



**Presentation to Stakeholders
on
Approach Paper
on
TERMS AND CONDITIONS OF TARIFF REGULATIONS**

**For Tariff Period from 01.04.2024 to 31.03.2029
Central Electricity Regulatory Commission**

June 22, 2023
New Delhi

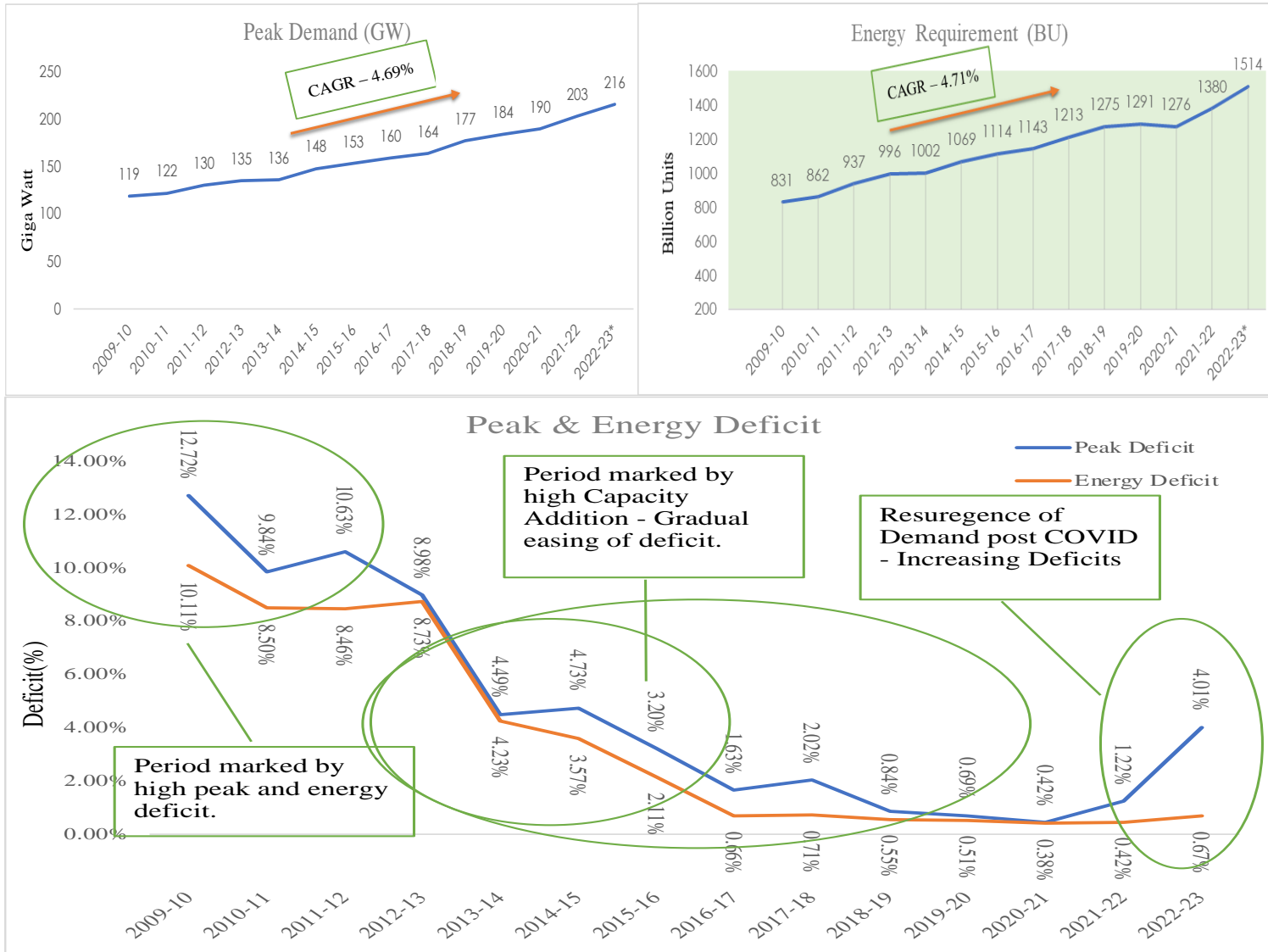
In this Presentation

- Review of Past & Key Determinants
- Tariff Simplification – Possible Approaches to Tariff Determination
- Financial Aspects Impacting Tariff
- Operational Parameters Impacting Tariff
- Other Key Issues
- Way Forward

Review of Past and Key Determinants

Review of Past

Sector Growth – Key Indicators



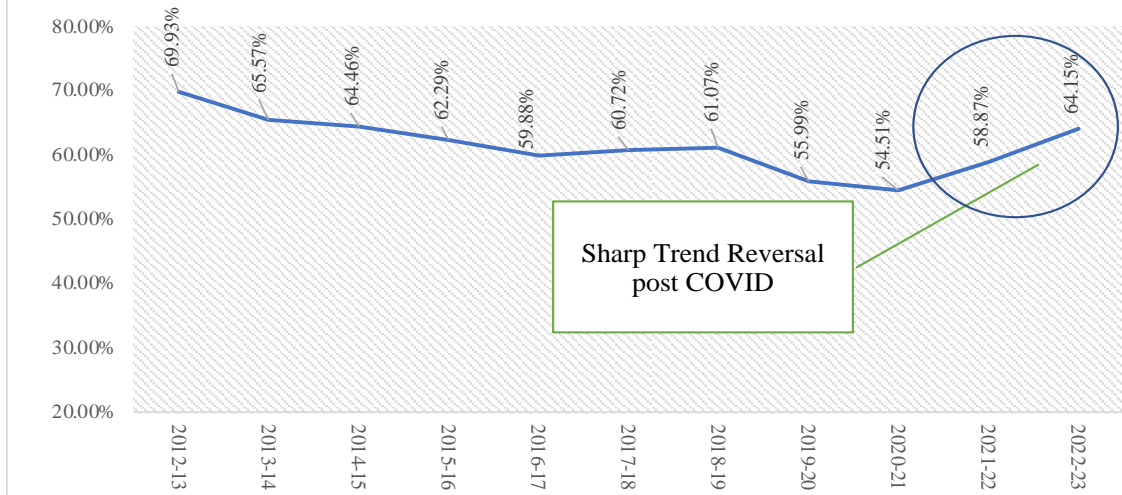
1. **Steady Growth in Energy Requirement and Peak Demand.**
2. **Peak deficit at 4% has started to widen from FY 2022-23 owing to strong revival in demand and delayed execution of scheduled projects.**
3. **Considering Economic Survey estimates GDP growth in the range of 6.5% for FY 2023-24. All Indicators points to considerable appetite to grow.**
4. **CEA in its Report on Optimal Generation Mix for FY 2029-30 (Version 2.0) has projected that by 2030 the existing capacity of FY 2021-22 will be required to double to approx. 777 GW – Requires 38 GW of thermal capacity addition.**
5. **The Report states that the present transmission system needs to be augmented to accommodate an additional 300 GW requiring considerable capital investment.**

Review of Past

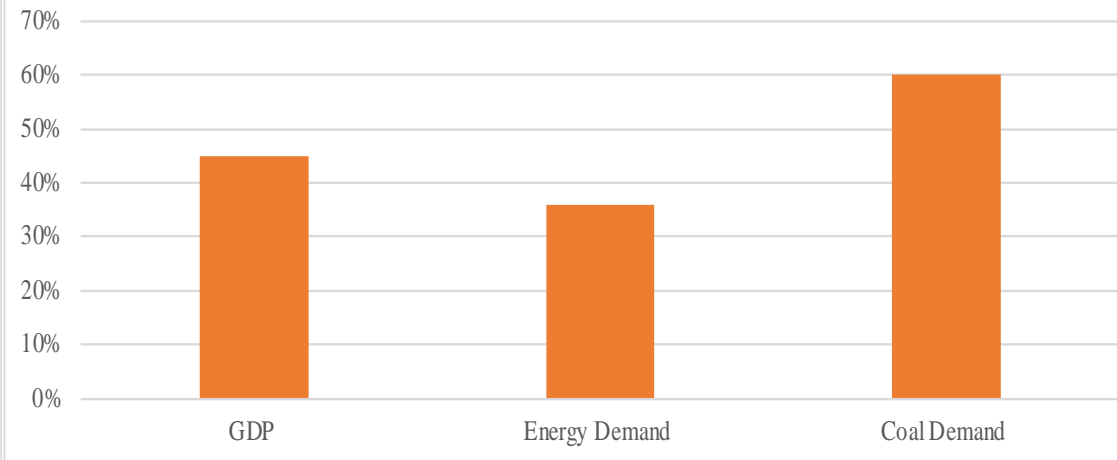
Sector Growth – Key Indicators

Source: CEA and IEA

All India Average PLF - Thermal Stations



Percentage of Global Average - Per Capita



1. Average PLF has also been increasing drastically (6% - FY 2022-23) suggesting strong demand revival.
2. Steady Growth in Energy Requirement and Peak Demand.
3. India way below global average in per-capita terms on key indicators such as GDP, Energy and Coal indicating huge appetite to consume.

Sustainability and Role of Different Generating Sources

- Government of India has pledged that it shall strive to be net-zero country by 2070.
- While planning to achieve the required capacity addition, one therefore needs to support sustainable sources of generation and incentivize efficiency of existing generating stations.

Role:

- Hydro Stations- Sustainable Source - Percentage Share dwindling - 29% (FY 1989-90) to 13% (FY 2022-23) - Ideally to Operate as Peaking Plants - **Storage Based Plants needs to be incentivized.**
- Gas Stations- Distinct advantages with regards to balancing grid - higher anticipated RE penetration, evolution of Ancillary Services and anticipated disruption in hydrogen production cost - Can provide transitional Support-
- Old Thermal Generating Station - Efficient - Economical - **Require Additional Financial and Operational support**

The following key aspects have been considered while preparing this Approach Paper.

- 1) Simplification of Tariff Determination Process.
- 2) Preserving and augmenting existing capacities - Incentivising life extension, R&M, and efficient old generating stations.
- 3) Providing the necessary push to Investments- Assured Returns - Mitigation of Risk Perception.
- 4) Regulatory Certainty.
- 5) Incentivising efficient plant operations and sustainable development.
- 6) Encouraging development of Hydro Generation Projects.

Tariff Simplification & Possible Approaches

Simplification of Tariff Determination Process

Two possible options suggested as follows.

- 1. Approach 1:** Shift to Normative Tariff wherein, once capital cost is approved on actual basis after prudence check, all other AFC components are determined on normative basis.
- 2. Approach 2:** Further Simplification of Existing Performance Based Hybrid Approach, wherein based on admitted capital cost, AFC components can be approved based on actuals or norms as may be specified for the Control Period. Further, additional capitalisation may be allowed on certain counts on normative basis.

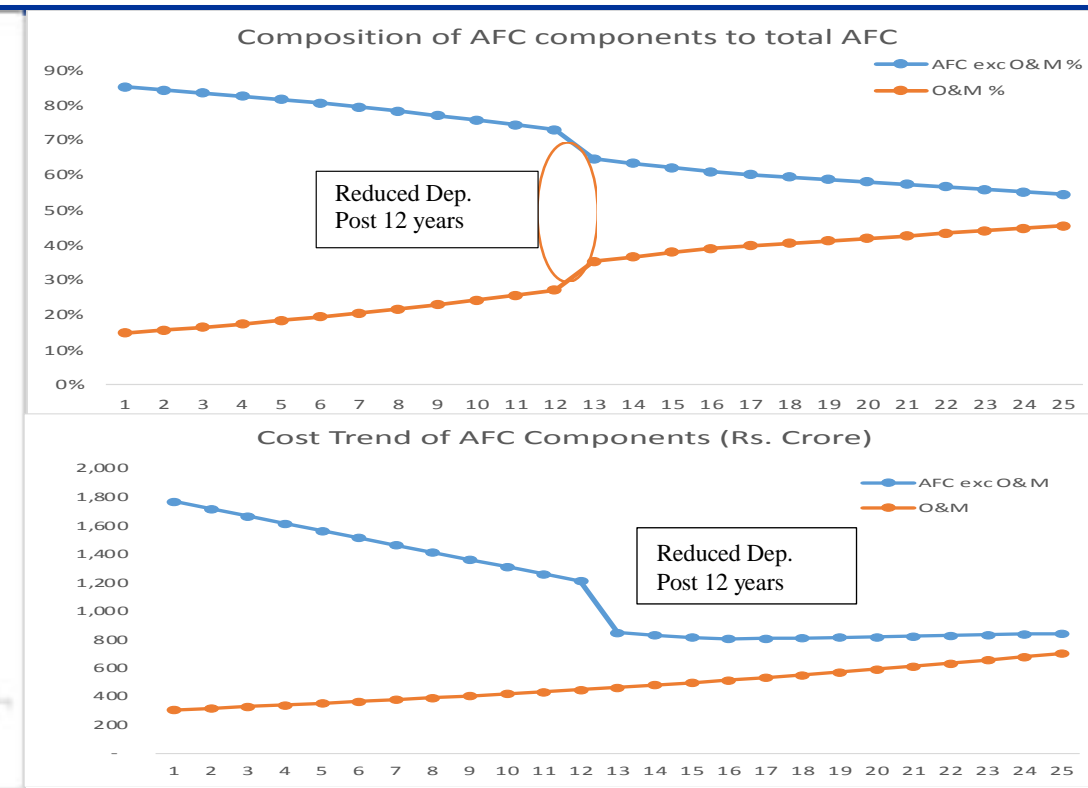
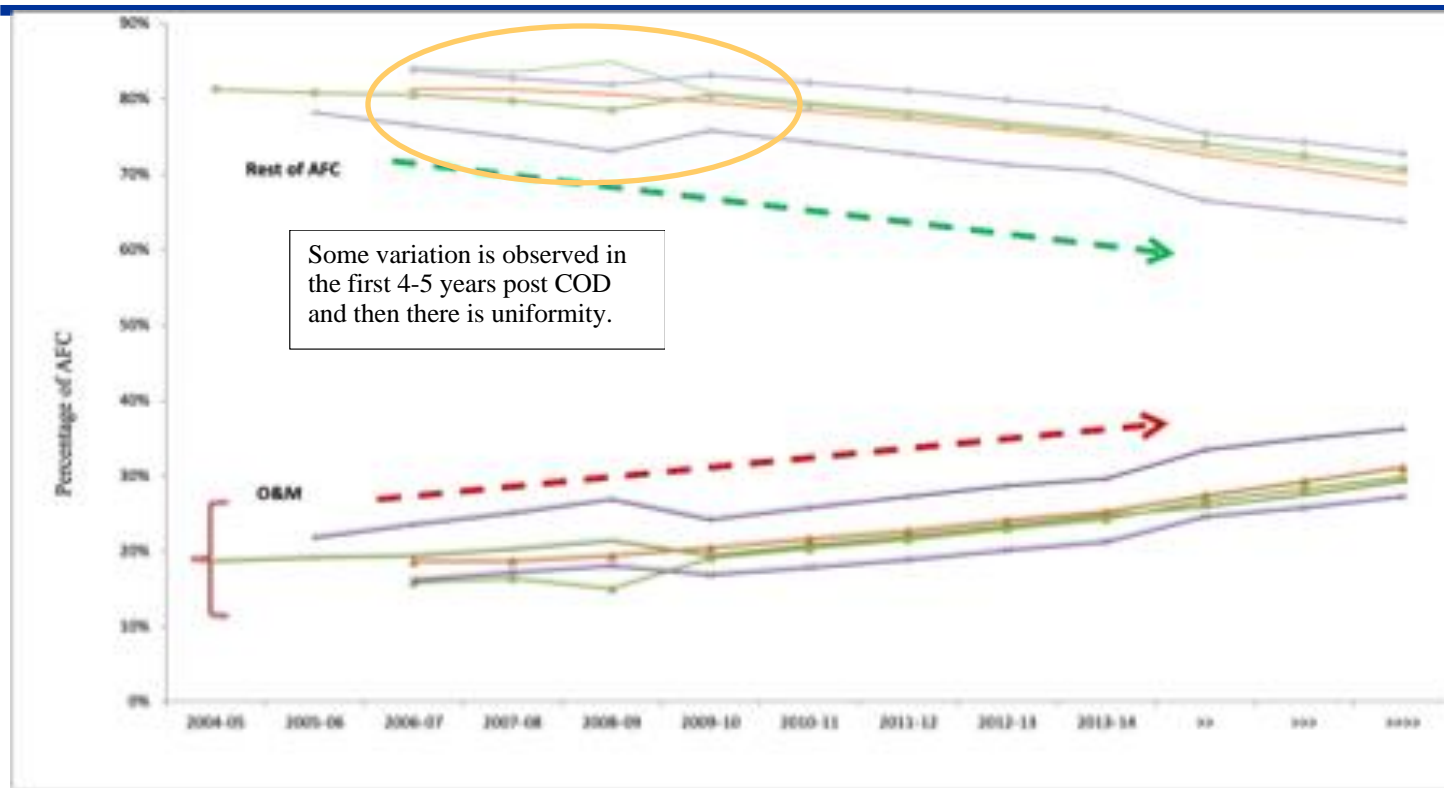
Approach 1: Normative Tariff

Components of AFC may be clustered into following two groups.

- 1) AFC component that increases over a period – O&M Expenses.
- 2) AFC components that decrease over a period – Rest of AFC components.

Approach 1 - Normative Tariff

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The above graphs depict a clear trend of cost components, provided that the terms and conditions of tariff remain the same throughout the project life.

The above trend is equally true in case of transmission assets.

If normative regime is to be adopted, the impact on account of following factors need to be duly accounted for from time to time so that the AFC components can be fine-tuned to incorporate impact of changes in market dynamics.

1. Weighted average rate of Interest
2. Interest on Working Capital

Approach 1 – Normative Tariff

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1. Apart from the year on year variation which could be station specific, there could be inherent variation due to different cost of funds, funding pattern, depreciation rate and other plant specific peculiarities and therefore **normative tariff for these stations appears to be feasible only when determined Asset specific.**
2. The Asset specific normative tariff will allow the tariff determined to be close to actuals thereby eliminating the chance of major gain or loss and will also help achieving the other objective of eliminating the need of periodic tariff filings.
3. In view of aberrations observed in the first five years post COD, **Tariff during the first five years may be approved on actual basis and shall be subject to truing up.**

Detailed Approach

1. **From Projects under Operation for more than 5 years as on 01.04.2024**
 - a) Capital Cost as on 31.03.2024 is proposed to be considered for determination of tariff for FY 2024-25. Based on the norms to be specified in the CERC Tariff Regulations, 2024, Annual Fixed Charges (AFC) for first year of the next tariff period i.e., FY 2024-25 is proposed to be determined. The AFC components for base year (FY 2024-25) shall be determined individually and then clubbed under the following two categories.
 - 1) AFC excluding O&M Expenses
 - 2) O&M Expenses

Once the above two major components of AFC are determined for FY 2024-25 (Base Year), the above two components for rest of the years of tariff period shall be determined and indexation rate shall be specified.

Approach 1 – Normative Tariff

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Detailed Approach – Contd..

- Post expiry of each tariff period, the Commission shall call upon relevant data and only revise the indexation factor pertaining to “AFC excluding O&M component” approved at the time of tariff determination for each Project for each year.
- Based on the revised indexation of past tariff period, Generating Station or Transmission Licensees shall refund/recover the differential amount as done presently
- Through the same exercise **the Commission shall also specify the indexation factor for the above two categories for the next tariff period (2029-2034) with base as FY 2024-25.**
- In case of any additional capitalisation was incurred or is required, the Petitioner may file a separate petition seeking approval of capital expenditure and once allowed, the variation on account of additional capitalisation can be serviced through computing the impact on AFC and adjusting the same through the same indexation mechanism as specified above.
- AFC of existing projects, including servicing of additional capitalisation shall continue to be governed as per the CERC Tariff Regulations, 2024.
- Energy Charges are already being allowed based on normative performance parameters and actual fuel cost and is proposed to be continued.

Sample Calculation >>>



Approach 1 – Projects that are yet to complete five years post COD as on 01.04.2024

- a) The Capital Cost shall be approved on actual basis upto cut-off date. Further, additional capitalisation post cut-off date can be allowed on normative basis.
- b) The tariff components of AFC shall be determined and trued up on actual basis till the financial year in which the cut-off date of such generating stations ends. The AFC for each station shall be determined under the following two categories for the first financial year post cut-off date.
 - 1. AFC excluding O&M Expenses
 - 2. O&M Expenses
- c) Thereafter, from 6th financial year onwards, the above AFC categories shall be determined based on indexation mechanism as proposed for existing projects.
- d) The current practice of approving Energy charges shall continue, in case of generating stations.

Approach 2 – Performance Based Hybrid Approach

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Approach 2 – Existing Approach with further simplification of tariff determination process

Generation Tariff

In case of generating stations although O&M expenses, Depreciation, Return on Equity are specified on normative basis, following components as per present Regulations require consideration of actual values.

1. Energy Charge – Fuel Cost and GCV to be considered.
2. Working Capital – Actual fuel cost keeps varying and affects total receivables.
3. Interest Rate on Loans and Interest Rate on Working Capital

Transmission Tariff

As per the current Tariff Regulations governing determination of transmission charges, the following components of tariff are already allowed on normative basis.

1. O&M expenses
2. Depreciation
3. Return on Equity
4. Working Capital Requirement and Interest thereon.

The Regulation at present allows interest on normative loan capital on actual weighted average rate of Interest.

- ✓ Under Existing approach, most of the regulatory overburden is on account of recurring but low value additional capitalization claims.
- ✓ In order to eliminate such requirement, option of normative additional capitalization has been suggested in this Approach Paper.

Financial Aspects Impacting Tariff

Parameter	Issue in Brief	Description/Additional Detail
Capital Cost	<p>Issue Flagged: Mode of Procurement of Equipment and Services</p> <p>Mandatory to follow Competitive Bidding on Public Procurement Platform.</p> <p>Genesis – To ensure competitive bidding is followed.</p>	<p>In order to encourage transparency in project execution, suggestion on the following have been sought.</p> <ol style="list-style-type: none"> Need to mandatorily award work and services contracts for developing projects under regulated tariff mechanism through transparent process of competitive bidding using public procurement platforms duly complying with the policy/guidelines issued by Government of India as applicable from time to time.
	<p>Issue Flagged: What cost should be considered for allowing capital cost?</p> <p>Benchmark Cost or Cost as per Investment Approval?</p> <p>Genesis - Tariff Policy recommends Benchmarking of Capital Cost.</p>	<p>Benchmark Cost may not be a true representation for all the plants that can form basis for disallowing cost due to following reasons.</p> <ul style="list-style-type: none"> ❖ Thermal Generating Station - Cost is largely affected by site conditions, water handling, coal handling systems etc. ❖ Hydro Generating Station - Cost depends on several aspects such as choice of technology, design, reservoir based/Pondage/ROR, etc. ❖ Transmission System – Cost depends on factors such as tower design, terrain, soil type, wind zones etc., <p>Therefore, benchmarking may serve limited purpose and may not be a better alternative to current project specific Investment Approvals. – Comments Sought</p>

Parameter	Issue in Brief	Description/Additional Detail
Capital Cost	<p>Issue Flagged: What cost to be considered for assets acquired post NCLT Proceedings?</p> <p>Cost of Acquisition or Historical Cost of Asset?</p> <p>Genesis: It is observed that acquired value of Assets are lower than the historical cost of Assets.</p>	<p>Section 62 specifies determination of tariff based on cost plus principle and therefore, the acquisition value may need to be considered.</p> <p>Comments and Suggestions are sought on the following issues.</p> <ol style="list-style-type: none">1. Historical Cost or Acquisition Value whichever is lower should be considered for determination of tariff post approval of Resolution Plan.2. Tariff Provisions to be included to address the issue of cost of debt servicing including repayment that were allowed as a part of tariff during the CIRP process.

Parameter	Issue in Brief	Description/Additional Detail
Interest During Construction (IDC)	<p>Issue Flagged: Existing IDC provisions may require more pragmatic approach to recognise and allow the cost considering implementation schedule and base case IDC/IDC approved in IA.</p> <p>IDC approved in Original Investment Approval may also be considered.</p> <p>IDC may require to be computed post SCOD.</p> <p>Whether to consider IDC approved in Original Investment approval for allowing IDC?</p> <p>Genesis - Under existing provisions if developers starts work post SCOD and if for some reason delay is not condoned, it cannot be allowed any IDC.</p> <p>Further, IA includes IDC working based on prudent phasing without delay hence can form basis of prudence check.</p>	<p>Comments and Suggestions are sought on the following issues</p> <ol style="list-style-type: none"> Existing mechanism wherein the pro-rata computation is done on excess IDC pertaining to delay period beyond SCOD; or Pro-rata IDC may be allowed considering the total implementation period wherein the actual IDC is pro-rated considering the SCOD and period of delay condoned over total implementation period; or IDC approved in the original Investment Approval to be considered while allowing actual IDC in case of delay. In case the actual IDC is below that approved in the Original Investment approval, the same may be allowed as lower IDC even in case a project is delayed may be due to prudent phasing of funds adopted by the utilities. <p>[Illustration]</p>

Price Variation and Renovation & Modernization

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Parameter	Issue in Brief	Description/Additional Detail
Price Variation	<p>Issue Flagged: Additional Information pertaining to Price Variation to be provided in a Separate Tariff Format.</p> <p>Utilities to submit statutory auditor certificate certifying the price variation corresponding to delay.</p> <p>Price Variation to be allowed on Pro-Rata Basis corresponding to Delay condoned</p> <p>Genesis – Time overrun not only increases IDC and IEDC, but it also results in increase in the hard cost in case the contract provides for cost escalation beyond SCOD.</p>	<p>In case of Time overrun, if the impact of such delay is not being allowed for the delay not condoned, the same treatment may be extended to price variation, therefore comments sought on the following.</p> <p>For allowing price variation, the utilities may be mandated to submit the statutory auditor certificate along with the petition duly certifying the price variation corresponding to delay and the same may be allowed on pro-rata basis corresponding to the delay condoned. Further, a separate form may also be specified to submit the relevant information pertaining to price variation.</p>
Renovation and Modernization	<p>Issue Flagged: In view of the inherent benefits of undertaking R&M as against going for fresh capital investment the current provisions may be continued.</p> <p>Whether to continue the existing provisions or make these provisions more efficient?</p> <p>Genesis – R&M is a cost effective alternative to huge Capital Infusion Requirement and hence has been allowed in the past.</p>	<p>R&M is a cost effective alternative and allows to defer infusion of huge capital investments on construction of new capacities and avoids seeking fresh approvals and clearances. Therefore, it has been allowed in the past.</p> <p>Suggestions are sought from stakeholders on continuation of the existing provisions of undertaking R&M or continuing with Special Allowance, if opted at the beginning of the tariff period for the rest of the tariff period.</p>

Initial Spares and Controllable & Uncontrollable Parameters

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Parameter	Issue in Brief	Description/Additional Detail
Initial Spares	<p>Issue Flagged: For Transmission Projects Number of Categories proposed to be reduced from 11 categories to 5 broad categories</p> <p>Process of approval of Initial Spares needs to be simplified.</p> <p>Genesis - Need is felt to simplify the process of approval.</p>	<p>In order to simplify the process of approval without going into the miniscule details of having 11 classifications, a single norm for green and brown field projects may be introduced under 5 broad categories of assets as follows:</p> <ol style="list-style-type: none"> 1. Transmission Lines including HVDC lines. 2. Sub-stations (including HVDC S/s) 3. Dynamic Reactive Compensation devices 4. Communication System 5. Under Ground Cable
Controllable and Uncontrollable Parameters	<p>Issue Flagged: Delay on account of Forest Clearance may be treated as Uncontrollable Parameter</p> <p>Whether delay on account of Forest Clearance to be treated as Uncontrollable Parameter ?</p> <p>Genesis - Delay on account of getting Forest clearances may be beyond the control of utilities.</p>	<p>Delay on account of forest clearances may be included as uncontrollable reasons provided that such delay is not attributable to generating company or the transmission licensee.</p>

Differential Norms - Servicing Impact of Delay

Parameter	Issue in Brief	Description/Additional Detail
Differential Norms - Servicing Impact of Delay	<p>Issue Flagged: Rigorous pursuit of approvals such as forest clearances and other critical clearances to be encouraged.</p> <p>RoE on Equity corresponding to cost and time overrun allowed may be allowed at the weighted average rate of interest on loan instead of fixed RoE. Or,</p> <p>Even if delay on account of uncontrollable parameter is condoned some part of cost impact (Say 10%-20%) corresponding to the delay condoned may be disallowed to encourage rigorous pursuit of approvals.</p> <p>Genesis - Delays could have been restricted if the approvals were sought more assertively instead of mere having written correspondences.</p>	<p>In several cases the delays are attributable to lack of timely clearances, forest approvals etc. which require constant and rigorous follow up. In some of these cases the delays could have been restricted if the approvals were sought more assertively instead of mere having written correspondences.</p> <p>Further, if the generating stations or transmission licensees are allowed such impact, the cost of servicing of such delay should not result in increase in RoE for such utilities instead such allowances should be mere compensatory in nature.</p> <p>Another View is that no additional measure may be required as even with RoE at 15.50%, and the entire delay is condoned, the Equity IRR reduces from around 12% to 11% and for every subsequent year of delay, the Equity IRR reduces further.</p> <p>Accordingly, Comments and Suggestions are sought on the following issues:</p> <ol style="list-style-type: none">1. Whether RoE on Equity corresponding to cost and time overrun allowed over and above project cost as per investment approval may be allowed at the weighted average rate of interest on loan instead of fixed RoE?2. Whether some part of cost impact (Say 20%) corresponding to the delay condoned may be disallowed to encourage rigorous pursuit of approvals?3. Whether the current mechanism of treating time overruns may be continued, considering that Utilities are automatically dis-incentivised if the project gets delayed

Parameter	Issue in Brief	Description/Additional Detail
Additional Capitalisation	Cut Off Date – Whether to be increased to 5 years	It was observed that the majority of additional capitalisation post COD is incurred within 5 years from COD and therefore it is proposed to increase the cut off date from the present 3 years to 5 years. <i>A Separate study carried out found that around 84% total Capital cost is incurred as on COD and almost entire balance 16% is incurred in the first 5 years.</i>
	Intermittent additional capitalisation may be approved on normative basis. Genesis – Simplification of Tariff Determination and shifting towards normative tariff	<div>1. Thermal - Based on the analysis of actual add cap in the past (15-20 years) and co-relating such expenses to different unit sizes such as 200/210 MW series, 500/660 MW Series and different vintage (5-10, 10-15, 15-20, 20-25 years post COD) a special dispensation in the form of yearly allowance may be allowed which shall not be subject to any true up and shall not be required to be capitalised.</div> <div>2. Hydro - As each hydro generating station is unique owing to various factors, additional capitalisation of such generating stations may not be benchmarked as can be done for thermal generating stations. Station Specific add cap may be approved on normative basis.</div> <div>• Discharge of liabilities of works already admitted by the Commission as on 31.03.2024 shall be allowed as and when such liability is discharged.</div>

Additional Capitalisation

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Parameter	Issue in Brief	Description/Additional Detail
Additional Capitalisation	Additional Capitalisation under Regulation 26 to 29 to continue as these add cap is incurred on account of uncontrollable reasons.	<ul style="list-style-type: none"> ➤ Cost incurred towards works presently covered under Regulation 26 to Regulation 29 to be allowed separately. ➤ Items that may be in the nature of minor items such as tools and tackles, spares costing below Rs. 20 lakhs may be allowed only as part of O&M expenses and may not be considered as part of additional capitalisation
	Genesis - Simplification of Tariff Determination and shifting towards normative tariff	
	<p>Issue Flagged: Provisions for necessary add. Cap pertaining to Railway Infra and Coal transportation after cut off date does not exists in case of thermal stations.</p> <p>Enabling provisions may be added.</p> <p>Genesis - If add cap results in reduction in operational cost and is beneficial the same may be allowed.</p>	<ul style="list-style-type: none"> ➤ There are no enabling provisions under which a generating station can seek approval of cost pertaining to Railway Infrastructure and its augmentation for transportation of coal up to the receiving end of the generating station (excluding any transportation cost and any other appurtenant cost paid to railways) which are not covered under the above provisions that may result in better fuel management and can lead to reduction in operation costs or shall have other tangible benefits. Therefore, in order to have an enabling provision under which such costs can be allowed with prior approval, a provision may be introduced to existing Regulation 26 to allow such expenses if it is established that such expenses will result in quantifiable benefits.

Parameter	Issue in Brief	Description/Additional Detail
Additional Capitalisation [Transmission System]	<p>Issue Flagged: Add Cap post Cut-off date seldomly required except in case of technological obsolescence, Damages or Augmentation.</p> <p>Cut-off date may be extended to 5 years from present 3 years.</p> <p>Add Cap post Cut-off Date - Technological Obsolescence, Change in Law and Force Majeure</p> <p>Genesis -Based on analysis carried out post COD major add cap continues for around 5 years.</p> <p>No recurring expenses</p>	<p>Unlike generating stations, additional capitalization post cut-off date is seldom required in case of transmission system unless due to technological obsolescence or damages or augmentation. Accordingly, the may be allowed if required post cut-off date.</p> <p>Therefore, for Transmission Systems, additional capitalisation post cut-off date may be allowed on technological obsolescence, change in law, force majeure or due to replacement as presently allowed -Comments Sought.</p>

Parameter	Issue in Brief	Description/Additional Detail
Segregation of Normative O&M Expenses	<p>Issue Flagged: Allowing one time impact on issues affecting one of the components of O&M Expenses (Employee, A&G and R&M Expense) becomes difficult due to absence of segregation of baseline expenses forming part of O&M expenses.</p> <p>The O&M Expenses may be segregated into Two Broad Categories i.e. Employee Expenses and other O&M Expenses comprising of R&M and A&G Expenses.</p> <p>Genesis – The need to have a Reference Cost to allow future impact.</p>	<p>In case of Employee Expenses one-time effect for pay revision impact is required to be approved.</p> <p>It is further anticipated that in the forthcoming tariff period wage/salary revision is expected and therefore O&M norms may be specified under following two categories.</p> <ol style="list-style-type: none">1. Employee Expenses2. Other O&M Expenses comprising of Repair and Maintenance and Administrative and General Expenses. <p>Alternatively, 50% of the actual wage revision can be allowed on a normative basis to cater the impact of pay/wage revision.</p> <p>However, considering that systems which are more automated will require lesser manpower and systems that are less automated will require higher manpower, approving separate norms may result in inequity even though the total O&M expenses of such systems may be comparable.</p> <p>Therefore, the above suggestion may also be seen in the perspective that these expenses have been historically allowed as one time expenses and any change in the methodology as suggested above may result in un-necessary complications.</p>
Norms for HVDC Stations	<p>Issue Flagged: One Single Norm for all HVDC Schemes needs to be specified.</p> <p>Simplification of O&M Norms required for HVDC Schemes.</p> <p>Genesis – Normative O&M Expenses are approved for certain Schemes while for other schemes O&M Expenses are approved based on Norms of Schemes of similar nature.</p>	<p>There is a need to simplify the norms and therefore one norm for all HVDC Schemes in terms of per MW considering the actual expenses incurred in the past may be specified.</p> <p>Whether the proposed approach can be adopted or any alternatives can be adopted?</p>

Parameter	Issue in Brief	Description/Additional Detail
O&M Expenses for Special Cases	<p>Issue Flagged: Whether additional O&M Expenses needs to be allowed for Transmission Assets being operated in NE Region and Hilly Region?</p> <p>Possible solution needs to be explored so that development of electrical infrastructure in these regions is encouraged</p> <p>Genesis - O&M expenses towards upkeep of Transmission System in the North-Eastern region of India entails additional costs due to logistical challenges as well as poor infrastructure growth of the region</p>	<p>Whether to approve additional O&M expenses for transmission assets being operated in N-E Regions and Hilly Region manner in which such additional costs need to be allowed?</p>
Inclusion of Capital Spares	<p>Issue Flagged: Whether Norms for Capital Spares be included in O&M norms?</p> <p>In order to simplify the process of allowing the spares, all the spares may be allowed on normative basis or on actual basis</p> <p>Genesis - Capital Spares are being allowed on the basis of actuals and Initial Spares and O&M Spares are being allowed on normative basis leading to considerable effort to be put in to map these expenses.</p>	<p>Capital Spares expenses are non-recurring and sporadic and therefore benchmarking the same may be difficult. However, if the Capital Spares are analyzed for a larger duration of 15-20 years and the same can be projected with some degree of predictability.</p> <p>Further, instead of including all the capital spares as part of normative O&M expenses, recurring and low value capital spares below Rs. 20 lakh may be made part of normative O&M expenses while for capital spares with value in excess of Rs. 20 lakh, utilities may submit the same on case to case basis with appropriate justification for Commission's consideration.</p> <p>Whether the proposed approach can be adopted or any alternatives can be adopted to simplify the approval of Capital spares?</p>

Parameter	Issue in Brief	Description/Additional Detail
Impact on account of change in Law and Taxes	<p>Issue Flagged: Whether norms to be included with regard to allowing additional expenses on account of any change in law resulting in an increase in O&M expenses.</p> <p>Possible approach to be explored so that such additional impact may be allowed.</p> <p>Genesis - Delayed recovery of additional expenses on account of change in law resulting in an increase in O&M expenses in the absence of relevant provision under current regulations and time consuming regulatory proceedings for change in law Petitions.</p>	Whether to include any provisions with regard to allowing impact of a change in law on O&M expenses?

Depreciation and Interest on Loan Capital

1/1

Parameter	Issue in Brief	Description/Additional Detail
Depreciation	<p>Issue Flagged: Front Loading of Tariff observed due to shorter Loan Tenure and higher Depreciation in the initial years</p> <p>Increased Loan Tenure may be considered for computation of Depreciation Rates</p> <p>There is a need to create a balance and align depreciation rate with actual loan tenure and life of the assets.</p> <p>Genesis – Excessive front loading of tariff increases resistance to future investments.</p>	<p>It is observed that while specifying depreciation rate, the tenure of the loan considered is 12 years whereas life of most of the assets are 25 – 40 years. It is observed that shorter Loan Tenure and higher depreciation in the initial years has resulted in front loading of tariff.</p> <p>Considering that nowadays loans are available for 15-18 years and availability of several innovative refinancing options, depreciation rates may be may be specified considering loan tenure of 15 years instead of the current practice of 12 years. Further, additional provisions may also be specified that allow lower rate of depreciation to be charged by the generator in the initial years if mutually agreed upon with the beneficiary(ies).</p> <p>[The risk of increase in interest rate due to higher loan tenure may be minimum for regulated entities.]</p>
Interest on Loan Capital	<p>Issue Flagged: Establishing one on one co-relation between non-project specific loan is difficult while working out WAROI</p> <p>Simplification of Approval IoL based on WAROI is required.</p> <p>Genesis – Since Loans availed by Utilities are not project specific, it makes the exercise of approving WAROI a time intensive process taking in consideration the time and effort involved in establishing one on one co-relation.</p>	<p>To simplify the approval of interest on loans, the weighted average actual rate of interest of the generating company or transmission licensee may be considered instead of project specific interest on loans. Further, the cost of hedging related to foreign loans be allowed on an actual basis, without allowing any actual FERV.</p> <p>Comments and suggestions are sought from stakeholders on the above suggestions and alternatives, including in respect of treatment of FERV/cost of hedging</p>

Return on Equity

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Parameter	Issue in Brief	Description/Additional Detail
Return on Equity	<p>Issue Flagged:</p> <ol style="list-style-type: none">1. Risk perception of power generation projects has increased owing to increased insolvency proceedings.2. Strong energy demand revival post COVID-19 has triggered the additional capacity building requirement.	<p>Comments and Suggestions are sought on following:</p> <ol style="list-style-type: none">1. Review of Rate of RoE to be allowed including that to be allowed on additional capitalization that are carried out on account of Change in Law and Force Majeure.2. Whether revised rate of RoE to be made applicable to only new projects or to both existing and new projects?3. Whether incentivizing timely completion of hydro generating station attract investments?4. Merit behind approving different Rate of RoE to Thermal, Hydro Generation and Transmission Projects with further incentives to Dam/reservoir based projects including PSP.5. Merit in allowing RoE by linking the rate of return with market interest rates such as G-SEC rates/MCLR/RBI Base Rate.
	<p>To cater to increasing energy demand, timely commissioning of generation projects needs to be ensured</p> <p>Genesis - Although despite taking sufficient measures to ensure the timely commissioning of generation projects, delay in commission of projects is prevalent. Further ways to incentivize developers needs to be explored and ways to deter the delay needs to be explored.</p>	

RoE – Old Generating Stations

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Parameter	Issue in Brief	Description/Additional Detail
Return on Equity – Old Gencos	<p>Issue Flagged: Whether there is a case to allow higher RoE to Old but efficient Generating Stations?</p> <p>Additional RoE for such old but efficient generating stations; or</p> <p>Additional Incentive in (Paise/kWh) for generation in excess of target PLF.</p> <p>Genesis – Due to low capital base of Old Stations, Equity in Paise/kWh working out to be around 22 Paise/kWh as against around 65 Paise/kWh (new generating Stations). Most of these stations are pit head based whose energy charges are low.</p> <p>Unfavourable Risk –Reward Proposition</p>	<p>Risk-Reward proposition may not be equitable for operating Such Old Generating Stations. Operation of such plants is beneficial for beneficiaries.</p> <p>Possible options to encourage higher availability and generation from Old Generating Stations can be as follows.</p> <ol style="list-style-type: none">1. Alternatively, additional incentive in the form of paise/kWh apart from that being currently allowed may be allowed to such generating stations against generation beyond target PLF.

Tax Rate

1/1

Parameter	Issue in Brief	Description/Additional Detail
Tax Rate	<p>Issue Flagged: Effective Tax Rate under no circumstances can be higher than the applicable tax rate (MAT/Corporate Tax etc.) Tax to be payable only in case company is paying taxes.</p> <p>Effective Tax Rate to be limited to the applicable tax Rate. (Additional Clarity to be provided).</p> <p>Genesis – Effective tax rate can never be higher than the notified tax rate as per relevant Finance Act. – Additional Clarity being provided.</p>	<p>A domestic company shall fall under one of the following brackets, and the maximum tax amount that shall be payable is limited by the tax rates notified for the relevant category. Therefore, Base Rate of RoE may be grossed up as follows:</p> <ol style="list-style-type: none"> 1. At MAT Rates (If not opted for Section 115 BAA) 2. At Effective Tax Rate (if not opted for Section 115BAA) subject to ceiling of Corporate Tax Rate; or 3. At reduced tax rate under Section 115BAA of the Income Tax Act or any other relevant categories notified from time to time time subject to ceiling of rate specified in the relevant Finance Act.. <p>Further, tax shall be allowed only in cases where the company has actually paid taxes as under no circumstances tax can be allowed to be recovered if the company has not paid any tax for the year under consideration.</p>

Interest on Working Capital

1/1

Parameter	Issue in Brief	Description/Additional Detail
Interest on Working Capital	Issue Flagged: 1. Since current Working Capital Norms are efficient, therefore, existing norms may be retained. 2. Modification required in the norms of old gas generating stations – in view of low PLF 3. Alternative approach for determination of IoWC as some percentage of AFC	<p>With regard to gas based generating stations, it is observed that such generating stations are operating with PLF of around 20%-25%. It is anticipated that these generating stations shall continue to operate at such low PLFs in the next tariff period and therefore the current practice of allowing working capital requirement considering generation at normative PLF may need review.</p> <p>With regard to thermal and gas based generating station, fuel cost forms sizeable part of the working capital requirement and as working capital requires truing up on the basis of actuals primarily because of changing fuel expenses it is to be explored how working capital can be approved such that yearly truing up is not required.</p>
	Whether to continue the existing provisions?	Comments and Suggestions are sought on following:
	Genesis – The working capital norms specified by the Commission currently deals with all the issues.	1. Whether any modification is required in the Working Capital Norms. 2. Whether any modification is required in the norms of old gas generating stations to factor in the actual generation while allowing working capital requirement for gas based generating stations
	Further, older Gas Stations operating with lower PLF and costlier cost of generation are scheduled only to meet peak requirements. Such stations are expected to operate in at low PLF upcoming control period. Possible alternatives to be explored to approve the IoWC without the requirement of yearly True-Up	3. Whether Rate of Interest for WC may be continued at one-year MCLR plus 350 bps or any better alternative to the same 4. Alternative approach to approve IoWC that may not require periodic truing up.

Life of Generating and Transmission System

1/1

Parameter	Issue in Brief	Description/Additional Detail
Life of Generating and Transmission System	Issue Flagged: Increase in life of thermal Projects and Transmission sub-station from 25 years to 35 years	It is observed that as more and more coal based thermal generating stations are operating efficiently even beyond 25 years, there may be a case to align normative life of these stations considering that with proper upkeep these generating stations can operate even beyond 30 years.
	The life of Thermal Stations and Transmission Sub-station may be increased to 35 Years as more and more TPS and Sub-stations are operational beyond 25 Years	Similarly, in case of Transmission Sub-stations it is observed that these assets can operate way beyond 25 years similar to transmission lines.
	Genesis - Proper upkeep has enabled Thermal Stations and Transmission Sub-stations to operate beyond 25 Years thereby making a case for reassessing normative life of these assets	<p>It is however observed that one of the factors that has enabled these assets to operate beyond 25 years is regular operations and maintenance carried out by the utilities. The Commission in the past has allowed special allowance to these assets in order to take care of the increasing need of repairs that is required to keep the equipment operating efficiently. As the need for higher repairs will still be required therefore the current dispensation of allowing special allowance may be continued post 25 years.</p> <p>Comments and Suggestions are sought on following:</p> <ol style="list-style-type: none">1. Whether the life of Thermal Generating Stations and Transmission Sub-stations can be increased from 25 to 35 Years.2. Whether Special Allowance or provision of R&M may be allowed post 25 Years

Input Price of Coal – Integrated Mine and Treatment of Interest on Differential

Tariff after Truing-Up

1/1

Parameter	Issue in Brief	Description/Additional Detail
Input Price of Coal – Integrated Mine	<p>In view of no compelling reasons to revisit the current terms and conditions for determination of input price of coal, it is proposed that the current provisions may be continued.</p> <p>Genesis – Much actual data is not available to review the current operational norms and other provisions. Further, not many such mines have achieved their commercial operations.</p>	<p>It is observed that the Commission as on date has only received couple of petitions for determination of input price of coal and as such not many such mines have achieved their commercial operations and therefore not much actual data is available to review the current operational norms and other provisions.</p> <p>In view of no compelling reasons to revisit the current terms and conditions for determination of input price of coal, it is proposed that the current provisions may be continued.</p> <p>Comments and Suggestions are sought on following:</p> <p>1. Any modifications that may be required to current tariff provisions with regard to determination of input price of coal and lignite from integrated mines.</p>
Treatment of Interest on Differential Tariff after Truing-Up	<p>Issue Flagged: Concern raised by Stakeholders on the method of charging interest on the Surplus/Gap..</p> <p>In view of rising concern among the stake holders with regard to charging interest on the surplus/gap, possible approach may be explored to simplify the process.</p> <p>Genesis – Interest on the surplus/gap is charged up to the liquidation of the last instalment.</p>	<p>It is observed that the current regulation allows for recovery/refund of differential Tariff in Six equal Monthly Installments. However, stakeholders have raised concerns over the method of charging interest on the differential amount up to the liquidation of the last instalment.</p> <p>In order to streamline the rate of interest on the differential amount, the current practice of allowing a simple interest rate as per Regulation 10(7) in the 2024-29 tariff block may be continued. Further, interest may be allowed to be charged on the differential amount by the Utility only until the issuance of the Order, and no interest may be allowed during the recovery in six equal monthly instalments.</p> <p>Comments and Suggestions are sought on the above approach and alternative ways, if any</p>

Operational Parameters Impacting Tariff

Normative Plant Availability Factor (NAPAF)

1/1

Parameter	Issue in Brief	Description/Additional Detail
Normative Plant Availability Factor (NAPAF)	<p>Issue Flagged:</p> <ol style="list-style-type: none"> 1. No specific methodology for computing PAF of Run-of River (ROR) Plants 2. Review of Existing Norms Required <p>A mechanism needs to be specified for working out the NAPAF for ROR Plants..</p> <p>Genesis - Changing Dynamics affect the NAPAF for Thermal and Hydro Stations may need fine tuning.</p>	<p>Comments and Suggestions are sought on following:</p> <ol style="list-style-type: none"> 1. Reintroduction of the methodology adopted in the CERC Tariff Regulations, 2004. Based on Regulation XI (b) under Chapter 3 of the Tariff Regulations, 2004, the methodology can be specified as follows: “In case of purely run-of-river power stations, declared capacity means the ex-bus capacity in MW expected to be available from the generating station during the day (all blocks), as declared by the generating station, taking into account the availability of water, optimum use of water and availability of machines;” 2. Any other methodology that can be considered for the computation of plant availability for ROR based hydro generating plants. 3. The existing norms of NAPAF may need review by considering past years PAF, procurement of coal from alternate sources, other than designated fuel supply agreement, change in hydrology etc.

Peak and Off-Peak Tariff

1/1

Parameter	Issue in Brief	Description/Additional Detail
Peak and Off-Peak Tariff	<p>Issue Flagged: Operational difficulties faced by Generators regarding declaration of high demand and low demand season declared by RLDCs.</p> <p>Intervention required to ease off the operational difficulties faced by generators due to declaration of Peak and Off-Peak season in advance by RLDCs.</p> <p>Genesis - Peak and off-Peak season being defined by RLDC.</p>	<p>The current provisions require the Regional Load Despatch Centres (RLDCs) to notify in advance the months of high-demand season and low demand season so that overhauling can be planned by the generators accordingly.</p> <p>As recovery of reasonable costs is of prime importance for any infrastructure sectoral growth, comments/suggestions are sought on the possible interventions/modifications required to address the issues highlighted above. Specific suggestions are also sought on the following:</p> <ol style="list-style-type: none">1. Whether it would be advisable to limit the recovery based on daily peak and off-peak periods.2. Suggestions on National versus Regional Peak as a reference point for recovery of fixed charges.

Compensation for Part Load Operations and GCV of Fuel

1/1

Parameter	Issue in Brief	Description/Additional Detail
Compensation for Part Load Operation	<p>Issue Flagged: Compensation for low load operation below 55% PLF.</p> <p>Impact to be allowed on actual or normative basis.</p> <p>Compensation for Operations below 55%.</p> <p>Impact on actual or normative.</p> <p>Genesis - Due to significant RE Penetration, PLF goes below 55% in some cases.</p> <p>Further, impact should be either on actual basis or normative basis and not whichever is lower.</p>	<p>Compensation mechanism for part loads operations below normative level up to technical minimum was included as part of the Amendment to the Indian Electricity Grid Code, 2010 in the year 2017.</p> <p>Commission in IEGC has decided to make this part of Tariff Regulations.</p> <p>Accordingly, the appropriate provisions may be inserted to deal with part load operation compensation as a part of Tariff Regulations.</p> <p>Further actual operations is falling below 55% in some cases and may require redressal.</p> <p>Further, impact of part load may be allowed on either on normative basis or actual basis.</p> <p>Comments and Suggestions are sought on the existing norms and any changes that may be required to compensate the generators to operate the plants in a flexible manner to support the Grid.</p>
GCV of Fuel	<p>Issue Flagged: Current Provisions may be continued.</p> <p>In view of the wider acceptability found for the approach adopted by the Commission, the current provisions may be continued.</p> <p>Genesis - No compelling reason to modify the same.</p>	<p>It has been observed that the approach adopted by the Commission has found wider acceptability, however, it is observed that the variation in GCV “as billed” and “as received” is significant due to loss of GCV at mine end and during transportation often leading to grade slippages.</p> <p>Although the magnitude of such losses has reduced in the past, however, the losses are still significant and may need to be accounted for in terms of risk sharing between the coal company, railways and the generating station.</p> <p>Accordingly, Comments and Suggestions have been sought on ways to reduce the gap between as billed and as received GCV.</p>

Parameter	Issue in Brief	Description/Additional Detail
Coal Blending	<p>Issue Flagged: Whether Consent of Beneficiaries for blending of Coal to be linked to % Blending instead increase in ECR?</p> <p>Linking consent of Beneficiaries for blending of Coal to be linked to % Blending instead increase in ECR will result in swift response to increase in demand by generating company.</p> <p>Genesis - Generating companies are facing problem to comply with the directions of MoP on account of absence of permission by the concerned beneficiaries which is required under Regulation 43(3) of the CERC Tariff Regulations, 2019.</p>	<p>MoP at various instances have been providing guidelines for Blending of Coal owing to coal shortage. However, generating companies are facing problem to comply with the directions of MoP on account of absence of permission by the concerned beneficiaries which is required under Regulation 43(3) of the CERC Tariff Regulations, 2019.</p> <p>In view of the above, considering the shortage situation may recur, consent of beneficiaries may be linked with % blending of imported coal instead of increase in ECR which in turn will result in swift response to increase in demand by generating company. Procurement of such coal (other than linkage coal) has to be done through a transparent competitive bidding process.</p>

Separate Norms for ROR/Storage Based Hydro Projects

1/1

Parameter	Issue in Brief	Description/Additional Detail
Separate Norms for ROR/Storage Based Hydro Projects	<p>Issue Flagged: Whether more enabling framework or incentive mechanism for dam/reservoir based generating stations to operate as peaking plants?</p> <p>Reviewing the norms for such stations will result in increased generation from such plants and will also benefit beneficiaries.</p> <p>Genesis - Promoting Dam/Reservoir based Generating Stations shall help the beneficiaries in better load management and flexible grid operations.</p>	<p>Currently the Tariff Regulations for all the hydro stations are same except for higher RoE allowed for Storage based Hydro Generating Stations and PSP vis-à-vis Run-of-River projects.</p> <p>Further, NAPAF of storage based generating stations is generally higher than ROR based projects considering the ability of storage based generating stations to generate on demand.</p> <p>In view of the above, it is proposed that more enabling framework or incentive mechanism for dam/reservoir based generating stations to operate as peaking plants wherein these stations may be incentivized to operate as peaking plants.</p> <p>Comments and Suggestions are sought on whether the proposed approach can be adopted or any alternatives can be adopted.</p>

De-Commissioning of Generating Station and Transmission Assets

1/1

Parameter	Issue in Brief	Description/Additional Detail
De-Commissioning of Generating Station and Transmission Assets	<p>Issue Flagged: Possible approaches to treat the impact of de-commissioning cost in case the generating stations/transmission system is de-commissioned before the completion of useful life?</p> <p>Disposal of such de-commissioned generating station/system entails cost (unrecovered depreciation) towards such pre-closure and on the other hand these generating stations have some salvage value which can be realized.</p> <p>Genesis - De-commissioning is done to comply with any statutory order or due to technological obsolescence duly approved by RPC or any other uncontrollable factor, hence should be financially neutral.</p>	<p>In some cases de-commissioning of Generating Station and Transmission Assets is on account of:</p> <ol style="list-style-type: none"> 1. To comply with revised Pollution norms. 2. Generating Station or Transmission System is de-commissioned prior to completion of its useful life due to technological obsolescence or any other uncontrollable factors <p>It is observed that the disposal of such de-commissioned generating station/system entails cost (unrecovered depreciation) towards such pre-closure and on the other hand these generating stations have some salvage value which can be realized.</p> <p>It is to be analyzed how these costs and revenue can be accounted for so that it is cost neutral to the generating/Transmission company and also do not impact the beneficiaries.</p> <p>Suggestions have been sought on possible approaches to recover/refund the impact of de-commissioning cost in case the generating stations/transmission system is de-commissioned before the completion of useful life, if such de-commissioning is done to comply with any statutory orders or due to technological obsolescence duly approved by RPC.</p>

Parameter	Issue in Brief	Description/Additional Detail
Approval process for carrying out non-ISTS lines carrying inter-state power and associated Capital Cost	<p>Issue Flagged: Whether Norms needs to be decided for process to be followed before undertaking the construction of new intra-state transmission lines carrying inter-state power by the STUs and State Transmission Licensees?</p> <p>Possible approach with regards to obtaining approvals needs to explored to streamline the process of tariff determination of such Transmission assets developed by STU's and State Transmission Licensees</p> <p>Genesis – Streamline the process.</p>	<p>It is observed that many of the State transmission licensees have claimed tariff of the transmission lines either due to the creation of LILO on the existing transmission lines or systems or the construction of new transmission lines and intra-state lines converted into inter-state lines due to the bifurcation of a State.</p> <p>It is further observed that State transmission licensees are not taking any prior approval from the Commission, for the implementation of new transmission lines and also many of the State transmission licensees are claiming tariff for the transmission lines without submitting any approvals of SCM and RPC.</p> <p>In view of the above,</p> <p>Suggestions have been sought on possible approaches to be developed for the approval process to be followed before undertaking the construction of new intra-state transmission lines carrying inter-state power.</p> <p>Further, Suggestions have been sought on the capital cost to be considered for the computation of transmission charges in respect of intra-State lines (carrying inter-state power) of the State transmission utilities.</p>

Necessity to Review the need of Regulation 17

1/1

Parameter	Issue in Brief	Description/Additional Detail
Necessity to Review the need of Regulation 17 (2)	<p>Issue Flagged: Continuing Regulation 17 (2) in its present form would create complications and the same is proposed to be modified.</p> <p>Power Sale is governed through PPAs and any interventions in PPA through Tariff Regulations violates contract sanctity. Such modalities should be governed through PPAs.</p> <p>Genesis - Regulation 17 (2) of the existing Regulations may be inequitable for generating stations.</p>	<p>It is observed that generation is a delicensed activity and is purely guided by terms and conditions of PPA for a period of 25 years and that any extended operation should also be governed by PPA.</p> <p>Further, any interventions in PPA through tariff Regulations every five-year including such exit clauses may not be desirable as it may violate contract sanctity.</p> <p>Further, any extended operations should also be governed by PPA as was the case in the initial PPA period.</p> <p>In view of the above, it is observed the continuing Regulation 17 (2) in its present form would create complications and the same is proposed to be modified.</p>

Macro Issues to be Dealt

- 1. Tariff Simplification – Approach 1 & Approach 2**
- 2. Allowing Add Cap on Normative Basis**
- 3. Incentivizing Peak Generation**
- 4. Measures to Reduce Impact of Delay – Time and Cost Overrun**
- 5. Peak and Off Peak Tariff**
- 6. GCV Billed V/s GCV Received – Accounting for Losses**
- 7. Compensation of Part Load Operation**
- 8. Necessity to Review Regulation 17(2)**

T h a n k Y o u

Illustration

Illustration: Consider an asset which was supposed to be implemented in 36 months suffers a delay of 12 months. Further, suppose IDC upto SCOD is Rs. X and IDC beyond SCOD till actual COD is Rs. Y, and the Commission has condoned delay of 4 months then IDC allowable under the above two scenarios shall be as follows.

Under **Option 1** above the allowable IDC shall be Rs. $X + [Y*(4/12)]$, i.e., only IDC pertaining to delay is pro-rated.

Whereas,

Under **Option 2** the allowable IDC shall be Rs. $(X+Y)*[(36+4)/48]$ wherein the total IDC is pro-rated based on the SCOD and delay condoned vis-à-vis actual implementation period of 48 months.



Tariff Order specifying Indexation at the beginning of the Tariff Period

Particulars	UoM	Assumptions
		Tariff Order
Commercial Date of Operation		01/04/19
Installed Capacity	MW	500
Capital Cost as on COD	Rs. Lakh	380036
Debt	%	70%
Equity	%	30%
Debt	Rs. Lakh	266025
Equity	Rs. Lakh	114011
Cost of Debt	%	6.63%
Cost of Equity	%	15.50%
Depreciation	%	5.11%
IoWC Rate	%	10.00%

Existing Project

Normative Approach - Tariff Order Issued at the beginning of Tariff Period 2024-29 for Asset-X

Tariff Order Issued at the beginning of Tariff Period

Year>>>		Truing Up shall be done for 2019-24 tariff block					First Year Tariff and Indexation for the rest shall be specified.				
AFC - Tariff Order for FY 2024-29	UoM	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29
RoE	Rs. Lakh	17672	17672	17672	17672	17672	17672	17672	17672	17672	17672
Depreciation	Rs. Lakh	19429	19429	19429	19429	19429	19429	19429	19429	19429	19429
Cumulative Dep	Rs. Lakh	19429	38857	58286	77714	97143	116571	136000	155429	174857	194286
O&M Expenses	Rs. Lakh	11255	11650	12060	12485	12920	13566	14244	14957	15704	16490
Interest on loan	Rs. Lakh	16994	15706	14418	13130	11842	10553	9265	7977	6689	5401
IoWC	Rs. Lakh	2927	2980	3036	3093	3153	3224	3297	3374	3454	3538
AFC Total	Rs. Lakh	68276	67437	66614	65809	65015	64444	63907	63408	62948	62528

Indexation specified at the time of tariff Order

Year>>>											
Particulars	UoM	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29
O&M Expenses	Rs. Lakh	11,255	11,650	12,060	12,485	12,920	13,566	14,244	14,957	15,704	16,490
Rest of AFC Components	Rs. Lakh	57,021	55,787	54,554	53,324	52,095	50,878	49,663	48,451	47,243	46,039
O&M Indexation*	Factor #	AFC till cut-off date to be specified under the current mechanism						1.05	1.05	1.05	1.05
Rest of AFC Indexation*	Factor #							0.98	0.98	0.98	0.97

*Y-O-Y escalation/de-escalation as per the computations of individual components of AFC

Indexation for a Particular Year = (Expenses of Current Year/Expenses of Preceding Year)

Sample Calculation

Revision of Indexation for the past Tariff Period and Specifying New Indexation for the Next Tariff Period

Particulars	UoM	Assumptions	Based on Indexation	New Indexation
		Tariff Order	Revision 2024-29	2029-34
Commercial Date of Operation		01/04/19		
Installed Capacity	MW	500		
Capital Cost as on COD	Rs. Lakh	380036	380036	380036
Add Cap approved	Rs. Lakh	0	Rs. 2000 Lakh (FY 27) Rs. 2200 Lakh (FY 29)	
Debt	%	70%	70%	70%
Equity	%	30%	30%	30%
Debt	Rs. Lakh	266025	266025	266025
Equity	Rs. Lakh	114011	114011	114011
Cost of Debt	%	6.63%	8.58%	8.58%
Cost of Equity	%	15.50%	15.50%	15.50%
Depreciation	%	5.11%	5.11%	5.11%
IoWC Rate	%	10.00%	12.00%	12.00%

Existing Project

Normative Approach - Revision in Indexation at the end of Tariff Period 2024-29- In case Additional Capitalisation is approved in Tariff Period 2024-29

Year>>>		Commission to call out for relevant data at the end of the Tariff Period and revised Indexation for 2024-29 and new Indexation for 2029-34 to be issued									
		Revision of AFC at the end of Tariff Period - Revised Indexation specified					New Indexation to be specified for next Tariff Period				
AFC	UoM	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31	FY 2031-32	FY 2032-33	FY 2033-34
RoE	Rs. Lakh	17672	17672	17672	17672	17672	17672	17672	17672	17672	17672
Depreciation	Rs. Lakh	19429	19429	19429	19429	19429	19429	19429	8376	8376	8376
Cumulative Dep	Rs. Lakh	116571	136000	155429	174857	194286	213714	233143	241519	249895	258271
O&M Expenses	Rs. Lakh	13566	14244	14957	15704	16490	17479	18528	19639	20818	22067
Interest on loan	Rs. Lakh	13649	11983	10317	8651	6985	5319	3653	2461	1742	1024
IoWC	Rs. Lakh	3926	4008	4095	4186	4280	4388	4501	4459	4598	4743
O&M Expenses	Rs. Lakh	13566	14244	14957	15704	16490	17479	18528	19639	20818	22067
Rest of AFC Comp.	Rs. Lakh	54675	53092	51512	49937	48366	46807	45254	32967	32388	31815
AFC Total	Rs. Lakh	68241	67336	66469	65641	64855	64286	63782	52606	53205	53882

AFC - Add Cap Impa	UoM	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31	FY 2031-32	FY 2032-33	FY 2033-34
RoE	Rs. Lakh			46.50	144.15	195.30	195.30	195.30	195.30	195.30	195.30
Depreciation	Rs. Lakh			51.12	158.48	214.72	214.72	214.72	214.72	208.58	208.58
Cumulative Dep	Rs. Lakh			51.12	209.60	424.32	639.04	853.75	1,068.47	1,277.05	1,485.63
O&M Expenses	Rs. Lakh			-	-	-	-	-	-	-	-
Interest on loan	Rs. Lakh			57.84	174.90	224.93	206.52	188.11	169.70	151.55	133.66
IoWC	Rs. Lakh			2.4	7.3	9.7	3.1	2.9	2.6	2.3	2.0
O&M Expenses	Rs. Lakh	-	-	-	-	-	-	-	-	-	-
Rest of AFC Comp	Rs. Lakh	-	-	157.83	484.81	644.62	619.68	600.99	582.30	557.73	539.57
AFC Total	Rs. Lakh			157.83	484.81	644.62	619.68	600.99	582.30	557.73	539.57

Revised Indexation											
Particulars	UoM	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31	FY 2031-32	FY 2032-33	FY 2033-34
O&M Expenses	Rs. Lakh	13,566	14,244	14,957	15,704	16,490	17,479	18,528	19,639	20,818	22,067
Rest of AFC Comp	Rs. Lakh	54,675	53,092	51,670	50,422	49,010	47,427	45,855	33,549	32,946	32,354
O&M Indexation*	Factor #	No Revision in Indexation for O&M					1.060	1.060	1.060	1.060	1.060
Rest of AFC Indexation*	Factor #	1.075	0.971	0.973	0.976	0.972	0.968	0.967	0.732	0.982	0.982

*Y-O-Y escalation/de-escalation as per the computations of individual components of AFC

* FY 2024-25 - Indexation w.r.t cost approved in Tariff Order

Indexation for a Particular Year = (Expenses of Current Year/Expenses of Preceding Year)