

CENTRAL ELECTRICITY REGULATORY COMMISSION
Core 3, 7th Floor, Scope Complex, Lodhi Road, New Delhi – 110 003
Tele : 24363174, Fax : 24360010

L-7/104(120)/CERC-2007

11th December 2007

To

Subject: TERMS AND CONDITIONS OF TARIFF FOR THE TARIFF PERIOD
STARTING ON 1.4.2009.

The Central Electricity Regulatory Commission, established under the Electricity Regulatory Commissions Act, 1998, and deemed to be the Central Commission for the purposes of the Electricity Act, 2003 (the Act), that came into force with effect from 10 June 2003, is bestowed with the jurisdiction for regulation of tariff of the generating companies owned or controlled by the Central Government, and other generating companies having a composite scheme of generation and sale in more than one State, regulating the inter-State transmission of energy and determination of tariff of the transmission utilities. The Commission has specified the terms and conditions of tariff for the period 1.4.2004 to 31.3.2009, under the provisions of Section 61 of the Act, in addition to performing other functions conferred upon it.

2. The Commission has initiated action for laying down the terms and conditions of tariff for the tariff period commencing on 1 April 2009. In the last eight and half years of tariff regulation by the Commission, starting from May 1999, many changes and developments have taken place in the power and financial sectors in India. As such, it has been felt to give a fresh look into the bases and assumptions to be considered while framing the fresh terms and conditions of tariff.

3. The Commission welcomes written suggestions/comments from the stakeholders, members of public, players in the electricity industry and others, on several issues listed in the enclosed paper, to be taken into account while laying down the principles, and approaches to be adopted for tariff determination during the next tariff period.

4. The Commission looks forward to your comments and suggestions which should reach the Commission's office by 10.1.2008. In case you would like to make a presentation to the Commission, this may be so stated while submitting your comments and suggestions. The Commission may, depending upon the time factor, arrange for such presentations as may be considered appropriate.

Sd/-
(K. S. DHINGRA)
Chief (Law)

Approach Paper - Issues to be addressed

1. Approach for Rate of Return

The Commission, while framing regulations for the previous periods, had recognized that Return on Capital Employed (ROCE) approach is preferable but because of lack of benchmarking for Debt-Equity mix, fluid situation in regard to interest rate and debt market in India, had decided to adopt Return on Equity (ROE) approach. With the listing of major power utilities on stock exchanges, permission for 100% FDI in power sector, development of debt market in India, stabilizing trends of interest rate and accessibility of Indian companies to foreign market for debt and equity, the ground situation has changed to a great extent. As such, a fresh look is required to be given towards the approach for rate of return, that is, whether ROE approach vis-à-vis ROCE approach.

2. Rate of Return on Equity

The Commission had specified a post-tax ROE rate of 16% for the tariff period 2001-04 and 14% for the tariff period 2004-09. It may be necessary to comment whether a review of rate of return on equity from the existing rate will be required considering the present equity market expectation, risk perception (Beta value) of power sector, etc, in case ROE approach is to be adopted.

Another factor that may need consideration is whether the Commission should adopt a fixed rate of return (as has been followed in the past), or to link the rate of return to market rate considering the risk perception. If rate of return is to be linked to market rate, the criteria to be adopted for arriving at the rate of return.

3. Pre-tax Vs Post-tax Return

The Commission has been specifying post-tax rate of return and has allowed income-tax, as pass through, to be recovered separately based on actuals. This approach has been questioned repeatedly by the beneficiaries. In general, the profit of the utilities should be equal to ROE specified because all other elements of tariff are based on the general premise of pass through. But practically, the profit of the utility is influenced by a slew of other factors such as profits of non-core business carried out by the utility, UI earnings, efficiency gains, consideration of notional expenditure in tariff, incentive earned, etc. Further, for calculating pass through of income-tax to beneficiaries, it is necessary to segregate the total income-tax paid by a company into core business as also region/project-wise, which may prove to be a difficult proposition. Another negative aspect of the existing post-tax approach is that there is no inducement for better tax planning. Therefore, it is being urged to move to pre-tax rate of return.

In case pre-tax return is adopted, the consequential issue then should be as to what would be the normative pre-tax rate of return.

4. Determination of Cost of Debt

The Commission, for calculation of interest on loan has been considering weighted average rate of interest, calculated on the basis of actual loan, actual interest rate and scheduled loan repayment. But as of now, debt market is developing well, interest rate has shown stability within a predictable range and foreign debt market is accessible to the Indian companies. Accordingly, it will be proper to deliberate whether the Commission should adopt:

- (a) Existing method of considering weighted average rate of interest, calculated on the basis of actual loan, actual interest rate and scheduled loan repayment, or
- (b) Normative cost of debt calculated on the basis of present debt market condition.

5. Treatment of Foreign Exchange Rate Variation (FERV)

The existing regulations on terms and conditions of tariff provide that every generating company and transmission licensee shall recover FERV on year-to-year basis as income or expense in the period in which it arises. Recoveries from or payments to the beneficiaries on account of FERV are done directly. The Commission has so far not allowed hedging of foreign loans. The tariff policy says that FERV risk shall not be a pass through. It further provides that appropriate costs of hedging and swapping of loans to take care of foreign exchange variations should be allowed for the debt obtained in foreign currencies. Recently, Indian Rupee has proved to be a strong currency vis-à-vis other currencies and has appreciated substantially against US Dollar. The trends are that this position may continue in future as well. In view of this, the following issues need to be deliberated and addressed, while framing the terms and conditions for determination of tariff:

- (i) Whether the present arrangement should continue and FERV risk shall be made as pass through? Or
- (ii) Whether the hedging/swapping be allowed and if so, costs associated with hedging and swapping be allowed for debt obtained in foreign currencies and the resultant benefits, if any, be passed over to beneficiaries/consumers?

6. Capital Cost

The comments are invited in regard to the following issues, namely-

- (a) Whether the capital cost considered for tariff is to be restricted to actual cash out go, balance sheet figure, or whether undischarged liability should be included, as a part of capital cost for the purpose of tariff?
- (b) Whether prudence check is to be linked to any benchmarked capital cost?

- (c) Treatment to be given to cost elements like initial spares, return on equity during construction, Govt. grant and subsidies, intangible assets like technical know-how, etc in the capital cost.

7. **Capital Cost: GFA approach Vs NFA approach**

The Commission, while framing the regulations in the past, noted that the approach of giving return on equity, even though the assets are written off, is unwarranted and unfair. But it decided generally to adopt GFA approach as it allows incentive to the investors and its interest to sustain the operation and maintenance of the projects gets reduced from an equity base of 30% (normative equity) to 10% (salvage value) and, for incentivising the generating/transmission utilities for creation of internal resources for capacity replacement/addition. Now, in view of the changed position of fund availability, it might be proper to deliberate afresh and take a view whether the Commission should continue with Gross Fixed Asset (Liability Side) Approach as at present, or switch over to the Net Fixed Asset (Asset Side) Approach, in all cases.

This aspect needs to be commented upon in the context of both, ROE and ROCE approaches.

8. **Debt/Equity Ratio**

Financing plan of the project plays a predominant role in the determination of tariff. The present regulations applicable during the period 2004-09 contain complex provisions in regard to debt-equity ratio of the existing projects, new projects and apportionment of additional capitalization. It has been felt that the regulations should be simple and easy to understand and implement. In this context the Commission seeks views as to what should be the optimum Debt-Equity mix for determination of tariff during tariff period commencing on 1.4.2009, for the existing and the future projects as also for apportionment of additional capital expenditure for the projects commissioned prior to 1.4.2009, but where additional capital expenditure is incurred after that date and those commissioned thereafter.

9. **Depreciation**

Comments are invited in regard to treatment of depreciation, viz.

- (i) Whether there is a need to expressly link depreciation to repayment of debt?
- (ii) Whether the existing grouping of assets for specifying depreciation rates is required to be revisited?
- (iii) Whether the existing practice of allowing AAD should be continued?
- (iv) In case AAD is not allowed, whether the existing rate of depreciation is required to be revisited or, the utilities should be asked to make their own arrangements to meet the debt repayment obligation (from internal

resources/profits/or by rescheduling of debts, etc), like any other business entity?

- (v) Whether to apply methodology of block-wise depreciation rate instead of the existing practice of applying weighted average rate of depreciation?
- (vi) Whether the life of the project be decided on normative basis against the present methodology of life of the project being decided on the basis of weighted average life of the assets derived from the rates prescribed in Appendix-II of the 2004 regulations? If so, what should be the life of the thermal, hydro and transmission projects?

10. Interest on Working Capital (IOWC)

Comments are invited in regard to treatment of IOWC, viz.

- (i) Whether working capital is to be calculated by taking into account both current assets and current liabilities, or the existing method of considering only current assets is to be continued?
- (ii) Whether amount and stock of fuel oil/O&M expenses/maintenance spares/receivables specified in the existing regulations should continue or, any change is required?
- (iii) Whether maintenance spares should form a part of the working capital along with O&M expenses in the existing methodology is to be continued?
- (iv) Whether stores and spares / repairs & maintenance / employees cost, insurance, security and most of the sub-elements under administrative expenses and most of the sub-elements under corporate office expenses included in O&M expenses should form a part of the working capital?
- (v) Whether instead of providing it separately an additional mark-up in terms of percentage may be added up to the ROE or ROCE, as the case may be, to take into account the requirement of IOWC?
- (vi) In case ROCE approach is applied, whether net working capital can be a part of the Regulatory Asset Base instead of providing it separately?