

Teestavalley Power Transmission Limited

(CIN: U40109DL2006SGC151871)

Government of Sikkim Enterprise

JV of Sikkim Urja Ltd. (Govt. of Sikkim Enterprise) & POWERGRID (Govt. of India Enterprise)

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TPTL/CERC/2023-24/20230731

Dated:31.07.2023

To,
The Secretary,
Central Electricity Regulatory Commission (CERC)
3rd & 4th Floor, Chanderlok Building,
36, Janpath, New Delhi-110001

Sub: Comments on Approach Paper on Terms & Conditions of Tariff Regulations for Tariff Period 01.04.2024 to 31.03.2029.


Sir,


Teestavalley Power Transmission Ltd (A Govt. of Sikkim Enterprise), Joint Venture of M/s Sikkim Urja Limited (formerly M/s Teesta Urja Limited) and M/s POWERGRID, is entrusted with the implementation and operation of 400 kV D/C Teesta III- Kishanganj Quad Moose transmission line along with 2 nos. line bays and 2 nos. 63 MVAR switchable line reactors at Kishanganj switchyard as a part of the master plan for evacuation of power from 1,200 MW Teesta III HEP as well as other Hydro-Electric projects in the State of Sikkim. The transmission line was commissioned in February 2019 and is in operation since then.

The Hon'ble Commission vide its orders in (i) Petition No. 108/TT/2016 dated 15th May 2018 (ii) Petition No. 368/TT/2018 dated 22nd Jan 2020, and (iii) Petition No. 96/TT/2019 dated 9th Aug 2020 and (iv) Petition no. 35/TT/2021 dated 22.03.2022 determined the transmission tariff for the asset for control periods; 2014-19 , 2019 -24

The current tariff period will come to an end on March 31st 2024. We are thankful that opportunity has been given to the stakeholders to provide their comments while deciding the principles and methodologies to be adopted for tariff determination during the next tariff period commencing on 01.04.2024. Accordingly, the comments on the Approach paper are attached as Annexure-01.

Yours Sincerely,
For Teestavalley Power Transmission Limited


(Rajeesh Garg)
Chief Financial Officer



4.12 O&M Expenses

4.12.3 O&M Norms for Special Cases

Whether to approve additional O&M expenses for transmission assets being operated in N-E Regions and Hilly Region manner in which such additional costs need to be allowed?

- a. The Inter-State Transmission Line has been planned & constructed to evacuate the power from various large hydro projects located in Sikkim with capacity of ~ 2,900 MW. Presently, the line is evacuating power from Teesta III HEP (1200 MW), Rongichu HEP (113 MW), Dikchu HEP (96 MW), Jorethang HEP (96 MW), Tashiding HEP (97 MW) & Chuzachen HEP (99 MW). The line also evacuates power from Teesta V HEP (510 MW) under contingency. Therefore, currently the line is being utilized for evacuating about 2300 MW from these Hydro Generating Stations in Sikkim. Due to the unique and critical nature of the line, it is needed to maintain the transmission Line with minimum breakdown so that the highest reliability and availability of the ISTS line could be achieved.
- b. Almost a half of the line route including 300 nos. towers falls in the difficult hilly terrain of Sikkim and Darjeeling Hills having steep slope with altitudes as high as 2600m. The towers are located in steep slope areas with huge overburden. As a result, the towers are vulnerable to landslides, rockslide, shooting stones, rock mass failure etc. The area is also highly earthquake prone. Also, it is pertinent to mention that the hills through which the line passes are of Great Himalayan range, Shivalik range which are comparatively younger mountains and are still in growing stage.
- c. The other half of the line including 289 nos. towers, passes through plain terrain of Darjeeling District of West Bengal and Kishanganj District of Bihar, which is prone to storms, cyclones and high floods in Mahananda River which changes its course often.
- d. In spite of the difficult terrain, the ISTS line has been maintained at an average of 99.51% availability, for the past three financial years, and at 99.99% availability for the current FY 2022-23 which exceeds the operational norm specified by this Hon'ble Commission. The Operation & Maintenance of the entire ISTS Transmission Line (except substation equipment's installed at Kishanganj S/S of POWERGRID) is being carried out by TPTL on its own by in-house team of skilled Engineers & Fitters. It is to mention that such high standard of operation & maintenance of the line entails incurring additional Employee expenses and other O&M expenses comprising repair and maintenance and administration and general expenses as below:-

Protection of Tower Foundations:

As mentioned above, in Hilly terrain the towers are located in areas having steep slope and huge overburden, the towers are vulnerable to landslides due to failure of slopes. In order to protect the foundation of towers extensive civil works are taken up every operation year. The works are carried out by continuous monitoring of all the towers, identifying civil works to be taken up and execution of the civil works through competent agencies/vendors. The following civil works for protection of tower foundations include the following:-

- i. Construction of protection walls of Gabion wire mesh type which includes benching works, supply of Double twisted hexagonal Gabion wire mesh cage supply of boulders for filling in wire cage, soling & concreting works for base of the walls etc,
- ii. Drain construction at all the tower pits to divert the natural surface run off in the hill slopes and prevent the accumulation of water at tower pits,



- iii. Backfilling of soil works at tower pits , wherever soil erosion has been observed, to maintain adequate clearance
- iv. Chimney extension works, stub strengthening works for critical towers in high landslide prone zone,
- v. Constructions of access footpaths for movement of materials, machinery & manpower to towers located deep in the valleys.
- vi. Copping works

Also in Plain terrain , for towers which are located near rivers , protection walls are constructed to prevent the scouring of the river banks. For towers which are located in paddy fields , chimney extension works carried out to maintain minimum copping clearances.

Further expenditure is also incurred for upkeep and maintenance of the protection structures constructed for tower foundations. The civil works are repetitive in nature owing to the terrain of the line, for instance the protection wall works , backfilling of soil , benching works, upkeep of drains of tower pits etc. are periodically carried out as the area is susceptible to landslides which often cause damage to the protection structures, blocking of drains, depositing of excess soil , wash out of the access paths to the tower locations.

To execute these works, rate contracts for protection of towers are entered into with competent agencies/vendors every operation year. These works are executed at considerable expenditure as generally the input costs of labour, material & machinery are high on account of difficult terrain in the hilly region.

Trimming/Lopping works for Maintaining Clearances

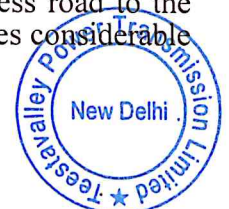
The corridor of the transmission line has abundance of rapidly growing trees & vegetation including bamboos, creepers etc. as the area is prone to high rainfall. This necessitates frequent clearance of the vegetation by extensive patrolling enroute the line for which expenditure is incurred on continuous basis. Further , as these lands are owned by the local people who also cultivate crops in these areas, landowners at some instances do not allow trimming/looping of the trees, vegetation etc. In such cases, the local authorities are approached for issuance of directions on the same. At many instances , compensation for trimming/looping of trees and vegetation is also paid as directed by the local authorities. The fitters , labour etc. for the work are required to be be paid higher man-day rates due to hilly terrain when compared to work in plain terrain.

Condition monitoring of Tower Foundations

Being the youngest mountain, the Himalayan Region through which the line passes is a area of high Neo- Tectonic activity which may causes periodic tremors & earthquakes. As most of the foundations in the hilly section of the line were completed around 10 years ago, there could be possibility of differential settlement of the foundation area. TPTL has adopted the practice of continuous monitoring of ground levels of the tower foundation area encompassing all the tower pits & foundation protection structures by carrying out survey and updating contour levels of the area. For carrying out survey works additional expenditure is incurred every operation year.

Higher Administrative expenses for Higher patrolling frequency in Hilly Terrain

As submitted in the preceding paras, the line traverses through difficult hilly terrain of the Himalayan region. For maintaining availability of the line in the hilly terrain, the frequency of patrolling the towers is high to continuously monitor any growth of vegetation enroute the line sections, observe any changes at the tower foundations etc. As most of the towers in the hilly section are located deep jungles , dense forests, the patrolling team including section officer and fitters carrying required T&P reaches the nearest access road to the tower and thereafter has to carry on foot to reach tower location which takes considerable



time. To cater to such high patrolling and keeping in view difficult access, additional manpower and patrolling vehicles have been deployed in the line section falling in hilly portion. As the area is remote, this results in higher expenditure on account of basic amenities, manpower deployment, transportation of manpower, materials, T&P etc. to carry out the line operation and maintenance works. If the same methodology is not implemented, then in case of outage of the line, the restoration time will be much high affecting the availability of the line.

In view of the above, it is suggested to allow additional expenses based on actual expenditure being incurred for repair & maintenance of the line in difficult terrain.

4.12.3 O&M Norms for Special Cases

Insurance Expenses

Insurance policies are taken for complete transmission system including substation, Stores from authorized insurance agencies. The expenditure incurred against the insurance premium for the line is as below:-

Rs in Lakh			
S.no	Year	Premium Expenditure in in Rs	Insurance Premium as percentage of O&M expenses
1.	2019-20	124.66	33%
2.	2020-21	227.08	59%
3.	2021-22	298.83	75%
4.	2022-23	316.26	76%

The normative O&M expenses as notified by the commission for the tariff block is inclusive of insurance expenses. It is observed that the insurance expenses itself accounts for substantial part of the O&M expenses (almost to the tune of 75%) allowed by the commission.

In view of the above, it is suggested to allow separately on the basis of actual expenditure incurred on account of insurance expenses of each Financial year.

4.12.3 O&M Norms for Special Cases- Additional comments

It would be appreciated that TPTL being a separate legal corporate entity, by virtue of its creation as a company under the Companies Act 1956 and requires a fixed cost to be incurred for the purpose of complying with statutory formalities, it has to discharge and comply with all Statutory Laws and regulations. It is also expected that TPTL should follow corporate governance, for which Corporate Office with Managing Director, Director (Projects), Company Secretary, Chief Financial Officers etc and others KMPs are minimum required. These expenses are fixed in nature and remain same irrespective of the level of Operation & Maintenance activities. Being a Single line asset company of TPTL's corporate office cost is distributed not only on the transmission lines but also on its substations and other business activities like consultancy. Against the approved O&M Expenses for maintenance of the asset an amount of Rs. 1,465.16 Lakh, Rs. 1,548.51 Lakh and Rs. 1,658.30 Lakh has been actually incurred by for FY 2019-20, FY 2020-21 and FY 2021-22 respectively for maintenance of the asset. The O&M charges that have been allowed by the commission for FY 2019-20, 2020-21 & 2021-22, 2022-23 are around 26%, 25% & 24% of the actual O&M expenditure incurred by TPTL for the respective financial years.



O&M Expenses approved by the Commission				
Year	2019-20	2020-21	2021-22	2022-23
Approved (in Lakhs)	374.25	387.30	400.90	415.04
Actual (in Lakhs)	1,465.16	1548.51	1658.30	1664.45

TPTL is a single project company, which is spread over 215 Km (430 CKT km), which requires more project offices to maintain the line in Hills & Plain .TPTL is the maintaining one of the most difficult transmission line and is into O&M of transmission line. We strongly recommend that O&M cost shall be fixed as percentage of project cost or Gross Block instead of per Km. We recommend a maximum percentage of 1.5 to 2 % of the Gross Block in case of transmission line and 2.5 to 3 % in case of substations subject to actual expenses incurred by the transmission licensee. As this is subject to prudence check by the Hon'ble Commission it would ensure adequate maintenance of the transmission line.

In view of the above, we strongly opine that O&M cost of multi circuit owner cannot be same with a single project company like TPTL, which is efficient in its working but lacks economies of scale. The present O&M norm may not only jeopardize the operation of the line but availability of the line will be seriously affected because of low O&M cost. Since, the TPTL transmission line from Teesat-III to Sikkim to Kishanganj is an important link between Eastern region, it is suggested that O&M norms may be considered separately in case of TPTL taking into account its inherent limitation due to size of operation. It is reiterated that TPTL is maintaining high efficiency in operation and maintenance cost in its given situation.

It may be noted that CERC has considered an escalation rate of 3.51% for giving increase in O&M expenses on Year and Year (YOY) basis. This rate is far less than the prevailing inflation rate of 6 to 7 % per annum.

4.12.4 Inclusion of Capital Spares

The 400 kV Teesta III – Kishanganj D/C transmission line alongwith 2 nos. line bays and 2 nos. switchable line reactors of TPTL were commissioned in February 2019 and is under successful operation & maintenance since then.

It is submitted that the spares for Transmission lines broadly include the following:

S.no	Material Description
1.	Tower Material
2.	Bolts & Nuts
3.	Conductor
4.	Earthwire
5.	Hardware Fittings & Accessories

The spares consumed for the asset of TPTL in the past 5 years of operation have been continually around Rs. 5 lakh. Therefore, spares with value less than Rs. 20 lakhs if made part of normative O&M expenses, majority of expenditure on account of consumption of spares of TPTL would not be capitalized. It is, therefore prayed that all expenditure at actuals towards consumption of spares for transmission lines be allowed to be capitalized for transmission assets.

It Is submitted that in the O&M of the transmission lines, hardware fittings, accessories of conductors, insulators, assorted tower members are consumed, the combined value of which often doesn't exceed Rs. 20 lakhs, as is evident from the trend of consumption of spares for transmission line of TPTL. Therefore, it would be highly appropriate if the consumption of



spares at actuals be allowed to be capitalized instead of keeping a ceiling limit of Rs 20 Lakh in case of transmission line company.

Even in case of substation bays & reactors, the consumption of spares doesn't exceed Rs. 20 lakh, as recommended in the Approach Paper.

In case of transmission utilities having multiple assets including numerous transmission lines and substations, the expenditure towards consumption of spares would exceed Rs. 20 lakhs. However, in case of utilities with a single asset, such limit on capitalization prohibits these utilities from recovering their expenditure towards consumption of spares for efficient O&M of their assets.

It may also be mentioned that TPTL is maintaining the 400 kV Teesta III – Kishanganj transmission line with the following availability during the last 4 financial years.

Financial Year	2019-20	2020-21	2021-22	2022-23
Availability	98.80%	99.76%	99.98%	99.99%

In view of the above, it is prayed that in case of single asset transmission companies a suitable lower limit be specified (say Rs 5 Lakh) for expenditure towards consumption of spares for transmission line as well as substation bays & reactors to be allowed to be capitalized.

4.7 Initial Spares

It is submitted that the transmission line of the petitioner passes through extremely difficult hilly terrain of altitude as high as 2600 m in the North District, East District & South District of the State of Sikkim and Darjeeling District of the State of West Bengal, which is part of the Eastern Himalayan Region where frequent landslides/rockslides occur during monsoon season as well as in other seasons due to rock mass failure, overburden deposited along the hill slope etc. in the Eastern Himalayas. Also, these districts fall in highly earthquake prone zone. Further, the transmission line also passes through the Kishanganj District of the State of Bihar where frequent storm, cyclone, tempest, hurricane, typhoon, high flood along the bank of the Mahananda river occur during the month of June to September in a year.

It may be mentioned that National Highway – NH 34 which connects the State of Sikkim to the rest of the country remains closed sometimes during monsoon due to landslides/ rockslides. Also, due to frequent Gorkhaland Statehood Movement, the NH-34 remains closed and thus the movement of materials from the State of West Bengal to the State of Sikkim is hampered.

In view of the fact that this is the only line owned by TPTL and by considering the special features of the geographical area through which the only available 400 kV Double Circuit Quadruple Moose transmission line passes and evacuates power of upto 2300 MW from large Sikkim Hydro Generating Complex to the rest of the country, two (2) nos towers on complete tower basis for each type of angle towers and two (2) nos leg extensions & body extensions of each type for Sikkim, West Bengal Hills and West Bengal Plains & Bihar are required to be kept as capital spare. For suspension type towers in plain area, the number of towers in the longest section of the transmission line is required to be kept as capital spare on complete tower basis. This is due to the fact that during storm / tempest / hurricane / typhoon / cyclone, all the suspension towers between two Angle Points may damage/collapse.

Assorted members of tower was also required to be kept as capital spare for replacement of members due to theft, damage during lightning or any other atmospheric disturbances. It may be noted that there are seven (7) types of towers, namely DA, DB, DC, DD, DBH, DCH & DDH. In addition to the seven types of towers, there are additional six (6) types of reinforced towers, namely, DBR, DCR, DDR, DBHR, DCHR & DDHR. Also, there are +1.5M, +3M, +4.5M, +6M, +7.5M, +9M, -1.5M, -3M, -4.5M leg extensions and +3M, +6M, +9M, +18M, +25M, +30M body extensions in the transmission line in the States of Sikkim, West Bengal & Bihar.



In view of the above, the extra Initial spares were required to be procured along with standard requirement of the transmission line and the said procurement is part of the project cost approved by Board. Hence it is requested to kindly allow the capitalization of the initial spares in the light of the reasons mentioned above.

Tower Material: -

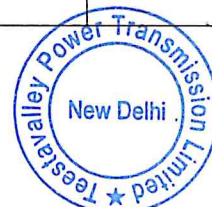
S. No.	Tower type	No. of Towers installed in Sikkim	Initial Spares
Sikkim			
1	DB & DBH	46	2 nos. Basic Body along with 2 nos. all Leg Extension & Body Extension of each type of Tower
2	DC & DCH	45	
3	DD & DDH	47	
West Bengal Hills			
1	DB & DBH	30	2 nos. Basic Body along with 2 nos. all Leg Extension & Body Extension of each type of tower
2	DC & DCH	50	
3	DD & DDH	53	
West Bengal Plains & Bihar			
1	DA	187	10 nos. Basic Body with all Leg Extension & Body Extension
2	DB	30	2 nos. Basic Body along with 2 nos. all Leg Extension & Body Extension of each type of tower
3	DC	22	
4	DD	52	

Conductor: -

State	Line Length (km)	Conductor installed (km)	Initial Spares (km)
Sikkim	57	1382	20
West Bengal Hills	51	1237	18
West Bengal Plains & Bihar	107	2594	37

Initial Spares for Hardware Fittings: -

State	Double I Suspension Insulator String	Single I Suspension Pilot Insulator String	Single Tension Insulator String	Quadruple Tension Insulator String	Accessories for Conductor & Earth wire
Sikkim	-	-	-	48	Lot



West Bengal Hills	-	-	6	48	
West Bengal Plains & Bihar	70	27	6	88	
Total	70	27	12	184	Lot

Insulators: -

State	Insulator (nos.) installed	Initial Spares (nos.)
Sikkim	8370	712
West Bengal Hills	6702	711
West Bengal Plains & Bihar	7340	590

Earth wire: -

State	Length (km)	Earth wire installed (km)	Initial Spares (km)
Sikkim	57	114	4
West Bengal Hills	51	102	4
West Bengal Plains & Bihar	107	214	6

It is also pertinent to mention that “*CEA GUIDELINES FOR AVAILABILITY OF SPARES AND INVENTORIES FOR POWER TRANSMISSION SYSTEM (TRANSMISSION LINES & SUBSTATION/SWITCHYARD) ASSETS*” mandates separate spare norms for transmission system elaborates mandatory spares to be kept for transmission lines based on different wind zones, cyclone / whirlwind prone areas. The guidelines state separate spare towers for each tower type along with spares for each type of body extension / leg extension to be kept as mandatory spare for transmission line.

It is further submitted that the 400 kV D/C (Quad) Teesta III – Kishanganj transmission line of TPTL is evacuating power of upto 2300 MW from the Sikkim Generating Complex and the transmission line section upto Rangpo LILO point is the only evacuating path of power from 1200 MW Teesta III HEP and 96 MW Dikchu HEP. Therefore, it is imperative that adequate spare towers be maintained by TPTL to address any exigent situation in this region. Due to same, three different stores are maintained for three different zones as below for quick movement of line spare materials.

- i. Sikkim Hills
- ii. West Bengal Hills
- iii. West Bengal & Bihar Plains

It is submitted that 1% limit of initial spares is not sufficient for TPTL as it is a single asset company. It is pertinent to note that being a single asset company, TPTL is bound to maintain the spares for the transmission line as against a company with multiple assets can maintain the same spares for the multiple assets which would lead to balancing out of the spare cost across the assets, therefore coming under the limit of 1% as specified by the CERC Regulations, 2019.

It is, therefore, pleaded that in view of the reasons as mentioned above, the initial spares for single asset companies be allowed to be capitalized at around 3 % of the Plant & Machinery



cost, which is a minimum for efficient operation & maintenance of the transmission line of single asset companies, with transmission line passing through multiple states and difficult terrains.

Substation:

In addition to the transmission line, TPTL also owns 2 nos. line bays alongwith 2 nos. switchable line reactors at Kishanganj GIS Substation of POWERGRID.

It is further submitted that as TPTL is a single asset owner, TPTL is bound to maintain the minimum level of mandatory spares for its bays & switchable reactors at Kishanganj GIS Substation. T

The limit of spares of 5%/7% (a specified in CERC Tariff Regulations, 2019) for GIS substation might be adequate for utilities owning entire substation with large nos. of bays / reactors as the utility has the liberty to maintain the spares, cost of which would be distributed across the different bays & reactors.

In case of single asset company as TPTL, the cost of spares to be maintained would be beyond the 5%/7% limit as specified in the CERC Regulations, 2019. As the transmission line is crucial for evacuating power from the Sikkim Hydro Generating Complex, it is imperative to maintain the spares as per spare norms, which would lead to an expenditure beyond the 7% limit as specified in the regulations.

Furthermore, many of the spares for GIS bays & reactors are make specific and the GIS bays for TPTL were supplied by an international vendor. Therefore, there is a considerable lead time for the procurement of these spares. Therefore, the limit of 3 years from COD of project, for additional capitalization of assets would not be fulfilled.

In view of the reasons as detailed above, it is pleaded that the initial spares for GIS Substations be allowed to capitalized at around 10-12% of Plant & Machinery cost, which would allow the single asset companies to recover the cost incurred towards procurement of the spares; also the cut – off for additional capitalization of assets from 3 years of COD may be re-visited and therefore, be revised to 5 years from COD for substation.



Comments on other aspects in the Approach Paper

S.No.	Related to	Details	Comments of TPTL
1.	3.2 Approach 1: Normative Tariff	<p>Under this Approach:</p> <p>(a) For existing projects, the components are clubbed under the head AFC and O&M expenses are provided separately for the Base Year (2024-25), whereafter, indexation rate is applied for balance period.</p> <p>(b) Upon expiry of tariff period, only indexation factor for O&M expenses shall be revised.</p> <p>(c) For additional capitalization, separate petition seeking approval of capital expenditure and once allowed the variation due to additional capitalisation can be serviced through computing the impact on AFC and adjusting the same through indexation mechanism.</p>	<p>It is submitted that this approach is not suitable to transmission projects on the following grounds:</p> <p>(a) This approach introduces indexation factor based on AFC components approved by CERC. Such AFC is also eligible for revision due to additional capitalisation. Considering AFC would be determined and subsequently revised due to additional capitalisation, indexation would become irrelevant and make computation cumbersome.</p> <p>(b) Filing separate petition for additional capitalisation and upon its approval, adjustment through indexation mechanism would result in revision of AFC, multiple times during the control period, depending upon the nature and urgency of additional capitalisation. It is suggested to continue with one-time interim revision during the control period and subsequently, actualize the same during true-up of next control period.</p>
2.	3.3 Approach 2: Performance Based Hybrid Approach	<p>This Approach seeks suggestions on whether this interest rate on loan can be fixed with linkage to the reference rate.</p>	<p>Linking the rate of interest on loan to some reference rate would not be advisable considering debt syndication of single asset projects involve assessment of various parameters by lenders and getting competitive lending rates are difficult. Reference rate would result in normalization of rate across the pool of transmission assets, which may be much lower than the actual rate of interest leviable to the transmission company. Accordingly, the existing mechanism of allowing</p>



S.No.	Related to	Details	Comments of TPTL
			actual rate of interest shall continue, which may be allowed based on certification by the project lenders/statutory auditors for reducing the task of computation of rate by CERC.
3.	4.2.3 Reference Cost for Approval of Capital Cost	Suggestions/comments are invited on other efficient reference costs other than Investment Approval costs for prudence checks	It is submitted that Investment Approval in case of transmission licensees are majorly done prior to commencement of construction, especially by a competent technical body. Such estimates are used for funding purposes. However, the tariff determination exercise is carried out around 6 months prior to COD. Considering the gestation period of 3-4 yrs., having two reference cost would make the regulatory certainty unattainable. Further, considering transmission lines go through various terrains and have multiple challenges like 'right of way', compensation, geographical terrain etc., it is difficult to benchmark its capital cost. As such, it is suggested to continue with the present approach of considering Investment Approval.
4.	4.13 Rate of Depreciation	It has been suggested that depreciation rate may be specified considering a loan tenure of 15 years instead of current practice of 12 years.	It is submitted that in case of transmission projects, the loan tenure as extended by lenders is around 12 years only. By revising/reducing the rates of depreciation based on 15 years, licensees shall face difficulty in repaying loan as sufficient corpus under AFC shall not be available. Accordingly, it is suggested to continue with the current norm of depreciation for transmission projects.
5.	4.16 Rate of Return on Equity	For computing the return on equity based on CAPM, following has been proposed: (a) Risk Free Rate: Average 10-year GOI securities rate over one-year horizon. (b) Equity Beta: Daily data on SENSEX and BSE Power Index for latest 5 years. (c) Market Risk Premium (MRP): Reflecting historical returns for 30-years or beyond instead of existing practice of	With respect to Equity Beta, the period taken is 5 years only which would show higher volatility, however, for MRP, period proposed is 30 years. Power sector in India opened on a large scale much after implementation of Electricity Act, 2003 with new players competing for construction of projects. As such, MRP of 30 years would not give a correct picture. Further, Equity Beta for 5 years would also not give correct picture considering volatility of Indian as well as global stock markets. It is suggested to consider both these parameters for 20 years to



S.No.	Related to	Details	Comments of TPTL
		<p>considering 20 years. Another approach has been suggested to compute MRP using Survey Method.</p>	<p>normalize the volatility as well as show realistic MRP.</p> <p>With respect to computation of MRP using Survey Method, it is submitted that the group to be surveyed is difficult to assess, i.e., whether to consider institutional investors, individual investors, analysts, academics. Etc. Such survey will also be constrained by sample size, with varying results depending upon expected MRP and historical assessment. As such we shall continue with existing practice of assessing historical returns of last 20 years for MRP.</p> <p>Existing Practice of rate of return on equity to be maintained and it is suggested that allowing ROE linking with Market Interest rate such as G-SEC Rates / MCLR / RBI Base rate need not to be adhered to. Further Current rate of return on Equity @15.5 % for existing transmission line should be protected / maintained. This will further encourage investment in the sector.</p>

