# CENTRAL ELECTRICITY REGULATORY COMMISSION
# NEW DELHI

**<u>Coram</u>**

1. Shri D.P. Sinha, Member
1. Shri G.S. Rajamani, Member
1. Shri K.N. Sinha, Member

**<u>Petition No.23/2001</u>**

**In the matter of:**

National Grid International Limited …..Petitioner

**VS**

1. Union of India
2. Powergrid Corporation of India Limited
2. Power Trading Corporation Limited ….Respondents

The following were present:

1. Mr. Roger Woods, Country Director, National Grid
1. Smt. Sangeeta Sharli, Advocate, National Grid
1. Shri Sanjay Bhandarkar, Asstt. Director, National Grid
1. Shri M.G. Ramachandran, Advocate, Government of India
1. Shri Rajeev Sharma, Dy. Secretary, Government of India
1. Dr. Surat Singh, Advocate, Powergrid
1. Shri Ashwani Jain, DGM I/C(UP&C), Powergrid
1. Shri S. Garg, DGM (IPTC), Powergrid
1. Shri K.V.R. Chaitanya Swamy, Sr. Manager, PTC
1. Shri G.S. Dhir, Manager (Law), PTC

**ORDER**
**(DATE OF HEARING 15-5-2001)**
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The petitioner, National Grid International Ltd. filed a petition seeking review of the Commission's composite order dated 21-12-2000 in petitions 4/2000, 31/2000, 32/2000, 34/2000, 85/2000, 86/2000 and 88/2000, prescribing the terms and conditions for determination of tariff, both generation as well as transmission. These terms and conditions under Clause (c) of Section 13 of Electricity Regulatory Commissions Act, 1998 (hereinafter referred to as the Act) are essentially applicable to Powergrid Corporation of India Ltd.(PGCIL), a public sector utility engaged in interstate transmission of electricity. The review petition was heard on 17-4-2001. On hearing, the Commission did not find any valid ground for review of the directions contained in the Commission's Order dated 21-12-2000 (hereinafter referred to as the Commission's order) on the grounds stated in the petition. However, the review petition was treated as a fresh petition on behalf of the petitioner, which is a private investor and pleaded to establish that it deserves to be treated differently due to its own position vis-à-vis situation obtaining in the sector. Since the Commission considered it necessary to afford it an opportunity to present its case, the petition was admitted for hearing and notices were issued to respondents.

2. The petitioner which is engaged in transmission and distribution projects in a number of developing countries around the world has stated that it proposes to form a joint venture company with PGCIL to develop Tala Transmission Project for evacuation of power from Tala Hydro Project in Bhutan. It reviewed the return that could be expected from this project, in the light of Government of India Notification dated 16-12-1997(hereinafter referred to as Government of India notification) and the Commission's Order. According to the petitioner, based on the Government of India notification as also the Commission's Order, it will get an

inadequate return, making the project unattractive. The petitioner has stated that it will be getting an Internal Rate of Return on equity (hereinafter referred to as IRR) of about 10% based on the Commission's order though it expects to earn a post-tax IRR in the range of 16%-18% as earned in a number of other developing countries. The petitioner has however not produced any documentary evidence in support of its averment that in other countries it is getting IRR of 16-18%. The petitioner feels that it will be earning low IRR as per the Commission's Order, for the following reasons:

(i) The petitioner will not get return on equity during construction period;

(i) The expenditure incurred by it on insurance will not be recovered;

(i) The dividend tax is not allowed as pass-through in the tariff;

(i) Depreciation is permitted at around 3% per annum against the weighted average rate of 6.12% permissible under the Government of India notification, and

(i) The incentive shall be allowed above 98% availability as against the 95% availability as per Government of India notification.

3. The petitioner has accordingly prayed for modification of these norms. It has been argued on behalf of the petitioner that it forms a class separate and distinct from PGCIL, as its financing pattern is different. It has been argued on behalf of the petitioner that suitable directions be issued to ensure that the petitioner becomes entitled to post-tax IRR of 16% in nominal terms in the currency of investment, i.e. U.S. Dollars. The petitioner has furnished a copy of

the financial model in support of its claim that the existing norms yield an IRR of about 10%.

4. Union of India and Power Trading Corporation have filed their reply to the petition. No reply has been filed on behalf of PGCIL though Dr. Surat Singh, advocate appearing on its behalf argued the matter orally that PGCIL shall be entitled to a level playing field in the matter of terms and conditions of tariff and whatever terms apply to the petitioner should be applicable to PGCIL.

5. Union of India in its reply has generally supported the claim of the petitioner, except that relating to return on equity during the period of construction. It has stated that by the year 2012, a total investment of around Rs.80,000/- crores shall be required in inter-state transmission system and this amount is to be raised through internal resources as also through investment from private sector. PGCIL is expected to invest Rs.45000/- crores and the balance of the estimated investment needs to come from the private sector. Therefore, it has been actively pursuing the avenues of private sector participation and investment in the transmission sector. Such an investment is unlikely to come unless adequate IRR is available to the investors both in public sector as well as the private sector. According to Union of India accelerated depreciation allowed as per Government of India Notification at 5.27% for lines and 7.84% for sub-stations and generation projects respectively and the availability level of 95% prescribed by it for the purpose of incentive, were "conscious well thought of

policies of the Govt. of India issued to provide adequate IRR and encourage much needed investment in transmission systems and projects by both public or private sector". It has also argued that for transmission projects, the insurance and dividend tax should be allowed as a pass-through. According to Union of India, the rate of return should also be fixed taking into account the method of financing and risk involved. Union of India is of the opinion that unless the issues raised by the petitioner are properly addressed and resolved, it may not be able to attract investment through private sector participation and the proposed transmission projects planned upto the year 2012 may remain unimplemented. Union of India at the same time tends to seek parity for PGCIL on the issues raised by the petitioner. The learned counsel also clarified that no minimum IRR is fixed by the Government of India as a policy, though he argued that to attract investment in the transmission sector, the investor should get an adequate IRR. Power Trading Corporation (PTC) has averred that the norms for tariff should balance the risk of investment with adequate return so as to incentivise the investor for adequate investment in the transmission sector, at the same time should be at fair and affordable prices to the consumer.

6. At the hearing, we sought Shri M.G. Ramachandran, learned Counsel appearing on behalf of Union of India to clarify whether averments made in the affidavit could be considered the policy direction to the Commission under Section 38 of the Act. The learned Counsel clarified that the reply was not a directive under Section 38 of the Act. In the reply filed by Union of India, it is

stated that 7.48% depreciation for sub-stations and "generation projects" allowed under the Government of India notification is the policy of the Government of India. The learned counsel was asked why the generation projects were specifically referred to in the reply when the Government of India notification was applicable to transmission projects only. He was forthright in stating that the Government of India notification was not applicable to generation projects and was confined to transmission projects only. He sought to explain that mention of "generation projects" may have been through inadvertence. In view of this statement we do not propose to take any cognisance of the references made to the generation projects in the reply filed on behalf of the Union of India. To another query from the Commission whether Government of India has changed its stand from what is contained in its letter dated 1.6.99, which had left discretion to the regulatory commissions in the matter of norms, the counsel said that he was unable to furnish a reply on that aspect. Union of India in its affidavit has referred to the guidelines issued by it on 31-1-2000 which deal with private sector participation in transmission sector. It is stated that these guidelines are the declared policy of the Union of India, issued in public interest. We are unable to find any relevance of these guidelines for adjudication of the issues raised in the petition since these guidelines do not in any manner relate to tariff issues raised by the petitioner. On the question whether or not the guidelines are matter of policy, we leave this issue to be considered in the proceedings already in hand with the Commission, having a direct bearing on the matter of procedure for inviting private investment in power sector.

7. We have carefully examined the financial model submitted by the petitioner and find that **according to this model**, considering a sample construction period of 36 months, the petitioner is likely to get an IRR of 14.28% in rupee terms and 8.84% in Dollar. The method of calculation of IRR by the petitioner is based on:

(i) Calculation of IRR with reference to the earnings of the individual investors;

(i) Transfer of profits to reserves @ 10%

(i) Upfront investment of equity was assumed as 50% in the first quarter of the construction cycle;

(i) The depreciation rate has been considered at 5.27% in the IRR calculations while during the arguments, the petitioner has argued for accelerated depreciation at 7.84%;

(i) Debt Service Reserve of 6 months, and

(i) Target availability of 95% and incentive beyond that level of availability.

8. Before examining the issues raised on behalf of the petitioner, we may state that an analysis by the staff of the Commission, based on parameters contained in the Commission's order reveals that the petitioner is likely to get an IRR of about 15.9% in Rupee terms and of about 10.4% in Dollar terms and not 14.28% and 8.84% respectively, as stated by the petitioner. The differences of IRR based on the petitioner's model and the staff calculations are on account of the following :

(a) The petitioner has calculated IRR in the hands of individual investors. IRR ought to have been calculated at the hands of the company and not in the hands of the individual investor;

(a) For the purpose of calculation of IRR of the company, the transfer of profits to reserves should not have been considered.

(a) The model of the petitioner assumes entire funding from Indian Financial Institutions, that being so, investment of equity and debt on *pari passu* basis would be a reasonable assumption as against 50% equity investment upfront;

(a) The provision of advance against depreciation as provided in the Commission's order has not been taken into consideration in the financial model furnished by the petitioner, and

(a) Debt service reserve does not represent the cash outflow of the company and hence should not be taken into account for calculating IRR.

9. We make it clear that by above comparison of IRR we should not be understood to have adopted IRR as the criteria for fixation of tariff norms. The Government of India has been following the criteria of ROE as a norm for the purpose of fixation of tariff and we continue to follow it. We are conscious that IRR does not have any fixed connotation and varies with the individual perception and is amenable to managerial decisions.

10. We now propose to examine the issues raised by the parties. We have a mandate under the law that while determining the terms and conditions for fixation of tariff, an adequate return to the utilities may have to be ensured and norms prescribed should encourage efficiency, economical use of the resources, good performance and optimum investments in the sector. At the same time, the terms and conditions prescribed have to be fair to the consumers. While considering the issues raised by the petitioner, we shall be guided by those objectives.

**Fixation of Rate of Return based on method of financing**

11. We have examined the suggestion of the Union of India regarding fixing of rate of return by taking into account the method of financing and the risk involved. The acceptance of the suggestion would imply that ROE may have to be fixed on case-to-case basis. The methodology may create more uncertainties. The returns in case of IPPs in generation sector also are not fixed on the basis of mode of financing. The risk could be covered by adopting appropriate safeguards such as insurance . Accordingly, the Commission does not find any merit in linking returns to the mode of financing.

**Return on Equity during construction period**

12. As per the Commission's order, ROE is not permissible during the construction period. The petitioner has contended that a project may require a

period of 3 years for completion, during which period equity is invested and it is logical for the investor to expect return during this period. However, because of the Commission's order *ibid* the investor will be denied any return during the period of construction. The petitioner has argued that it should be permitted ROE during the period of construction to boost IRR. The Government of India, who has generally supported the claim of petitioner on all other counts, has not favoured ROE during construction period. We have considered this aspect very carefully. We find that ROE during the construction period is not being allowed in any sector under the administered price regime. Further even in normal course of business, returns on equity are earned only after production and sale and not during construction. On these considerations, we do not find any justification for allowing ROE during the period of construction. Accordingly, the claim of the petitioner is rejected.

**<u>Insurance Expenses</u>**

13. In the Commission's order, the O&M expenses allowed by the Commission, includes the expenses on insurance, if any. The petitioner has pleaded that it may be allowed recovery of insurance expenses @ 0.5% of the project cost. According to the petitioner, PGCIL is self-insuring its projects and is not incurring any expenditure on insurance. We are not in favour of modifying the norms for O&M expenses as provided in the Commission's order. However, to enable the petitioner to meet any additional expenses, not provided for in the Commission's

order, we have proposed a Transmission Majoration Factor to take care of such expenses, a concept discussed subsequently.

**Tax on Dividend**

14. The petitioner has submitted that the dividend tax payable @ 10.2% should be made a pass-through in the tariff. Union of India has supported the claim of the petitioner. Prior to establishment of the Commission, the examination of the tariff related matters of HIRMA Mega Power Project was assigned to a Special Independent Group (SIG) headed by justice P.N. Bhagawati. SIG, after detailed deliberations, had suggested that the dividend tax should not be allowed as pass through. We find that in case of Independent Power Producers engaged in generation of electricity, the dividend tax is not a pass through item. The acceptance of the petitioner's prayer will disturb the existing parity between those engaged in generation and transmission of electricity. As held by the Supreme Court in The Commissioner of Income Tax, Calcutta VS Nalin Behari Lal Singha and Others [1969 (2) SCC 310] " Dividend in its ordinary connotation means the sum paid to or received by a shareholder proportionate to his share holding in a company out of the total sum distributed". According to Dictionary of Finance (Oxford Reference) (1993 edition) "Dividend" means " the distribution of part of the earnings of a company to its shareholders". The Penguin Dictionary of Economics (1992 edition) defines "Dividend" as " the amount of a company's profits that the board of directors decides to distribute to ordinary shareholders". It

would thus imply that Dividend declared by the company is the share of its shareholders. The payment of dividend tax does not affect the IRR of the company. For these reasons, we do not propose to direct that the dividend tax be made pass-through in tariff and are in favour of maintaining the *status quo* on this issue.

**<u>Rate of Depreciation (ROD)</u>**

15. It has been further submitted by the petitioner, that the weighted average rate of depreciation as per the findings of the Commission is around 3% per annum against the weighted average rate of 6.12% permissible under the notifications issued by the Government of India from time to time. This would result in reduction of IRR since, according to the petitioner, compensation on account of advance against depreciation permitted by the Commission will only solve the cash flow problems but will not improve the IRR. Union of India in its response has stated that depreciation as provided in the Government of India notification is a matter of policy and, therefore, should be adhered to while determining tariff for transmission projects. It has thus been argued both by the petitioner and the Union of India that the ROD should be at accelerated rate as provided in the Government of India notification for transmission lines and sub-stations.

16. We may state that the Government of India notification on ROD was issued by the Government of India in March 1994 and the Government of India notification only adopts the rates prescribed under that notification. The manner of prescribing depreciation rate was considered in detail in the Commission's order. The Commission found that the straight line method of depreciation was being generally followed by the regulators in the electricity sector where market mechanism does not exist. A similar practice is also followed by other industries with administered prices. In order to bring about uniformity in the method of charging depreciation, the Commission concluded that straight line method should be followed by all the utilities in electricity sector. The Commission further felt that depreciation rates prevailing prior to 1992 could broadly become the relevant rates, subject to any revision in estimation of useful life of the asset which was done in 1992 and 1994. In the opinion of the Commission, it would smoothen out the tariff, reduce tariff shocks due to excessive front loading, bring uniformity of depreciation rates across the various utilities. We do not find any justification to make any departure from the view taken by the Commission in its order dated 21.12.2000 on the question of charging of depreciation, so far as the utilities covered by clauses' (a), (b) and (c) of Section 13 of the Act are concerned.

**<u>Availability norms and incentive</u>**

17. In accordance with Government of India notification, a transmission utility is to be paid incentive @ 1% return on equity for each percentage point of increase in availability of the system beyond 95 percent. However, as per the

Commission's order, the incentive becomes payable in accordance with the following formula:

| **Availability %** | **Incentive as a percent of equity** | **Cumulative Incentive As a percent of equity** |
|---|---|---|
| 98% and below | 0.00 | 0.00 |
| 98.01% -98.50% | 1.00 | 1.00 |
| 98.51% - 99.00% | 1.00 | 2.00 |
| 99.01% - 99.50% | 1.00 | 3.00 |
| 99.51 –99.75% | 1.00 | 4.00 |

18. The petitioner has submitted that the cut off level of 98% availability for the purposes of incentive is unreasonable and harsh, which would cause prejudice to the petitioner and would have adverse effect on IRR. The petitioner has prayed for maintenance of availability level at 95% as notified by the Government of India and has suggested its own formula for the purpose of incentive. Union of India in its response has stated that the level of incentive as provided in Government of India notification is a well thought of policy and may be restored.

19. The Government of India notification was issued by the Government of India to prescribe norms for determination of tariff for inter-state transmission since it was invested with these powers. With the constitution of the Commission, the function of regulation of tariff for inter-state transmission is conferred on the Commission by virtue of clause (c) of Section 13 of the Electricity Regulatory Commissions Act, 1998 (for short, the Act). Therefore, determination of terms and conditions of tariff, including norms for availability, incentive, etc.are presently within the exclusive domain of the Commission. We also note that the Government of

India in its letter dated 1.6.99 has expressly stated that the adoption of the norms prescribed earlier by the Government of India is within the discretion of the Commission. The relevant extracts from Government of India's letter No. 25/24/98-R&R dated 1.6.99 are reproduced below:

> " CERC and SERCs in the States like Orissa and Haryana where Section 43 A (2) has been disapplied will, however, be entitled to deviate from such tariff notification issued by the Government. In case of such deviation, reasons will be recorded by the Commission. The Commission will adopt the principles contained in the notification and modify them as the circumstances required. However, the discretion has to be left to the CERC and SERC to follow the norms as they, in exercise of quasi-judicial power, consider just and proper. In doing so, the norms of operation and PLF laid down by the CEA will be a guiding factor and not a binding factor."

20. It is also of interest to note that Government of India vide its letter dated 31.5.99 forwarded to the Commission the relevant papers in regard to finalisation of ABT after due deliberations, which included the finalisation of targets of availability for generating stations in the country. It only means that so far as fixation of levels of availability in respect of generating stations is concerned, the Government of India did not consider the target availability already fixed under its previous notification to be a policy. Therefore, it logically follows that in the reckoning of the Government of India the availability/PLF fixed for transmission utilities under Government of India notification cannot be considered its policy. It is to be further noted that the learned counsel for Union of India in his submission fairly stated that the response filed by the Government of India is not a policy directive under Section 38 of the Act and are just the submissions.

21. On consideration of these factors, we consider that the norms prescribed under Government of India notification including those relating to availability and incentive do not in any manner bind the Commission and these are to be regulated as per the Commission's order, since translated into the notification dated 26.3.2001 in exercise of the statutory powers conferred under clause (c) of Section 13 and Section 28 of the Act. The question of fixation of normative availability of transmission system was considered by the Commission in Petition No.86/2000 and the issue was examined in consultation with CEA. On consideration of the report received from CEA, the Commission in its order dated 8-12-2000 directed that the normative availability for recovery of full fixed cost shall be fixed at 98% and the transmission utility shall be entitled to incentive or liable for disincentives if actual availability is higher or lower than the normative availability. None of the parties has been able to find any fault with the reasoning given in support of fixation of normative availability at 98%. For the reasons already recorded in the Commission's order dated 8-12-2000 *ibid* we do not find any merit in the submission made on behalf of the petitioner as well as the Union of India to opt for the lower level of normative availability for the purpose of recovery of fixed charges or for entitlement to incentive. That would be a retrograde step and is also contrary to the consumers' interest. The Commission recognises the difference in the availability of a single or a few lines executed by private sector, here and there, as against availability of a system comprising of a network of lines. Keeping this in view, the Commission proposes transmission

Majoration Factor, a concept discussed subsequently. Such an arrangement would not disturb the norms and parameters already ordered by the Commission.

**Transmission Majoration Factor (TMF)**

22. In discussing the elements of "Insurance" and "Target Availability/incentive" for transmission lines, the Commission has mentioned a concept designated as "Transmission Majoration Factor". Introduction of this factor is in due consideration of the fact that the Commission recognises the need for expediting new investments in the transmission sector. It has also recognised the fact that the private investors, in transmission, have to incur additional liabilities in their **pioneering efforts** compared to long standing central transmission utility like PGCIL. Accordingly, in respect of such lines executed by private investors, the Commission proposes to allow 10% mark up (pre-tax) on transmission charges as Transmission Majoration Factor. This would be available only to the new private investors who would like to enter the field. Accordingly, there would be no need to provide for TMF in respect of projects executed by PGCIL. This will not also apply to the HVDC projects to be executed by private investors involving heavy capital investments and do not, hence, justify a special treatment by way of Transmission Majoration Factor. In respect of PGCIL, the development surcharge of 10% provided to it takes care of requirements of TMF allowed for private investors in respect of new investments.

23. The directions contained in the Commission's order shall yield an additional IRR of about 4.5% in US Dollar terms over and above 8.84% indicated by the petitioner. This additional IRR includes the effect of monthly payment of return on equity vis-a-vis the annual return on equity of 16%. By taking into account the effect of payment of depreciation and interest payment on monthly basis as compared to the quarterly or half yearly repayment of loan, the IRR would improve further. The returns that may be earned by the petitioner and other private investors in the light of above directions is considered to be reasonable and adequate to attract necessary investment in the private sector, on the one hand and protect the consumers' interest on the other hand.

24. Commission would like to make it clear that the TMF is a one-time measure to encourage private entrepreneurs to promote investments in transmission sector. We expect that the serious entrepreneurs would seize this opportunity and we also expect that the PGCIL would also expedite urgent action to cover all the critical lines within a limited period in meaningful and constructive cooperation with private investors. Accordingly, the TMF would be available to new entrepreneurs only for the period up to 31st March 2004. This would, thus, be co-terminus with the Commission's order dated 21-12-2000 on terms and conditions of tariff. However, the benefit of TMF would continue to be available during the entire life of the project in respect of the investors who enter the transmission sector up to the period ending 31-3-2004.

25. The directions contained in this order shall be notified in accordance with Section 28 of the Act, as supplementary to the earlier notification dated 26-3-2001. With these directions, the petition stands disposed of.

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| **Sd/-** | **Sd/-** | **Sd/-** |
| **(K.N. Sinha)**<br>**Member** | **(G.S.Rajamani)**<br>**Member** | **(D.P.Sinha)**<br>**Member** |

New Delhi dated the 29th May, 2001.