

Before the
MAHARASHTRA ELECTRICITY REGULATORY COMMISSION
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Case No. 20 of 2005

In the matter of
**Approval of Rate of Power Purchase by M/s. Tata Power Company Ltd
from Southern Region.**

**Dr Pramod Deo, Chairman
Shri A. Velayutham, Member
Shri S.B.Kulkarni, Member**

ORDER

Dated: 5th October, 2005.

1. The Commission convened a meeting with the concerned Licensees in the State on 24th August, 2005 to discuss the roadmap for power supply and demand management in the Mumbai system, the short/medium term arrangements to maintain uninterrupted supply in Mumbai during the ensuing peak season, and related issues. During the meeting, some Licensees expressed concern that in the coming months, particularly from October 2005 onwards, the Mumbai area would be facing a difficult situation due to power shortage. The Commission asked Tata Power Company (TPC) to elaborate on the steps planned by it to mitigate the likely supply deficit. The representative of TPC replied that, in order to meet the anticipated growth in demand, TPC is exploring the possibility of sourcing 175 MW of power from the Southern Region. Reference to such sourcing of outside power had also been made by TPC in its further written submission following the hearing on the separate Petition filed by Maharashtra State Transmission Co. Ltd. (MSTCL) and Maharashtra State Distribution Co. Ltd. (MSDCL) against TPC to restrain excess drawal. At the meeting held on 24th August, 2005, the Commission had concluded that the preferred option would be for erstwhile MSEB to obtain power from this or other source and supply it to TPC at actuals. In the alternative, if this were not possible, direct sourcing by TPC could be considered.

2. Vide letter dated 30th August, 2005, TPC sought the Commission's approval for purchasing 175 MW of power on a 'round the clock' basis from a source in the Southern Region, initially from 1st September to 30th September, 2005. In its letter, TPC referred to the above mentioned meeting held on 24th August, 2005, and the directives given by the Commission during the meeting. TPC requested the Commission's approval for purchasing this power at a landed price of approximately Rs 3.60/kWh, in order to avoid load shedding in Mumbai.

3. Subsequently, TPC filed a Petition on 13th September, 2005 proposing short term procurement of power by TPC for the month of September, 2005 and for a period of twelve months from October 2005 onwards, from a source in the Southern Region, citing Regulation 25 of the MERC (Terms and Conditions of Tariff) Regulations, 2005. TPC has made the following submissions in its Petition:



a) Load Projections and sources of power for Mumbai

TPC has been supplying power to the Brihanmumbai Electric Supply & Transport Undertaking (BEST), Reliance Energy Ltd (REL) and its own direct consumers. The load of Mumbai has been steadily increasing in the last few years and has reached around 2500 MW in the current year. TPC has submitted the details of increase in peak load of Mumbai area from FY 1998-99 to FY 2005-06 (upto July 2005). The 7-year and 3-year Compounded Annual Growth Rate (CAGR) of increase in demand works out to 3.6% and 4.5%, respectively. TPC has projected the load of Mumbai for FY 2005-06, FY 2006-07 and FY 2007-08 by assuming a growth rate of around 5%. Further, considering the available sources of power, TPC has estimated the deficit at 244 MW, 368 MW and 499 MW in FY 2005-06, FY 2006-07 and FY 2007-08, respectively (excluding the smaller area of Mumbai supplied by MSDCL).

b) Load Growth Projections for September 2005

TPC has been drawing around 350 to 400 MW from the grid to meet the demand in September 2005, which includes power drawal of 250 MW under the standby arrangement due to outage of REL's Dahanu Thermal Power Station (DTPS) Unit 2. TPC has indicated that, even with good monsoons and higher generation from its hydro plants, the Mumbai system (TPC-BEST-REL) collectively may have to draw around 400 MW from the grid, at least for 3 hours every day to meet the normal demand.

c) Unit 4 Operations

TPC has submitted that its Trombay Unit 4 is being operated using oil (LSHS) and with the LSHS price increasing to Rs. 16989/tonne for the month of August 2005, the variable ex-bus cost works out to Rs 4.52/kWh.

d) Power Purchase for September 2005

TPC has submitted that, as per the directives given by the Commission at the meeting held on 24th August, 2005, it has made arrangements to source 175 MW of power on 'round the clock' basis from a source in the Southern Region, initially from September 1 to 30, 2005. The price of power at the delivery point is 263 paise/kWh, with actual transmission losses and wheeling charges as applicable. TPC has estimated the landed price of power after considering the prompt payment rebate, as 346.1 paise/kWh based on prevailing transmission charges and losses.

e) Power Purchase for 12 months starting from October 2005

TPC has submitted the month-wise actual/estimated demand (in MVA) for Mumbai for FY 2004-05 and FY 2005-06. TPC has mentioned that, as compared to FY 2004-05, the demand in FY 2005-06 is expected to increase in the range of 125 to 275 MVA.



TPC has mentioned that, for a recent tender floated by the West Bengal State Electricity Board (WBSEB) in the Eastern Region for sale of power during October, November, and December 2005, Tata Power Trading Company Limited (TPTCL) has quoted a price of approximately Rs 3.42/kWh at the delivery point in the Eastern Region, which was lower than the price quoted by the highest bidder.

TPC has further submitted that, in order to meet the increased demand, it is in the process of finalizing an agreement with a source in the Southern Region for purchase of power for the next twelve months. The price of this power at the delivery point is expected to be approximately Rs 3.00/kWh, with actual transmission losses and wheeling charges as applicable. TPC has estimated the landed price of power after considering the prompt payment rebate at 389.4 paise/ kWh based on prevailing transmission charges and losses.

f) Prayers

In its Petition, TPC has requested the Commission to

- Approve purchase of 175 MW of power on 'round the clock' basis for the month of September 2005 at the rate of approximately Rs 2.63/kWh at the delivery point in Southern Region. In addition, the transmission losses and wheeling charges would be applicable at actuals.
- Grant approval for purchase of 175 MW of power on 'round the clock' basis for a period of twelve months from October 2005 onwards at the rate of Rs 3.00/kWh at the delivery point in Southern region. In addition, the transmission losses and wheeling charges would be applicable at actuals.

4. At the hearing held on 14th September, 2005, the representative of TPC, Shri J.D. Kulkarni, reiterated the submissions made in the Petition. He submitted further that, considering the projected demand - supply situation of Mumbai for the next 3 years, TPC intends to enter into an agreement for purchase of 175 MW of power on 'round the clock' basis for a period of three years from October 2005 onwards at the rate of Rs 3.00/kWh at the delivery point in Southern Region. In addition, the transmission losses and wheeling charges would be applicable at actuals. The landed price of power after considering prompt payment rebate works out to Rs 3.89/kWh.

5. In response to the Commission's query regarding justification for purchasing 175 MW of power on 'round the clock' basis vis-à-vis TPC's own generation and merit order dispatch, Shri. Kulkarni submitted that the landed cost of this power will be cheaper than that of its own generation at Unit 4 or Unit 6 using oil as fuel, as the variable cost of generation with LSHS as fuel at the prevailing LSHS prices works out to approximately Rs 4.70/kWh. (The Commission notes, however, that TPC's Petition refers to Rs 4.52 kWh as the cost.).

6. In response to the Commission's query with regard to sourcing of this power requirement from MSDCL, Shri. Kulkarni submitted that TPC had explored this option, but MSDCL is not willing to commit supply of 175 MW power on 'round the clock' basis.

7. Subsequent to the hearing, the Commission directed MSTCL and MSDCL to submit their comments in the light of the meeting held on 24th August, 2005 to discuss the demand management of Mumbai system, by 20th September, 2005.



8. Vide letter dated 15th September, 2005, MSDCL communicated that it would not be possible for it to buy power on behalf of TPC, and sell it to TPC for supply in the Mumbai area. Instead, MSDCL could enter into a tripartite agreement with TPC and the seller identified by TPC for sourcing the desired power supply, and TPC will have to make all the payments, including wheeling charges, to the concerned Transmission Utilities. MSDCL also submitted that there should be a strict condition that TPC must not draw excessively from the MSDCL system during peak hours. Further, in case of corridor constraints like outage of HVDC line or any of the 400 kV Chandrapur- Parli circuits, etc., MSDCL would not be responsible for supplying power to the TPC system. As regards unabsorbed power, MSDCL submitted that if TPC is unable to absorb the full quantum of power contracted by TPC, MSDCL would accept the unabsorbed power and make payment at the rate of its own power purchase, if it is less than the rate contracted by TPC.

9. Against this background, the Commission heard the matter further on 20th September, 2005.

10. The representative of MSDCL, Shri. A.D. Palamwar, reiterated the submissions made vide letter dated 15th September, 2005. In response to a query from the Commission regarding availability of transmission capacity and wheeling charges, he submitted that MSDCL would support wheeling of 175 MW power being purchased by TPC from Southern Region to Mumbai. As regards wheeling charges, he also submitted that the wheeling charges are being proposed in the ARR Petition being filed by MSTCL/MSDCL, and the same can be provisionally applied in this case.

11. The Commission observed that it would determine the transmission and wheeling charges separately. However, this arrangement of buying 175 MW of power from the Southern Region can be treated as an interim arrangement to meet the additional requirement of Mumbai, and the transmission charges and transmission losses as applicable to transmission of Central Sector power to the State of Goa can be considered.

12. As regards transmission and wheeling charges, Shri. Kulkarni submitted that TPC will pay the charges as approved by the Commission, since these would be a pass through in the ARR. Further for estimating the landed price of power, TPC has assumed that the transmission charges and transmission losses payable to the Maharashtra State Utility would be the same as the transmission charges and transmission losses applicable to short-term open access transactions of Western Region as per the Transmission Open Access Regulations of the Central Electricity Regulatory Commission (CERC).

13. Shri. Kulkarni submitted that, although TPC intends to enter into an agreement for purchase of power for 2-3 years, the transmission corridor for short-term power purchase has to be booked on a quarterly basis, and that it has already booked the transmission corridor for the period from October to December 2005. Shri. Kulkarni further submitted that additional power to the extent of 70-75 MW might also be required during the peak hours, in addition to 175 MW, to meet the system demand of Mumbai. He requested the Commission to allow TPC to enter into an agreement for purchase of 175 MW power on 'round the clock' basis for a period of 3 years commencing from October 2005.

14. Shri. Subodh Shah, representing REL, submitted that REL require additional power mainly during the peak hours, and that REL had earlier submitted a separate Petition to the Commission for approval of ceiling rate at Maharashtra boundary for purchase of 50 MW of power during the peak hours for the next twelve months. Shri. Shah reiterated the submissions



made in that Petition, and requested the Commission to approve the ceiling rate at the Maharashtra boundary for purchase of power.

15. The representative of BEST submitted that BEST does not have any reservation with regard to TPC buying additional 175 MW of power on a 'round the clock' basis, provided the cost of power purchase by BEST from TPC is allowed as a pass through in its ARR.

16. Shri Shantanu Dixit, representing Prayas (consumer representative), made the following submissions:

- There is a need to adopt a consistent approach for approval of additional power purchase on short-term basis as between the various Licensees;
- The exact requirement of power and shortage of power in Mumbai should be worked out in two phases – first upto December 2005, and from December 2005 onwards;
- In case both TPC and REL buy the additional power as proposed and surplus power is available during some hours of the day, the same can be sold to MSDCL at TPC's marginal rate.

17. The Commission observed during the hearing that the issue of purchase of additional power for the period October 2005 to December 2005 as an interim arrangement, and the matter of additional power requirement from January, 2006 onwards to meet the system demand of Mumbai, need to be dealt with separately. For assessing the additional power requirement for the next 3 years, the Commission directed the concerned Licensees, i.e., TPC, REL and BEST to submit the projected demand and demand supply position of their respective licence areas.

18. Shri. Dixit suggested that the interim arrangement of buying 175 MW additional power by TPC from Southern Region on 'round the clock' basis may be considered upto the end of the current financial year, i.e., upto March 2006.

19. Shri. Kulkarni of TPC submitted that the additional power of 175 MW and the transmission corridor is available for the period from October to December 2005. However, for the period from January to March 2006, the additional power and transmission corridor may not be available.

20. The Commission notes that TPC has filed its Petition under Regulation 25 of the MERC (Terms and Conditions of Tariff) Regulations, 2005. Regulation 25.2 states that:

“Subject to the exceptions contained in this Regulation 25, any variation, during any quarter of a financial year, in the quantum or cost of power procured and any procurement from a source other than a previously approved source, in excess of five (5) per cent of the quantum or cost, as the case may be, of power procurement for such quarter, as approved by the Commission in the power procurement plan of the Distribution Licensee, shall be only with the prior approval of the Commission”.

21. The Commission believes that, although the matter of short term power purchase involves certain other related issues such as determination of transmission charges, transmission losses, etc, the purchase of 175 MW additional power on 'round the clock' basis from the Southern Region has to be considered as an interim, 'ad-hoc' arrangement in order to ensure uninterrupted supply of power to Mumbai during the ensuing peak season.



22. The cost of this additional 175 MW of power for the period from October 2005 onwards, after considering prompt payment rebate has been indicated as Rs 3.89/ kWh. This is cheaper than the variable cost of around Rs 4.52/ kWh of TPC's own generation at Unit 4 or Unit 6 using LSHS as fuel at the LSHS price of Rs 16989/ tonne for the month of August 2005.

23. The Commission had asked TPC to explore the possibility of buying this additional power from/ through MSDCL. In its Reply, TPC submitted that it has explored this option, but that MSDCL is not willing to commit supply of 175 MW power on 'round the clock' basis. Further, in its submission, MSDCL communicated that it will not be possible for it to buy power on behalf of TPC. Since MSDCL is not willing and/or able to supply the additional power to TPC, the latter would have to resort to purchase of this additional power itself in order to ensure uninterrupted supply of power to Mumbai.

24. Considering the immediate requirement of additional power for the Mumbai system during the ensuing peak season, i.e., from the month of September 2005, the Commission accords its in-principle approval to TPC for

- Purchase of 175 MW of power on 'round the clock' basis for the month of September 2005 at the rate of approximately Rs 2.63/kWh at the delivery point in the Southern Region. The transmission losses and wheeling charges for transmission of this power from Southern Region to Mumbai system would be applicable at actuals.
- Purchase of 175 MW 'round the clock' power for a period of three months from October to December, 2005 at the rate of Rs 3.00/kWh at the delivery point in the Southern Region. The transmission losses and wheeling charges for transmission of this power from the Southern Region to the Mumbai system would be applicable at actuals. In case the additional power is also required from January 2006 onwards, TPC can extend this arrangement of purchase of 175 MW of power on 'round the clock' basis for a further period of three months, i.e., from January 2006 to March 2006, at the rate of Rs 3.00/kWh at the delivery point in the Southern Region.

25. Considering the paucity of time, and in order to ensure that the residents of Mumbai do not suffer from load shedding, the Commission has accorded this in-principle approval on an 'ad-hoc' basis as an interim, short-term arrangement. The Commission has not undertaken any detailed analysis of the load growth projected by TPC and the cost-benefit analysis for purchase of this additional power. The Commission directs the TPC to submit the following information on monthly basis after the close of each month:

- Peak demand of the Mumbai system
- Total Demand Met
- Quantum of Own Generation and Power Purchase from various sources
- Additional Power Purchased under this short term arrangement
- Landed cost of additional power purchased

26. In case of surplus power availability after considering this additional 175 MW purchase of power, TPC shall apply merit order to its own generation, and reduce generation to balance requirement and availability.



27. The Commission directs MSTCL/ MSDCL to co-ordinate and make available the transmission network through the Chandrapur - Bhadrawati route for transmission of this power to the Mumbai system. The Commission also directs TPC to explore the possibility of transmitting Southern Region power to Mumbai through the Belgaum-Kolhapur route, and submit its report to the Commission within one month from this Order.

28. The Commission will separately determine the transmission and wheeling charges for open access and other transactions for transmission of power on the State network. However, the transmission charges and transmission losses payable by TPC to MSTCL for this arrangement will be based on the Western Region rates for short-term open access as per the Transmission Open Access Regulations of the CERC.

29. In order to ensure uninterrupted supply to Mumbai in the medium term, the Commission directs the three Licensees of Mumbai, i.e., TPC, REL and BEST, to submit the month-wise projected demand and demand supply position for the next three years, within two weeks from this Order.

Sd/-
(S.B. Kulkarni)
Member

Sd/-
(A. Velayutham)
Member

Sd/-
(Pramod Deo)
Chairman



(A. M. Khan)
Secretary, MERC