

Before the
MAHARASHTRA ELECTRICITY REGULATORY COMMISSION
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Case No. 76 of 2011

In the matter of
Approval of the PPA between TPC-G and TPC-D.

Shri V.P. Raja, Chairman
Shri Vijay L. Sonavane, Member

TATA Power Co Ltd.

.... Petitioner

ORDER

Dated: October 31, 2011

Tata Power Company Limited submitted a Petition under affidavit before the Commission on 01/06/2011, under Regulation 25.1 of the MERC (MYT Regulation) 2011 for approval of a power purchase agreement (“the PPA”) between its Generation (“TPC-G”) division / arm and Distribution division / arm (“TPC-D”), with the following prayers:

“

- a) *Approve the Power Purchase Agreement dated 28th March 2011 entered into between Tata Power – G and Tata Power-D for 400 MW of capacity with effect from 1st April, 2011.*

- b) *Condone any inadvertent omissions / errors / shortcoming and permit Tata Power-D to add / change / modify / alter this filing and make further submissions as may be required at a future date;*
- c) *Pass any other appropriate order(s) as this Hon'ble Commission may deem fit."*

2. Details of submission :

2.1 TPC in its Petition submitted that, Tata Power-G (TPC-G) and Tata Power-D (TPC-D) had signed a Power Purchase Arrangement (PPA) for 527 MW between them, in December 2006 and submitted the same to the Commission for its approval. The Commission had approved the said PPA vide its Order dated 6th November 2007.

TPC further submitted that, based on the MERC orders, Tata Power-G was supplying 500 MW to R Infra for the year FY 2008-09 and FY 2009-10, out of its generating capacity of 1777 MW. However, subsequent to the order of the Supreme Court in May 2009, Tata Power had asked R Infra to make alternate arrangements for power from 1st April 2010. The quantum of capacity that would have been available with Tata Power-G for disposal from 1st April 2010 is given by the Petitioner in the Table below:-

Table: Capacity available from 1st April 2010 for disposal

Sr No	Particulars	Capacity (MW)
1	Capacity available to R Infra in FY 2008-09 and FY 2009-10	500
2	Less Approx Unit 4 Capacity (on Standby) in the above capacity	-40
3	Net Capacity (Not available for Rinfra from 1st April 10)	460

TPC further submitted that thereafter, Tata Power-G signed a Power Purchase Agreement (PPA) with BEST for contracting 100 MW of the capacity from this 460 MW from 1st April 2010. R Infra, however, approached the Government of Maharashtra (GoM) for its share in the said 500 MW capacity. The GoM thereafter appointed a five member committee and decided the matter of

allocation of capacity between Tata Power-D and R Infra for the year FY 2010-11 and onwards. TPC submitted that the capacity made available to R Infra by the GoM through the memorandum of 7th May 2010 was as follows:-

Table: Availability of Capacity (MW) for the year FY 2010-11 by the GoM

From	To	BEST	Tata Power -D	Rinfra	Total
1-Apr-10	30-Apr-10	0	0	460	460
1-May-10	30-Jun-10	100	0	360	460
1-Jul-10	31-Mar-11	100	160	200	460

TPC submitted that it had filed a writ petition in the Bombay High Court against this memorandum of the GoM and that, the High Court by its judgment and order dated 18th January 2011 has quashed the memorandum. The Petitioner submitted that notwithstanding the same, as can be seen from the above table, the GoM has divided the capacity only upto the period ending 31st March 2011.

2.2.1 Power Purchase Agreements with Tata Power Trading Company Ltd (TPTCL).

The Petitioner further submitted that subsequent to writing to R Infra about the non availability of capacity from 1st April 2010, as presented in the APR petition of FY 2009-10 (filed around end-December 2009), Tata Power –G has signed a PPA with TPTCL from 1st April 2010. The extracts of the APR petition is as follows:-

“7.1 Sharing of Tata Power-G Capacity from FY 2010-11 onwards

“The Hon’ble Commission has approved the Power Purchase Agreement between Tata Power –G and Tata Power –D vide its order dated 6th November 2007.

Subsequently the matter of Capacity Allocation of Tata Power –G was appealed in the Appellate Tribunal of Electricity and then in the Apex Court.....

“ ...In the mean time, Tata Power in its letter dated 25th June 2009 informed R Infra that it would continue to supply the above 500 MW till 31st March 2010 only and advised them to make alternate arrangements from 1st April 2010.

“ ...Thereafter, Tata Power in its letter dated 9th November 2009 offered 100 MW capacity from its certain units to BEST.

“... In light of the above, Tata Power –G would have the following capacity at its disposal on 1st April 2010.

Table 7-2: Available Capacity from 1st April 2010

Unit	Capacity MW	Capacity contracted from 1st April 2010			Total	Balance Capacity Available (from 1st April 2010) (TPTCL)
		BEST	Tata Power -D	Capacity Offered		
				to BEST from 1st April 2010		
Unit 4	150	68	40	0	108	42
Unit 5	500	225	134	31	390	110
Unit 6	500	225	134	31	390	110
Unit 7	180	81	48	11	140	40
Hydro	447	201	120	27	349	98
Unit 8 -LA	150	100	50		150	0
Total	1927	900	527	100	1527	400

As can be seen from the above Table, there is balance capacity to the extent of 400 MW that is available which has not been contracted out to any distribution licensee in Maharashtra. Tata Power –G has tied up this capacity with Tata Power Trading Company Ltd (TPTCL) and is in the process of entering into a formal agreement shortly.

TPC further submitted that thereafter, on 12th January 2010, Tata Power- G entered into an agreement with TPTCL for 400 MW capacity. Out of this capacity contracted to TPTCL, a quantum of 160 MW was in turn contracted by TPTCL with Tata Power –D for the year FY 2010-11.

2.3 The Petitioner further submitted that, in the Tariff Order dated 12th September 2010, the Commission did not, however, consider the above mentioned arrangement between Tata Power –D and TPTCL while approving Tata Power – D's power purchase quantum and cost of power purchase during FY 2010-11. The

Petitioner submitted that, the Commission, instead considered the additional 160 MW required by Tata Power –D as directly contracted from Tata Power –G. Relevant extract of the Tariff Order dated 12th September 2010 is reproduced as follows:

“The Commission has gone by the PPAs entered into by different Utilities and other power procurement arrangement as on date. Hence, the Commission has considered the additional 160 MW required by TPC-D as directly contracted from TPC-G.”

The Petitioner submitted that TPTCL is understood to have appealed against the above direction in the Appellate Tribunal for Electricity (ATE), and the matter is presently *sub judice*.

The Petitioner submitted that, in any case, the above appeal in the ATE pertains to the period of agreement between Tata Power –D and TPTCL which was valid till 31st March 2011.

2.4 Power Purchase Agreement between Tata Power –G and Tata Power –D

The Petitioner further submitted that the Commission had approved a PPA between Tata Power –G and Tata Power –D, on 6th November 2007, for 477 MW capacity, and additional 50 MW capacity from Trombay Unit 8. TPC submitted that the Commission had passed a series of orders in the year 2009 for facilitating changeover of consumers from R Infra to Tata Power –D by using the network of R Infra. TPC submitted that subsequent to the above mentioned various orders, there has been a large movement of consumers (“Changeover Consumers”) from R Infra to Tata Power-D and the sales (“Changeover Sales”) of Tata Power –D have been rising steadily since then.

The Petitioner further submitted that at the time of filing of the APR petition for FY 2009-10, Tata Power had estimated certain quantum of Changeover Sales for FY 2010-11 and proposed a capacity of above-said 160 MW (to be procured from Tata Power –G through TPTCL) for meeting the estimated requirement for FY 2010-11. The Petitioner submitted that , the actual sales, however, resulting from this

changeover of consumers have been significantly higher than the estimated quantum of sales projected in the APR petition. The Petitioner submitted that as a result of the same, there is a need for contracting further capacity from Tata Power –G.

The Petitioner further submitted that the sales due to Changeover Consumers is increasing and that the Petitioner expected that keeping in mind the present rate of applications received, the same will increase even further. The Petitioner submitted that, accordingly, there is a need for tying up more capacity (i.e higher than 160 MW). The Petitioner explained that in this pursuit, Tata Power –D has entered into the subject PPA dated 28th March 2011 with Tata Power –G for the balance 400 MW capacity available with Tata Power –G from 1st April 2011.

The Petitioner submitted that the present PPA entered into between Tata Power –G and Tata Power –D is without prejudice to the rights and contentions of parties in the proceedings pending before ATE in Appeal No. 11 of 2011 arising out of Tariff Order dated 12th September 2010.

The Petitioner submitted that the subject PPA is in line with the PPA that was signed in December 2006, followed by the terms and conditions agreed between Tata Power G and Tata Power –D and submitted to the Commission vide its letter no REG/MERC/09/57 dated 12th March 2009. The Petitioner attached the copy of the signed PPA as Annexure -1 of the Petition, for the Commission's approval.

2.5 Justification for requirement for Contracting capacity to the extent of 400 MW

The Petitioner, in its submission reiterated that, Tata Power –D's requirement has been growing over the past few months. TPC further submitted that, there is a significant rise in the number of applications received for changeover of supply from R Infra to Tata Power –D.

The Petitioner, in its submission further highlighted the fact that Tata Power –D had filed a petition (Case 20 of 2011) seeking approval of the Commission for medium-term procurement of power through Case 1 competitive bidding route as

per the Competitive Bidding Guidelines. The Petitioner submitted that the Commission approved such power procurement vide its order dated 9th May 2011 and held the following:

“11. The Commission analysed the details of the demand as projected by TPC-D for the period from FY 2010-11 to FY 2015-16. Further, currently TPC-D has a Power Purchase Arrangement of 845 MW considering the additional capacity of 198 MW from April 1, 2011 by its Generation Business, i.e., TPC-G. Therefore, even after considering the additional capacity available with TPC-D, the power required of TPC-D is as under

Table: Power procurement requirement

	FY 2010- 11	FY 2011- 12	FY 2012- 13	FY 2013- 14	FY 2014- 15	FY 2015- 16
Peak Demand (MW)	799	1,054	1,095	1,133	1,176	1,225
Contract Power at bus bar (MW)¹	622	814	814	814	814	814
GAP	177	240	281	319	362	411

¹ Capacity at G<>T interface after taking into account the auxiliary consumption

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“13. The Commission is of the view that the demand projected by TPC-D for future years appears to be reasonable considering the demand projected for FY 2010-11 and actual demand witnessed during the changeover period. However, in the context of the assumptions used for the demand projections, the Commission advised / suggested for improvement of historical data estimation of sales and consumption of electricity by use of the secondary data. Considering the above aspects, the Commission accords its approval to TPC-D’s request to procure above quantum of power on medium-term basis through

competitive bidding process under Case-1 Bidding in the different supply periods.

The Petitioner further submitted that while approving the quantum of power to be procured by Tata Power –D through competitive bidding route the Commission has considered availability of additional 400 MW (358 MW after considering 42 MW of Standby from Unit 4) from the generating capacity of Tata Power –G. TPC submitted that, in effect, the Commission had acknowledged that there is rightful requirement of this 400 MW power for Tata Power –D.

The Petitioner submitted that, the computation given in the table below demonstrates that the present requirement of Tata Power –D is unmet even after contracting the balance 400 MW capacities from Tata Power –G.

Table : Requirement of Capacity from Tata Power -G

Sr. No.	Particulars	Unit	Value
1	Demand As approved at G<> T Interface	MW	1,054
2	Approx Auxiliary Consumption of Tata Power -G	%	4%
3	Demand at Generator Terminals	MW	1,098
4	Capacity Contracted with Tata Power -G (excluding Unit 4 as Standby)	MW	487
5	Balance required to be tied up	MW	611

The Petitioner submitted that as can be seen from the above table, the requirement of Tata Power –D in FY 2011-12 can absorb about 400 MW (358 MW excluding 42 MW of Standby of Unit 4) of capacity from Tata Power –G with the above assumptions.

2.6 Maintainability of the Petition

The Petitioner submitted that the present petition has been filed in accordance with Regulation 25.1 of the MERC (Multi Year Tariff) Regulations, 2011 seeking the Commission’s approval to the PPA dated 28th March 2011 entered into between Tata Power –G and Tata Power –D. The Petitioner cited the relevant regulation as under:

“25.1 Every agreement or arrangement for power procurement by a Distribution Licensee from a Generating Company or Licensee or from other source of supply entered into after the date of effectiveness of these Regulations shall come into effect only with the prior approval of the Commission:

Provided that the prior approval of the Commission shall be required in accordance with this Regulation 25 in respect of any agreement or arrangement for power procurement by the Distribution Licensee from a Generating Company or Licensee or from any other source of supply on a standby basis:

Provided further that the prior approval of the Commission shall also be required in accordance with this Regulation 25 for any change to an existing arrangement or agreement for power procurement, whether or not such existing arrangement or agreement was approved by the Commission.”

2.7 Applicability of Competitive Bidding Guidelines

The Petitioner submitted that Para 5.1 of the Tariff Policy notified by the Govt. of India stipulates as follows:

“All future requirement of power should be procured competitively by distribution licensees except in cases of expansion of existing projects or where there is a State controlled/owned company as an identified developer and where regulators will need to resort to tariff determination based on norms provided that expansion of generating capacity by private developers for this purpose would be restricted to one time addition of not more than 50% of the existing capacity.”

The Petitioner submitted that the applicability of Para 5.1 is for generating capacity set up in future while the present PPA is with respect to capacity that was existing prior to the National Tariff Policy. The Petitioner further submitted that the capacity of 400 MW presently offered by Tata Power –G through the subject PPA is from its existing generation capacity, which is over and above the capacity

contracted under the PPA of December 2006, and therefore does not fall under any new generation capacity. The Petitioner further submitted that, this capacity is part of the same capacity which was earlier being made available to R Infra at a tariff which had been determined by the Commission. As such, this capacity does not pertain to any new addition made by Tata Power-G. The Petitioner further submitted that, the proposed PPA with Tata Power –G is entered into by Tata Power-D, on the same terms and conditions, as of the earlier PPA of December 2006, which has been approved by the Commission vide its order dated 6th November 2007, and that, the proposed PPA would be co-terminus with the earlier PPA. The Petitioner further submitted that, on the basis of the above submission, the proposed procurement of 400 MW by Tata Power –D from Tata Power –G is not in violation of Para 5.1 of the Tariff Policy (Para 5.1) and Competitive Bidding Guidelines would not be applicable in the present situation.

The Petitioner further submitted that in this regard, Tata Power–G had signed a Power Purchase Agreement for supplying 100 MW to BEST from 1st April 2010. The said PPA was approved by the Commission by its order dated 1st September 2010 in Case No 1 of 2010. The observations of the Commission in Para 15, which is relevant for the present purpose, reads as follow:

“From the above, it would appear that BEST should have procured this quantum or part of this quantum (100 MW) through a transparent process of competitive bidding route, rather than directly from an identified source, viz., TPC-G. However, at the same time, it needs to be noted that the additional capacity of 100 MW is being offered by TPC-G from its existing generation capacity, and does not fall under any new generation capacity. As a result, it could be inferred that the procurement of 100 MW from TPC-G is not violative of the aforesaid quoted provisions of the Tariff Policy. This capacity became available on account of TPC-G deciding not to supply 500 MW to RInfra with effect from April 1, 2010. Given the present demand being met by BEST, which has exceeded 832 MW in several months, the Commission is of the view that BEST's move to tie-up the additional capacity of 100 MW from TPC-G with effect from April 1, 2010, will actually help to protect the interest of its

consumers in Mumbai Island city, and shields them from the fluctuations of the power exchanges, since this power is being sold by TPC-G to BEST at regulated rates determined by the Commission. Further, had BEST not contracted this additional capacity from TPC-G, then the capacity may have become spare capacity, and may have been contracted by TPC-G to sources outside the State, which would not have been in the best interests of Mumbai city.”

3 Hearing.

Hearing in the Case was scheduled on June 23, 2011 and notice was sent to the Petitioner and the Consumer Representatives authorized under Section 94(3) of the Act. The Petitioner was also asked to forward the copy of his submission to the said Consumer Representatives.

During the hearing held on June 23, 2011, the Petitioner was represented by Shri Ashok Sethi, Shri V H Wagle and Shri Prashant Joshi.

None of the Consumer Representatives were present for the hearing .

3.1 During the hearing, the Petitioner submitted that salient features of the said PPA of TPC-D with TPC-G is as follows;

- a) TPC-G was supplying 500 MW power out of its capacity of 1777 MW, to R Infra in the past. As a result of various developments, inclusive of directives given by the Commission and by the Government of Maharashtra (GoM), from July 1, 2010 to March 31 2011, the mandated power supply to R Infra from TPC-G was reduced to 160 MW and subsequently R Infra was required to make alternate arrangements for fulfilling the needs of its own consumers. TPC-D has entered into PPA with TPC-G for supply of 400 MW power w e f the date 1st April 2011, as the mandate of supplying power to R Infra ends on 30th March 2011.

b) The Petitioner further submitted that as per the Order issued regarding Case 20 of 2010 in the matter of Petition of TPC-D for approval of Medium term power procurement through Competitive bidding process under Case 1 bidding, the Commission has approved the load projection of TPC-D upto 2015 and observed as follows:

“The Commission analysed the details of the demand as projected by TPC-D for the period from FY 2010-11 to FY 2015-16. Further, currently TPC-D has a Power Purchase Arrangement of 845 MW considering the additional capacity of 198 MW from April 1, 2011 from its generation business.....From the above, the peak shortfall in FY 2015-16 would be close to 411 MW. “

c) The Petitioner further submitted that in its Petition for APR for FY 2009-10, TPC-D had contracted for a capacity of 160 MW of power from the existing units of TPC-G for meeting the increased requirement for FY 2010-11. The Petitioner also stated that due to the migrated customers, TPC-D is not able to cater its entire load from its own (TPC-G’s) power plants.

d) The Petitioner submitted that R Infra had approached GoM for continuation of the power supply of 500 MW, which was evaluated by an empowered committee and the following capacity was made available to R Infra vide its memorandum dated 7th May 2010.

From	To	R Infra	BEST	TPC-D	Total
1/04/2010	30/04/2010	460	0	0	460
1/05/2010	30/06/2010	360	100	0	460
1/07/2010	31/03/2011	200	100	160	460

The Petitioner submitted that on 12th January 2010, TPC-G entered into the agreement with TPTCL for supply of 400 MW capacity. Out of this capacity contracted to TPTCL, a quantum of 160 MW was contracted by TPTCL with TPC-D for FY 2010-11.

The Petitioner stated that, subsequent to the end of its mandatory power sale requirement to Reliance Infra on 31st March 2011, 400 MW power, from TPC-G's generating plants, not tied up for sale to any utility, is now available for consumers of TPC-D. The Petitioner stated that TPC-D has entered into PPA with TPC-G for the above mentioned 400 MW power and it requests the Commission to accord its approval to the said PPA.

3.2 The Commission observed that high cost of generation from TPC's Trombay unit 4 and Unit 6 would affect the interest of consumers vitally and as such, it was essential to ascertain the opinion of Consumer Representatives in the matter. The Commission, therefore, adjourned the hearing and scheduled the same to be held on July 13th, 2011 at 11 AM. Accordingly, notice was sent to the Petitioner. Further, along with the 4 Consumer Representatives viz. Prayas, Thane Belapur Industries Association, Mumbai Grahak Panchayat and Vidarbha Industries Association, authorized vide Section 94(3) of the Act, for the hearing held on June 23, 2011, notice for the hearing scheduled on July 13, 2011 was also sent to the 3 additional Consumer Representatives viz. Shri Rakshpal Abrol, Shri Ponnarathnam and Shri Sandip Ohri authorized by the Commission under Section 94(3) of the Act.

3.3 At the hearing held on 13th July 2011, the Petitioner was represented by Shri Ashok Sethi, Shri Prashant Joshi and Shri V H Wagle. Among the Consumer Representatives and to whom the Commission had sent notices regarding the said hearing, Dr Ashok Pendse, Shri Ponnarathnam and Shri Rakshpal Abrol were present for the said hearing.

During the hearing held on July 13, 2011, the Petitioner explained the composition of 400 MW power from various generating units of TPC-G, comparison of price with alternate power purchase cost, Transmission constraints in Mumbai and specific advantage of tying up of capacity of 400 MW of TPC-G. After hearing the Petitioner, the Commission directed the Petitioner to submit the load curves of its Consumers, for diurnal variations, superimposed with the transmission constraints in Mumbai. The Commission scheduled the next hearing in the matter on August 2, 2011.

Notice was accordingly sent to the Petitioner and all the Consumer Representatives as above.

3.4 During the hearing held on August 2, 2011, the Petitioner was represented by Shri Ashok Sethi, Shri Prashant Joshi and Shri V H Wagle. Among the Consumer Representatives, Dr Ashok Pendse, and Shri Ponnarathnam were present.

During the said hearing held on August 2, 2011, the Petitioner explained load curves and diurnal variations. The Petitioner further submitted that the said PPA between TPC-G and TPC-D for supply of 400 MW power in Mumbai would be useful in Islanding scheme of Mumbai. After hearing the Petitioner, the Commission observed that the issues related to “Islanding scheme” and “Transmission constraint” were Technical Issues. The Commission therefore directed to form a Technical Committee comprised of Technical officers of MERC to go into the nitty-gritty of the islanding system, operational constraints of TPC-G and Transmission constraints in Mumbai. The Commission scheduled the next hearing in the matter on August 26th, 2011. Notice was accordingly sent to the Petitioner and to all the Consumer Representatives as above.

3.5 The Technical Committee so formed by the Commission held a meeting with the TPC officials on 8th August 2011 at the Commission’s office and presented its findings to the Commission in the next hearing in the matter.

3.6 During the hearing held on August 26, 2011, the Petitioner was represented by Shri Prashant Joshi and Shri V H Wagle. Among the Consumer Representatives authorized by Section 94(3) of the Act and to whom the Commission had sent notice regarding the said hearing, Shri Ponnarathnam was present.

During the hearing, the Commission asked the Technical Committee to present its findings to the Commission.

Findings of the Committee

- a) The Committee submitted that, based on TPC-D's projection of month-wise actual demand data for period April 2010-June 2011 it was noted that there was substantial increase in demand on TPC-D from 770 MW in April 2010 to 1140 MW in May 2011. Considering the existing PPA of 527 MW, there will be additional requirement of 650 MW in order to meet the current peak demand. Hence TPC –D has proposed to meet this peak demand through 400 MW under the proposed PPA and balance power through Competitive bidding.
- b) The present transmission corridor capacity when compared with the demand curves for Mumbai region indicates that merely 1100 MW capacity can be brought from outside to meet demand of Mumbai. From this, it appears that the Transmission capacity is not adequate.
- c) The Committee recommended that in case the aforesaid proposal of approval of PPA was to be considered, TPC should explore the possibility of removal of the Unit # 4 capacity of 42 MW from the proposed PPA and the possibility of inclusion of 100 MW capacity from Trombay Unit # 8 which is currently being sold on merchant basis. This will bring the PPA quantity to 458 MW which is in line with present demand forecast.
- d) The Committee also referred to the islanding system of Mumbai (Reverse power under-frequency based scheme) which would be able to operate correctly in case the demand –supply balance was met adequately through generation within the island in case of grid severance (tripping of weak ties of Mumbai with Maharashtra State In-STS).
- e) The Committee desired further clarifications regarding present demand of TPC-D so as to justify the requirement of 400 MW. TPC-D projected month-wise actual demand data for period April 2010 - June2011. The Committee noted that there was substantial increase in demand from 770 MW in

April 2010 to 1140 MW in May 2011. Considering the existing PPA of 527 MW, there will be an additional requirement of 650 MW in order to meet the current peak demand. Hence TPC –D has proposed to meet this peak demand through 400 MW under the proposed PPA and balance power through Competitive bidding.

- f) The Committee further deliberated on the Cost of power from proposed capacity and details of pooled cost of generation (as provided by TPC-D) which are shown below:

Unit	Capacity	Contracted Capacity	Fixed Cost as approved by the Hon'ble Commission in Tariff Order of 2010	Generation as approved by Commission	Fixed Cost proportional to Contracted Capacity	Generation proportional to the Contracted Capacity	Fixed Cost per Kwh	Existing Energy Charge (Q 1 of FY 2010-11)	Total Tariff
Unit	MW	MW	Rs Cr	MU	Rs Cr	MU	Rs/Kwh	Rs/Kwh	Rs/Kwh
Unit 4	150	42	12.59	132	3.54	37.14	0.95	0	0.95
Unit 5	500	110	240.19	3311	52.84	728.42	0.73	3.01	3.74
Unit 6	500	110	206.79	3381	45.49	743.82	0.61	6.74	7.35
Unit 7	180	40	106.79	1227	23.73	272.67	0.87	1.73	2.60
Hydro	447	98	191.36	1443	41.95	316.36	1.33		1.33
Total	1777	400	758	9494	168	2098	0.80		4.46

Note: Unit # 4 cost is exclusive of energy charge.

The Average pooled Cost comes to Rs 4.46/kWh and is based on the actual generation and approved tariff orders. The fuel cost also has been considered from Q1-FY11. TPC-D further justified that this cost is well comparable with levellised tariff of Rs. 4.85/kWh in recent medium term power procurement by RInfra.

Observations:

After considering the findings of the Technical Committee, the Commission directed TPC-D to build Scenarios regarding the various combinations of TPC-G Units based on above discussions and submit its revised submission to the Commission.

The Commission scheduled the next hearing in the matter on September 16th, 2011. Notices were accordingly sent to the Petitioner and to all the Consumer Representatives as above, authorised under Section 94(3) of the Act.

4. Revised Submissions by the Petitioner -:

As per the directive issued by the Commission, the Petitioner submitted its revised submission on 9th September 2011, as follows, giving revised projection as directed.

4.1 Applicability of Tariff policy.

The Petitioner submitted that the said 400 MW capacity of TPC is not a new capacity which has been recently constructed but it has been servicing the needs of Mumbai consumers for several years through Power Purchase arrangement with R Infra earlier.

The Petitioner further submitted that the provision in Tariff policy is applicable to expansion project or capacity addition only. Hence there is no conflict with the Tariff Policy.

4.2 Past approach adopted by the Commission.

The Petitioner submitted that in its Order in Case 1 of 2010 in the matter of Brihan-Mumbai Electric Supply and Transport (BEST) Undertaking's Petition seeking approval of Power Purchase Agreement between BEST and TPC for 100 MW, dated 1 September 2010 the Commission has stated that,

“It needs to be noted that the additional capacity of 100 MW is being offered by TPC-G from its existing generation capacity, and does not fall under any new generation capacity. As a result, it could be inferred that the procurement of 100 MW from TPC-G is not violative of the aforesaid quoted provisions of the Tariff Policy.”

4.3 Transmission bottlenecks for bringing power into Mumbai.

The Petitioner submitted that there are transmission bottleneck issues for inter-state transmission corridors and hence intra-state power can more reliably be transmitted until the problems are resolved and sufficient corridor are available

The Petitioner further submitted that in case competitive bidding under Case I is to be resorted to, there is no other available capacity in Mumbai which can participate in Case I bidding.

The Petitioner stated that relevance of the above issue to the present case stems from the fact that the existing corridor capacity for bringing power into Mumbai is about 1100 MW. Subsequent to Tata Power's withdrawal of the supply to R Infra in view of its own growing demand, R Infra has been sourcing significant quantum of power from outside Mumbai including the medium term power procurement quantum that has been approved by the Commission for R Infra.

The Petitioner further submitted that if the power to the extent of 400 MW is procured through Case 1 bidding route from outside Mumbai (as there is no capacity of TPC-G which can participate in Case 1), there will not be adequate transmission line corridor availability to bring such power. It will eventually lead to load shedding in Mumbai to maintain the Transmission line loading. Hence this 400 MW capacity offers a positional advantage over any other capacity outside Mumbai.

4.4 Tenure of PPA

The Petitioner submitted that the Commission has granted approval of Case I bidding for 350 MW during peaking hours in Case 20 of 2011 from 1st April 2012 onwards and if an additional 400 MW is required to be procured through Case 1 bidding, then the total Capacity required would be 750MW. Considering the 4 (four) year's time required for initiation of the supply above 500 MW, the effective date of availability of the above power would be at the earliest FY 2016-17, while the proposed PPA is upto the period ending FY 2017-18, a year more than the availability of the capacity under Case 1 bidding. Hence, the benefit of such procurement by competitive bidding will be for 1 (one) year only.

4.5 Prices under Case I bidding.:

The Petitioner submitted that after the prices from the 100 MW capacity of Trombay Unit 8 were included and those of Trombay Unit 4 were excluded, the average price of supply of the said power covered under the said PPA is Rs 4.05, which is comparable with bids received for Medium Term supply by R Infra through Case I bidding.

4.6 Mumbai system islanding

A strong generating capacity within Mumbai will effectively help Mumbai Islanding scheme to safeguard Mumbai in case of its severance from the grid.

5. During the hearing held at 10:30 AM on September 16, 2011, the Petitioner was represented by Shri Ashok Sethi and Shri Prashant Joshi. Among the Consumer Representatives, Shri Ponnarathnam and Shri Rakshpal Abrol were present.

5.1 Shri N. Ponnarathnam requested TPC to explain the benefits that the consumers would derive from the proposed PPA. The Petitioner explained that these were already explained in the previous hearings, however the relevant papers would be forwarded to Shri Ponnarathnam for his scrutiny. The Petitioner subsequently confirmed that the said action has been taken.

5.2 Shri Rakshpal Abrol stated that in recent past consumers from R Infra had migrated to TPC, and hence the load of TPC had increased substantially. Shri Abrol further stated that TPC being an integrated power company with its own transmission network in Mumbai, further transmission loss will not be incurred for the proposed additional capacity sought from its own generating stations for supplying to Mumbai consumers. Shri Abrol expressed that the proposed PPA may be approved.

6. During the hearing held on September 23, 2011, the Petitioner was represented by Shri Ashok Sethi, Shri V H Wagle and Shri Prashant Joshi., Shri Rakshpal Abrol was also present.

6.1 At the said hearing held on September 23, 2011, the Petitioner again presented the salient features of its proposal and submitted that,

- a) The requirement of TPC-D to procure the said quantum is immediate as the load has already increased, and hence the proposed PPA is not aimed at any “future” requirement, but “Present” requirement.
- b) The generating capacity of TPC-G is not a new capacity but which has already been in service, towards fulfilling R Infra’s requirement of serving its consumers in Mumbai.
- c) Transmission constraints make it difficult to get the additional power from outside, into Mumbai city.
- d) To ensure reliability of operation of Islanding system and thereby to ensure continuity of supply to Mumbai it is essential to have a generating capacity within the island
- e) After inclusion of additional 100 MW (Total 250 MW) from Trombay Unit 8 and after exclusion of expensive power from Trombay Unit 4, the average price of the said quantum of power was comparable to the recent power supply deals executed through competitive bidding route for Medium term supply.

6.2 Consumer representative Shri Rakshpal Abrol expressed that he was aware of the problems faced by the Petitioner and he further expressed that the said PPA may be approved by the Commission in the interest of the consumers. Shri Abrol further expressed that with the continuous stream of consumers migrating from R Infra to TPC-D, the 42 MW unallocated capacity of Trombay Unit 4 also should be allocated to TPC-D.

The Commission directed the Petitioner to submit a revised PPA for the Commission’s approval. The Petitioner mentioned that the said changes have already been incorporated as Amendment Addendum, attached as Appendix to the letter REG/MERC/2011/219 dated 24th August 2011 and also in the Revised submission on Affidavit dated 8th September 2011.

The hearing in the matter held on September 23, 2011 was, thereupon concluded.

7. Analysis

The Commission, after scrutiny of all the material submitted and after hearing the Petitioner as well as the Consumer Representatives, is of the view as follows:

7.1 Necessity of procuring the said quantum of power through PPA between TPC-G and TPC-D:

The Commission is of the view that TPC-D's load is increasing substantially.

As per the projections of load made by TPC-D which was approved by the Commission in its Order dated 9th May 2011 in Case 20 of 2011, the year-wise power requirement of TPC-D is as follows :

Year	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Power Requirement MW	1054	1095	1133	1176	1225

Vide Order dated 9th May 2011 in Case 20 of 2011 mentioned above, the medium term power procurement as given below has been approved by the Commission. The ensuing gap in the demand after the aforesaid medium term power procurement, is proposed to be met by TPC-D through procurement of additional power which is available from TPC-G's generating capacity. The detailed tabulation is given below. :

Year	Power Requirement MW	Capacity already contracted by TPC-D (Excl. 40 MW of Trombay Unit 4)	Case I bidding approved (Case 20 of 2011)	Shortfall MW	Initially Petitioned MW	Proposed MW through revised submission
FY 2011-12	1054	487		567	400	458
FY 2012-13	1095	487	250	458	400	458
FY 2013-14	1133	487	350	296	400	458
FY 2014-15	1176	487	350	339	400	458
FY 2015-16	1225	487		738	400	458

7.2 Alternative power supply sources :

The Commission observes that as per “Request for Proposal for procurement of power for Medium term or Long Term under case 1 bidding procedure, the scheduled delivery date is defined as follows :

Definitions:

“Scheduled Delivery Date” shall mean [Date to be inserted] on which the Seller is required to start delivering the power at the Delivery Point as per the terms and conditions of the PPA;

[Note: In case of Requisitioned Capacity being equal to or greater than 500 MW, the Procurer/Authorised Representative shall have the option to decide the Scheduled Delivery Date which shall not be less than four (4) years from the Effective Date.

The Commission therefore observes that the aforesaid 400 MW power, clubbed with the 350 MW already approved by the Commission will total to 750 MW, and will not be available in less than 4 years’ time, viz., only by year FY 2016-17. The Commission is also of the view that the proposed period of the said PPA is only upto 2017-18. Because of the unreasonable time gap between the demand and supply, the above alternative of procurement of the total requirement through competitive bidding route will not be suitable in the present case.

Even considering the effective date (i.e., the date from which the PPA becomes effective) of 1st April 2012, such capacity of 750 MW under Case 1 bidding would be available at the earliest FY2016-17 while the proposed PPA is upto the period ending FY 2017-18, about a year more than the availability of the capacity under Case 1 Bidding.

7.3 Technical constraints :

7.3.1 Transmission constraints:

The Commission, on the basis of discussions of reports at various platforms such as, the meetings of Maharashtra State Power Committee (MSPC) and the Transmission planning committee spearheaded by the State Transmission Utility (STU), is of the view that there are severe constraints in bringing in power into Mumbai area on the existing EHV network. The constraints as above cannot be removed until further augmentation in the capacity of the said interconnecting EHV network is carried out, which will take some time. As all the consumers of TPC-D are located within Mumbai area, additional bulk power transmission on the said

transmission links having restriction on capacity, may tend to make the supply system unreliable.

7.3.2 Islanding scheme :

The Commission observes that the electricity supply utilities in Mumbai have implemented a Reverse power under frequency scheme which is used to island the Mumbai consumers and safeguard them in case there is a heavy grid disturbance or a “sudden loss” of generating capacity. Based on the findings of the Technical Committee, the Commission observes that in the event of such occurrence, Mumbai area gets automatically islanded, certain non-essential load is removed and remaining load continues to get supply with a dynamic balance between the load and the generation within the island. Successful operation of the scheme and assurance of continuous supply to the consumers in Mumbai depends upon availability of adequate generation within the island to meet the demand adequately. In case such generation is not available within the island, the operation of the said islanding system cannot be guaranteed. The Commission observes that there have been instances in the past when the above mentioned islanding system has ensured uninterrupted power supply to the consumers in Mumbai when the State grid had collapsed and large areas of the State had suffered black-out.

7.4 Commercial competitiveness

The Commission observes that the Petitioner has built up cost scenarios based on the actual generation, approved tariff orders and the fuel cost prevalent during Q1-FY11.

- a) In the initial scenario, the Petitioner submitted an affidavit dated May 31st 2011, wherein it had included 42 MW power from Trombay Unit 4 and had excluded the 100 MW capacity of Trombay Unit 8 which is being sold on Merchant basis. In the above scenario, the average cost of supply to be supplied through the said PPA was Rs. 4.46/kWH (fixed costs and variable costs expressed on “per kWH” basis).

- b) The Commission observes that subsequently as directed by the Commission, the Petitioner has submitted a revised proposal as “additional submission” on affidavit dated September 8th 2011, in which another scenario was projected. In the said revised scenario, the Petitioner has excluded the expensive power of Trombay Unit 4 and has included the 100 MW capacity of Trombay Unit 8 which was earlier sold as merchant power.

The Commission observes that with the changes as above, the average cost of supply in the said PPA under Scenario (b) above, with the same cost assumptions as in the scenario (a) above, would come to Rs 4.05/kWH. Thus, there will be a saving of [0.41/kWh] from the originally proposed price and the price now offered. The Commission observes that the said cost under scenario (b) is competitive as compared to the cost of other Medium term procurement contracts approved recently for immediate supply of Electricity, such as in the following cases –

Generating Company	Approved vide	Period of supply	Levellised tariff Rs/kWH
Abhijeet MADC	Case 84 of 2011	1 st July 2011 to 31 st March 2014	4.80
Wardha Power co	Case 85 of 20 ¹¹ and Case 11 of 2011	31 st may 2011 to 31 st March 2014	4.85
Vidarbha Industries Power Ltd.	Case 12 of 2011	April 2011 to March 2014	4.80

8. During the hearing in the case on August 26, 2011, the Commission asked the Petitioner to amend the terms of PPA with regards to Mega Watt Capacity mix from various units.

Accordingly the Petitioner made an additional submission on affidavit, dated September 8, 2011 amending therein, the Mega Watt Capacity mix from various units of TPC-G.

The statement of Mega Watt capacity mix in the original Power Purchase Arrangement dated March 28th 2011 and in the subsequent Amended submission of the Power Purchase Arrangement and the submission of Revised Terms of Agreement, is as follows :

Capacity Allocation

Unit / Plant of TPC-G	Unit/Plant Capacity MW	Capacity Available MW	TPC-D share MW		
			As per original proposal on Affidavit dated May 31, 2011	Approved as per Revised Terms of Agreement , From 1 st April 2011 to 30 th September 2011	Approved as per Revised Terms of Agreement , From 1 st October 2011
Trombay Unit 4	150	42	42	0	0
Trombay Unit 5	500	110	110	110	110
Trombay Unit 6	500	110	110	110	110
Trombay Unit 7	180	40	40	40	40
Trombay Unit 8 (L.A)	150	0	0	0	0
Trombay Unit 8 (Merchant)	100	100	0	0	100
Hydro	447		98	98	98
Total MW			400	358	458

9. With the above, the Commission approves the PPA between TPC-G and TPC-D for procurement of 358 MW power from 1st April 2011 to 30th September 2011 and for 458 MW power from 1st October 2011, to meet the demand of consumers of TPC-D. The approved prices as specified in the TPC-G tariff order in the matter of Case 96 of 2009 dated 8th September 2010 shall be applicable.

Sd/-

(Vijay L. Sonavane)
Member

Sd/-

(V. P. Raja)
Chairman