MAHARASHTRA ELECTRICITY REGULATORY COMMISSION

EXPLANATORY MEMORANDUM

ON

Draft Maharashtra Electricity Regulatory Commission (Approval of Capital Investment Schemes) Regulations, 2022

March, 2022

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LIST OF ABBREVIATIONS

AEML	Adani Electricity Mumbai Limited
APTEL	Appellate Tribunal for Electricity
ATIL	Adani Transmission (India) Limited
EA 2003	Electricity Act, 2003
APR	Annual Performance Review
ARR	Aggregate Revenue Requirement
BEST	Brihanmumbai Electric Supply and Transport
CAGR	Compound Annual Growth Rate
Capex	Capital Expenditure
CBG	Competitive Bidding Guidelines
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
Ckt-km	Circuit Kilometres
COD	Commercial Operation Date
CTU	Central Transmission Utility
DISCOM	Distribution Companies
DPR	Detailed Project Report
G-T-D	Generation, Transmission and Distribution
GFA	Gross Fixed Asset
GoM	Government of Maharashtra
HT	High Tension
HVDC	High Voltage Direct Current
IWC	Interest on Working Capital
InSTS	Intra-State Transmission System
JPTL	Jaigad Power Transmission Co. Ltd.
kWh	kilo Watt hour
LT	Low Tension
M-DNAC	Mumbai Distribution Network Assessment Committee
MEGPTCL	Maharashtra Eastern Grid Power Transmission Company Ltd.
MERC	Maharashtra Electricity Regulatory Commission.
MNRE	Ministry of New and Renewable Energy
MoU	Memorandum of Understanding
MSEDCL	Maharashtra State Electricity Distribution Company Limited
MSETCL	Maharashtra State Electricity Transmission Company Limited
MSLDC	Maharashtra State Load Despatch Centre
MSPGCL	Maharashtra State Power Generating Company Limited
MYT	Multi Year Tariff
OA	Open Access
O&M	Operation and Maintenance

PGCIL	Power Grid Corporation of India Limited
PPA	Power Purchase Agreement
PoC	Point of Connection
RE	Renewable Energy
RLDC	Regional Load Despatch Centre
ROE	Return on Equity
R&M	Repair and Maintenance
SERC	State Electricity Regulatory Commission
SEZ	Special Economic Zone
SFOC	Secondary Fuel Oil Consumption
SHR	Station Heat Rate
SLDC	State Load Despatch Centre
STU	State Transmission Utility
ToD	Time of Day
TPC	Tata Power Company Limited
TPC-G	Tata Power Company Limited- Generation Business
TPC-T	Tata Power Company Limited- Transmission Business
TSA	Transmission Service Agreement
TSU	Transmission System User

1 Introduction

1.1 Background & Regulatory Framework

As per Section 61 of the Electricity Act, 2003 ("EA 2003" or "the Act"), State Electricity Regulatory Commissions (SERCs or Commissions) have the power to specify terms and conditions for determination of tariff and in doing so shall be guided by the factors which **encourage competition, efficiency, economical use of the resources, good performance and optimum investments so that Generation, Transmission, Distribution, and supply of electricity** is conducted on commercial principles and the consumers interest is safeguarded.

Section 61 of the EA 2003 stipulates:

> *"61. The Appropriate Commission shall, subject to the provisions of this Act, specify the terms and conditions for the determination of tariff, and in doing so, **shall be guided by the following**, namely:-*
>
> *(a) The principles and methodologies specified by the Central Commission for determination of the tariff applicable to generating companies and transmission licensees;*
>
> *(b) The generation, transmission, distribution and supply of electricity are conducted on commercial principles;*
>
> *(c) The factors which would **encourage competition, efficiency, economical use of the resources, good performance and optimum investments**;*
>
> *(d) **Safeguarding of consumers' interest and at the same time, recovery of the cost of electricity in a reasonable manner**;*
>
> *(e) The principles rewarding efficiency in performance;*
>
> *(f) Multiyear tariff principles;*
>
> *(g) That the tariff progressively reflects the cost of supply of electricity and also reduces cross-subsidies in the manner specified by the Appropriate Commission;*
>
> *(h) The promotion of co-generation and generation of electricity from renewable sources of energy;*
>
> *(i) The National Electricity Policy and tariff policy" (**emphasis added**)*

Section 181 of the Act stipulates powers of the State Commissions to make Regulations, as reproduced below:

"181. (Powers of State Commissions to make regulations): --- (1) The State Commissions may, by notification, make regulations consistent with this Act and the rules generally to carry out the provisions of this Act.

(2) In particular and without prejudice to the generality of the power contained in sub-section (1), such regulations may provide for all or any of the following matters, namely: -

…

(zp) any other matter which is to be, or may be, specified."

Capital Investment (also referred as "Capital Expenditure" or "Capex") has a significant impact on the tariff determination process for Generation Businesses/Companies, Transmission Businesses/Licensees, Distribution Businesses/Licensees, State Transmission Utility (STU) and the Maharashtra State Load Despatch Centre (MSLDC) and their successors[**Regulated Power Entities**]. The Regulated Power Entities undertake capex works under various schemes known as "Capital Investment Schemes" or "Capex Schemes" in order to create/develop/augment/improve existing assets/infrastructure.

The Maharashtra Electricity Regulatory Commission (MERC or the Commission) issued the "Guidelines for In-Principle Clearance of Proposed Investment Schemes" (hereinafter referred as "**Capex Guidelines**") on 9 February, 2005 with an objective to stipulate a framework for carrying out the prudence check of the capital expenditure schemes proposed by the Regulated Power Entities and assess the impact of these schemes on tariffs of these entities. As per the Capex Guidelines, the Regulated Power Entities are required to obtain ex-ante in-principle approval of the Commission for Capital Investment Schemes exceeding Rs.10 Crore. Also, as per SLDC Budget Order and subsequent applicable MYT Regulations, SLDC is required to obtain ex-ante in-principle approval of the Commission for Capital Investment Schemes exceeding Rs.1 Crore.

The Commission notified the first amendment to the Capex Guidelines on 18th February, 2008 stipulating that Generating Companies planning to submit Capital Investment Schemes for establishment of new generating stations shall be excluded from these Guidelines.

The purpose of notifying the Capex Guidelines was to have a procedure to be followed for in-principle approval of major capital investment works proposed to be undertaken by the Regulated Power Entities . This ensured that the Commission was not only aware of the proposed major works that are being taken up by these entities, but was able to scrutinise the prudence of major capex schemes being undertaken by Regulated Power Entities to ensure that only necessary capital investment is made thereby preventing unnecessary tariff impact to the consumers of the Utility. It also ensured that the Regulated Power Entities took into account the other technical, economical, and safety parameters of Capital Investment Schemes while submitting the same for approval of the Commission.

Power Sector is very dynamic in nature and there have been significant changes in the business environment of power sector utilities since the notification of the Capex Guidelines in 2005, as partially amended in year 2008. Other factors such as technology upgradation, commercial upliftment, increased level of power consumption, need for investments, introduction of competition in distribution through parallel licensees, efficient utilization of resources, increasing

number of private players in the Generation, Transmission and Distribution Businesses, etc., has led to transformation in the scenario under which Capex Schemes are carried out by the entities over the years. The Commission has been facing increasing issues in restraining over-capitalisation of assets, i.e., prevention of execution of inefficient and poorly planned CAPEX Schemes or unnecessary Schemes and felt there is room for improvement in the framework of prudence check of proposed CAPEX Schemes of Utilities.

Owing to the above factors, the Commission felt that there is a need to regularize and streamline the filing and approval process of Capital Investment Schemes in line with the developments witnessed by the sector in the past sixteen years and based on the learnings at the time of scrutiny of these Capital Investment Schemes and based on the approach adopted in various MYT/MTR Orders. The Commission has tried to ensure that an objective approach gets adopted to the extent possible, at both stages of approval of Capital Investment Schemes, i.e., at in-principle approval stage as well as at the time of approval of completed cost.

The Commission has hence formulated the Draft Maharashtra Electricity Regulatory Commission (Approval of Capital Investment Schemes) Regulations, 2022 (hereinafter referred as "**Draft Capex Approval Regulations, 2022**" or "these Draft Regulations"). While formulating the Draft Capex Approval Regulations, 2022, the Commission has been guided by the analysis of Capital Investment Schemes submitted by the Regulated Power Entities and approved by the Commission over the past few years. The Commission has also considered the existing Guidelines and relevant Regulations, recent MYT/MTR Orders, and the Hon'ble APTEL Judgments passed from time to time with regard to Capital Investment Schemes. While framing the Draft Regulations, the Commission has also considered the inter-State comparison of existing Capex Approval Regulations/Guidelines or MYT Regulations for approval of capex as prevailing in other States. It is clarified that the objective of these Draft Regulations is to optimise the capital investment in terms of improved framework for prudence check.

The Commission has proposed the draft Capex Approval Regulations, 2022 based on its experience in implementing the MERC Capex Guidelines for in-principle approval of Capex Schemes and final approval of such schemes as per MERC (Multi-Year Tariff) Regulations, 2019 as amended from time to time [hereinafter referred as "MERC MYT Regulations, 2019"]. **The rationale for the various provisions proposed in the draft MERC (Approval of Capital Investment Schemes) Regulations, 2022 have been elaborated in this Explanatory Memorandum (EM).**

The Commission while formulating draft Capex Approval Regulations, 2022, has endeavoured to balance the interest of consumers and the regulated entities. Based on its analysis of various aspects, the Commission has tried to bring out the best possible regulatory framework through these draft Regulations as discussed in subsequent Chapters.

The Commission has incorporated the following Preamble in the draft Capex Approval Regulations, 2022:

*"**Preamble:***

Section 61 of the Electricity Act, 2003 requires the State Electricity Regulatory Commission to be guided by the factors which encourage competition, efficiency, economical use of the resources, good performance and optimum investments so that Generation, Transmission, Distribution, and supply of electricity are conducted on commercial principles and the consumers interest is safeguarded. Section 181 of the Electricity Act, 2003 mandates the State Electricity Regulatory Commission to make Regulations consistent with the Act and the Rules generally to carry out the provisions of the Act. Capital Investment has a significant impact on the revenue requirement and tariff determination process for regulated entities. It is necessary to ensure that the Capital Investment is regulated in a transparent and consistent manner for all entities, while ensuring economic use of funds.

The Maharashtra Electricity Regulatory Commission (Approval of Capital Investment Schemes) Regulations, 2022 aims to lay down the framework to be followed by all State Entities for obtaining the Commission's in-principle approval for proposed Capital Investment as well as the approval to be granted to the final completed cost."

The Explanatory Memorandum is organised in the following Seven (7) Chapters:

Chapter 1: Introduction

Chapter 2: Definitions and Applicability of Regulations

Chapter 3: Categorization of Capital Investment Schemes

Chapter 4: Application and Scrutiny for In-Principle Approval and Completed Cost approval of Capital Investment Schemes

Chapter 5: Treatment of Time and Cost Overrun of Capital Investment Scheme

Chapter 6: Necessary Conditions for Capital Investment Schemes

2 Definitions and Applicability of Regulations

2.1 Applicability of Regulations

The Capex Guidelines published by the MERC in the year 2005 were applicable to all Capital Investment Schemes carried out by the Regulated Power Entities falling under the regulatory regime and operating in the State of Maharashtra.

In 2008, the Commission amended the Capex Guidelines stating that all the Capital Investment Schemes for setting up of new generating unit/station by the Generating Companies shall be excluded from these Guidelines. Such Investment Schemes shall be governed under the MYT Regulations notified by MERC from time to time.

The Commission carried out an inter-State comparison of the applicability of Regulations/Guidelines for approval of Capital Investment Schemes. The Commission observed that many States have not notified any separate Regulations or Guidelines for approval of Capital Investment Schemes since the approval of Capex Schemes in these States are governed by the MYT/Tariff Regulations notified in the respective State.

Only a few States such as Delhi, Bihar, Karnataka, Rajasthan, Madhya Pradesh and Andhra Pradesh, apart from CERC, have notified separate Regulations/Guidelines for approval of Capital Investment Schemes. Out of the above, Rajasthan is the only State, which has made its Regulations applicable to all three entities (i.e., Generation, Transmission and Distribution). All the other States have made their Regulations/Guidelines applicable only to Transmission Licensees and Distribution Licensees, while CERC's Capex Regulations are applicable for Transmission Licensees. Capital Investment Schemes for Generation Companies in these States including CERC are governed by its respective MYT/Tariff Regulations as amended from time to time.

Moreover, the MYT/Tariff Regulations in the State of Karnataka allow Capital Investment Schemes for Generating Companies only for Additional Capitalisation and Renovation and Modernisation. CERC also has restricted Capital Investment Schemes of Generating Companies only to the provisions specified in its MYT Regulations.

The Commission is of the opinion that it would be unfair to Generation Companies if they are completely prohibited from filing of Capital Investment Scheme for in-principle approval. The Commission in various MYT/MTR Orders has been directing the Generating Companies to improve the overall performance of the station/units. It would be difficult for the Generating Companies to improve their performance without proposing any Capital Investment Scheme for performance improvement. Further, certain Capex Schemes would be required for existing Generating Stations/Units to meet revised environmental norms. The Commission has, therefore, continued the applicability of these draft Regulations to Generating Companies.

Considering all the above factors, the Commission has proposed applicability of these draft Regulations to existing and future Generation Companies, Transmission Licensees, Distribution Licensees, STU, MSLDC, and their successors for approval of Capital Investment.

Further, the Commission has continued with the exclusion of Capital Investment Schemes consisting of new generating unit/station by the Generating Companies. In addition to this clause, the Commission proposes to also exclude filing of additional capitalisation falling within the original scope of work of new generating unit/station, from these draft Regulations. The same shall be governed under the MERC MYT Regulations, 2019, as amended from time to time.

The Commission thus, proposes the following clauses in draft Capex Approval Regulations, 2022:

> *"1.3 These Regulations shall be applicable to existing and future Generation Businesses/Companies, Transmission Businesses/ Licensees, Distribution Businesses/Licensees, State Transmission Utility (STU), Maharashtra State Load Despatch Centre (MSLDC), and their successors [Regulated Power Entities]for approval of Capital Investment, in all matters covered under these Regulations:*
>
> *Provided that these Regulations shall not be applicable for approval of Capital Cost of new Generating Unit/Station and for additional capitalisation within the original scope of work of new Generating Unit/Station, which shall be regulated as specified in the Maharashtra (Multi-Year Tariff) Regulations, 2019, as amended from time to time.*

2.2 Definitions and Interpretations

a) The Commission has defined the various terminologies used in these draft Regulations under Regulation 2 of these Regulations. The terminologies defined in these draft Regulations are in line with the terms defined in the Electricity Act, 2003 or the Regulations framed by the Commission under the Electricity Act, 2003. Many of the definitions are in line with the definitions specified in the MERC MYT Regulations, 2019.

b) The Commission has, therefore, not discussed all the definitions specified in these draft Regulations in the Explanatory Memorandum (EM). The Commission in this section of the EM has only covered the key definitions, which have been defined specifically for the purpose of these draft Regulations.

c) The Commission has defined the term 'Applicant' in these draft Regulations. The Applicant shall be the Generating Company/Business or Transmission Licensee or Distribution Licensee or MSLDC that are required to file the application for approval of Capital Investment Schemes in accordance with the Electricity Act, 2003 and these draft Regulations. The relevant extract of the definition is as follows.

> *"'Applicant' means a Generating Company/Business or Transmission Businesses/Licensee or Distribution Businesses/Licensee (including deemed distribution*

licensee) or MSLDC, who has filed an Application for approval of Capital Investment in accordance with the Act and these Regulations;"

d) The Commission has defined the term 'Capital Investment or Capex' as the investment proposed by the Applicant to meet the objectives, or which qualify for the criteria specified for Capital Investment Scheme. The relevant extract of the definition is as follows:

"Capital Investment' or 'Capex' means investment proposed by the Applicant against Schemes to meet the objectives specified in Regulation 3 of these Regulations;"

e) The Commission has defined the term 'Capitalisation' as the capital investment put to use as certified by the appropriate authority. The appropriate authority in different cases has been specified separately. The relevant extract of the definition is as follows:

'Capitalisation' means the amount of Capital Investment put to use, as certified by the appropriate authority, as specified in Regulation 6 of these Regulations.

f) In order to ensure clarity, the Commission has defined the term 'Cost Benefit Analysis' as the comparison of all costs with all the objectives and benefits. The relevant extract of the definition is as follows:

"'Cost Benefit Analysis' means the comparison of all costs associated with a particular Capital Investment Scheme with all the objectives and benefits including savings in expenses, arising out of the Capital Investment Scheme".

g) In order to ensure clarity regarding the monitoring of cost benefits, the Commission has defined the term 'Cost Benefit Monitoring' as the periodic comparison of actual costs and the actuals benefits with respect to the costs and benefits proposed at the time of in-principle approval. The relevant extract of the definition is as follows:

"'Cost Benefit Monitoring' means the process of periodic comparison of actual cost benefit, considering both tangible and intangible benefits, and year-wise tariff impact achieved with respect to cost benefit analysis and year-wise tariff impact proposed at the time of in-principle approval for selected Schemes as may be considered necessary by the Commission."

h) The Commission has defined the term 'Detailed Project Report Scheme' or 'DPR Scheme' as Capital Investment Schemes whose estimated cost exceed the limits specified in these draft Regulations for obtaining in-principle approval of the Commission. The relevant extract of the definition is as follows:

"'Detailed Project Report Scheme' (or 'DPR Scheme') means a capital expenditure Scheme with projected capital cost exceeding the limits specified in these Regulations, for which the Generating Businesses/Company or Transmission Businesses/Licensee or Distribution Business/Licensee or MSLDC is required to obtain prior in-principle approval of the MERC in accordance with these Regulations;"

i) The Commission has defined the term 'Existing Asset' to mean a Generating Unit/Station or assets of Licensee or MSLDC declared as under commercial operation prior to notification of these Regulations. The relevant extract of the definition is as follows:

"'Existing Asset' means a Generating Unit/Station or assets of Transmission Business/Licensee or Distribution Business/Licensee or MSLDC declared as under commercial operation prior to notification of these Regulations;"

j) The Commission has defined the term 'Group Company' as follows:

"'Group Company' means two or more enterprises which, directly or indirectly, are in position to:

(i) exercise twenty-six per cent, or more of voting rights in other enterprise; or

(ii) appoint more than fifty per cent of members of board of directors in the other enterprise, a subsidiary company of the concerned entity, or a sister subsidiary company, or a Special Purpose Vehicle (SPV) under a common holding company;"

k) The Commission has also defined the term 'Non-DPR Scheme' as Capital Investment Schemes whose estimated cost is within the limits specified in these draft Regulations and are not required to obtain in-principle approval of the Commission. The relevant extract of the definition is as follows:

"'Non-DPR Scheme' means a capital expenditure Scheme with projected capital cost within the limits specified in these Regulations, for which the Generating Business/Company or Transmission Business/Licensee or Distribution Business/Licensee or MSLDC is not required to obtain prior in-principle approval of the Commission;"

l) The Commission has defined the term 'Opex Schemes' with the same intent as it was introduced in the MERC MYT Regulations, 2019. The relevant extract of the definition is as follows:

"'Opex Schemes' are Schemes proposed to be undertaken by the Generating Business/Company or Transmission Business/Licensee or Distribution Business/Licensee or MSLDC for Operation and Maintenance of the asset, wherein the payments will be linked to the performance and deliverables throughout the contract period, including but not limited to system automation, maintenance, new technology and IT implementation, etc., as specified in the MERC (Multi-Year Tariff) Regulations, 2019, as amended from time to time; "

m) The Commission has defined the term 'Prudence Check' for the purpose of these draft Regulations with an intention to specify the amount of scrutiny that the Commission shall carry out before approval of Capital Investment Schemes. The relevant extract of the definition is as follows:

"'Prudence Check' means the scrutiny of reasonableness of capital investment incurred or proposed to be incurred, financing plan, use of efficient technology, cost and time over-run and such other factors as may be considered appropriate by the Commission in accordance with these Regulations;"

n) The Commission has defined the term 'Sister Concern' as follows:

"'Sister Concern' means two or more Companies, including a Special Purpose Vehicle (SPV) owned or controlled by the same entity or person"

o) For complete clarity, the Commission has defined the term 'Tariff Based Competitive Bidding' as follows:

"'Tariff Based Competitive Bidding' or 'TBCB' in case of Transmission Projects means the procurement of Transmission Services in accordance with the 'Guidelines for Encouraging Competition in Development of Transmission Projects' notified by the Ministry of Power, Government of India, under Section 63 of the Act, as amended from time to time"

3 Categorization of Capital Investment Schemes

3.1 Capital Investment Scheme

The existing Capex Approval Guidelines defines 'Capital Investment Scheme' as under:

> ***"B) Capital Investment Schemes**:*
>
> *For the purpose of these guidelines, a Capital Investment Scheme means any non-recurring capital expenditure programme for the acquisition, construction or improvement of a permanent facility in a particular sector (i.e. Generation, Transmission, Distribution, General, etc.) or a geographical region…."*

As per the above definition any capex incurred by the Regulated Power Entity for acquisition, construction or improvement of a permanent facility shall be termed as Capital Investment Scheme.

Though the above definition is very clear on what kinds of works/projects shall be termed as 'Capital Investment Scheme', it was observed in the past few years that various Regulated Power Entities have been submitting schemes of regular repairs and maintenance of assets and/or schemes that are of operating expenditure nature, under 'Capital Investment Scheme' for in-principle approval of the Commission in the pretext of non-recurring onetime expenses.

The Commission has been rejecting such schemes filed by Companies/Licensees stating that such expenditure is in the nature of revenue expenditure and not capital expenditure and hence, cannot be termed as 'Capital Investment Schemes'. The Commission through the approval letter has been directing Companies/Licensees to claim such expenditure either under repairs and maintenance as part of O&M expenses or under Operating Expenditure Schemes (Opex Schemes), which is allowed over and above the O&M expenses as specified in the MERC MYT Regulations, 2019.

The Commission feels that in order to clearly differentiate between capital expenditure and revenue expenditure and minimise the ambiguities, it is necessary to define all kinds of works/projects or schemes that shall be termed as 'Capital Investment Schemes'.

The Commission has accordingly specified in the draft Regulations that only those works/schemes/projects which fulfil at least one or combination of the following objectives shall be termed as 'Capital Investment Schemes':

1. New Infrastructure to meet upcoming load;
2. Augmentation of capacity of the existing project/system;
3. Increase in transformation capacity;
4. Increase in revenue from the assets;
5. Increase in operational efficiency of existing system;
6. Increase in the Useful life of entire project/scheme/assets;

7. Replacement of the entire asset after completion of Useful Life and which has gone beyond repair;
8. Improvement in power quality and reliability;
9. Reduction in maintenance requirements;
10. Renovation and Modernisation for extension of life of entire project;

The Commission shall reject any Capital Investment Scheme filed for in-principle approval by applicants, which does not fulfil at least one or combination of the above objectives.

In addition to the above clause, the Commission has included a proviso specifying that all Renovation and Modernisation Schemes proposed by the Generation and Transmission Companies must be in accordance with the Guidelines notified by the Central Electricity Authority (CEA).

The Commission is also of the opinion that in case the Capital Investment Scheme is with respect to asset replacement, the approval may not be given merely on the basis that the existing asset has completed its useful life. The Commission shall assess the justification provided by the applicant, the residual life, diagnostic test report, performance degradation and cost benefit analysis of repairs against replacement before giving in-principle approval. Further, the certificate from competent agency shall be required only in case the replacement of assets is premature without completion of regulated life or obsolescence of the technology and there are alternatives to replacement under capital expenditure.

The Commission in the past has observed that Applicants have filed the schemes for asset replacement merely because the useful life of the asset is completed as per provision of the relevant Regulations, while the asset is still working without interruptions and without any or minor degradation in performance. The Commission is of the opinion that such assets can be continued in operation even if the useful life is over. The Commission has therefore, proposed such clause for assessment of Capital Investment Schemes filed for replacement of assets.

The Commission thus, proposes the following clauses in the draft Capex Approval Regulations, 2022:

"3.1 Any one or a combination of the following objectives needs to be fulfilled by the proposed Capital Investment Schemes for being considered for approval in accordance with these Regulations:

(a) New Infrastructure to meet upcoming load;
(b) Augmentation of capacity of the existing project/system;
(c) Increase in transformation capacity;
(d) Increase in revenue from the assets;
(e) Increase in operational efficiency of existing system;
(f) Increase in the Useful Life of the entire project/scheme/assets;
(g) Replacement of the entire asset after completion of Useful Life and becomes beyond

repair;

(h) Improvement in power quality and reliability

(i) Reduction in maintenance requirements;

(j) Renovation and Modernisation for life extension of entire project;

(k) Improvement in system parameters:

Provided that Renovation and Modernisation Schemes for Generation Business and Transmission Business shall be in accordance with relevant Guidelines notified by the Central Electricity Authority (CEA).

3.2 Asset replacement shall not be approved merely because the asset has completed its Useful Life as specified in the applicable Regulations, and the Applicant will have to submit adequate justification for the asset replacement based on aspects such as inter-alia, residual life as certified by competent agency, performance degradation based on the diagnostic testing, assets beyond repair and cost-benefit analysis of repair versus replacement.

3.3 The certificate from the competent agency referred in Regulation 3.2 shall be required only in case the replacement of assets is premature without completion of regulated life or obsolescence of the technology and there are alternatives to replacement under capital expenditure.

3.4Replacement of the assets shall be the last resort and not the first priority:

Provided that while proposing the asserts for replacement only essential scope shall be considered to optimise the project cost".

3.2 Categorisation of Capital Investment Schemes

The Capex Guidelines specified the following categories of works to be included under Capital Investment Schemes:

"The scope of investments included in each Scheme shall be any of the following:

(i) Works of a similar or related nature

For example: New Receiving Stations proposed at different locations within the licence area must be clubbed together and presented as a Scheme for New Receiving Stations, Schemes for modernization / augmentation of the Transmission cables must be presented together, Information Technology Schemes, SCADA and Communication Equipment at the region/State level, Schemes for Major Replacement of Old Equipment etc.

(ii) Different types of Capital Nature Works within a geographical area, say in a District

For example, all capital investments covered under a District Integrated Scheme can be presented together as a Scheme

(iii) An independent identifiable project as would be submitted to a financial institution like REC, PFC, etc or for funding under APDRP."

The existing Guidelines specify the nature and category of Capital Investment Schemes only through examples as stated above. The Commission feels that there is need to give additional clarity on the Capital Investment Schemes that can be filed by the entities before the Commission.

The Commission, hence, proposes to categorise the prospective Capital Investment Schemes in these draft Regulations. The Commission has identified the categories under which the Generation Companies, Transmission Licensees, Distribution Licensees and SLDC shall file for approval of the Capital Investment Scheme. The Commission has listed these categories based on the study of the Capital Investment Schemes filed by the Applicants in the past few years.

Also, the Commission feels that defining such categories in these draft Regulations, will enable the Applicants to file Capital Investment Schemes with more clarity and less ambiguity. This categorization will also help the Commission to standardise the schemes for which Applicants can file for in-principle approval.

The Commission has proposed the following indicative categories for Capital Investment Schemes for Generation, Transmission and Distribution Companies.

For Generation Company:

(a) Improvement in operational performance parameters of Generating Unit/Station;
(b) Compliance with environmental norms notified by the concerned Indian Governmental Instrumentality and requires to set up additional assets that qualify under the criteria specified for Capital Investment Schemes;
(c) Renovation & Modernization in accordance with the provisions of the MERC (Multi-Year Tariff) Regulations, 2019, as amended from time to time;
(d) Replacement of Asset on account of inter-alia, completion of Useful Life and in beyond repairable condition, performance degradation, need for induction of new efficient technology;
(e) Emergency Restoration Works involving asset replacement;
(f) Civil work such as office building, approach road, etc.;
(g) Obsolescence of assets and absence of support from Original Equipment Manufacturer;
(h) Replacement of Battery Sets and battery charger after completion of Useful Life and assets becoming irreparable:

For Transmission Licensees:

(a) Evacuation of power from upcoming Generation Unit/Station;
(b) Erection of Air Insulated Sub-station (AIS) or Gas Insulated Sub-station (GIS) and associated transmission lines;

(c) Capacity augmentation at existing Transmission Sub-station and Transmission Lines;
(d) Construction of transmission link or tie-lines for interconnections between Sub-stations and/or Transmission Lines;
(e) System strengthening to mitigate overloading or to provide redundancy or to improve voltage profile or reactive power management through installation of reactors.
(f) Network improvement to ensure reliability and availability of network;
(g) Installation or Upgradation of Supervisory Control and Data Acquisition (SCADA);
(h) Installation or Upgradation of communication and/or control equipment;
(i) Interface metering and communications;
(j) Renovation & Modernisation in accordance with the provisions of the MERC (Multi-Year Tariff) Regulations, 2019, as amended from time to time;
(k) Replacement of Asset on account of inter-alia, completion of Useful Life, performance degradation, need for induction of new and efficient technology;
(l) Emergency Restoration System involving asset replacement;
(m) Obsolescence of assets and absence of support from Original Equipment Manufacturer;
(n) Civil work such as office building, approach road for transmission construction, etc.:

For Distribution Licensees:

(a) Infrastructure required for releasing new supply connections;
(b) System strengthening by enhancing capacity of inter-alia, Sub-station, cables, and Circuit Breaker, to mitigate overloading or to provide redundancy or to improve voltage profile;
(c) Agriculture feeder separation;
(d) Justified conversion of Overhead Wires to Underground Cables based on the approved Policy document by concerned Local Government and vetted by the State Government and/or the Commission;
(e) Capital Nature Schemes funded partially by Central or State Government Grants;
(f) Upgradation of distribution network in a particular area including ring main system;
(g) Installation of Receiving Sub-station, distribution lines and transformers to cater to demand in a particular area;
(h) Capacity augmentation of distribution lines and transformers at existing Sub-stations or Receiving Stations;
(i) Improvement in quality of supply and reliability of distribution system;
(j) Emergency Restoration System involving asset replacement;
(k) Installation or Upgradation of Supervisory Control and Data Acquisition (SCADA);
(l) Installation or Upgradation of communication and/or control equipment;
(m) Setting up Distribution Supply Operation Centre (s)
(n) Implementation of Smart Meters and/or Pre-paid meters;
(o) Improvement in consumer services;

(p) Obsolescence of assets and absence of support from Original Equipment Manufacturer;
(q) Civil work such as office building, approach road, etc.:

For SLDC

(a) New infrastructure related to setting up of Area LDCs in other parts of the State;
(b) Information Technology related software and hardware including SCADA;
(c) Software/Servers for Energy Accounting and Deviation Settlement;
(d) Civil work such as office building, etc.:

The Commission has also included a proviso for all Businesses that Repair and Maintenance of the existing roads and building shall not be claimed as capital expenditure/Capex as this type of work are of O&M nature especially when not taken up in time result in unjustified special repairs requiring funds in the nature of capital investment.

The Commission has included a proviso while defining the categories for Generation, Transmission and Distribution Companies, to address the issue of clubbing of Schemes. The proviso includes the following conditions:

1. Generation Companies shall file separate Capital Investment Scheme for each generating unit/station. The Generation Company/ Business should propose Schemes keeping in mind the balance tenure of Power Purchase Agreement with the Distribution Licensee so that the Tariff Impact are based on years of operation of the project.
2. Transmission Licensees shall file separate Capital Investment Schemes for each Transmission Scheme as appropriate.
3. Distribution Licensee shall file Schemes of Combined DPR for entire state/License Area in case of Consumer Metering Scheme, Metering of Feeders, DTs, Substations, Advanced Metering Infrastructure (AMI), creation of substation, replacement/ upgradation of transformers and Government funded Schemes.

It has been observed that Licensees are submitting Capex Schemes for premature replacement/shifting of the assets because of projects of other utilities such as road widening, strengthening of dams, removal of obstacles, and freeing space for other project. The Commission is of the view that cost of such expenditure shall be recovered/recoverable from the concerned infrastructure development agency. Only in case the same is not recovered/recoverable from the concerned infrastructure development agency, then such expenditure may be allowed as capex, depending on circumstances and justification.

To facilitate implementation of Smart Meters and Prepaid Meters, Distribution Licensee may consider Total Expenses or TOTEX Model (Hybrid of Capex and Opex Model) where part of the Project cost is funded through Revenue Expenditure.

Almost entire distribution system of Mumbai DISCOMs (AEML, TPC, and BEST) is through Underground Cabling (UG). However, very few cities in MSEDCL licence area (Navi Mumbai, Pune, Nashik) have UG cabling, and the distribution network in most of MSEDCL licence area comprises Overhead (OH) wires. There is an increasing trend of MSEDCL preparing/submitting capex schemes for conversion of OH to UG, generally due to local pressures and beautification requirements. If OH to UG conversion is carried out in entire MSEDCL licence area, the cost would be extremely high, which would have a direct impact on the consumer tariff. There is a need to rationalise and streamline such Capex proposals for conversion of OH to UG distribution system, in order to keep tariffs within control.

In this context, CEA has notified "Guidelines for use of under Ground Cable System and Overhead Conductor System along with cost benefit analysis", 2018.

The said CEA Guidelines recommend as under:

(i) UG cabling should be used only in highly populated areas.
(ii) Use of Aerial Bunched Cable (ABC) would be a cheaper option as compared to UG cabling.
(iii) UG cables have certain disadvantages, such as, high cost of installation, requirement of specialized techniques for fault location identification, longer time for repairing faults, difficult to modify/reroute cables, etc., which need to be borne in mind while deciding on UG cables.

In order to discourage a piece-meal approach to UG cabling, it is proposed that the Distribution Company/Licensee should prepare a comprehensive Policy considering the following criteria before proposing such Schemes for conversion from OH to UG:

- Whether the proposed conversion from OH to UG satisfies the criteria laid down by CEA in the said Guidelines?
- What is the purpose of undertaking such scheme? - addressing safety concerns or improving reliability or reducing losses or combination of these? The purpose and measurable benefit need to be captured before proposing such Scheme
- Whether use of other cheaper options such as Aerial Bunched Cables, ring main of OH network, etc., would resolve the issues being faced?
- Is complete conversion of OH network (HT & LT) to UG network required? Can partial undergrounding of network (say only LT network) resolve issue being faced?
- Details of Average Billing Rate (ABR) of such area where project is proposed; whether ABR is above ACoS of Distribution License or lower?
    - OH to UG conversion not to be considered in cases where the ABR is lower than ACOS.
    - In case ABR of that area is higher than ACoS, number of years required to recover capex of the proposed scheme from available margin in ABR (ABR-ACoS) for that area.

- Fix a reasonable pay-back period (say 5 years or 7-8 years) through margin between ABR-ACOS for recovering additional capex.
- Any scheme requiring period more than such stipulated period may not be undertaken as it would burden the other consumers of MSEDCL.

- In case the Scheme is to be undertaken despite not meeting above criteria, then:
  - whether subsidy/Viability Gap Funding (VGF) from Govt. or local body or Planning Authority (MIDC, MMRDA) loading excess expenses on local consumers through additional charges can be envisaged;
  - In default of the commitment of the local body concerned, then the same shall be recovered from the local area through additional charges and shall not be socialised over the DISCOM's ARR.
- The Scheme should identify quantifiable and measurable parameters to be achieved post execution of such Scheme, which would need to be monitored continuously and any deviation reported to MERC. This would discourage possible hypothetical/unverifiable inflated benefits cited at the time of Proposal.

Reinstatement (RI) charges being levied by Urban Local Bodies on Distribution Licensees for laying down of underground infrastructure comprise almost 30-40% of the project cost, as well as of R&M Charges. Further, the RI charges are frequently revised upwards. The RI Charges vary a lot across different Local Bodies, as summarised in the Tables below:

MCGM Rates

Table 1: Footpath rates

Sr. No.	Existing Surface	Finished to	Rate in Rs. Per Rmt.		
			Trench Size 0.60 M X 1.0 M	Trench Size 0.75M X 1.0 M	Trench Size 1.0 M X 1.50M
1	Gray or any specified colour with shot blasted Texture paver Blocks(200x200x6Omm) Condition no. 1 & 5 of at pg. no 3 & 4 of this circular shall be referred.	Gray or any specified colour with shot blasted Texture paver Blocks (200x200x6Omm)	6768	7656	8868
2	Concrete finished/ Any surface	Concrete finished	7375	8188	9074

3	Finished in Stencil/Stamp Concrete/ Any surface	Finished in Stencil/Stamp Concrete	8430	9432	10129
4	Finished in marble chips Concrete/ Any surface	Finished in marble chips Concrete	7769	8583	9468

Table 2: Road Rates

Sr. No.	Existing Surface	Finished to	Rate in Rs. Per Rmt.		
			Trench Size 0.60 M X 1.0 M	**Trench Size 0.75M X 1.0 M**	**Trench Size 1.0 M X 1.50M**
1	Cement Concrete Carriageway	A) 100 mm thick Paver block immediately	22100	23312	24408
		B) Cement Concrete Pavement in due course			
2	TWT Carriageway	A) 100 mm thick Paver block immediately	13913	15160	16324
		B) Cement Concrete Pavement in due course		.	
3	UTWT Carriageway	A) 100 mm thick Paver block immediately	12547	13757	15069
		B) Cement Concrete Pavement in due course		,	
4	C. C. Passage	Cement Concrete Pavement	10292	11364	12024
5	C. C. side.strip	Cement Concrete Pavement	10509	11605	12292
6	Mastic Asphalt 25 mm thick	Mastic Asphalt 25 mm thick	6674	7487	8326

7	Mastic Asphalt 40 mm thick	Mastic Asphalt 40 mm thick	7570	8383	9221
8	Bituminous concrete (30/40 grade)	Bituminous concrete (30/40 grade)	6096	6910	7748
9	Paver blocks 80mm thick (50% Grey & 50% Red Paver Blocks)	Paver blocks 80mm thick (50% Grey & 50% Red Paver Blocks)	5070	5829	7048
10	Paver blocks 80mm thick (Only Grey colour)	Paver blocks 80mm thick (Only Grey colour)	4937	5802	6902
11	Paver blocks 100mm thick (50% Grey & 50% Red Paver Blocks)	Paver blocks 100mm thick (50% Grey & 50% Red Paver Blocks)	5527	6094	7607
12	Paver blocks 100mm thick (Only Grey colour)	Paver blocks 100mm thick (Only Grey colour)	5323	6017	7364

Table 3: Multiplying Factors based on the Age of the Road

Sr. No.	Item	2 Years	3 Years	5 Years	10 Years
1	Excavation during first year of Defect Liability Period	4	4	4	4
2	Excavation during Second year of Defect Liability Period	3	3	3	3.5
3	Excavation during third year of Defect Liability Period	-	2	2	3
4	Excavation during fourth ear of Defect Liability Period		-	1.7	2.75
5	Excavation during fifth year of Defect Liability Period	-	-	1.4	2.5
6	Excavation during 6th year' of Defect, Liability Period	-	-	-	2.25

7	Excavation during 7th year of Defect Liability . Period	-	-	-	2
8	Excavation during 8th year of Defect Liability Period	-	-	- .	1.75
9	Excavation during 9th year of Defect Liability Period	-	-	-	1.5
10	Excavation during 10th year of Defect Liability Period	-	-	-	1.25
11	Excavation beyond Defect Liability Period	1	1	1	1

Note:1) The above flat rates are calculated on the basis of Unified Schedule of Rates (SOR) 2018 effective from 20.06.2018.

2)The flat rates are subject to revision in accordance with revision of fair market rate schedule.

Table 4:Thane (TMC) 2021

SN	Type of Road	Pvt. / Govt. Firms Rate Rs.	Unit
1	RI Charges Concrete Footpath	5500	Rs./sq.mtr
2	Kachha - Khadikaran Road	2500	Rs./sq.mtr
3	Concrete Road	11700	Rs./sq.mtr
4	Rent for Land	Rs. 10 / Year / Meter for 20 years = 200 / meter	
5	Security amount	10%	Per Sq.mtr
6	Supervision Charges	15%	Per Sq.mtr

Table 5: Pune 2021

SN	Approval Powers	Type	Name of Company	Excavation by Open Trenching method Rs./Rmt.

1	1) Additional Municipal Commissioner - Proposals above 500 rmt 2) Chief Engineer (Road) - Proposals below 500 rmt 3) Superintending Engineer - 100 rmt 4) Relative Executive Engineer - 25 rmt	Normal Process excavation	Private Organisations, OFC Cable, Central Govt., Maharashtra Govt., MNGL, BSNL, Metro, etc.	12192
2		HDD process		4000

Table 6: Nagpur 2019

SN	Head	Mode	Rate (Rs. / rmt)
1	Supervision Charges	Non refundable	1100
2	Security Deposit	Refundable	5420
3	Along the road	Non refundable	275

Table 7: Aurangabad 2020

SN	Description	Rate Rs. / rmt
1	Repairing of Earth Soil (Kachha) excavation for laying of cable / Pits of pole in earth soil … etc. Complete	280
2	Repairing of Paving Blocks excavated for laying of cable / Pits of Pole… etc. complete	1800
3	Repairing of BT Road excavation for laying of cable / Pits of Pole … etc. complete	1650
4	Repairing of Concrete Road excavation for laying of cable / Pits of Pole … etc. complete	2700
5	Supervision Charges	5% on total work cost

Table 8: Nashik (NMC) 2020

SN	Type of Road	Rate Rs. (A)	15% Supervision(B)	Total Rate Rs. / rmt C=(A+B)
1	Excavation in soil / Murum along but outside the Road	130	19.5	149.5

2	Excavation in Khadi - Kachha Road	2173	325.95	2498.95
3	Excavation in BT Road	4616	692.4	5308.4
4	Excavation in Concrete Road	5436	815.4	6251.4
5	Excavation in Paver Block / Footpath	3853	577.95	4430.95

Table 9: Kalyan Dombiwali (KDMC) 2021

SN	Type of Road	Unit	Applicable Charge For Service Company	Applicable Charges for Local Resident
1	BT Road	Rs. Per rmt	8997.45	4379.42
2	Paving Blocks	Rs. Per rmt	7335.36	5199.73
3	Earth Soil (Kachha - Khadikaran)	Rs. Per rmt	4529.56	2615.98
4	Concrete Road	Rs. Per rmt	9172.09	7157.5
5	Rent for Land	Rs. Per rmt	10	10
6	Supervision Charges	On principle amount	15%	15%
7	Security Deposit	On principle amount	10%	50%

Table 10: Navi Mumbai (NMMC) 2018

SN	Type of Road	Existing Rate Rs. (Per sq.mtr)	Resident / Govt. Org. / Undertaking	Pvt. Firms (As per Thane MC
1	RI Charges BT Road / Footpath	2795	2795	9600
2	Kachha - Khadikaran Road	1348	1348	3300
3	Other Surface Road	316	316	2000
4	Use of existing duct for Cable laying			3000

5	Rent for Land			Rs. 10 / Year / Meter for 20 years = 200 / meter
6	Security amount	10%	10%	10%
7	Supervision Charges	15%	15%	15%

Table 11: Mira Bhayandar (MBMC) 2016

SN	Type of road / Surface reaffirmation		Unit
1	Drilling under road by tunnelling	2000	Per rmt
2	Grouted Road	3900	Per sq.mtr
3	Kachha Road	2090	Per sq.mtr
4	WBM Road	3300	Per sq.mtr
5	Concrete Road	11700	Per sq.mtr
6	BT Road (Damari) / Dambar 60/70 grade / Dambar 30/40 grade	9600	Per sq.mtr
7	Concrete Footpath/ Paver Block 80mm/100mm	5500	Per sq.mtr
8	Flyover	130000	Per sq.mtr
9	Sub-way	780000	Per sq.mtr
10	Culvert	57200	Per sq.mtr
11	Road - Mastic Asphalt	7900	Per sq.mtr
12	Use of existing duct for Cable laying	3000	Per Mtr per cable
13	Rate for Cable of higher area	Above rate till 6 Inch (182.32 sq.mtr) - Then as per road digging rate	

14	HDD / Open cut chamber	Additional 50% for S N 2 to 12	
15	Chhatrapati Shivaji Maharaj Marg	10330	
16	Rate of excavation based on depth	Excavation below 1 mtr - above rate Above 1 mtr - Additional proportionate rate	
17	Rate for Road widening	Excavation below 1 mtr - above rate Above 1 mtr - Additional proportionate rate	
18	Defect Liability Period (DLP) Rate	Excavation during 1st year of DLP - +100% Excavation during 2nd year of DLP - +50% Excavation during 3rd year of DLP - +25%	Per sq.mtr
19	Rent for land	Rs. 10 / Year / Meter for 20 years = 200 / meter	Per sq.mtr
20	Security amount	10%	Per sq.mtr
21	Supervision Charges	15%	Per sq.mtr

Heavy RI charges make capex schemes uneconomical and resulting in tariff impact on all the consumers of the licensees. With increased usage of Underground (UG) cables, incidence of RI charges will only increase impacting the capital cost as well as the Repair & Maintenance expenses, which are also passed on to the consumers. The Commission is of the opinion that there is a need to reduce and rationalise the RI Charges. However, as the RI Charges are levied by the Local Bodies, over which the Commission does not have jurisdiction, the possible measures to mitigate the tariff impact of high RI Charges are discussed below:

Distribution Licensees should take up this issue with Urban Development Department of Government of Maharashtra (GoM) for reducing/eliminating such charges. The Distribution Licensees may approach the GoM through the aegis of the Co-ordination Committee. The Urban Local Bodies could make provision of cable trench alongside the road mandatory so as to avoid digging of the road for laying down underground infrastructure.

The draft Regulations propose that 50% of the cost due to RI shall be recovered from the consumers of the local area, as stipulated in the Tariff Order. The recovery shall be in the nature of an additional special charge in Rs/kWh terms like FAC, after end of the year based on total actual amount paid towards RI during the previous year, divided by actual sales in the previous year, considering normative distribution losses. The recovery shall be made after prior approval by MERC. As there would be a gap of 6-8 months between incurring the cost and recovery, the applicable carrying cost on the amount recoverable from the consumers of the local area may be factored into the amount approved for recovery. The balance 50% of the cost shall be socialised and recovered from the overall ARR and Tariffs.

Also, the Distribution Licensees should approach Urban Development Department of Government of Maharashtra (GoM) for refund of Excess RI Charges collected by Urban Local Bodies according to the Rule 12 of the Maharashtra Electricity Works of Licensees Rules, 2012. The refund so collected by the Licensee should be passed on to the consumers from whom such RI cost has been recovered.

Based on the experience with Capex Schemes submitted by Utilities, it is seen that on several occasions, there is ambiguity (or lack of clarity for the Utility) as to whether a particular Scheme qualifies as a Capex Scheme. Once the particular Capex Scheme is submitted for approval, MERC analyses the same, and on several occasions, has concluded that the proposed Scheme does not qualify to be treated as a Capex Scheme.

There is a need to impart clarity on types of Schemes, which shall be considered as Capex Scheme and evaluated under the Capex Approval Regulations.

In its approval/rejection letter, the Commission details the reasons for not considering the Scheme as a Capex Scheme. However, it would be better if the Utilities are made aware upfront regarding which types of Schemes shall qualify or not qualify as Capex Schemes and accordingly the proposal would need to be submitted. This would reduce the time, effort and cost of the Capex approval process. Further, the objective of reducing ambiguity and providing adequate clarity on the Capex approval framework would also be achieved.

While the nature of Schemes that would be considered as Capex Schemes for the different Businesses, viz., Generation, Transmission, Distribution and SLDC are specified in the Regulations, the same have been prepared based on the experience till date, provisions of the Accounting Standards, MYT Regulations, etc., and by their very design cannot be a limited list, and shall be illustrative.

Hence, a negative list of Schemes is proposed that shall not be considered as Capex Schemes. Such a negative list shall also be illustrative and not a limited list.

The proposed negative list of Schemes for the various Businesses are as under:

(a) Replacement/repairing of individual items such as Current Transformer (CT), Potential Transformer (PT), Lightning Arrestor (LA), Circuit Breaker (CB), Distribution Box, Cables, LT switchgears, protection system, Insulators and Hardware after failure;
(b) O&M/overhauling of the equipment such as CB, Transformers, ICTs, Coal Mills, Boiler, Compressor, Generator, Alternator, Coal Handling Plant, Ash Handling Plant, etc.;
(c) Replacement of small part of the entire system such as Relays of Sub-stations, control, protection and communication panels of Sub-station equipment, replacement of the panel meters, reprogramming of meters;
(d) Replacement of the members of the Transmission Towers, increasing height of the towers, replacement of few towers, replacement of few spans of the conductor of Transmission lines, re-earthing of the Sub-stations and Towers, Strengthening of Towers/Poles, replacement of motors, gearbox, Stators, Rotors, Coal Mill parts, Security System (including digital), replacement of protection and control system water supply system, replacement of ancillary system/Street Lights, etc.;
(e) Premature Replacement of Air Insulated Substation (AIS) with Gas Insulated Substation (GIS)/Underground Cables/Transmission Lines/other equipment before completion of useful life, and even after completion of useful life in cases where replacement is not justified based on the diagnostic test reports/Study report;
(f) Foundation strengthening of the Towers/Poles, substation equipment, internal civil work, repair and maintenance of office/residential quarters/guest house and office building, Metal spreading in yard, furniture, Repair and maintenance of control rooms, Compound wall for the Sub-stations and empty land, street light replacement, R&M of existing roads and buildings, etc.;
(g) Procurement of maintenance spares, testing tools and kits, maintenance tools, Annual Maintenance Contract (AMC);
(h) Beautification projects unless the same is justified as per the pre-decided Policy;
(i) Distribution/Generation scope of work included in Transmission DPR, Transmission Scope included in Generation DPR, etc.;
(j) DPR for only land without any project proposal;
(k) Development of Garden, Advertisement expenses;
(l) Premature replacement of the equipment, cables, rerouting of cables/lines for freeing the space for other project/infrastructure activities of Utility;
(m) Work required for restoration of supply post occurrence such as Tower collapse, conductor snapping, shifting of the Tower/poles on consumer request;
(n) Clubbing of scope of work of O&M nature at different plants, substations, lines;
(o) Opex Schemes as provided in the Regulations;
(p) Expenditure that should be taken up under O&M expenses;
(q) Transmission Schemes that are not included in the STU Plan;

(r) Schemes that are not included in the Rolling Plan of the concerned Utility;

(s) Schemes that have not obtained the Commission's in-principle approval, unless they are exempted.

b) It has been observed that the utilities are proposing Capex Schemes involving replacement /part replacement of existing Asset. In this regard, it is important to understand the stipulations of the prevalent Accounting Standards. IND AS 16 applicable from April, 2021 stipulates as under:

"7 The cost of an item of property, plant and equipment shall be recognised as an asset if, and only if:

(a) it is probable that future economic benefits associated with the item will flow to the entity; and

(b) the cost of the item can be measured reliably."

*"12. Under the recognition principle in paragraph 7, an enterprise does not recognise in the carrying amount of an item of property, plant and equipment the costs of the day-to-day servicing of the item. Rather, these costs are recognised in the statement of profit and loss as incurred. Costs of day-to-d**ay servicing are primarily the costs of labour and consumables, and may include the cost of small parts. The purpose of such expenditures is often described as for the 'repairs and maintenance' of the item of property, plant and equipment.***

13. Parts of some items of property, plant and equipment may require replacement at regular intervals. For example, a furnace may require relining after a specified number of hours of use, or aircraft interiors such as seats and galleys may require replacement several times during the life of the airframe. Similarly, major parts of conveyor system, such as, conveyor belts, wire ropes, etc., may require replacement several times during the life of the conveyor system. Items of property, plant and equipment may also be acquired to make a less frequently recurring replacement, such as replacing the interior walls of a building, or to make a non-recurring replacement. Under the recognition principle in paragraph 7, an enterprise recognises in the carrying amount of an item of property, plant and equipment the cost of replacing part of such an item when that cost is incurred if the recognition criteria are met. The carrying amount of those parts that are replaced is derecognised in accordance with the derecognition provisions of this Standard."

c) A variety of proposals for full replacement and part replacement have been assessed by the Commission. Based on experience, it is observed that some Utilities are proposing such replacement as capex on account of obsolescence, supported by OEM letters for discontinuation of support. Obsolescence could be either technology obsolescence or

equipment obsolescence. The proposed replacement could be for part/whole equipment before/after completion of useful life.

In case of obsolescence of technology or equipment, the proposed capex for asset replacement is proposed to be allowed, as replacement parts will not be available. However, this shall be subject to certain safeguards.

The various situations of obsolescence and the proposed treatment is as under:

Particulars	**Proposed Treatment**
Technology Obsolescence	Capex allowed, subject to certification of Technical Expert body like CEA and/or comprising certain proportion of project cost. **Illustration**: a) Relay, which is one part of Circuit Breaker become obsolete faster than circuit breaker technology b) SCADA or communication switches, etc.
Equipment Obsolescence	Capex allowed, subject to OEM letter confirming discontinuation of support and product. **Illustration**: a) Particular Model of the Equipment / Bulk Oil CB / Oil filled cables. b) AIS to GIS is not a case of equipment obsolescence, as AIS technology is still very much in use

Taking into account the above and its evaluation of past DPRs the Commission proposes to allow complete asset replacement as capex, and partial asset replacement under O&M expenses, as small part replacement of the asset shall not generally extend performance or capacity of the Asset thus, it is estimated that if the cost of partial replacement is less than 25% of the cost of complete equipment it would be considered O&M Expense. If cost is greater than 25 % it is estimated that it would allow value to be added to the asset and thus, it should be considered as Capex, considering the nature of asset replacement, and subject to adequate justification being submitted.

The various situations of asset replacement and the proposed treatment is as under

Particulars	Proposed Treatment
Complete asset replacement after completion of useful life as per Regulations	Capex allowed, subject to asset being beyond repair, residual life certification, performance degradation, cost-benefit analysis of repair vs. replacement, technology/parts obsolescence, assets go beyond repair. Eg. Power Transformers, switchgears, Transmission Lines, etc. Detailed deliberations would be carried out on case-to-case basis. It shall be the responsibility of the Applicant to justify the scheme.
Complete asset replacement before completion of useful life as per Regulations	Capex allowed, subject to asset going beyond repair, performance degradation, cost-benefit analysis of repair vs. replacement, technology/parts obsolescence. Detailed deliberations would be carried out on case-to-case basis. It shall be the responsibility of the Applicant to justify the scheme.
Part asset replacement after completion of useful life as per Regulations	For part replacement less than 25% of cost of complete equipment, Expense allowed as O&M expenses. For part replacement greater than 25% of cost of complete equipment, Expense allowed as Capex. Detailed deliberations would be carried out on case-to-case basis. It shall be the responsibility of the Applicant to justify the scheme.
Part asset replacement before completion of useful life as per Regulations	a) In case of technology obsolescence, for part replacement less than 25% of cost of complete equipment, Expense allowed as O&M expenses. For part replacement greater than 25% of cost of complete equipment, Expense allowed as Capex subject to certification of Technical Expert body like CEA b) In case of Equipment obsolescence, Capex is allowed subject to communication from Original Equipment Manufacturer (OEM) confirming discontinuation of support. Detailed deliberations would be carried out on case-to-case basis. It shall be the responsibility of the Applicant to justify the scheme.

d) The Commission is also of the opinion that in certain exceptional cases Asset replacement not fulfilling the above criteria may be allowed by the Commission. The Commission is of

the opinion that the beneficiary of such investment shall be entitled to lower Return on Equity on such Investment as may be specified in Maharashtra MYT Regulation, 2019 as amended from time to time.

e) The Commission has also addressed the issue of clubbing of Capital Investment Schemes separately in subsequent Chapters.

f) The Commission thus, proposes the following clauses in draft Capex Approval Regulations, 2022:

"3.5 The indicative list of various categories under which Generating Companies or Generating Businesses may file Capital Investment Schemes for approval are:

(a) Improvement in operational performance parameters of Generating Unit/Station;

(b) Compliance with environmental norms notified by the concerned Indian Governmental Instrumentality and requires assets that qualify under the criteria specified for Capital Investment Schemes

(c) Renovation & Modernization in accordance with the provisions of the MERC (Multi-Year Tariff) Regulations, 2019, as amended from time to time;

(d)Replacement of Asset on account of inter-alia, completion of Useful Life, performance degradation, need for induction of new technology

(e)Emergency Restoration Works involving major asset replacement;

(f)Civil work such as office building, approach road, etc.;

(g) Obsolescence of assets and absence of support from Original Equipment Manufacturer;

(h)Replacement of Battery Sets and battery charger after completion of Useful Life and assets becoming irreparable:

Provided that the Repair and Maintenance of the existing roads and building shall not be claimed as capital expenditure.

3.6 The Generating Companies or Generating Businesses shall submit separate Capital Investment Schemes for each Generating Unit/Station, as appropriate.

3.7 The Capital Investment Schemes submitted by Generating Companies or Generating Businesses shall be corelated to the remaining tenure of the Power Purchase Agreement with the Distribution Licensee.

3.8 The indicative list of various categories under which Transmission Business/Licensees may file Capital Investment Schemes for approval are:

(a)Evacuation of power from upcoming Generation Unit/Station;

(b)Erection of new Air Insulated Sub-station (AIS) or Gas Insulated Sub-station (GIS) and associated transmission lines;

(c)Capacity augmentation at existing Transmission Sub-station and Transmission Lines;

(d)Construction of transmission link or tie-lines for interconnections between Sub-stations and/or Transmission Lines;

(e)System strengthening to mitigate overloading or to provide redundancy or to improve voltage profile;

(f)Network improvement to ensure reliability and availability of network;

(g)Installation or Upgradation of Supervisory Control and Data Acquisition (SCADA);

(h)Installation of new or Upgradation of communication and/or control equipment;

(i) Interface metering and communications;

(j) Renovation & Modernisation in accordance with the provisions of the MERC (Multi-Year Tariff) Regulations, 2019, as amended from time to time;

(k) Replacement of Asset on account of inter-alia, completion of Useful Life, performance degradation, need for induction of new technology;

(l)Emergency Restoration System involving major asset replacement;

(m) Obsolescence of assets of project/scheme and absence of support from Original Equipment Manufacturer;

(n) Civil work such as office building, approach road for transmission construction, etc.:

Provided also that the Repair and Maintenance of the existing roads and building shall not be claimed as capital expenditure.

3.9 The Transmission Business/Licensees shall submit separate Capital Investment Schemes for each Transmission Scheme, as appropriate.

3.10 Under normal circumstances, the cost of premature replacement/shifting of the assets because of projects of other utilities such as road widening, construction of dams, removal of obstacles, and freeing space for other project, shall be recovered/recoverable from the concerned infrastructure development agency:

Provided that the premature replacement/shifting of the assets because of projects of other utilities as stated above may be treated as capex scheme depending on circumstances and justification, in cases where the same is not recovered/recoverable from the concerned infrastructure development agency.

3.11 The indicative list of various categories under which Distribution Business/Licensees can file Capital Investment Schemes for approval are:

(a)Infrastructure required for releasing new supply connections;

(b)System strengthening by enhancing capacity of inter-alia, Sub-station, cables, and Circuit Breaker, to mitigate overloading or to provide redundancy or to improve voltage profile;

(c)Agriculture feeder separation;

(d)Justified conversion of Overhead Wires to Underground Cables based on the approved policy document by concerned agency and vetted by the State Government and/or the Commission;

(e)Capital Nature Schemes funded partially by Central or State Government Grants;

(f)Upgradation of distribution network in a particular area including ring main system;

(g)Installation of Receiving Sub-station, distribution lines and transformers to cater to demand in a particular area;

(h)Capacity augmentation of distribution lines and transformers at existing Sub-stations or Receiving Stations;

(i)Improvement in quality of supply and reliability of distribution system;

(j)Emergency Restoration System involving asset replacement;

(k) Installation or Upgradation of Supervisory Control and Data Acquisition (SCADA);

(l)Installation of new or Upgradation of communication and/or control equipment;

(m)Implementation of Smart Meters and/or Pre-paid meters;

(n)Improvement in consumer services;

(o)Obsolescence of major assets and absence of support from Original Equipment Manufacturer;

(p) Civil work such as office building, approach road, etc.:

Provided also that the Repair and Maintenance of the existing roads and building shall not be claimed as capital expenditure.

3.12 The Distribution Business/Licensees shall submit combined DPR for entire State/licence area in case of consumer Metering Schemes, Metering of Feeders, Distribution Transformers, Sub-stations, Advanced Metering Infrastructure, creation of sub-stations, replacement/upgradation of transformers, Government grant funded Schemes, etc.

3.13 The Distribution Business/Licensees may consider implementation of Smart Meters and/or Pre-paid meters under TOTEX (Capex Expenditure + Opex Expenditure) model,

3.14 Under normal circumstances, the cost of premature replacement/shifting of the assets because of projects of other utilities such as road widening, removal of obstacles, and freeing space for other project, shall be recovered/recoverable from the concerned infrastructure development agency:

Provided that the premature replacement/shifting of the assets because of projects of other utilities as stated above may be treated as capex scheme depending on circumstances and justification, in cases where the same is not recovered/recoverable from the concerned infrastructure development agency.

3.15 Capital investment proposals of Distribution Licensees for conversion of Overhead Lines to Underground Cables shall be allowed only if such proposals are in accordance with a comprehensive policy to be prepared by the Distribution Licensee.

3.16 The comprehensive Policy for conversion of Overhead Lines to Underground Cables referred in Regulation 3.15 shall be based on the following criteria:

(a) Whether the proposed conversion from Overhead Lines to Underground Cables satisfies the criteria laid down by CEA in the 'Guidelines for use of under Ground Cable System and Overhead Conductor System along with cost benefit analysis', 2018;

(b)The purpose of undertaking such Scheme in terms of addressing safety concerns or improving reliability or reducing losses or combination of these need to be clearly identified;

(c)Whether use of other cheaper options such as Aerial Bunched Cables, ring main of Overhead network, etc., would resolve the issues being faced;

(d)Whether complete conversion of Overhead network (High Tension and Low Tension) to Underground network is required or partial undergrounding of network is sufficient to resolve the issues being faced;

(e)Whether the conversion from Overhead Lines to Underground Cables has been prioritised based on certain intelligible criteria;

(f) Whether the Average Billing Rate (ABR) of such area where project is proposed is higher than the Average Cost of Supply (ACoS) of the concerned Distribution Licensee:

i. Conversion of Overhead Lines to Underground Cables not to be considered in cases where the ABR is lower than the ACoS;

ii. Conversion of Overhead Lines to Underground Cables to be considered in cases where the ABR of that area is higher than the ACoS, and if the number of years required to recover the capital investment of the proposed Scheme from available margin between ABR and ACoS is equal to or lower than the stipulated payback period of say 5 years;

(g) In case the Scheme is to be undertaken despite not meeting above criteria, then the cost of such investment shall be funded through:

i. Subsidy or Viability Gap Funding (VGF) from Government or Local Body or Planning Authority (MIDC, MMRDA, etc.), or

ii. Recovered from the consumers located in that area through additional charges to be determined separately , and shall not be socialised over the Aggregate Revenue Requirement (ARR) of the concerned Distribution Licensee, or

iii. A combination of i and ii above.

3.17 Such Schemes for conversion of Overhead Lines to Underground Cables shall identify quantifiable and measurable parameters to be achieved post execution of such Scheme, which shall be monitored continuously and any deviation reported to the Commission.

3.18 Premature replacement/shifting of the assets because of projects of other utilities as stated above may be treated as capex scheme depending on circumstances and justification, in cases where the same is not recovered/recoverable from the concerned infrastructure development agency.:

3.19 In order to mitigate the impact of varied and high Reinstatement (RI) Charges levied by the Urban Local Bodies for laying down underground distribution infrastructure, fifty (50) percent of the capital cost due to RI shall be recovered from the consumers of the concerned local area through an additional charge to be approved by the Commission from time to time:

Provided that the Distribution Licensees may take up this issue with Urban Development Department of the State Government for reducing/eliminating such charges, which may consider making provision of cable trench alongside the road mandatory so as to avoid digging of the road for laying down underground infrastructure:

Provided further that Distribution Licensees shall pursue with the concerned Urban Local Bodies for the excess RI Charges collected for any Scheme in accordance with Rule 12 of the Maharashtra Electricity Works of Licensees Rules, 2012, and pass on the refund to the consumers from whom such RI cost has been recovered.

3.20 The various categories under which MSLDC can file Capital Investment Schemes for approval are:

(e) New infrastructure related to setting up of Area Load Despatch Centres in other parts of the State;
(f) Information Technology related software and hardware including SCADA;
(g) Software/Servers for Energy Accounting and Deviation Settlement;
(h) Civil work such as office building, etc.:

Provided that the Repair and Maintenance of the existing roads and building shall not be claimed as capital expenditure.

3.21 The indicative list of various categories of Schemes that shall not be allowed as Capital Investment Schemes (DPR as well as Non-DPR) for Generating Companies/ Businesses or Transmission Licensees/Businesses or Distribution Licensees/Businesses/MSLDC(Applicant) is as follows:

(a) Replacement/repairing of individual items such as Current Transformer (CT), Potential Transformer (PT), Lightning Arrestor (LA), Circuit Breaker (CB), Distribution Box, Cables, LT switchgears, protection system, Insulators and Hardware after failure;

(b) O&M/overhauling of the equipment such as CB, Transformers, ICTs, Coal Mills, Boiler, Compressor, Generator, Alternator, Coal Handling Plant, Ash Handling Plant, etc.;

(c) Replacement of small part of the entire system such as Relays of Sub-stations, control, protection and communication panels of Sub-station equipment, replacement of the panel meters, reprogramming of meters;

(d) Replacement of the members of the Transmission Towers, increasing height of the towers, replacement of few towers, replacement of few spans of the conductor of Transmission lines, re-earthing of the Sub-stations and Towers, Strengthening of Towers/Poles, replacement of motors, gearbox, Stators, Rotors, Coal Mill parts, Security System (including digital), replacement of protection and control system, water supply system, replacement of ancillary system/Street Lights, etc.;

(e) Premature Replacement of Air Insulated Substation (AIS) with Gas Insulated Substation (GIS)/Underground Cables/Transmission Lines/other equipment before completion of useful life, and even after completion of useful life in cases where replacement is not justified based on the diagnostic test reports/Study report;

(f) Foundation strengthening of the Towers/Poles, substation equipment, internal civil work, repair and maintenance of office/residential quarters/guest house and office building, Metal spreading in yard, furniture, Repair and maintenance of control rooms, Compound wall for the Sub-stations and empty land, street light replacement, R&M of existing roads and buildings, etc.;

(g) Procurement of maintenance spares, testing tools and kits, maintenance tools, Annual Maintenance Contract (AMC);

(h) Beautification projects unless the same is justified as per the pre-decided Policy;

(i) Distribution/Generation scope of work included in Transmission DPR, Transmission Scope included in Generation DPR, etc.;

(j) DPR for only land without any project proposal;

(k) Development of Garden, Advertisement expenses;

(l) Premature replacement of the equipment, cables, rerouting of cables/lines for freeing the space for other project/infrastructure activities of Utility;

(m) Work required for restoration of supply post occurrence such as Tower collapse, conductor snapping, shifting of the Tower/poles on consumer request;

(n) Clubbing of scope of work of O&M nature at different plants, substations, lines;

(o) Opex Schemes as provided in the Regulations;

(p) Expenditure that should be taken up under O&M expenses;

(q) Transmission Schemes that are not included in the STU Plan;

(r) Schemes that are not included in the Rolling Plan of the concerned Utility;

(s) Schemes that have not obtained the Commission's in-principle approval, unless they are exempted.

3.22 Schemes proposing asset replacement shall be allowed only if the following conditions are fulfilled:

(a) Complete asset replacement after completion of Useful Life as per Regulations subject to asset being beyond repair, residual life certification, performance degradation, cost-benefit analysis of repair vs. replacement, technology and/or equipment obsolescence, no support of OEM, etc.;

(b) Complete asset replacement before completion of Useful Life as per Regulations subject to asset being beyond repair, performance degradation, cost-benefit analysis of repair vs. replacement, technology and/or equipment obsolescence, no support of OEM;

(c) Part asset replacement after completion of Useful Life as per Regulations, if comprising more than twenty-five (25) percent of the cost of complete equipment;

(d) On account of technology obsolescence, subject to certification of Technical Expert body like CEA and comprising more than twenty-five (25) percent of the cost of complete equipment;

(e) On account of equipment obsolescence, subject to communication from Original Equipment Manufacturer (OEM) confirming discontinuation of support:

Provided that in case certain Schemes for asset replacement are allowed by the Commission under exceptional circumstances despite not fulfilling the above conditions, then the Applicant may be entitled to lower rate of Return on Equity on such investment, as may be specified in the applicable MERC (Multi-Year Tariff) Regulations"

3.3 Differentiation between Capex Schemes and Opex Schemes

a) The Commission had introduced the concept of Opex Schemes in the MYT Regulations, 2019. Accordingly, the Commission in these draft Regulations has also allowed Applicants to file for Opex Schemes as and when necessary. The Commission has already defined the term Opex Scheme.

b) The distinct definition of Capex Schemes and Opex Schemes will ensure that there is desired clarity regarding Schemes that can be filed as Capex Schemes and Schemes that can be filed as Opex Schemes.

c) The Commission has included a proviso stating that whenever the Applicant files for Opex Schemes, it shall be substantiated with detailed justification and cost benefit analysis of such schemes including savings in O&M expenses, in accordance with the principles laid down in the MYT Regulations.

d) The Commission has included an additional proviso specifying that whenever a Scheme is to be categorised under Capex or Opex, the Commission shall always give importance to the purpose of work rather than the nature of the work on differentiating capex and Opex. This issue is explained through the following illustration.

e) In case of implementation of Smart metering scheme, the OEM provides an IT solution, which is of subscription or Opex model. This kind of service model allows infusion of latest technology and utilities would gain in efficiency. The Commission is allowing such Schemes as Opex Schemes for which the expense would be allowed over and above normative O&M Expenses.

f) Thus, Opex Scheme shall comprise those schemes, which are proposed for Operation and Maintenance of the asset, wherein the payments will be linked to the performance and deliverables throughout the contract period, especially for system automation, maintenance, new technology and IT implementation, etc., as specified in the MYT Regulations amended from time to time.

g) Further, the onus of achievement of the proposed improvements shall lie with the Applicant, and the Applicant shall be held accountable for the same.

h) The Commission thus, proposes the following clauses in draft Capex Approval Regulations, 2022:

"3.23 The Applicant may also submit Opex Schemes for approval of the Commission, which shall be considered as separate from Capital Investment Schemes.

3.24 For Opex Schemes, the Applicant shall submit detailed justification and cost benefit analysis and life-cycle cost analysis of such schemes including savings in O&M expenses, as specified in the MERC (Multi-Year Tariff) Regulations, 2019, as amended from time to time.

3.25 For Opex Schemes, the Applicant may consider operational advantages in management as one of the benefits:

3.26 The purpose of the Scheme shall be given importance rather than the nature of the work or funding pattern, while deciding whether it is a Capex Scheme or Opex Scheme:

Provided that the onus of achievement of the proposed improvements in the set parameters shall lie with the Applicant."

4 Application and Scrutiny for In-Principle Approval and Completed Cost Approval of Capital Investment Scheme

4.1 Cost Limit of Capital Investment Schemes for In-Principle Approval:

The Capex Guidelines specified the following limit beyond which the Capital Investment Schemes are required to be submitted to the Commission for in-principle approval before executing the Scheme. The relevant clause is as follows:

"C) Submission of Feasibility Reports (FRs):

For those Capital Investment Schemes exceeding Rs. 10 crores, the Licensee should submit Feasibility Reports for the Commission's In-Principle Approval with a broad Cost-Benefit Analysis. These capital investment proposals should constitute a least cost plan."

In accordance with the Capex Guidelines, entities have been filing for in-principle approval of Capital Investment Schemes for works above Rs. 10 Crore. Such Capital Investment Schemes were termed as DPR schemes, while those below Rs. 10 Crore were termed as Non-DPR Schemes.

DPR Limits are the benchmark limit beyond which it is mandatory for all entities to approach the Commission for in-principle approval of Capital Investment Schemes. Thus, while formulating the framework under these draft Regulations, deciding cost limit for Capital Investment Scheme was one of the key considerations.

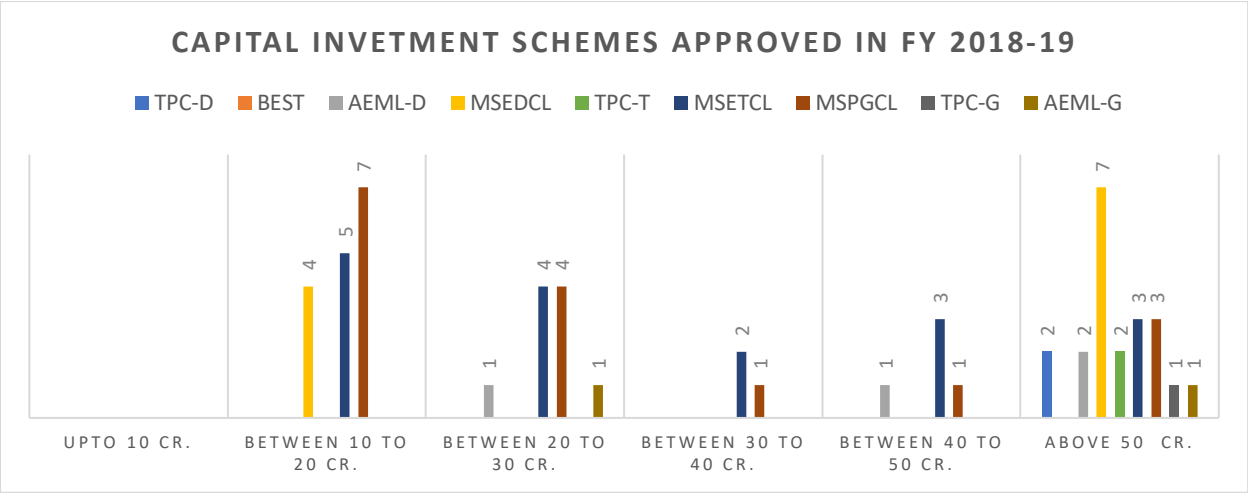
The DPR limit was specified as Rs. 10 Crore in the Capex Guidelines and has continued to be the same for the last sixteen years. The Commission observed that over the period there are dynamic changes in the power in Generation, Transmission and Distribution in terms of increased capacity. Hence, Capital Expenditure needs have increased dramatically over the years in the State of Maharashtra. The objective of specifying a DPR limit for in-principle approval by the Commission was to monitor the maximum possible amount of Capital Investment Schemes carried out by Generating Companies, Licensees and SLDC without overburdening the resources of the Commission. Over the period due to increase in inflation and also advent of the modern technology, the cost of the schemes have increased substantially. Further, in the recent years, the Commission has been receiving more applications for in-principle approval of Capital Investment Schemes. The Commission, therefore, proposes to revise the DPR limit so that the number of applications would be reduced while at the same time the Commission should be able to scrutinize maximum possible amount of Capital Investment Schemes, to ensure that the overall objective of the Regulations is met.

To determine DPR cost limit for in-principle approval of Capital Investment Schemes, the Commission studied Schemes and the estimated cost of the Schemes approved by the Commission in the past few years.

Capital Investment Schemes approved by the Commission in FY 2018-19:

The following graph shows the analysis of DPRs limits based on the study of Capital Investment Schemes approved by the Commission in FY 2018-19:

Figure 4-1: Capital Investment Schemes approved in FY 2018-19

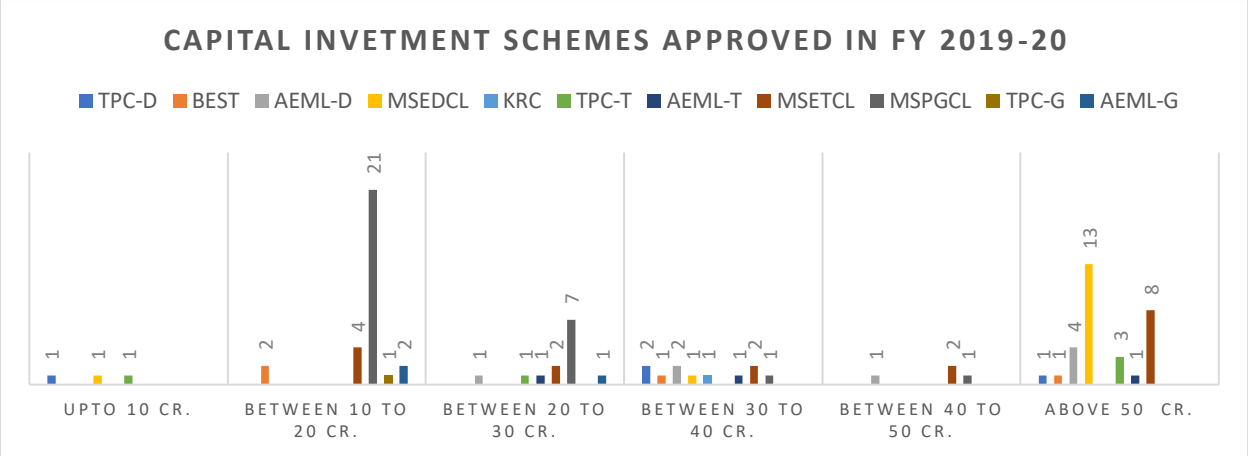


As seen from the above figure, maximum number of Capital Investment Schemes approved for all entities were costing more than Rs. 50 Crore. The second largest number of Capital Investment Schemes were costing between Rs. 10 to Rs. 20 Crore, followed by Schemes between Rs. 20 to Rs. 30 Crore.

Capital Investment Schemes approved by the Commission in FY 2019-20:

The following graph shows the analysis of DPRs limits based on the study of Capital Investment Schemes approved by the Commission in FY 2019-20:

Figure 4-2: Capital Investment Schemes approved in FY 2019-20

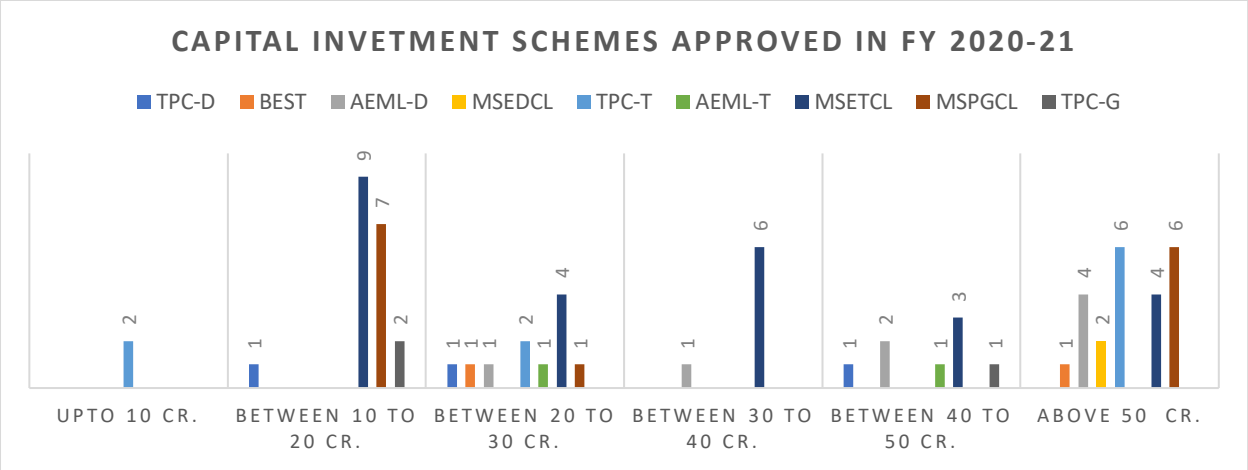


As seen from the above figure, maximum number of Capital Investment Schemes approved for all entities were costing more than Rs. 50 Crore. The second largest number of Capital Investment Schemes were costing between Rs. 10 to Rs. 20 Crore, followed by Schemes between Rs. 20 to Rs. 30 Crore.

Capital Investment Schemes approved by the Commission in FY 2020-21:

The following graph shows the analysis of DPRs limits based on the study of Capital Investment Schemes approved by the Commission in FY 2020-21:

Figure 4-3: Capital Investment Schemes approved in FY 2020-21



As seen from the above figure, maximum number of Capital Investment Schemes approved for all entities were costing more than Rs. 50 Crore. The second largest number of Capital Investment Schemes were between Rs. 10 to Rs. 20 Crore, followed by Schemes between Rs. 20 to Rs. 30 Crore.

The Commission has further analysed the Capital Investment Schemes approved for all three years taken together, both in terms of numbers and cost of Capital Investment Schemes. The following graphs shows the percentage-wise analysis of number and cost of Schemes for FY 2018-19, FY 2019-20 and FY 2020-21:

Figure 4-4: Percentage of Capital Investment Schemes approved in last 3 years (in number)

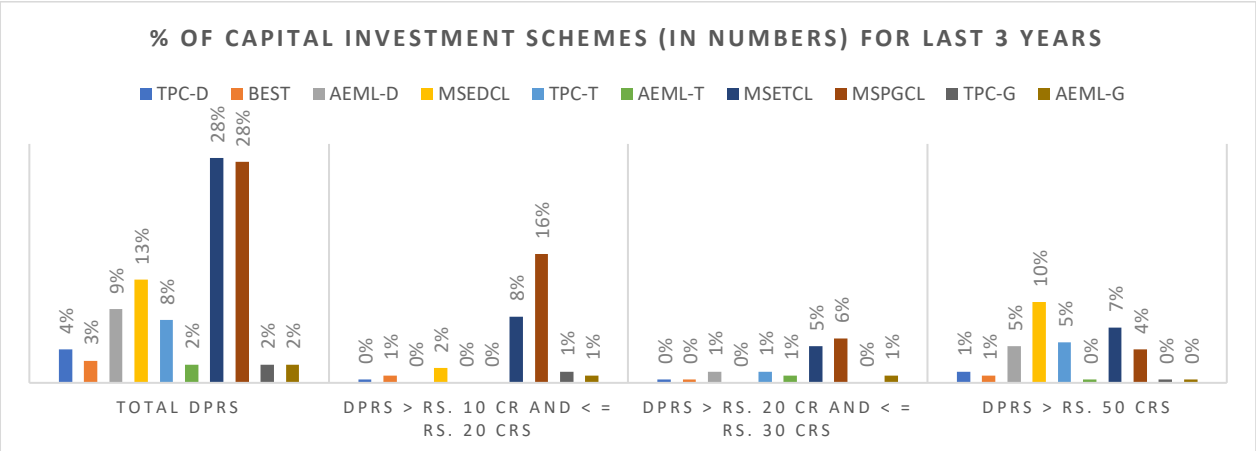
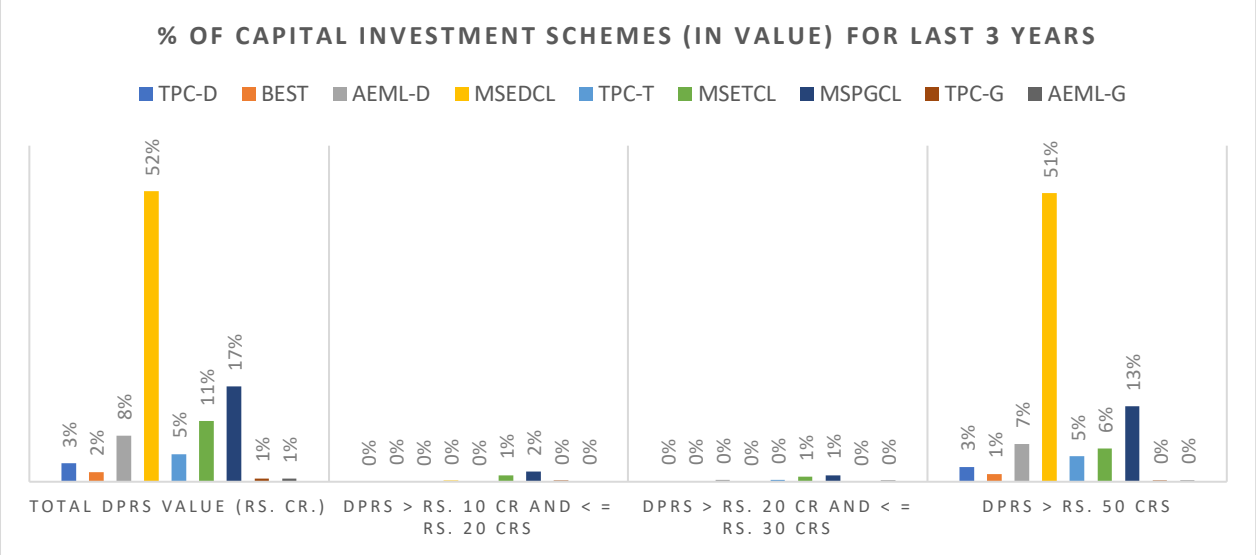


Figure 4-5: Percentage of Capital Investment Schemes approved in last 3 years (in value)



As can be seen from the above figures, though 30% of the Capital Investment Schemes approved by the Commission (in numbers) were in the range of Rs. 10 to Rs. 20 Crore, however, in terms of value these schemes account for only 3% of the approved Capital Investment Schemes in last 3 years. The Commission is therefore of the opinion that revising the DPR limit upwards to Rs. 20 Crore would have a negligible effect in terms of the cost/value of schemes approved by the Commission, however, Capital Investment Schemes in terms of number would reduce significantly.

To further validate the effect of revising the DPR limit to a higher number, the Commission has analysed entity-wise percentage of Capital Investment Schemes (numbers and value) that would be submitted to the Commission for in-principle approval in case the DPR limit is raised from Rs.10 Crore to Rs. 20 Crore, Rs. 30 Crore, Rs. 40 Crore and Rs. 50 Crore.

The analysis of revision in the DPR limit in case of Generation Companies is shown in the graphs below:

GENERATION

Figure 4-6: DPR Limit raised to Rs. 20 Crore

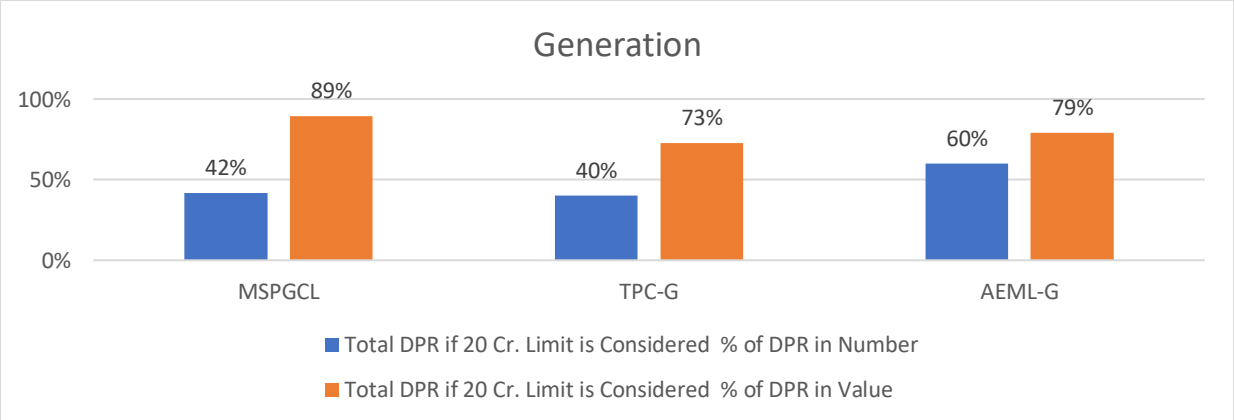


Figure 4-7: DPR Limit raised to Rs. 30 Crore

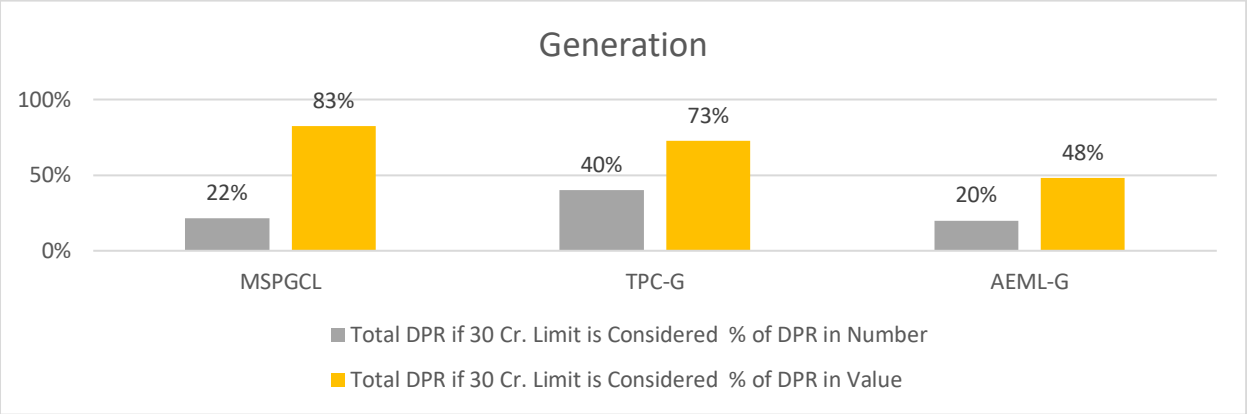


Figure 4-8: DPR Limit raised to Rs. 40 Crore

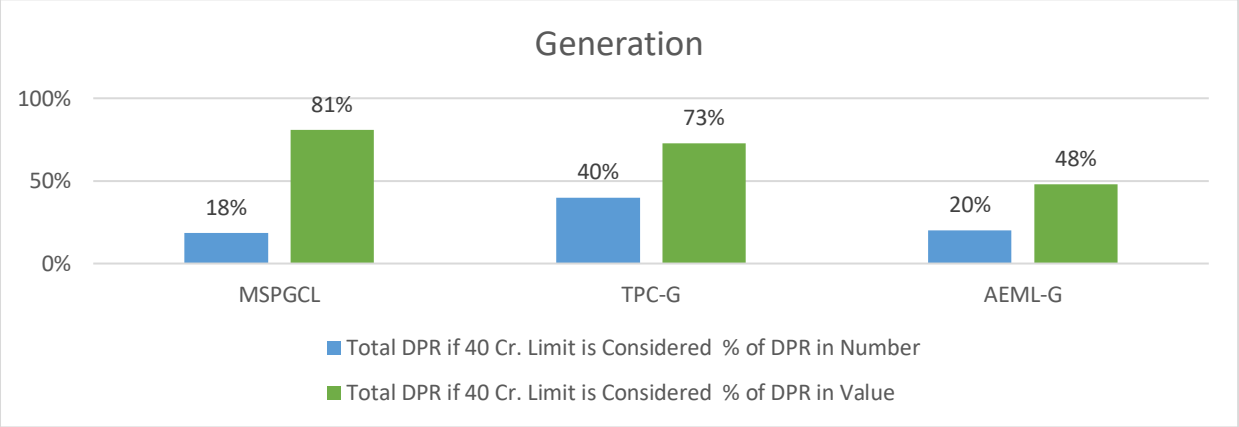
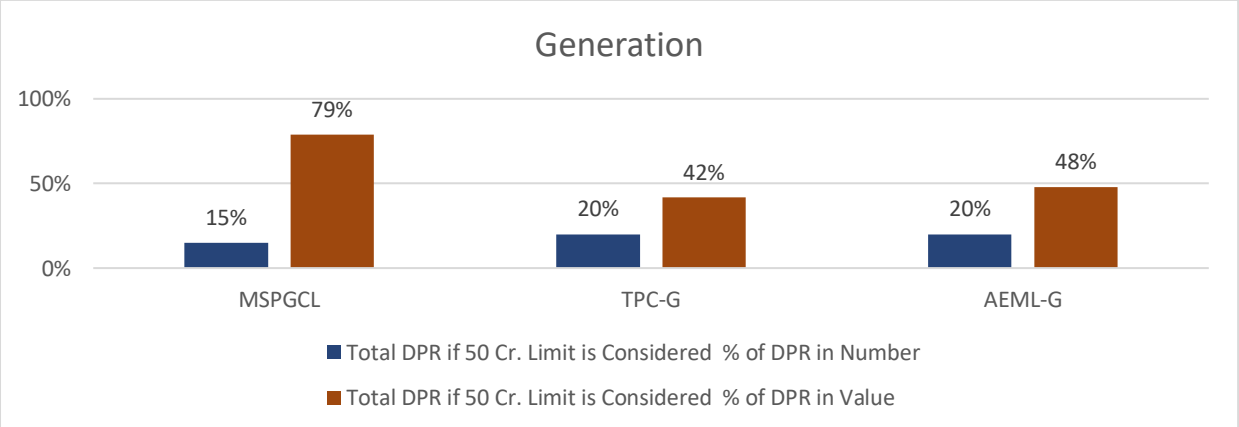


Figure 4-9: DPR Limit raised to Rs. 50 Crore



From the above graphs, it can be observed that in case of Generation Companies, if the DPR limit is raised to Rs. 25 Crore, except for TPC-G more than 75% of the Capital Investment Schemes in terms of value would still come under the purview of the Commission for in-principle approval.

Further increasing the DPR limit would drastically reduce the Capital Investment Schemes both in terms of number and value.

The analysis of revision in the DPR limit in case of Transmission Licensees is shown in the graphs below:

TRANSMISSION

Figure 4-10: DPR Limit raised to Rs. 20 Crore

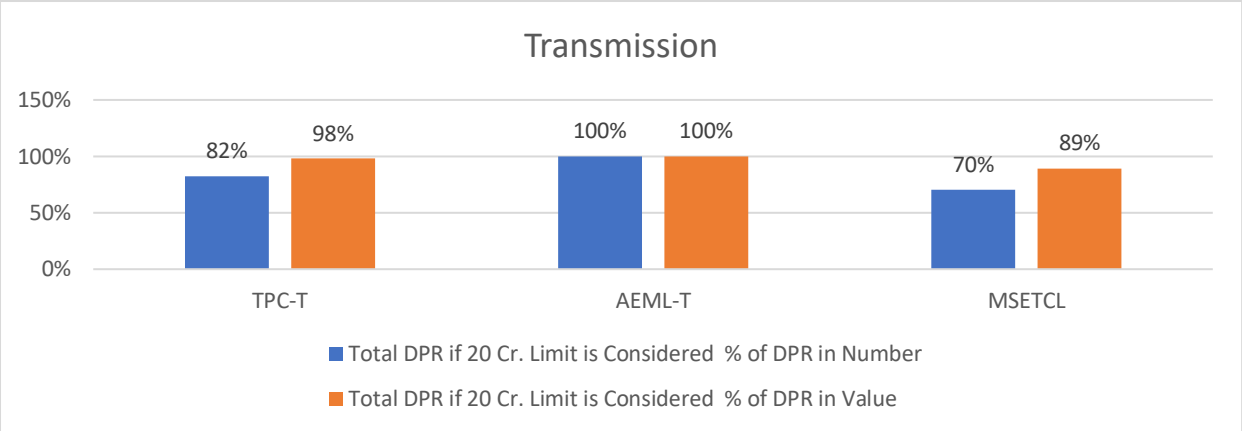


Figure 4-11: DPR Limit raised to Rs. 30 Crore

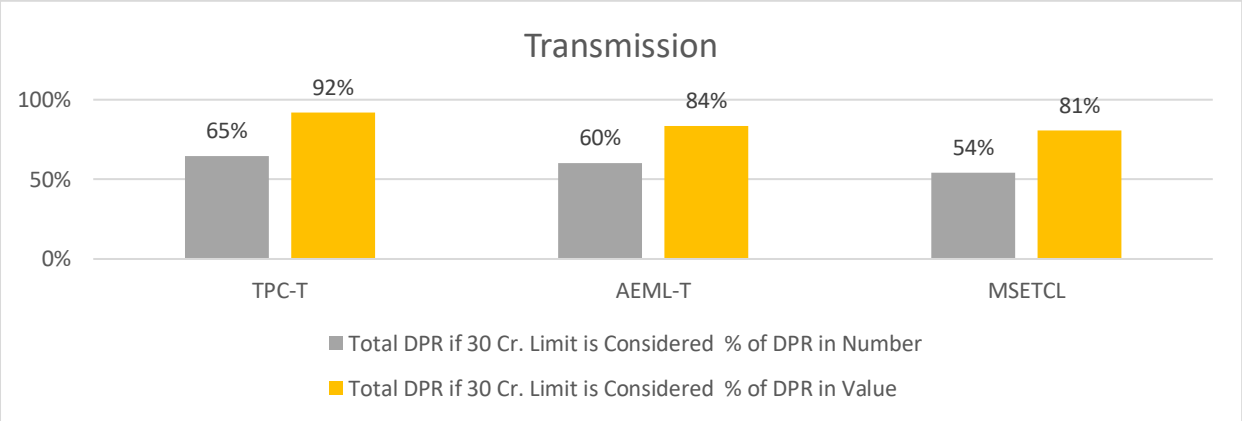


Figure 4-12: DPR Limit raised to Rs. 40 Crore

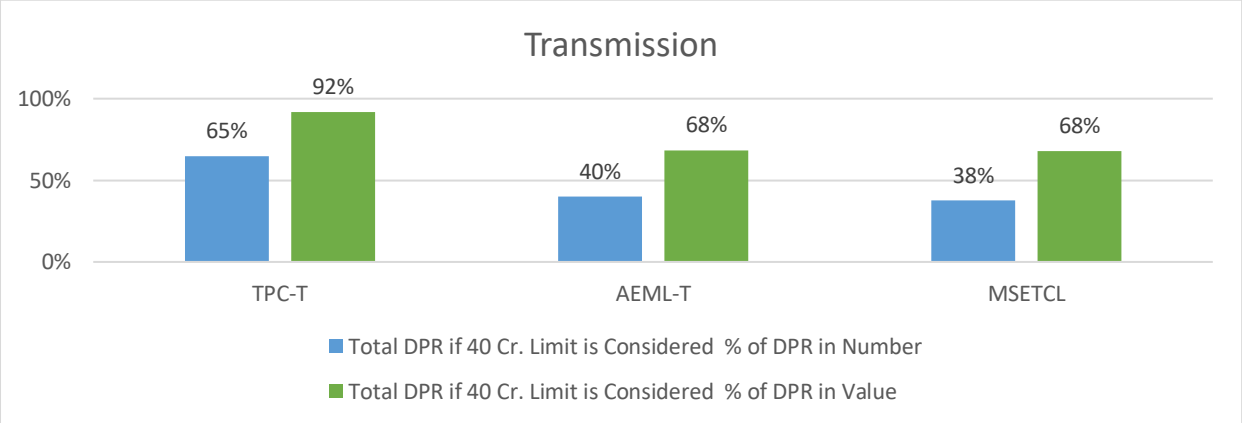
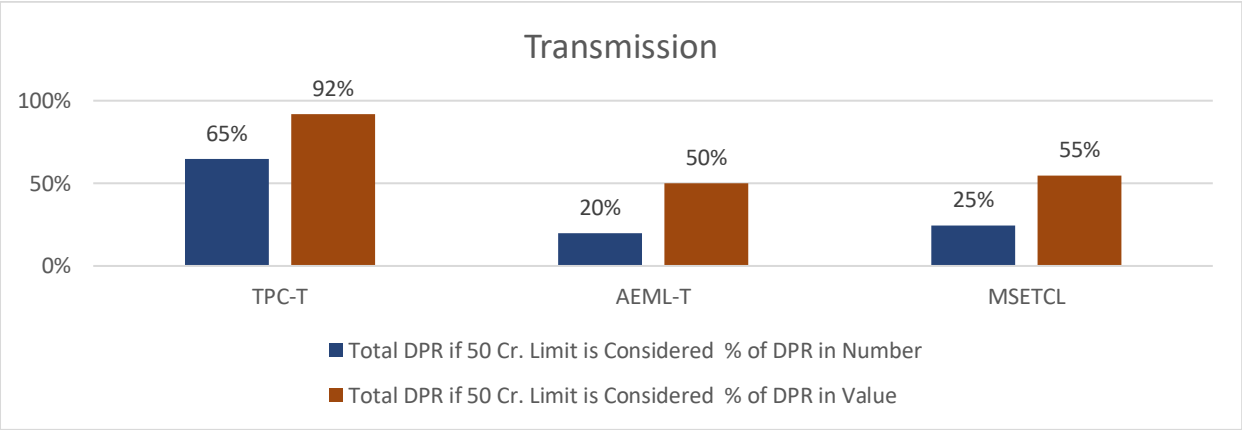


Figure 4-13: DPR Limit raised to Rs. 50 Crore



From the above graphs, it can be observed that in case of Transmission Licensees, if the DPR limit is raised to Rs. 30 Crore, more than 80% of the Capital Investment Schemes in terms of value would still come under the purview of the Commission for in-principle approval. Further increasing the DPR limit would drastically reduce the Capital Investment Schemes both in terms of number and value. However, if the DPR limit is kept at Rs. 20 Crore, there is negligible difference in terms of cost/value of Capital Investment Schemes for Transmission Licensees that are approaching the Commission for in-principle approval.

The analysis of revision in the DPR limit in case of Distribution Licensees is shown in the graphs below:

DISTRIBUTION

Figure 4-14: DPR Limit raised to Rs. 20 Crore

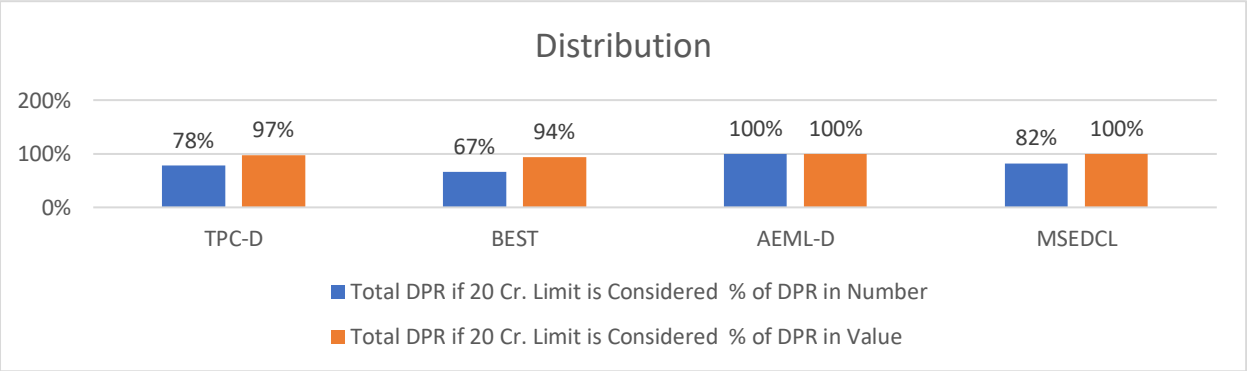


Figure 4-15: DPR Limit raised to Rs. 30 Crore

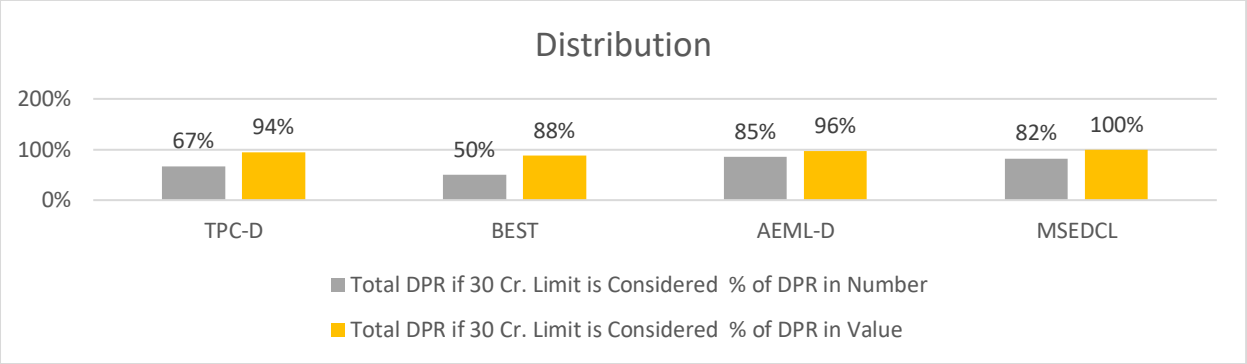


Figure 4-16: DPR Limit raised to Rs. 40 Crore

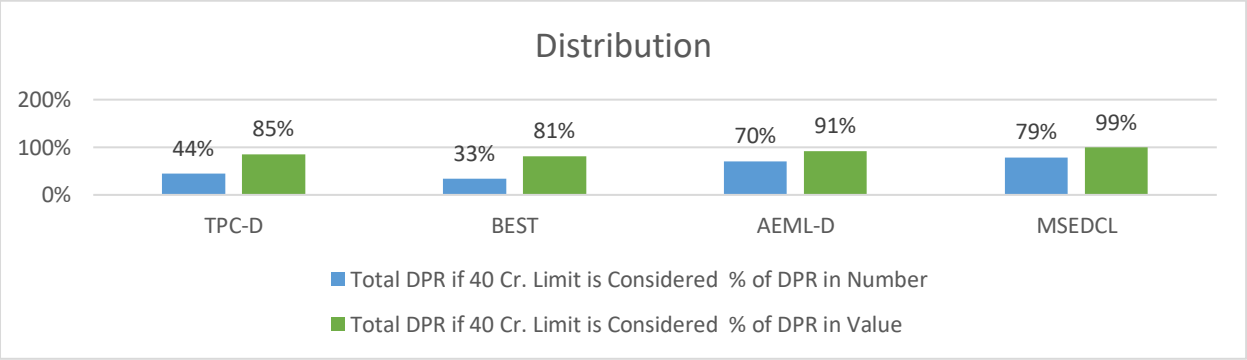
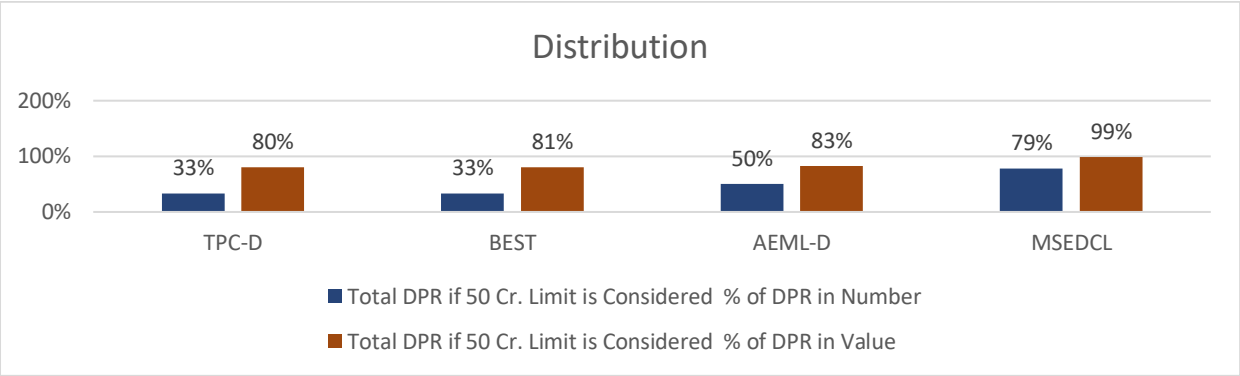


Figure 4-17: DPR Limit raised to Rs. 50 Crore



From the above graphs, it can be observed that in case of Distribution Licensees, if the DPR limit is raised to Rs. 50 Crore, more than 80% of the Capital Investment Schemes in terms of value would still come under the purview of the Commission for in-principle approval. However, this would not be the case if clubbing is allowed for Distribution Licensees under limited conditions as proposed in these Regulations. With conditional clubbing for Distribution Licensees, it would not be appropriate to set a very high DPR limit. Since, there is a restriction on clubbing, it would be suitable to propose a lower DPR limit so that maximum Capital Investment Schemes would still be approaching the Commission for in-principle approval.

From the above analysis, the Commission concludes that in case the DPR limit is increased to Rs. 25 Crore, under any scenario or for any entity (G-T-D), the maximum percentage of Capital Investment Schemes out of the total Capital Investment Schemes in terms of cost/value, would still be approaching the Commission for in-principle approval. The Commission has analysed that around 60% of DPRs in terms of number and 80% of DPR in terms of value would be classified as DPR Schemes. Accordingly, the Commission proposes to revise the DPR Limit for in-principle approval of Capital Investment Schemes to Rs. 25 Crore in these Regulations for Generation Companies and Transmission and Distribution Licensees.

On analysis of the Capital Investment Schemes approved for SLDC and small Deemed Distribution Licensees, it was observed that there was no need to revise the DPR limit for these Companies. Hence, the DPR limit for SLDC and Deemed Distribution Licensees is retained at Rs. 1 Crore.

The Commission thus, proposes the following clauses in draft Capex Approval Regulations, 2022:

> *"4.1 Capital Investment Schemes of a value exceeding Rupees. Twenty-five crore or such other amount as may be stipulated by the Commission from time to time shall be considered as DPR Schemes:*
>
> *Provided that the limit shall be Rupees. One crore for MSLDC and Deemed Distribution Licensees other than Maharashtra State Electricity Distribution Company Limited (MSEDCL):*

4.2 Capital Investment Schemes of a value below the values specified in Regulation 4.1 shall be considered as Non-DPR Schemes."

4.2 Stages of Approval of Capital Investment Scheme

The Capex Guidelines specified a two-stage approval process as follows.

"The Commission plans to adopt a 2-Stage Approval Process.

- *In-Principle Clearance*
- *Final Approval during the Tariff Determination Process and/or ARR Review"*

As per the existing Capex Guidelines, first stage of prudence check is done when the scheme is proposed to be executed by the applicant and submitted for in-principle approval. The second stage of prudence check is done at the time of final approval during the true-up process of ARR for the respective year.

The merits/demerits of continuing with the 2-stage approval process vis-à-vis reducing to single-stage approval process after completion of the capital asset have been analysed. The various Options available for approval of Capex and relative merits/demerits are as under:

Option	Merits	Demerits
I	**Only completed cost approval (No in-principle approval /based on capital plan approved in tariff petitions)**	
1	Significant time and effort savings for Utilities and MERC	There will be no basis for considering capex at the time of MYT Order – cannot be considered zero also, as huge under-estimation will lead to increased tariffs later
2	Risk of disallowance after cost incurrence shall be borne for Utility – may force Utilities to avoid debatable capex and result in controlling capex	Whether MERC will really be able to disallow capital cost, once incurred?
3	Situation of allowing capex on ex-ante based on projected benefits is avoided, especially since, the measurement & verification of benefits is an issue	Even if capital cost disallowed at time of true-up, chances of Utilities getting favourable Orders in Appeal.
II	**2-stage approval (In-principle & completed cost)- present approach**	

Option	Merits	Demerits
1	Clear basis for factoring capex at the time of MYT Order, based on in-principle cost approval	Significant time of Utility as well as MERC has to be invested in capex approval process. Also delay occurs in approval process, particularly when the utilities submit incomplete DPR.
2	MERC will be able to screen proposals upfront – past experience shows significant tightening in capex approval, and Utilities no longer submit such doubtful schemes	No risk to Utility of disallowance after cost incurrence – leading to inflated capex proposals.
3	In-principle approval stage helps MERC modulate tariff impact by phasing of capex	Capex is allowed on ex-ante based on projected benefits, though the measurement & verification of benefits is a concern
4	All other costs are largely pass-through; Returns are linked to capex, hence, require greater scrutiny at prior approval stage itself.	

In view of the above, the Commission is of the opinion that the two-stage approval process followed as per the existing Guidelines is the most appropriate process for approval of the DPRs. Further, it is being used for the last 16 years and helped the Commission to minimise the inefficiencies in the execution of the projects by the applicants. Therefore, the Commission proposes to continue with the existing two-stage process in these draft Regulations, where prudence check is done by the Commission before initiation and after completion of DPR schemes.

Further, in order to remove any ambiguity regarding the status of the prior in-principle approvals given by the Commission on the Application for Capex approval, the Commission has clarified in the Regulations that the prior in-principle approval granted by the Commission for the Capital Investment shall be considered as an Order issued by the Commission.

The Commission thus, proposes the following clauses in draft Capex Approval Regulations, 2022:

"4.2 The Commission shall approve the Capital Investment in the following two stages:

(a) In-principle approval prior to undertaking the capital investment against DPR Schemes;

(b) Final approval of completed cost after asset is put to use:

…

4.7 The prior in-principle approval granted by the Commission for the Capital Investment shall be considered as an Order issued by the Commission."

4.3 Exemption of Schemes from obtaining in-principle approval:

The Commission presently has exempted only those Capital Investment Schemes, which are funded 100% through grants, from taking in-principle approval of the Commission. The Commission proposes to continue with the same and exempt Capital Investment Schemes, which are funded 100% through grants/consumer contribution from taking prior in-principle approval of the Commission. The exemption is given considering that the impact on tariff of the applicant due to such Capital Investment Scheme shall be limited only to the O&M expenses. However, the Commission is of the opinion that in case the scheme is partially funded through grants/consumer contribution, (i.e., if the grant/consumer contribution portion is below 100%) then there would be an impact on the debt/equity portion, which is over and above the O&M expenses. The Commission is therefore of the opinion that in such cases the applicant shall approach the Commission for prior in-principle approval like any other DPR Scheme.

Further, the Commission has also done inter-State comparison of Capital Investment Schemes that are exempted from in-principle approval. The Commission observed that in some States, emergency works are also exempted from obtaining in-principle approval. The emergency restoration works are required to be carried out on occurrence of unforeseen event. Under such circumstances, these works are necessarily required to be taken up without any delay. Not initiating such works with immediate effect for restoration of services for want of in-principle approval of the Commission would not be appropriate as it will leads to delay in restoration of the services and hamper the consumers supply. Hence, the Applicant need not approach the Commission for in-principle approval of such works.

Hence, the Commission has also exempted emergency works from taking in-principle approval of the Commission. However, the Commission has included a clause stating that the applicant shall approach the Commission within 30 days from the date of initiation of such emergency works.

The Commission thus proposes the following proviso in draft Capex Approval Regulations, 2022:

"4.4 Prior in-principle approval shall not be required for Non-DPR Schemes or 100 percent Grant funded Schemes or Schemes that fall under emergency works.

4.5 Prior in-principle approval shall be required for DPR Schemes funded partly by Grants where the contribution or share of the Application in terms of debt and equity is higher than the limit specified in Regulation 4.1.

4.6 In case of emergency works, the Applicant shall approach the Commission within 30 days from the start of the work and shall submit the DPR complete in all respects for approval of the Commission with due approval of its competent authority."

4.4 Framework for Prior In-Principle Approval of Capital Investment Schemes:

The Commission is of the opinion that Capex approval process to a certain limit can be re-organised for more effective approval process. The Commission has categorized the Schemes in the following manner and delegated the approval of DPR in the following way:

Capex Limit	Approval Authority	Proposed Treatment
Up to Rs. 25 Crore	**Non-DPR Schemes**	Limit for Non-DPR Schemes (only completed cost approval) may be increased from Rs. 10 Crore to Rs. 25 Crore – 60% of DPRs in terms of numbers, and 80% of DPR in terms of value will be classified as DPR Scheme
> Rs. 25 Crore & up to Rs. 50 Crore	**Capital Investment Scrutiny Committee (CISC) at MERC**	1. A Committee may be formed for screening capex approval Applications – comprising Secretary/officers of the Commission (assisted by Consultants/External Experts or agency in certain cases, as necessary) – screening as per Capex Regulations 2. Responsible Officer(s) deputed for screening of the Scheme would analyse the Scheme in detail, raise deficiencies and queries on the Scheme and after detailed analysis, put up each qualified Scheme for the consideration of the CISC. 3. Presentation to be given by applicant to the CISC on the salient features of the Scheme to facilitate better understanding of the Scheme. 4. CISC to submit its recommendation to the Commission for due consideration with due analysis and justification within a maximum time period of two (2) Months from the date of Scheme being put up to CISC for consideration. 5. CISC would at a maximum carry 2 deliberations before finalising its recommendation on each Scheme. This is to fast track the process of approving the Schemes.

Capex Limit	Approval Authority	Proposed Treatment
		6. If the scheme is not justified or the Applicant does not submit the requisite information as sought within stipulated time, CISC may return the scheme to the Applicant with the reasons for doing so in writing.
> Rs. 50 crore & up to Rs. 100 Crore	**Approval by Commission**	1. Responsible Officer(s) deputed for screening of the Scheme would analyse the Scheme in detail, raise deficiencies and queries on the Scheme and after detailed analysis, put up each qualified Scheme for the consideration of the Commission. 2. Presentation to be given by the applicant to the Commission on the salient features of the Scheme to facilitate better understanding of the Scheme. 3. Commission would after due deliberation based on assessment of Scheme according to this Regulation would recommend its approval or rejection for the Capital Investment Scheme.
> Rs. 100 Crore	**Approval by Commission**	**3 step approval process (same as for Schemes between Rs. 50-100 Crore for G, D and SLDC).**
		For Transmission Schemes – STU to evaluate and Commission to check if due process is followed for technical and financial analysis.

The Commission is of the opinion that the above framework for approval can help the Commission in streamlining the approval process. This would assist the Commission in preventing the long pendency of cases. The Commission has also delegated most of the work of approval of Transmission Schemes to STU as STU is already undertaking its own due diligence in planning the Transmission Network.

Regulation 13.2.3 and 13.2.4 of MERC (State Grid Code), 2020 or MEGC, 2020 specifies that:

> *13.2.3. Prior to inclusion of any new transmission system element entailing capital outlay exceeding threshold limit of INR 100 Crore or such other threshold limit to be stipulated by the Commission from time to time, as part of transmission system plan, STU shall evaluate and present alternate options of meeting the User/Requester requirement (with*

or without transmission element, factoring optimal capacity expansion than sought for, or evaluate alternate technology options, consider deferment or prioritisation considerations etc.) and accordingly undertake scenario analysis of various cases and present it to User/Requester in order to ensure economical and efficient development of transmission system element(s) to economise overall Return of Investment for transmission system as whole.

13.2.4. Prior to inclusion of any new transmission system element or augmentation of the capacity of existing transmission system element, as part of transmission system plan, the STU shall give due consideration to equitable and fairness in recovery of costs from concerned transmission system users (subject to prevalent pricing framework) and shall highlight the incremental cost recovery burden that would be added to transmission system users due to addition/augmentation of such new transmission system element and in case the capacity utilisation of such element does not take place as planned. For this purpose, the STU through (GCC/MTC) shall expressly deliberate, highlight and record the viewpoints of transmission system users for addition/augmentation of transmission system elements, before incorporation of such transmission system element and finalisation of transmission system plan and annual rolling plan.

Thus, as specified in the Grid Code, for Transmission system projects worth more than Rs. 100 Crore, STU is required to evaluate financial prudence by least cost analysis and sensitivity analysis. The ultimate decision of undertaking the project is taken after due deliberation in GCC/MTC after stakeholder consultation as discussed above.

Further, the STU was required to formulate Guidebook for operationalisation of the Planning Code covering detailed modalities for implementation of the financial planning criteria and technical planning criteria, information requirements from Users/Requesters, etc. within three months (by 02.12.2021) from notification of these Regulations. However, the STU is yet to formulate the Guidelines.

In these Regulations, the role of STU for such Transmission system projects worth more than Rs. 100 Crore has been further elaborated. The STU would evaluate and conduct technical feasibility/criteria of the Scheme like Reactive power management, Distribution Network planning, Load Bifurcation study, Reorientation of Discom load on other substations if possible etc. Financial prudence of the Scheme would be assessed on parameters like least cost analysis , various scenario analysis and with approval in GCC or MTC as appropriate before adding the scheme in the transmission licensee's plan and STU Plan.

The STU would undertake the approval of new transmission element worth more than Rs. 100 Crore according to the aforsaid Regulation 13 of the MEGC and Regulation 8 of these Regulations, which specify the methodology of evaluation of Capital Investment Schemes at In-Principle approval stage. Accordingly, the Commission would only ensure that the STU has followed all the due processes and due approval of GCC or MTC as appropriate has been received

for the Transmission Capital Investment Scheme. If for any reason, stakeholders in GCC or MTC are unable to agree on certain aspects of such scheme, then the Application for the Scheme shall be evaluated by the Commission in the same manner as other Generation and Distribution Schemes worth more than Rs. 100 Crore.

The Commission thus, proposes the following proviso in draft Capex Approval Regulations, 2022:

"4.8 All Capital Investment Schemes of a value exceeding Rupees Twenty-five crore and up to Rupees Fifty Crore shall be first scrutinised by the Capital Investment Scrutiny Committee (CISC) set up by the Commission for scrutiny of such proposals:

Provided that an external expert or agency may be co-opted by the CISC from time to time for necessary inputs and expertise.

4.9 For Schemes categorised for scrutiny by the CISC, the Applicants shall make a presentation to the CISC on the salient features of the Capital Investment Scheme in order to facilitate better understanding of the Scheme.

4.10 The concerned officers of the Commission shall analyse the Schemes in detail, raise deficiencies and queries on the Scheme, and after detailed analysis, put up each qualified Scheme for the consideration of the CISC.

4.11 The CISC shall submit its recommendations to the Commission for due consideration along with due analysis and justification within a maximum time period of two months from the date each qualified Scheme has been first put up to the CISC for consideration:

Provided that the CISC shall finalise its recommendations on each Scheme after a maximum of two (2) deliberations:

Provided that if the scheme is not justified or the Applicant does not submit the requisite information as sought within stipulated time, CISC may return the scheme to the Applicant with the reasons for doing so in writing.

4.12 For Capital Investment Schemes of a value exceeding Rupees Fifty crore and up to Rupees Hundred Crore, the Applicants shall make a presentation to the Commission on the salient features of the Capital Investment Scheme in order to facilitate better understanding of the Scheme.

4.13 The concerned officers of the Commission shall analyse in detail such Schemes of a value exceeding Rupees Fifty crore and up to Rupees Hundred Crore, raise deficiencies and queries on the Scheme, and after detailed analysis, put up each qualified Scheme for the consideration of the Commission.

4.14 For Capital Investment Schemes of Generation Business and Distribution Business of a value exceeding Rupees Hundred crore, the Applicants shall make a presentation to the

Commission on the salient features of the Capital Investment Scheme in order to facilitate better understanding of the Scheme.

4.15 The concerned officers of the Commission shall analyse in detail such Schemes of Generation Business and Distribution Business of a value exceeding Rupees Hundred crore, raise deficiencies and queries on the Scheme, and after detailed analysis, put up each qualified Scheme for the consideration of the Commission:

Provided that an external expert or agency may be consulted by the Commission from time to time for necessary inputs and expertise while evaluating such Schemes.

4.16 For Capital Investment Schemes of Transmission Business of a value exceeding Rupees Hundred crore, the STU shall evaluate the technical feasibility and financial prudence of the Scheme based on least cost analysis and sensitivity analysis, in accordance with Regulation 13 of the Maharashtra Electricity Grid Code, 2020 and the Prudence Check framework specified in Regulation 8 of these Regulations:

Provided that while undertaking the technical evaluation of such Schemes, the STU shall bear in mind the issues related to reactive power management, associated distribution network development, load bifurcation/re-orientation, available alternatives, management of outlets for Distribution Licensees, etc.

4.17 The decision on undertaking Transmission Schemes of a value exceeding Rupees Hundred crore shall be taken after due deliberation between the stakeholders in the Grid Co-ordination Committee and/or Maharashtra Transmission Committee, formulated as per the Maharashtra Electricity Grid Code, 2020, as appropriate.

4.18 When the Application is made for approval of such Transmission Schemes of a value exceeding Rupees Hundred crore under these Regulations, the Commission shall only ensure that the STU has followed the due process laid down in the Maharashtra Electricity Grid Code, 2020 and the provisions of these Regulations, before granting approval for such Schemes.

4.19 In case the Grid Co-ordination Committee and/or Maharashtra Transmission Committee, as applicable, is unable to agree on certain aspects of such Transmission Schemes of a value exceeding Rupees Hundred crore, then the Application made to the Commission for approval of the Scheme shall be evaluated in accordance with the procedure laid down in Regulations 4.14 and 4.15:

Provided that Grid Co-ordination Committee and/or Maharashtra Transmission Committee, as applicable, shall carry out deliberations and necessary studies before concluding the matter:

Provided further that if the Grid Co-ordination Committee and/or Maharashtra Transmission Committee, as applicable, are unable to agree on certain aspects of such Transmission Schemes then it shall note down the reasons for non-agreement and the same

shall be submitted along with the DPR for the Commission's approval.

4.20 The Commission may review the value limit for consideration as DPR Scheme as specified in Regulations 4.1, 4.8 4.12, 4.14 and 4.16 once in every three years, and stipulate a different value limit through separate Order, as appropriate.

4.5 Time period for filing of DPR Scheme for In-principle approval

The existing Capex Guidelines do not define any timeline for filing of application for in-principle approval of DPR Scheme by entities. Due to absence of such timelines, DPR Schemes are filed by these entities as per their convenience throughout the year.

The Commission has been processing the applications for in-principle approval of DPR Scheme individually for each scheme filed by each applicant separately throughout the year. As a result, the MYT/MTR Petitions filed by the Utilities comprise a mix of Schemes that are approved, Schemes that have been filed and are pending approval, and Schemes that are yet to be filed for approval.

The Commission is of the opinion that there should be a defined timeline in these draft Regulations for filing/submission of DPR Schemes by all Applicants, so that the process of filing and approval of Capex Schemes is streamlined and there is clarity on the approved Schemes, at the time of tariff determination based on the MYT/MTR Petitions filed by the Utilities. At the same time, it would be cumbersome for the Utilities as well as the Commission if all the Schemes are filed for approval at the same time. Hence, the Commission has specified that the Applications for in-principle approval may be filed twice a year in line with the following half-yearly timelines:

1. On or before 30th April of each year
2. On or before 31st October of each year

All entities shall compile all the DPR Schemes accumulated for submission during first and second half of the year and shall file/submit it together on or before 30th April and 31st October, respectively. The Commission shall not entertain filing/submission of DPR Schemes at any other time during the year, except in case of emergency schemes, which are required to be filed within 30 days from the start of the work.

The Commission thus, proposes the following clauses in draft Capex Approval Regulations, 2022:

"4.21 The Applicant may file the Application for in-principle approval of DPR Schemes in April and October of every financial year, on or before 30th April and 31st October, respectively:

Provided that the Application for in-principle approval of DPR Schemes shall be filed under a single covering letter, along with the consolidated cost benefit analysis and tariff impact for all the Capital Investment Schemes:

Provided further that any Application filed after 30th April and 31st October, respectively, shall be considered along with the next filing, as applicable."

4.6 Clubbing of Capital Investment Schemes

The existing Capex Guidelines specify the following conditions for clubbing of Capital Investment Schemes:

> *"….New Receiving Stations proposed at different locations within the licence area must be clubbed together and presented as a Scheme for New Receiving Stations, Schemes for modernization / augmentation of the Transmission cables must be presented together, Information Technology Schemes, SCADA and Communication Equipment at the region/State level, Schemes for Major Replacement of Old Equipment outlived regulated life etc.*
>
> *(ii) Different types of Works within a geographical area, say in a District*
>
> *For example, all capital investments covered under a District Integrated Scheme can be presented together as a Scheme*
>
> *(iii) An independent identifiable project as would be submitted to a financial institution like REC, PFC, etc or for funding under APDRP."*

The existing Guidelines had allowed for clubbing of Capital Investment Schemes in order to minimise the repetition in filing/submission of similar kind of schemes, and to ensure that majority of the Schemes do obtain in-principle approval. The existing Capex Guidelines provided for clubbing of schemes in three ways, viz., (i) clubbing works of a similar or related nature, such as new Receiving Stations or modernisation of transmission lines, SCADA, etc.; (ii) clubbing all works within a geographical area; (iii) clubbing identifiable projects as may be submitted to Financial Institutions like REC, PFC, etc., or for funding under APDRP.

However, the Commission in recent years has experienced challenges in evaluating the prudence of the schemes due to very high degree of clubbing done by the Generation Companies, Licensees and SLDC. The Commission is of the opinion that the criterion for Clubbing Capital Investment Schemes needs to be reassessed.

Generation Companies, Transmission Licensee, and Distribution Licensees have been submitting Capex Schemes for in-principle approval by taking advantage of the above clause of clubbing in the existing Guidelines and submitting clubbed Capital Investment Schemes with an intention to qualify small Capital Investment Schemes above the DPR limit specified in the Capex Guidelines, for obtaining in-principle approval of the Commission.

Clubbing of Capital Investment Schemes not only results into complexity in assessment of estimated cost of Capital Investment Schemes but also creates difficulties in scrutiny and

prudence check of such Schemes. The Commission in the recent past has therefore, rejected Capital Investment Schemes, which were inappropriately clubbed and submitted to the Commission for in-principle approval.

Considering the above factors, the Commission has decided to do away with the conditions of clubbing of Capital Investment Schemes for Generating Companies. However, the Commission is of the opinion that completely eliminating clubbing of schemes in the case of Transmission Licensees and Distribution Licensees may lead to substantial increase in small Capex Schemes, which may be significantly lower than the DPR limit specified by the Commission in these draft Regulations for taking in-principle approval. This would also have an impact on the non-DPR capitalisation, which is allowed by the Commission in MYT/MTR Orders as per MERC MYT Regulations, 2019. The MYT Regulations, 2019 limit the allowance of non-DPR capitalisation to the extent of 20% of the DPR capitalisation.

Thus, the Commission is of the opinion that Distribution Licensee can club Schemes of a single Distribution zone or equivalent area. It is also observed that Distribution Licensees enjoy benefits of increasing purchasing power if procurement is being done centrally, wherever possible. Hence, the Commission has specified that Schemes related to metering, centralised purchase such as Distribution Transformers, Cable, and other equipment, may be submitted for the Distribution Licensee as a whole.

Further, the Distribution Licensee may club Schemes of categories specified in Regulation 3.

The Distribution Licensees may also club identifiable projects partly funded by Government Grant like DDUGJY, IPDP, RDSS, SAUBHAGYA, etc.

There have been instances where Licensees have clubbed O&M or Non-DPR Schemes to get them qualified as DPR Scheme, which have been rejected by the Commission. Hence, these draft Regulations specify that Transmission Licensees or Distribution Licensees or SLDC shall not club O&M Schemes or Non-DPR Schemes to qualify as DPR Scheme.

There have also been instances of Licensees clubbing O&M Schemes to get them qualified as Non-DPR Scheme, which have been rejected by the Commission. Hence, these draft Regulations specify that Transmission Licensees or Distribution Licensees or SLDC shall not club the O&M Schemes to qualify as Non-DPR Scheme.

There have also been other instances of the opposite nature where Utilities have split the scope of work of the Scheme into small parts to qualify as Non-DPR Scheme. The Commission has directed the Utilities to file for DPR approval in such cases.

The Commission thus, proposes the following clauses in draft Capex Approval Regulations, 2022:

> *"4.22 Distribution Licensees shall submit separate application for approval of Capital Investment for each Distribution Zone or equivalent area, except for Schemes related to metering, centralised purchase such as Distribution Transformers, Cable, and other equipment, which may be submitted for the Distribution Licensee as a whole:*

Provided that the Distribution Licensees may club Schemes for being considered as a DPR Scheme only for the categories of capital investment schemes specified under Regulation 3, for in-principle approval under these Regulations:

Provided further that the Distribution Licensees may club Distribution Schemes partly funded by Government grants such as DDUGJY, IPDP, RDSS, SAUBHAGYA, etc.

4.23 Transmission Licensees may club the similar type of capital work of particular Zone/Circle-wise to minimise the number of Schemes.

4.24 The Transmission Business/Licensees or Distribution Business/Licensees or SLDC shall not club the O&M Schemes or Non-DPR Schemes to qualify as DPR Scheme:

Provided that the Transmission Business/Licensees or Distribution Business/Licensees or SLDC shall not club the O&M Schemes to qualify as Non-DPR Scheme.

4.25. The Generating Business/Company, Transmission Business/Licensees or Distribution Business/Licensees or SLDC shall not split the scope of work into small parts to qualify as Non-DPR Schemes.

4.26 The Applicants shall not be allowed to club Schemes for being considered as a DPR Scheme for in-principle approval under these Regulations."

4.7 Final Approval of Completed Cost

The existing Capex Guidelines stipulate the following framework for final approval of Capital Investment Schemes:

"Final Approval during the Tariff Determination Process and/or ARR Review"

The Commission is of the opinion that the existing practice of according approval for completed cost at the time of filing of True-up of the respective year in which the Capital Investment Scheme is completed is appropriate, and needs to be retained, with certain modifications to streamline the process.

Under the existing process, the Commission has been directing the Applicants in its in-principle approval letter to submit the completed cost immediately after completion / commissioning of the respective scheme. The approval of the completed cost of the scheme is done during the processing of respective True-up Petition.

The Commission is of the opinion that instead of filing completed cost for each individual Capital Investment Scheme, the Applicant shall consolidate all the completion reports and submit it periodically at the end of the month of September and March of every year as specified in Regulation 4.21 of these draft Regulations. The Applicant shall subsequently consolidate all the completion reports and file for approval of completed cost along with the respective MYT/MTR Petition, which contains the True-up of the year in which such Capital Investment Schemes are completed. This would enable the Commission to have a clear picture at the time of approval of

Capitalization for True-up years. Also, the Commission would also be in a better position to assess the completed cost at the time of processing of True-up Petition, as the Application for filing of completed cost is to be filed with requisite details as specified in these Regulations.

The Commission has covered in detail the application and format for filing of completed cost in Regulation 6 of these Regulations and the prudence check to be carried out by the Commission on filing for completed cost is detailed out in Regulation 9 of these Regulations.

The Commission therefore proposes the following clauses in draft Capex Approval Regulations, 2022

> *"4.27 The Final approval of completed cost after asset is put to use shall be sought along with the claim for true-up for any financial year filed along with the appropriate Petition for approval of Multi-Year Tariff or Mid-Term Review, in accordance with the MERC (Multi-Year Tariff) Regulations applicable at that point in time."*

4.8 DPR Format and Necessary Documents to be submitted for In-Principle Approval

The existing Capex Guidelines, regarding the supporting documents to be submitted along with Capital Investment Scheme or Feasibility Reports (FRs) for in-principle approval stipulate as follows:

> *"The FRs must be accompanied by such information, particulars and documents to support the details contained in the plan including technical reports, design criteria, supplier/contractor quotations, term sheets of financing agencies etc., as may be required to enable assessment of the nature involved in ex-ante, in-principle clearance…."*

Each Utility is submitting the DPR Schemes in their own desired format with the above details, and the Commission directs the Utilities to submit additional data and justification while evaluating the DPR Schemes.

The Commission is of the opinion that there is a need to bring more clarity in these draft Regulations on the format for submission of Capital Investment Schemes by the Applicants and the necessary supporting documents, which are required to be filed by the Applicants along with the Capital Investment Scheme, in order to avoid any ambiguity and to reduce the time for processing the Capex Approval Applications.

The Commission has therefore specified a detailed format for submission of Capital Investment Schemes by the Applicant for in-principle approval of the Commission. The format is appended to these draft Regulations as **Appendix 1**. The format at **Appendix 1** is prepared based on the study and analysis of Capital Investment Schemes filed and approved by the Commission in the past few years and based on the inter-State comparison of the formats prescribed/particulars required to be furnished as prescribed in other States.

The following Table shows the particulars that are included in the formats prescribed/particulars required to be furnished for filing of Capital Investment Schemes in Other States:

Name of State/ Commission	**Particulars required to be furnished for submission/filing of Capital Investment Scheme**
Assam	(i) Complete scope and justification; (ii) Estimated life extension of the generation/transmission asset; (iii) Improvement in performance parameters; (iv) Cost-benefit analysis; (v) Phasing of expenditure; (vi) Milestones/Timelines (vii) Schedule of completion; (viii) Estimated completion cost; (ix) Other aspects.
Bihar	(i) Scheme wise and source wise actual capital expenditure and capitalization for previous year vis-a-vis projected in the investment plan for that year, for first six months of current year vis-à-vis projected in the investment plan for that period and year wise schedule of capital expenditure and capitalization for next ten years starting from ensuing years. Based on actual expenditure and capitalization the rolling plan may get revised in subsequent filings. (ii) Scheme wise objective of the investment (iii) Detailed Project Report (DPR) duly approved by the competent authority (iv) Statement/report to substantiate the purpose and nature of investment duly approved by the competent authority for which DPR is not available
Chhattisgarh	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 or the distribution licensee
Delhi	1. Name of Scheme, 2. Estimated Cost, 3. Objective/Justification, 4. Brief Scope of work, (Major Items) 5. Completion Period 6. Funding Arrangement, 7. Cost Benefit analysis/Return on investment
Gujarat	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, record of consultation with beneficiaries and any other information considered to be relevant
Karnataka	1. Particulars of the project (Name of utility, Zone, Circle, Division

Name of State/ Commission	Particulars required to be furnished for submission/filing of Capital Investment Scheme
	2. Name/Description of the Capital Work 3. Date of Sanction, 4. Estimated Cost, 5. Awarded Cost, 6. Date of Work Award, 7. Date of Commencement, 8. Targeted Date of Completion, 9. Actual Date of Completion, 10. Brief Description of the work [a]the reasons for taking up the work, [b] quantified objective, [c] phased realisation or benefit upon full completion)
Madhya Pradesh	1. Brief outline of the Project, 2. Scope and Objective of the Investment, 3. Technical reports, 4. Design criteria, 5. Project financing avenues, 6. Contractor/supplier quotations, 7. Cost Estimate with and without escalation 8. Detailed justification of the investment in light of existing operating conditions such as the equipment is operating close to or above their rated capacity, to facilitate the backup system in conditions of exigency or during maintenance, to cater the normal load growth, the equipment has outlived its life, introduction of new and advance technology, etc.
Punjab	(a) Purpose of investment; (b) Broad Technical Specifications of the proposed investment and supporting details; (c) Capital Structure; (d) Capitalization Schedule; (e) Financing Plan, including identified sources of investment; (f) Physical targets; (g) Cost-benefit analysis; (h) Prioritization of proposed Investments
Rajasthan	1. Objective, 2. Technical justification, 3. Capital cost,

Name of State/ Commission	Particulars required to be furnished for submission/filing of Capital Investment Scheme
	4. Year wise phasing of expenditure and their financing plan etc. 5. Estimated cost of generation, details in respect of dedicated transmission lines and/or substations. 6. Justification of the least cost of transmission satisfying the requirement of Grid Code. 7. Cost benefit analysis
Andhra Pradesh	1. In proposal-(i) Brief outline of the different components that constitute it and the salient features of the Scheme. (ii) The objectives of the Scheme and justification for taking it up. 2. Along with proposal (i) Complete details of the Scheme such as transmission and/or distribution lines, substations, extension of bays at the existing substations, etc. (ii) Detailed cost estimates for each item of work covered by the Scheme, erection charges, expenses projected for contingencies, estimated extend of interest during construction, establishment and other charges etc. based on cost data, if any deviations justification to be provided. (iii) A comprehensive sketch / single line diagrams of the proposed work, grid maps of relevant areas
Uttar Pradesh	1. Financing Plan 2. Physical Targets for each year to meet consumer growth and network augmentation 3. Trajectory of Reduction in Transmission and Distribution Losses 4. Improvement in quality of supply/reliability/metering etc. 5. Reduction in overloading/congestion etc 6. Lease cost plan for any investment 7. Alternatives considered 8. Cost Benefit Analysis and other aspects
Orissa	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, record of consultation with beneficiaries and any other information considered to be relevant
Central ERC	1. Name of Scheme, 2. Estimated Cost (with and without escalation), 3. Cost Benefit analysis including long term benefit analysis, 4. Brief Scope of work, 5. Objective/Justification,

Name of State/ Commission	Particulars required to be furnished for submission/filing of Capital Investment Scheme
	6. Funding Arrangement, 7. Time frame/phasing out of expenditure

The Commission observed that in almost all the States, the benefits/justification in terms of Technical and Financial parameters are required to be submitted by the Utilities. The existing Capex Guidelines also provide for benefits/justification to be submitted along with the Capital Investment Scheme, however, the Applicants usually submit general benefits/justification without proper/adequate quantification of the benefits. The Commission has found it difficult in the past to verify the actual benefits arising from the implementation of the Scheme.

Technical Justification

The Commission is of the opinion that the benefit/justification in terms of quantified Technical and Financial parameters need to be provided by the Applicant to carry out the prudence check of Capital Investment Scheme. For example, asset replacement should not be proposed merely because the useful life of the asset as specified in the MYT Regulations has been completed. While proposing Capex Schemes for asset replacement, under technical justification, the Applicant shall provide a report from OEM / Independent Consultant/Third Party justifying the need for such replacement. The asset should also undergo residual life test and any other test as recommended by Central Electricity Authority (CEA) or any other competent Authority and the test results showing signs of deterioration or obsolescence may be submitted to the Commission.

Further, the Applicant also needs to justify that the asset is beyond repair based on the record of past major occurrences / failures and history of major overhauls. Applicants also need to provide clarification whether life extension is possible or not, or replacement is only option available with the Applicant.

For Capex Schemes with an objective to improve the performance and operational efficiency of the Applicant, the submission shall include detailed explanations of how the proposed scheme is expected to improve the performance and by what extent in both qualitative and quantitative terms.

For other Schemes necessary to meet planning criteria of the CEA, technical justification can be in the form of report/recommendation of expert agency, provisions of Supply Code/Grid Code/Other mandatory rules/guidelines notified by MoEF&CC/MoP/CEA or to comply with the Regulations of the Commission.

Financial Justification

Under financial justification, the Applicants need to provide how the proposed investment would bring long term benefit to the consumer. The benefit can be either in terms of increase in revenues

or savings in cost to the Applicant, reduction in losses, improvement in operating parameters such as availability, efficiency, etc., which ultimately results in reduction in tariff to the consumers. Detailed computations need to be provided by the Applicants so that financial viability of the investment can be ascertained.

The Commission also observed that Least Cost analysis is a necessary criterion for assessment of Capital Investment Scheme and is undertaken in the States of Karnataka, Madhya Pradesh, Rajasthan and Andhra Pradesh. The Commission is also of the view that the Applicant should consider various alternatives at the time of conceptualizing the proposed Capital Investment Schemes. The Applicant should provide the Cost benefit analysis of each alternative and show how the least cost alternative is the most suitable.

In case of line-specific Transmission Licensees, the Application for in-principle approval of capex is submitted after the Transmission Licence is issued for the particular transmission assets/Scheme. However, even in this case, the Applicant has to submit the least-cost option in the Application for in-principle approval, with due regard to the route, overhead lines or underground cabling or a mix of the two, land availability, etc. In case the Applicant is proposing a particular alternative even if the cost benefit analysis of the proposed option is not the best suited, then in such case, the Applicant shall provide detailed justification for such proposal (Socio-economic reasons, Law and order reasons, Right of Way (RoW) issues, etc., with documentary proofs).

The Commission also observed that 'If not' and 'If deferred' analysis is undertaken in the States of Delhi, Rajasthan and Andhra Pradesh, which brings out the importance and urgency of the Capital Investment Scheme. The Commission feels that such an analysis is important for assessment of Capital Investment Scheme and has therefore, proposed the same in the DPR submission format. The Commission has observed that the Applicants in the past have not been submitting the detailed analysis on the importance and urgency of the Capital Investment Scheme. The Commission would thus like to mandate this analysis in the DPR filing format so that detailed analysis of merits and demerits of not undertaking the investment and the adverse effect if the investment is undertaken at a later stage can be submitted along with the filing of Capital Investment Scheme. The analysis should come with detailed computation showing its effect on loss of revenue, increase in cost, loss of reliability, loss of useful life etc.

Critical Issues

The Commission in the past has observed that some Capital Investment Schemes of Transmission Licensees are proposed for in-principle approval without inclusion of such Scheme in STU Plan. In a State such as Maharashtra, where there are multiple Transmission Licensees operational, it is important to have co-ordination between these Transmission Licensees before setting up transmission infrastructure by any of the Licensee so as to avoid duplication of assets and redundancy of infrastructure. The Commission also observed that in States such as Bihar and Odisha, the schemes are first part of STU Plan and then the Licensees approach the respective

Commission for In-principle approval. Thus, the Commission proposes to include a mandatory condition for each and every Scheme irrespective of scope of work, to be included in the STU Plan, before the Transmission Licensees approach the Commission for in-principle approval.

Similarly, the Distribution Licensees operating in the parallel licensee area of Mumbai need to seek concurrence of Mumbai Distribution Network Assessment Committee (M-DNAC) before approaching the Commission with an application for in-principle approval of capex required for release of new connections under certain circumstances in parallel licence area.

The Commission also observed that some Capital Investment Schemes though completed have not been 'put to use' due to lack of readiness of upstream / downstream arrangement. The Commission has observed that in the States of Madhya Pradesh and Andhra Pradesh, the respective Commission mandates the details of upstream/ downstream arrangement and the details of power flow from the proposed asset so that the Commission can take informed decision on the Capital Investment Scheme. The Commission has therefore, proposed to include the details of required upstream/downstream arrangements from the proposed asset, in the format for submission of Capital Investment Scheme so as to minimise idling of assets and ensure end-to-end power flow and for realisation of the benefits from the proposed Scheme.

The Commission further observed that some projects are held up due to avoidable/unavoidable physical and financial constraints like compensation issues, law and order issues like theft/loot of material, etc. The Commission observed that in the States of Madhya Pradesh and Andhra Pradesh, the Commission analyses these constraints and alternate plans are to be indicated to be submitted by the Licensees in this regard. The Commission analyses these alternate plans to check the prudence of the proposed Capital Investment Scheme and ensure optimum utilization of assets in a timebound manner. Accordingly, the Commission has included these aspects related to physical and financial constraints to be submitted under justification by the applicant along with the filing of Capital Investment Scheme.

Submission of Necessary Documents

The Commission in this format for submission of Capital Investment Scheme has also detailed some of the necessary documents/proofs to be submitted along with the application for in-principle approval. The Commission has discussed the same in detail in subsequent paragraphs.

It is observed that at the time of prudence check carried out by the Commission on the schemes for in-principle approval, the Commission has been sending data gaps to the Utilities for submission of necessary documents. The entities have been filing these documents subsequently in response to the data gaps. Some of these documents are standardized documents, which are necessarily required for similar kind of Capital Investment Schemes.

The Commission is of the opinion that as the in-principle approval of the scheme depends on the availability of such critical documents justifying the scheme, such documents are required to be

submitted along with the Capital Investment Scheme and not in subsequent submissions. Hence, the Commission has included these documents in these draft Regulations so that the Commission need not have to ask the entities separately for these documents in each and every scheme. In addition, the Commission has also added some standard documents, which the Commission has been asking in its data gaps for keeping its records and references before giving in-principle approval to the schemes. The Commission has also included some additional documents, which would support the claim and strengthen the justification to carry out the proposed Capital Investment Scheme. While some documents are common for all entities irrespective of the nature of capital expenditure scheme, some are specific to the entities such as G-T-D, while some are specific to the scheme proposed to be filed by the Applicants. Inclusion of such detailed list of documents in the Regulations would not only minimize the number of queries but also will reduce the time taken for processing of Capital Investment Schemes for in-principle approval.

The Commission has also carried out the inter-State comparison on this issue. The key finding of the Commission based on inter-State comparison of some of the States is as shown below:

Name of State/ Commission	**Documents required along with Capital Investment Plan/Scheme**
Assam	DPR with complete scope, justification, improvement in performance parameters, Cost Benefit Analysis, Phasing of Expenditure, Schedule of Completion etc.
Bihar	DPR duly approved by the competent authority, Board Approval of proposed Schemes, In case of Transmission Projects, approval letter of proposed projects from CEA and STU
Chhattisgarh	Genco – Power Sale Arrangement for new Project. TRANSCO – Power evacuation plan and system strengthening plan forecasted by DISCOM DISCOM – Sales/demand forecast, Load forecast, Metering Plan, Loss reduction etc.
Delhi	Technical reports, Design criteria, Bill of quantity, Single line diagram, Feed-in Arrangements, Availability of land/ROW, Recommendation of Steering Committee if applicable, CEA overall system plan study
Gujarat	DPR with complete scope, justification, cost-benefit analysis, estimated life extension, financial package, phasing of expenditure, schedule of completion, reference price level, estimated completion cost, record of consultation with beneficiaries, etc.
Karnataka	DPR 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

Name of State/ Commission	Documents required along with Capital Investment Plan/Scheme
Madhya Pradesh	Technical reports, design criteria, project financing avenues, contractor/supplier quotations, etc. Details and cost estimates, provision for price variation if any, Existing operating conditions such as the equipment is operating close to or above their rated capacity, Cost Benefit Analysis, Least cost analysis, Approval of Competent Authority, Statutory and safety clearances, Upstream downstream network, Load flow study, Consistency with National Power Plan and approved plan of the CEA, etc.
Punjab	DPR with purpose of investment, technical specification, capital structure, financing, physical targets, cost benefit analysis and Priority of Investment. Other documents such as Load Flow studies, Future load forecasts of the State, planned capacity augmentation by the CTU for the State. STU plan to include the capex only after approval of PSERC.
Rajasthan	Project Feasibility Reports with their objective, technical justification, capital cost, year wise phasing of expenditure and their financing plan etc. Cost-benefit ratio or the least cost consideration, Approval of state planning coordination committee, Design Criteria, Request of concerned Discom, Load flow studies
Andhra Pradesh	DPR, feasibility studies and other similar preliminaries, All capex to be part of Resource Plan, Network expansion plans of other licensees and their consent, Number of consumers, MWs of capacity to be created, expected sales in MUs, Supply or reduction in DTR failures, Load forecasts, Cost estimates for each item, Comprehensive sketch / single line diagrams, load flow study, Simulation tools showing impact of the scheme on network performance, Proof of necessity of scheme, Least cost Option, Study to examine the economic, technical and environmental aspects of all alternatives, Downstream arrangements etc.
Uttar Pradesh	DPR, Least Cost Plan, Information on number of bays, sub-station, distribution sub-stations, transmission, and transformation capacity (MVA) and line length (circuit km) showing need for investment, Investment alternatives, Cost Benefit analysis, Request letter from Discom
Odisha	Proposed Schemes shall coincide with STU Plan
CERC	Project Inception Report covering objective, justification of scheme with cost benefit analysis, scope of work, details of generation projects and target beneficiaries, time frame for completion, broad estimated cost, unit rates arrived from latest award prices etc. MoM of Standing committee of CEA and beneficiaries, Reconciliation with other ISTS scheme, Demand Projection,

Name of State/ Commission	Documents required along with Capital Investment Plan/Scheme
	Network reliability, Design criteria, Technical Report, Estimated Costs, Capex to coincide with other CERC Regulations, Consent of beneficiaries

After due consideration of the documents as stated above in each of the Regulations including CERC, the Commission has proposed a detailed list of documents that are required to be submitted by the Generation Company, Licensees and SLDC at the time of filing of Capital Investment Scheme for in-principle approval, as discussed below:

Documents common for all Entities

(a) Approval of Competent Authority designated by the Board of Directors – The Commission observed that in the past while some entities have been submitting the Capital Investment Schemes for in-principle approval only after taking approval of the Board, some of the entities have been filing the same without Board approval. In fact, Board approval was taken after the in-principle approval of the Commission. The Commission feels that the Capital Investment Scheme should be approved by the highest level of Authority within the Company (i.e. the Board of Directors) before approaching the Commission. However, the Commission also appreciates that it may be difficult for all entities to obtain the approval of the Board of Directors before submitting the Capital Investment Scheme for approval. Considering these factors, the Commission has specified in these draft Regulations that Applicants shall file the Capital Investment Schemes only after approval of the Competent Authority as designated by the Board of Directors for filing of such schemes through Board Resolution. **Entities have been following the same procedure at the time of filing of MYT/MTR Petition. The same is being made applicable to filing of Capital Investment Schemes as well. The Commission shall not entertain any Capital Investment Schemes filed without the approval of competent Authority designated by the Board.**

(b) Bill of Quantity and per unit rate of each material based on cost estimates – The Commission is of the opinion that the break-up of estimated hard cost of Capital Investment Scheme in terms of bills of quantity with per unit rate of each of the equipment/materials proposed to be taken up for the works to arrive at the hard cost of the Scheme is necessary for scrutiny of the estimated cost. This information will also enable the Commission to verify whether the unit rate proposed by the entities for each of the materials are taken from the latest updated Standard Cost Sheet available with the entities. The basis for arriving at the unit cost is also necessary.

(c) Study Report: If the scheme is proposed as per the study carried out then report of such study and recommendations of the experts need to be submitted along with the scheme.

(d) Technical Justification and specifications: The utilities need to submit the technical justification and specifications of the project.

(e) Diagnostic Test Reports: - If the scheme is for replacement of the existing assets because of deterioration of the technical parameter / performance then the utility needs to submit the diagnostic reports justifying the scope of work.

(f) Financial Details of the Scheme: Concerned utility needs to submit the financial details and viability of the scheme.

Documents applicable for Generation Companies

(a) **Notification of MoEF&CC**- Notification of MoEF&CC and latest status of enforcement of such Notification is required to be submitted if the Capital Investment Scheme proposed by the Generation Company is for in-principle approval of works required to be undertaken so as to meet the environmental norms specified by MoEF&CC.

(b) **Recommendation of OEM/Expert Recommendation –** The Generation Company is required to submit this document in case the proposed Capital Investment Scheme is with respect to any of the following:

a. Capital Investment Scheme proposed is for Additional Capitalisation of new generating station/unit, which is beyond original scope of work;

b. Capital Investment Scheme proposed is for major Renovation and Modernization of existing generating station/unit;

c. Capital Investment Scheme proposed is for replacement of any asset in the existing generating station/unit. In this case, the expert recommendation shall also include that the asset is beyond repairs, and replacement is the only possible option for efficient functioning of the station/unit.

Documents applicable for Transmission Licensees

(a) **Inclusion in STU Plan** – For in-principle approval of any Scheme proposed by the Transmission Licensee, it needs to be first approved by STU and subsequently included by STU in its 5-year Plan:

Provided that if the Scheme is removed from STU Plan for any reason, then the in-principle approval granted by the Commission to the Scheme, if any, shall be considered as null and void.

(b) **Recommendation of OEM/Expert Recommendation** – The Transmission Company is required to submit this document in case the proposed Capital Investment Scheme is with respect to any of the following:

a. Capital Investment Scheme proposed is for Additional Capitalisation of new Sub-station, which is beyond original scope of work;

b. Capital Investment Scheme proposed is for major Renovation and Modernization of existing Sub-station;

c. Capital Investment Scheme proposed is for replacement of entire Sub-station/Line or any asset of the existing Sub-station. In this case, the expert recommendation shall also include that the asset is beyond repairs, and replacement is the only possible option for efficient functioning of the Sub-station/Line;

d. Capital Investment Scheme for system strengthening/ network improvement/ LILO/ capacity augmentation/ construction of Transmission Line between sub-stations

(c) **Licence Document –** In case of erection of Sub-station and/or associated lines, all Transmission Licensees except MSETCL shall also submit Licence Document wherein the proposed assets have been included in its Licence, along with the STU Plan.

(d) Load flow study report – In case the Capital Investment Scheme is proposed to cater to increase in load or extension of the network in a particular area.

(e) Requirement Letter from DISCOM – In case the Capital Investment Scheme is with respect to setting up of Sub-station or Transmission Line or both or augmentation of existing substations, in order to meet the load growth of the Distribution Licensee in the area on request of Distribution Licensee, the Transmission Licensee, at the time of seeking in-principle approval shall submit the request letter of the DISCOM stating that the DISCOM would be requiring an additional Transmission Sub-station/line to meet its upcoming load. Also, detailed basis on which the DISCOM has raised the requirement needs to be submitted with DPR.

(f) **Request Letter and Demand Projections or Phasing of Load of DISCOM** – In case the Capital Investment Scheme is with respect to construction of asset so as to feed the upcoming 33 kV/ 22 kV sub-station of Distribution Licensee.

(g) **BPTA or TSA or Amendment of Licence** – In case the Capital Investment Scheme is with respect to evacuation of power from upcoming generating station/unit, then in that case, the Transmission Licensee shall submit either BPTA or TSA signed with the Generator or the Amendment in Licence with respect to evacuation.

(h) **Request Letter of Consumers (Submitted to Distribution Licensee) –** In case the Capital Investment Scheme is with respect to erection of assets to meet the demand of existing/upcoming consumer at 110/132 kV and above.

(i) **Scheme Document and proof of funding from State/Central Govt** – In case the Capital Investment Scheme is partially funded by Central/State Government Scheme through grants.

(j) **Documentary proof of Technology Obsolescence or Unavailability of Spares/Services** – In case the Capital Investment Scheme is for asset replacement due to the reasons such as technology obsolescence or unavailability of spares/services due to stoppage of production or discontinuation of services.

(k) **Availability of land –** The Commission understands that in some cases submitting documentary proof of purchase of land would be difficult for the Licensee at the time of in-principle approval. Therefore, it is proposed that in case the Capital Investment Scheme is with respect to erection of an asset on the proposed land, the Licensee should submit some documentary evidence such as informal guarantee, ongoing negotiations, settled rate, etc., to communicate the land availability and showcasing that there would be minimum challenges for the Transmission Licensee to procure the land.

(l) **Feed-in arrangement –** In case the Capital Investment Scheme is proposed to develop feed-in arrangement for existing or proposed asset of another Transmission Licensee.

(m) **Details of Loading of Asset** – In case the Capital Investment Plan is with respect to system or network improvement/augmentation, Licensee to submit proof of overloading conditions beyond safe margin of line /sub-station and information showing that equipment proposed to be augmented is operating close to rated capacity or beyond critical loading. Also, Licensee has to submit the future projection of the load and its basis.

(n) **NOC of CTU**: If the scheme is incidental to the ISTS then NOC of CTU for connectivity to its network needs to be submitted.

Documents applicable for Distribution Licensees

(a) **Recommendation of OEM/Expert Recommendation** – The Distribution Company is required to submit this document in case the proposed Capital Investment Scheme is for replacement of Distribution Transformer, Cables, Lines, or any other Distribution asset, etc. The expert recommendation shall also include that the asset is beyond repairs, and replacement is the only possible option for efficient functioning of Distribution Transformer, Cables, Lines, etc.

(b) **Request Letter of Consumer –** In case the Capital Investment Scheme is with respect to erection of assets or augmentation of existing assets to meet the demand of existing/upcoming consumer at 11 kV and above.

(c) **Scheme Document and proof of funding from State/Central Govt** – In case the Capital Investment Scheme is partially funded by Central/State Government Scheme through grants.

(d) **Documentary proof of Technology Obsolescence or Unavailability of Spares/Services** – In case the Capital Investment Scheme is for asset replacement due to the reasons such as technology obsolescence or unavailability of spares/services due to stoppage of production or discontinuation of services.

(e) **Availability of land –** The Commission understands that submitting documentary proof of purchase of land in some cases would be difficult for the Licensee at the time of in-principle approval, therefore, it is proposed that in case the Capital Investment Scheme is with respect to erection of an asset on the proposed land, the Licensee should submit some documentary evidence such as informal guarantee, ongoing negotiations, settled rate, etc., to communicate the land availability and showcasing that there would be minimum challenges for the Transmission Licensee to procure land.

(f) **Feed-in arrangement –** In case the Capital Investment Scheme is proposed to develop feed-in arrangement for existing or proposed asset of another Distribution Licensee.

(g) **Details of Loading of Asset** – In case Capital Investment Plan is with respect to system or network improvement/augmentation, Licensee to submit proof of overloading conditions beyond safe margin of line /sub-station and information showcasing that equipment proposed to be augmented is operating close to rated capacity/full loaded. Also, Licensee has to submit the future projection of the load and its basis.

As discussed above, the Commission proposes to include all above documents to be submitted with filing of respective Capital Investment Scheme at the time of in-principle approval. The Commission is of the opinion that these documents shall necessarily be part of the Capital Investment Schemes filed by the Applicants. Therefore, the Commission has included an additional clause stating that the Commission may return any Application if the necessary particulars are not furnished along with the application for in-principle approval of Capital Investment Scheme.

As regards SLDC, the Commission in its latest MYT Order for SLDC had given the following instructions for utilisation of Load Despatch Centre Development (LDCD) Fund created in the MTR Order in Case No. 171 of 2017 and subsequent additions to this Fund as per surplus created after the truing up of FY 2017-18 and FY 2018-19 and provisional True-up of FY 2019-20:

- Fund will be utilised by MSLDC for the purpose of funding of the capitalisation approved for the period FY 2018-19 to FY 2024-25.
- In case the fund is not sufficient, the balance capitalisation will be deemed to be funded through debt and equity in accordance with the provisions of the applicable MYT Regulations.
- MSLDC shall maintain separate record of the funds available in the LDCD Fund and its year wise utilisation. These records shall be submitted to the Commission as part of next Tariff Petition.
- MSLDC should book the details of the LDCD fund under separate account head to ensure transparency and tracking of utilisation of fund. The intent of this provision is to ensure that the Commission is in a position to track the creation and utilisation of fund

The Commission has, therefore, included a clause on utilisation of LDCD fund in line with the directions given to SLDC in latest MYT Order. The Commission has stated that any Capital Investment Scheme which is submitted by SLDC shall clearly indicate utilization of LDCD Fund and balance funding if any through Debt-Equity, if required.

The Commission therefore proposes the following clauses in draft Capex Approval Regulations, 2022:

"5.1 The Application for in-principle approval of Capital Investment shall necessarily comprise the following particulars:

(1) ***Overview of Scheme***

a. Name of the Scheme;
b. Date of approval by competent authority, duly authorised by the Company's Board of Directors, along with documentary evidence;
c. Categorisation of Scheme under Regulation 3 of these Regulations;
d. Location of the project including GPS co-ordinates;
e. Brief scope of work;
f. Objective of the capital investment;
g. Technical specifications of the scope of work;
h. Reference of Study Report or Recommendations of well-reputed Government Institute or Expert agency, such as CPRI /ERDA etc., as applicable;
i. Estimated cost and basis of the same;
j. Completion Schedule of the capital investment with Project Evaluation and Review Technique (PERT) Chart;
k. Year-wise capital investment and proposed capitalisation;
l. Funding arrangement with break-up of grants, consumer contribution, debt, equity, as applicable;
m. Quantifiable, verifiable and monitorable tangible and intangible benefits of the capital investment;
n. Overall cost-benefit analysis;
o. Checklist of the supporting documents appended;
p. Any other relevant documents required based on the nature of the scheme.

(2) ***Justification for Scheme***

a. Need for the capital investment with adequate back-up documentation in terms of inter-alia load flow studies, projected load growth, new connection applications, recommendations of Original Equipment Manufacturer or expert;
b. All Transmission and Distribution Schemes shall be prepared considering overall system requirement, existing infrastructure and ongoing capital investment projects, and not only for specific area, in order to ensure against over-investment

in certain districts/areas;

c. *Urgency of the capital investment in terms of scope for and impact of phasing and/or deferment, as well as implications of not undertaking the capital investment;*
d. *Single Line Diagram of the proposed Scheme and Grid maps of relevant areas;*
e. *Detailed route survey for Transmission Schemes;*
f. *Technical justification*
    i. *Basis for consideration as a Capital Investment Scheme rather than Opex Scheme or expenditure to be undertaken under O&M expenses;*
    ii. *Statutory requirement, if any;*
    iii. *Inclusion in STU Plan for Transmission Schemes and prepared as per the provisions of the State Grid Code as amended from time to time;*
    iv. *Expected benefits of Capital Investment in terms of inter-alia development of the new infrastructure, augmentation of existing infrastructure, improvement in operational parameters/ efficiency; improvement in quality of supply, improved load management, increased redundancy, evacuation of upcoming generation, adoption of latest technology, and release of new connections;*
    v. *Past trends and projections of concerned operational performance for next five years, with and without proposed capital investment, in cases where the Scheme is for improvement of operational performance;*
    vi. *Justification for quantities proposed for various items*
    vii. *Basis/test report/diagnostic test report, etc., if the Scheme is for replacement of the existing assets;*
    viii. *Compliance of the Central Electricity Authority (CEA) transmission planning criteria, provisions of the State Grid Code, etc., as amended from time to time;*
    ix. *Request letter and demand projections of phasing of load of Distribution Licensee or request letter from consumer/s, as applicable;*
    x. *Details of loading of asset, future load projections, and basis for load projections;*
    xi. *NOC of CTU, in case the scheme is incidental to the ISTS.*
g. *Financial justification/Cost analysis:*
    i. *phasing of capital investment and capitalisation;*
    ii. *cost assessment with break-up of equipment cost, installation cost, Project Management expenses or turnkey cost, as applicable, contingencies, interest during construction;*
    iii. *Impact of taxation on the project cost;*
    iv. *Reasonability/comparison of rates considered for estimation;*
    v. *Ensuring that only necessary scope of work is considered for execution;*
    vi. *Efforts taken by the utilities to optimise the project cost;*
    vii. *least cost analysis considering all possible alternatives to the proposed scheme to achieve the desired objectives and merits and demerits of the*

various alternatives, considering the economic, technical and environmental aspects of all such alternatives, to ensure that the proposed option is the least cost option available;

viii. *funding arrangements;*

ix. *projected revenue addition;*

x. *projected reduction in operating costs;*

xi. *Cost-Benefit analysis in terms of comparison of the investment Cost with technical and financial benefits, quantified objective of the Scheme, overall benefit to the entity, year-wise realisation of target objectives, year-wise tariff impact in Rs./kWh for the first five years after commissioning of proposed capital investment, financial investment criteria such as inter-alia Payback Period, Internal Rate of Return (IRR), and Net Present Value (NPV);*

xii. *Copy of the verification of the land cost issued by the District Revenue Authority if the land is acquired before the in-principle approval of the scheme, along with the utilisation of the proposed land:*
Provided that if excess land is acquired without adequate justification, then the Commission may allow the cost of the necessary land only.

h. *Methodology by which the Scheme's progress can be monitored and corrective action to be taken in case of any deviation from the schedule;*

i. *Methodology for verification of Scheme being put to use and projected percentage utilization of the assets for the first five years after commissioning of proposed capital investment;*

j. *Details of required upstream/downstream arrangements, if any, for realisation of the benefits from the proposed Scheme, and their status and programme for their completion;*

k. *List and Status of Statutory Clearances/Approvals required to execute the project;*

l. *Physical and financial constraints, if any, in execution of the Scheme, and identification of all possible delays and their causes and proposed mitigation measures:*

5.2 The Commission may return any Application if the necessary particulars are not furnished along with the Application, unless specific relaxation is sought and granted by the Commission.

5.3 If the Transmission Scheme is removed from the STU Plan or modified for any reason, then the in-principle approval granted by the Commission to the Scheme, if any, shall be considered as null and void.

5.4 The Capex Schemes proposed by SLDC shall clearly indicate funding through utilisation of Load Despatch Centre Development (LDCD) Fund and balance funding through debt or equity or grants, as applicable.

5.5 The Applicant shall be responsible for obtaining all applicable clearances and approvals, and financial impact of any delay in obtaining the necessary clearances shall be dealt with appropriately by the Commission.

5.6 The Application for in-principle approval of Capital Investment shall be submitted in accordance with the Format specified in Appendix 1:

Provided that the Format may be modified by the Commission from time to time, as required:

Provided further that the Commission may ask the Applicant at any stage of the approval process to submit any other relevant information for undertaking the Prudence Check of the proposed capital investment."

4.9 Technology Upgradation and/or Improvement in Existing Infrastructure:

The existing Guidelines do not provide any specific mechanism to be adopted by the Commission in case the applicant files Capital Investment Scheme for upgradation of technology and / or improving the existing infrastructure, considering the long-term benefit of the consumers. The Commission has come across certain Capital Investment Schemes filed by the Applicants in the past few years. Following are few examples of such upgradation/improvements in existing infrastructure:

1. Conversion of Overhead Lines to Underground Cabling by Distribution Licensees/Transmission Licences
2. Upgradation from AIS to GIS bays by Transmission Licensees
3. Uprating of the lines by replacement of the conductor with higher capacity.
4. Conversion of single circuit line into multi circuit by using the same corridor; etc.
5. Use of narrow base /Monopole towers, etc.

The above illustrations of technology upgradation are very high-cost Capital Investments, and may result in a significant tariff impact on the consumers. At the same time, it is not as if the existing AIS bays or Overhead cables are unable to achieve the purpose for which they have been installed, and in many cases, neither is their Useful Life completed. Also, in case of overhead to underground cabling, it is primarily a requirement of the Local Authority, as part of its urban infrastructure improvement and beautification package.

In order to ensure that only essential Capex is undertaken under this route, the Commission has specified a mechanism for treatment of such Capital Investment Scheme in these draft Regulations to provide clarity to the Applicants on the required justification for such schemes, as detailed below:

1. The Applicant must justify that the existing asset is facing significant operational difficulties, which is leading to frequent disruption of operations and/or supply;
2. The useful life of the asset needs to either be completely exhausted or significantly completed as validated by residual life assessment test, or the asset has to be beyond repair;
3. The cost benefit analysis should justify the upgradation of asset.

Further, the Commission has also included a proviso in this clause specifying that if the Applicant submits the Capital Investment Scheme for in-principle approval even if the above conditions are not satisfied, then the same shall be subject to the condition that the cost of the proposed Capital Investment Scheme shall be recovered directly from the Local Authority governing the area in which the scheme is proposed to be carried out. In this regard, the applicant shall submit the consent of the concerned Local Authority for recovery of the cost of the Capital Investment Scheme at the time of taking in-principle approval of the Commission.

The Commission therefore proposes the following clauses in draft Capex Approval Regulations, 2022:

> *"5.7 The following criteria shall have to be satisfied for Capex Schemes proposed for technology upgradation and improvement at significantly higher cost:*
>
> *a. Significant operational difficulties with the existing assets leading to frequent disruption of operations and/or supply;*
>
> *b. The Useful Life of the asset proposed to be upgraded should have either been exhausted or significantly completed as validated by residual life test/diagnostic test results, and not merely because of completion of Useful Life;*
>
> *c. Cost benefit analysis should justify the asset upgradation:*
>
> *Provided that in case the Applicant submits Capex Scheme for technology upgradation and improvement despite above specified criteria not being satisfied, then the cost of the Capex Scheme shall be recovered directly from the Local Authority governing the area that shall benefit from the Capex Scheme and shall not be socialised across the licence area:*
>
> *Provided further that the consent of the concerned Local Authority for recovery of the cost of the Capex Scheme shall be submitted along with the DPR Scheme for in-principle approval of the Commission."*

4.10 Revised In-Principle Approval of Capex Schemes

The existing Capex Guidelines do not have any provisions for revised approval for Capex Schemes. However, Transmission Licensees have been submitting Applications for revised in-principle approval, which have been entertained in the past, even after many years after the original approval and on more than one occasion for the same Scheme. Further, in some cases, the licensees have sought the revised approval even before initiation of work.

The Commission is of the view that such practice of seeking revised in-principle approval should not be encouraged and should be resorted to only under exceptional circumstances. Also, under no circumstances revised in-principle approval be sought for the same Scheme more than once. Thus, the Commission is of the opinion that Revised In-principle Approval may be sought by the Applicant only after ninety (90) % of the project cost has been expended. This is because by then, the Applicant would be sure of the final cost required to complete the Scheme and it would not approach the Commission multiple times to revise the project cost for any number of reasons.

The Commission, therefore, proposes the following clauses in draft Capex Approval Regulations, 2022:

> "*5.8 Revised in-principle approval of Capital Investment may be accorded by the Commission in case an Applicant files an Application for the same, only under exceptional circumstances related to land unavailability for the Scheme or feasibility of the Scheme being adversely affected due to force-majeure events.*
>
> *5.9 Revised in-principle approval may be sought only after exceeding ninety (90) percent of the originally approved cost of the Scheme.*
>
> *5.10 Revised approval may be granted only for change in scope of work due to site conditions and not change in rates.*
>
> *5.11 If the variation between actual cost and approved cost is within 10% of the approved cost, then the variation shall be absorbed by the Applicant.*
>
> *5.12 The Applicant shall submit all the necessary documents and justification for the request for revised in-principle approval as may be sought by the Commission.*
>
> *5.13Such revised in-principle approval shall not be accorded more than once for any Scheme under any circumstances*."

4.11 Application for Final Approval of Completed Cost of DPR Schemes

The existing Capex Guidelines do not have any specific provisions for filing of application for final approval of completed cost of Capital Investment Schemes, but have a clause stating that at the final approval stage the format specified for in-principle approval shall be used for making comparison with all parameters of the Capital Investment Scheme. The relevant clause of the existing Capex Guidelines is as follows:

> *"During final approval stage similar formats will be used and comparison of final vs. original will be made."*

The Commission is of the opinion that there is a need to bring clarity in these draft Regulations on the details required to be submitted by the Applicant at the time of filing of completed cost of

Capital Investment Scheme. Based on the details submitted at the time of filing the completed cost, the Commission shall undertake assessment for final approval of cost of Capital Investment Scheme. In this regard, the Commission feels that a format should be prescribed for filing of completed cost by all Applicants. Along with the format, the Commission feels that some necessary supporting documents to justify the completed cost would also be required to be filed along with the application for approval of completed cost of Capital Investment Scheme.

In order to come up with a detailed format for filing of completed cost and the necessary supporting documents that are required to be filed along with the completed cost, the Commission has made an inter-State comparison of approaches adopted in other States in the following Table:

Name of State/ Commission	Provisions in Regulations/Guidelines
Assam	The Commission allows the works proposed in the Capital Investment Plan (CIP) by the Genco/Licensee after preliminary scrutiny. Works are verified based on the need for investment and purpose for investment. Project-wise CBA is not submitted. The Commission accords approval with some directives to Genco/Licensee. Capitalisation allowed in Tariff Order based on past trends and actual capitalization allowed in true-up based on audited accounts. Project-wise actual Capitalization details are sought and accordingly based on the submission of Genco/Licensee, approval is provided by the Commission, even if capitalisation is higher than approved.
Bihar	Commission scrutinizes the documents submitted by Licensee and accords in-principle approval for individual schemes of Transmission and Distribution. The Commission compares approved cost with the actual cost submitted at the time of True-up. Based on justification provided, time/cost overrun allowed/disallowed.
Chhattisgarh	At the time of true-up, the Commission scrutinizes the capitalisation claimed by Genco/Licensee with the amount reflecting in the Audited Accounts, i.e., with respect to the amount actually put to use by the Genco/Licensee. The Commission also scrutinizes the IDC claimed and disallows IDC if there is cost/time overrun observed in the approved Capex based on prudence check.
Delhi	Following parameters are verified at the time of physical verification for final approval:

Name of State/ Commission	Provisions in Regulations/Guidelines
	Whether competitive bidding for material procurement was done or not, whether scope and objectives at the time of approval are achieved or not, and whether actual benefits are in line with the proposed benefits or not. Report on physical verification of assets claimed in capitalization by Licensee at the time of final True-up is submitted by third party. If the assets are not found to be put to use, then capitalisation is disallowed. Third party verification includes verification of the actual cost, actual quantity of material used, proper implementation of the scheme and clearances like Electrical Inspector's certificate etc. At the time of final approval, if the actual expenditure is found to be inflated, reasons sought for inflated price. Also, whether the inflated cost is due to purchases from Group Companies at high rates or otherwise gets verified.
Gujrat	The Commission verifies the capitalization claimed with the Audited Accounts at the time of processing of True-up Petition. No separate validation of Capex schemes. No field study done. In case of GETCO, loading levels of Transmission lines checked to verify if asset is put to use or not.
Karnataka	The Commission carries out prudence check of all the works claimed under capitalisation at the time of True-up on sample basis through third party. The verification is done to check factors such as assets put to use, procurement process, energization of assets, fixed asset register, etc. The Commission accordingly provide marking for each capex scheme for which prudence check is undertaken. Accordingly based on the rating/marking Licensee shall be allowed capitalisation at the time of True-up. Physical Verification by third party at the time of final approval consist of following works ✓ Review the achievement of the objectives set out for incurring the capital expenditure ✓ Prudence check of major material procurement, closing inventory etc. to ensure that no idle stock is kept ✓ Selection of representative sample from the list of works provided by Genco/Licensee ✓ Analyze, Validate, Correct the information submitted with respect to the sample list of works finalized

Name of State/ Commission	Provisions in Regulations/Guidelines
	✓ Works to be selected from different geographical area and at least one type of work from each scheme. ✓ Physical verification at the actual place of site and document the same as per KERC Guidelines ✓ Checking of primary objectives, planned expenditure, merits of alternatives, financing, cost benefit, performance evaluation, cost data analysis, schedule of implementation and time & cost overruns etc. ✓ Cost to be compared with schedule of rates and benchmark costs and best practices of other States ✓ Final report with hard copy of evaluation signed by EE and AO of the division for each of the works
Madhya Pradesh	Commission to verify the assets that are put to use based on the capitalisation reflecting in Audited Accounts at the time of True-up. Further, the Licensee is asked to submit completion certificate of assets that are put to use and asset de-capitalised during the year. Accordingly, Commission approves capitalisation.
Andhra Pradesh	Capitalisation allowed based on Audited Accounts. No physical verification done. Scheme-wise capital expenditure verified with respect to the amount approved in Capital Investment Plan
Punjab	The Commission carries out prudence check based on the capitalisation reflecting in audited accounts at the time of true-up. Once verified from audited accounts, the Commission to verify scheme-wise increase in actual project cost with respect to approved project cost. Based on the justification, the Commission to decide whether to allow increase in cost or not. Also, in case of delay in completion of scheme the Commission decides whether disallow IDC or not based on prudence check.
Rajasthan	Commission to verify the assets that are put to use based on the capitalisation reflecting in Audited Accounts during True-up. Further, the Commission scrutinizes work orders on sample basis. In case of cost/time overrun, Commission approves 50% of the capitalisation. No physical verification done by Commission.
Uttar Pradesh	At the time of final approval, if any scheme claimed in True-up is not prior approved, the Commission disallows the capitalization for such schemes

Name of State/ Commission	Provisions in Regulations/Guidelines
Odisha	The Commission verifies the capitalisation with the Audited Accounts at the time of processing of True-up Petition. The Commission to assess the reasons for delays in execution of projects and shall seek justification for deviation of cost with respect to approved.
Central ERC	At the time of True-up, scrutiny is done by checking expenditure on similar projects in the past, reasonableness of financing, IDC, cost/time over-run, procurement through competitive bidding or not.

As seen from the above Table, most of the State Commissions verify whether the asset is 'put to use' or not before final approval of capitalisation. The existing Capex Guidelines also mandate putting to use of the Scheme as a mandatory condition for considering final approval of Capital Investment Scheme. However, the Applicants have not been providing the necessary documents in this regard. The Commission through data gaps have been routinely asking the Applicants for submitting the documentary evidence for put to use of the Scheme through completion certificates and information of actual loading of the newly commissioned assets.

The Commission also observed that in most of the States both the actual technical and financial aspects are verified with respect to the approved amount. The Commission also at the time of scrutiny of final approval of Capital Investment Scheme has been routinely asking the Applicants for submitting documentary evidence for justifying the technical and financial aspects as claimed and the actual benefits arising out of the Scheme.

Technical Parameters

The Commission feels that the technical aspects, which were proposed at the time of in-principle approval are necessary to be achieved with regard to the proposed Capital Investment Scheme. The corresponding technical parameters achieved by the Applicants must be supported by appropriate documentary evidence. For example, the Applicant must provide physical completion certificate issued by officer of the Licensee who would certify that the work has been completed and the asset is put to use. However, the claim of asset being put to use can be further strengthened by providing the actual percentage of utilization/loading of asset. The Commission would also verify the certificate of Electrical Inspector, which certifies that installation is safe and ready for operation and commissioned satisfactorily.

The Commission also needs to verify if there is any change in scope of work at the time of filing of completed cost. Also, whether the change in scope of work leads to variation in quantity and cost of the material used. Any variation in this regard could increase or decrease the

estimated/approved cost of Capital Investment Scheme. The Commission in its scrutiny of completion cost had observed that in some cases, the cost of the Capital Investment Scheme has been within the approved cost, however, the scope of work has been reduced. On this basis, the utility has claimed that there is no cost overrun. Also, in some cases it is observed that though there is considerable decrease in length of the line, however, the cost of the project is increased. Thus, it is necessary for the Applicant to provide Bills of Quantity actually implemented vis-à-vis quantity claimed in the Application for in-principle approval. The Applicant also to provide the break-up of number of units of materials/equipment and their per unit cost of works taken up in Capital Investment Scheme. Justification needs to be provided if there is variation in quantity or change in scope of work with respect to the original scope of work approved in-principle by the Commission. It is also necessary to provide changes in specification of proposed/approved assets with respect to the actual. Providing such details would enable the Commission to assess various parameters including assessment of time overrun of Capital Investment Schemes in an appropriate manner.

In case of time overrun, the Applicant must provide the cause of time overrun in execution of the Capital Investment Scheme. The Applicant shall also submit that whether the causes for delay were already highlighted to the Commission at the time of in-principle approval or not. If yes, then in that case whether the necessary fall-back plan was implemented as proposed by the Applicant. The Applicant shall substantiate if the delay was beyond the control of the Applicant. Also, the loss/impact incurred on the operational parameters due to delay in implementation of Capital Investment Scheme, irrespective whether it was within or beyond the control of the Applicant.

The Commission has also observed in the past that some projects have time overrun of several years. Actual phasing of capital expenditure for some of the Capital Investment Scheme was thus, entirely different than envisaged. The Applicant needs to provide necessary details so that the Commission can assess if the phasing of capital expenditure was appropriate and whether the delay in execution was on account of the justification provided by the Applicant or not.

The Commission has also included a clause requiring the Applicant to submit the detailed comparison of the scope and cost approved by the Commission vis-a-vis that actually incurred by the Applicant with justification for deviations.

Financial Parameters

The Commission has observed that in many Schemes, the actual cost of Capital Investment Scheme witnesses a lot of variation as compared to in-principle approved cost. Hence, the Commission feels that there is a need for the Applicant to provide item-wise justification for variation between approved item/material/equipment cost and actual completed cost.

The Commission also needs to assess whether the cost overrun is due to increase in Interest During Construction (IDC) or due to increase in hard cost. The Applicant, therefore, needs to provide the break-up of actual hard cost and IDC separately with respect to approved hard cost

and IDC. The Commission also need to assess the actual cost benefit analysis w.r.t. to proposed cost benefit and any deviation in the same due to time overrun observed in Capital Investment Scheme. The Applicant, hence, needs to provide these details at the time of final approval of the scheme. Similarly, variation in financial parameters like IRR, NPV and payback period needs to be provided by the Applicant with final completed cost. Impact of commissioning of asset on retail tariff from proposed to actual needs to be assessed and justified.

The Commission would need documentary evidence to justify that the asset has been capitalised in the annual accounts of the applicant, along with the date of asset capitalisation. This can be substantiated with a Financial Completion Certificate (FCC) issued by competent officer of Applicant, duly authorised by the competent authority. The Applicant shall also substantiate that the asset is separately accounted in Fixed Asset Register of the Applicant.

The Applicant shall also submit justification for change in funding pattern for the Capital Investment Scheme with respect to the one proposed at the time of in-principle approval.

The Commission observes that in many cases, the Capital Investment Schemes after completion do not completely fulfil the intended objective of the scheme as proposed by the Applicant. For example, if the proposed scheme was to bring down the existing Station Heat Rate (SHR) of a generating unit, then after implementation of the scheme, SHR of the unit should be lower as submitted by the Applicant at the time of in-principle approval, as the approval of the Commission itself was dependent on the achievement of this objective. However, it is observed that SHR many times still remains at the same level or is only slightly lower than the existing level, and does not achieve the desired level as submitted at the time of in-principle approval. Similar conditions apply in case of Transmission and Distribution where the scheme intends to bring down the transmission and distribution loss level of the Licensee, improvement of voltage profile etc. The Commission feels that there should be alignment between the objective proposed at the time of in-principle approval and objective actually achieved after completion of the scheme. The Applicant shall therefore submit the proposed and actual objective of the scheme at the time of final approval of the scheme so that the Commission can assess the variation in the same and the Applicant shall also submit reasons for the variation in objectives.

The Commission therefore proposes the following clauses in draft Capex Approval Regulations, 2022:

*"**6. Application for Approval of Completed Cost of DPR Schemes***

The approval of completed cost of all the DPR Schemes completed before filing the claim for true-up for any financial year along with the appropriate Petition as specified in Regulation 4.9 shall be sought in a combined manner and shall necessarily comprise the following particulars for each Scheme:

(1) *Name and Reference number of Scheme along with date of in-principle approval by the Commission;*

(2) *Whether the stated objectives of the Scheme as submitted in the Application for in-principle approval have been achieved, and justification for variation in the same.*

(3) ***Technical Parameters***

a. *Date of asset being 'put to use' along with Certificate of Electrical Inspector or authorised officer of Distribution Business/Licensee, as applicable;*

b. *Comparison of year-wise loading of asset since the date of being put to use with year-wise loading proposed in the Application for in-principle approval;*

c. *Bills of Quantity actually used vis-à-vis quantity claimed in the application for in-principle approval, with break-up of number of units and per unit cost, and justification for the variation in quantity, if any;*

d. *Justification for change in scope of work with respect to the original scope of work approved in-principle by the Commission, including changes in specification of assets, if any, and cost implication due to the change if higher than 10% of the approved cost;*

e. *Variation with respect to scheduled completion date, reasons and justification for the delay, if any, inter-alia, technical parameters, constraints, controllable and uncontrollable factors, mitigation measures adopted by the Applicant, and confirmation that these factors had been highlighted at the time of seeking in-principle approval;*

f. *Physical Completion Certificate (PCC) issued by technical officer of Applicant, duly authorised by the competent authority;*

g. *Impact on operational performance on account of delay in execution of works, if any;*

h. *Final route survey report in case of Transmission Business/Licensee, and justification for deviation from route proposed in the application for prior approval, if any, in case of cost increase higher than 10% of the approved cost;*

i. *Detailed comparison of the scope and cost approved by the Commission vis-a-vis that actually incurred by the Applicant with justification for deviations.*

(4) ***Financial Parameters***

a. *Item-wise justification for variation between approved equipment cost and completed cost, if any, in case of cost increase higher than 10% of the approved cost;*

b. *Difference between approved and actual year-wise phasing of capital investment and capitalisation;*

c. *Justification for increase in Interest During Construction (IDC), if any, with respect to IDC approved by the Commission in the in-principle approval;*

d. *Confirmation that the asset has been capitalised in the annual accounts of the entity, along with the date of asset capitalisation, as reflected either in the Asset Register or ERP system;*

e. *Justification for variation in funding through debt or equity or grants, if any, with respect to that proposed in the Application for in-principle approval;*

f. *Financial Completion Certificate (FCC) issued by competent officer of Applicant, duly authorised by the competent authority;*
g. *Comparison of actual cost benefit analysis with respect to cost benefit analysis proposed at the time of in-principle approval and justification for variation, if any;*
h. *Impact on financial performance on account of delay in execution of works, if any;*
i. *Impact of commissioning of asset on retail tariff after considering actual completed cost.*
j. *Copy of the verification of the land cost issued by the District Revenue Authority, if the land was acquired post in-principle approval of the scheme:*

Provided that if excess land is acquired without adequate justification, then the Commission may allow the cost of the necessary land only.

4.12 Submission of Rolling Capital Investment Plan

The Capex Approval Guidelines specified the following regarding filing of Rolling Plan:

*"**A) Submission of Three-Year Capital Investment Plan**:*

The Licensees shall submit a 3–year Rolling Capital Investment Plan outlining the major schemes proposed for each Financial Year. The capital investment plans should be internally consistent and reconcilable with other relevant proposals and supporting information presented in the submission such as demand projections, network reliability and design criteria"

The Commission observed that even though the existing Guidelines specified for filing of 3-year Rolling Capital Investment Plan, none of the Transmission/Distribution Licensees have filed the Rolling Capital Investment Plan before the Commission during the applicability of these Guidelines.

The Commission has done an inter-State comparison of Capital Expenditure Regulations or Guidelines or applicable MYT Regulations to find out how other States in the country regulate Capital Expenditure. It has been observed that majority of States, e.g., Delhi, Rajasthan, Andhra Pradesh, Assam, Bihar, Chhattisgarh, Gujarat, Karnataka, Madhya Pradesh, Punjab, Uttar Pradesh, and Orissa regulate the Capital Expenditure of Utilities in the form of approval of Capital Investment Plan or through similar mechanism. Majority of these States approve the Capital Investment Plan for the whole Control Period and revises the CIP as per requirement of the utility during the Tariff approval Process. This ensures that the Utility maintains a long-term perspective.

The Commission is of the opinion that a Rolling Capital Investment Plan enables the consumers to understand the future business outlook of the Generation Company, Transmission/Distribution Licensee and SLDC. It also enables the entities to have an effective strategy for growth and development in the future. Hence, it is necessary for each of the regulated entities to prepare and file the Rolling Capital Investment Plan for the Control Period.

The Commission has hence, retained the clause for filing of Rolling Capital Investment Plan for all the regulated entities. The Commission has modified the time frame for Rolling Capital Investment Plan from three years to five years considering the time frame for the Control Period defined in MERC MYT Regulations, 2019.

The Rolling Capital Investment Plan is to be filed by the Applicants within three months from the notification of these Regulations. The Rolling Capital Investment Plan is to be updated annually on or before 30th April of every financial year.

The Rolling Capital Investment Plan for each of the Applicant shall be in line with the Capital Investment Schemes proposed to be submitted/filed by them for the ensuing years.

Rolling Capital Investment Plan by the Transmission Licensees, has to be in line with STU Five-Year Plan. The schemes of transmission licensees, which are not part of STU's five year plan shall be rejected by the Commission. Further, the Applicant has to provide justification for changes in the scheme/scope for the ensuing year, if any.

The Commission thus, proposes the following clauses in draft Capex Approval Regulations, 2022:

"7.1 All Generating Business/Companies, Transmission Business/Licensees, Distribution Business/Licensees and MSLDC shall submit a five-year Rolling Capital Investment Plan for the next five financial years, within three (3) months of notification of these Regulations.

7.2 The Rolling Capital Investment Plan may be updated annually on or before April 30th of every financial year and shall be uploaded on Applicant's/STU's website.

7.3 The Rolling Capital Investment Plan of Transmission Business/Licensees shall be consistent with the five-year Rolling Plan prepared by STU:

7.4The Rolling Capital Investment Plan for the first three years shall be a concrete Plan and no changes shall be made in the same to the extent of addition of new schemes, though unnecessary schemes can be excluded.

7.5If there are changes in the schemes/scope envisaged in the Rolling Plan for the fourth and fifth year then the Applicant has to give the justification for such changes:

Provided that only incremental changes shall be considered by the Commission for the fourth and fifth year based on the justification to be submitted by the Applicant, and complete revamp/modification of the Rolling Capital Investment Plan is not envisaged:

***Illustration**: Original Rolling Capital Investment Plan comprises 10 Transmission Schemes including 4 220 kV Sub-stations, 6 132 kV Sub-stations, and 750 km of 220 kV/132 kV transmission lines; due to re-routing and land acquisition issues, the revised Rolling Capital Investment Plan may factor changes to length of transmission lines; however, revision in the number of 220 kV and 132 kV Sub-stations or location changes are not envisaged.*

7.6 The Rolling Capital Investment Plan shall bear in mind the previous trend in capital investment.

7.7 The Rolling Capital Investment Plan shall neither be approved in-principle by the Commission nor shall it be construed as approved by the Commission.

7.8 Adverse inference may be drawn regarding the Capital Investment Schemes of the Applicant in case of non-submission of Rolling Capital Investment Plan as per the above schedule."

4.13 Evaluation of Capital Investment Schemes at In-Principle Approval stage

The existing Capex Guidelines in respect of Capital Investment Schemes filed before the Commission provides as follows:

"The Capital Investment Scheme Proposals will be, inter alia, subjected to the following evaluation and filtering mechanism:

1) Statutory/Safety Requirement

2) Need for the Investment

a. Demand Side Requirement

b. Technical Justification

c. Urgency

d. Prudence of the Investment

3) Cost Assessment and Possibility of Phasing the Investment

4) Benefits and Costs to Consumers "

The existing Capex Guidelines also stipulate the prudence check that is to be carried out by the Commission under each of the above heads mentioned in the Guidelines.

The Commission currently scrutinises proposed Capital Investment Schemes based on the objective, purpose, feasibility reports, Detailed Project Reports, broad cost benefit analysis and least cost plan and accords in-principle approval based on the prudence check of these parameters. Additional documents such as technical reports, design criteria, supplier/vendor budgetary offer / quotations, term sheets of financing agencies, etc., are also assessed by the Commission.

The Commission is of the opinion that though the evaluation criteria of Capital Investment Scheme is clearly stipulate in the Guidelines, there is a need to introduce stricter evaluation criteria so that the Applicants will be more vigilant in filing of Capital Investment Schemes for in-principle approval before the Commission.

The Commission in this regard has done the inter-State comparison of evaluation criteria carried out by various SERCs including CERC at the time of filing of such Capital Investment Schemes, as shown below:

Name of State/ Commission	Relevant Provisions on evaluation of Capital Investment Plan/Scheme
Assam	Scrutiny of overall CIP with necessity and expected benefits at the time of approval
Bihar	The Commission to check for approval of competent Authority, purpose of investment, capital structure, capitalization schedule, financing plan and cost benefit analysis, etc. The Commission may call for additional information or particulars or documents as appropriate. Based on the scrutiny of information in the DPR, in-principle approval is provided
Chhattisgarh, Gujarat, Punjab, Uttar Pradesh, Orissa	Scrutiny of overall CIP with necessity of investment, justification and expected benefits are assessed at the time of approval.
Delhi	Commission to scrutinize based on following: 1) Necessity – Whether necessary to set up infrastructure, whether equipment operating at rated capacity. 2) Statutory/Safety Requirements - Whether the scheme is necessary to discharge the duty/obligation as per Electricity Act, 2003 or to meet any other statutory or safety requirement. 3) Technical Justification - Whether it is as per planning criteria of CEA/CTU/STU, whether it is as per design criteria, whether equipment replacement is necessary, whether asset has outlived its normal life span, Average rate of technology obsolescence, Whether improve reliability, reduce T&D loss, commensurate demand growth, Execution in different phases or not. 4) Alternatives - Whether alternative schemes considered, whether result in duplication of asset, whether capex includes O&M expenses, Whether it is necessity or luxury. 5) Cost Benefit –Whether capex is showing benefit against cost, whether least cost option selected, Payback period and whether recurring associated cost reasonable or not. 6) Whether in-feed to the new substation proposed will be available or not. 7) Whether it meets at least the near future demand growth.
Karnataka	DPR not submitted at the time of CIP approval. Scrutiny of overall CIP proposed with necessity of investment, justification, expected benefits are assessed at the time of approval. Capex revisions are not entertained
Madhya Pradesh	The CIP analysed on following basis

Name of State/ Commission	Relevant Provisions on evaluation of Capital Investment Plan/Scheme
	a) DPR not submitted at the time of CIP Approval. However, CIP approved based on the need for the investment in the Transmission or Distribution System, which the Licensee proposes to undertake. It is verified that whether the licensee has examined the economic, technical, system and environmental aspects of all viable alternatives to the proposal for investing in or acquiring new Transmission or Distribution System (as the case may be) to meet such needs. Assessment based on Brief outline of the project, its salient features (including whether this is a new/ augmentation/ renovation and modernisation project) such as scope and objectives of investment, technical reports, design criteria, project financing avenues, contractor/supplier quotations, etc., (b) Details and cost estimates of components amenable to physical verification along with the provision of price escalation, if any. c) Detailed justification of the investment in light of existing operating conditions such as whether the equipment is operating close to or above their rated capacity, to facilitate the backup system in conditions of exigency or during maintenance, to cater the normal load growth, equipment's outlived life, introduction of new and advance technology, etc. d)Least cost analysis and benefits to be specified for analysis. e)Transmission Plan to be consistent as per the CEA, Carry out load flow studies, considering the new projects along with the works programmed for completion during the year. Transmission loss reduction, congestion in network and improvement in voltage condition at each of the buses. f) Distribution CIP - To be in accordance with the guidelines as laid down in the Distribution Planning Code.
Rajasthan	a) Project feasibility reports of the schemes will include their objective, technical justification, capital cost, year wise phasing of expenditure and their financing plan etc. b) The schemes for setting up of power station will incorporate estimated cost of generation, details in respect of dedicated transmission lines and/or substations. c) Power evacuation schemes shall have the justification of the least cost of transmission satisfying the requirement of Grid Code. d) Schemes for setting up of EHV GSS and EHV transmission lines will incorporate approval of state planning coordination committee constituted under Grid Code and Cost benefit analysis as provided by respective distribution licensee proposing creation of new sub-station or

Name of State/ Commission	Relevant Provisions on evaluation of Capital Investment Plan/Scheme
	augmentation of the sub-station and also CBA based on transmission tariff and additional transmission capability. e) Distribution licensee will indicate cost benefit analysis based on tangible /intangible benefit except for those specially mentioned otherwise. Capital expenditure on Institutional strengthening, consumer services and Preliminary works shall not require cost benefit analysis.
Andhra Pradesh	DPR, feasibility studies and other similar preliminaries to be carried out before approaching the Commission. Schemes may be categorized in the following groups – a) System improvement; b) System expansion; c) Generation Evacuation; d) System Replacement. Objective of the Schemes to be specified. Complete details of the Scheme such as transmission and/or distribution lines, substations, extension of bays at the existing substations, communication equipment, metering, other ancillary services, etc. Detailed cost estimates for each item of work covered by the Scheme, erection charges, expenses projected for contingencies, estimated extent of IDC, establishment and other charges, etc. The cost estimates shall be worked out by the Licensee based on latest cost data. A comprehensive sketch / single line diagram of the proposed work, grid maps of relevant areas submitted. The scheme shall be supported by the results of the load flow study, or any other appropriate tools/ techniques employed by the Licensee to simulate the impact of the scheme on network performance. The results of the load flow shall be provided for each year up to a period of five years from the date of commissioning of the scheme. Physical and Financial benefit, Cost benefit analysis, Sanctions and Statutory clearances, commissioning schedule, downstream arrangements, constraints etc.
CERC	Evaluation is done on following criteria: 1) Need for Scheme; 2) Technical Justification; 3) Urgency; 4) Prudence of Investment; 5) Cost Assessment and possible phasing of implementation; 6) Cost Benefit to users of proposed Scheme

The Commission has also analysed the submission made by the Generation Companies, Licensees and SLDC in the past few years and based on the learnings of the processes/scrutiny of these Capital Investment Schemes has proposed the clauses to be included in these draft Regulations.

The Commission proposes the following parameters for evaluation of Capital Investment Scheme under these Regulations:

1. The single line diagram for the proposed scheme duly differentiating the existing infrastructure/network vis-à-vis the newly proposed schemes.
2. The in-feed arrangements for proposed scheme and the letter of confirmation from the Company/Licensee/consumer, which is expected to provide the feed-in arrangement. The Commission shall also verify whether the in-feed arrangement based on which the scheme is proposed has got all the necessary approvals or not and whether it is necessary for overall network development.
3. The availability of land and right of way approvals for the proposed scheme. This is a crucial factor in providing in-principle approval. The Commission has observed that there have been cases in the past where the required approvals/clearances are not available with the Company/Licensee, which ultimately results into delay in execution of works. Though it is not feasible to provide for fool proof documents in this regard, the Commission may check the readiness of the Company/Licensee in acquiring the same. The Commission may also verify the methodology proposed for acquiring these approvals/clearances.
4. Phases of implementation of scheme with yearly expenditure proposed to be incurred and likely completion date of scheme. The Commission may verify whether similar schemes in the past have been completed within the time proposed for the scheme.
5. The Bills of Quantity for the proposed Capital Investment Scheme. The Commission may verify the bills of quantity with respect to the proposed scope of work. The Commission may also verify whether the per unit rate of materials are in line with the Standard Cost sheet.
6. The Commission may verify the background, necessity, objectives, overall suitability, and payback period proposed by the Company/Licensee in its Capital Investment Scheme. The Commission may verify the submissions made by the entities with respect to the above parameters.
7. The Commission may verify the PERT Chart showing work completion stages, fall back plan for delays, financial arrangement, comparison with available technologies etc. The format for filing the Capital Investment Scheme also provides for submission of these parameters.
8. In case the Capital Investment Scheme is to be funded through deposit work, the Commission to verify the funding of such works through a letter from respective agency/consumer for funding of the asset. The Commission to also verify if there are any cost sharing arrangements between the agency/consumers and the licensees or any other agency and whether the same is according to the MERC Supply Code and Performance Standards Regulations.
9. In case the proposed Capital Investment Scheme is to be partially funded by grant under Government schemes, the Commission shall verify the scheme document and approval of

respective Authority/State/Central Government along with supporting documents such as disbursement of funding approved by the respective Authority. The Commission shall study the scheme document in detail before according to in-principle approval.

10. In case the Transmission Licensee has proposed the Capital Investment Scheme, the Commission shall verify:

a) Whether it fits into CEA's overall system planning study for the State of Maharashtra and whether it is included by STU in its Plan.

b) Whether the Capital Investment Scheme proposed is the least cost option or not.

c) Whether the proposed Capital Investment Scheme is approved by the competent authority delegated by the Board of Directors.

d) Whether the proposed Capital Investment Scheme meets at least the near future demand growth projections. The Commission shall verify the impact of the scheme on network performance based on results of the load flow for each year up to a period of five years from the date of commissioning of the scheme. The Commission to also verify the expected loading on the proposed asset for the next 5 years.

11. The Commission has retained the clause on Statutory and Safety requirement wherein the Capital Investment Scheme proposed is to discharge the duties / obligations as per EA 2003 or to meet any other statutory or safety requirement of the Company/Licensee. Also, the Commission needs to check whether the proposed Capital Investment Scheme is likely to cause or result in violation of any of the provisions of the E.A. 2003, and if so, the safeguards.

12. Further, the Commission to verify:

a) The technical study/justification provided by the Company/Licensee in support of the proposed Capital Investment Scheme.

b) All possible alternatives to the proposed Capital Investment Scheme including the possibility of whether the proposed works can be carried out under Repairs and Maintenance or under opex scheme.

c) Cost Benefit Analysis submitted by the Company/Licensee for all possible alternatives and confirm that the proposed Capital Investment Scheme gives the best benefit to cost ratio.

13. In case the Capital Investment Scheme is for Replacement of Asset after completion of regulatory life, the Commission shall verify the same in the following chronology of conditions before according in-principle approval to such schemes.

a. Whether the completion of regulatory life has affected the performance of the asset. (The Commission shall verify the performance based on the results of the diagnostic test parameters).

b. Whether the replacement of the asset is recommended by OEM/expert recommendation/third party. (Report of OEM/expert/third party is to be necessarily submitted by Company/Licensee)

c. Whether performance of the asset can be brought to the desired level through repairs or through opex.

d. Whether performance of the asset can be brought to the desired level through Renovation and Modernisation of asset (part replacement)

e. Whether the results of the Residual Life Test to assess the real residual life of the asset are unfavourable.

f. Whether there have been interruptions/faults/issues that have occurred in the last five years on the asset.

14. Further, the Commission to verify:

a) Whether the unit rate of components proposed in the Capital Investment Scheme is in line with the Standard Cost Sheet. In case of Capital Investment Scheme for Generation Companies and SLDC, where there is no Standard Cost Sheet or in case of Transmission/Distribution Licensee, where the per unit rate of material is not covered in the Standard Cost Sheet, the Commission to verify the per unit rate based on quotations provided by multiple vendors for such equipment/materials.

b) The Load Flow Study report in case the Capital Investment Scheme is for erection of new Sub-stations and Transmission Line.

c) Whether the scope of work proposed by the Company/Licensee for the Capital Investment Schemes is necessary for the objective/purpose of the scheme, or whether the scope of work is overestimated. Whether the list of materials/equipment proposed are appropriate as per the proposed scope of work or not.

d) To verify the proposed funding of Loan by Bank/FI and/or infusion of Equity by Company/Licensee. Also, whether the proposed infusion of Debt and Equity every year is sufficient to meet the expenditure proposed to be incurred every year. The Commission shall study the documents relating to proof of infusion of Loan/Equity.

e) Verify the impact of proposed Capital Investment Scheme on Tariff of respective entity as submitted by the Company/Licensee.

f) To study the 'IF not' and 'IF deferred' analysis submitted by the Company/Licensee. The Commission to verify the negative impact if any shown by the Company/Licensee based on this analysis and accordingly accord in-principle approval.

15. The Commission, if not satisfied with the scrutiny of documents/submissions of the Company/Licensee, can conduct third party verification of the proposed Capital Investment Scheme before providing in-principle approval.

16. Based on the above verification and based on the information/data/documents provided by the Company/Licensee, the Commission shall accord in-principle approval to the proposed Capital Investment Scheme.

17. The Commission thus, proposes the following clauses in draft Capex Approval Regulations, 2022:

"8.1 The Commission shall undertake Prudence Check of the Application submitted for in-principle approval of DPR Schemes based on the submissions made by the Applicant in accordance with Regulation 5 of these Regulations.

8.2 The Prudence Check for in-principle approval of DPR Schemes shall comprise detailed scrutiny of the following parameters inter-alia:

(1) Whether the Applicant has submitted all the essential data, justification and documentary evidence, as specified in Regulation 5;

(2) Technical Evaluation criteria

a. Whether the proposed Capex falls under the Categorisation of DPR Schemes specified in Regulation 3;

b. Background, necessity, objectives, and overall suitability of proposed Capex;

c. Whether the Scheme will result in quantifiable and verifiable benefits;

d. Approval of authorised representative of the Company;

e. The Single Line Diagram (SLD) for the proposed Schemes and Grid maps of relevant areas, duly differentiating with the existing Schemes;

f. The in-feed arrangements for various Schemes along with the letter of confirmation for the in-feed from the concerned agencies;

g. The feasibility of availability of land and/or right of way approvals for the Scheme and methodology proposed for acquiring the same;

h. The Bill of Quantity estimated by the Applicant;

i. PERT Chart showing completion stages and alternative plan for delays;

j. Whether proposed Transmission Scheme fits into CEA's overall system planning study for the State of Maharashtra and is included in the Rolling capital Investment Plan of the Applicant and the five-year STU Plan;

k. Whether it meets the demand projections for the period of five years from the date of commissioning of the scheme;

l. Whether the Scheme is necessary to discharge the duties and obligations of the Applicant as per the Act or to meet any other statutory or safety requirement;

m. Whether all possible alternatives to the proposed Capex have been submitted by the Applicant including assessment whether such works can be carried out under Opex Scheme or O&M activities;

n. Efforts taken by the Applicant to optimise the project cost;

o. In case proposed DPR is for asset replacement after completion of regulatory Useful Life, the Commission shall scrutinise the following aspects before according approval:

i. Whether the completion of regulatory Useful Life has adversely affected the performance of the asset;

ii. Whether the assets are beyond repair;

iii. Whether performance of the asset can be brought to the desired level through repairs or Renovation and Modernisation;

iv. Residual Life Test to assess the real residual life of the asset;

v. Interruptions/faults/issues that have occurred in the last five years on the asset;

vi. Results of the diagnostic testing of the equipment/material and their analysis;

p. Structural audit report of existing civil structure in case of replacement of civil structure;

q. Load flow study report in case of setting up of Sub-stations, Transmission Lines, Distribution network;

r. Whether all possible constraints have been realistically envisaged and mitigation measures proposed;

s. Impact if the proposed Capex is either not carried out or is deferred for some period;

t. Proposed framework for implementation and periodic monitoring of the Scheme;

u. Requirement of third-party verification on case-to-case basis, if considered appropriate by the Commission;

v. Demand/Requirement of the Distribution Business/Licensees/consumers in case of Transmission Schemes.

(3) Financial Evaluation criteria

a. Cost estimates derived based on rates of components available in the Standard Cost Sheet to be maintained by the respective Transmission Business/Licensees and Distribution Business/Licensees, and justification provided by Applicant in case of variation with respect to the Standard Cost Sheet;

b. Other costs considered by the Applicant;

c. For Generation Business/Companies and for new works of Transmission Business/Licensees and Distribution Business/Licensees, which are not present in the Standard Cost Sheet, estimated cost based on least of the quotations received from vendors;

d. In case of deposit work, the letter from respective agency/consumer for such purpose and cost sharing arrangements between the development agencies and the Licensees;

e. In case of works to be partially funded by Grants, whether the approval of respective Government for the same has been submitted;

f. Whether the proposed Capex is the Least Cost Option;

g. Cost Benefit Analysis of all possible alternatives;

h. Proposed funding for the Scheme;

i. Impact of proposed DPR on retail Tariff."

4.14 Prudence check for approval of Completed Cost of DPR Schemes

1) The MERC MYT Regulations, 2019 provide for assessing the financial prudence of the completed schemes through various parameters like variation in capital expenditure and capitalisation, variation in physical progress, scrutinizing of time and cost overrun, optimum drawls of loans in accordance with the physical progress of projects etc. The relevant clauses are as follows:

"23.5 The financial prudence with respect to capital expenditure shall be assessed in terms of the following parameters:

(a) whether projected capital expenditure and capitalisation is based on realistic estimates, and adequate justification has been provided for any anomalous increase in capital expenditure and capitalisation projected by the Generating Company or Licensee;

(b) mechanism put in place for monitoring the physical progress of projects with respect to their original schedule;

(c) optimum drawal of loans in accordance with the physical progress of the capital expenditure schemes, and efficient utilisation of such loans;

(d) in case the actual capital expenditure or capitalisation exceeds 10% of that approved by the Commission, the Generating Company or Licensee shall submit detailed justification for such excess along with its Petition for True-up;

(e) in case any scheme has not been commenced during the year despite the Commission's approval, detailed justification shall be submitted along with the Petition for True-up."

2) The MERC MYT Regulations, 2019 provide for prudence check of the completed schemes as follows:

"24.2 The capital cost admitted by the Commission after prudence check shall form the basis for determination of Tariff:

Provided that prudence check may include scrutiny of the reasonableness of the capital expenditure, financing plan including the choice and manner of funding, interest during

construction, use of efficient technology, cost over-run and time over-run, and such other matters as may be considered appropriate by the Commission for determination of Tariff"

3) The Commission currently scrutinises completed Capital Investment Schemes based on the comparison of proposed and actual objective, purpose, feasibility reports, Detailed Project Reports, broad cost benefit analysis, etc., and based on such prudence check accords final approval. The Commission verifies the additional documents for the asset being 'put to use', date of asset capitalization in the annual accounts of the entity and any third-party verification report if the Commission has directed the same to be submitted from time-to-time for scrutiny of completed project.
4) The Commission is of the opinion that though the evaluation criteria of Capital Investment Scheme is clearly specified in the above Regulations, there is a need to specify stricter evaluation criteria so that Generating Companies, Licensees and SLDC are more vigilant in execution of Schemes and subsequent filing of completed cost of Capital Investment Schemes for approval before the Commission.
5) The Commission in this regard has done the inter-State analysis of evaluation criteria considered by various SERCs including CERC at the time of filing of such Capital Investment Schemes. The key findings of the Commission based on inter-State comparison of some of the States are as shown below:

Name of State/ Commission	**Relevant Provisions on evaluation of Capital Investment Plan/Scheme**
Assam	Commission verifies scheme wise capitalization with respect to the amount approved in Capital Investment Plan. Based on the scheme wise analysis, the capitalization is allowed subject to the amounts reflecting in Audited Accounts at time of true-up. No physical verification carried out.
Bihar	Capitalisation allowed based on Audited Accounts at time of true-up. No physical verification done by the Commission. Scheme-wise assessment to the extent of delay in execution of scheme. Awarded cost becomes the new benchmark instead of the approved cost to determine whether there is any cost overrun in the scheme.
Chhattisgarh	Capitalization allowed by the Commission is based on Audited Accounts at time of true-up. No physical verification done.
Delhi	First prudence check done on the basis of Audited Accounts. Physical verification done of all assets claimed by Genco/Licensee. Scheme-wise assessment carried out by the Commission. All the parameters checked including procurement and cost benefit analysis. Capitalisation allowed on the

Name of State/ Commission	Relevant Provisions on evaluation of Capital Investment Plan/Scheme
	basis of the outcome of report submitted by third party on physical verification of the asset
Gujarat	Capitalisation allowed based on Audited Accounts. No physical verification carried out by the Commission. Scheme-wise capital expenditure verified with respect to the amount approved in Capital Investment Plan (CIP)
Karnataka	First prudence check done on the basis of Audited Accounts. Physical verification done for sample of assets claimed by Genco/Licensee. Scheme-wise assessment carried out by the Commission. All the parameters checked including procurement and cost benefit analysis. Capitalization allowed on the basis of the outcome of report submitted by third party on physical verification of the asset.
Madhya Pradesh	Capitalisation allowed based on Audited Accounts. No physical verification done by the Commission. Scheme-wise assessment carried out to the extent that completion certificates for capitalised assets are directed to be submitted at the time of True-up
Punjab	Capitalisation allowed based on Audited Accounts. No physical verification done by the Commission. Scheme-wise assessment done to the extent that IDC is disallowed in case of delay in execution of projects/scheme, if justification submitted is not sufficient to prove that the delay was beyond the control of Genco/Licensee.
Rajasthan	Capitalisation allowed based on Audited Accounts. Commission to scrutinize the cost based on type of expenditure claimed, whether capital expenditure or revenue expenditure. Commission to also verify the cost with the approved DPRs and whether Genco/Licensee has provided any justification for time and cost overrun. Commission to also check whether the certificate of Electrical Inspector has been received for all the transmission and distribution schemes. Work Order Copy and Work completion certificate are also provided for prudence check of the Commission
Andhra Pradesh	Capitalisation allowed based on Audited Accounts. No physical verification done by the Commission. Scheme-wise capital expenditure verified with respect to the amount approved in Capital Investment Plan

Name of State/ Commission	Relevant Provisions on evaluation of Capital Investment Plan/Scheme
Uttar Pradesh	Commission to scrutinize based on whether the amount claimed in capitalization has prior approval for schemes above 10 Crore. Also, the Commission to check if the same is included in the Capital Investment Plan submitted for the MYT Control Period. Final approval is based on Audited Accounts. Claim is disallowed if the schemes are not with prior approval. IDC is also disallowed in case the delay in project is attributable to the Genco/Licensee.
Odisha	Capitalisation allowed based on Audited Accounts. No physical verification done by the Commission. Scheme-wise actual capital expenditure verified with respect to the amount approved in Capital Investment Plan
CERC	Commission to scrutinize by checking of expenditure of similar projects in the past, reasonableness of financing, IDC, cost/time over-run, procurement through competitive bidding or not

6) The Commission has also analysed the Capital Investment Schemes submitted by the Generation Companies, Licensees and SLDC in the past few years and based on the learnings of the processes/scrutiny of these Capital Investment Schemes, the Commission has proposed the following clauses for prudence check in these draft Regulations. Accordingly, the Commission has to check:
   a) Whether the Scheme submitted by the Applicant has received the Commission's in-principle approval or is exempted from obtaining in-principle approval on account of being 100 % Grant funded Schemes.
   b) Whether the stated objectives of the Capital Investment Scheme as submitted in the Application for in-principle approval have been achieved. In case of any variation with the proposed objective, the Commission shall take appropriate decision depending on the justification provided by the applicant.
   c) Whether the asset has been 'put to use' and is presently loaded. The Commission to verify the Physical Completion Certificate, Financial Completion Certificate and other relevant documentary proofs like Certificate of Electrical Inspector for ensuring that the asset is put to use.
   d) Commission to verify the scope of work with respect to the original scope of work approved in-principle by the Commission. Commission to take appropriate decision on the final cost of the Capital Investment Scheme if the scope of work is reduced with

respect to the original scope of work.

e) Commission to verify the variation in the quantities used with respect to the quantities considered in the DPR Scheme.

f) Commission to verify the variation in approved equipment cost and completed cost, and phasing of capital investment.

g) Commission to verify if the Applicant has adopted industry best practices for minimising the incidence of Income Tax while executing the capital expenditure.

h) Commission to verify the variation with respect to scheduled completion date and justification thereof, and impact of delay in completion, if any, including impact on IDC. The Commission to cross check the documentary evidence submitted by the Applicant for substantiating increase in IDC and accordingly take appropriate decision.

i) To verify the date on which the asset was capitalised in the annual accounts of the entity.

j) The variation in the funding of the capital investment. If there is any variation, the Commission may take appropriate decision based on the impact of variation in actual funding with respect to proposed.

k) The actual cost benefit analysis. The Commission must assess the same with the cost benefit proposed while obtaining in-principle approval.

l) The impact of commissioning of asset on retail tariff after considering actual completed cost. Any increase in actual impact of commissioning of asset on retail tariff to proposed one would have to be justified by the Applicant.

m) To study the Cost Audit Report for selected Capital Investment Schemes, as submitted by the Applicant.

n) To assess the requirement of third-party verification of the Capital Investment Scheme on case-to-case basis. The Commission would internally assess the completed cost application and based on its assessment may select the Schemes that require third party verification.

7) Based on the above verification and based on the information/data/documents provided by the Company/Licensee, the Commission shall accord Completed cost approval to the Capital Investment Scheme.

8) The Commission thus, proposes the following clauses in draft Capex Approval Regulations, 2022:

"9.1 The Commission shall undertake Prudence Check of the completed cost of all the DPR Schemes based on the submissions made by the Applicant in accordance with Regulation 6 of these Regulations.

9.2 The Prudence Check for approval of the completed cost of DPR Schemes shall comprise detailed scrutiny of the following parameters inter-alia:

(1) Whether the Applicant has submitted all the essential data, justification and documentary evidence, as specified in Regulation 6;

(2) Whether the DPR Scheme has received the Commission's in-principle approval or is exempted from obtaining in-principle approval on account of being a 100 percent Grant funded Schemes;

(3) Whether the stated objectives of the Scheme as submitted in the Application for in-principle approval have been achieved;

(4) Whether the asset has been 'put to use' and is benefiting the consumers/system;

(5) Variation in the scope of work with respect to the original scope of work approved in-principle by the Commission

(6) Variation in the quantities actually used with respect to the quantities considered in the DPR Scheme;

(7) Variation between approved equipment cost and completed cost, and phasing of capital investment;

(8) Whether the Applicant has adopted industry best practices for minimising the incidence of income tax while executing the capital expenditure;

(9) Variation with respect to scheduled completion date and justification thereof, and impact of delay in completion, if any, including impact on Interest During Construction (IDC) and inflation on the cost of the entire project;

(10) Date of asset capitalisation in the annual accounts of the entity;

(11) Variation in the funding of the capital investment;

(12) Whether the stated objectives of the Scheme as submitted in the Application for in-principle approval have been achieved;

(13) Actual cost benefit analysis, utilisation index of the assets;

(14) Impact of commissioning of asset on retail tariff after considering actual completed cost;

(15) Study of Cost Audit Report for selected Capex Schemes, as desired by the Commission;

(16) Requirement of third-party verification on case-to-case basis, if considered appropriate by the Commission."

9) As discussed earlier, the Commission is of the opinion that it is essential for the Capital Investment Scheme to achieve the objective as proposed by the Applicant at the time of

in-principle approval. Since the approval of the Commission itself is dependent on the achievement of such objective, it is necessary to incorporate a clause stating the appropriate action that would be taken by the Commission if the proposed objectives are not achieved.

10) The Commission is of the opinion that partly/fully disallowing the Capital expenditure or reducing the rate of Return on Equity on this particular asset would be a suitable disincentive to the Applicants, which would make sure promised benefits of the Capital Investment Schemes fructify.

11) The Commission thus, proposes the following clauses in draft Capex Approval Regulations, 2022:

"9.3 If the in-principle approval has not been obtained for the Capex Scheme in accordance with Regulation 4.2 or if the Applicant is unable to establish the benefits as submitted in the Application for in-principle approval either fully or partly , the Commission may either disallow the capitalisation claimed against the respective DPR Scheme, in part or in full, as appropriate, or allow lower Return on Equity on such investment, as may be specified in the applicable MERC (Multi-Year Tariff) Regulations:

Provided that in case the actual benefits of the Scheme are greater than the benefits considered at the time of in-principle approval, no sharing of gains shall be allowed to the Applicant

9.4 The Cost Benefit Monitoring of selected Capital Investment Schemes shall be done by the Commission on an on-going basis as considered appropriate by the Commission."

12) The Commission observed in the past that in some cases there is a slight mismatch in the capitalization amount claimed in the completion report submitted by Applicant with the amount claimed in the True – up Petition. The Commission is of the opinion that such discrepancy in submission by the Applicant should not be allowed. The Commission is of the view that it may disallow part or full capitalization amount of the scheme based on severity of the issue. The Commission thus, proposes the following clauses in draft Capex Approval Regulations, 2022:

"9.5 The amount of capitalisation claimed in the True-up Petition against DPR Schemes shall match with the respective Completion Reports submitted by the Applicant in accordance with Regulation 16:

Provided that mismatch between amount of capitalisation claimed in the True-up Petition with the capitalisation reported in the Completion Reports may lead to disallowance of part or complete capitalisation."

4.15 Prudence Check for Approval of Completed Cost of Non-DPR Schemes:

1) The MERC MYT Regulations, 2019 provides for capping of Non-DPR Capitalization at 20% of approved DPR capitalisation. The relevant provisions of the MYT Regulations are as follows:

   " 24.7 The cumulative amount of capitalisation against non-DPR schemes for any Year shall not exceed 20% or such other limit as may be stipulated by the Commission through an Order, of the cumulative amount of capitalisation approved against DPR schemes for that Year:

   Provided that the Commission may allow capitalisation against non-DPR schemes for any Year in excess of 20% or such other limit as may have been stipulated by the Commission through Order, on a request made by the Generating Company or Licensee or MSLDC:

   Provided further that the Generating Company or Licensee or MSLDC should ensure that expenses that would normally be classified as O&M expenses are not categorised under non-DPR schemes.

2) In case, where there has been no capitalisation of any DPR scheme in a particular year, the Commission has allowed 50% of the cost of capitalised non-DPR schemes in respective Tariff Orders.

3) The Commission initially has been allowing Non-DPR capitalisation as per the provisions of the MYT Regulations, 2019, i.e., 20% of the DPR capitalisation. The Commission also allowed Non-DPR Capitalisation if combined Non-DPR Capitalisation for all years of the Control Period is within the limit of 20%.

4) However, the Commission observed that in some cases, the entities have filed for approval of non-DPR schemes relating to miscellaneous items such as Renovation of Club and Renovation works at Holiday homes. The Commission disallowed these Schemes as they have no intrinsic economic or technical or financial benefit to the consumer. In view of the above, the Commission started directing entities to submit Cost Benefit Analysis for Non-DPR Schemes as well.

5) **The Commission in some cases has also disallowed Non-DPR capitalization for capital spares forming part of inventory as these assets should be procured under O&M expenses. Some Applicants have been claiming O&M expenses under Non-DPR capitalisation and therefore it is necessary for the Commission to conduct prudence check of Non-DPR capitalisation claimed by the Applicants. Thus, it is imperative for Commission to scrutinise the Non-DPR capitalisation as well.**

6) Thus, the Commission taking into account its experiences has proposed to include the following conditions in draft Capex Approval Regulations, 2022:

   a) To verify that the Non-DPR capitalisation claimed is with respect to assets, which are put to use by the applicant and are not forming part of inventory;

   b) To verify that Non-DPR capitalisation claimed shall not be with respect to replacement of old assets, which have already completed useful life;

   c) To verify that Non-DPR capitalisation claimed shall not be with respect to other business of the Applicants;

   d) To verify that Non-DPR capitalisation claimed shall not be of the nature of operating expenditure (opex) as defined in these Regulations;

   e) To allow Non-DPR capitalisation as it feels appropriate, based on the justification and cost benefits analysis provided by Genco/Licensee for carrying out the capital expenditure, subject to the limit of 20% specified in the MYT Regulations, 2019;

   f) The Commission, if necessary, may also take up physical verification for Non-DPR capitalisation claimed by Genco/Licensee. The methodology and prudence check of physical verification for Non-DPR capitalisation shall be the same as adopted for DPR capitalisation.

7) The Commission thus, proposes the following clauses in draft Capex Approval Regulations, 2022:

   "10.1 The Final approval of completed cost of Non-DPR Schemes after asset is put to use shall be sought along with the claim for true-up for any financial year filed along with the appropriate Petition for approval of Multi-Year Tariff or Mid-Term Review, in accordance with the MERC (Multi-Year Tariff) Regulations applicable at that point in time.

   10.2 The Prudence Check for approval of the completed cost of Non-DPR Schemes shall comprise detailed scrutiny of the following parameters inter-alia:

      (1) List of Non-DPR schemes with details of works undertaken, amount capitalized, justification for undertaking the works, and cost benefit analysis;

      (2) Whether the Non-DPR assets have been put to use or are forming part of the inventory;

      (3) Whether the Non-DPR capitalisation is with respect to replacement of old assets;

      (4) Whether the Non-DPR capitalisation is relating to Other Business of the Applicant;

(5) Whether such Non-DPR Schemes fall under Opex Schemes or O&M activities;

(6) Benefits achieved after execution of the Non-DPR scheme;

(7) Requirement of third-party verification on case-to-case basis, if considered appropriate by the Commission.

10.3 The Commission shall allow Non-DPR capitalisation based on the prudence check, subject to the cap against Non-DPR capitalisation specified in the MERC (Multi-Year Tariff) Regulations, 2019, as amended from time to time:

Provided that if the Non-DPR capitalisation does not meet the specified criteria then the Commission shall not allow the capitalisation of such scheme"

4.16 Overhead / Contingency cost

1) The existing Capex Guidelines do not have any provision related to Overhead Charges or Contingency charges to be considered as part of the capital cost at the time of In-Principle approval of Capital Investment Schemes. The Commission has observed that the Applicants have been quoting significantly different and high overhead/contingency charges in their Application for In-Principle Approval of Capital Investment Schemes. These charges range from 3% to 38% depending on the type of the Scheme and the Applicant. Due to absence of standard guidelines, the Applicants have been claiming these expenses as per their internal practices.
2) Thus ,the Commission has analysed the DPRs filed by the Utilities in the last 3 years and compiled the different categories and percentages of overheads that are claimed by different entities. The summary of the Commission's analysis is provided below:

Name of Generation Company/ Licensee	Particulars of Overhead Charges claimed	Total Overhead Charges %
Generation		
MSPGCL	Staff Cost 5%	5%
TPC-G	Project Engineering and Staff Cost 5%	5%
AEML-G	Nil	-
Transmission		
MSETCL	Contingency 3%, Centages 10%, Price variation 5%, Statutory charges 5%, RoW Compensation 15%	13%-38%
TPC-T	Staff cost 5%, Contingency 3%	8%-10%
AEML-T	Indirect Cost (Transportation, Insurance, Vehicle Hiring, Security, Administrative Support, Travelling, Printing, Stationary, Communication expenses) and Supervision charges 13%	13%
Distribution		
MSEDCL	Transportation on material 4%, T&P on Material Cost 1%, Contingencies on material 2.5%, Contractor supervision charges on material 5%, Insurance + Labour + Finance Cost 3%, Turnkey Cost 5%	15.50%-20.50%
AEML -D	Indirect charges 13%, Supervision Charges 8%	21%
TPC-D	Staff and overhead charges 5%, Contingency 3%	8%-10%
BEST	Nil	-

3) The most common components of overhead charges claimed by Generation Company/Licensees along with their percentages are summarised below:

Name of Overhead	% Range
Staff Cost	5%

Name of Overhead	% Range
Contingency Charges	3 to 5%
Supervision Charges	5%-8%
Indirect Charges	8%-13%
Transportation Charges	4%
Insurance, Labor, Finance	3%

The overheads claimed in other States is summarised below:

State	Particulars of Overheads	% of Project Cost
Uttar Pradesh	Contingency 2%, Administration and Establishment charge 10%	12%
Telangana	S&H charges 3%, Contingencies 3%, Establishment and General Charges 10%	16%
Jharkhand	Supervision and contingency cost 3.5%	3.5%
Himachal Pradesh	Indirect Cost 11% and Contingency charge 3%	14%

4) The above analysis shows the wide variation in type and quantum of overhead charges claimed by different entities. Distribution overheads vary from 8% to 21% depending on entity and type of work. Transmission Overheads vary the most (8% to 38%) due to inclusion of statutory charges, centages, price variation and RoW compensation charges as per internal circular of MSETCL. Comparatively, Generation Overheads are lesser at 5%.
5) Also, Licensees such as AEML consider a cumulative 21% overhead charges on project cost in distribution but 13% in Transmission. Government Licensees like MSEDCL and MSETCL charge around 20% and 38% Contingency/Overhead charges, respectively. MSETCL's overhead charges are the highest as it accounts for various centages and price variation.
6) In Distribution, TPC-D considers overheads at maximum 8% (5% staff cost, 3% contingency) but MSEDCL and AEML-D charge 20-21%.
7) The inter-State comparison also shows a huge variation ranging from 3.5% in one State to around 14% in another State.

8) The Commission also referred to a circular of MSEDCL. As per this Circular dated 27.06.2019, the overhead charges of MSEDCL are as under:

Particulars	**Inside Sub-station**	**Outside Sub-station**
Transportation on Material	4.00%	4.00%
T&P on material cost	1.00%	1.00%
Contingencies on Material	0.50%	0.50%
Erection Cost on Material	5.00%	15.00%
Supervision charges on Material	5.00%	5.00%
Insurance, Labour, finance Cost	2.50%	2.50%
Turnkey Profit Charges	4.00%	4.00%
Total Overheads	**22.00%**	**32.00%**

9) As per the above Table, the overhead charges work out to around 22.00% inside sub-station and 32.00% outside sub-station, which is very high. The Commission is of the opinion that the overhead charges cannot be allowed at the in-principle approval level as it will exaggerate the estimate of the scheme. Further, post in-principle approval, such approved cost become the benchmark for future analysis/final approval.

10) The Commission has also referred to Government Resolution (GR) of the Government of Maharashtra dated 20 October, 2003, wherein overhead charges allowed for Electrical Works are as under:

Particulars	**Inside Sub-station**
Establishment Charges	7.00%
Tools and Plants (T&P) on material cost	0.50%
Audit Charges	0.50%
Total Overheads	**8.00%**

11) The Commission, hence, feels that there is a need to bring clarity in these draft Regulations with respect to the claim of overhead and/or contingency cost.

12) The Commission has proposed to allow only a nominal overhead charge of 3% of the project cost as contingency charges at the time of in-principle approval of the Capital

Investment Scheme. However, the Commission may allow the actual overheads at the time of approval of completed cost based on the justification submitted by the Applicant and the scrutiny carried out by the Commission. The objective is to reflect the real cost of the scheme at the time of in-principle approval of the scheme.

13) Thus, the Commission proposes the following provisions in draft Capex Approval Regulations:

a) Commission would allow only Contingency at 3% of the project cost at time of in-principle approval as overheads.

b) Commission may consider the overhead cost actually incurred at the time of approval of completed cost subject to the verification and scrutiny by the Commission through auditor certificate or any other adequate justification provided by the Applicant.

c) Commission may also separately allow variation in Road Re-instatement (RI) Charges and Right of Way (RoW) Compensation, if any, at the time of submission of completed cost subject to the justification provided by the Applicant along with the necessary supporting documents.

14) The Commission thus, proposes the following clauses in draft Capex Approval Regulations, 2022:

"13.1 In the in-principle approval of DPR Schemes, the Commission may allow Contingency expenses of maximum 3 per cent of capital cost, which shall be subject to true-up at the time of approval of completed cost based on head-wise justification to be submitted by the Applicant.

13.2 The Commission shall not normally consider any other Overheads beyond the ceiling allowed for Contingency expenses:

Provided that the Applicant may claim other Overheads beyond the above-specified ceiling with adequate justification along with the necessary supporting documents for the consideration of the Commission.

13.3 Variation in Road Re-instatement (RI) Charges and Right of Way (RoW) Compensation with such costs considered in the in-principle approval shall be allowed separately, based on adequate justification to be submitted by the Applicant:

Provided that variation in RI Charges for same location/part location due to inadequate planning may be disallowed"

4.17 Capital Investment by Distribution Licensees under Parallel Licensee Scenario

The existing Capex Guidelines do not have any provisions for evaluating Capital Expenditure done under Parallel Licensee scenario. However, there have been several Orders issued by the Commission in this context for the Mumbai Suburban Licence area, and Hon'ble APTEL has also issued some Judgments on Appeals filed by the concerned Distribution Licensees, viz., Adani Electricity Mumbai Limited (AEML) and The Tata Power Company Limited (TPC), against these Orders. The Commission has also constituted the Mumbai Distribution Network Assessment Committee (M-DNAC) for evaluating capex proposals by competing Distribution Licensees, viz., AEML and TPC, in the parallel licence area.

The Commission's Order dated 12th June, 2017 in Case No. 182 of 2014 and in Case No. 40 of 2015 details four possible scenarios under which Capital Expenditure would be allowed. They are summarized in the tables below :

Scenario 53 (a)	
Licensee A	**Licensee B**
Completely covers with Distribution Mains	Does not completely cover
Licensee A will always be preferred to set up network to connect consumer	

Scenario 53 (b)	
Licensee A	**Licensee B**
Completely covers with Distribution Mains	Completely covers with Distribution Mains
Extension only through service lines	

Scenario 53 (c)	
Licensee A	**Licensee B**
Not Present	Not Present
Network development by any Licensee will depend on the choice of new consumers	

Scenario 53 (d)	
Licensee A	**Licensee B**
Completely covers with Distribution Mains	Does not completely cover
Decision to be taken considering the comparative costs of each Licensee to connect to the new consumer	

The subsequent Hon'ble APTEL Judgment on the issue in Appeal No. 35 of 2020 dated 28th May 2020 is summarized below:

"46…

Thus, any enforcement or application of these principles must factor in the presence of the competing distribution licensees and, in equal measure, the extent of their presence, the possibility of increased demand of supply (inclusive of the additional load requested by existing consumers or the additional demand of new consumers) being responded to, the readiness and capacity of the distribution licensee(s) to cater to such increased demand which, in turn, depends on reach of the existing distribution mains (LT or HT), associated switchgear, distribution substations, age of such equipment or network (that also bringing in the check of obsolescence), need or feasibility of augmentation, et al. In this view of the matter, it will not be just or fair to apply the description of the four scenarios as given in para no. 53 of the interim order dated 09.11.2015 as rigid rules.

…

49…

The meaning of the expression "completely covered" is sought to be explained by the State commission in its orders but has not been subjected to any rigid definition. Noticeably, in para 123.6 quoted earlier, the State commission has mentioned the possibility of consumer being connected "by laying a service line" so as to rule out the need for the "distribution mains" to be augmented or extended. Provision of new or augmentation or extension of existing CSS, cables, switchgear or DSS etc. also require to be knitted into the principles, this being based on same concerns as of economy. It is interesting to note that in context of Level-2, connectivity by augmentation or extension of distribution mains which is "nearest" is shown as the preferred option.

…

50…

The State commission has correctly observed (see sub-paras-b of paras 136.1 and 136.2 quoted earlier) that even in an area which is "completely covered" by one licensee or the other, the existing network of distribution might require work in the nature of "extension, addition or augmentation" to be undertaken "over time" so as to be in a position to respond to stresses of higher-level. Since the demands of the consumers – new or existing – are bound to rise above Level-1, it has been necessary, and the State commission has accordingly so arranged, for situations like those of the higher levels (Level-2 To Level-5) also to be properly taken care of even for purposes of scenario 53 (a), as indeed for scenario 53 (d), irrespective of the fact as to whether or not one or the other distribution licensee "completely covers" or is "present".

…

51…

The experience gained in the wake of order dated 12.06.2017 seems to have made the State commission, and its delegate (M-DNAC), to realise that such evaluation cannot be contingent upon mere question as to which of the two licensees can connect the new consumer (or even the old one) by a "service line" with its nearest distribution mains. It is for this reason - and we fully endorse the justification therefor - that the test of "network spread" was expressly added by the subsequent orders.

…

54. Speaking specifically in the context of scenario 53 (a), since two distribution licensees would be operating in the larger area of licence, they are bound to have some distribution system in place. The first test essentially is as to whether the distribution mains are in existence. Since the area of license is a wide geographical division, existence of distribution mains anywhere in that wide area cannot suffice. Though, it was argued before us that the "distance" cannot be the benchmark in such an analysis, we are of the considered view that the factor of distance will always have a role to play. After all , the idea is to find out as to which distribution company is "better placed" to connect to the consumer "in the most economical and optimal manner" and in this context the existence of distribution means "in the vicinity" was flagged as a crucial factor (para 128.4 of order dated 12.06.2017 of the State commission). That muster of "in the vicinity" has been consistent part of scrutiny by the Commission is vivid even in the impugned order (see para 27 extracted earlier). The dictionary meanings (Cambridge Dictionary) of the word "vicinity" include "neighbourhood" and "locale." It is also explained as "the area immediately surrounding something." The word "neighbourhood" is defined as "an area of a town" or "the people who live or work in this area." Similarly, the word "locale" is explained as "an area or place, especially one where something special happens, such as the action in a book or film." Its synonyms include "setting," "position" or "venue". It is inherent, therefore, in the use of the expression "in the vicinity" that the distribution mains must be in "proximity (the state of being near in space)" of the consumer expecting to be served. From the above, it naturally follows that to reach a satisfaction that such distribution system is geared to provide the requisite connectivity without much ado, the location or the area in question must be shown to have some contiguity with the location of the area to which the distribution licensee has already reached out. The area or location must necessarily be a composite neighbourhood and definitely cannot be pockets separated by several kilometres. This approach is the only correct one, it being in sync with the aims and objectives of Electricity Act, 2003 which, as noticed at the outset, visualizes, inter alia, efficient and economical use of resources, good performance and protection of the interests of the consumers at large.

...

58. In our view, the test of "network spread" has been properly explained by the State commission in the impugned order. It confirms to the tests of proximity and contiguity of the consumer to the existing distribution mains of the distribution licensee which also apply. We may add that the words "network spread" do not necessarily mean that the licencee must have its supply cables reaching out to every nook, corner or inch of the area. It would suffice if the connectivity can be arranged by augmenting the system within the meaning of the works envisaged in levels higher than that of Level-1.---"

The aforesaid Judgment of Hon'ble APTEL has provided additional clarity on the criteria for setting up Distribution Network in the Mumbai Suburban Parallel Licensee area.

The Commission has detailed the four Scenarios and the five Levels under which Distribution Licensees can set up distribution network in the Mumbai Suburban parallel licence area.

The Commission after taking into account its relevant Orders and the Judgement of the Hon'ble APTEL, has proposed to include the following procedures/conditions for approval of Capital Investment Schemes under the Mumbai Suburban parallel licence area in the draft Capex Approval Regulations, 2022:

The capital investment required for connecting to new consumer in parallel licence areas shall be optimised in the following manner.

1. The 4 Scenarios elaborated in the Commission's Order in Case No. 182 of 2014 have been incorporated in these Regulations.
2. Distribution Licensee to identify the level (Level 1 to Level 5) and the Scenario (Scenario 53 (a) to Scenario 53 (d)) under which the present case is to be dealt with and accordingly propose to take up the work for laying of distribution network.
3. Distribution Licensee shall approach the M-DNAC for approval of cost estimates for installing the distribution network based on the request received by the consumer for L3 to L5 level (L1 and L2 to be given directly with intimation to M-DNAC).
4. M-DNAC based on the application of the Licensee would scrutinize the submission and accordingly categorize the application under appropriate level and scenario. M-DNAC would call for proposal from both Licensees, if the case falls under Scenario 53 (d) for least cost mechanism for setting up distribution network.
5. Based on the proposal submitted by the Licensee, M-DNAC would decide on the Licensee to which it shall ask to set-up the network. In case of any dispute on the decision of M-DNAC, the Licensee may approach the Commission for adjudication. The criteria of 'network spread',

'distance', 'presence', 'proximity', and 'vicinity' is the basis for deciding the scenario by M-DNAC. The same is to be included in these Regulation.

6. Regulation to include factors as specified in the Hon'ble APTEL Judgment for any Licensee to take up capex in particular area. The definition of 'completely covered' shall also include distribution mains for extension of lines, DSS, etc., and not just the extension of service line.
7. The Level 1 to Level 5 shall be as under:
    a. Level 1 - LT or HT consumer connection is possible by extending the service line and/or DSS etc. from the existing LT or HT distribution mains, respectively, without any extension or augmentation considering the 'distance', 'presence', 'proximity', and 'vicinity' of Licensees.
    b. Level 2 - The LT consumer connection is possible only after augmentation or extension of the nearest LT distribution mains considering the 'network spread', 'distance', 'presence', 'proximity', and 'vicinity' of both the Licensees.
    c. Level 3 - The LT consumer connection is possible only after providing new CSS or augmenting the existing CSS.
    d. Level 4 - The LT / HT consumer connection is possible only after laying or augmenting HT cable/mains and associated switchgear.
    e. Level 5 - The LT/ HT consumer connection is possible only after laying or augmenting the HT cable/mains and associated switchgear, and commissioning of new or augmentation of the existing DSS or Receiving Station in the area.
8. These Regulations shall confer powers to M-DNAC as a deciding authority for establishing network in parallel licence area and ensuring that the directions given by M-DNAC are enforceable under such circumstances.
9. These Regulations also include a clause stating that the proposal for laying of network in parallel licence area shall be submitted by the Licensees operating in that area only with specifications standardized as per benchmark norms of MSEDCL (loading and diversity factor etc.), so that the proposals are comparable.
10. The Commission thus, proposes the following clauses in draft Capex Approval Regulations, 2022:

    "11.1 In the Mumbai suburban distribution licence area supplied electricity by Adani Electricity Mumbai Limited and The Tata Power Company Limited, and where both Distribution Business/Licensees have existing distribution network either partly or fully covering the licence area through Distribution Mains, the capital investment required for connecting to new consumer shall be optimised in the manner specified in these Regulations.

11.2 The preferred Distribution Business/Licensee for setting up distribution network to connect to the consumer shall be identified in accordance with the following four (4) Scenarios as well as Levels specified in Regulation 11.3:

Scenario	***Spread of Distribution Network of Respective Distribution Business/Licensee***	***Preferred Distribution Business/Licensee for setting up distribution network to connect to the consumer***
Scenario 1	*Licensee A completely covers the locality with Distribution Mains and Licensee B does not completely cover with Distribution Mains*	*Licensee A*
Scenario 2	*Licensee A and Licensee B both completely cover the locality with Distribution Mains*	*Licensee A or Licensee B shall connect by extending service lines, depending on choice of new consumer*
Scenario 3	*Licensee A and Licensee B both do not have distribution network in the locality*	*Network development by Licensee A or Licensee B, depending on choice of new consumer*
Scenario 4	*Licensee A and Licensee B both have distribution network in the locality but have not completely covered with Distribution Mains*	*Network development by Licensee A or Licensee B, depending on comparative capital cost to connect to new consumer*

11.3 The various Levels to be considered for selecting the preferred Distribution Business/Licensee for setting up distribution network to connect to the consumer to be considered under Scenario 4 specified in Regulation 11.2 are as under:

a. ***Level 1****: Connection to LT consumer or HT consumer is possible by extending the service line and/or Distribution Sub-Station from the existing LT or HT Distribution Mains, respectively, without any extension or augmentation, considering the distance, presence, proximity, and vicinity of both the Distribution Business/Licensees;*
b. ***Level 2****: Connection to LT consumer is possible only after augmentation or extension of the nearest LT Distribution Mains considering the network spread, distance, presence, proximity, and vicinity of both the Distribution Business/Licensees;*

c. ***Level 3****: Connection to LT consumer is possible only after providing new Consumer Sub-station (CSS) or augmenting the existing CSS;*

d. ***Level 4****: Connection to LT consumer or HT consumer is possible only after laying or augmenting HT cable or HT mains and associated switchgear;*

e. ***Level 5****: Connection to LT consumer or HT consumer is possible only after laying or augmenting the HT cable or HT mains and associated switchgear, and commissioning of new or augmentation of the existing Distribution Sub-Station (DSS) or Receiving Station in the area.*

11.4 The cost estimates of Capital investment proposals for setting up distribution infrastructure in the Mumbai Suburban distribution licence area supplied electricity by Adani Electricity Mumbai Limited and The Tata Power Company Limited, and where both Distribution Licensees have existing distribution network either partly or fully covering the licence area through Distribution Mains shall be submitted to the Mumbai Distribution Network Assessment Committee (M-DNAC) set up by the Commission for scrutiny of such proposals, in accordance with the mechanism specified in Regulations 11.6 to Regulation 11.15.

11.5 The M-DNAC shall have the following composition:

(a) One or more technical officers of the Commission not below the rank of Dy. Director (Technical), one of whom shall convene and chair meetings of the M-DNAC;

(b) One or more external members with technical competence, of whom at least one shall be conversant with electricity distribution and/or consumer issues, and may include an Authorised Consumer Representative.

11.6 The Distribution Business/Licensee to whom the consumer has applied for connectivity shall identify the Scenario as specified in Regulation 11.2 and Level as specified in Regulation 11.3 under which the present case is to be dealt with and accordingly propose to take up the work for laying of distribution network.

11.7 In cases qualifying under Level 1 and Level 2 as specified in Regulation 11.3, the concerned Distribution Business/Licensee to whom the consumer has applied for connectivity shall set up the required distribution infrastructure and intimate the M-DNAC accordingly.

11.8 In cases qualifying under Level 3 to Level 5 as specified in Regulation 11.3, the concerned Distribution Business/Licensee to whom the consumer has applied for connectivity shall submit its proposal to the M-DNAC for approval of cost estimates for installing the distribution network.

11.9Based on the application of the Distribution Business/Licensee, M-DNAC shall scrutinize the submission and accordingly categorize the application under appropriate

Scenario and Level, considering the network spread, distance, presence, proximity, and vicinity of both the Distribution Licensees.

11.10 If the case falls under Level 3 and above as specified in Regulation 11.3, M-DNAC shall call for proposal from the parallel Distribution Licensees, for assessing the least cost mechanism for setting up distribution network:

Provided that the proposal for laying of distribution network in parallel licensee area shall be submitted by the Distribution Business/Licensees based on standard technical specifications related to loading and diversity factor, as may be stipulated by M-DNAC from time to time,, and the capital cost shall be computed accordingly.
11.11 Upon receipt of the proposals, M-DNAC may consult either or both Licensees for any clarifications it may require.

11.12 Based on the proposals received from the parallel Distribution Licensees, M-DNAC shall decide on which Distribution Business/Licensee is preferred to set-up the network for the present case based on the capital cost of the alternative proposals.
Provided that the estimated cost of the required works involved in the proposal submitted to the M-DNAC shall be final, and will be considered as the ceiling cost for the purposes of the concerned Licensee's ARR.

11.13 In cases qualifying under Scenarios 1 to 3 as specified in Regulation 11.2, the concerned Distribution Business/Licensee to whom the consumer has applied for connectivity shall submit to the M-DNAC details of the applications it is considering for new connections at Levels 3 to 5 in areas identified by it as falling under Scenarios 1 to 3, with a copy to the other Licensee.

11.14 The M-DNAC shall verify that the area categorisation by the Licensee is correct:
Provided that if it is not disputed by the other Licensee, the M-DNAC may dispose of the reference accordingly without any further verification and the concerned Licensee may proceed accordingly:

Provided further that if the claimed categorisation is disputed and found to be incorrect, the M-DNAC shall inform the concerned Licensee, who shall deal with the application in accordance with the dispensation applicable for the category determined by the M-DNAC:
Provided also that considering the limited nature and purpose of the evaluation required, the M-DNAC shall dispose of such references on priority.

11.15 The decisions of the M-DNAC shall be uploaded on the websites of the Commission and the concerned Licensees.

11.16 In case of any dispute regarding the decision of M-DNAC in this regard, the Distribution Business/Licensees may approach the Commission for adjudication."

4.18 Capital Investment Schemes for Projects falling under Section 63

1) The existing Capex Guidelines are primarily intended to address the capex requirements of projects set up under Section 62 of the EA 2003, for which the Commission regulates all aspects of investment and return. The existing Capex Guidelines do not have any specific provisions for approval of Capital Investment Schemes for projects set up through competitive bidding under Section 63 of the EA 2003.

2) However, capital expenditure undertaken by entities against projects set up through competitive bidding under Section 63 of the EA 2003 on account of Force majeure or Change in Law, are liable to be compensated by their beneficiary. The same is also reflected in the agreement (either PPA or TSA) signed between the entities. Any dispute on such compensation shall be adjudicated by this Commission and hence, some enabling provision to determine and approve such compensation must be present in the proposed Capex Approval Regulations, 2022.

3) Thus, the Commission shall have a role in determining the compensation to be allowed only in case of disputes between beneficiary and Generation Company or Transmission Company who is the project developer on the nature and impact of "Force Majeure Event" or "Change in Law". The Generation Company or Transmission Company in case of any such dispute may come for Final approval for such Capital Investment Scheme before the Commission. In such cases, the Commission would check the prudence of the Capital Investment Scheme according to the framework specified in these Regulations.

4) However, in Section 63 projects, the original capital cost is not known to the Commission. The Commission is of the opinion that the additional amount on account of these factors shall not be allowed as allowance of capital cost entitles the entity to claim Depreciation, Interest and RoE on the amount capitalised. Hence, the Commission has proposed that the amount which is additionally incurred due to 'force majeure' and 'change in law' shall be allowed as an additional tariff over and above the tariff discovered through competitive bidding rather than considering it in the GFA of the entity.

5) Further, the asset installed under such conditions may have a useful life beyond the validity of the agreement (i.e. PPA or TSA). However, there is no point of allowing the cost of the asset beyond the validity of the agreement. Once the agreement is terminated, the developer can recover the balance cost of such asset from the respective beneficiary it signs an agreement with. Hence, the recovery of approved capital cost through tariff shall be proportionately allowed only for the balance period of Power Purchase Agreement or Transmission Service

Agreement as applicable and not for the entire Useful Life of the concerned asset.

6) The Commission thus, proposes the following clauses in draft Capex Approval Regulations, 2022:

"12.1 These Regulations shall not normally be applicable for capital investment undertaken in Projects set up through Competitive Bidding under Section 63 of the Act:

Provided that Final approval may be sought for capital investment undertaken in such projects only in cases where the capital investment has been undertaken under specific conditions of Force Majeure Event or Change in Law and there is a dispute between the beneficiary and the Project Developer on the same:

12.2 The Prudence Check of capital investment undertaken in such Section 63 projects shall be done by the Commission on application by the Applicant under Regulation 12.1 in accordance with the framework specified in these Regulations.

12.3 The additional expenditure approved for such capital investment shall be appropriately allowed to be recovered as additional Tariff over and above the Tariff discovered through competitive bidding, and shall not be added to the capital cost of the Project:

Provided further that the above recovery of approved additional expenditure through tariff shall be proportionately allowed only for the balance period of Power Purchase Agreement or Transmission Service Agreement as applicable and not for the entire Useful Life of the concerned asset."

5 Treatment of Time and Cost Overrun of Capital Investment Scheme

5.1 Time Horizon for Capital Investment Schemes

a) The existing Capex Approval Guidelines stipulate the following time frame for completion of Capital Investment Schemes:

"The Scheme shall be planned considering a 3–5 year investment horizon for Generation and transmission related investments, and a 1-3 year horizon for Distribution-related investments."

b) The Commission observed that though the Guidelines stipulate the maximum time horizon for completion of schemes for Generation, Transmission and Distribution Companies, many Schemes exceed the stipulated time limit and are commissioned much later as compared to the estimated time frame.

c) The reasons for the delay can either be due to controllable or uncontrollable factors. The Commission is of the opinion that though the Applicants cannot be held responsible for delay due to factors beyond their control, there has to be a specified time-limit and implication for not completing the Scheme within the specified time limit.

d) The analysis of the Capital Investment Schemes approved in the last 3 years for Generation, Transmission and Distribution Companies on sample basis shows that the maximum time frame approved by the Commission for these entities is as follows:

Particulars	Genco / Licensee	Maximum Time Frame for execution of capex approved by MERC
Generation (Maximum 4 years)	MSPGCL	3 years
	AEML-G	2 years
	TPC-G	4 years
Transmission (Maximum 3 years)	MSETCL	3 years
	AEML-T	3 years
	TPC-T	3 years
Distribution (Maximum 4 years)	MSEDCL	3 years
	AEML-D	4 years
	TPC-D	4 years

e) From the above, it can be observed that for Generation Companies, the maximum time frame approved is 4 years, for Transmission Companies, the maximum time frame approved is 3 years, and for Distribution Companies, the maximum time frame approved is 4 years.

f) The Commission notes that the existing regulatory framework allows maximum time horizon of 5 years for execution of Capital Investment Schemes for Generation and Transmission Companies and 3 years for Distribution Companies.

g) In case of Generation and Transmission Companies, the maximum time horizon for execution of Capital Investment Scheme has not crossed the overall limit of 5 years as provided in the existing Capex Guidelines. However, in case of Distribution Companies, the maximum time frame approved for Capital Investment Scheme is for 4 years, which is more than the existing time frame of three year provided in the Capex Guidelines. Considering the above, the Commission has therefore, revised the time frame for Distribution Companies to 4 years.

h) Hence, the Commission proposes to specify only the outer limit for completion of projects/schemes. The Commission has therefore, specified an outer limit of five (5) years for completion of works in case of Generation and Transmission Investment Schemes (including MSLDC) and outer limit of four (4) years for completion of works in case of Distribution Investment Schemes. The Companies should, however, strive to complete the Schemes much earlier.

i) The Commission thus proposes the following clauses in draft Capex Approval Regulations, 2022:

"14.1 Capex Schemes shall be planned considering a maximum time horizon of 5 years for Generation Business/Companies and Transmission Business (including MSLDC)/Licensees and 4 years for Distribution Business/Licensees."

5.2 Treatment of Time Overrun in Capex Schemes

a) Regulation 30.9 of the MERC MYT Regulations, 2019 specifies that Interest During Construction (IDC) incurred on account of excess drawal of debts shall be allowed or disallowed, partly or fully, subject to prudence check. The relevant provision is reproduced below:

"30.9 The excess interest during construction on account of time and/or cost overrun as compared to the approved completion schedule and capital cost or on account of excess drawal of the debt funds disproportionate to the actual requirement based on Scheme completion status, shall be allowed or disallowed partly or fully on a case to case basis, after prudence check by the Commission based on the justification to be submitted by the Generating Company or Transmission Licensee or Distribution Licensee along with documentary evidence, as applicable:

Provided that where the excess interest during construction is on account of delay attributable to an agency or contractor or supplier engaged by the Generating Entity or

the Transmission Licensee, any liquidated damages recovered from such agency or contractor or supplier shall be taken into account for computation of capital cost:

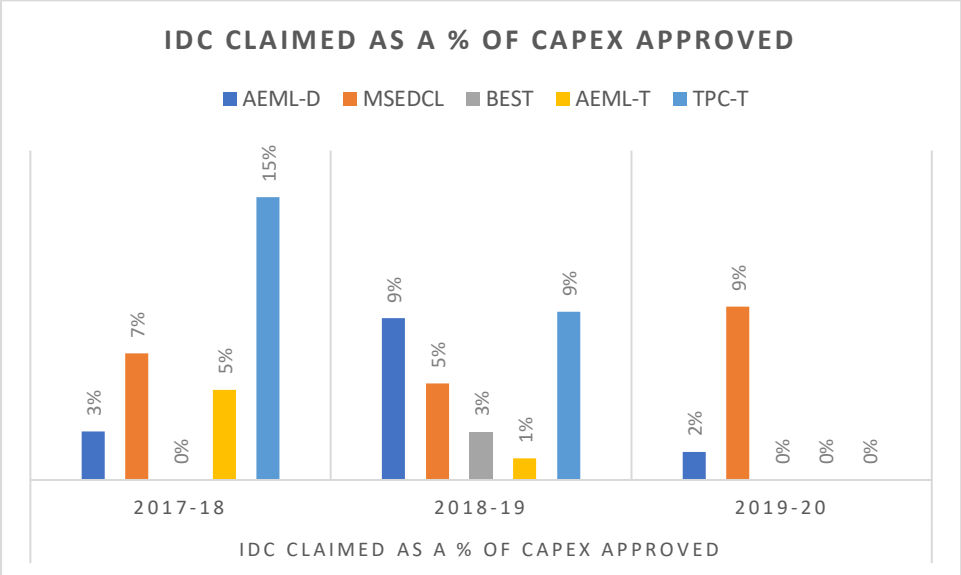
Provided further that the extent of liquidated damages to be considered shall depend on the amount of excess interest during construction that has been allowed by the Commission:

Provided also that the Commission may also take into consideration the impact of time overrun on the supply of electricity to the concerned Beneficiary/ies."

b) In this regard, the Commission has analysed latest Tariff Orders of all the major Companies/ Licensees and discovered that there have been cases of time and cost overrun in execution of Capital Investment Scheme.

c) It is observed that MSETCL has considerable number of schemes, which have witnessed time overrun as well as cost overrun in the past, whereas AEML-D, AEML-G and MSPGCL have experienced cost overrun.

d) The Commission has analysed IDC claimed by Companies / Licensees and discovered that IDC comprises a significant portion of the Capitalization claimed by the Licensees, as shown in the Graph below:.



e) From the above analysis, it can be concluded that IDC comprises around 3 to 15% of the capitalisation claimed by Companies/Licensees.

f) The Commission also observes that a significant portion of IDC has been disallowed, which comprises a considerable portion of Capitalization claimed for the respective year. Hence, IDC comprises a major component of Capitalization and IDC due to time overrun of the Scheme on account of factors for which the entity is responsible, should not be passed on to the consumer/beneficiary.

g) The Commission is of the opinion that the Applicant should mention the possible causes of time overrun that may be witnessed during execution of the Scheme, at the time of filing of application for In-principle Approval. The Commission shall consider only those delays identified by the Applicant in its Application. The Commission is of the opinion that this would ensure that the Applicant would take all the possibilities into consideration before planning and execution of the project. The Commission has excluded delays due to Force-majeure or Change in Law conditions, which are unanticipated.

h) Hence, the Commission has, proposed a clause in these draft Regulations specifying that the Generation Company and the Licensee shall specify the expected reasons for delays (controllable and uncontrollable) with justification for such delays at the time of filing for prior approval of Capital Investment Scheme. The Generation Company and Licensee shall specify the expected increase in time for execution of projects due to such expected delays under worst case scenario. The Commission, at the time of final approval shall consider only those delays, which are already cited by the Generation Company and Licensee as expected reasons for delays, in its filing for prior approval of Capital Investment Schemes. The delays due to Force Majeure or Change in Law shall be considered by the Commission even if they are not cited by the applicants in their application for in principle approval as the same are unforeseen delays and cannot be envisaged earlier.

i) The Commission thus, proposes the following clauses in draft Capex Approval Regulations, 2022:

"14.2 In its Application for approval of DPR, the Applicant shall provide for all expected delays and the expected increase in time for execution of projects due to such expected delays, which are beyond the control of the Applicant.

14.3 At the time of approval of completed cost, the Commission shall consider only those delays identified in the DPR Scheme by the Applicant:

Provided that the Commission may consider any delay in execution of the Scheme for reasons attributable to Force Majeure or Change in Law."

j) Further, the allowance of IDC in the capital cost shall be subject to submission of justification and documentary evidence for delays attributable to other factors.

k) In previous MYT/MTR Orders for Generation Companies, the Commission has done the prudence check of additional capitalisation claimed after the cut-off date and based on justification, has allowed the Capital expenditure. Delay in execution of projects lead to lower capitalisation in current year and may lead to higher capitalisation in future years. Hence, any delay, which is controllable in nature has been disallowed and only in-principally approved cost of Capital Investment Scheme has been allowed as final completed cost.

l) The Commission has disallowed IDC for schemes with delays without proper justification by entities in past Tariff Orders. For schemes where justification was provided and the Commission was satisfied, IDC has been allowed entirely. Also, if the work was within the scheduled completion date, IDC was allowed.

m) In Appeal No. 72 of 2010 (Maharashtra State Power Generation Co. Ltd., v/s MERC) , the Hon'ble APTEL vide its Order dated 17 April,2011 has ruled that if it cannot be established that the delay is entirely beyond the control of the Generating Company, 50% of the excess IDC is to be disallowed. IDC on account of time over run is to be shared equally between Generation Company and Beneficiary. The relevant abstracts of the Order are as follows:

"*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."

n) 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.

o) 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.

p) 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.

q) In case of Transmission Licensees, the Commission has observed issues like never ending delays, Unutilized bays, idling assets for want of put to use , ROW issues, land procurement delays, court cases, crop compensation, etc. The Commission has scrutinised physical progress, elements of the schemes which were commissioned (fully or partly) and "put to use", the commissioning dates, loading information for the commissioned assets, comparison of the approved DPR cost with the actual capitalisation claimed to determine

instances of cost-overrun, examining the reasons contributing to the cost overrun and if these can be considered to be controllable or uncontrollable (e.g. change in scope, etc.), review of the project implementation timelines (approved and actual) to assess time overrun and if this time overrun has contributed to the overall cost overrun (e.g. increase in IDC due to delay in project implementation), etc.

r) The Commission has disallowed 50% cost over and above the approved DPR cost, if the provided reasons for cost overrun are beyond the control of the Licensee, but Licensee could not establish the same through documentary proof.

s) If reasons for cost overrun are not acceptable, in-principle approval amount is considered for final approval. IDC also disallowed since there is a delay in capitalisation. When the cost overrun is not entirely due to uncontrollable factors, cost overrun is disallowed by the Commission to that extent.

t) For Distribution Licensees, in case of schemes with excess capitalisation over and above the in-principle approved capital cost, the Commission has continued to disallow 50% of the IDC computed by the Applicant. Some of these schemes are those on which excess capitalisation has also been claimed, for which the Commission has disallowed 50% of the IDC on account of delay.

u) The Commission further analysed that though the Applicants are liable for any time over run in the project, certain causes of time overrun like Force majeure or change in law events are not in the control of the Applicant. Hence, the Commission proposes to allow IDC of the Applicant if the time overrun is either due to Force majeure or change in law events.

v) The Commission also notes that in many cases of time overrun caused by delay in obtaining Right of Way (RoW) clearances, the Licensees have not been prompt in taking necessary action for avoidance of such events. In such case this justification for time overrun becomes a controllable one. Hence, the Commission is of the opinion that Applicant must ensure that it has adopted all possible options to avoid time overrun due to RoW clearance with timely action taken reports to be provided with justification. Evidence is to be provided at the time of filing of completed cost on taking timely action as per the provisions of Section 67 of Electricity Act, 2003, Maharashtra Electricity Works of Licensees Rules, 2012 and GoM Resolutions issued from time to time. If the Commission finds that the Applicant has not taken timely appropriate actions to mitigate the time overrun, it shall consider such time overrun as a controllable event.

w) The Commission has also observed that despite repeated urgings, some Applicants are still incurring delays in ongoing projects due to mundane issues and inefficiencies. The Commission is of the opinion that the Applicant must ensure timely completion of the projects and has proposed a disincentive in the draft Regulations against delay in completion of the projects. The Commission would take a view based on the severity of time overrun in the project. The Commission has hence, proposed to limit the Return on Equity on the

Capitalization incurred for such delayed projects. The maximum penal limit on RoE is proposed to be 10%.

x) The Commission thus, proposes the following clauses in draft Capex Approval Regulations, 2022:

"14.4 In case of delay in completion of the Capex Scheme beyond the schedule considered in the in-principle approval, the Commission shall adopt the following methodology for allowing excess Interest During Construction (IDC) on account of delay in completion of the Scheme, at the time of approval of completed cost:

Period of Delay (Percentage of original Scheduled Completion Period)	***Percentage Disallowance of excess IDC***
1% - 20%	*10%*
21% - 40%	*25%*
41-60%	*40%*
60%-80%	*75%*
Above 80%	*100%*

14.5The above matrix specified in Regulation 14.4 shall be applicable for all Schemes that achieve completion after the notification of these Regulations, irrespective of whether the Scheme commenced before the notification of these Regulations:

Provided further that the total time taken for completion shall not normally exceed the maximum time horizon for Capex Schemes specified in Regulation 14.1.

14.6The Commission may allow additional Interest during Construction (IDC) if the total time taken for completion is beyond the above specified time horizon on account of reasons attributable to Force Majeure or Change in Law:

14.7In case of delays due to receipt of Right of Way (RoW) clearances, evidence of timely action taken as per the provisions of the Section 67 of the Act and the Maharashtra Electricity Works of Licensees Rules, 2012 shall be submitted by the Applicant.

14.8 In addition to the disallowance of entire or part of the excess IDC as specified in Regulation 14.2, the Commission may also consider any other form of financial penalty as may be specified in the applicable MERC (Multi-Year Tariff) Regulations."

5.3 Treatment of Cost Overrun in Capex Schemes

1) Regulation 23.5 of the MERC MYT Regulations, 2019 specifies that if Capitalization incurred is greater than 10% of in-principle Approved cost , then the Applicant has to

justify with detailed reasonings and computations for such excess in its petition for True-up. The relevant provision is reproduced below:

"23.5…

(d) in case the actual capital expenditure or capitalisation exceeds 10% of that approved by the Commission, the Generating Company or Licensee shall submit detailed justification for such excess amount along with its Petition for True-up;"

2) The Commission has analysed the differences in in-principle approved cost and final approved costs of projects and have found that cost overrun has occurred in a significant number of projects due to :

(a) Change in scope of work,

(b) Variation in quantity of materials,

(c) Variation in cost of materials.

3) The reasons for these variations have been on account of un-foreseen circumstances like delay from Applicant side, land procurement delays, Unutilized bays, court cases, crop compensation, change in demand growth, revision in route, ROW issues, economic issues like unforeseen increase material price due to market forces, force-majeure and change in law issues, etc.

4) In cases where the Applicant has justified its cost over-run as uncontrollable with documentary proof, the Commission has allowed such cost escalation for the project. If the Commission finds the justification for cost overrun inappropriate, the capitalization is allowed to the extent of in-principle approval of the scheme. Hence, for the final capital cost approved, the in-principle approval is the ceiling cost of the project.

5) The Commission acknowledges that there may be sufficient reasons for change in scope or quantity variation w.r.t. in-principle approval as there have been number of similar cases. However, the reason for such variation needs to be validated to justify the reasonableness of the changes made. Also, in case scope or quantity of material is lesser than in principle approval, the cost of the scheme would be proportionately reduced to the extent of actual scope of work or actual quantity. For e.g., if the in-principle approval of a scheme is for erecting a substation of 132/33 kV Level with two transformers with an additional space for one more transformer, but during execution it was observed that the load pattern has changed rapidly and due to load growth all three transformers would be required. In such cases, the Commission may consider the increase in cost with respect to approved cost as the difference on account of change in scope of work of the Capital Investment Scheme. The Commission, hence, would validate the quantity of a particular scheme with a previously completed scheme of similar nature to validate the necessity of quantity.

6) Further, the Commission has proposed that cost overrun due to negligence of the Applicant, inefficiency, or incompetence of the contractor to complete the work shall not be allowed. The Applicant should have sufficient risk mitigation measures in the work agreement to make up for such cost overrun.

7) The Commission thus, proposes the following clauses in draft Capex Approval Regulations, 2022:

"15.1 The capital cost of the DPR Scheme, as approved in-principle by the Commission in accordance with these Regulations, shall act as ceiling capital cost and the Applicant shall accordingly execute the works proposed in the DPR Scheme.

15.2 The Applicant shall furnish the details of variance in capital cost and justification for the variance with respect to capital cost approved in-principle by the Commission, at the time of seeking approval for the completed cost.

15.3 If the reasons for the increase in capital cost are found to be beyond the control of the Applicant, the Commission may consider the increase in capital cost.

15.4 The Commission shall consider the cost overrun of the equipment cost with respect to the capital cost approved in-principle by the Commission only to the extent of the work award cost, subject to the condition that the works have been awarded on the basis of competitive bidding in accordance with these Regulations.

15.5 The Commission shall not allow cost overrun in the equipment cost over and above the award cost, as the treatment of cost deviation with respect to the award cost shall be addressed under the execution contract with the equipment supplier or EPC contractor, as applicable:

Provided that the Commission may consider cost overrun in the following cases:

a. Change in scope of work due to circumstances beyond the control of the Applicant;

b. Quantity variation depending on adequate justification being provided by the Applicant:

15.6 The Commission may verify whether the quantity for a particular Scheme is in line with the actual quantity utilised for a Scheme of similar nature undertaken by the Applicant in the past.

15.7 If the actual scope of work or quantity for a particular Scheme is lower than the scope of work or quantity, respectively, considered at the time of in-principle approval, then the actual scope of work and quantity shall be considered and proportionate capital cost shall be compared with the approved cost, for identifying whether there has been any cost overrun.

15.8 The negligence of the Applicant, failure of the contractor to execute the work, or bankruptcy of the contactor of the Applicant or project implementing agency shall not be treated as circumstances beyond the control of the Applicant:

15.9 Right of Way (RoW) issues or delay in obtaining statutory clearances claimed without timely action by the Applicant as per the provisions of the Act and Maharashtra Electricity Works of Licensees Rule, 2012, State Government Order/notification, etc., shall not be treated as circumstances beyond the control of the Applicant:

15.10 The Generating Company or Licensee shall follow prudent contract practice by incorporating necessary safeguard clauses against risk of price increment on account of Foreign Exchange Rate Variation (FERV) on imported material:

15.11 Any extra rupee liability towards FERV on import of material may be disallowed as may be specified in the applicable MERC (Multi-Year Tariff) Regulations."

6 Necessary Conditions for Capital Investment Scheme

6.1 Pre-requisites for undertaking Capex Schemes

The existing Capex Guidelines do not specify any pre-requisites to be followed by Applicants at the time of execution of Capital Investment Scheme, after receiving in-principle approval of the Commission.

However, the Commission at the time of in-principle approval has given standard directions common to all Applicants in the past. These directions are relating to the processes/necessities/guidelines that are to be strictly followed by the Applicants after receiving in-principle approval of the Capital Investment Scheme till the completion of the scheme.

The Commission is of the opinion that these instructions are mandatory and shall be necessarily followed by the Applicants undertaking the capex. The Commission therefore feels that these instructions should be standardized and incorporated in these Regulations. Including these pre-requisites as part of these Regulations will ensure that the Commission does not have to re-iterate these directions in every in-principle approval letter issued by the Commission.

The Commission proposes the following conditions to be specified in these draft Regulations for all proposed Capital Investment Schemes which have received in-principle approval:

1. In case the Generation Company/Licensee or SLDC does not initiate the work (including tendering process) within a period of one year or as specified by the Commission from the date of according in-principle by the Commission, the in-principle approval for the Scheme shall be deemed to be cancelled.
2. All Applicants shall provide a periodic update on the approved Capital Investment Scheme on a half yearly basis through the web-based portal being developed for filing and approval of Capital Investment Scheme. The periodic updates shall be in terms of item-wise physical progress achieved and item-wise capital expenditure incurred till date during the implementation of the scheme.
3. Along with the half-yearly periodic updates, the Applicants shall also furnish completion reports of the approved Capital Investment Schemes, which are put to use in the latest six months with the following details, inter-alia, in accordance with the Format specified in **Appendix 1** so that the same details can be compiled along with the half-yearly submissions for approval of completed cost:
    a. Item-wise actual cost incurred;
    b. Escalation in actual cost with respect to the approved cost;
    c. Justification and reasons for increase/decrease in cost;
    d. The scope and objectives of the Scheme and to what extent the applicant has

achieved these objectives.

4. Assets put to use after execution of Capital Investment Scheme should be maintained separately in the Fixed Asset Register.
5. The spares shall be utilized as per availability to optimise the project cost.
6. The Generating Company or Licensee shall ensure timely completion of corresponding upstream/downstream network of another Transmission/Distribution Licensee for time bound end to end connectivity and avoid idling of assets.

The assessment that is to be carried out by the Commission at the time of submission of completed cost of Capital Investment Scheme by the Generating Company/Licensee or SLDC is covered separately in subsequent Chapters.

The Commission thus, proposes the following clauses in draft Approval of Capital Expenditure Regulations, 2022:

"16. Pre-requisites for undertaking Capex Schemes

All Capex Schemes shall fulfil the below specified pre-requisites for being considered at the time of approval of completed cost:

…

c. If the Applicant fails to initiate the work, including tendering process, within a period of one year or as stipulated by the Commission, from the date of receipt of in-principle approval, the in-principle approval shall be deemed to be cancelled;

d. The Applicant shall provide regular updates on half-yearly basis on status of implementation of all Capex Schemes that have received the in-principle approval of the Commission with respect to the PERT Chart submitted along with the Application for in-principle approval, at the end of the month of September and March of every year, through the web-based portal being developed by the Commission for this purpose and in physical form till the web-based portal is operationalised as well as if the web-based portal is not functional for any reason;

e. Along with the half-yearly update, the Applicant shall furnish to the Commission the Completion Report of the Schemes put to use in the latest six months with details of item-wise actual cost incurred, escalation in cost, if any, with reasons, the scope and objectives of the Scheme and to extent to which these have been achieved, etc. ., in accordance with the Format specified in ***Appendix 1;***

f. Assets put to use after execution of the Capex Scheme shall be added to the Asset Register of the entity;

g. The Applicant shall utilise spares as per availability with a view to optimise the capital cost..."

6.2 Procurement Process

a) The existing Capex Guidelines have no specific provisions on the procurement process required to be carried out by the Applicant for the proposed Capital Investment Scheme approved by the Commission. However, the Commission in its in-principle approval letter has clearly stated that all procurement relating to the Capital Investment Scheme shall be done only through competitive bidding process. The Commission has therefore, incorporated this condition in these draft Regulations.

b) Further, the Commission observed that since it is mandating all Applicants to follow competitive bidding process for all the works related to Capital Investment Scheme, it is also necessary to provide a standardized process/guidelines that needs to be followed by all the entities while executing the competitive bidding process. This will ensure that all entities execute the competitive bidding process in the same manner as provided in these Regulations. The Commission has, therefore, annexed the entire process of procurement through competitive guidelines as Appendix 2 of these Regulations. The Commission has also made it necessary for Applicants to submit documentary proof of procurement process, at the time of submission of completed cost of the Capital Investment Scheme.

c) The Commission thus, proposes the following clauses in draft Approval of Capital Expenditure Regulations, 2022:

"All Capex Schemes shall fulfil the below specified pre-requisites for being considered at the time of approval of completed cost:

*a. Procurement of equipment or turnkey contracts shall be done through open Competitive Bidding only, in accordance with the Guidelines specified at **Appendix 2**, and the Applicant shall be required to submit documentary evidence of the same at the time of submission of completed cost;"*

d) In addition to the above, the Commission has included an additional condition stating that if the lowest bidder discovered through competitive bidding is a sister concern of the company/applicant who is executing the Capital Investment Scheme, then in such cases, the applicant shall take prior approval of the Commission before awarding the project. The Commission is of the opinion that while executing the competitive bidding process, the applicant may try to give undue advantage to its sister concerns/companies, if any, so that the work can be awarded to these companies. To keep a check on such activities, the Commission feels that there should be some restriction on the Applicant before awarding the work to its sister concern. Thus, the Commission proposed the following condition in these Regulations stating that for Capital Investment Schemes which are in-principally

approved, the applicant should take prior approval of the Commission before awarding any project to its sister concern/Group companies:

"All Capex Schemes shall fulfil the below specified pre-requisites for being considered at the time of approval of completed cost:

...

b. In case the winning bidder in the competitive bidding process is a sister concern or Group Company of the Generating Business/Company or Transmission Business/Licensee or Distribution Business/Licensee, prior approval of the Commission shall be taken before awarding the project;"

e) As discussed earlier, the Commission has appended the Guidelines for Procurement through Competitive Bidding along with these Regulations as **Appendix 2**. The Commission has adopted these Guidelines from the *Guideline of Competitive Bidding Process for Procurement of Material and Services* notified by Delhi Electricity Regulatory Commission (DERC). These Guidelines will not only standardize the process of competitive bidding for all the Applicants, but also ensure transparent and fair procurement across all Utilities in the State. The detailed guidelines are captured in the Explanatory Memorandum as **Annexure 2.**

6.3 Treatment for delay in Commissioning/put to use of Transmission asset due to Generation or Distribution

a) In accordance with Regulation 2.1 (b) (c) of the MERC MYT Regulations 2019, the Commission may allow revision in Scheduled Commercial Operation Date (SCOD) if Transmission system of Licensee is prevented from regular service due to delay in in commissioning of the concerned generating Station or upstream/ downstream Generation/ Transmission/ Distribution interconnecting asset is not available for 'put to use'. The relevant clause is as below:

"If a Transmission system of Licensee is prevented from regular service due to delay in in commissioning of the concerned generating Station or the upstream or downstream transmission system or distribution system, the Licensee shall approach the Commission to seek revised approval of Scheduled Commercial Operation Date (SCOD)"

b) The above clause provides for revision in date of COD for the Transmission Licensee on account of delay in execution of asset from another entity. However, it is necessary to also ensure responsibility of such delays on the accountable entity in case the delays are due to controllable factors.

c) The Commission in this regard has analysed the inter-State Regulations for finding out the treatment for delay in commissioning/put to use of one entity due to delay in commissioning caused by asset of another entity. The Commission observed that in the States of Gujarat, Assam, Bihar, Uttar Pradesh and Odisha, the respective Commissions have been allowing the impact of delay in commissioning/put to use in the form of IDC or otherwise on a case-to-case basis. However, in some States such as New Delhi and Madhya Pradesh, the respective Regulations clearly specifies that no additional impact of time or cost overrun can be admitted/passed on through tariff as the same should be covered under Connection/Implementation Agreement signed by both Parties.

d) The Commission, thus, proposes the following clauses in draft Capex Approval Regulations, 2022:

"All Capex Schemes shall fulfil the below specified pre-requisites for being considered at the time of approval of completed cost:

…

h. The inter-connected entities should ensure that the upstream/downstream network is created as per the optimised scheduled to avoid stranding of assets."

6.4 Standard Cost Sheet to be maintained by the Transmission Licensees and Distribution Licensees

a) The existing Capex Guidelines do not have any provision related to Standard Cost Sheet.

b) The Commission has analysed the available Cost Sheets of different Licensees and it is observed that the specifications as well as the rates of items procured by the Licensees, including the Distribution Licensees operating in the Mumbai licence area, differ from each other in some way or the other. Some Licensees use higher grade components/equipment, while some use unconventional materials. Also, there is significant price variation in similar components as well. The probable reasons could be economies of scale, purchasing power, difference in specification/rating, terms and condition of the payment and contract etc. Thus, having a Unified Cost Sheet for the State or even Mumbai Licence area may be difficult. At the same time, existence of a Standard Cost Sheet will ensure that the same item is not considered at different rates.

c) The Commission has also observed that the rates of the equipment and material may change due to market forces. The Commission has hence, proposed that Standard Cost Sheet should be prepared and submitted by each Licensee based on the latest discovered prices every six months. Considering the Tariff approval process of each Licensee, it is proposed that every Licensee should submit their latest Cost sheet by 30th April and 30th October every year.

d) In case of Transmission Licensee, it should submit the Cost Sheet to STU for validation. After validation, STU would forward the validated Cost Sheet of the Transmission Licensee to the Commission.

e) The Standard Cost Sheet shall be the reference document for estimation of item-wise capital cost by the Applicant while seeking in-principle approval of DPR Scheme.

f) In case any item is not present in the Cost Sheet of the Licensee while filing for in-principle approval of the Scheme, the Applicant can provide budgetary quotation from multiple vendors.

g) If any Licensee does not submit the Cost Sheet of latest discovered prices by the specified time, the Commission shall approve the Scheme as per the available Standard Cost Sheet, and any increase in cost because of referring old Standard Cost Sheet shall not be entertained in future.

h) The Commission thus, proposes the following clauses in draft Capex Approval Regulations, 2022:

"17.1 Distribution Business/Licensees shall prepare and submit the Standard Cost Sheet to the Commission within three (3) months of notification of these Regulations, for all capital items procured by them based on latest rates discovered through competitive bidding with supporting documents, which may be validated by Officers of the Commission.

17.2 Transmission Business/Licensees shall submit the Standard Cost Sheet for all capital items procured by them based on latest rates discovered through competitive bidding, to the State Transmission Utility (STU) for validation within two (2) months of notification of these Regulations.

17.3 STU shall forward the validated Standard Cost Sheet for each Transmission Business/Licensee to the Commission within three (3) months of notification of these Regulations.

17.4 Transmission Business/Licensees and Distribution Business/Licensees shall update the Standard Cost Sheet annually by 31st May based on the latest discovered rates and submit the same to the STU and Commission, respectively:

Provided that the STU shall validate the periodic submissions of the Transmission Business/Licensees and forward validated Standard Cost Sheet to the Commission within one (1) month of receipt of the updated Standard Cost Sheet from the Transmission Business/Licensees.

17.5 The Standard Cost Sheet shall be the reference document for estimation of item-wise capital cost by the Applicant while seeking in-principle approval of DPR Scheme:

17.6For items not listed in Standard Cost Sheet, the Applicant shall provide budgetary quotations from multiple vendors for estimation of capital cost of such items or procurement costs for earlier periods as a reference.

17.7The Applicants shall ensure that Standard Cost Sheet is maintained for the major equipment contributing to around 60 percent to 70 percent of the total Scheme cost, comprising inter-alia, cables, conductors, transformers, meters, transmission towers, switchgears, etc.:

17.8If the Applicants do not submit the updated Standard Cost Sheet, the Commission shall approve the Scheme as per the available Standard Cost Sheet without any escalation:

Provided that the cost data in the Standard Cost Sheet shall not be more than two years old."

6.5 Role of STU in Capex Schemes for Transmission Business

a) The existing Capex Guidelines do not have any specific provisions on the role of STU in approval/scrutiny of Capital Investment Schemes taken up by Transmission Licensees. The STU being a co-ordinating entity for development of efficient and effective Intra State Transmission Network and is responsible for regular co-ordination between all Transmission Licensees in the State. The STU's responsibilities with regard to co-ordination between Transmission Licensees are already covered under the MERC State Grid Code Regulations, 2020 (State Grid Code). The Commission is of the opinion that in addition to the responsibilities given to STU under State Grid Code, STU shall also be made responsible to check/validate/cross verify/scrutinize all the technical and financial aspects of the proposed Capital Investment Scheme by all Transmission Licensees for optimisation of resources and project cost. STU shall provide technical and financial justification for all the proposed works to be carried out as per STU Plan.

b) The Commission is of the opinion that maintaining a Standard Cost Sheet for all Licensees would be essential to scrutinize the estimated cost of the works proposed by each of the Licensees. The Commission has discussed in detail the need for Standard Cost Sheet in subsequent chapters. Since, STU is a co-ordinating entity for all the Transmission Licensees, the Commission feels that it shall be the responsibility of STU to collate the Standard Cost Sheets of all the Transmission Licensees of the State and maintain an updated record. The STU shall also be responsible to standardise the cost of common items used by all the Transmission Licensees based on the latest discovered price through Competitive Bidding. The STU shall send the Standardised Cost Sheet of all the Transmission Licensees to the Commission within 3 months of publication of these Regulations and shall regularly update the prevailing Standard Cost Sheet every six months, within a period of one month from the date of receipt of Standard Cost Sheet of

all the Transmission Licensees.

c) The Commission is of the opinion that all the Transmission Licensees operating in the State should submit their cost estimate for taking up Capital Investment Scheme proposed in the STU Plan. Based on the various cost estimates received by STU, it shall decide the entity responsible for taking up the Capital Investment Scheme based on the lowest cost estimate. Alternatively, STU may recommend Tariff Based Competitive Bidding (TBCB) approach for taking up the Capital Investment Scheme as it feels appropriate.

d) It is observed that there have been numerous changes in STU Plan in recent years. The Commission is of the opinion that STU Plan should not be subject to frequent changes. The STU is to be held responsible for any unwarranted changes made to STU Plan. Thus, the Commission proposes to include such provisions in the draft Capex Approval Regulations, 2022. The STU shall provide detailed justification to the Commission for every change made in the STU Plan, once it is formally published on STU's website. The Commission feels that the changes necessary to be made if any can be done in STU Plan only once in a year and not as per the convenience of STU.

e) The Commission has further specified that the Rolling Plan of each Transmission Licensee shall be in sync with the STU Plan. The Capital Investment Scheme filed for in-principle approval before the Commission by each Transmission Licensee shall be part of the Capex Rolling Plan submitted and regularly updated by the Licensee.

f) The Commission thus, proposes the following clauses in draft Capex Approval Regulations, 2022:

"18.1 STU shall perform all the activities mandated under the Act and Regulations notified by the Commission including the State Grid Code as amended from time to time and the MERC (Multi-Year Tariff) Regulations, 2019, as amended from time to time.

18.2 The STU shall prepare the rolling five-year Plan for the State of Maharashtra in accordance with the State Grid Code as amended from time to time and provide technical and financial justification for all the proposed Capex Schemes to be carried out in the next 5 years of the STU plan, in the submission to the Commission.

18.3 The STU Plan shall be based on a holistic view, duly taking into account capital investment schemes already proposed as well as Schemes taken up in nearby areas in the past.

18.4 The Transmission Business/Licensees, viz., Maharashtra State Electricity Transmission Company Limited (MSETCL), The Tata Power Company Limited – Transmission (TPC-T), and Adani Electricity Mumbai Limited - Transmission (AEML-T) shall send capital cost estimates to STU for the Capex Schemes that they desire to take up, out of the Capex Schemes proposed in the STU Plan.

18.5 The STU may either permit the Transmission Business/Licensee with the lowest capital cost to take up the concerned Capex Scheme under Section 62 of the Act or recommend the Capex Scheme to be taken up through Tariff Based Competitive Bidding (TBCB) under Section 63 of the Act.

18.6 STU shall be responsible for any changes proposed in the STU Plan and shall submit proper justification for such changes to the Commission:

Provided that the STU Rolling Plan may be revised annually, subject to adequate justification being submitted by the STU.

18.7 The Rolling Capex Plan prepared by the Transmission Business/Licensee shall be in sync with the STU Plan.

18.8 No Capex Scheme submitted by any Transmission Business/Licensee shall be considered by the Commission for in-principle approval unless the Scheme is part of the STU Plan and has been validated by the STU.

18.9 The STU shall validate the Standard Cost Sheet for each Transmission Business/Licensee and forward the same to the Commission within three (3) months of notification of these Regulations, as well as validate the periodic updates of the Standard Cost Sheet, which shall be forwarded to the Commission within one (1) month of receipt of the updated Standard Cost Sheet from the Transmission Business/Licensees."

6.6 Web-based Portal for Submission and Periodic updates of Capital Investment Schemes

a) The Commission is of the opinion that the evolution in technology in the recent years and the outbreak of COVID-19 last year has given a substantial push to online submission of Petitions/documents. The Commission has also allowed entities to file various Petitions online with all the necessary documents. The Commission proposes to introduce similar conditions for filing, approval monitoring, etc., of Capital Investment Schemes. The Commission proposes to allow all entities to file Capital Investment Schemes for in-principle approval online through a web-portal. Also, further processing of the application such as data gaps and monitoring, etc., shall also be done online. The Commission thus, proposes to admit the Application of DPR Schemes through the Commission's dedicated Web Portal and all future correspondence of Commission with applicants regarding raising of various data gaps, reply to data gap by the Applicants, periodic monitoring of the scheme after approval, etc. shall be done through the Web Portal only. However, until the Web portal becomes operational, the Applicant should submit its application in physical form only.

b) The Applicants provide the status report of Capex scheme through physical mode. With an effective web solution, it is proposed that Applicants should provide the half yearly

status report of implementation of project and completion reports through the web portal itself. The Web portal would send automated messages to the registered Applicants who are liable to submit such reports in the month of September and March each year.

c) The Commission thus, proposes the following clauses in draft Capex Approval Regulations, 2022:

*"19.1 The Applicant shall submit the DPR Schemes with all supporting documents in the formats specified in **Appendix 1** for the Commission's approval through the web-based portal being developed by the Commission for this purpose and in physical form till the web-based portal is operationalised:*

Provided that one physical copy shall always be submitted for the Commission's records.

19.2 In accordance with Regulation 16 of these Regulations, the Applicant shall provide regular updates on half-yearly basis on status of implementation of all Capex Schemes that have received the in-principle approval of the Commission, at the end of the month of September and March of every year, through the web-based portal being developed by the Commission for this purpose and in physical form till the web-based portal is operationalised as well as if the web-based portal is not functional for any reason."

APPENDIX 1: Format for Filing of Capital Investment Scheme for In-Principle Approval

1. **PART I (Particulars to be furnished in the Overview of the DPR)**

1. Index	---Index with the documents Page No.
2. Name of Applicant	_____(Name of the Utility proposing the capex/DPR)
3. Name of the Capital Investment Work	_____(E.g. Construction of 400/220kVSubstation at ____, Construction of220kV Transmission line at ____)
4. Nature of capex Scheme (New/ Resubmitted / revised / modified (/ extended)	Whether the present DPR was earlier referred back/cancelled with any specific directions? If yes, whether the previous conditions satisfied. The detailed chronology of the events is added or not Detailed reasoning for resubmission/ revision/ modification/ extension is submitted or not
5. Details of the Location	_____(Name of Zone, Circle/Area/Location) along with GPS Co-ordinates
6. Date of Approval by Competent Authority designated by the Board of Directors of the Company	_____(Documentary Proof to be furnished)
7. Category of DPR	_____(Under which of the categories specified in the Regulations does the capital work fall under)
8. Objective of the Capital Investment	_____(Overall objective of the work - like system strengthening, system augmentation, replacement of assets, Renovation &Modernization, etc.)
9. Need Analysis	_____(improve reliability, loss reduction, mandatory under sections of EA 2003 , as per CEA Regulations, any other statutory mandate, etc.)
10. List of Identical schemes previously approved by the Commission and their progress report (5 years data)	_____

<table>
<tr><td>11. State Map Location (For Transmission)</td><td>Remark – (Utility needs to mention) Project location Map is synchronized with Updated web site State Map. Each surrounding asset (functional and proposed) is properly shown on State Map.**</td></tr>
<tr><td>12. Brief Scope and Specifications of Work</td><td>_____(E.g. i) 400kV UG cable ___ km;
ii) 400/220kV transformer 2x200 MVA;
iii) 220kV cable _____ km)</td></tr>
<tr><td>13. Any Reference of Study Report / recommendations of OEM/Expert</td><td>_____(Load Growth Report, EPS Report, STU Plan, Load Flow Study, Recommendations Report of Expert Agency, Report of OEM/Third Party/ Recommending Committee/Any report by competent authority based on which works is proposed to be undertaken)##</td></tr>
<tr><td>14. Estimated cost</td><td>Rs. ____ (Hard Cost-Supporting details)
Rs. ____ (Total Cost with IDC and Contingency)</td></tr>
<tr><td>15. Time Frame of the expenditure</td><td>Completion Period___ months<table><tr><th>Year</th><th>Capex (Rs.)</th><th>Capitalization (Rs.)</th></tr><tr><td>1 (FY _____)</td><td></td><td></td></tr><tr><td>2 (FY _____)</td><td></td><td></td></tr><tr><td>3 (FY _____)</td><td></td><td></td></tr><tr><td>…</td><td></td><td></td></tr></table></td></tr>
<tr><td>16. Funding arrangement</td><td><table><tr><th>Source of Funds</th><th>Amount (Rs.)</th><th>Share (%)</th></tr><tr><td>Debt</td><td></td><td></td></tr><tr><td>Equity</td><td></td><td></td></tr><tr><td>Grants</td><td></td><td></td></tr></table></td></tr>
</table>

	Consumer Contribution/ Deposit Works		
	…		
	TOTAL		**100%**

_____(Name of Bank/FI from which loan is expected with expected Interest rate)

_____(In case of fully/partially grant funded scheme, same may be mentioned along with the agency providing the grant and documentary proof of grant provided)

_____(In case of funding through deposit works, justification to be provided that the work which is implemented is as per Supply Code/SOP etc.)

_____(Proof of infusion of Equity if any)/(In case of funding through Internal accruals, the same is to be mentioned)

17.Benefits

_____(% reduction in Tariff over a period of __ years, etc.)

_____(% reduction in Loss over a period of ___years, etc.)

_____(Reduction in SHR from ___ to ____)

__% Additional sale of energy

----Augmentation of the system.

For existing infrastructure –

A. ... S/s will get load relief of ... MW. Thus, S/s capacity addition will not require in next ... years. (So, if no sudden growth is observed triggering additional requirement, capacity addition will not be financially added in ARR even though executed earlier)

System Improvement % VR of .... Feeder (name) will be reduced to .....Any other kind of Benefit (quantifiable)

18. Overall cost-benefit analysis	Comparison of capital cost & corresponding tariff impact with above benefits, and analysis in terms of payback period, IRR, NPV, other financial parameters for project assessment, etc.

**** - STU / MSETCL must prepare Map of complete InSTS every year showing all existing and proposed infrastructure in Map as per the plan updated every year. Position for Proposed scheme must be properly marked on the State Map. In case of any instantaneous proposal, STU / MSETCL must update the State Map first and upload it on website and then issue the approval of STU for the scheme. There should not be any conflict for any existing lines / infrastructures shown on the Updated Map.**

- In case of replacement of existing assets considering obsolescence, Utility needs to get the detailed explanation from OEM regarding the hurdles to keep existing assets with the life extension measures and also justification to declare assets as obsolete like errors in particular parts, Company policy to change product, hard for company to get associated parts, etc.

2. PART II (Particulars to be furnished for justification of works)

1. Need of the investment	_____(Loss reduction, increase in reliability, to fulfil new supply/load growth requirement, Creation of back up Facility(Redundancy, Reliability, Augmentation of the system in terms of increase in capacity , N-1 compliance, Statutory Compliance, etc.)) _____(The scheme shall be supported by the results of the load flow study or any other appropriate tools, study report/ OEM/Expert recommendation/impact of the scheme on network performance, MoEFCC/MOP/CEA Notification/Guidelines, etc.)
2. Urgency of the Project	_____(Priority to be submitted for implementation of work) (i.e., High/Medium/Low) _____(Basis on which the priority is decided by the Applicant with detailed justification) _____(Possibility of deferring the investment) _____(Consequential impact, if any, of deferring the capital investment on the Applicant)
3. Scheme for revised approval / scope / cost	Compare earlier urgency and present urgency. Other way to utilized partially installed assets through earlier DPR. Clarification how the existing system is withstanding although earlier approved scheme is not executed in time? Detailed reasoning for the change/ modification / revision in scope and cost along with the documentary proof
4. Proposed Capital Investment Scheme	_____(Applicant to provide justification on why the proposed capital investment is to be considered under Capex approval and not under Opex or Repairs and Maintenance works based on the definition of Capex specified in the Regulations) In case of revision in cost/ quantity –provide broad comparison of earlier and present costs. Justify cost / quantity increment.
5. Technical Justification	_____(Submission of report of OEM/ Independent Consultant/Third Party stating the need for investment)

<table>
<tr><td></td><td>Clarify each type of test undertaken for checking the assets (As recommended by CEA or any competent authority) to be declared as showing sign of deterioration or obsolescence. Also provide benchmarks of specific authority for same.

Clarify whether life extension is possible or replacement is only option available. Provide detail analysis for life extension.

_____(Submission of Field Reports/Surveys stating hindrances in regular operations of Applicant and how this investment will help in eradication of such hindrances)

_____(Submission of justification how this investment will help in improving the performance/operational efficiency of the Applicant)

_____(Other Technical justification such as necessary to meet planning criteria of CEA, Report/Recommendation of Expert Agency, provisions of Supply Code/Grid Code/Other mandatory rules/guidelines notified by MoEFCC/MoP/CEA or to comply with the Regulations of the Commission)

----If the scheme is for replacement of the existing assets, then then Past major occurrences /failures. History of major overhauls and to justify the assets are beyond repairable.

Prudency of the technical specifications as per market trend</td></tr>
<tr><td>6. Financial Justification</td><td>_____(How the investment is going to give the desired returns or savings in future)

_____(Long term benefit to be shown in terms of increase in revenue/income or savings in cost after the implementation of investment)

----Treatment of the old assets if the scheme is for replacement of the assets.</td></tr>
<tr><td>7. Consent of M-DNAC</td><td>_____(In case of network laying in parallel license area, whether the approval of M-DNAC has been received)</td></tr>
<tr><td>8. Plan of other Transmission Licensees /CTU</td><td>---- Plan of other Transmission Licensees (InSTS) and CTU etc need to be considered to avoid duplication of work.</td></tr>
<tr><td>9. Phasing of Investment</td><td><table><tr><th>Year</th><th>Capex</th><th>Capitalization</th></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr></table></td></tr>
</table>

<table>
<tr><td></td><td><table><tr><td></td><td></td><td></td><td></td></tr></table></td></tr>
<tr><td>10. Statutory / Safety Requirement</td><td>Whether the investment is required to comply with any duty/obligation under EA 2003 or to meet any safety / statutory requirement? (With supporting Document)</td></tr>
<tr><td>11. Cost Assessment/Cost Break-up.(Detailed breakup of each head is required. Utility may attach separate sheets with the excel working documentary proof justifying the rate reasonability)</td><td><table>
<tr><td>Particulars</td><td>Unit (No.)</td><td>Rate (in Rs.) *</td><td>Amount (in Rs. Lakh)</td></tr>
<tr><td>Item 1</td><td></td><td></td><td></td></tr>
<tr><td>Item 2</td><td></td><td></td><td></td></tr>
<tr><td>…</td><td></td><td></td><td></td></tr>
<tr><td>Erection/
Civil Cost</td><td></td><td></td><td></td></tr>
<tr><td>Total</td><td></td><td></td><td></td></tr>
<tr><td>Contingency (@___% of Total)</td><td></td><td></td><td></td></tr>
<tr><td>Grand Total</td><td></td><td></td><td></td></tr>
<tr><td colspan="4">*Unit rate as per cost sheet data</td></tr>
</table></td></tr>
<tr><td>12. Least Cost analysis</td><td><table>
<tr><td>Works considered by Applicant to meet the same purpose/objective</td><td>Estimated Cost and Quantified Benefit of Investment in each case (economic, technical, and environmental)</td></tr>
<tr><td>Alternative 1</td><td></td></tr>
<tr><td>Alternative 2</td><td></td></tr>
<tr><td>Alternative 3</td><td></td></tr>
</table>
Alternative ___ with the lowest estimated cost and the highest quantified benefit is to be adopted.</td></tr>
<tr><td>13. If not and If Deferred Analysis</td><td><table><tr><td>If Not</td><td>Merits: __
Demerits: __</td></tr></table></td></tr>
</table>

	<table><tr><td>If Deferred</td><td>Merits: __ Demerits: __</td></tr></table> Detailed calculations for investment not done or deferred to be shown.
14. Cost Benefit Analysis	1. Investment Cost vs. Benefits analysis 2. ROI from Beneficiary/Consumer Point of View (Comparison of tariff without the proposed investment vs. with the proposed investment) 3. Target Objective (Year wise Projection) 4. Year wise Tariff impact due to Investment in terms of % of ARR and Rs./kWh 5. Payback Period, NPV, IRR and other Financial Parameters for project assessment 6. Justification for cost increment due to proposal for only any specific quality product or increased no. of quantity than normally required. Justify, why alternatives cannot be possible.
15. Methodology of Put to use of the asset and computing Percentage utilization of Project	_____(Documentary evidence that shall be submitted at the time of final approval as proof of put to use after completion. For e.g. Electrical Inspector Certificate/Metering data, / Load on the assets, etc.) _____(projected loading pattern for first 5 years) _____(Documentary evidence that shall be submitted at the time of final approval as proof of Utilisation for e.g. Transformer loading/Sub-station loading/ % VR reduction / Balance state for other Substations, etc.)
16. Constraints	1.Technical, Physical and Financial constraints, if any, in execution of the Scheme may be highlighted. 2. Uncertainties or risks involved in the investment. Fall back options/mitigation measures planned by Applicant if these uncertainties/risk occur. 4. Risk Mitigation plan proposed by the Applicant. 5. Delays, both Controllable and uncontrollable 6. RoW Issues/Land availability/Forest Area/Delay in other clearances, etc. 7. Activity wise time bound plan to obtain the various approvals/clearances. Alternatives.

	7. Other constraints (if any)
17. Inclusion in STU Plan/Licence for Transmission Projects. Recommendation of the Transmission Planning Committee as provided in the Grid Code .	_____(Documentary Evidence to be provided for inclusion of this capex in STU Plan/Transmission Licence)
18. Works intended for adaptation of latest Technology/ Improvement/Upgradation of Existing Infrastructure	_____(Conditions specified in the Regulations needs to be satisfied for taking up such work) Justification for urgency to implement change. Detail checks for keeping existing one asset till completion of its useful life. _____(In case above conditions are not satisfied, then Licensee to show readiness with documentary proof from local body/ authority for recovery of such investment invariably from those consumers who are benefiting from these improvement/upgradation works) _____(Cost Benefit analysis of latest technology w.r.t existing technology) _____ (Balance useful life of existing assets proposed to be replaced/upgraded) -----(Basis/assessment for replacement of the existing assets)
19. Upstream/Downstream arrangement	_____(Upstream/downstream arrangements for proposed capex) _____(Proof of upcoming upstream/ downstream network already in progress of work proposed to be taken up) _____(Proof of progress of upstream/ downstream network if work is already started) _____(If not started expected date of start of work and expected date of completion for interconnecting network) _____(Documents conveying necessary co-ordination to be done with G-T-D for such capex as mandated in the Regulations before filing for Capex approval and during the progress of the work, viz., Consent/Agreement Letter from respective interconnecting Genco/Licensee).

	--------(Declaration that Transmission Licensee has not considered the scope of the Distribution Licensee in its scope of work (Ex. EHV SS , land for Distribution SS , office etc)
20. Statutory Clearances and Project Layout	1. Approval from Competent Authority 2. National Green Tribunal (NGT) clearance, if applicable 3. Clearance if acquired such as Forest, Aviation, Defence , CRZ , Wild Life, Salt land, Mangroves , Local bodies etc and tentative plan to obtain such approval or at least application for forest clearance filed 4. SLD, Grid maps, Diagrams/Project layout, etc. 5. SLD to clearly indicate in different colours the existing diagram and proposed diagram after implementation of capex 6. Proof of land acquisition if any or any other documentary proof of ongoing negotiations/intention to sell/lease land to be provided. In case of lease land – proof of non-availability of Govt. Land. Clarify steps taken for getting Govt. Land on priority. 7. RoW clearances if acquired or Progress made on getting RoW clearances. Also, alternatives to be provided if RoW is not achieved on the proposed area/route. 8. PERT Chart for Project Implementation and possibilities of delay with fall back plan in case of delay (All these submissions to be provided as Annexure)
21. Detailed Survey	_____(Survey Report to assess the project requirement and highlight difficulties in project execution/scope / route etc.)
22. Past Trends and Future projection	_____(Actual trend in last five years of the components/loading / parameters/cost relating to the proposed capex(based on which is the scheme is proposed) vis-a-vis future projection for 5 years after implementation of capex) For e.g. If the scheme is for improvement of performance say increase in capacity to avoid overloading of system, then past and future expected trend of loading, voltage profile, losses, etc., to be provided
23. Detailed Justification for quantity proposed	_____(Justification for quantity required against the proposed scope of work) _____(Validating the quantity proposed with the help of SLD/Survey report etc.)

24. Check list of the documents appended	----Check list with appended documents to be appended. (All documents to be numbered.

FORMAT FOR APPROVAL OF CAPITAL INVESTMENT SCHEME BY THE COMMISSION

1. Scheme Approval Code	
2. Name of Applicant	_____(Name of the Applicant proposing to do the capex)
3. Name of the Capital Work	_____(E.g.Construction of 400/220kV Substation at ____, Construction of 220kV Transmission line at ____)
4. Category of DPR	_____(Under which of the categories specified in the Regulations, does the proposed work fall under)
5. Objective of the Capital Investment	_____(Overall objective of the work to be specified - like system strengthening, system augmentation, replacement of assets, Renovation Modernization, etc.)
6. Whether the works can be considered as Capex or not	_____(After assessment of proposed works and based on the justification provided by Applicant, decision on whether the works can be considered as Capex)
7. Single line diagram	_____(Comments based on SLD on how the investment is proposed to benefit in the long run.)
8. In-feed / Upstream-downstream arrangements	_____(Letter of confirmation from G-T-D for which in-feed is being arranged or not. Comments on proper arrangement if available or not? Also, any progress made on the in-feed arrangement)
9. Past five years trends and five year projection of the parameters based on which the scheme is proposed	-----Past five years trends and five year projection of the parameters based on which the scheme is proposed

<table>
<tr><td></td><td>Ex. Loading details, loss reduction, Power Factor, Station Heat Rate, etc.</td></tr>
<tr><td>10. Statutory Approvals</td><td>_____(Whether Land/Right of way/ other approval are available. If not, whether methodology for acquiring the same is given or not?)</td></tr>
<tr><td>11. Phasing of Investment</td><td><table><tr><th>Year</th><th>Capex</th><th>Capitalization</th></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr></table>Likely Completion date:</td></tr>
<tr><td>12. Cost Assessment</td><td><table><tr><th>Particulars</th><th>Unit (No.)</th><th>Rate (Rs. /unit)*</th><th>Cost (in Rs. Lakh)</th></tr><tr><td>Item 1</td><td></td><td></td><td></td></tr><tr><td>Item 2</td><td></td><td></td><td></td></tr><tr><td>…</td><td></td><td></td><td></td></tr><tr><td>Erection/Civil Work</td><td></td><td></td><td></td></tr><tr><td>Total</td><td></td><td></td><td></td></tr><tr><td>Contingency (@__% of Total)</td><td></td><td></td><td></td></tr><tr><td>Grand Total</td><td></td><td></td><td></td></tr><tr><td colspan="4">* Per unit rates as per cost sheet</td></tr></table></td></tr>
<tr><td>13. PERT Chart</td><td>_____(PERT chart with comments on
1. Completion stages
2. Contingency plan for delay)</td></tr>
</table>

14. Deposit/grant funded	_____(If project is funded by Consumer Contribution, Comments on compliance of Supply Code Regulations in implementation of project) _____(If Project is Grant funded, comments on availability of all documentary evidence and funding arrangement)
15. Part of CEA System Plan/STU Plan/Transmission Licence	_____(Whether transmission project is part of CEA's overall system planning study as well as the STU Plan and Licence)
16. Least Cost analysis	_____(Whether Least cost analysis is submitted and its prudence. Assessment of all possible alternatives to the proposed capex as submitted by Applicant. Assessment of Cost Benefit Analysis of the proposed project and its comparison with possible alternatives.)
17. Approval of Competent Authority designated by the Board of Directors of the Company	_____(Whether Project is approved by Competent authority (delegated by Board of Directors))
18. Effectiveness of the proposed system	_____(Whether it meets at least the near future demand growth projections (in case of new infrastructure) Whether it would be able to provide the benefit claimed in the DPR)
19. Whether safety/statutory requirement	_____(Is Investment necessary to discharge the duties / obligations as per EA 2003 or to meet any other statutory or safety requirement?)
20. Safeguards from violation of Electricity Act, 2003	_____(Is the investment likely to constitute or result in violation of any of the provisions of the EA 2003, and if so, the safeguards)
21. Technical justification	_____(Whether the Project necessity is supported by any technical study like Load flow analysis, OEM/Third Party Report, Field report on shortcoming of existing assets, justification provided by Applicant for new investment, etc.)

<table>
<tr><td>22. Asset replacement criteria compliance</td><td>_____(Whether proposed capex meets Asset replacement criteria)</td></tr>
<tr><td>23. Upgradation of Existing Technology/Improvement works</td><td>_____ (Whether proposed capex meets the criteria specified in the Regulations

If not, whether the Licensee has submitted consent from the consumers benefitting from the same for recovery of cost of such investment)</td></tr>
<tr><td>24. Clubbing of Schemes</td><td>_____(Whether the clubbing of Schemes, if any done by the Applicant is within the scope of the Regulations (Clubbing allowed in some cases))</td></tr>
<tr><td>25. Consent of M-DNAC</td><td>_____(In case of network laying in parallel license area, whether the approval of M-DNAC has been received)</td></tr>
<tr><td>26. Plan of other Transmission Licensees /CTU</td><td>---- Plan of other Transmission Licensees (InSTS) and CTU etc need to consider to avoid duplications of work.</td></tr>
<tr><td>27. Prudence of Cost estimate</td><td>_____(Whether Cost estimate is based on rates of Cost Sheet? If not, whether reason is justified)</td></tr>
<tr><td>28. Verification of Scope of Works proposed</td><td>_____(Whether the scope of work proposed is necessary to meet the objective of the Project and whether quantity is proposed is in line with the scope of work). To ensure that only necessary scope of work is proposed.</td></tr>
<tr><td>29. Proposed Funding</td><td>_____(Is proposed funding of Loan by Bank/FI and/or infusion of Equity by Applicant in line with phasing of execution of works?

Whether Interest rates are in line with prevailing market rates or existing actual interest rates of Applicant?)</td></tr>
<tr><td>30. Impact of proposed Capex on Tariff</td><td><table><tr><td>Year</td><td>Year 1</td><td>Year 2</td><td>Year 3</td><td>Year 4</td><td>Year 5</td></tr></table></td></tr>
</table>

	Tariff Impact | | | | | |
31. 'IF not' and 'IF deferred' analysis.	_____(Negative impact, if any, if the proposed capex is either not carried out or is deferred for some period)
32. Third Party Verification	Whether physical verification of Project by third party is required?
33. Specific Directives to the Applicant	Based on the analysis, any specific directives to the Applicant in the approval letters.

APPENDIX 2: Guidelines for Procurement of material through Competitive Bidding

1. The Applicant shall invite and finalise tenders for procurement of equipment, material and/or services with a transparent, competitive, fair and reasonable procedure. Applicant to resort to open tendering for all types of procurement and shall not resort to procuring it only from the registered vendors.
2. Advertisement in the form of Tender Notice should be given in at least two national dailies having wide circulation and be posted on the Applicant's website and reputed Tendering website.
3. Minimum time to be allowed for submission of Bids should be three weeks (four weeks in case of Global Tender enquiry). Deadline may be extended if less than 3 bids are received.
4. Tender Notice should contain description, specification and ceiling price of the goods and quantity; period and terms of delivery; cost of the tender/bidding document; place(s) and timing of sale of tender documents; place and deadline for receipt of tenders; place, time and date for opening of tenders; amount and Form of bid security / earnest money deposit; any other important information.
5. Tender document should clearly mention the eligibility criteria such as qualifications, minimum experience, past performance, technical capability, manufacturing facilities, financial position, ownership or any legal restriction, etc., as applicable.
6. The procedure for preparing and submitting the tenders; deadline for submission of tenders; date, time and place of public opening of tenders; requirement of earnest money and performance security guarantee; parameters for determining responsiveness of tenders; evaluating and ranking of tenders and criteria for full or partial acceptance of tender and conclusion of contract should be incorporated in the tender enquiry in clear terms.
7. Tender document shall be issued with bifurcation of receipt of quotations in two parts. The first part is to contain the relevant technical specifications and allied commercial details as required in terms of the tender documents and the second part should contain only the price quotation. The first part is commonly known as "Technical Bid" and the second part "Financial Bid". The Technical Bid and the Financial Bid should be sealed by the tenderer in separate covers duly superscribed and both these sealed covers are to be put in a bigger cover, which should also be sealed and duly superscribed as explained above. First, the technical bids are to be opened at the prescribed time and date and the same will be scrutinized and evaluated by the committee of officers/competent authority of the Applicant with reference to parameters prescribed in the tender documents and the offers received from the tenderers. Thereafter, in the second stage, the financial bids of only the technically qualified bidders are to be opened for further scrutiny, evaluation, ranking and placement of contract.
8. Where the price has several components like price of the goods, costs for installation and commissioning, operators' training, etc., the tenderers should be asked to furnish the cost break-up indicating the applicable prices for each such component (as specified and

desired in the tender document) along with overall price. The tender documents are to specify the currency (currencies) in which the tenders are to be quoted (priced).

9. In order to obviate delays, a committee of officers of the Applicant representing finance, Stores, Purchase, indenting department, etc., may be constituted at levels appropriate to the value of the procurement, which will open, process, evaluate and give its detailed recommendations to the competent authority within the Applicant.
10. Tenders should be opened immediately after the deadline of receipt of tenders with minimum time gap in between in the presence of the representatives of the tenderers if they present themselves. Quotations sent by e-mail, telex, cable or facsimile are to be ignored and rejected. Minimum three bids should be considered for the purposes of technical evaluation.
11. All the tenders are to be evaluated strictly on the basis of the terms and conditions incorporated in the tender enquiry document (based on which offers have been received) and the terms, conditions etc. stipulated by the tenderers in their tenders. No new condition should be brought in while evaluating the tenders.
12. Important events connected with the tendering process and the selection of the bidder shall be immediately uploaded on the notice board/web site, for eg, the bidders who qualify in Part – 1 (i.e., technical bid in case of two-part bid), the successful tenderer to whom the contract is awarded, etc. After placing the Order with the successful bidder, the Purchase Order shall be posted on the web site of the Applicant.
13. Negotiations with the tenderers are to be avoided. However, where considered necessary, price negotiations may be resorted to, but only with the lowest evaluated responsive tenderer, and that too with the approval of the competent authority of the Applicant, after duly recording the reasons for such action.
14. Retendering may be resorted to if there is no adequate response to the Tender advertisement or the L1 prices are substantially higher in comparison to the estimated cost and negotiations have not met with positive results and/or in case of suspicion of cartel formation after receipt of quotations.
15. Single Tender Enquiry should be resorted to only in unavoidable situations with the approval of the competent authority of the Applicant and the reasons for arriving at such decision are to be recorded in cases where:
    a. It is known that only a particular firm is the manufacturer of the required goods. A Proprietary Article Certificate may be provided before procuring the goods from a single source indicating the reasons for resorting to such type of purchase, the financial concurrence and approval of competent authority of the Applicant obtained etc.