a. Efficiency in the implementation of the project not involving approved change in scope of such project, change in statutory levies or change in law or force	*benchmarks rather than depending on the provisions of the contract between the generating company and its contractors/suppliers. If the time schedule is taken as per the terms of the contract, this may result in imprudent time schedule not in accordance with good industry practices."* **Uncontrollable factor:-** Time and Cost over-runs on account of land acquisition should not be considered as uncontrollable, as it is on the Bidder/Generator to check the feasibility of the building plant. In which acquisition of land is one of the parameter. Hence COD and capital cost is being worked out considering

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majeure events; and b. Delay in execution of the project on account of contractor, supplier or agency of the generating company or transmission licensee. (2) The "uncontrollable factors" shall include but shall not be limited to the following: a. Force Majeure events; b. Change in law; and c. Time and cost over-runs on account of land acquisition except where the delay is attributable to the generating company or the transmission licensee; 22. Initial Spares: Initial spares shall be capitalised as a percentage of the Plant and Machinery cost upto cut-off date, subject to following ceiling norms: (d) Transmission system (i) Transmission line - 1.00% (ii) Transmission Sub-station - 4.00% (vi) Static Synchronous Compensator - 3.50%	such circumstance. Therefore once Capital cost is approved by the Commission, it should not be further approve the IDC on account of time and Cost Over-run under Uncontrollable factors.
Additional Capitalisation and De-capitalisation: Computation Of Additional Capital Expenditure	
23. Additional Capitalisation within the original scope and upto the cut-off date: (1) The capital expenditure in respect of the new project or an existing project incurred or projected to be incurred, on the following counts within the original scope of work, after the date of commercial operation and up to the cut-off date may be admitted by the Commission, subject to prudence check: (a) Undischarged liabilities recognized to be payable at a future date; (b) Works deferred for execution; (c) Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 22 of these regulations; (d) Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority or the order or decree of any court of law; Change in law or compliance of any existing law within the cut-off date; and (e) Force Majeure events;	• Any works covered under original scope but executed after the cut-off date may be allowed post prudence check as the same is due to resultant delay by Generator / Transmission Licensee and may have to be incurred before the cut off date. Any cost / time over run needs to be borne by Generator / Transmission Licensee and may not be burden on beneficiary. • Any works covered outside the scope may not be allowed unless it falls within Change in Law or Force Majeure. The deferred work related to ash pond or ash handling may not be allowed which is beyond the scope of work.

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Provided that in case of any replacement of the assets, the additional capitalization shall be worked out after adjusting the gross fixed assets and cumulative depreciation of the assets replaced on account of de-capitalization.	
24. Additional Capitalisation within the original scope and after the cut-off date: (1) The additional capital expenditure incurred or projected to be incurred in respect of an existing project or a new project on the following counts within the original scope of work and after the cut-off date may be admitted by the Commission, subject to prudence check: (a) Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority, or order or decree of any court of law; (b) Change in law or compliance of any existing law; (c) Deferred works relating to ash pond or ash handling system in the original scope of work; (d) Liability for works executed prior to the cut-off date; (e) Works covered under original scope but executed after the cut-off date ; (f) Liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments; and (g) Additional capitalization on account of raising of ash dyke as a part of ash disposal system. (2) In case of replacement of assets deployed under the original scope of the existing project after cut-off date, the additional capitalization may be admitted by the Commission, after making necessary adjustments in the gross fixed assets and the cumulative depreciation, subject to prudence check on the following grounds: (a) The useful life of the assets is not commensurate with the useful life of the project and such assets have been fully depreciated in accordance with the provisions of these regulations; (b) The replacement of the asset is necessary on account of change in law or Force Majeure conditions; or (c) The replacement of such asset has otherwise been allowed by the	• The following clause related to additional capitalization to be retained. *Provided that any expenditure on acquiring the minor items or the assets including tools and tackles, furniture, air-conditioners, voltage stabilizers, refrigerators, coolers, computers, fans, washing machines, heat convectors, mattresses, carpets etc. brought after the cut-off date shall not be considered for additional capitalization for determination of tariff w.e.f. 1.4.2014:9*

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Commission based on sufficient grounds. **25. Additional Capitalisation beyond the original scope:** (1) The capital expenditure, in respect of existing generating station or the transmission system including communication system, incurred or projected to be incurred on the following counts beyond the original scope, may be admitted by the Commission, subject to prudence check: (a) Liabilities to meet award of arbitration or for compliance of the order or directions in the order of any statutory authority, or order or decree of any court of law; (b) Change in law or compliance of any existing law; (c) Force Majeure Events; (d) Any capital expenditure to be incurred on account of need for higher security and safety of the plant as advised or directed by appropriate Indian Government Instrumentality or statutory authorities responsible for national or internal security; (e) Deferred works relating to ash pond or ash handling system in additional to the original scope of work, on case to case basis; Provided also that if any expenditure has been claimed under Renovation and Modernisation (R&M) or repairs and maintenance under O&M expenses, same expenditure cannot be claimed under this Regulation. (2) In case of de-capitalisation of assets of a generating company or the transmission licensee, as the case may be, the original cost of such asset as on the date of de-capitalisation shall be deducted from the value of gross fixed asset and corresponding loan as well as equity shall be deducted from outstanding loan and the equity respectively in the year such de-capitalisation takes place with corresponding adjustments in cumulative depreciation and cumulative repayment of loan, duly taking into consideration the year in which it was capitalised.	
26. Additional Capitalisation on account of Renovation and Modernisation: (1) The generating company or the transmission licensee, as the case may be	

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intending to undertake renovation and modernization (R&M) of the generating station or unit thereof or transmission system or an element thereof for the purpose of extension of life beyond the originally recognised useful life for the purpose of tariff , shall file a petition before the Commission for approval of the proposal with a Detailed Project Report giving complete scope, justification, cost-benefit analysis, estimated life extension from a reference date, financial package, phasing of expenditure, schedule of completion, reference price level, estimated completion cost including foreign exchange component, if any, and any other information considered to be relevant by the generating company or the transmission licensee. Provided that the generating company or the transmission licensee, as the case may be, making the applications for R&M will not be eligible for Special Allowance under these regulations. Provided further that, the generating company or the transmission licensee intending to undertake renovation and modernization (R&M) shall be required to obtain the consent of the beneficiaries or the long term customers, as the case may be, for such R&M and submit the same along with the petition. (2) Where the generating company or the transmission licensee, as the case may be, makes an application for approval of its proposal for renovation and modernisation, approval may be granted after due consideration of reasonableness of the proposed cost estimates, financing plan, schedule of completion, interest during construction, use of efficient technology, cost-benefit analysis, expected duration of life extension, consent of the beneficiaries or long term customers, if obtained, and such other factors as may be considered relevant by the Commission. (4) After completion of the R&M, the generating company or the transmission licensee, as the case may be, shall file a petition for determination of tariff. Expenditure incurred or projected to be incurred and admitted by the Commission after prudence check, and after deducting the accumulated depreciation already recovered from the original project cost, shall form the basis for determination of tariff.	• MSEDCL welcomes the proviso as proposed in their comments for seeking consent of beneficiaries before undertaking any R&M activities. • Also, since it may prove to enhance the life of the asset with benefits far exceeding the entailed cost, such benefits shall be shared accordingly in consultation with the discom/ beneficiary.

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27. Special Allowance for Coal-based/Lignite fired Thermal Generating station: (1) In case of coal-based/lignite fired thermal generating station, the generating company, instead of availing R&M may opt to avail a 'special allowance' in accordance with the norms specified in this Regulation, as compensation for meeting the requirement of expenses including renovation and modernisation beyond useful life of the generating station or a unit thereof and in such an event, upward revision of the capital cost shall not be allowed and the applicable operational norms shall not be relaxed but the special allowance shall be included in the annual fixed cost: Provided that such option shall not be available for a generating station or unit for which renovation and modernization has been undertaken and the expenditure has been admitted by the Commission before commencement of these regulations, or for a generating station or unit which is in a depleted condition or operating under relaxed operational and performance norms; (2) The special allowance shall be available for a generating station which has availed the special allowance during the tariff period 2009-14 or 2014-19 as applicable from the date of completion of the useful life. (3) The special allowance admissible to the generating station shall be @ Rs 9.5 lakh per MW per year for the tariff period 2019-24. (5) The special allowance allowed under this Regulation shall be transferred to a separate fund for utilization towards Renovation & Maintenance activities, for which detailed methodology shall be issued separately.	• Since Special allowance is added to Annual Fixed Cost, it is being charged to the DISCOM / Beneficiaries from the day when it is not spent in actual. Special allowance currently allowed to the generator is primarily for the Renovation and modernization activities. • Also, After adding Special allowance under O&M, working capital w.r.t special allowance would become applicable as the same will be part of the O&M expenses • Hence MSEDCL is of the view that, Special allowance may discontinue from this control period and Renovation and modernisation cost may be allowed on actual basis after prudence check. • Also Renovation and modernization activities may be undertaken after consent from the DISCOM/Beneficiaries in order to avoid burden on the DISCOM/Beneficiaries. • Accordingly, the detailed methodology for treatment of the separate fund need to prepared based on the above submission.
28. Special Provision for thermal generating station which have completed 25 years of operation from commercial operation date: (1) In respect of a thermal generating station that has completed 25 years of operation from the date of commercial operation, the generating company and the beneficiary may agree on an arrangement where the total cost inclusive of the fixed cost and the variable cost for the generating station as determined under these regulations, shall be payable on scheduled generation instead of the pre-existing arrangement of separate payment of fixed cost based on availability and energy charge based on schedule.	• The analysis and treatment to the older plants should be done on case to case basis as they remarkably differ on various parameters. Further, it is worth to note that performance of a unit does not necessarily deteriorate much with age, if proper O&M practices are followed. • As most of these have already recovered depreciation and completed loan repayments, they may have advantage from financial perspective. Further, their O&M cost could also be low. Hence, older plants with

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(2) The beneficiary will have the first right of refusal and upon its refusal to enter into an arrangement as above the generating company shall be free to sell the electricity generated from such station in a manner as it deems fit.	competitive variable costs should not be closed and may not be scheduled on the basis of the total cost which may result in non-schedule under MoD to some extent during the Off-season. • Hence, the decision should be taken on case to case basis and in consultation with the discom/ beneficiary. • Accordingly, the tariff needs to be decided on the case to case basis identifying variable and fixed cost based on availability. Also, within agreement, in case the same is not schedule by beneficiary, the generating station to be allowed to sell to third party with sharing mechanism with beneficiary.
29. Additional Capitalization on account of Revised Emission Standards: (1) A generating company requiring to incur additional capital expenditure in the existing generating station for compliance of the applicable revised emissions standards shall share its proposal with the beneficiaries and file a petition for approval for undertaking such additional capitalization; (2) The proposal under clause (1) above shall contain details of proposed technology as specified by the Central Electricity Authority, scope of the work, phasing of expenditure, schedule of completion, estimated completion cost including foreign exchange component, if any, detailed computation of indicative impact on tariff to the beneficiaries, and any other information considered to be relevant by the generating company; (3) Where the generating company makes an application for approval of additional capital expenditure on account of implementation of Emission Control Standards, the Commission may grant approval after due consideration of the reasonableness of the cost estimates, financing plan, schedule of completion, interest during construction, use of efficient technology, cost-benefit analysis, and such other factors as may be considered relevant by the Commission. (4) After completion of the implementation of revised emission standards, the generating company shall file a petition for determination of tariff. Any expenditure incurred or projected to be incurred and admitted by the	• It is submitted that since the additional capitalization due to revised emission standard might have to be undertaken by each generating plant, therefore in line with the proviso of determining capital cost of the new plant, similar practice may be adopted whereby the benchmark norm is required to be determined on the basis of which such cost can be approved. • MSEDCL proposes facilitation of creation of pollution control systems through the green fund already created by GOI by levying clean energy cess. Discoms are already stressed and any further pass through of costs would further deteriorate their financial. • CERC through CEA may propose government of India to compensate the generating utilities towards creation of pollution control systems so as to reduce the burden on discoms and thereby end consumers. Further, any installation of pollution control equipments should be done with the prior consent of discoms. •

<table>
<tr><th>CERC Draft Tariff Regulations 2019</th><th>Comments</th></tr>
<tr><td>Commission after prudence</td><td></td></tr>
<tr><td colspan="2">Tariff Structure</td></tr>
<tr><td>14. Components of Tariff:
(1) The tariff for supply of electricity from a thermal generating station shall comprise two parts, namely, capacity charge (for recovery of annual fixed cost consisting of the components as specified in Regulation 15 of these regulations) and energy charge (for recovery of primary and secondary fuel cost and limestone cost where applicable).
(2) The supplementary fixed cost for additional capitalization on account of implementation of revised emission standards in the existing generating station or new generating station, as the case may be, shall be determined by the Commission separately;
(3) The energy charge of the generating station shall be determined in accordance with the provisions of Chapter 11 of these Regulations. The input price of coal or lignite from the integrated mine shall form part of energy charge of the generating station.

(4) The tariff for supply of electricity from a hydro generating station shall comprise capacity charge and energy charge to be derived in the manner specified in Regulation 54 of these regulations, for recovery of annual fixed cost (consisting of the components referred to in Regulation 15 of these regulations) through the two charges.

(5) The tariff for transmission of electricity on inter-State transmission system shall comprise transmission charges for recovery of annual fixed cost consisting of the components specified in Regulation 15 of these regulations.

15. Capacity Charges: The Capacity charges shall be derived on the basis of annual fixed cost. The annual fixed cost (AFC) of a generating station or a transmission system including communication system shall consist of the following components:
(a) Depreciation;</td><td>MSEDCL proposes facilitation of creation of pollution control systems through the green fund already created by GOI by levying clean energy cess. Discoms are already stressed and any further pass through of costs would further deteriorate their financial.
CERC through CEA may propose government of India to compensate the generating utilities towards creation of pollution control systems so as to reduce the burden on discoms and thereby end consumers. Further, any installation of pollution control equipments should be done with the prior consent of discoms.
Inter-State Transmission System
MSEDCL had oppose a two part tariff and proposed Single part tariff for transmission system in consultative paper which has been accepted by Commission in Draft Regulations. However, MSEDCL would like to resubmit the</td></tr>
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(b) Return on equity; (c) Interest on loan capital; (d) Interest on working capital; and (e) Operation and maintenance expenses: Provided that special allowance in lieu of R&M, where opted in accordance with Regulation 27 of these regulations, shall be recovered separately and shall not be considered for computation of working capital. 16. Variable Charges or Energy Charges: Energy charges shall be derived on the basis of the landed fuel cost (LFC) or variable cost of a generating station (excluding hydro) and shall consist of the following cost: (a) Landed Fuel Cost of primary fuel; and (b) Cost of secondary fuel oil consumption: Provided that any refund of taxes and duties along with any amount received on account of penalties from fuel supplier shall have to be adjusted in fuel cost. Provided further that the methodology of determination of supplementary energy charges, if any on account of implementation of revised emission standards in case of a thermal generating station shall be determined separately by the Commission;	following comments: *"(i.) MSEDCL strongly opposes two-part tariff structure as almost the entire cost associated with transmission of power is of fixed nature* *(ii.) The transmission companies would not be able to recover the fixed charges if the access charges are kept low. Similarly, the transmission company may not be able to recover capex in case the players only book capacity and then doesn't wheel power.* *(iii.)Instead, there should be a differentiation between short term and long term transmission of power. Transmission of power for short term shall be charged at a rate higher than transmission of power for long term since the long term consumers are the ones who contributes in the development of transmission infrastructure."*
30. Return on Equity: (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with Regulation 17 of these regulations. (2) Return on equity shall be computed at the base rate of 15.50% for thermal generating station, transmission system including communication system and run of the river hydro generating station, and at the base rate of 16.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run of river generating station with pondage: Provided that: i. Return on equity in respect of additional capitalization after cut off date within	• In the light of reduced bank interest rate and seeing the historical trend, the return on equity needs to be reduced and needs to be capped at 14%. • Further MSEDCL suggests lower return on equity considering that the market and regulatory space has matured over the years and the pertaining risk has mitigated to large extent. • In line with additional returns given to incentivize the project developer for timely completion, a penalizing mechanism shall also be formulated for delay in project

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or beyond the original scope shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system; ii. in case of a new project, the rate of return shall be reduced by 1.00% for such period as may be decided by the Commission, if the generating station or transmission system is found to be declared under commercial operation without commissioning of any of the Restricted Governor Mode Operation (RGMO) or Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system based on the report submitted by the respective RLDC; iii. in case of existing generating station, as and when any of the requirements under proviso ii of this Regulation are found lacking based on the report submitted by the respective RLDC, rate of return shall be reduced by 1.00% for the period for which the deficiency continues.	completion. Penalty on return for delay in completion of projects would encourage prudence on behalf of developers. • Also with regards to the provision of consideration of equity as debt for the additional captialisation after cut-off date within or beyond original scope of work, MSEDCL submits that any additional capitalisaiton which is beyond the original scope of work may not be included unless it falls under change in law or force majeure.
32. Interest on loan capital: (1)The loans arrived at in the manner indicated in Regulation 17 of these regulations shall be considered as gross normative loan for calculation of interest on loan. (2) The normative loan outstanding as on 1.4.2019 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2019 from the gross normative loan. (3) The repayment for each of the year of the tariff period 2019-24 shall be deemed to be equal to the depreciation allowed for the corresponding year/period. In case of de-capitalization of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered upto the date of decapitalisation of such asset. (4) Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be, the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the depreciation allowed for the year or part of the year. (5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio after providing appropriate accounting	• The present approach of giving the cost of debt a pass through in tariff does not provide incentive to the utility to lower the cost of borrowings which has a detrimental effect on discoms power purchase cost. • MSEDCL proposes calculation of cost of debt on normative basis by linking cost of debt to market parameters such as MCLR & G-sec • Further, there should be a ceiling rate equal to 150 bps above the existing MCLR rate. • The entities should be penalized in case they don't adhere to the laid guidelines within the specified timelines. • Provisions of resetting the normative cost of debt on a frequent basis shall be kept to gauge and incorporate market sentiments • Sharing of benefits in the ratio of 2:1 between the generating/ transmission entities and discoms on whatever benefits is accrued on account of restructuring of loans.

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adjustment for interest capitalized: Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered: Provided further that if the generating station or the transmission system, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company or the transmission licensee as a whole shall be considered. (6) The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest. (7) The changes to the terms and conditions of the loans shall be reflected from the date of such re-financing. (8) In case of dispute, any of the parties may make an application in accordance with the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999, as amended from time to time, including statutory re-enactment thereof for settlement of the dispute: Provided that the beneficiaries or the long term transmission customers shall not withhold any payment on account of the interest claimed by the generating company or the transmission licensee during the pendency of any dispute arising out of re-financing of loan.	• For refinancing, the sharing is address subsequently in the relevant section.
33. Depreciation: (1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system including communication system. In case of the tariff of all the units of a generating station or a transmission system including communication system for which a single tariff needs to be determined, the depreciation shall be computed from the effective date of commercial operation of the generating station or the transmission system taking into consideration the depreciation of individual units. Provided that effective date of commercial operation shall be worked out by considering the actual date of commercial operation and installed capacity of all the units of the generating station or capital cost of all elements of the	• Admissibility of additional expenditure after renovation and modernization should be restricted to limited items and further ascertainment of extension of useful life in lieu of additional expenditure incurred in R &M should be established to compute allowable depreciation. • The residual value of any specific asset shall be established for computing depreciation and Increase in the useful life translates into effective reduction in depreciation rates • The decrease in the salvage value from 10% to 5% needs to be justified as this will have an impact on tariff whereby 5% of additional burden will be shifted to Beneficiaries / DISCOM. Also, there needs to be a clarity

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transmission system, for which single tariff needs to be determined. (2) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission. In case of multiple units of a generating station or multiple elements of transmission system, weighted average life for the generating station of the transmission system shall be applied. Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis. (3) The salvage value of the asset shall be considered as 5% and depreciation shall be allowed up to maximum of 95% of the capital cost of the asset: Provided that the salvage value for IT equipment and software shall be considered as NIL and 100% value of the assets shall be considered depreciable. Provided further that in case of hydro generating station, the salvage value shall be as provided in the agreement, if any, signed by the developers with the State Government for development of the Plant: Provided also that the capital cost of the assets of the hydro generating station for the purpose of computation of depreciated value shall correspond to the percentage of sale of electricity under long-term power purchase agreement at regulated tariff: Provided also that any depreciation disallowed on account of lower availability of the generating station or generating unit or transmission system as the case may be, shall not be allowed to be recovered at a later stage during the useful life and the extended life. (4) Land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset. (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	on the salvage value and ascertained value at the end of the useful life and the resultant adjustment in the tariff with regards to differential amount between residual value and realized value.

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generating station and transmission system: 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. (6) In case of the existing projects, the balance depreciable value as on 1.4.2019 shall be worked out by deducting the cumulative depreciation as admitted by the Commission upto 31.3.2019 from the gross depreciable value of the assets. (7) The generating company or the transmission license, as the case may be, shall submit the details of proposed capital expenditure five years before the completion of useful life of the project along with justification and proposed life extension. The Commission based on prudence check of such submissions shall approve the depreciation on capital expenditure. (8) In case of de-capitalization of assets in respect of generating station or unit thereof or transmission system or element thereof, the cumulative depreciation shall be adjusted by taking into account the depreciation recovered in tariff by the decapitalized asset during its useful services.	
34. Interest on Working Capital: (1) The working capital shall cover: **(a) Coal-based/lignite-fired thermal generating stations** (i) Cost of coal or lignite and limestone towards stock, if applicable, for 15 days for pit-head generating stations and 20 days for non-pit-head generating stations for generation corresponding to the normative annual plant availability factor or the maximum coal/lignite stock storage capacity whichever is lower; (ii) Advance payment for 30 days towards Cost of coal or lignite and limestone for generation corresponding to the normative annual plant availability factor; (iii) Cost of secondary fuel oil for two months for generation corresponding to the normative annual plant availability factor, and in case of use of more than one secondary fuel oil, cost of fuel oil stock for the main secondary fuel oil; (iv) Maintenance spares @ 20% of operation and maintenance expenses specified in Regulation 35; (v) Receivables equivalent to 45 days of capacity charges and energy charges for sale of electricity calculated on the normative annual plant availability factor; and	• The closing stock of the coal may not have been ideally for 15 to 20 days due to various reasons, prima facie due to shortage of coal and therefore allowing working capital to that extent will result in undue advantage to generating company. • Therefore, Working capital requirements on account of fuel stock shall be done on annual average basis for last two years. Further, the commission should also consider the same methodology for working capital computation during true-up. • Since the working capital requirement is purely on the basis of the actual generation, Normative working capital should be linked with PLF and not PAF considering the wide gap between the two. Further, the gap is expected to become wider owing to increasing contribution of renewable sources in energy mix. • Also it is observed that Generator are claiming fixed

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(vi) Operation and maintenance expenses for one month. **(b) Open-cycle Gas Turbine/Combined Cycle thermal generating stations** (i) Fuel cost for 30 days corresponding to the normative annual plant availability factor, duly taking into account mode of operation of the generating station on gas fuel and liquid fuel; (ii) Liquid fuel stock for 15 days corresponding to the normative annual plant availability factor, and in case of use of more than one liquid fuel, cost of main liquid fuel duly taking into account mode of operation of the generating stations of gas fuel and liquid fuel; (iii) Maintenance spares @ 30% of operation and maintenance expenses specified in Regulation 35 (iv) Receivables equivalent to 45 days of capacity charge and energy charge for sale of electricity calculated on normative plant availability factor, duly taking into account mode of operation of the generating station on gas fuel and liquid fuel; and (v) Operation and maintenance expenses for one month. (c) **Hydro generating station (including pumped storage hydroelectric generating station) and transmission system:** (i) Receivables equivalent to 45 days of annual fixed charges; (ii) Maintenance spares @ 15% of operation and maintenance expenses specified in Regulation 35 of these regulations; and (iii) Operation and maintenance expenses for one month. (2) The cost of fuel in cases covered under sub-clauses (a), (b) and (c) of clause (1) of this Regulation shall be based on the landed cost incurred (taking into account normative transit and handling losses) by the generating station and gross calorific value of the fuel as per actual weighted average for the third quarter of preceding financial year in case of each financial year for which tariff is to be determined. Provided that in case of new generating station, the cost of fuel for the first financial year shall be considered based on landed cost incurred (taking into account normative transit and handling losses) and gross calorific value of the	charges by showing availability, on the other hand due to relatively higher variable charge it does not fit in to MOD. Therefore Normative working capital may be link to the PLF and non PAF. • Commission has considered Advance payment for 30 days towards Cost of coal or lignite and limestone for generation corresponding to the normative annual plant availability factor. However, the normal practice is to make advance payment for 0 days of stock. Also, this is required to be linked with the closing stock which is proposed to be 15 to 20 days and MSEDCL has proposed to linked the same with actual stock. • Reduction in receivable in working capital requirement reduce the working capital requirement to that extend, which helps to reduce cost to that extend which will be benefited ultimately to customer. Accordingly, the receivables is required to be limited to 30 days as any delay beyond that, generator is liable to get DPC and interest for the working capital blocked for any additional days.

<table>
<tr><th>CERC Draft Tariff Regulations 2019</th><th>Comments</th></tr>
<tr><td>fuel as per actual weighted average for three months, as used for infirm generation, preceding date of commercial operation for which tariff is to be determined.
(3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2019 or as on 1st April of the year during the tariff period 2019-24 in which the generating station or a unit thereof or the transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later:
Provided that in case of truing-up, the rate of interest on working capital shall be considered at bank rate as on 1st April of each of the financial year during the tariff period 2019-24;
(4) Interest on working capital shall be payable on normative basis notwithstanding that the generating company or the transmission licensee has not taken loan for working capital from any outside agency.</td><td></td></tr>
<tr><td>35. Operation and Maintenance Expenses:
(1) Thermal Generating Station:
Normative Operation and Maintenance expenses of thermal generating stations shall be as follows:
(1) Coal based and lignite fired (including those based on Circulating Fluidised Bed Combustion (CFBC) technology) generating stations, other than the generating stations or units referred to in clauses (b) and (d):
(in Rs Lakh/MW)
<table>
<tr><th>Year</th><th>200/210/ 250 MW</th><th>300/330/ 350 MW</th><th>500 MW</th><th>600 MW</th><th>800 MW and above</th></tr>
<tr><td>FY 2019-20</td><td>30.59</td><td>24.22</td><td>20.38</td><td>17.39</td><td>15.65</td></tr>
<tr><td>FY 2020-21</td><td>31.57</td><td>24.99</td><td>21.03</td><td>17.94</td><td>16.15</td></tr>
<tr><td>FY 2021-</td><td>32.58</td><td>25.79</td><td>21.71</td><td>18.52</td><td>16.66</td></tr>
</table></td><td>
The escalation considered is of 3.20% p.a. for thermal power plants / Transmission System and 4.74% p.a for Hydro Power Plants, without providing any rationale for the same with additional configuration of 800 MW.
Escalation in O&M Expenses based on WPI and CPI indexation is a transparent way to ascertain the percentage increase in O&M expense. However, pay revision/ pay hike component after a particular period should also be considered/ incorporated separately.
Also, considering the economics of benefits with regards to expansion of the units, the earlier provision may be retained whereby for 5^{th} and 6^{th} unit, 0.90 shall be multiple factor and for more than 6^{th} unit, 0.85 to be considered as multiple factor.
Reviewing of O&M expenses of plants being operated continuously at low level is necessary considering the rationale that lower utilization translates into lower expense. Accordingly, the O&M also needs to be linked to PLF of the plant considering the operation level as well
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<table>
<tr><th>CERC Draft Tariff Regulations 2019</th><th>Comments</th></tr>
<tr><td>
<table>
<tr><td>22</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>FY 2022-23</td><td>33.62</td><td>26.62</td><td>22.40</td><td>19.11</td><td>17.20</td></tr>
<tr><td>FY 2023-24</td><td>34.69</td><td>27.47</td><td>23.12</td><td>19.72</td><td>17.75</td></tr>
</table>
Provided that where the date of commercial operation of any additional unit(s) of a generating station after first four units occurs on or after 1.4.2019, the O&M expenses of such additional unit(s) shall be admissible at 90% of the operation and maintenance expenses as specified above;
Provided that Operation and maintenance of generating station and the transmission system of Bhakra Beas Management Board (BBMB) and Sardar Sarovar Project(SSP) shall be determined after taking into account provisions of the Punjab Reorganization Act, 1996 and Narmada Water Scheme, 1980 under Section 6-A of the Inter-State Water Disputes Act, 1956 respectively.
(3) Open Cycle Gas Turbine/Combined Cycle generating stations:
(in Rs Lakh/MW)
<table>
<tr><th>Year</th><th>Gas Turbine/ Combined Cycle generating stations</th><th>Small gas turbine power generating stations</th><th>Agartala GPS</th><th>Advance F Class Machines</th></tr>
<tr><td>FY 2019-20</td><td>16.24</td><td>34.38</td><td>41.00</td><td>25.00</td></tr>
<tr><td>FY 2020-21</td><td>16.76</td><td>35.48</td><td>42.31</td><td>25.80</td></tr>
</table>
</td><td>
as the expansion of renewable power within State.

The O&M of Sardar Sarovar Project(SSP) shall be determined considering the State Government agreement as well as Narmada Water Scheme, 1980 under Section 6-A of the Inter-State Water Disputes Act, 1956 respectively.
O&M expense excludes fuel other than used for generation of electricity, water charges and security expenses. However, Security expenses which is considered as a pass through on actual basis may not be considered separately and needs to be a part of O&M Expenses as it is obligation of the developer under Prudent utility practices. In case the Security Expenses is excluded, the O&M Base cost resultantly reduces and required to be considered accordingly for projection of O&M cost during Control Period.

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FY 2021-22	17.30	36.62	43.66	26.63
FY 2022-23	17.85	37.79	45.06	27.48
FY 2023-24	18.42	39.00	46.50	28.35

(5) Generating Stations based on coal rejects:

Year	O&M Expenses
FY 2019-20	29.29
FY 2020-21	30.23
FY 2021-22	31.20
FY 2022-23	32.20
FY 2023-24	33.23

(6) The Water Charges, Security Expenses and Capital Spares for thermal generating stations shall be allowed separately prudence check:

Provided that water charges shall be allowed based on water consumption depending upon type of plant, type of cooling water system etc., subject to prudence check. The details regarding the same shall be furnished along with the petition:

Provided further that the generating station shall submit the assessment of the security requirement and estimated expenses,

Provided also that the generating station shall submit the details of year wise actual capital spares consumed at the time of truing up with appropriate justification for incurring the same and substantiating that the same is not funded through compensatory allowance or special allowance or claimed as a part of additional capitalisation or consumption of stores and spares and renovation and modernization.

<table>
<tr><th>CERC Draft Tariff Regulations 2019</th><th>Comments</th></tr>
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(2) Hydro Generating Station: (a) Following operations and maintenance expense norms shall be applicable for hydro generating stations which have been operational for three or more years as on 01.04.2019 subject to maximum of 4% of admitted capital cost as on commercial date of the respective year:

(b) In case of the hydro generating stations declared under commercial operation on or after 1.4.2019, operation and maintenance expenses of first year shall be fixed at 2.5% of the original project cost (excluding cost of rehabilitation & resettlement works, IDC and IEDC) and, in case of hydro generating station which have not completed a period of three years as on 1.4.2019 , operation and maintenance expenses of 2019-20 shall be worked out by applying escalation rate of 4.70% on the applicable operation & maintenance expenses as on 31.3.2019. The operation & maintenance expenses for subsequent years of the tariff period shall be worked out by applying escalation rate of 4.70% per annum.

(c) The Security Expenses and Capital Spares for hydro generating stations shall be allowed separately after prudence check:

Provided further that the generating station shall submit the assessment of the security requirement and estimated expenses at the time, the details of year wise actual capital spares consumed at the time of truing up with appropriate justification.

(3) Transmission system:

a) The following normative operation and maintenance expenses shall be admissible for the transmission system:

<table>
<tr><th>Particulars</th><th>2019-20</th><th>2020-21</th><th>2021-22</th><th>2022-23</th><th>2023-24</th></tr>
<tr><td colspan="6">Norms for sub-station Bays (Rs Lakh per bay)</td></tr>
<tr><td>765 kV</td><td>42.03</td><td>43.37</td><td>44.76</td><td>46.19</td><td>47.67</td></tr>
<tr><td>400 kV</td><td>30.02</td><td>30.98</td><td>31.97</td><td>32.99</td><td>34.05</td></tr>
<tr><td>220 kV</td><td>21.01</td><td>21.69</td><td>22.38</td><td>23.1</td><td>23.83</td></tr>
<tr><td>132 kV and below</td><td>15.01</td><td>15.49</td><td>15.99</td><td>16.5</td><td>17.02</td></tr>
<tr><td colspan="6">Norms for Transformers (Rs Lakh per MVA)</td></tr>
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765 kV	0.364	0.376	0.388	0.4	0.413	
400 kV	0.266	0.275	0.284	0.293	0.302	
220 kV	0.182	0.188	0.194	0.2	0.206	
132 kV and below	0.182	0.188	0.194	0.2	0.206	
Norms for AC and HVDC lines (Rs Lakh per km)						
Single Circuit (Bundled Conductor with six or more sub-conductors)	0.845	0.872	0.9	0.929	0.959	
Single Circuit (Bundled conductor with four or more sub-conductors)	0.725	0.748	0.772	0.796	0.822	
Single Circuit (Twin & Triple Conductor)	0.483	0.498	0.514	0.531	0.548	
Single Circuit (Single Conductor)	0.242	0.249	0.257	0.265	0.274	
Double Circuit (Bundled conductor with four or more sub-conductors)	1.268	1.309	1.351	1.394	1.439	
Double Circuit (Twin & Triple	0.845	0.872	0.9	0.929	0.959	

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Conductor)						
Double Circuit (Single Conductor)	0.362	0.374	0.386	0.398	0.411	
Multi Circuit (Bundled Conductor with four or more sub-conductor)	2.226	2.297	2.371	2.446	2.525	
Multi Circuit (Twin & Triple Conductor)	1.482	1.529	1.578	1.629	1.681	
Norms for HVDC stations						
HVDC Back-to-Back stations (Rs Lakh per 500 MW)	750	774	799	824	851	
Rihand-Dadri HVDC bipole scheme (Rs Lakh)	2,319	2,393	2,469	2,548	2,630	
Talcher-Kolar HVDC bipole scheme (Rs Lakh)	2,564	2,646	2,731	2,818	2,908	
Bhiwadi-Balia HVDC bipole scheme	1,761	1,817	1,875	1,935	1,997	
Bishwanath-Agra HVDC bipole scheme	1,329	1,371	1,415	1,460	1,507	

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<tr><th>CERC Draft Tariff Regulations 2019</th><th>Comments</th></tr>
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Provided that operation and maintenance expenses for new HVDC bi-pole scheme for a particular year shall be allowed pro-rata on the basis of normative rate of operation and maintenance expense with reference to similar HVDC bi-pole scheme for the respective year:
Provided further that the O&M expenses norms for HVDC bi-pole line shall be considered as Single Circuit quad AC line;
Provided also that the O&M expenses for the GIS bays and transformers shall be allowed as worked out by multiplying 0.70 of the O&M expenses of the normative O&M expenses for bays and transformers.
(b) The total allowable operation and maintenance expenses for the transmission system shall be calculated by multiplying the number of sub-station bays, transformer capacity of the transformer (in MVA) and kMs of line length with the applicable norms for the operation and maintenance expenses per bay and per km respectively.
(4) Communication system: (a) The following norms shall be applicable for calculation of operation and maintenance expenses for the communication system:
<table>
<tr><th>Norms for O&M Expenses</th><th>2019-20</th><th>2020-21</th><th>2021-22</th><th>2022-23</th><th>2023-24</th></tr>
<tr><td>Length of OPGW links (Rs Lakh/Km)</td><td>0.069</td><td>0.071</td><td>0.073</td><td>0.076</td><td>0.078</td></tr>
<tr><td>Number of Remote Terminal Units(RTUs)(Rs Lakh/RTU)</td><td>2.16</td><td>2.23</td><td>2.30</td><td>2.37</td><td>2.45</td></tr>
<tr><td>Number of PMU installed (Rs Lakh/PMU)</td><td>0.96</td><td>0.99</td><td>1.02</td><td>1.05</td><td>1.08</td></tr>
</table>
(b) The total admissible O&M expenses for the communication system shall be calculated by multiplying the length of OPGW link (in km), number of remote
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<tr><th>CERC Draft Tariff Regulations 2019</th><th>Comments</th></tr>
<tr><td>terminal units (in number) and number of PMU (in number) and with the applicable norms for the operation and maintenance expenses as specified above.

(c) The Security Expenses, Capital Spares and Self-insurance reserve for transmission system and associated communication system shall be allowed separately after prudence check:
Provided that the transmission licensee shall submit the assessment of the security requirement and estimated expenses, the details of year wise actual capital spares consumed and details of self-insurance expenditure at the time of truing up with appropriate justification.</td><td>• There is an uneven escalation trend noticed for Communication system O&M and also being the first time the determination of O&M tariff is identified, the rational for the same is required to be provided:
<table><tr><th>Norms for O&M Expenses</th><th>2020-21</th><th>2021-22</th><th>2022-23</th><th>2023-24</th></tr><tr><td>Length of OPGW links</td><td>2.90%</td><td>2.82%</td><td>4.11%</td><td>2.63%</td></tr><tr><td>Number of Remote Terminal Units</td><td>3.24%</td><td>3.14%</td><td>3.04%</td><td>3.38%</td></tr><tr><td>Number of PMU installed</td><td>3.13%</td><td>3.03%</td><td>2.94%</td><td>2.86%</td></tr></table></td></tr>
<tr><td colspan="2">COMPUTATION OF CAPITAL COST OF INTEGRATED MINE AND INPUT PRICE</td></tr>
<tr><td>36. Input Price for variable charges:
(1) Where the generating company has the arrangement for supply of coal or lignite from the integrated mine(s) allocated to one or more of its generating stations as end use project, the variable charge component of tariff of the generating station shall be determined based on the input price of coal or lignite, as the case may be, from such integrated mines in accordance with these regulations. For this purpose, the generating company shall maintain the account of such integrated mine separately.
(2) These regulations shall apply in all cases where mine is allocated to the end use generating station whose tariff is to be determined by the Commission.
(3) The input price of lignite from the integrated mine shall be determined by</td><td>• The Regulations is silent on the treatment to be provided for any delay in CoD of the integrated mine compared to SCoD.</td></tr>
</table>

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the Commission for which appropriate regulations shall be notified separately. Till such time, the Commission shall continue to adopt the guidelines specified by the Ministry of Coal, Government of India. (4) These regulations shall apply to the mines achieving commercial operation on or after 1.4.2019 and also the mines which have been declared under commercial operation during 2018-19 and whose input price has not been determined by the Commission. **37. Date of Commercial Operation:** (1) The date of commercial operation in case of an integrated mine shall mean the date declared by the generating company on occurrence of earliest of the following milestones unless otherwise stated in the project report: a) Beginning of the financial year immediately after the year in which the 25% of rated capacity as per mining plan; or b) Beginning of the financial year immediately after the year in which the value of production is more than total expenditure; or c) two years of touching of coal or lignite; (2) The input price for supply of coal from the integrated mines prior to date of commercial operation shall be considered at the notified price of Coal India Limited for the corresponding grade of coal supplied to the power sector. (3) Any value of coal realized by the generating company from supply of coal prior to date of commercial operation shall be adjusted against the capital cost of the integrated mine. 38. Application for determination of Input Price: (1) The generating company shall file a petition before the Commission as per Annexure- I (Part IV) for determination of the input price for the variable cost along with the tariff petitions for one or more generating stations in accordance with the provisions of these regulations. (2) The generating company shall submit the details of capital expenditure and additional capital expenditure incurred and projected to be incurred duly certified by the Auditor, wherever applicable.	• It is required that in the event of any delay, a penalty is required to be proposed in the Regulations by way of a discount on the input price or reduction in fixed cost recovery. • Also, in case the target capacity is not met due to any reason, it results in procurement of coal by Generating Company from other sources such as E-auction or imported coal and any incremental cost due to this may be not be allowed to be pass on to the beneficiaries. • The Target capacity is required to be assess through a proper due diligence and no shortfall in production of coal is required to be allowed.

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39. Capital Cost: (1) The Capital cost for development, operation and closure of the integrated mine, shall be determined by the Commission after taking into account the approved mining plan, detailed project report, capital expenditure incurred, additional capital expenditure projected to be incurred, mine closure plan, cost audit report. (2) The expenditure incurred for development of the integrated mine by the generating company upto date of commercial operation shall be considered for the purpose of capital cost and the expenditure incurred after the date of commercial operation till the date of achieving target capacity shall be treated as capital work in progress (CWIP) and shall be capitalized on year to year basis as additional capital expenditure corresponding to the coal production level specified in the progressive mining plan or actual production, whichever is higher; (3) If the generating company has appointed any agency for development and operation of integrated mine, the assets belonging to the agency appointed by the generating company shall not form part of capital cost. (4) The capital expenditure incurred shall be admitted after prudence check. (5) The Commission may get the capital expenditure and additional capital expenditure, if any, of the integrated mine as furnished by the generating company vetted by the Central Mine Planning and Design Institute Ltd (CMPDIL) or any other independent agency. **40. Additional Capitalisation after commercial operation upto date of target capacity:** (1) The capital expenditure in respect of the integrated coal mine of generating station incurred or projected to be incurred, after the date of commercial operation and upto the date of achieving target capacity may be admitted by the Commission, subject to prudence check. (2) Capital expenditure incurred after the date of commencement of production upto the date of achieving target capacity shall be recognized as capital work in progress and admitted as additional capital expenditure during the respective years of the tariff period corresponding to the production targets envisaged in	• With regards to Capital Cost, a benchmark needs to be pre-decided for the impact of the same on the variable and fixed cost. • Determination of capital cost based on the actual cost as per the balance sheet of the regulated entities doesn't incentivize developers for taking cost cutting measures, hence, benchmarking of technology and capital needs to be done. • It would also be prudent to consider the delay with respect to some benchmarks rather than depending on the provisions of the contract between the generating company and its contractors/suppliers.

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the as per progressive mining plan; **41. Additional Capitalisation after date of target capacity:** The capital expenditure, in respect of the integrated coal mine of generating station incurred or projected to be incurred, within the scope of production plan, after the date of achieving target capacity, may be admitted by the Commission, subject to prudence check. **42. Debt: Equity Ratio:** Debt-Equity Ratio of 70:30 to be considered as on date of Commercial Operation for a particular coal mine. Actual equity in excess of 30% of the capital cost shall be treated as normative loan and in case actually equity deployed is less than 30% the actual equity shall be considered. The Debt: Equity ratio shall be applied to the capital cost of each year arrived after considering the Written Down Value of assets as per the industry practice followed in coal sector which may be as per Income Tax Act, 1961 or as per the Companies Act, 2013. **42A. Depreciation**: Depreciation in respect of integrated coal mine shall be computed from the date of commercial operation and value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission. Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro-rata basis. **42B. Operation and Maintenance Expenses:** The Operation and Maintenance expenses of mine shall be determined based on the original project cost for first year and thereafter, it shall be escalated at the average rate of wholesale price index (WPI) for each financial year. **42C. Interest on Working Capital**: (1) The working capital of the integrated mine shall cover: (i) Input cost of coal towards stock, if applicable, for 15 days of coal production	• Since this is the first regulations, to determine the O&M expenses for the mine, it will be not be a prudent practice to consider the base O&M cost as per original project cost as any inefficiency may also be included in the same. Therefore, benchmarking of the O&M cost of Mine is also require to be study and to considered as

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corresponding to the normative production level as per the approved mining plan; (ii) Consumption of stores and spare including explosives, lubricants and fuel @ 15% of operation and maintenance expenses; (iii) Operation and maintenance expenses for one month; (2) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2019 or as on 1st April of the year during the tariff period 2019-24 in which the mine is declared under commercial operation: Provided that in case of truing-up, the rate of interest on working capital shall be considered at bank rate as on 1st April of each of the financial year during the tariff period 2019-24; (3) Interest on working capital shall be payable on normative basis notwithstanding that the generating company has not taken loan for working capital from any outside agency. **43. Return on Equity:** Return on equity shall be computed at the base rate of 15.50%. The base rate of return on equity shall be grossed up with the effective tax rate of the respective financial year. **44. Interest on Loan:** The rate of interest shall be the weighted average rate of interest calculated on the basis of actual loan portfolio. 45. Determination of input price: (1) The input price of coal sourced from the integrated mine shall be derived based on the production cost and shall comprise following components: (a) Capital Cost; (b) Depreciation; (c) Interest on loan capital; (d) Return on equity; (e) Interest on working capital; and (f) Operation and maintenance expenses	base O&M cost. **Interest on Loan** • The present approach of giving the cost of debt a pass through in tariff does not provide incentive to the utility to lower the cost of borrowings which has a detrimental effect on discoms power purchase cost. • MSEDCL proposes calculation of cost of debt on normative basis by linking cost of debt to market parameters such as MCLR & G-sec

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(2) The input price of coal of such generating company whose integrated mine has been brought under commercial operation shall be determined by the Commission, after taking into account the information provide as per Appendix V; (3) The Commission shall approve the input price per Metric Tonne (MT) after the prudence check and considering the information provided by the generating company as specified in clause (2) of this Regulation. (4) At the start of the tariff period, in respect of such generating station having integrated mine, the Commission through specific tariff orders shall approve the input price of per metric tonne as calculated above. The input price per Metric Tonne so approved for the first month of supply of from the integrated mine, shall form the basis for arriving at input price for subsequent months and periods. In case of non-availability of information before raising the bill, the generating company may raise provisional bill, which can be subsequently adjusted against the final bill. Provided that the generating company shall provide details of input price as per prescribed formats as per Annexure-I to the beneficiaries. (5) The input price per Metric Tonne (MT) at the start of supply from integrated mine shall be trued up by the generating company at the end of every financial year on the basis of actual cost taking into account the audited financial statements and cost audit report / cost accounting records as well as any directions of the Commission, if any, in this regard and shall refund or recover the amount from the beneficiaries at the Bank Rate.	• Further, there should be a ceiling rate equal to 150 bps above the existing MCLR rate. • The entities should be penalized in case they don't adhere to the laid guidelines within the specified timelines. • Provisions of resetting the normative cost of debt on a frequent basis shall be kept to gauge and incorporate market sentiments **<u>Input Price</u>** • The input price of the coal or lignite may not be allowed merely on the basis of the cost certified by the auditor but also a prudence check is required to be carried out by Commission to determine such input price. Also, the benchmark can be considered for the input price to control any inefficiency to be passed on to the beneficiaries. The regulations needs to provide the provision that is shall not increase the notified price of

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	CIL or else the basic advantage of integrated mine may get defeated.
COMPUTATION OF VARIABLE COST	
46. Variable Cost: The variable cost in respect of the thermal generating Stations shall comprises landed fuel cost of primary fuel, Cost of secondary fuel oil consumption and cost of reagents on account of implementation of the revised emission control standards.	• MSEDCL proposes facilitation of creation of pollution control systems through the green fund already created by GOI by levying clean energy cess. Discoms are already stressed and any further pass through of costs would further deteriorate their financial. • CERC through CEA may propose government of India to compensate the generating utilities towards creation of pollution control systems so as to reduce the burden on discoms and thereby end consumers. Further, any installation of pollution control equipments should be done with the prior consent of discoms.
47. Components of Landed cost of Primary Fuel: The landed cost of primary fuel for any month shall include base price or input price of fuel corresponding to the grade and quality of fuel and inclusive of statutory charges as applicable, transportation cost by rail or road or any other means, and loading, unloading and handling charges. Provided that procurement of fuel at a price other than Government notified prices may be considered, if based on competitive bidding through transparent process, for the purpose of landed fuel cost; Provided further that landed cost of primary fuel shall be worked out based on the actual bill paid by the generating company including any adjustment on account of quantity and quality; Provided also that in case of Coal or Lignite thermal generating station, the Gross Calorific Value shall be measured by third party sampling and the expenses towards the third party sampling facility shall be reimbursed by the beneficiaries.	• MSDECL in line with the consultative paper, proposed to have the standardizing of the cost components and also suggests standardization in the format in which the generators should give information regarding fuel cost to the procurers. The discoms should also have the right to seek any other relevant information from the generators regarding fuel as and when required. • The generators should intimate the discoms as early as one month before any change in variable cost (more than 5%) owing to any or several reasons (change in source, change in mode of transport, internal handling, change in law, blending proportion, etc) is envisaged. • Standardization of components of fuel cost and capping on the variation of prices and further verification of the same would decrease the wide fluctuations in tariffs. **<u>Alternate Fuel Sources:-</u>** • Heavy reliance on coal from alternative sources would

<table>
<tr><th>CERC Draft Tariff Regulations 2019</th><th>Comments</th></tr>
<tr><td></td><td>translate into substantial increase in energy charges affecting the power purchase cost for discoms.
• In the context of erratic supply of coal from domestic sources, arrangements from alternative sources of coal though can be allowed but within a pre-specified limit and at the prior consent of discom/beneficiary.</td></tr>
<tr><td>48. Transit and Handling Losses:
The landed cost of coal or lignite during the month shall include the transit and handling losses as per the following norms :-
<table>
<tr><th>Thermal Generating station</th><th>Distance of Generating Station from source of fuel</th><th>Transit and Handling Loss (%)</th></tr>
<tr><td>Pit head</td><td>-</td><td>0.20%</td></tr>
<tr><td>Non-pit head</td><td>Upto 1000 KM</td><td>0.80%</td></tr>
<tr><td></td><td>Above 1,000 KM</td><td>1.20%</td></tr>
</table>

Provided that in case of pit head stations if coal or lignite is procured from sources other than the pit head mines which is transported to the station through rail, transit and handling losses applicable for non-pit head station shall apply:

Provided further that in case of imported coal, the transit and handling losses applicable for non-pit head station shall apply.</td>
<td>• Instead of getting into all these intricacies, MSEDCL suggests benchmarking of specific coal consumption (Kg/ kWh) considering all the parameters which may affect electricity generation of the specific unit/ station/ technology to avoid the complications and to simplify the procedure for fuel cost ascertainment.
• Cost of slippage in grade of coal between the loading point and the site of generating station needs to be looked at in terms of risk allocation between the coal company, railways and the generating stations. The quantity of losses in transit attributed to theft and inefficiencies should not be passed to beneficiaries.
• At present pit head stations are nowhere defined in regulations which allows ambiguity in allowance of transit and handling losses, therefore this needs to be addressed in new Regulations. It is submitted that definition of pit-head station is not clear with respect to the distance and therefore, it is necessary that the definition of pit head and non-pit-head should be clarified/ defined in the Regulation
• The norms of the transit loss has been increased from 0.8% to 1.2% (allowing increase of 50% inefficiency) for the non-pit head power plant getting coal from the distance above 1000 km. The loss for imported coal is linked with non-pit head coal whereby the transit loss will be increased from</td></tr>
</table>

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	0.2% to 1.2% (increased by 6 times). However in Statement of Reasons, it has been stated that for imported coal, the loss related to pit-head i.e. 0.20% will be applied. So the Regulations and Statement of Reasons are contradictory in nature. • However, it is submitted that mere increase in distance in transportation of coal, may not results in to increase in transit and handling loss.. • Considering the norms to be in progressive in nature, the transit and handling loss need to be reduced over the period of time instead of increasing the same. Hence the increase of transit and handling loss may be reviewed and need to be revised accordingly.
49. Computation of Gross Calorific Value: (1) The gross calorific value for computation of energy charges as per Regulation 52 of these regulations shall be done in accordance with GCV on as received basis. (2) The generating company shall provide to the beneficiaries of the generating station the details in respect of GCV and price of fuel i.e. domestic coal, imported coal, e-auction coal, lignite, natural gas, RLNG, liquid fuel etc. as per the forms prescribed at Annexure-I to these regulations: Provided that the details of the weighted average GCV of the fuel on as received basis used for generation during the period, blending ratio of the imported coal with domestic coal, proportion of e-auction coal shall be provided separately, along with the bills of the respective month; Provided further that copies of the bills and details of parameters of GCV and price of fuel i.e. domestic coal, imported coal, e-auction coal, lignite, natural gas, RLNG, liquid fuel etc., details of blending ratio of the imported coal with	• MSEDCL suggests benchmarking of specific coal consumption (Kg/ kWh) considering all the parameters which may affect electricity generation of the specific/ unit/ station/ technology to avoid the complications and to simplify the procedure for fuel cost ascertainment. • Also, GCV as received at Coal Mine and measured at unloading point may be different due to various reasons. As provided in the consultative paper, it was stated that the loss of GCV can take place on account of grade slippage at mine end, during transportation (transit with railway) and during storage (at generating stations). • MSEDCL proposes standardizing GCV computation method on "As Billed' basis for procurement of coal both from domestic and international suppliers. • The regulations needs to highlight the impact of grade slippage and whole burden cannot be pass on to the beneficiaries and ultimately to the end consumers.

<table>
<tr><th>CERC Draft Tariff Regulations 2019</th><th>Comments</th></tr>
<tr><td>domestic coal, proportion of e-auction coal shall also be displayed on the website of the generating company.</td><td>Also, there are instances whereby the coal goes to washery from the Coal mine end and then to the unloading point of the Generating Station. Therefore, to avoid and loss of GCV which is due to reason within the control of Generator, it is necessary to have a GCV check at mine end, washery end and unloading point.
Heavy reliance on the alternate coal (Imported coal) may result in to substantial increase in the energy charges affecting the power purchase cost for DISCOMs. Hence stringent due diligence of the blending ratio/quantum and quality of the coal may be done based on the Invoicing and circumstance in which imported coal has been procured in order to control the fuel cost.
The generators should intimate the discoms as early as one month before any change in variable cost (more than 5%) owing to any or several reasons (change in source, change in mode of transport, internal handling, change in law, blending proportion, etc) is envisaged.</td></tr>
<tr><td>50. Landed Price of Reagent (Limestone, Sodium Bi-Carbonate, Urea and Anhydrous Ammonia etc.):
(1) Where the specific reagent such as limestone, Sodium Bi-Carbonate, Urea and Anhydrous Ammonia are used during operation of emission control system, the landed price of such reagents shall be determined based on normative consumption specified in clause (2) of this Regulation and purchase price of the reagent through competitive bidding, applicable statutory charges and transportation cost;

(2) The normative consumption of specific reagent for the various technologies installed for Emission Control System shall be considered as under:

<table><tr><th>Particulars</th><th></th><th>Specific Reagent Consumption (gms / kWh)</th></tr><tr><td>SOX Control</td><td>Wet Limestone</td><td>15.00</td></tr></table></td><td>The rationale behind such normative consumption is not provided and MSEDCL request to provide the same.
MSEDCL proposes facilitation of creation of pollution control systems through the green fund already created by GOI by levying clean energy cess. Discoms are already stressed and any further pass through of costs would further deteriorate their financial.
CERC through CEA may propose government of India to compensate the generating utilities towards creation of pollution control systems so as to reduce the burden on discoms and thereby end consumers. Further, any installation of pollution control equipments should be done with the prior consent of discoms.</td></tr>
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<tr><td>

System	Type	(Limestone)
	Dry sorbent injection	12.00 (Sodium Bi-Carbonate)
Standard Particulate Matter		-
NOX Control System	Combustion Modification	-
	Selective Non-Catalytic Reduction	1.85 (Urea)
	Selective Catalytic Reduction (SCR)	1.60 (Anhydrous Ammonia)

Provided that the specific reagent consumption specified as above is allowed on provisional basis, and shall be applicable only where emission control system is installed. The above norms shall be reviewed based on the actual of performance during the 2021-22.</td><td></td></tr>
<tr><td colspan="2">COMPUTATION OF CAPACITY CHARGES AND ENERGY CHARGES</td></tr>
<tr><td>51. Computation and Payment of Capacity Charge for Thermal Generating Stations:
(1) The fixed cost of a thermal generating station shall be computed on annual basis, based on norms specified under these regulations, and recovered on monthly basis under capacity charge. The total capacity charge payable for a generating station shall be shared by its beneficiaries as per their respective percentage share or allocation in the capacity of the generating station. Capacity Charge for the month shall be recovered in two parts viz., Capacity Charge for Peak period of the month and Capacity Charge for Off-Peak period of the month.
(2) The Capacity Charge rate for Peak hours shall be 25% more than that of Off-Peak hours. The Capacity Charge payable to a thermal generating station for a calendar month shall be calculated in accordance with the following formulae:</td><td>• Computation of annual fixed charges on pro-rata basis and not for the entire capacity is the prevailing practice.
• The proposed mechanism for differential peak and off-peak recovery of fixed charges seems to hold good for the procurers. There have been numerous cases where generating stations have been found to declare lower availability during the peak demand period and higher availability during low demand period so as to achieve the target cumulative availability on annual basis to recover the full annual fixed charges. MSEDCL strongly proposes for introduction of system of differential AFC recovery linked to peak and off-peak months for each generating stations.
• With considerable expected renewable capacity addition in the system, there will be huge demand variation within a day. Thus, having a differential peak and off-</td></tr>
</table>

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$CC_m = \sum_{i=1}^{NDM} CCpdi + \sum_{i=1}^{NDM} CCopdi$ Where, $CC_{pd} = \frac{(AFC)}{(NDY)} x\ WFp$; $CC_{opd} = \frac{(AFC)}{(NDY)} x\ WFop$; and, $WFp = \frac{(1.25\ x\ NHDp\ x\ PAFDp)}{[(1.25\ x\ NPAFp\ x\ NHDp)+(NPAFop\ x\ NHDop)]}$; $WFop = \frac{(NHDop\ x\ PAFDop)}{[(1.25\ x\ NPAFp\ x\ NHDp)+(NPAFop\ x\ NHDop)]}$ Subject to, $CCm \leq \frac{(AFC\ x\ NDM)}{NDY}$; and $\sum_{i=1}^{NDM} CCpdi \leq \frac{(AFC\ x\ NDM)}{(NDY)} x \frac{(1.25\ x\ NPAFp\ x\ NHDp)}{[(1.25\ x\ NPAFp\ x\ NHDp)+(NPAFop\ x\ NHDop)]}$; and $\sum_{i=1}^{NDM} CCopdi \leq \frac{(AFC\ x\ NDM)}{(NDY)} x \frac{(NPAFop\ x\ NHDop)}{[(1.25\ x\ NPAFp\ x\ NHDp)+(NPAFop\ x\ NHDop)]}$ Where, CCm = Capacity Charge for the month NDM = Number of Days in the month CCpd = Capacity Charge for the peak hours of the day CCopd = Capacity Charge for the off-peak hours of the day AFC = Annual Fixed Cost NDY = Number of Days in the year NHDp = Normative Number of Peak Hours in a Day NHDop = Normative Number of Off-Peak Hours in a Day PAFDp = Plant Availability Factor achieved during the Peak Hours of the Day	peak tariff on day basis holds importance. The same will also be in line with Tariff Policy which clearly mentions that the Commission shall introduce differential rates of fixed charges for peak and off-peak hours. • Also, the plant availability should be based upon the availability of coal/ fuel as per the CEA norms. • It is proposed that The number of hours of "Peak" and "Off-Peak" periods in a region shall be declared on monthly basis in advance, by the concerned RLDC and the Peak period in a day shall not be less than 4 hours. However, it is submitted that for inter-State generating station, which has a multiple State as beneficiaries which may fall in different region or within same region, the peak hours may be different for the same State and therefore, the Peak and Offpeak is required to be defined State wise rather than region wise. • Mechanism for fixation of "peak" and "off peak" period need to be clarified.

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PAFDop = Plant Availability Factor achieved during the Off-Peak Hours of the Day NPAFp = Normative Plant Availability Factor for Peak Hours of the Day NPAFop = Normative Plant Availability Factor for Off-Peak Hours of the Day WFp = Weightage Factor for Peak period WFop = Weightage Factor for Off-Peak period (3) Normative Plant Availability Factor for "Peak" and "Off-Peak" periods shall be equivalent to the NQPAF specified in Regulation 59 (A) of these regulations. The number of hours of "Peak" and "Off-Peak" periods in a region shall be declared on monthly basis in advance, by the concerned RLDC and the Peak period in a day shall not be less than 4 hours. (4) The generating company shall be allowed to recover the monthly Peak period Capacity Charge upon achievement of PAF equivalent to the NQPAF for cumulative Peak period during the month, and the monthly Off-Peak Period Capacity Charge upon achievement of PAF equivalent to the NQPAF for cumulative Off-Peak period during the month. (5) Achievement of PAF less than the specified NQPAF in "Peak" or "Off-Peak" periods shall result in pro-rata reduction in recovery of Capacity Charge for the appropriate period. Provided that if the cumulative peak period PAF achieved during a quarter is more than the specified NQPAF for peak period and the cumulative Off-Peak period PAF achieved during the quarter is less than the specified NQPAF for Off-Peak period, the loss in recovery of Capacity Charge for Off-Peak period shall be off-set against the notional gain on account of over-achievement in Peak period, subject to the ceiling of full recovery of Capacity Charge for Off-Peak period; Provided further that if the cumulative peak period PAF achieved during the quarter is less than the specified NQPAF for peak period and the cumulative Off-Peak period PAF achieved during the quarter is more than the specified NQPAF	

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for Off-Peak period, the loss in recovery of Capacity Charge for Peak period shall not be off-set against the notional gain on account of over-achievement in Off-Peak period; Provided also that carry forward of under-recovery of Capacity Charge shall not be allowed for recovery from one quarter to the subsequent quarter. (6) The Plant Availability Factor achieved for a Day (PAFD), Plant Availability Factor achieved for a Month (PAFM) and Plant Availability Factor achieved for a Quarter (PAFQ) shall be computed in accordance with the following formula: NPAFD or PAFM or PAFQ = 10000 x Σ DCi / { N x IC x (100 - AUX) } % i=1 Where, AUX = Normative auxiliary energy consumption in percentage. DCi = Average declared capacity (in ex-bus MW), for the ith day of the period i.e. the month or the year as the case may be, as certified by the concerned load dispatch centre after the day is over. IC = Installed Capacity (in MW) of the generating station N = Number of days during the period or number of hours during the peak or off-peak periods of the day, as the case may be. Note: DCi and IC shall exclude the capacity of generating units not declared under commercial operation. In case of a change in IC during the concerned period, its average value shall be taken. (7) In addition to the capacity charge, an incentive shall be payable to a generating station or unit thereof @ 65 paise / kWh for ex-bus scheduled energy during Peak period and @ 50 paise / kWh for ex-bus scheduled energy during Off-Peak period corresponding to scheduled generation in excess of ex-bus energy corresponding to Normative Quarterly Plant Load Factor (NQPLF) as specified in Regulation 59 (B) of these regulations. **52. Computation and Payment of Energy Charge for Thermal Generating Stations:**	

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(1) The energy charge shall cover the primary and secondary fuel cost and limestone consumption cost (where applicable), and shall be payable by every beneficiary for the total energy scheduled to be supplied to such beneficiary during the calendar month on ex-power plant basis, at the energy charge rate of the month (with fuel and limestone price adjustment). Total Energy charge payable to the generating company for a month shall be: Energy Charges = (Energy charge rate in Rs./kWh) x {Scheduled energy (ex-bus) for the month in kWh} (2) Energy charge rate (ECR) in Rupees per kWh on ex-power plant basis shall be determined to three decimal places in accordance with the following formulae: (a) For coal based and lignite fired stations: ECR = {(SHR – SFC x CVSF) x LPPF / (CVPF + SFC x LPSFi + LC x LPL} x 100 /(100 – AUX) (b) For gas and liquid fuel based stations ECR = SHR x LPPF x 100 / {(CVPF) x (100 – AUX)} Where, AUX =Normative auxiliary energy consumption in percentage. CVPF = (a) Weighted Average Gross calorific value of coal as received, in kCal per kg for coal based stations less 85 Kcal/Kg on account of variation during storage at generating station; (b) Weighted Average Gross calorific value of primary fuel as received, in kCal per kg, per litre or per standard cubic meter, as applicable for lignite, gas and liquid fuel based stations. (c) In case of blending of fuel from different sources, the weighted average Gross calorific value of primary fuel shall be arrived in proportion to blending ratio. CVSF = Calorific value of secondary fuel, in kCal per ml. ECR = Energy charge rate, in Rupees per kWh sent out. SHR = Gross station heat rate, in kCal per kWh. LC = Normative limestone consumption in kg per kWh. LPL = Weighted average landed price of limestone in Rupees per kg. LPPF = Weighted average landed price of primary fuel, in Rupees per kg, per litre or per standard cubic metre, as applicable, during the month. (In case of	**<u>Loss in GCV during storage:</u>** • The energy charges determination as per Regulations is on the GCV Received basis with an additional 85kCal/kg loss allowed on account of variation during storage at generating station. • Loss of GCV due to storage will result in additional burden on the beneficiaries / DISCOM which actual needs to be borne by Generator. Hence MSEDCL strongly object to the provision of reduction of 85 Kcal/Kg on account of variation during storage at generating station while computing the energy charge rate. **<u>Alternate Fuel Sources:-</u>** • Heavy reliance on coal from alternative sources would

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blending of fuel from different sources, the weighted average landed price of primary fuel shall be arrived in proportion to blending ratio) SFC = Normative Specific fuel oil consumption, in ml per kWh. LPSFi = Weighted Average Landed Price of Secondary Fuel in Rs./ml during the month Provided that energy charge rate for a gas or liquid fuel based station shall be adjusted for open cycle operation based on certification of Member Secretary of respective Regional Power Committee for the open cycle operation during the month. (3) In case of part or full use of alternative source of fuel supply by coal based thermal generating stations other than as agreed by the generating company and beneficiaries in their power purchase agreement for supply of contracted power on account of shortage of fuel or optimization of economical operation through blending, the use of alternative source of fuel supply shall be permitted to generating station: Provided that in such case, prior permission from beneficiaries shall not be a pre-condition, unless otherwise agreed specifically in the power purchase agreement: Provided further that the weighted average price of use of alternative source of fuel shall not exceed 30% of base price of fuel computed as per clause (7) of this Regulation. Provided also that where the energy charge rate based on weighted average price of use of fuel including alternative source of fuel exceeds 30% of base energy charge rate as approved by the Commission for that year or energy charge rate based on weighted average price of use of fuel including alternative sources of fuel exceeds 20% of energy charge rate based on based on weighted average fuel price for the previous month, Whichever is lower shall be considered and in that event, prior consultation with beneficiary shall be made not later than three days in advance. (4) Where the biomass fuel is used for blending with coal, the landed price of	translate into substantial increase in energy charges affecting the power purchase cost for discoms. • In the context of erratic supply of coal from domestic sources, arrangements from alternative sources of coal though can be allowed but within a pre-specified limit and at the prior consent of discom/beneficiary.

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biomass fuel shall be worked out based on normative consumption as specified in these regulations or actual consumption, whichever is lower, and landed price discovered at the receiving end of the generating station, inclusive of taxes and duties as applicable; (5) The Commission through the specific tariff orders to be issued for each generating station shall approve the energy charge rate at the start of the tariff period. The energy charge so approved shall be the base energy charge rate at the start of the tariff period. The base energy charge rate for subsequent years shall be the energy charge computed after escalating the base energy charge rate approved at the start of the tariff period by escalation rates for payment purposes as notified by the Commission from time to time for under competitive bidding guidelines. (6) The tariff structure as provided in this Regulation 51 and Regulation 52 of these regulation may be adopted by the Department of Atomic Energy, Government of India for the nuclear generating stations by specifying annual fixed cost (AFC), normative quarterly plant availability factor (NQPAF), installed capacity (IC), normative auxiliary power consumption (AUX) and energy charge rate (ECR) for such stations. **53. Declaration of Availability and Dispatch in case of thermal generating station**: The generating company shall declare day ahead availability or any revision thereof in respect of generating station for each fuel source which may be differentiated in terms of their price and calorific value and the beneficiaries shall have an option to schedule the power based on their merit order dispatch. **56. Computation and Payment of Transmission Charge for Inter-State Transmission System and communication system:** (1) The fixed cost of the transmission system or communication system forming part of transmission system shall be computed on annual basis, in accordance with norms contained in these regulations, aggregated as appropriate, and	**<u>Merit Order Dispatch</u>** • MSEDCL proposes to standardize regulations on MOD w.r.t the parameters that governs the derivation of costs such as variable cost, change in law components, FAC, percentage transmission losses and charges etc. • While preparing MoD, the incentive given on attainment of cumulative normative availability should also be considered. • Instead of determining the MoD on the basis of past dates having time lag of almost 2 months in the billing cycle i.e on the basis of (n-2), the current month's projected rates should be considered with an allowance of 3%.

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recovered on monthly basis as transmission charge from the users, who shall share these charges in the manner specified in clause (2) of this Regulation. (2) The Transmission charge (inclusive of incentive) payable for a calendar month for transmission system or part shall be computed for each region separately for AC and DC system as under: **For AC system:** a) For TAFM < 98% - AFC x (NDM/NDY) x (TAFM/98%) b) For TAFM: 98%< TAFM < 98.5% - AFC x (NDM/NDY) x (1) c) For TAFM: 98.5% < TAFM < 99.75% - AFC x (NDM/NDY) x (TAFM/98.5%) d) For TAFM > 99.75% - AFC x (NDM/NDY) x (99.75%/98.5%) **For HVDC bi-pole links and HVDC back-to-back Stations:** a) For TAFM < 95.00% AFC x (NDM/NDY) x (TAFM/95.00%) b) For TAFM: 95.00%< TAFM < 97.50% AFC x (NDM/NDY) x (1) c) For TAFM: 97.50%< TAFM < 99.75% AFC x (NDM/NDY) x (TAFM/97.50%) d) For TAFM > 99.75% AFC x (NDM/NDY) x (99.75%/97.50%) Where, AFC = Annual Fixed Cost specified for the year in Rupees NATAF = Normative annual Transmission availability factor, in per cent NDM = Number of days in the month NDY = Number of days in the year TAFM = Transmission System availability factor for the month, in percent computed in accordance with **Appendix-II**. **For Communication System:** a) For ACFM < 99.00% AFC x (NDM/NDY) x (ACM/99.00%) b) For ACFM > 99.00%	

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AFC x (NDM/NDY) x (ACFM%/99.00%) Where, CC = Communication charges inclusive of incentive up to the Nth month, AFC= Annual fixed cost of communication system as specified for the year in rupees, ACFM = Monthly Availability Factor of Communication system as a percentage, NACF = Normative Availability Factor of Communication system as a percentage, NDPN=No of days upto the end of Nth month of the financial year, NDY = No. of days in the year, and NAC1= Communication availability factor in percentage achieved upto the end of the Nth month of the year, (3) The transmission charges shall be calculated separately for part of the transmission system having different NATAF, and aggregated thereafter, according to their sharing by the long term customers. The transmission charges of the communication system shall be calculated by aggregating for individual communication system with reference to NACF and shall be shared by the long term customers. (4) The Normative Availability of Communication System (NACF) for communication system or part shall be computed for each region separately: $NACF = \sum_{i=1}^{N} (Ai)$ Where, N is total number of communication channels which is based on the requirement of RLDCs or NLDC and the same would be decided in consultation with respective; Ai is Availability of ith Channel which shall be calculated as (Bt-Bni)/Bt where Bt is the total number of blocks in month and Bni is the total number of block in month during which channel is not available and is calculated as difference between non availability of channel less non availability of channel on account of natural force majeure.	
NORMS OF OPERATION	

<table>
<tr><th>CERC Draft Tariff Regulations 2019</th><th>Comments</th></tr>
<tr><td>
Norms of operation for thermal generating station
59. The norms of operation as given hereunder shall apply to thermal generating stations:
(A) Normative Quarterly Plant Availability Factor (NQPAF)
(a) For all thermal generating stations, except those covered under clauses (b), (c), (d), & (e) - 83%
Provided that for the purpose of computation of Normative Quarterly Plant Availability Factor, annual scheduled plant maintenance shall not be considered.

(b) For following Lignite-fired Thermal generating stations of NLC India Ltd:

<table><tr><td>TPS-I</td><td>72%</td></tr></table>
</td><td>

Declaration of plant availability of generating units should be based upon the coal stock defined by CEA.
MSEDCL welcome the norms of quarterly Plant availability. Presently generator declare the higher availability in non-peak period and cumulatively able to achieve its target availability at annual level, which will be address to some extend due to quarterly plant availability norm.
As per draft regulation, for the purpose of computation of Normative Quarterly Plant Availability factor, annual schedule plant maintenance shall not be considered. Whereas In previous regulations, achievement of 85% of PAF for full recovery capacity charges considering annual scheduled plant maintenance. Hence, since, in draft regulation such annual scheduled plant maintenance period is not to be included for the computation of NQPAF, limit of PAF to recover full capacity charges should have been increased to that extend (i.e. 93%)
In view of this, as per provision in Draft Regulation, generator will be able to recover its full capacity charges by achieving just 83% PAF against PAF of 93% level (ideally it should have been considering annual scheduled plant maintenance period out)
Also, there have been numerous cases where generating stations have been found to declare lower availability during the peak demand period and higher availability during low demand period so as to achieve the target cumulative availability on annual basis to recover the full annual fixed charges. In this process, the beneficiaries may not get the electricity when required at the time of high demand. Consequently the discoms are required to procure power from short term markets in order to fulfil

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	its demand. This translates in to discoms paying open access charges as well as the fixed cost for procuring power which results in financial burdening. • For instance, *For 29 NTPC Coal based plants (excluding Mauda STPS Stage I), the average availability factor works out to 91.63% and the median works out to 91.57% with standard deviation of 4.81% which means availability factor of the plant varies from 96.39% and 86.75%.* • It has been proposed in Draft CERC Regulation 2019 that Normative Quarterly Plant Availability Factor (NQPAF) will be 83% as compared to Normative Annual Plant Availability Factor of 85% in previous CERC Tariff Regulations. • However as provided in the Statement of Reasons, it is clearly stated as follows: *……the average availability during FY 2012-13 to FY 2016-17 for most of the station of NTPC was above 90%, with few stations in the range of 85% to 90% and only 1 station i.e. Farakka with less than 85%.* • Therefore MSEDCL submit that, PAF limit may be kept at 92% or 93% with keeping annual scheduled plant maintenance period out or PAF to be kept at 85% including annual scheduled plant maintenance period. Else proposed provision in draft Regulation will be providing incentive to Generating Station for lower performance, thus may not be considered.

<table>
<tr><th>CERC Draft Tariff Regulations 2019</th><th>Comments</th></tr>
<tr><td>
(C) Gross Station Heat Rate:
(a) Existing Thermal Generating Station
(i) For existing Coal-based Thermal Generating Stations, other than those covered under clauses (ii) and (iii) below:
<table>
<tr><th>200/210/250 MW Sets</th><th>500 MW Sets (Sub-critical)</th></tr>
<tr><td>2,410 kCal/kWh</td><td>2,375 kCal/kWh</td></tr>
</table>
Note 2
For the generating stations having combination of 200/210/250 MW sets and 500 MW and above sets, the normative gross station heat rate shall be the weighted average gross station heat rate of the combinations.

Note 3
The normative gross station heat rate above is exclusive of the compensation specified in Regulation 6.3 B of the Grid Code. The generating company shall, based on unit loading factor, consider the compensation in addition to the normative gross heat rate above.
(ii) For following Thermal generating stations of NTPC Ltd:
<table>
<tr><td>Talcher TPS</td><td>2,830 kCal/kWh</td></tr>
<tr><td>Tanda TPS</td><td>2,750 kCal/kWh</td></tr>
</table>

(v) TPS-I and TPS-II (Stage I & II) of NLC India Ltd:
TPS-I : 4,000 kCal/kWh
TPS-II : 2,720 kCal/kWh
TPS- I (Expansion): 2,750 kCal/kWh

(vi) Open Cycle Gas Turbine/Combined Cycle generating stations:
For following existing gas based thermal generating stations:
<table>
<tr><th>Name of generating station</th><th>Combined cycle (kCal/kWh)</th><th>Open Cycle (kCal/kWh)</th></tr>
<tr><td>Gandhar GPS</td><td>2,040</td><td>2,960</td></tr>
</table>
</td><td>

The heat rate is a crucial parameter as it has substantial impact on tariff
The heat rate norms is required to be seen in the light of efficiency improvement targets to be achieved by the generating stations.
The operational norms should be progressive in nature and should be revised from time to time. The utilities may take up any investment if required to meet the norms, however, guidelines should be fixed for adherence to the timelines, scope and cost. In case the generator fails to achieve the target within the agreed terms then penalty should be imposed.
The gain/savings on account of improvement in heat rates should be shared with the beneficiaries.
The norms since needs to be progressive in nature, it is required to revise the SHR of 500 Sets to a lower level rather than continuing with the same norms as notified in last year.

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<table>
<tr><th>CERC Draft Tariff Regulations 2019</th><th>Comments</th></tr>
<tr><td>
<table>
<tr><td>Kawas GPS</td><td>2,050</td><td>3,010</td></tr>
<tr><td>Anta GPS</td><td>2,075</td><td>3,010</td></tr>
<tr><td>Dadri GPS</td><td>2,000</td><td>3,010</td></tr>
<tr><td>Auraiya GPS</td><td>2,100</td><td>3,045</td></tr>
<tr><td>Faridabad GPS</td><td>1,975</td><td>2,900</td></tr>
<tr><td>Kayamkulam GPS</td><td>2,000</td><td>2,900</td></tr>
<tr><td>Assam GPS</td><td>2,600</td><td>3,578</td></tr>
<tr><td>Agartala GPS</td><td>2,600</td><td>3,578</td></tr>
<tr><td>Sugen</td><td>1,760</td><td>2,554</td></tr>
<tr><td>Ratnagiri</td><td>1,820</td><td>2,641</td></tr>
</table>
</td><td></td></tr>
<tr><td>
(b) New Thermal Generating Station achieving COD on or after 1.4.2009:
(i) For Coal-based and lignite-fired Thermal Generating Stations:
=1.05 X Design Heat Rate (kCal/kWh)

Provided that the design heat rate shall not exceed the following maximum design unit heat rates depending upon the pressure and temperature ratings of the units:

<table>
<tr><td>Pressure Rating (Kg/cm2)</td><td>150</td><td>170</td><td>170</td><td>247</td><td>247</td></tr>
<tr><td>SHT/RHT (0C)</td><td>535 / 535</td><td>537 / 537</td><td>537 / 565</td><td>537 / 565</td><td>565 / 593</td></tr>
<tr><td>Type of BFP</td><td>Electrical Driven</td><td>Turbine Driven</td><td>Turbine Driven</td><td>Turbine Driven</td><td>Turbine Driven</td></tr>
<tr><td>Max Turbine Heat Rate (kCal/kWh)</td><td>1955</td><td>1950</td><td>1935</td><td>1900</td><td>1850</td></tr>
<tr><td>Min. Boiler Efficiency</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Sub-Bituminous Indian Coal</td><td>0.86</td><td>0.86</td><td>0.86</td><td>0.86</td><td>0.86</td></tr>
<tr><td>Bituminous Imported Coal</td><td>0.89</td><td>0.89</td><td>0.89</td><td>0.89</td><td>0.89</td></tr>
</table>
</td><td>
The formula for SHR of newly thermal generating station has been revised from 1.045 to 1.05. Considering the latest technology, improvisation in innovation, it is submitted that the operational efficiency will be far better than the old plants commissioned in earlier period. Therefore, this needs to be revised. Also, the rationale for arriving at this number is required to be provided.
</td></tr>
</table>

<table>
<tr><th>CERC Draft Tariff Regulations 2019</th><th>Comments</th></tr>
<tr><td>
<table>
<tr><th colspan="4">Max Design Unit Heat Rate (kCal/kWh)</th><th></th><th></th></tr>
<tr><td>Sub-Bituminous Indian Coal</td><td>2273</td><td>2267</td><td>2250</td><td>2222</td><td>2151</td></tr>
<tr><td>Bituminous Imported Coal</td><td>2197</td><td>2191</td><td>2174</td><td>2135</td><td>2078</td></tr>
</table>
</td><td></td></tr>
<tr><td>
(D) Secondary fuel oil consumption:
(a) For Coal-based generating stations other than at (c) below: 0.50 ml/kWh
(b) (i) For Lignite-fired generating stations except TPS-I : 1.0 ml/kWh
(ii) For TPS-I : 1.5 ml/kWh
(c) For Coal-based generating stations of DVC:
<table>
<tr><td>Bokaro TPS</td><td>1.5 ml/kWh</td></tr>
<tr><td>Chandrapur TPS</td><td>1.5 ml/kWh</td></tr>
<tr><td>Durgapur TPS</td><td>2.4 ml/kWh</td></tr>
</table>
(d) For Generating Stations based on Coal Rejects : 2.0 ml/kWh
</td><td>

Benchmarking of consumption rate would induce operational discipline among power plant operators.
Separate benchmarking of operational parameters such as specific secondary fuel oil consumption in accordance with the consumption pattern of last 10 years for power plants based on different technologies is suggested.
The operational norms should be progressive in nature and should be revised from time to time. The utilities may take up any investment if required to meet the norms, however, guidelines should be fixed for adherence to the timelines, scope and cost. In case the generator fails to achieve the target within the agreed terms then penalty should be imposed.
The gain/savings on account of improvement in efficiency should be shared with the beneficiaries

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<tr><td>
(E) Auxiliary Energy Consumption :
(a) For Coal-based generating stations except at (b) below:
<table>
<tr><th>Generating Station</th><th>With Natural Draft cooling tower or without cooling tower</th></tr>
<tr><td>200 MW series</td><td>8.50%</td></tr>
<tr><td>300/330/350/500 MW series</td><td></td></tr>
<tr><td>Steam driven boiler feed pumps</td><td>5.75%</td></tr>
<tr><td>Electrically driven boiler feed pumps</td><td>8.00%</td></tr>
<tr><td>600 MW and above</td><td></td></tr>
<tr><td>Steam driven boiler feed pumps</td><td>5.75%</td></tr>
</table>
</td><td>

The Auxiliary Consumption has been increased from 5.25% to 5.75% for 300/330/350/500 MW and above (Steam driven boiler feed pump). As stated, the norms needs to be progressive in nature and any relaxation in such norms results in encouragement of inefficiencies and additional burden on beneficiaries.
Also, Norms for Aux. consumption shall not only be based on the unit capacity but also on the technology on which the unit is based.

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<table>
<tr><th>CERC Draft Tariff Regulations 2019</th><th>Comments</th></tr>
<tr><td>
<table>
<tr><td>Electrically driven boiler feed pumps</td><td>8.00%</td></tr>
</table>
Provided that for thermal generating stations with induced draft cooling towers and where tube type coal mill is used, the norms shall be further increased by 0.5% and 0.8% respectively:
Provided further that Additional Auxiliary Energy Consumption as follows may be allowed for plants with Dry Cooling Systems:

<table>
<tr><th>Type of Dry Cooling System</th><th>% of gross generation</th></tr>
<tr><td>Direct cooling air cooled condensers with mechanical draft fans</td><td>1.0%</td></tr>
<tr><td>Indirect cooling system employing jet condensers with pressure recovery turbine and natural draft tower</td><td>0.5%</td></tr>
</table>
(b) For Other Coal-based generating stations:
<table>
<tr><td>(i)</td><td>Talcher Thermal Power Station</td><td>10.50%</td></tr>
<tr><td>(ii)</td><td>Tanda Thermal Power Station</td><td>11.50%</td></tr>
<tr><td>(iii)</td><td>Bokaro Thermal Power Station</td><td>10.25%</td></tr>
<tr><td>(iv)</td><td>Chandrapur Thermal Power Station</td><td>9.50%</td></tr>
<tr><td>(v)</td><td>Durgapur Thermal Power Station</td><td>10.50%</td></tr>
</table>

(c) Gas Turbine /Combined Cycle generating stations:
(i) Combined Cycle : 2.75%
(ii) Open Cycle : 1.00%

(d) For Lignite-fired thermal generating stations:
(i) For all generating stations with 200 MW sets and above:
The auxiliary energy consumption norms shall be 0.5 percentage point more than the auxiliary energy consumption norms of coal-based generating stations at (E) (a) above.
</td><td>

The operational norms should be revised from time to time. The utilities may take up any investment if required to meet the norms, however, guidelines should be fixed for adherence to the timelines, scope and cost. In case the generator fails to achieve the target within the agreed terms then penalty should be imposed.
The gain/savings on account of improvement in efficiency should be shared with the beneficiaries.
It has been observed that in many cases, the norms of auxiliary consumption has been increased. Considering the latest technology, improvisation in innovation, it is submitted that the operational efficiency will be far better than the old plants commissioned in earlier period. Therefore, this needs to be revised. Also, the rationale for arriving at this number is required to be provided.

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</table>

<table>
<tr><th>CERC Draft Tariff Regulations 2019</th><th>Comments</th></tr>
<tr><td>
Provided that for the lignite fired stations using CFBC technology, the auxiliary energy consumption norms shall be 1.5 percentage point more than the auxiliary energy consumption norms of coal-based generating stations at (E) (a) above.

(ii) For Barsingsar Generating station of NLC using CFBC technology: 12.50%
(iii) For TPS-I, TPS-I (Expansion) and TPS-II Stage-I&II of NLC India Ltd.:
<table>
<tr><td>TPS-I</td><td>12.00%</td></tr>
<tr><td>TPS-II</td><td>10.00%</td></tr>
<tr><td>TPS-I (Expansion)</td><td>8.50%</td></tr>
</table>
(iv) For Lime stone consumption for lignite-based generating station using CFBC technology:
Barsingsar : 0.056 kg/kWh
TPS-II (Expansion) : 0.046 kg/kWh

(e) For Generating Stations based on coal rejects: 10%
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<tr><td>
60. Norms of operation for hydro generating stations:
(4) Based on the above, the Normative annual plant availability factor (NAPAF) of the hydro generating stations already in operation shall be as follows :-
<table>
<tr><th>Station</th><th>Type of Plant</th><th>Plant Capacity No. of Units x MW</th><th>NAPAF (%)</th></tr>
<tr><td>THDC</td><td></td><td></td><td></td></tr>
<tr><td>THDC Stage I</td><td>Storage</td><td>4x250</td><td>80</td></tr>
<tr><td>KHEP</td><td>Storage</td><td>4x100</td><td>68</td></tr>
<tr><td></td><td></td><td></td><td></td></tr>
<tr><td>NHPC</td><td></td><td></td><td></td></tr>
<tr><td>Bairasul</td><td>Pondage</td><td>3x60</td><td>91</td></tr>
<tr><td>Loktak</td><td>Pondage</td><td>3x35</td><td>88</td></tr>
<tr><td>Salal</td><td>ROR</td><td>5x115</td><td>64</td></tr>
<tr><td>Tanakpur</td><td>ROR</td><td>3x31.4</td><td>59</td></tr>
<tr><td>Chamera-I</td><td>Pondage</td><td>3x180</td><td>93</td></tr>
<tr><td>Uri I</td><td>ROR</td><td>4x120</td><td>74</td></tr>
</table>
</td><td>

Looking at the recent technological advancements and huge investments in creating the infrastructure and R&M activities, the targets for PAF should be set on a on a higher side, However as per Draft Regulation it has been proposed to be reduced for some of the plants.
Further, apportioning of risks associated with hydrology between the generator and the beneficiary reduces the risk burden on the discoms.

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</table>

CERC Draft Tariff Regulations 2019	Comments

Rangit	Pondage	3x20	92
Chamera-II	Pondage	3x100	93
Dhauliganga	Pondage	4x70	78
Dulhasti	Pondage	3x130	91
Teesta-V	Pondage	3x170	87
Sewa-II	Pondage	3x40	89
TLDP III	Pondage	4x33	77
Chamera III	Pondage	3x77	87
Chutak	ROR	4x11	48
Nimmo Bazgo	Pondage	3x15	70
Uri II	Pondage	4x60	70
Parbati III	Pondage	4x130	43
NHDC			
Indira Sagar	Storage	8x125	87
Omkareshwar	Pondage	8x65	93
NEEPCO			
Kopili I	Storage	4x50	69
Khandong	Storage	2x25	67
Kopili II	Storage	1x25	69
Doyang	Storage	3x25	70
Ranganadi	Pondage	3x135	88
NTPC			
Koldam	Storage	4x200	90
SJVNL			
Nathpa Jhakri	Storage	6x250	90
DVC			
Panchet	Storage	2x40	80
Tilaya	Storage	2x2	80
Maithon	Storage	3x20	80

(6) Auxiliary Energy Consumption (AEC):

Type of Station	AEC	
	Installed Capacity above 200 MW	**Installed Capacity upto 200 MW**
Surface		
Rotating Excitation	0.70%	0.70%
Static	1.00%	1.20%

Comments:

- Looking at the recent technological advancements and huge investments in creating the infrastructure and R&M activities, the targets for Aux. Consumption should be set on a on a lower side.
- Further, apportioning of risks associated with hydrology between the generator and the beneficiary reduces the risk burden on the discoms.

CERC Draft Tariff Regulations 2019	Comments
<table><tr><td>**Underground**</td><td></td><td></td></tr><tr><td>Rotating Excitation</td><td>0.90%</td><td>0.90%</td></tr><tr><td>Static</td><td>1.20%</td><td>1.30%</td></tr></table>	
Norms of operation for transmission system **61. Normative Annual Transmission System Availability Factor (NATAF)**: shall be as under**:** For recovery of Annual Fixed Charges: (1) AC system: 98% (2) HVDC bi-pole links and HVDC back-to-back stations: 95% For incentive consideration: (1) AC system: 98.50% (2) HVDC bi-pole links and HVDC back-to-back Stations: 97.5% Provided further that no incentive shall be payable for availability beyond 99.75%: Provided also that for AC system, two trippings per year shall be allowed. After two trippings in a year, for every tripping, additional 12 hours outage shall be considered in addition to the actual outage hours: Provided also that in case of outage of a transmission element affecting evacuation of power from a generating station, outage hours shall be multiplied by a factor of 2.	• At present, the incentive structure doesn't take into account the unavailability of a particular transmission line and instead considers the percentage availability on totality basis. The transmission companies gets incentivised even when large population of a particular region are deprived of reliable and quality power because of breakdown of the transmission line. • Hence, MSEDCL proposes changes in the incentive mechanism and suggests to take into account the percentage availability of each transmission corridor. • Further, MSEDCL proposes imposition of penalty in case the corridor is not available beyond the set percentage availability target. • Looking at the recent advancement in technologies, the availability of transmission infrastructure has improved considerably. Hence, the incentive percentage linked to availability needs to be reviewed and should be lowered to 0.5% for HVDC as well as AC systems.
SCHEDULING, ACCOUNTING AND BILLING	
65. Billing and Payment of charges: (1) Bills shall be raised for capacity charge, energy charge and the transmission charge on monthly basis by the generating company and the transmission licensee in accordance with these regulations, and payments shall be made by the beneficiaries or the long term	• Considering pass through of the coal cost, Generator should send the Bills to the DISCOM/Beneficiaries along with the certificate certifying the grade of the coal at loading and unloading point.

CERC Draft Tariff Regulations 2019	Comments
transmission customers directly to the generating company or the transmission licensee, as the case may be. Provided that the physical copy of the Bill in Original at the office of the Authorised Person and/or the scanned copy of Original Bill through Official Email ID of the Authorised Person of the Generating Company or the Transmission Licensee, as the case may be shall be recognized as valid mode of presentation of Bill. Provided further that Signatory or Signatories (official designation only) shall be authorized in advance by the Managing Director of the company and any change in the list of Authorised Signatory or the purpose, shall be communicated in the same manner. (2) Payment of the capacity charge for a thermal generating station shall be shared by the beneficiaries of the generating station as per their percentage shares for the month (inclusive of any allocation out of the unallocated capacity) in the installed capacity of the generating station. Payment of capacity charge and energy charge for a hydro generating station shall be shared by the beneficiaries of the generating station in proportion to their shares (inclusive of any allocation out of the unallocated capacity) in the saleable capacity (to be determined after deducting the capacity corresponding to free energy to home State as per Note 3 herein.	• Grade slippage in coal if any may be claim from the Coal India Ltd through credit note. • Impact of credit note may be consider in bill on receipt of credit against the credit note raised to Coal India Ltd. Bills should be supported with all the necessary certificates/proofs.
66. Recovery of Statutory Charges: (1) The generating company shall recover the statutory charges imposed by the State and Central Government such as Electricity duty, water cess by considering normative parameters specified in these regulations. In case of the Electricity duty is applied in the auxiliary consumption, such amount of electricity duty shall apply on normative auxiliary consumption of the generating station (excluding colony consumption) and apportioned to the each beneficiaries in proportion to their schedule dispatch during the month.	MSEDCL welcomes this proposal whereby the recovery of the statutory charges is limited to the efficiency of the power plant with respect to normative parameters. However it is proposed that the recovery shall be limited to actual or as per normative parameter, whichever is lower.
68. Rebate. (1) For payment of bills of the generating company and the transmission licensee through letter of credit on presentation or through National Electronic	• It has been observed that the invoices are submitted late evening which defeats the very purpose of availing rebate through early payment as the processing.

CERC Draft Tariff Regulations 2019	**Comments**
Fund Transfer (NEFT) or Real Time Gross Settlement (RTGS) payment mode within a period of 2 days of presentation of bills by the generating company or the transmission licensee, a rebate of 2% shall be allowed. **Explanation:** In case of computation of '30 days', the number of days shall be counted consecutively without considering any holiday. However, in case the last day or 30th day is official holiday, the 30th day for the purpose of Rebate shall be construed as the immediate succeeding working day (as per the official State Government's calendar, where the Office of the Authorised Signatory or Representative of the Beneficiary, for the purpose of receipt or acknowledgement of Bill is situated). (2) Where payments are made on any day after 2 days and within a period of 30 days of presentation of bills by the generating company or the transmission licensee, a rebate of 1% shall be allowed.	• MSEDCL proposes that the count of two days should be in the form of working hours i.e. 48 Hrs. from the time of receipt of invoices
69. Late payment surcharge: In case the payment of any bill for charges payable under these regulations is delayed by a beneficiary or long term transmission customers as the case may be, beyond a period of 45 days from the date of billing, a late payment surcharge at the rate of 1.25% per month shall be levied by the generating company or the transmission licensee, as the case may be.	• MSEDCL suggests linkage of late payment surcharge with MCLR rates along with premium of 150 bps.
SHARING OF BENEFITS	
70. Sharing of gains due to variation in norms: (1) The generating company or the transmission licensee shall workout gains based on the actual performance of applicable Controllable parameters as under: i) Station Heat Rate; ii) Secondary Fuel Oil Consumption; iii) Auxiliary Energy Consumption; and iv) Re-financing, Re-structuring of Loans or otherwise change in Interest Rate of Loan.	• As the entire downside risk is passed on to the beneficiary discoms, hence, similar treatment shall be given to any upsides on account of improved operational parameters. • Hence, any benefit accrued on account of improved operational parameters should be completely passed on to the beneficiaries. • Any realised gains shall be reconciled on a quarterly basis.

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(2) The financial gains by the generating company or the transmission licensee, as the case may be, on account of controllable parameters shall be shared between generating company or transmission licensee and the beneficiaries or long term transmission customers, as the case may be, on monthly basis with annual reconciliation. The financial gains computed as per the following formulae in case of generating station other than hydro generating stations on account of operational parameters as shown in Clause 1 of this Regulation shall be shared in the ratio of 50:50 between the generating stations and beneficiaries. Net Gain = (ECRN– ECRA) x Scheduled Generation Where, ECRN = Normative Energy Charge Rate computed on the basis of norms specified for Station Heat Rate, Auxiliary Consumption and Secondary Fuel Oil Consumption. ECRA = Actual Energy Charge Rate computed on the basis of actual Station Heat Rate, Auxiliary Consumption and Secondary Fuel Oil Consumption for the month. Provided that in case of hydro generating stations, the net gain on account of Actual Auxiliary Energy Consumption being less than the Normative Auxiliary Energy Consumption, shall be computed as per following formulae provided the saleable scheduled generation is more than the saleable design energy and shall be shared in the ratio of 50:50 between generating station and beneficiaries.: (i) When saleable scheduled generation is more than saleable design energy on the basis of normative auxiliary consumption and less than or equal to saleable design energy on the basis of actual auxiliary consumption: Net gain (Million Rupees) = [(Saleable Scheduled generation in MUs) – (Saleable Design energy on the basis of normative auxiliary consumption in MUs)] x 0.90 (ii) When saleable scheduled generation is more than saleable design energy on the basis of actual auxiliary consumption: Net gain (Million Rupees)= {Saleable Scheduled generation in MUs- [(Saleable Scheduled Generation in MUs x (100-normative AEC in %)/(100- actual AEC in %)]}x 0.90	

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71. Sharing of saving in interest due to re-financing: If re-financing of loan by the generating company or the transmission licensee, as the case may be, results in net savings on interest and in that event the costs associated with such re-financing shall be borne by the beneficiaries and the net savings shall be shared between the beneficiaries and the generating company or the transmission licensee, as the case may be, in the ratio of 50:50.	MSEDCL is of the view that, since cost of re-financing to be borned wholly by the Beneficiaries, in that case net saving shall also be passed to the Beneficiaries alone and not to be shared 50:50 between beneficiaries and Generating company / Transmission Licensee.
72. Sharing of Non-Tariff Income: The non-tariff income in case of generating station and transmission system on account of following shall be shared in the ratio of 50:50 with the beneficiaries and the long term customer on annual basis: a) Income from rent of land or buildings; b) Income from sale of scrap; c) Income from statutory investments; d) Interest on advances to suppliers or contractors; e) Rental from staff quarters; f) Rental from contractors; g) Income from advertisements; h) Interest on investments and bank balances;	• MSEDCL welcomes the provisions of sharing the Non-Tariff Income equally with beneficiaries. However, the Regulations needs to be clear with the proviso that any cost incurred for such Non-Tariff Income resulting in net loss shall not be shared with the beneficiaries. • Also, it is required to be submitted that the list provided in draft regulations needs to be an illustrative list and may not be considered as an exhaustive list.
MISCELLANEOUS PROVISIONS	
76. Deviation from ceiling tariff: (1) The tariff determined in these regulations shall be a ceiling tariff. The generating company or the transmission licensee and the beneficiaries or the transmission customer, as the case may be, may mutually agree to charge lower tariff. (2) The generating company or the transmission licensee, may opt to charge the lower tariff for period not exceeding one year at a time on account of lower depreciation based on the requirement of repayment; Provided that the unrecovered depreciation on account of reduction of depreciation by the generating company or the transmission licensee during useful life shall be allowed to be recovered after the useful life in these regulations;	• MSEDCL welcomes the proposed mechanism as it shall foster competition and translate into effective utilization of installed capacity. • However, post mutually agreed tariff, no incremental cost need to be allowed under true-up mechanism or else the entire objective for providing power at lower rate for being more competitive will get defeated. • The proposed mechanism would bring in benefits only if the generators take a hit on their ROE to get their plant capacities scheduled. • Further, though commission should take into account such mutually agreed terms during true-up, the resultant

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(3) The generating company or the transmission licensee, may opt to charge the lower tariff for a period not exceeding one year at a time on agreeing to deviation from operational parameters, reduction in operation & maintenance expenses due to reduction of dispatch level, willingness to charge reduced return on equity and incentive specified in these regulations; (4) The deviation from the ceiling tariff specified by the Commission, shall come into effect from the date agreed by the generating company or the transmission licensee and the beneficiaries or the transmission customer, as the case may be, and the approval of the Commission is not required in such case. (5) The generating company and the beneficiaries of a generating station or the transmission licensee and the long term customer of transmission system shall be required to approach the Commission for charging lower tariff in accordance with clauses (1) to (3) above. The details of the accounts and the tariff actually charged under clauses (1) to (3) shall be submitted at the time of true up.	under recovery if any, may not be allowed to be adjusted in the next control period. • MSEDCL observes that in a condition of near monopoly, there's no competition in transmission business and such scenario may be possible only in generation business.
77. Deferred Tax liability with respect to previous tariff period: Deferred tax liabilities for the period upto 31st March, 2009 whenever they materialise shall be recoverable directly by the generating companies or transmission licensees from the then beneficiaries or long term transmission customers/DICs, as the case may be. Deferred tax liabilities for the past periods, if any shall not be recoverable from the beneficiaries or the long term transmission customers/DICs, as the case may be.	However the Regulations need to clarify the treatment of deferred tax liabilities in case of the change in the beneficiaries prior to 2009 and post 2009.
83. Special Provisions relating to BBMB and SSP: The tariff of generating station and the transmission system of Bhakra Beas Management Board (BBMB) and Sardar Sarovar Project(SSP) shall be determined after taking into consideration, the provisions of the Punjab Reorganization Act, 1996 and Narmada Water Scheme, 1980 under Section 6-A of the Inter-State Water Disputes Act, 1956, respectively.	The Tariff of Sardar Sarovar Project(SSP) shall be determined considering the State Government agreement as well as Narmada Water Scheme, 1980 under Section 6-A of the Inter-State Water Disputes Act, 1956 respectively
Timeline for completion of Projects	
	MSEDCL submits that the timeline as determined by CERC in last Regulations needs to be retained as it has to be

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	considered as a benchmark timeline for the CoD of the plant / transmission lines and identify any inefficiency with regards to delay in CoD.