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Tariff Authority for Major Ports

GNo. 102 **New Delhi,** **16 April 2010**

NOTIFICATION

In exercise of the powers conferred by Sections 48, 49 and 50 of the Major Port Trusts Act, 1963 (38 of 1963), the Tariff Authority for Major Ports hereby disposes of the proposal received from the Tuticorin Port Trust for setting upfront tariff for coal handling terminal in pursuance of the guidelines for upfront tariff setting for Public Private Participation (PPP) projects at Major Ports vide this Authority's Notification No.TAMP/52/2007-Misc. dated 26 February 2008 as in the Order appended hereto.

(Rani Jadhav)
Chairperson

Tariff Authority for Major Ports

Case No. TAMP/27/2009-TPT

Tuticorin Port Trust - - - - - **Applicant**

O R D E R

(Passed on this 23rd day of February 2010)

This case relates to a proposal dated 5/6 August 2009 filed by the Tuticorin Port Trust (TPT) for fixation of upfront tariff for coal handling at Tuticorin Port on Design Built Finance Operate and Transfer (DBFOT) basis in pursuance of the guidelines for upfront tariff setting for Public Private Participation (PPP) projects at Major Ports Trusts vide Notification No.TAMP/52/2007-Misc. dated 26 February 2008.

2. The initial proposal dated 5/6 August 2009 filed by the TPT was not found to be in conformity with the norms prescribed in the guidelines particularly with reference to the parameters adopted by the port for assessing the optimal quay and yard capacities, capital cost estimation, etc. In view of the gaps observed in the proposal, the TPT was vide our letter dated 19 August 2009 advised to file a comprehensive proposal taking into consideration the gaps observed and explaining the reasons for the proposed deviations from the guidelines.

3.1. The TPT vide its letter dated 22 October 2009 has furnished the information / clarifications on the points raised by us along with revised proposed Scale of Rates and a copy of Techno-Economic Feasibility Report.

3.2. The salient points of the proposal filed by the TPT are given below:

(i). The port proposes to develop another berth (no. NCB - II) adjacent to the berth to be allotted to Neyveli Lignite Corporation (NCB - I) as a bulk cargo berth for handling coal traffic under Public Private Partnership mode.

(ii). The length of the berth is envisaged at 306 metres with a width of 22.90 metres. Vessels upto 12.80 metres draft and 75,000 DWT with an average parcel load of 60,000 tonnes are expected to be handled at the proposed coal berth.

(iii). The total storage area is envisaged at 12.60 hectares.

(iv). The port has explained that bulk cargo transported will be stacked using Stackers of commensurate capacity. The stacked bulk cargoes shall be loaded on to trucks using Front End Loaders for evacuation from the port. The evacuation will be mainly through trucks initially and in later stage by Rail Wagons in addition to truck loading.

(v). **Optimal Terminal Capacity**:

(a). Optimal Quay Capacity:

The optimal quay capacity is assessed at 9.49 million tonnes per annum adopting the following parameters:

- The share of capacity of panamax vessels (upto 75,000 DWT) bringing thermal coal is assumed at 81% and share of capacity of panamax vessels (upto 75,000 DWT) bringing industrial coal is assumed at 19%.

- The unloading norms prescribed in the guidelines for panamax vessels is 35,000 tonnes per day. As against this, the TPT has considered the unloading rate of 40,000 tonnes per day for thermal coal and 25,000 tonnes per day for industrial coal.

(b). Optimal Yard Capacity:

The optimal yard capacity is assessed at 5.54 million tonnes per annum as explained hereunder:

- Out of total stackyard area of 12.60 hectares (1,26,000 square metres), the TPT has considered 35,000 square metres of area each for stacking thermal coal and industrial coal (i.e. total 70,000 square metres of area).

- The stacking norms prescribed in the guidelines is 3 tonnes per square metres. As against the above position, the stacking factor considered by the TPT is 6.6 tonnes per square metres for thermal coal and 3.5 tonnes per square metres for industrial coal.

- The turnover of the plot prescribed in the guidelines is 12 times in a year with free period prescribed at 25 days. The TPT has assumed the turnover of the plot at 32 for both thermal coal and industrial coal and free period of 10 days.

(c). The optimal capacity of the terminal is considered at 5.54 million tonnes per annum being lower of the two capacities i.e. yard and quay for determining the upfront tariff for coal terminal.

(vi). The total capital cost of the coal handling terminal is estimated at Rs.332.09 crores. The breakup of the capital cost considered by the TPT as given below:

(**Rs. in crores**)

Sl. No.	**Particulars**	**Estimated Capital Cost**
A.	**Coal Handling Activity**	
(i).	**Civil Construction Cost**	
	- Berth apron and approaches	56.60
	- Other civil works	2.00
	-3% Contingencies and 7% Supervision charges on base cost	5.86
	- Work contract tax (4% on 65% of civil cost on base cost)	1.52
	Subtotal (i)	**65.98**
(ii).	**Coal Handling Equipment**	
	- Mechanical works	185.40
	- Electrical works	11.45
	- 3% Contingencies and 7% Supervision charges on base cost	19.69
	- Work contract tax (4% on 65% of civil cost on base cost)	5.12
	Subtotal (ii)	**221.66**
(iii).	**Miscellaneous** [5% on (i) and (ii) above excluding Works Contract Tax]	**14.05**
	Total Capital Cost for Handling Activity [(i) + (ii) + (iii)]	**301.69**
B.	**Capital Cost for berthing service**	
(i).	Cost of the berth	27.00
(ii).	Cost of Dredging alongside the berth	--
(iii).	3% Contingencies and 7% Supervision charges on base cost	2.70
(iv).	Work contract tax (4% on 65% of civil cost on base cost)	0.70
	Total Capital Cost for berthing service [(i) + (ii) + (iii) + (iv)]	**30.40**
C.	**Total Capital Cost of the Project (A + B)**	**332.09**

(vii). The ROCE is calculated at 16% on the gross block of assets.

(viii). (a). Operating cost for berthing service is estimated considering 1% of capital cost towards maintenance, depreciation at the applicable rate and insurance at 1% on the capital cost.

(b). Operating cost for cargo handling activity is estimated generally following the norms prescribed in the guidelines.

(i). The power cost is estimated considering the consumption norm of 1.4 units per tonne. The unit rate adopted for estimating power cost is Rs.6.

(ii). The repairs and maintenance cost, insurance and other expenses are estimated following the norms prescribed in the guidelines. Depreciation is considered at 3.34% on civil work and 10.34% on mechanical and electrical cost following the rate of depreciation prescribed in the Companies Act.

(iii). License fee is estimated under three heads viz. waterfront area charges (33,250 square metres), stackyard at Hare Island and way leave for conveyors (36,480 square metres).

(ix). Total Annual Revenue Requirement estimated for cargo handling activity and berth hire activity is as follows:

(**Rs. in lakhs**)

Sl. No.	**Particulars**	**Cargo handling activity**	**Berth hire activity**
(i).	Operating Cost	6531.28	162.34
(ii).	ROCE (16%)	4827.04	486.40
(iii).	Total estimated revenue requirement	**11358.32**	**648.74**

(x). The revenue requirement estimated from cargo handling activity is apportioned as follows following the norms prescribed in the guidelines:

(**Rs. in lakhs**)

Sl. No.	**Particulars**	**Estimated revenue requirement**
(i).	Cargo handling charges (Rs.11358.32 lakhs x 98%)	11131.15
(ii).	Storage charges (Rs.11358.32 lakhs x 1%)	113.58
(iii).	Miscellaneous charges (Rs.11358.32 lakhs x 1%)	113.58
	Total	**11358.31**

(xi). The upfront tariff proposed by the TPT are as follows:

(a). Consolidated cargo handling charge:

		Rs. per tonne
(i).	Thermal Coal	202.38
(ii).	Industrial Coal	202.38

(b). Storage charge (after 10 days free period) (as per the revised calculation dated 22 October 2009):

		Rs. per tonne / day
(i).	For the first 6 days	2.80
(ii).	For the next 6 days	3.20
(iii).	Thereafter	5.60

(c). Miscellaneous charge (for environment and management service, sweeping of cargo on the wharf, safety measures, etc.) - Rs.2.10 per tonne.

(d). Berth hire charge:

Sl. No.	Vessel	Rate per GRT per hour or part thereof (in Re.)
(i).	Vessel carrying thermal coal	0.2727
(ii).	Vessel carrying industrial coal	0.4545

4. A summary of queries raised by us and reply furnished by the TPT vide its letter dated 22 October 2009 are summarised below:

<table>
<tr><th>Sl. No.</th><th>Queries raised by us</th><th>Reply furnished by TPT</th></tr>
<tr><td rowspan="4">(i).</td><td>Optimal Terminal Capacity:</td><td></td></tr>
<tr><td><u>A. Optimal Quay Capacity</u>:</td><td></td></tr>
<tr><td>(a). The basis for assuming that all vessels calling at the proposed coal terminal will be of panamax size.</td><td>After deepening, North Cargo Berth-2 will be able to accommodate vessels upto 12.8 mtrs. draft as against 10.90 mtrs. at present. Accordingly, it is assumed that panamax vessels call at the proposed terminal. Further, it may be stated that the trend in deployment of vessels is for panamax and capesize rather than Handymax vessels to gain economies of scale / freight advantage.

The data furnished in the Clarkson Directory reveals that deployment of bulk carriers above 40000 DWT will increase phenomenally in the near future.

Further, the Techno Economic Feasibility Report of Additional Inner Harbour development at Tuticorin Port prepared by National Institute of Ocean Technology had proposed to deepen the Habour to handle vessels with a maximum draft of 12.8 mtrs. This project has also been included in the National Maritime Development Programme of the Ministry. The report also envisages deepening of the basin to 14.1 mtrs. Keeping in view the need to optimally utilise the limited waterfront, it is proposed that panamax vessels with a draft of 12.8 mtrs. are handled at the berth. For deepening project, tender processing already commenced.</td></tr>
<tr><td>(b). Average GRT, parcel size under different categories of coal cargo vessel viz. capsize, panamax, handy max handled by the Tuticorin Port Trust (TPT) during the last three years 2006-07 to 2008-09 may be indicated.</td><td>Tuticorin Port at present cannot accommodate capesize vessels. The average GRT and parcel size of thermal and industrial coal vessels during the past three years are given below:

<table>
<tr><th rowspan="3">Range</th><th colspan="6">Average GRT</th></tr>
<tr><th colspan="3">Thermal Coal in Tonnes</th><th colspan="3">Industrial Coal in Tonnes</th></tr>
<tr><th>06-07</th><th>07-08</th><th>08-09</th><th>06-07</th><th>07-08</th><th>08-09</th></tr>
<tr><td>Upto 40,000</td><td>39918</td><td>39332</td><td>35710</td><td>37744</td><td>30538</td><td>27593</td></tr>
<tr><td>40,001 to 60,000</td><td>49354</td><td>50986</td><td>49489</td><td>47783</td><td>50969</td><td>51915</td></tr>
<tr><td>60,001 to 80,000</td><td>74270</td><td>73880</td><td>73880</td><td>73350</td><td>72829</td><td>69966</td></tr>
<tr><td>Average Parcel Size</td><td>41716</td><td>43116</td><td>39465</td><td>30310</td><td>43225</td><td>43905</td></tr>
</table></td></tr>
<tr><td>(c). The unloading norm prescribed in the guidelines for panamax vessels is 35,000 tonnes per day. As against this, the TPT has considered unloading rate of 40,000 tonnes per day for thermal coal and 25,000 tonnes per day for industrial coal. The reasons for the deviation from norms prescribed in the</td><td>An unloading norm of 40,000 Tonnes per day is considered with a view to achieve higher efficiency and to reduce the cost of handling. The reasons for adopting different unloading norms for thermal and industrial coal is the difference in the bulk density of thermal and industrial coal which are 0.80 T/m^3 and 0.50</td></tr>
</table>

	guidelines may be explained. The basis for the revised norms proposed to be adopted may be explained. The reasons for adopting different unloading norms for thermal and industrial coal may also be explained.	T/m^3 respectively.
	B. Optimal Yard Capacity:	
	(a). The upfront tariff guidelines for coal terminals do not specify any separate norms for assessing yard capacity with reference to different types of coal to be handled. The deviation proposed may be explained along with the justification for different physical (stacking) norms considered in the calculation.	The guidelines specify norms in general. The stacking capacity per sq. mtr. will vary according to density of material. Hence, the difference.
	(b). Para 3.9 of the proposal states that the total area of stack yard will be 12.60 hectares (1,26,000 square metres). However, for estimating the optimal yard capacity, 35,000 square metres of land for stacking thermal coal and 35,000 square metres for stacking industrial coal (i.e. total 70,000 square metres) is considered. The optimal quay capacity is estimated at 9.5 Million Tonnes Per Annum (MTPA), but the optimal capacity of terminal is limited to the yard capacity at 5.5 million tonnes per annum by restricting the yard area to 70,000 square metres as against 1,26,000 square metres available as per proposal. Consequently, the investment burden of providing quay side facilities to handle 9.50 million tonnes per annum is passed on to 5.50 million tonnes. Explain the reasons for not considering the proposed area of 126000 sq. mtrs for estimating the optimal yard capacity. The port should explore the possibilities of either improving the yard capacity or to scale down quay side facilities to match as far as possible with the yard capacity.	(i). The total area of the stackyard will be 12.6 hectares only though the stacking area will only be 70,000 sq. mtrs. The balance area will be required for locating equipment Berms and peripheral roads. This is indicated clearly in drawing no.5.1. Hence, it is not possible to consider the total area. Increasing the stacking area will also increase the area required for the facilities mentioned above and hence the total area required. (ii). The optimal quay capacity is calculated based on the unloading rate per day, which is proposed for the faster turn round of ships, resulting in increased efficiency and reduction in the cost of handling. The yard capacity is dependent on evacuation rate. Hence, it will not be advisable to alter the norms adopted. (iii). It is not advisable to scale down the quay facilities as it will have a bearing on the efficiency levels. The yard capacity is based on TAMP guidelines and being lower than quay capacity; the yard capacity proposed is the optimal capacity of the proposed terminal.
	(c). Explain the reasons for assuming same area of the stack yard for thermal coal and industrial coal when the share of these two items is significantly different.	The reason for assuming the same area of the stackyard despite difference in share is due to low density of industrial coal. The rate of evacuation and the quantity that can be stacked per sq. mtrs. are relatively less for industrial coal compared to thermal coal. As such, despite lower share in the traffic, same area for stacking has been reckoned for industrial coal.
	(d). Stacking norms prescribed in the guidelines is 3 tonnes per square metres. The turnover of the plot prescribed in the guidelines is 12 times in a year with free period prescribed at 25 days. As against the above position, the stacking factor considered by the TPT is 6.6 tonnes per square metre for thermal coal and 3.5 tonnes per square metre for industrial coal. The turnover factor assumed by TPT is 32 for both thermal coal and industrial coal and free period of 10 days. The reasons and the	The stacking factor of 6.6 tonnes per sq. mtr. has been reckoned for thermal coal based on a density of 0.95 tonne cum. and stack height of 7 metres. In case of industrial coal, the stacking factor has been reckoned as 3.5 tonne per sq. mtr. based on density of 0.5 per tonne per sq. mtr. and stack height of 7 mtrs. Though it is possible to evacuate 16,000 tonnes per day, the turnover ratio has been taken as 32 tonnes with an estimated evacuation ratio rate of 10,000 tonnes per day. The turnover ratio considered is achievable.

<table>
<tr><td></td><td>basis for deviations made from the norms prescribed in the guidelines may be explained.</td><td></td></tr>
<tr><td></td><td>(e). The actual average stacking factor and annual turnover achieved at the port during the years 2006-07 to 2008-09 in respect of thermal coal / industrial handled in the port may be furnished.</td><td>The stacking factor for thermal coal in the coal stackyard is 7.6 tonnes / sq. mtr. and for industrial coal is 4 tonnes / sq. mtr. The annual throughput achieved during the years 2006-07 to 2008-09 is furnished as below:
<table>
<tr><th>Years</th><th>Thermal Coal</th><th>Industrial Coal</th></tr>
<tr><td>2006-07</td><td>56.08</td><td>11.65</td></tr>
<tr><td>2007-08</td><td>61.12</td><td>19.21</td></tr>
<tr><td>2008-09</td><td>58.80</td><td>21.13</td></tr>
</table></td></tr>
<tr><td>(ii).</td><td>Capital cost estimation:</td><td></td></tr>
<tr><td></td><td>(a). The upfront tariff guidelines stipulates list of civil work for coal terminal such as berth apron and approach, stack yard, conveyor galleries, transfer tower, etc. The civil cost estimated by the TPT does not give breakup of various civil works. Furnish break up of the civil work envisaged for coal terminal along with capital cost estimation. The reasons for deviation, if any, from the norms and the justification for the same for each item of the civil work may be explained.</td><td>Civil costs estimate are based on works of similar nature recently carried out at Chennai, Ennore and Tuticorin Port. Break up costs of civil works as per guidelines will be prepared by the successful bidder based on the detailed engineering carried out by them after choosing the equipment.

For equipment the manufacturers normally do not given budgetary offers to non-buyers. The cost is based on the recent purchases of similar equipment.

It is confirmed that the rates adopted for estimation is based on current rates / prices. However, the break up details of various civil works are furnished as follows:
<table>
<tr><th>Description</th><th>Amount (Rs. crores)</th></tr>
<tr><td>Construction of R.C.C. Jetty with 1200 mm dia bored piles, including all fittings like fenders bollards, etc., as in drawing</td><td>27.00</td></tr>
<tr><td>Construction of Approach trestle with three rows of 1000 mm bored piles. 7 m x 6 m grid - 2760 m long, 12 m wide in water</td><td>37.00</td></tr>
<tr><td>Construction of R.C.C. Columns and beams 2 streams each 5 m wide 980 m long on lands</td><td>19.60</td></tr>
<tr><td>Hardening of stackyard 1,26,000 square meters</td><td>2.00</td></tr>
<tr><td>Total</td><td>85.60</td></tr>
</table></td></tr>
<tr><td></td><td>(b). The upfront tariff guidelines stipulate normative level of equipment such as 2 ship unloaders, 2 reclaimers, 2 wagon loaders, etc. The proposal of the TPT does not indicate the details of equipment proposed to be deployed with reference to the norms prescribed. Please furnish break up of the equipment cost giving details of equipment, numbers, unit cost, etc. The reasons for deviation, if any, from the norms prescribed in the guidelines may be explained.</td><td>As can be seen from Techno Feasibility Report (Appendix 8.02), the proposal envisages 2 unloaders, 3 stackers and 20 front end loaders. Reclaimer and wagon loader are not included as the cargo is initially proposed to be evacuated by trucks for loading the cargo in trucks 20 nos. of front end loaders have been proposed.</td></tr>
</table>

	(c). The cost of dredging along side the berth is not included in the total capital cost with reference to berthing service. Confirm no dredging along side berth is envisaged for coal berth. It may be noted that the upfront tariff is not fixed with reference to a particular project. Upfront tariff once approved by the TAMP for a coal berth at the port would apply to similar cargo handling facilities likely to be developed at the port in the next five years.	Dredging will be done by port as part of common facility and hence kept outside the scope of the project. The charges for the dredging facility will be collected separately by port from the vessels directly along with the port dues and pilotage fees and dredging levy thereon.
	(d). The proposal does not substantiate the capital cost estimate of Rs.332.09 crores with documentary support. Furnish copies of supporting documents / calculations / rate analysis done by the port / Consultant appointed by the port to justify the estimation of the capital cost both civil and equipment indicating the period pertaining to which the unit rate is adopted and also give references to the main sheet to co-relate the figures. Also, confirm that the current prevailing rate is adopted for estimating the capital cost items.	Civil costs estimate are based on works of similar nature recently carried out at Chennai, Ennore and Tuticorin Port. Break up of cost for civil works will be prepared by the successful bidder as per guidelines based on the detailed engineering carried out by them after choosing the equipment. For equipment, manufacturers normally do not given budgetary offers to non-buyers. The cost is based on the recent purchases of similar equipment and it is confirmed that the rate adopted for estimating is based on the current rates.
	(e). Explain the basis of adopting 10% of the capital cost towards, supervision and contingencies.	This is an accepted norm adopted in all project estimations. It includes 3% for contingencies and 7% for detailed engineering and execution, supervision. It is for information that as per clause 4.18(b) section 4 of CPWD manual, the provision for contingencies for preparation of detailed estimate is 3% and as per clause 12.2.1. Section 12 the allowable departmental charges levied by the CPWD works executed by them is 7% (Appendix – 13).
	(f). Explain the basis of assuming 65% of the base capital cost will attract Works Contract Tax. Also, confirm whether the works contract tax will be applicable for all the items of assets i.e. civil work, equipment cost, electrical work.	As for as civil works, the labour component is 65% and material component is 35%. Since, materials are subjected to tax only 4% on 65% of labour component has been considered. For equipments and electrical works, works contract tax will apply to 65% of the erection cost only. The remaining 35% is for materials used for erection which are already subjected to tax.
(iii).	**Operating Cost**:	
	(a). Confirm that the unit rate of power adopted at Rs.6 per unit is the prevailing rate.	Yes.
	(b). The guidelines for upfront tariff stipulate that lease rent for port land and assets is to be estimated based on the rate prescribed in the Scale of Rates of the respective major ports. The existing Scale of Rates of TPT does not prescribe any rate for water front area. The basis adopted for estimating this item may be indicated. The unit rate adopted for estimating license fee for stack yard is not clear as the lease rent approved by the Authority varies for various zones/ purposes. Please give	Rate approved as per Licence fees (storage) inside security wall is Rs.8/- Sq. m./Month, vide TPT Scale of Rates. The lease rent approved by the Authority for the port is for long term allotment of lands for various purposes viz., service, industrial and commercial and hence is not applicable.

	reference to the relevant schedule of Scale of Rates considered by the TPT for estimating License fee for stack yard.	
	(c). License fee for stack yard is estimated for area of 36480 sq. metres. For estimating the optimal yard capacity, 35000 sq. metre of area for stacking thermal coal and 35000 sq. mtrs of area for industrial coal (i.e. total 70000 sq. mtrs.) is considered. As stated earlier, the proposal some where else envisages stack yard area of 1,26,000 sq. metre for coal terminal. The inconsistencies with reference to the stack yard area may be removed.	There is no inconsistency in stack yard area. The total area proposed to be leased to the bidder is 1,26,000 sq. mtrs. of which 70,000 sq. mtrs. is meant for stackyard and balance is towards locating equipments, Berms and Peripheral roads.
(iv).	**Scale of Rates**:	
	(a). <u>Cargo Handling Charge</u>: The composite handling rate for Thermal Coal and Industrial Coal is proposed at the same level despite the handling rates of these commodities are assumed to be different while estimating the quay capacity. The composite handling rate proposed by the TPT may be reviewed and related to the relevant productivity factor assumed in the calculation.	The suggestion of TAMP to link handling rate with the discharge rate cannot be considered in view of the fact that for the same cargo efficiency rates differ from vessel to vessel based on the type and age of the vessel, deployed quantity of cargo available at that time etc. As such, it is desirable for a single rate for thermal coal as well as industrial coal. Moreover, handling rate cannot be different for same handling facility. Also the guidelines do not indicate any formula for arriving at wharfage based on productivity.
	(b). Though the port has proposed concessional tariff for coastal vessel / coastal cargo in berth hire as well as composite handling charge, the revenue impact of allowing such concession is not considered while arriving at the proposed rates. If no coastal cargo is envisaged, it may be expressly stated.	Coastal rate is considered in respect of thermal coal and foreign rate for industrial coal based on current experience.
	(c). <u>Storage Charge</u>: (i). For arriving at the proposed storage charge of Rs.12 per tonne per day, the TPT has divided the revenue requirement by the cargo likely to attract storage charge. Revenue is also dependent upon the number of days the cargo is likely to remain uncleared. The time factor is not considered by TPT. The storage charge proposed by the TPT may be reviewed and revised in light of the above observation. (ii). The basis of assuming cargo equal to 17% of the capacity will attract storage charge beyond the proposed free period may be explained and justified with reference to the plot turnover assumed by TPT and proposed free period of 10 days.	(i). The proportionate earmarked earnings stipulated for 1% of total revenue requirement. Storage charges is computed on 12.3% of the optimal capacity (which is likely to accrue revenue from storage charge). (ii). The basis for assuming 17% of capacity will attract storage is keeping in view the free period of 10 days and plot turn over of 30 (32 rounded off to 30). However, to avoid inconsistency, it has since been reassessed as 12.3% as shown below: Free period = 10 days Plot turnover = 32 Cargo likely to attract Storage = 12.3% (or) 6.77 lakh tonnes

	(iii). The basis of arriving at the proposed slab wise storage charge may be explained. Please furnish detailed estimation of revenue from the proposed storage charge indicating number of days the cargo will stay under each of the slabs beyond the proposed free period of 10 days.	(iii). The slabs proposed earlier have been reviewed keeping in view the existing Scale of Rates of Tuticorin Port Trust which envisages demurrage charges for first six days after expiry of free period. According, storage charges have been worked out as below: For the first six days (after expiry of free period = Rs.2.80 per ton For the next six days = Rs.3.20 per ton Thereafter percentage of cargo that attract storage = Rs.5.60 per ton
	(iv). The actual average dwell time of thermal coal/ industrial coal handled by the port during the last three years 2006-07 to 2008-09 may be furnished.	(iv). Dwell time for thermal coal does not arise as the same is directly loaded on to conveyor which carries the coal directly to TNEB (Thermal Power Station).

5. In accordance with the consultation process prescribed, the earlier proposal dated 6 August 2009 and the covering letter of TPT dated 22 October 2009 alongwith revised proposed Scale of Rates were circulated to the prospective applicants / bidders (as forwarded by the TPT) as well as other user organisations seeking their comments. The comments received from the users / prospective applicants / bidders have been forwarded to the TPT as feedback information. The TPT has furnished its observations on the comments of the users / prospective applicants / bidders.

6. On scrutiny of the information / clarifications furnished by the TPT, the TPT was requested to further furnish additional information / clarifications on a few points vide our letter dated 6 January 2010. The TPT vide its letter dated 9 February 2010 has furnished its reply. A summary of the queries raised and the clarifications furnished by the TPT are brought out in subsequent paragraphs.

7.1. A joint hearing in this case was held on 11 January 2010 at the Chennai Port Trust (CHPT) premises. The TPT made a power point presentation of its proposal, interalia, furnishing their clarifications on the comments of the users / potential bidders. At the joint hearing, TPT and the concerned users / organisation bodies have made their submissions.

7.2. It was decided in the joint hearing that the TPT will take action on the following points by 21 January 2010:

(i). Revised computation (alongwith revised proposed SOR) will be furnished in view of an error observed in its proposal in determination of the yard capacity.

(ii). Additional information / clarifications will be furnished as sought vide our letter of even number dated 6 January 2009.

(iii). Formal comments of the port on the remarks made by the users/potential bidders will be furnished. Simultaneously, with the submission of its comments to the Authority, the comments may also be circulated to respective users/potential bidders allowing them 3 days time therefrom to furnish their feedback to the Authority.

8.1. The TPT has vide its letter dated 9 February 2010 furnished its response to the points decided at the joint hearing. It has furnished revised upfront tariff calculation modifying the error observed in the determination of the yard capacity. It has furnished its comments on the remarks made by users/ potential bidders and as advised by TAMP forwarded the same to the users/ potential bidders with a request to furnish their comments to the Authority. We have not received any further comments from users / potential bidders except M/s.SICAL Logistics Limited.

8.2. A summary of further queries raised by us vide letter dated 6 January 2010 and the additional information / clarifications furnished by the TPT thereon are tabulated below:

Sl. No.	Queries raised by us	Reply received from TPT
(i).	Detailed calculation for considering differential handling rates for thermal coal and industrial coal may be furnished.	(a). The handling norm of 40,000 MT is prescribed for loading Port as per upfront guidelines. (b). In as much as the same status exist in unloading Port also hence, the same volume is proposed for adoption for Thermal Coal at NCB II as unloading Port. The Grab Unloader discharges through Grabs and the Grabs have a fixed volumetric capacity. Hence, the tonnage will be directly related to Bulk Density. The bulk Density of thermal coal is taken as 0.8 MT/ Cu. Mtr. and Industrial Coal as 0.5 MT/Cu. Mtr. Hence, when the capacity is 40,000 TPD for thermal coal, with the same grab, the discharge per day will be 40,000 x 0.5/0.8 = 25000 TPD, the volume of the grab remaining same. The other alternative of changing to higher volumetric capacity to handle higher TPD was not considered as the rate of 25,000 is adequate for handling the projected throughput.
(ii).	The basis of estimating share of capacity of thermal coal and industrial coal at 81% and 19% respectively may be explained.	The percentage share of thermal coal at 65% and industrial coal at 35% is considered in the revised calculation based on average ratio of traffic throughput from 2004-05 to 2008-09.
(iii).	(a). The upfront tariff guidelines do not prescribe any norm nor does it place any restriction on the port on area to be allotted to the operator for storage purpose. The expectation is to consider area required to handle the anticipated capacity. In view of wide gap observed between the optimal quay and optimal quay capacity, the port may examine the possibility of improving the yard capacity by increasing the area to be allotted for storage and also by improving the other parameters considered in assessing the optimal yard capacity.	Based on discussion with TAMP, the capacity of Terminal is reassessed at 7 Million Tonnes.
	(b). Considering the share of industrial coal at 19% and the handling rate of 25,000 tonnes per day as assumed by the TPT, the share of this cargo in the optimal quay capacity works out to 1.21 million tonnes per annum. As against this, the optimal yard capacity for industrial coal assessed by the port is 1.92 million tonnes per annum. In view of the yard capacity constraint in this case, the port may examine the feasibility of optimal allocation of storage yard.	
	(c). Clause 5.9. of the Feasibility Report states that 500 square metres of area is proposed to be allotted for parking 10 trucks near the stackyards. The port	This is essentially required as the arrival and the discharge of the trucks will not match. Hence, further improvement is not possible and envisaged.

	may examine whether the area proposed for parking area (for trucks) can be more effectively utilised for stacking cargo.	
	(d). When the stacking factor for thermal coal and industrial coal is achieved by the port at 7.6 tonnes per square metre and 4 tonnes per square metre respectively, then the reasons for assuming the stacking parameter at 6.6 and 3.5 tonnes per square metre i.e. lower than the level already achieved by the port may be justified.	The lower stacking factor is considered in view of the varying bulk density of different Bulk Cargoes.
	(e). When the port itself admits that it is possible to evacuate 16,000 tonnes per day, then the reasons for assuming evacuation rate of 10,000 tonnes per day and restricting turnover ratio as 32 in a year may be explained. Section 5.14 of the Feasibility Report also mentions about evacuation rate of 16,000 tonnes per day with railway line proposed in the port. The port is, therefore, again advised to review the yard capacity in light of the above observation.	Evacuation at 18000 Tonnes per day considering turnover ratio of 28 is achievable.
(iv).	Estimation of capital cost and operating cost to be considered in the upfront tariff fixation should take into consideration all the facilities envisaged by the port following the norms prescribed in the guidelines and deviation, if any, from the norms to be justified. The list of civil works indicated in Appendix 8.01 of the Feasibility Report does not cover list of civil works such as berth apron and approach, conveyor galleries, transfer towers, etc. The port is, therefore, again advised to review the civil cost and confirm that it includes all the relevant cost items as per the list of civil work indicated in the guidelines. The reasons for deviation, if any, from the guidelines may be justified and explained item-wise.	The costs of all items stated are included, though the description of items in Appendix 8.01 does not elaborate all this. The estimated cost includes cost of Berth apron.
(v).	(a). The normative list of equipment prescribed in the guidelines requires deployment of two stackers whereas the port has considered three stackers in the capital cost. The reasons for the deviation may be explained.	The stacking of the Thermal Coal will require 2 Stackers in view of the higher rate of handling per day and the Industrial Coal will require only one in view of the lesser handling rate per day. Also, the number of equipments will depend on many factors like lay out of the plots, the handling capacities per day, the total quantum of Cargo to be handled per year etc. Hence, it may not always be two only. This may please be admitted.
	(b). Citing that the port initially envisages evacuation of cargo by trucks, the port has not considered the capital cost of reclaimer and wagon loader stipulated in the guidelines. Vadinar Oil Terminal Limited has pointed out that the detailed study of evacuation of cargo through rail and road has not been done by the port. The port is advised to examine whether the evacuation facility by road envisaged by	The evacuation by rail was not considered at the time of the proposal. The details of the train handling capacity etc. was not known. The Reclaimers and Wagon loaders will be required only if there is loading of at least 3 trains per day. As the evacuation proposed is mainly through trucks, the wagons will continue to be loaded by Front End Loaders, hence reclaimers and wagon loaders are not

	the port will continue to apply for all 30 years of the project period.	proposed.
	(c). The capital cost estimated by the TPT includes cost of 20 numbers of front end loaders which is not found as per the normative list of equipment prescribed in the guidelines. Further, two numbers of cranes, four numbers of payloaders and dozers, workshop equipment prescribed in the guidelines are not also found to be included in the capital cost estimated by the TPT. The reasons for deviation from the norms prescribed in the guidelines may be justified.	The equipments referred and workshop facilities are mainly for maintenance of the plant and equipment if the maintenance is carried out by the Port and as the BOT operator, may have his own contact for maintenance, these were not included.
(vi).	The unit rate for estimation of civil works and equipment cost stated to have been adopted by the TPT in the estimation may be indicated. It is reiterated to substantiate the unit rate of equipment with reference to the cost incurred by the port for recent purchases of similar equipment, rate adopted from neighbouring ports and quotations obtained. The exact period to which unit rate pertains to may be indicated explicitly.	These type of equipments were not purchased by any Port recently. Our estimate is based on similar type of equipment. Civil cost estimates based on works of similar nature recently carried out at Tuticorin Port. The TPT vide its email dated 18 February 2010 has confirmed that the capital cost of the projections takes into consideration the escalation upto January 2010.
(vii).	Furnish copy of the recent electricity bill may be furnished to substantiate the unit rate of power considered at Rs.6/- in the estimation.	Since furnished.
(viii).	(a). As stated earlier, the license fee is computed for 72,960 sq. mtrs. (earlier it was 70,000 sq. mtrs.) as against 1,26,000 sq. mtrs. of area proposed for stackyard. The license fee on the proposed to be allotted for road, berms and peripheral also needs to be reckoned with. The inconsistency with reference to area considered for estimation of license fee may be corrected.	The License fee is calculated for the Total area of 1,26,000 sq. mtrs. There is no inconsistency.
	(b). The license fee estimated for stackyard at Hare Island for 36,480 sq. mtrs. will work out to 28.01 lakhs for the unit rate indicated as against 96.77 lakhs considered by the TPT. The arithmetical error may be corrected.	The License fee of Rs.96.77 Lakhs for Stack yard is calculated for the total area of 12.6 Hectares @ Rs.6.40 per Sqm per month. The stack yard area 36480 Sqm. shall be read as 1,26,000 Sqm.
	(c). The estimation of license fee includes Rs.31.92 crores towards waterfront charge. The existing Scale of Rates of TPT does not prescribed any license fee for waterfront area. The basis on which the unit rate of Rs.8 per square metre is considered in the estimation of license fee for this area may be explained.	As per the Port's Scale of Rates, the Licence fee for the area inside the security wall is Rs.8.00/ Sqm/p.m. Taking into account the water front area of 33,250 Sqm., the Licence fee is 31.92 Lakhs.
(ix).	The upfront tariff calculation furnished by the port does not reckon with the impact of concessional tariff applicable for coastal vessel and coastal cargo. If no coastal cargo is envisaged, the port is again requested to state it explicitly.	Yes. For feasibility study purposes, based on current trends of cargo throughput, the thermal coal vessels are assumed to be coastal and industrial coal and other bulk cargoes are foreign. This is confirmed.
(x).	The basis of assuming 12.3% of the cargo capacity will attract the storage charge	Based on the evacuation rate of 18,800 TPD the number of days that will attract

	uniformly for both thermal coal and industrial coal may be explained in the light of the fact that the stack height and share of capacity and turn over assumed for the two cargoes are different.	storage charges has been taken as 45 as shown below: Capacity: 70,00,000 Tonnes Evacuation per day: 18,000 Tonnes No. of Days required to evacuate: 330 No. of days that will attract storage: 35 Cargo likely to attract storage 35/365 = 14.30%
(xi).	The port has not furnished detailed estimation of revenue from proposed storage charge indicating number of day cargo will stay under each slab beyond the proposed free period of 10 days.	The slabs proposed earlier have been reviewed keeping in view the existing Scale of Rates of Tuticorin Port Trust which envisages demurrage charges for first six days after expiry of free period. Accordingly, storage charges have been worked out as below: For the first six days (after expiry of free period) = Rs. 2.00 per ton For the next six days = Rs.3.24 per ton Thereafter percentage of = Rs. 6.32 per ton
(xii).	The berth hire is arrived for estimated traffic of 6.5 million tonnes whereas the optimal capacity of the terminal assessed by the TPT is 5.54 million tonnes per annum. The inconsistency in the calculation may be corrected.	The Berth hire is calculated for Optimal capacity of 7.00 Million Tonnes per annum based on optimal year capacity.
(xiii).	As stated earlier, the feasibility report mentions that evacuation of cargo can be improved by the proposed rail line by the TPT. The proposal of the TPT, however, does not recognize rail related capital cost. Since the upfront tariff to be fixed will be applicable for the entire project period of 30 years and will also apply to similar facility being developed on BOT basis during the next five years, the port may confirm there will be no evacuation of cargo by rail during the project period. If the port envisages rail movement of cargo, then suitable adjustment may be made in the proposal to reckon relevant cost items and separate handling rate may be proposed for rail bound cargo which may be derived based on the relevant cost of investment and operations for cargo.	No separate reply furnished to this point.

8.3. To summarise, the main modifications done by the TPT are as follows:

(i). (a). The share of capacity of thermal coal and industrial coal is considered at 65% and 35% respectively as against 81% and 19% considered in the original proposal. Accordingly, the revised optimal quay capacity is assessed at 8.80 Million Tonnes Per Annum.

(b). As pointed out at the joint hearing, the utilisation factor of 70% prescribed in the formula for determination of the optimal yard capacity is not considered as the exact area used for stacking has been reckoned in the yard capacity calculation. The turnover ratio is considered as 28 based

on the evacuation rate of 18,000 tonnes per day. Consequent to the above modification, the optimal yard capacity is reassessed at 6.93 million tonnes as against 5.54 million tonnes per annum assessed in the original proposal.

(c). Accordingly, the optimal capacity of the terminal is considered at 7 million tonnes per annum being lower of the two capacities.

(ii). The revised Annual Revenue Requirement from cargo handling activity is estimated at Rs.11485.86 lakhs which is apportioned between cargo handling charges, storage charges and miscellaneous charges at 98%, 1% and 1% as per the norms prescribed in the guidelines.

(iii). The revised upfront tariff proposed by the TPT is as follows:

(a). Consolidated cargo handling charges for thermal coal, industrial coal and bulk cargoes:

		Rs. per tonne
(i).	Foreign	160.80
(ii).	Coastal	96.50

(b). Storage charge (after 10 days free period):

		Rs. per tonne / day
(i).	For the first 6 days	2.00
(ii).	For the next 6 days	3.24
(iii).	Thereafter	6.32

(c). Miscellaneous charge (for environment and management service, sweeping of cargo on the wharf, safety measures, etc.) - Rs.1.64 per tonne.

(d). Berth hire charge:

Sl. No.	**Vessel**	**Rate per GRT per hour or part thereof (in Re.)**
(i).	Vessel carrying thermal coal (coastal vessel)	0.2457
(ii).	Vessel carrying industrial coal (foreign going vessel)	0.4095

9. The proceedings relating to consultation in this case are available on records at the office of this Authority. An excerpt of the comments received from the concerned parties will be sent separately to the relevant parties. These details will also be made available at our website http://tariffauthority.gov.in.

10. With reference to totality of the information collected during the processing of this case, the following position emerges:

(i). The proposal is to fix upfront tariff cap for coal handling terminal at Tuticorin Port Trust (TPT) to be developed on Public Private Participation (PPP) basis. The proposal is based on the guidelines for upfront tariff fixation issued by the Ministry of Shipping, Road Transport and Highways (MSRTH) in February 2008.

As per Clause 2.2. of the guidelines for upfront tariff setting for PPP Projects at the major ports of February 2008, the tariff caps to be prescribed would be applicable to all the terminals that are bid out for handling thermal coal and industrial coal (coke) at the Tuticorin Port Trust during the next five years.

(ii). Based on our observations, the TPT has revised its original proposal mainly to rectify the error in the yard capacity calculation and has furnished a revised set of calculations vide its letter dated 9 February 2010. As brought out in the earlier part of this note, the optimal yard capacity is revised to 7 Million Tonnes Per Annum (MTPA) as against 5.54 (MTPA) assessed in the original proposal.

(iii). The proposal generally complies with the guidelines issued for upfront tariff setting. Deviations proposed in some of the norms / parameters are, *inter alia*, discussed in the subsequent paragraphs.

(iv). Optimal Terminal Capacity:

(a). Optimal Quay Capacity:

(i). The share of capacity of panamax vessels carrying thermal coal was assumed at 81% and industrial coal at 19% in the original proposal and the optimal quay capacity was assessed at 9.49 Million Tonnes Per Annum (MTPA). In the revised calculations furnished vide its letter dated 9 February 2010, the port has modified the share of capacity of thermal coal and industrial coal at 65% and 35% respectively and stated that it is based on the share of traffic handled by the port during 2004-05 to 2008-09. The revised share of cargo capacity furnished by the port is relied upon.

(ii). The port has confirmed that after deepening of channel leading to North Cargo Berth-2 for which the tender process has already been initiated, the proposed terminal can accommodate vessels upto 12.8 mtrs. draft. Accordingly, it anticipates panamax vessels of 75000 DWT to call at the proposed terminal. The feasibility report furnished by the port also supports this position. Though ABG-LDA Bulk Handling Private Limited has sought to consider handling of Handmax vessels only, the port is confident that its terminal can handle Panamax vessels.

(iii). The upfront tariff guidelines for coal handling terminal prescribe the handling norms for different size of vessels such as capesize / panamax vessels/ handy max. The unloading norms prescribed in the upfront tariff guidelines for coal terminal for panamax vessels is 35,000 tonnes per day. The guidelines do not prescribe separate productivity norms with reference to different types of coal handled by different categories of vessel. The TPT has considered the handling rate of 40000 tonnes per day for panamax vessels carrying thermal coal and 25000 tonnes per day for panamax vessels carrying industrial coal.

The TPT has clarified that the handling norm for coal loading prescribed at 40,000 Tonnes Per Day (TPD) in the upfront guidelines has been adopted in its case of unloading. As regards industrial coal, handling rate of 25000 TPD is adopted based on its bulk density.

With reference to the point made by some of the prospective bidders to reckon the handling rate as per the norms, the port has clarified that higher norms are adopted for thermal coal with a view to achieve higher productivity. For the coal terminal at Visakhapatnam Port Trust, handling rate of 42000 tonnes / day for coking coal and 27000 tonnes / day for steam coal was considered. As can been seen later, the yard capacity will be the limiting factor in this case and any further updating of handling rates proposed by TPT may not, therefore, be of any consequence.

(b). Optimal Yard Capacity:

(i). The upfront tariff guidelines stipulate that the yard capacity is to be assessed for the area of the yard made available by the port for development. The port envisages allotment of a total land area of 126000 sq. mtrs. to the terminal of which 70,000 sq. mtrs.

is proposed to be used for stackyard and balance is towards locating equipments, Berms and Peripheral roads, etc. 35000 sq. mtrs of area for stacking thermal coal and 35000 sq. mtrs of area for industrial coal (i.e. total 70000 sq. mtrs.) is planned.

The port has clarified that the same area of the stackyard is proposed to be allotted to thermal coal and industrial coal despite difference in their share in capacity because the rate of evacuation and the quantity that can be stacked per sq. mtrs. are relatively less for industrial coal compared to thermal coal due to the density factor.

Initially, the port had considered the actual stack area of 70000 sq. mtrs. and also applied 70% utilisation factor on it to determine the yard capacity. On being pointed out at the joint hearing, the port has modified the yard capacity calculation to remove the duplication.

(ii). Stacking Capacity:

The guidelines for upfront tariff setting prescribe the stacking factor norm at 3 tonnes per square metre. The TPT has proposed the stacking factor at 6.6 tonnes per square metre for thermal coal and 3.5 tonnes per square metre for industrial coal duly recognising the difference in the density of the cargo.

M/s.Vadinar Oil Terminal Limited have requested to consider it as per the norms. The port has reported that stacking factor of 7.6 tonnes/ sq. mtr. for thermal coal and 4 tonnes /sq mtr. for industrial coal has already been achieved in the past. Incidentally, the stacking factor considered while determining upfront tariff for coal terminal at Visakhapatnam Port is 6 tonnes / sq. mtr. for coking coal and 4 tonnes / sq. mtr. for steam coal based on stack height of 7 metres. In view of the above position, the stacking factor considered by the port is relied upon and adopted in the upfront tariff calculation.

(iii). Plot turnover:

The norm for plot turnover for a coal terminal prescribed in the guidelines is 12. The TPT while furnishing reply to the queries raised vide its letter dated 9 February 2010 has effected modification in the turnover factor and considered it at 28 instead of 32 considered in the original proposal. The port has stated that the turn over factor of 28 is considered based on the evacuation of 18000 tonnes per day.

M/s.Vadinar Oil Terminal Limited have expressed doubt on achieving the turn over factor of 32 as the evacuation proposed by the port is mainly by truck. It has requested to recognise turnover ratio as per the norms prescribed in the guidelines citing that no study has been done by the port about cargo evacuation through rail and road, availability of rakes, etc.

The port has confirmed that evacuation at the rate of 18000 tonnes / day is possible and, therefore, the turnover ratio of 28 is achievable. Based on clarification by the port, the turnover factor assumed by the port is considered in the calculation. It is notable that plot turnover considered for coal terminals in Visakhapatnam Port Trust and Paradip Port Trust is 30 and the parameter considered by TPT at 28 is not very different from the other two ports. The port has recognised evacuation by road only in this proposal.

(iv). The optimal yard capacity of the terminal for handling thermal coal and industrial coal adopting the stacking factor and the turnover ratio as explained above and applying the formula prescribed in the guidelines is assessed at 6928600 Tonnes Per Annum.

(c). Optimal Terminal Capacity:

The optimal capacity for handling thermal coal and industrial coal is considered at 6928600 tonnes per annum being lower of the two capacities i.e. quay and yard in the calculation of upfront tariff without any rounding off. If turnover ratio and cargo stacking factor are considered strictly as per norms, the yard capacity would only be 1.76 Million Tonnes Per Annum which is abysmally low.

(d). M/s.Vadinar Oil Terminal Limited have argued that 70% capacity utilisation cannot be achieved in the first year itself. It will take some time for the operator to ramp up the capacity and stabilize and has, therefore, requested to consider the capacity utilisation at lower levels in the initial year say at 30% and increase it gradually each year while fixing the upfront tariff. It has to be recognised that upfront tariff is to be fixed based on the optimal capacity irrespective of any traffic likely to be handled by the operator. As required by the guidelines, the upfront tariff fixation exercise will recognise only the optimal capacity of the terminal determined based on the given formula irrespective of the traffic handled. It is for the concerned bidders to assess volume build up while formulating their financial bid.

(v). Capital Cost:

The capital cost for the coal terminal estimated by the TPT in the original proposal was Rs.332.09 crores which is marginally revised by the port to Rs.332.16 crores in the revised proposal.

(a). Berthing activity:

The total cost of berth is estimated at Rs.3040 lakhs. The guidelines require considering the cost as estimated by the Port Trust. To our query on not considering the estimated cost of dredging alongside the berth, the port has clarified that dredging will be done by port as part of common facility and hence kept outside the scope of the project.

(b). Cargo handling activity:

(i). Civil construction cost:

The upfront tariff guidelines broadly indicate the items of civil works for a coal terminal and require the port to estimate civil cost. The port has vide its letter dated 9 February 2010 confirmed that estimated capital cost of all items listed in the guidelines are included, though not itemised in the estimates.

(ii). Equipment cost:

The deviations made by the TPT from the normative level of equipment prescribed in the guidelines and justification furnished by the port for such deviations are discussed hereunder:

(a). The TPT has considered 3 stackers as against the prescribed norm of 2 nos. The port has justified that the stacking of the Thermal Coal will require 2 stackers in view of the higher rate of handling per day and the

Industrial Coal will require one stacker. Accordingly, 3 nos. are considered in the capital cost estimation.

(b). The normative list of equipment prescribes, 1 wagon unloader, 2 cranes, 2 nos. of reclaimers and 4 payloader/ dozers amongst other equipment.

The port has clarified that reclaimers and Wagon loaders are not proposed as the evacuation proposed is mainly through trucks. The front end loaders are proposed at 20 nos. for evacuation of cargo by loading it onto trucks.

It is noteworthy that clause 3.2. of the guidelines for upfront tariff setting give flexibility to this Authority to make necessary adjustment in the norms based on justification furnished by the port and in view of port specific conditions having impact on the norms prescribed in the guidelines. In view of clarification furnished by the port, this Authority accepts the estimates of these items.

(iii). The civil and equipment cost estimates prepared by the port are with provision for contingencies to take care of any requirement which is not envisaged in the estimates, works contract tax and engineering / supervision charge. Despite specific request, the TPT has not furnished supporting documents / rate analysis etc., to validate the estimates of capital cost with reference to cost of berth, the unit rate adopted for civil work and equipment cost. The port has confirmed that the estimation of civil costs are based on works of similar nature recently carried out at Chennai, Ennore and Tuticorin Port. For equipment it has stated that manufacturers normally do not given budgetary offers to non-buyers. The cost is based on the recent purchases of similar equipment and has confirmed that the rate adopted for estimating is based on the current rates.

For the reasons explained by the port, this Authority relies on the estimates furnished by the port subject to modification in the estimation of miscellaneous capital cost as explained in the subsequent analysis.

(iv). The guidelines prescribe a norm for estimating miscellaneous capital cost at 5% on civil and equipment cost. The suggestion made by some of the bidders to consider miscellaneous cost at atleast 30% of the civil and equipment cost is not as per the norms prescribed in the guidelines. The miscellaneous capital cost is considered at Rs.1405 lakhs as estimated by the port in the original proposal as against the revised figure of Rs.1412 lakhs estimated by the port. Arithmetical error observed in the calculation of the port in this regard is corrected.

(v). The estimated capital cost for berth hire service is at Rs.3040 lakhs as estimated by the port subject to the above modifications and the capital cost for cargo handling service is Rs.30169 lakhs. Thus, the total estimated capital cost is Rs.33209 lakhs as against Rs.33216 lakhs estimated by the port.

(vi). M/s.Vadinar Oil Terminal Limited have suggested to take into account atleast 25% escalation on account of inflation and price escalation as the project would be implemented over a period of 2-3 years. It may be relevant to mention that the capital cost estimations are based on the prevailing rate as reported by the TPT. As per upfront tariff guidelines, annual indexation of the base upfront tariff cap is allowed @ 60% of the WPI.

(vii). The return on capital employed is estimated at 16% of the estimated capital cost. M/s.Vadinar Oil Limited have requested to enhance return to 20% to make the project attractive. It is relevant to mention here that the rate of ROCE was reviewed by this Authority and it was decided to adopt ROCE of 16% for the year 2009-10 to determine tariff for major ports and private terminals. Hence the return on capital employed is computed at 16% on the estimated capital cost. This works out to Rs.486.40 lakhs for berth hire service and Rs.4827 lakhs for cargo handling services.

(vi). Operating Cost:

(a). The power cost is estimated adopting the consumption of 1.4 per tonne as per the norms prescribed in the guidelines. The unit cost of power considered by the TPT is Rs.6. The unit rate of power is updated to Rs.6.51 in our calculation based on the prevailing cost of power incurred by the port which is revealed by the copies of the electricity bill for the month of January 2010 and February 2010 produced by the port.

(b). As per the norms, the repairs and maintenance cost is estimated at 1% on the civil assets and 7% on the mechanical and electrical equipment, insurance cost at 1% of the gross fixed assets and other expenses at 5% of the gross value of fixed assets.

(c). Depreciation is computed @ 3.34% on civil cost and 10.34% on equipment cost as per the rates prescribed in the Companies Act under the SLM for the relevant group of assets.

(d). License fee is calculated for 126000 sq. mtrs. of storage area, water front charges for 33250 sq. mtrs. and way leave for conveyors for 36480 sq. mtrs. The guidelines for upfront tariff guidelines stipulate that the lease rent for the port land is to be estimated based on the rate prescribed in Scale of Rates of the respective Major Port Trusts. The TPT has confirmed that license fee is estimated based on the license fee prescribed in the existing Scale of Rates of the port.

(e). The guidelines requires the operating cost for berthing service to be estimated at 1% of the berth cost.

The TPT has considered insurance @ 1% and depreciation @ 3.34% on the aggregate capital cost relating to construction of berth while estimating the annual revenue requirement of berthing service apart from the prescribed norm of 1% towards maintenance.

Although the guidelines restrict the operating cost at 1% of the berth cost, the asset requires adequate insurance coverage and the fact that the value of the asset will depreciate due to wear and tear can also not be denied. While fixing upfront berth hire at other Port Trusts, this position was recognised and the cost of insurance and depreciation were considered to assess the annual revenue requirement from berthing service.

In view of the position explained above, the element of insurance cost, and depreciation are considered in this case also while estimating the operating cost for assessment of the revenue requirement from berth hire service. In this context, it is noteworthy that clause 3.6. of the guidelines for upfront tariff setting gives flexibility to this Authority to decide on a particular item of expenditure, which it considers for incorporation while computing the upfront tariff cap for which norms are not explicit in the guidelines.

(vii). The statement for fixing upfront tariff submitted by the TPT has been modified in line with the above analysis. A copy of the modified statement along with calculation of berth hire is attached as **Annex - I**.

(a). The total annual revenue requirement from cargo handling service is estimated at Rs.11527.80 lakhs which is an aggregate of operating cost of Rs.6700.76 lakhs and Return on a capital cost of Rs.4827.04 lakhs.

(b). As per the guidelines, 98% of the total revenue requirement is apportioned to handling charge and 1% each to storage charge and miscellaneous charge for arriving at the pre-determined tariff.

(c). As brought out earlier, the handling rate for industrial coal assumed is different from thermal coal. The port was, therefore, advised to consider proposing a differential composite handling rate based on the productivity for the said two cargo items. The upfront tariff guidelines, however, do not explicitly require prescribing separate rates for different categories of coal. The TPT has also insisted prescription of uniform tariff for both the cargo items citing even for the same cargo efficiency rates differ from vessel to vessel based on the type and age of the vessel, deployed quantity of cargo available at that time etc. Based on the optimal capacity of the terminal assessed at 6.93 MTPA, the composite handling rate to meet the estimated revenue requirement of Rs.11297.24 lakhs from cargo handling service will be Rs.163.05 per tonne as against Rs.160.80 proposed by the port. The port has not prescribed concession applicable for coastal cargo i.e. industrial coal. Concessional rate for coastal cargo should be prescribed separately for industrial coal alone in line with the government guidelines in this regard. This will, however, not have any revenue impact as it does not envisage to handle this cargo by coastal mode.

(d). The port has not defined the items covered in the composite handling rate. A note is incorporated stating that the composite handling charge include charges for unloading of the cargo from the vessel, transfer upto the point of storage, storage at the stackyard upto 10 days free period, loading on the trucks, wharfage and all other miscellaneous services not specifically prescribed in the Scale of Rates.

(e). The TPT has furnished calculations to show that 14.3% of the total cargo will attract storage charge after the free period. It has proposed the rate for the first slab (first six days) at 2.00 per tonne per day, Rs.3.24 per tonne per day for second slab for next six days and Rs.6.32 per tonne per day for the period thereafter.

In view of reckoning the optimal terminal capacity in absolute terms and revised estimation of annual revenue requirement, the unit storage charge proposed by the TPT has been modified. Consequently, the storage charge for the first slab is Rs.1.94 per tonne per day or part for the first slab. The rates for the subsequent slabs are determined maintaining the differential as proposed by TPT.

(f). Based on the modified revenue requirement and modified optimal capacity, tariff cap for miscellaneous charge is prescribed at Rs.1.66 per tonne as against Rs.1.64 per tonne proposed by the port. The miscellaneous charge covers charges for sweeping, dust suppressions, environment and management and safety measures, etc.

(g). The revenue requirement from berthing service works out to Rs.648.74 lakhs as estimated by the port.

Normally vessel related charges for foreign going vessels are denominated in US dollar terms by converting the rupee value to dollar terms by applying the exchange rate prevailing at the time of notification of the relevant tariff order. This Authority while finalising the upfront berth

hire at other major port trusts has already decided to approve the upfront berth hire charge in Rupee term only for the stated reasons.

The port has considered the industrial coal will be carried by foreign going vessels and thermal coal by coastal vessels. The TPT has proposed berth hire in rupee terms for foreign going vessel (i.e.) industrial coal at Re.0.4095 per GRT per hour or part thereof and Re.0.2457 for coastal vessel (thermal coal). The methodology followed by the TPT for arriving at the berth hire is in general found to be in line with the approach followed by this Authority in other upfront tariff cases. Since the terminal capacity is considered without any rounding off, the berth hire works out to 0.4121 per GRT per hour for foreign going vessel and Re.0.2472 per GRT per hour for coastal vessel.

(viii). Definitions of some of the common terms like foreign going vessel, coastal vessel, day are included in upfront schedule in line with the definitions prescribed in the Scale of Rates of TPT.

(ix). Some of the common conditions stipulated in the guidelines of 2005 and uniformly prescribed in the Scale of Rates of other major ports / private terminals such as users should not be required to pay charges for delays beyond reasonable level attributable to the private terminal operator, berth hire shall stop 4 hours after the vessel signaling readiness to sail, penal berth hire for a false signal, non accrual of storage charge for the period when the operator is not in a position to effect deliver/ship the cargo when requested by user for the reasons attributable to the operator are incorporated in the upfront tariff schedule for coal terminal.

(x). The TPT has proposed to prescribe a few conditions regarding the commencement of free period which are in line with the prescription in the Scale of Rates of the port and at the other major ports / private terminals.

(xi). The TPT has proposed conditions relating to berth hire charges for according ousting priority / priority berth hire charges. A condition is prescribed stating that granting ousting priority berthing / priority berthing will be governed by extant Government guidelines in this regard and provisions approved in the Scale of Rates of TPT.

(xii). The port has stated that the proposed rate will apply to the all bulk cargo handled at the terminal. The entire exercise of upfront tariff fixation is for handling thermal coal and industrial coal and that too at the ratio of 65% and 35% respectively. These assumptions have influenced the capacity determination and hence the tariff. Hence this Authority does not share the understanding of TPT that the rate fixed now will apply to all bulk cargo.

(xiii). Recognising that conditionalities fixed now would applicable for a time frame of 30 years, the provision relating to penal rate of interest for delayed payment by users and delayed refund by the operator, is prescribed at 2% above the Prime Lending Rate of the State Bank of India in line with the provision prescribed in other upfront tariff cases decided by this Authority.

11.1. As per clause 2.8 of the Guidelines, the tariff caps will be indexed to inflation but only to an extent of 60% of the variation in Wholesale Price Index (WPI) occurring between 1 January 2008 and 1 January of the relevant year. Such automatic adjustment of tariff caps will be made every year and the adjusted tariff caps will come into force from 1 April of the relevant year to 31 March of the following year. In the instant case, since the estimation of capital cost and unit rate of operating cost considered in the upfront tariff calculation are reportedly based on prevailing rate, it may be appropriate and relevant to prescribe the base WPI to be considered for automatic adjustment every year as 1 January 2010. A general note is prescribed in this regard in the Scale of Rates.

11.2. As specified in clauses 2.9.1. and 2.9.2. of the guidelines, before commencement of commercial operations, the private operator shall approach this Authority for notification of Scale of Rates containing the approved ceiling rates and the statement of conditions, as required under Section 48 of the Major Port Trusts Act, 1963.

11.3. As per clause 3.8.5 of the guidelines, if any question arises requiring clarifications or interpretation of the Scale of Rates and the statement of conditionalities, the matter shall be referred to this Authority and its decision in this regard will be binding on the operator.

11.4. The performance norms for the projects should be clearly brought out in the bid documents. The private operator is expected to perform at least at the performance norms brought out in the bid document/concession agreement.

11.5. The actual performance of the private operators will be monitored by this Authority. If any complaint regarding quality of service is received, this Authority will enquire into such allegation and forward its findings to the Tuticorin Port Trust. If any action is to be taken against the private operators, the Tuticorin Port Trust shall initiate appropriate action in accordance with the provisions of the relevant Concession Agreement.

11.6. During the commercial operation at the terminal, within 15 days from the end of every quarter, the private operator shall submit to this Authority through the Tuticorin Port Trust a report containing the terminal's physical and financial performance during the preceding three months.

12. In the result, and for the reasons given above and based on a collective application of mind, this Authority approves the tariff caps for handling thermal coal and industrial coal at Tuticorin Port Trust attached as **Annex - II**.

(Rani Jadhav)
Chairperson

ANNEX -I

FORMULATION OF UPFRONT TARIFF FOR COAL TERMINAL AT TUTICORIN PORT TRUST

Rs. in lakhs

Sr. No.	Particulars	Estimates by TPT	Estimates considered by TAMP
I	**Optimal capacity**		
(i).	**Optimal Quay Capacity**		
(a).	Share of Vessel Size		
	Percentage share of capacity of Panamax vessels (for thermal coal) vessels upto 75000 DWT (S1)	65%	65%
	Percentage share of capacity of Panamax vessels (for industrial coal) (S2)	35%	35%
(b).	Ship day Output (in tonnes per day)		
	- Panamax vessels (for thermal coal) (P1)	40000	40000
	- Panamax vessels (for industrial coal) (P2)	25000	25000
(c).	Quay Capacity = 0.7*((S1*P1)+(S2*P2)*365	**8878625**	**8878625**
	Quay Capacity in million tonnes	**8.80**	**8.88**
(ii).	**Optimal Yard Capacity**		
(a).	Area of yard made available by the Port (in square metres) (A)	For thermal coal 35000. For industrial coal 35000	For thermal coal 35000. For industrial coal 35000
	Area available for stacking (%) (U)	70%	70%
(b).	Stacking Quantity per square metre (tons) (Q)	For therml coal 6.6 T/sqm For industrial coal 3.5T/sqm	For therml coal 6.6 T/sqm For industrial coal 3.5T/sqm
(c).	Annual Turnover Ratio of the plot (T)	**28**	**28**
(d).	**Yard Capacity (in tonnes) = 0.7 * A * U * Q * T (for thermal coal)**	**4527600**	**4527600**
	Yard Capacity (in tonnes) = 0.7 * A * U * Q * T (for industrial coal)	**2401000**	**2401000**
(e)	**Total Yard Capacity (in tonnes)**	**6928600**	**6928600**
(f).	**Total Yard Capacity (in million tonnes)**	**7.00**	**6.93**
(iii).	**Optimal capacity of the Terminal - lower value of the optimal quay capacity and optimal stack yard capacity(in Million tonnes).**	**7.00**	**6.93**
II	**Capital Cost**		
(i).	**Cargo Handling Activity**	**Rs. in lakhs**	**Rs. in lakhs**
(a).	**Civil Cost**		
	- Berth apron and approach	5660.00	5660.00
	- Storage Yard	200.00	200.00
	station.	0.00	0.00
	- Conveyor galleries & Transfer towers	0.00	0.00
	- Marshalling Yard	0.00	0.00
	- Others	0.00	0.00
	- Buildings		0.00
	- Roads		0.00
	- Water supply and drainage		
	Subtotal	**5860.00**	**5860.00**
	Contingencies, engineering and supervision at 10% on the total base cost	586.00	586.00
	Works contract tax (4% on 65% of equipment base cost)	152.00	152.00
	Subtotal (a)	**6598.00**	**6598.00**
(b).	**Equipment Cost**		
	- Ship Unloader (norms 2 Nos.) TPT proposes 2 Grab unloaders	5600	5600.00
	- Reclaimer (norms 2 Nos.) TPT does not envisage this equipment	0	0.00
	- Wagon unloader and Truck unloader (norms - 1 No. each) TPT does not envisage this facility	0	0.00
	- Stackers (norms - 2 No.) TPT proposes 3 Stackers	3600	3600.00
	- Cranes (norms - 2 nos.) TPT does not envisage this equipment	0	0.00
	- Conveyors	8740	8740.00
	- Pay loaders & dozers (norms - 4 nos.) TPT proposes 20 Nos. of Front end loaders	600	600.00
	Work Shop equipment	0	0.00
	Electric Power & Control switch gears	1145	1145.00
	Subtotal	**19685**	**19685**
	Contingencies, engineering and supervision at 10% on the total base cost	1969	1969.00
	Works contract tax (4% on 65% of equipment base cost)	512	512.00
	Subtotal (b)	**22166**	**22166**
(c).	**Miscellaneous [5% on (a) and (b) excluding works contract tax]**	1412.00	1405.00
	Total Capital Cost for Handling Activity (a +b + c)	**30176.00**	**30169.00**
(ii).	**Capital Cost For Berthing Services**		
(a).	Cost of berth	2700.00	2700.00
(b).	Cost of dredging alongside berth	0.00	0.00
	Subtotal	**2700.00**	**2700.00**
	Contingencies, engineering and supervision at 10% on the total base cost	270.00	270.00
	Works contract tax (4% on 65% of civil base cost)	70.00	70.00
	Total Capital cost for berthing services (a+b+c)	**3040.00**	**3040.00**
(iii).	**Total Capital Cost of the Project (i+ii)**	**33216.00**	**33209.00**

Rs. in lakhs

Sr. No.	Particulars	Estimates by TPT	Estimates considered by TAMP
III	**Operating Cost**		
(i).	**Cargo Handling Activity**	**Estimates (Rs.in lakhs)**	**Estimates (Rs.in lakhs)**
	(a). Power Cost (1.4 units per tonne @ Rs. 6.0 per unit adopted by TPT) In our calculation unit rate of power considered at Rs. 6.50.	588.00	631.47
	(b). Repair & Maintenance		
	- Civil Assets (1% on civil work)	65.98	65.98
	- Mechanical & Electrical Equipment including spares (7% on mechanical and electrical works)	1551.62	1551.62
	(c). Insurance (1% on Gross fixed assets)	301.76	301.69
	(d). Depreciation		
	- Civil Assets 3.34%	220.37	220.37
	- Mechanical and Electrical Works 10.34%%	2291.96	2291.96
	(e). License Fee		
	- Water Front Charges (33250 sq. mtr @ Rs. 8 per sq. mtr./month *12)	31.92	31.92
	- Stack yard at Hare Island (126000sq. mtr @ Rs. 6.40 per sq. mtr. month *12)	96.77	96.77
	- Way Leave for conveyors (36480 sq. mtr @ Rs.1.428 per sq. mtr. annum)	0.52	0.52
	(f). Other Expenses towards salaries and overheads (5% on gross value of assets)	1508.80	1508.45
	Total Operating Cost	**6657.70**	**6700.76**
IV	**Revenue Requirement & proposed tariff**		
(i).	**Cargo Handling charge**		
	1. Revenue Requirement		
	(a). Total Operating Cost	6657.70	6700.76
	(b). Return on Capital Employed @ 16%	4828.16	4827.04
	(c).Total Revenue requirement from cargo handling activity	**11485.86**	**11527.80**
	2. Apportionment of Revenue Requirement		
	(a). Coal Handling Charges (98% of ARR)	11256.14	11297.24
	(b). Storage Charges (1% of ARR)	114.86	115.28
	(c). Miscelleneous Charge (1% of ARR)	114.86	115.28
	(d). Total Revenue requirement from cargo handling activity	**11485.86**	**11527.80**
	3. Proposed tariff per tonne rate		
	(a). Coal Handling Charge (Composite)		
	- Revenue Requirement (Rs. in lakhs)	11256.14	11297.24
	- Capacity (Million Tonnes per annum)	7.00	6.93
	Composite Handling Charge - cargo wise (foreign)	**160.80**	**163.05**
	(b). Storage Charge		
	- Revenue Requirement (Rs. in lakhs)	114.86	115.28
	- % of Cargo to attract storage charge	14.3%	14.3%
	- Cargo likely to pay storage charge (lakh tonnes)	10.00	9.91
	(i). Free period	10 days	10 days
	(ii). Storage Charge (beyond the free period)	**Rate Per tonne per day or part thereof**	**Rate Per tonne per day or part thereof**
	-Firstsix day	2.00	1.94
	-Next six days	3.24	3.14
	-Thereafter	6.32	6.13
	(c). Miscelleneous Charge		
	- Revenue Requirement (Rs. in lakhs)	114.86	115.28
	- Capacity (Million Tonnes per annum)	7.00	6.93
	- Miscellenous Charge per tonne	**1.64**	**1.66**
(ii).	**BERTH HIRE CHARGES**		
(a).	**Revenue Requirement**	**(Rs. in Lakhs)**	**(Rs. in Lakhs)**
	(i). Repairs & Maintenance Charge (1% on captial cost for berth)	30.40	30.40
	(ii). Depreciation	101.54	101.54
	(iii). Insurance (1% on total cost for berh hire service)	30.40	30.40
	Subtotal (a)	**162.34**	**162.34**
(b).	Return on capital Employed @ 16%	**486.40**	**486.40**
	Total Revenue requirement from Berthing services (a + b)	**648.74**	**648.74**
	Berth hire Charge		
	Foreign going vessel (Industrial Coal) (Rate per GRT per hour) in Re.	**0.40950**	**0.4121**
	Coastal vessel (Thermal Coal) (Rate per GRT per hour) in Re.	**0.24570**	**0.2472**

Rs. in lakhs

Sr. No.	Particulars	Estimates by TPT	Estimates considered by TAMP

BERTH HIRE COMPUTATION

Furnished by TPT vide letter dated 9 February 2010

Sr. No.	Particulars	Unit	Thermal Coal	Industrial Coal	Total
i.	Average DWT	DWT	75000	75000	
ii	Ship day output	Tonnes / day	40000	25000	
iii.	Average GRT	Tonnes	40000	40000	
iv.	Average parcel size	Tonnes	60000	60000	
v.	Tonnage expected to be handled	Tonnes	4600000	2400000	7000000
vi.	Average no of berth days (v / ii)	Days	115	96	211
vii.	No of berth hours {24 x (vi)}	Hours	2760	2304	5064
viii.	Expected number of vessels (v/iv)	Nos	77	40	117
ix.	Total GRT hours	Hours	**110400000**	92160000	202560000
x.	Revenue Requirement				**648.74**
xi.	**Berth hire - foreign going vessel**				**0.4095**
	Berth hire -Coastal vessel				**0.2457**

Working for foreign / coastal vessel rate			
92160000x + 110400000 * 0.6x =			64873600
92160000x + 6624000x =			64873600
x = Foreign going vessel rate			**0.4095**
Coastal vessel Rate = 0.6 x foreign going vessel rate			**0.2457**

Modified calculation by TAMP

Sr. No.	Particulars	Unit	Thermal Coal	Industrial Coal	Total
i.	Average DWT	DWT	75000	75000	
ii	Ship day output	Tonnes / day	40000	25000	
iii.	Average GRT	Tonnes	40000	40000	
iv.	Average parcel size	Tonnes	60000	60000	
v.	Tonnage expected to be handled	Tonnes	4527600	2401000	6928600
vi.	Average no of berth days (v / ii)	Days	113	96	209
vii.	No of berth hours {24 x (vi)}	Hours	2717	2305	5022
viii.	Expected number of vessels (v/iv)	Nos	75	40	115
ix.	Total GRT hours	Hours	108662400	92198400	200860800
x.	Revenue Requirement				**648.74**
xi.	**Berth hire - foreign going vessel (xi /x)**				**0.4121**
	Berth hire -Coastal vessel				**0.2472**

Working for foreign / coastal vessel rate			
9219840x + 108662400* 0.6x =			64873600
9219840x + 65197440* 0.6x =			64873600
x = Foreign going vessel rate			**0.4121**
Coastal vessel Rate = 0.6 x foreign going vessel rate			**0.2472**

Annex - II

TUTICORIN PORT TRUST

UPFRONT TARIFF SCHEDULE FOR HANDLING THERMAL COAL AND INDUSTRIAL COAL

1.1. Definitions – General

In this Scale of Rates, unless the context otherwise requires, the following definitions shall apply:

(i). **"Coastal vessel"** shall mean any vessel exclusively employed in trading between any port or place in India to any other port or place in India having a valid coastal licence issued by the competent authority.

(ii). **"Day"** shall mean the period starting from 6 a.m. of a day and ending at 6 a.m. on the following day.

(iii). **"Foreign-going vessel"** shall mean any vessel other than coastal vessel.

1.2. General Terms & Conditions

(i). The status of the vessel, as borne out by its certification by the Customs or the Director General of Shipping, shall be the deciding factor for classifying into 'coastal' or 'foreign-going' category for the purpose of levying vessel related charges; and, the nature of cargo or its origin will not be of any relevance for this purpose.

(ii) (a). A foreign going vessel of Indian Flag having a General Trading Licence can convert to Coastal run on the basis of a Customs Conversion Order.

(b). A foreign going vessel of Foreign Flan can convert to coastal run on the basis of a Coastal Voyage Licence issued by the Director General of Shipping.

(c). In cases of such conversion, coastal rates shall be chargeable by the load port from the time the vessel starts loading coastal goods.

(d). In cases of such conversion, coastal rates shall be chargeable only till the vessel completes coastal cargo discharging operations; immediately thereafter, foreign going rates shall be chargeable by the discharge ports.

(e). For dedicated Indian coastal vessels having a Coastal Licence from the Director General of Shipping, no other document will be required to be entititled to Coastal rates.

(iii). (a). The berth hire charges for all coastal vessels should not exceed 60% of the corresponding charges for other vessels.

(b). The cargo related charges for all coastal cargo other than thermal coal should not exceed 60% of the normal cargo related charges.

(c). In case of cargo related charges, the concessional rates should be levied on all the relevant handling charges for ship shore transfer and transfer from/to quay to/from storage yard including wharfage.

(d). Cargo from a foreign port which reaches an Indian Port "A" for subsequent transhipment to Indian Port "B" will be levied the concession charges relevant for its coastal voyage. In other words, cargo from/to Indian Ports carried by vessels permitted to undertake coastal voyage will qualify for the concession.

(iv). In calculating the gross weight or measurement by volume or capacity of any individual item, fractions upto 0.5 shall be taken as 0.5 unit and fractions of 0.5 and above shall be treated as one unit, except where otherwise specified.

(v). Interest on delayed payments / refunds.

(a). The user shall pay penal interest on delayed payments of under this Scale of Rates. Likewise, the terminal operator shall pay penal interest on delayed refunds.

(b). The rate of penal interest will be 2% above the prime lending rate of the State Bank of India.

(c). The delay on refunds will be counted only 20 days from the day of completion of services or on production of all the documents required from the users, whichever is later.

(d). The delay in payments by the users will be counted only 10 days after the date of raising the bills by the terminal operator. This provision shall, however, not apply to the cases where payment is to be made before availing the services where payment of charges in advance is prescribed as a condition in the scale of rates.

(vi). All charges worked out shall be rounded off to the next higher rupee on the grand total of the bill.

(vii). (a). The rates prescribed in the Scale of Rates are ceiling levels: likewise, rebates and discounts are floor levels. The terminal operator may, if they so desire, charge lower rates and / or allow higher rebates and discounts.

(b). The terminal operator may also, if they so desire rationalise the prescribed conditionalities governing the application of rates prescribed in the Scale of Rates if such rationalisation gives relief to the user in rate per unit and the unit rates prescribed in the Scale of Rates do not exceed the ceiling levels.

(c). The terminal operator should notify the public such lower rates and / or rationalisation of the conditionalities governing the application of such rates provided the new rates fixed shall not exceed the rates notified by the TAMP.

(viii). Users will not be required to pay charges for delays beyond reasonable level attributable to terminal operator.

2. BERTH HIRE CHARGES

Sl. No.	Vessels	Rate per GRT per hour or part thereof	
		Foreign Going Vessel (in Re.)	Coastal Vessel (in Re.)
1.	Vessels	0.4121	0.2472

Notes:

(i). The Period of berth hire shall be calculated from time the vessel occupies berth till she vacates the berth.

(ii). (a). Berth hire shall stop four hours after the time of the vessel signaling its readiness to sail.

(b). The time limit of 4 hours prescribed for the cessation of the berth hire shall exclude the ship's waiting time for want of favorable tide conditions, inclement weather and due to lack of night navigation.

(c). The Master/ agent of the vessel shall signal readiness to sail only in accordance with favourable tidal and weather conditions.

(iii). The Penal berth hire shall be equal to one-day's (24 hours) berth hire charges for a false signal.

"False Signal" would be when the vessel signals readiness and asks for a pilot in anticipation even when she is not ready for un-berthing due to engine not being ready or cargo operation not completed or such other reasons attributable to the vessels. This excludes signaling readiness when a vessel is not able to sail due to unfavorable tide, lack of night navigation or adverse weather conditions."

(iv). Ousting Priority / Priority Berth Hire Charges

The rates and conditions for granting ousting priority berthing / priority berthing will be governed by extant Government guidelines in this regard and provisions prescribed in the Scale of Rates of the Tuticorin Port Trust.

(v). No berth hire shall be levied for the period when the vessels idle at its berths for continuous one hour or more due to break down of Terminal Operator's equipment or power failure or any other reasons attributable to the Terminal Operator.

3. CARGO HANDLING CHARGES

Sl. No.	Commodity	Unit	Rate in Rupees	
			Foreign	**Coastal**
(a).	Thermal coal	Per Metric Tonne	163.05	163.05
(b).	Industrial coal	Per Metric Tonne	163.05	97.83

Note:

The cargo handling charges prescribed above is a composite charge and includes charges for unloading of the cargo from the vessel, transfer upto the point of storage, storage at the stackyard upto 10 days free period, loading on the trucks, wharfage and all other miscellaneous services not specifically prescribed in the Scale of Rates.

4. STORAGE CHARGES (Per tonne per day)

The storage charges to the cargo stored in the stack yard beyond the free period allowed shall be as below:

(A) Free Period : 10 days

(B) Storage charges after free period (Per tonne / day)

First 6 days after expiry of Free period	-	Rs. 1.94 per ton per day
For the next 6 days	-	Rs. 3.14 per ton per day
Thereafter	-	Rs. 6.13 per ton per day

Notes:

(i). For the purpose of calculation of free period Customs notified holidays and Terminals non-working days shall be excluded.

(ii). Free period for import cargo shall be reckoned from the day following the day of completion of final discharge from the vessel.

(iii). Storage charges on cargo shall not accrue for the period when the Terminal Operator is not in a position to deliver / ship the cargo when requested by the User due to reasons attributable to the Terminal Operator.

5. MISCELLANEOUS CHARGES:

The following Miscellaneous charges are applicable of thermal coal and industrial coal handled:

Sl. No.	Particulars	Rate per tonne or part thereof (in Rs.)
(i).	Charges for all miscellaneous services such as environment and management, sweeping of cargo on the wharf safety measures, etc.	1.66

6. GENERAL NOTE TO SCHEDULE (2) TO (5) ABOVE:

The tariff caps will be indexed to inflation but only to an extent of 60% of the variation in Wholesale Price Index (WPI) occurring between 1 January 2010 and 1 January of the relevant year. Such automatic adjustment of tariff caps will be made every year and the adjusted tariff caps will come into force from 1 April of the relevant year to 31st March of the following year.

* * * *

SUMMARY OF THE COMMENTS RECEIVED FROM THE PORT USERS / SHORTLISTED BIDDERS AND ARGUMENTS MADE IN THIS CASE DURING THE JOINT HEARING BEFORE THE AUTHORITY

F. No.TAMP/27/2009 – TPT - Proposal from the Tuticorin Port Trust for fixation of upfront tariff for coal handling at Tuticorin Port on Design Built Finance Operate and Transfer (DBFOT) basis.

A summary of comments received from users / prospective applicants / bidders and the comments of TPT thereon are tabulated below:

Sl. No.	Comments of users / user organisations and prospective bidders	Comments of TPT
1.	**Indian Chamber of Commerce and Industry**	
(i).	It has suggested composite handling rate of Rs.151.79 per tonne for thermal coal as against Rs.202.38 per tonne proposed by TPT. For industrial coal, Indian Chamber of Commerce and Industry has suggested a rate of Rs.150 per tonne.	No comments furnished.
(ii).	It has suggested to prescribe 15 days free storage period instead of 10 days free proposed by TPT.	No comments furnished.
(iii).	The Indian Chamber of Commerce and Industry has suggested miscellaneous charge of Rs.1.50 per tonne as against proposed rate of Rs.2.10 per tonne.	No comments furnished.
2.	**ABG-LDA Bulk Handling Pvt. Ltd.**	
(i).	The proposal of TPT is only for fixation of upfront tariff for handling thermal coal and industrial coal whereas, the project is for development of NCB-II for handling bulk cargoes. Furthermore as clarified by TPT, the successful bidder for the NCB-II project will have exclusivity to operate dry bulk cargo at Tuticorin Port. Therefore, the proposal of TPT should be entirely revised to include other types of bulk cargoes such as coking coal, copper conc., fertilizer, etc.	On analysis of traffic, it is found that there will be increasing demand for Thermal Coal & Industrial Coal. Hence, these two major commodities are also considered for project feasibility.
(ii).	Optimal Quay Capacity:	
	(a). The present maximum draft at TPT is only 10.9 mtrs. TPT has stated that the port has a proposal to deepen the channel and the basin to accommodate vessels upto 12.8 mtrs. draft. Most Panamax vessels between 70,000-75,000 DWT have a draft of between 13.4-14 mtrs. draft. Therefore in order to accommodate Panamax vessels upto 14 mtrs. draft, with an UKC of 1.3 mtrs., the channel and basin needs to be dredged to 15.3 mtrs. Otherwise, calculating the capacity of the coal terminal as well as designing the handling equipment based on Panamax vessels **will be incorrect, leading to overdesign, disproportionately higher cost making the entire project unviable vis-à-vis competing terminals / ports.** Considering Handymax vessels, we have estimated that the unloading rate that can be achieved is 30,000 tonnes per day as against the norm of 15,000 tonnes per day since we are regularly handling Handymax vessels and achieving higher than 30,000 tones per day using 2 Mobile Harbour Cranes whereas with gantry cranes the throughput can be higher.	It is considered with a view to achieve higher efficiency to reduce the handling cost. As the rate is only marginally higher, there will not be any significant changes in the rated capacity of the equipment for the unloading rate of 35,000 Tonnes.

	(b). The proposal of TPT tantamounts to setting a high tariff, for a facility with a higher than achievable throughput and in the end obtaining a high revenue share with a MGT resulting in a Minimum Guaranteed Amount (MGA). Obviously, the result will be that the successful operator will not be able to achieve the required throughput, the users will have to pay unduly high tariffs and ultimately the License Agreement will need to be renegotiated. Furthermore, the hapless terminal operator cannot attract higher throughput by giving discounts on TAMP's ceiling tariff since the terminal operator still has to pay the high revenue share on the ceiling rates only regardless of discounts. This issue should be addressed by the Port as well as Ministry of Shipping in finalising the draft Concession Agreement by allowing the terminal operators to give revenue share on the actual tariffs charged from time to time.	It is possible to achieve MGT by calling/ handling of Panamax Vessels and by installing Shore Unloader.
	(c). TAMP's norm for ship-day output for Panamax vessels is 35000 tonnes per day for unloading of coal. Since this terminal is an unloading terminal, it is not understood why TPT has considered the loading norm of 40000 tonnes per day instead of unloading norm of 35000 tonnes per day.	An unloading norm of 40,000 Tonnes per day is considered for Thermal coal with a view to achieving higher efficiency and to reduce the handling cost and is based on similar facility at both loading & unloading Ports.
(iii).	<u>Optimal Yard Capacity</u>:	
	(a). Area made available by the port for development as mentioned on page 19, Chapter 5 for arriving at optimal yard capacity is 35,000 sq. mtrs. Whereas on page 11, clause 3.9 of the same document, the total area of the stock yard is mentioned as 12.60 hectares.	Based on TAMP Hearing, Terminal capacity reassessed at 7 Million Tonnes.
	(b). Considering the total area of 126000 sq. m. and in accordance with TAMP's norms, the stockyard capacity will be 2.2 MTPA. However we believe that TAMP's norms for quantity that can be stacked / sq. mtr. area and turnover ratio of the plot should be 6.6 and 32 respectively as suggested by TPT.	
	(c). If this norm is used, the optimal yard capacity will be 13.03 MTPA. In either case the optimal yard capacity estimated by TPT appears to be not correct.	
(iv).	**Capital Cost:**	
	(a). **Civil Construction Cost**: (i). Since it is not feasible to handle fully loaded Panamax vessels as explained above, the option available to TPT is to convert the facility from Panamax to Handymax or to dredge the channel and the basin to 15.3m to accommodate Panamax vessels. (ii). In case, TPT decides to opt for the former option of converting the facility from Panamax to Handymax, there is no need for Berth length of 306m and the same can be reduced to 250m. Whilst a revised estimate can be made by the TPT for the reduced berth length of 250m, if we were to simply make a proportionate reduction in capex, the same would be approximately Rs.53.91 crores.	As per the projection of traffic the bulk carrier for the Panamax vessel 60,000 & 80,000 DWT passing ship draught upto 12.04m (39.50 ft). Hence the other question does not arise.

<table>
<tr><td></td><td>(b). Coal Handling Equipment:
In case TPT decides to convert the facility from Panamax capability to Handymax capability, a revised estimate should be prepared by TPT especially considering smaller gantry cranes with lesser outreach. As a thumb rule, we have estimated a 20% reduction in Capex for Coal Handling Equipment. Furthermore, it would help if the detailed breakup of handling equipment estimates and feasibility report as prepared by TPT and / or its consultants is provided to all the parties. In the absence of such details it is difficult for us to provide any comments as requested by TAMP.</td><td>The question of revision does not arise with respect to scope of facilities envisaged.</td></tr>
<tr><td></td><td>(c). Capital cost for berth hire:
It is not understood how the capital cost for berth hire has been arrived at as Rs.30.4 crores and why it is different to the estimated civil construction cost of Rs.65.98 crores.</td><td>Rs.65.98 crores is based on the order of TAMP.</td></tr>
<tr><td></td><td>(d). Total capital cost of the project:
It appears that the capital cost of the berth has been double counted, notwithstanding the unexplained difference in the capital cost of the berth in estimating the berth hire charges.</td><td>The cost estimation is in order.</td></tr>
<tr><td></td><td>(e). Taking into consideration the above points, they have furnished revised calculation which is summarised below:
<table>
<tr><th>Sl. No.</th><th>Particulars</th><th>As estimated by TPT</th><th>As per ABG-LDA Bulk Handling Private Limited</th></tr>
<tr><td>(i).</td><td>Optimal quay capacity</td><td>9.49 MTPA</td><td>7.665 MTPA</td></tr>
<tr><td>(ii).</td><td>Optimal yard capacity</td><td>5.54 MTPA</td><td>13.039 MTPA</td></tr>
<tr><td>(iii).</td><td>Optimal capacity</td><td>5.54 MTPA</td><td>7.665 MTPA</td></tr>
<tr><td>(iv).</td><td>Capital cost</td><td>Rs.332.09 crores</td><td>Rs.245.28 crores</td></tr>
<tr><td>(v).</td><td colspan="3">Annual Revenue Requirements:</td></tr>
<tr><td></td><td>Coal Handling Activity</td><td>Rs.11358.32 lakhs</td><td>Rs.9155.97 lakhs</td></tr>
<tr><td>(vi).</td><td>Tariff:</td><td></td><td></td></tr>
<tr><td></td><td>(a). Handling rate</td><td>Rs.202.38 per tonne</td><td>Rs.117.06 per tonne</td></tr>
<tr><td></td><td>(b). Miscellaneous charge</td><td>Rs.2.07 per tonne</td><td>Rs.1.19 per tonne</td></tr>
</table></td><td>The port referring to the individual revised estimates of operating cost, revenue requirement and the revised rates proposed (vide its letter dated 9 February 2010) have stated that the figures considered by the port are as per the tariff guidelines Order of the TAMP.</td></tr>
<tr><td>3.</td><td>Tuticorin Custom House Agents' Association and Tuticorin Ship Agents' Association</td><td></td></tr>
<tr><td>(i).</td><td>Cargo handling charges:
The handling rate proposed at Rs.202.38 per tonne is on the higher side. While the cost is worked out, it would be around Rs.100/- per MT for the existing berths with grab discharge. It is observed that the proposal is 100% more than what is practically applicable. A re-working should be made with a view to reduce the rate.</td><td>The unit rate is modified with respect to revised optimal capacity based on revised yard capacity at 7.0 million tones as per discussions at the Joint Hearing dated 6.1.2010. The revised rates proposed to TAMP are Rs.160.80/MT for Bulk Cargoes (Foreign) and Rs.96.50/MT for Bulk Cargoes (Coastal).</td></tr>
<tr><td>(ii).</td><td>Berth hire charges
For thermal coal and industrial coal, two different berth hire rates are proposed. Reasons for adoption of two different rates are not made available. For cargo handling charges, one specific rate is given for both the categories. It should only</td><td>Berth Hire charges are with reference to category of vessels for Thermal Coal (coastal) and Industrial Coal (Foreign) Hence for Thermal coal, and other coastal vessels carrying bulk</td></tr>
</table>

<table>
<tr><td></td><td>be fair and reasonable, if a rate of Re.0.2727 per GRT per hour is admitted irrespective of the fact whether the vessel carries thermal coal or industrial coal.</td><td>cargoes the rate is proposed at 0.2727 being 60% of Berth hire for Foreign (Industrial coal Vessels) and other foreign vessels carrying Bulk Cargoes. (For information, the unit rate is modified with respect to revised optimal capacity based on revised yard capacity at 7.0 million tones).

Revised Rates proposed to TAMP are Rs.0.2457/GRT/hour for Vessels (Coastal) and Rs.0.4095/GRT/hour for Vessels (Foreign).</td></tr>
<tr><td>4.</td><td>I.L. & F.S. Marine Infrastructure Company Limited</td><td></td></tr>
<tr><td rowspan="4">(i).</td><td>Method of evacuation of cargoes and layout of conveyors:</td><td></td></tr>
<tr><td>(a). The proposed conveyor alignment for evacuation of the cargo is across the unprotected waterfront and is approximately 3 km long. The structure including conveyor galleries and shall be exposed to significant wave and wind forces and therefore, the cost of the structure is likely to be high. Further maintenance of the conveyor at this section is of concern.</td><td>The proposed conveyor alignment will be routed in the shallow water region and the sea bed consist of 60 cms silt layer and underneath hard rock which will considerably reduce the depth of foundation and founding level of Pile and hence, there will not be any higher cost of the super structure and foundation. It is for information that the Conveyor from Second Coal jetty is running on the North of North Breakwater for more than one Km and enter inside the Harbour basin near NCB-II. TTPS is undertaking regular maintenance of the conveyor system without any difficulty. Taking into account the above, the estimate has been prepared.</td></tr>
<tr><td>(b). It is not clarified if the environmental clearance is being sought by Tuticorin Port Trust (TPT) for the proposed alignment.</td><td>Environmental Clearance for NCB - II has been obtained to handle dusty cargoes.</td></tr>
<tr><td>(c). The proposed evacuation by trucks loaded by front-end loaders is insufficient for handling the proposed cargo volume anticipated at the project facility. As per the RFQ issued by TPT, the concessionaire has to guarantee handling of a minimum volume of 5 MTPA from first year of commercial operation, which would require 500-600 trucks evacuating cargo daily. This appears impossible and inefficient means of evacuation not to mention the adverse impact on environment. It is proposed that evacuation primarily via rail be considered for the Project facility.</td><td>A quantum of 18,000 MT coal can be evacuated per day by using sufficient number of heavy cargo carrying capacity trucks.</td></tr>
<tr><td>(ii).</td><td>It is requested that a broad item wise breakup of the Capital Cost be provided, since with the information provided it is not possible to ascertain the number and type of equipment, structures, civil works and rates considered.</td><td>Details are furnished below:

<u>MECHANICAL EQUIPMENT</u>
Stack Yard in Hare Island

<table>
<tr><th>Sl. No.</th><th>DESCRIPTION</th><th>UNIT</th><th>QTY.</th><th>RATE (Rs.)</th><th>COST (Rs. lakhs)</th></tr>
<tr><td>1.</td><td>Grab Unloaders</td><td>Nos.</td><td>2</td><td>2800</td><td>5600</td></tr>
<tr><td>2.</td><td>Conveyors</td><td>Meters</td><td>8740</td><td>1.0</td><td>8740</td></tr>
<tr><td>3.</td><td>Stackers</td><td>Nos.</td><td>3</td><td>1200</td><td>3600</td></tr>
<tr><td>4.</td><td>Front End Loaders</td><td>Nos.</td><td>20</td><td>30</td><td>600</td></tr>
<tr><td></td><td>TOTAL</td><td></td><td></td><td></td><td>18540</td></tr>
</table></td></tr>
</table>

<table>
<tr><td></td><td></td><td>
<u>ELECTRICAL EQUIPMENT</u>
Stack Yard in Hare Island
<table>
<tr><th>Sl. No.</th><th>DESCRIPTION</th><th>UNIT</th><th>QTY.</th><th>RATE (Rs.)</th><th>COST (Rs. lakhs)</th></tr>
<tr><td rowspan="2">1.</td><td>(a). Transformers-HT-1500KVA</td><td>Nos.</td><td>1</td><td>25</td><td>25</td></tr>
<tr><td>(b). Transformers-HT-5500KVA</td><td>Nos.</td><td>1</td><td>75</td><td>75</td></tr>
<tr><td>2.</td><td>Transformers-LT</td><td>Nos.</td><td>3</td><td>15</td><td>45</td></tr>
<tr><td>3.</td><td>Switch Gear</td><td>Lump Sum</td><td></td><td></td><td>300</td></tr>
<tr><td>4.</td><td>Motor Control Gear</td><td>Lump Sum</td><td></td><td></td><td>250</td></tr>
<tr><td>5.</td><td>PLC</td><td>Lump Sum</td><td></td><td></td><td>150</td></tr>
<tr><td>6.</td><td>Illumination</td><td>Lump Sum</td><td></td><td></td><td>300</td></tr>
<tr><td></td><td>TOTAL</td><td></td><td></td><td></td><td>1145</td></tr>
</table>
<u>CAPITAL COST ESTIMATE</u>
(Civil Works)
<table>
<tr><th>Sl. No.</th><th>Description</th><th>Amount (Rs. Crores)</th></tr>
<tr><td>1.</td><td>Construction of R.C.C. Jetty with 1200 mm dia bored piles, including all fittings like fenders bollards etc., as in drawing</td><td>27.00</td></tr>
<tr><td>2.</td><td>Construction of Approach trestle with three rows of 1000 mm bored piles. 7 m x 6 m grid – 2760 m long, 12 m wide in water</td><td>37.00</td></tr>
<tr><td>3.</td><td>Construction of R.C.C. Columns and beams 2 streams each 5 m wide 980 m long on lands.</td><td>19.60</td></tr>
<tr><td>4.</td><td>Hardening of stack yard 1,26,000 square meters.</td><td>2.00</td></tr>
<tr><td></td><td>Total</td><td>85.60</td></tr>
</table>
</td></tr>
<tr><td>(iii).</td><td>The free storage period has been considered as 10 days. It is suggested that the free storage period be decreased to 5 days as it severely impacts the capacity of the stockyard and fast cargo evacuation should be encouraged.</td><td>Free storage of 10 days is reasonable.</td></tr>
<tr><td>(iv).</td><td>The turnover of the plot considered for calculation of the optimal yard capacity seems too high for the project specifically considering evacuation by road.</td><td>The Yard Capacity is based on TAMP guidelines and being lower of quay capacity is considered as optimal capacity as per TAMP guidelines. The same is being revised based on discussions at the Joint Hearing held on 06.01.2010 to 7.0 million tones.</td></tr>
<tr><td>(v).</td><td>The bulk density of the coal for thermal considered for calculation of the optimal yard capacity seems high and low for industrial coal. The bulk density for thermal coal is usually in the range of 0.65-0.8 tonnes / cum.</td><td>The bulk density of Thermal coal at 0.95 Tonne per Cum. has been reckoned based on the Thermal coal received by Tuticorin Thermal Power Station and the bulk density of 0.5 tonne per sq. metre and stack height of 7 metres taken for Industrial coal as per actual.</td></tr>
<tr><td>(vi).</td><td>The total yard is considered for calculation of the optimal yard capacity is 70,000 sqm (35,000 sqm + 35,000 sqm) whereas the information on the project mentions a total available area of 12.6 hectare. Similarly, the total area considered (including waterfront area) for computation of License Fee (Rentals for land) differs from this values.</td><td>The total area of the Stack Yard will be 12.6 Hectares and the licence fee is calculated accordingly. The details of license fee calculation for water front area, Stack yard at Hare Island and Way leave for conveyors has been furnished in Appendix 9-01 of TEFR.</td></tr>
<tr><td>(vii).</td><td>Miscellaneous costs considered at 5% for estimation of Capital Cost appears underestimated assuming it takes into consideration all contingencies, cost of studies, environmental protection works, taxes, duties and other financial costs.</td><td>Miscellaneous cost at 5% of Civil & equipment cost is as per norms prescribed in TAMP Guidelines.</td></tr>
<tr><td>(viii).</td><td>5% of miscellaneous costs considered for estimation of Operating Cost appears underestimated assuming it takes into consideration all contingencies, PMC, environmental and other financial costs.</td><td>The miscellaneous cost @ 5% of civil and equipment cost has been considered in accordance with the provision of Clause 4.0.0 of (Norms for calculation of capital cost) TAMP Guidelines for Upfront Tariff setting for PPP projects at Major</td></tr>
</table>

<table>
<tr><td></td><td></td><td>Port Trusts 2008 and hence no change is possible.</td></tr>
<tr><td>(ix).</td><td>The Capital and Operating Costs considered appear to be underestimated with respect to the prevailing Scale of Rates/ cost of construction.</td><td>Civil cost estimates are based on works of similar nature recently carried out at Tuticorin Port.</td></tr>
<tr><td>5.</td><td>Vadinar Oil Terminal Limited</td><td></td></tr>
<tr><td rowspan="4">(i).</td><td>Calculation of Optimal Capacity of Terminal:</td><td></td></tr>
<tr><td>(a). As per norms prescribed in guidelines for ‘Ship day output’ the unloading rate to be considered for Panamax size vessels is 35,000 tons/ day. TPT has considered a rate of 40,000 tons/ day for Thermal coal and 25,000 tons/ day for Industrial coal. Therefore an average rate of 37,150 tons/ day has been considered. Since upfront tariff fixation is on normative basis and not based on detailed design and evaluation, it will be incorrect that the norms are exceeded and not followed.</td><td>An unloading norm of 40,000 Tonnes per day for Thermal coal is considered with a view to achieving higher efficiency and to reduce the cost of handling. The reasons for adopting different unloading norms for Thermal and Industrial coal is the difference in the bulk density of Thermal and Industrial Coal which are 0.80 T/m^3 and 0.50 T/m^3 respectively.</td></tr>
<tr><td>(b). Cargo Handling charges are worked out based on Optimal Terminal Capacity which is 70% of the maximum terminal capacity applied to all the years of operation right from day one. However, it is pertinent to note that the capacity utilisation cannot be ramped upto 70% from the very first year itself. Industry practice and past experience shows that the capacity utilisation ramp up happens over a period of time. Moreover, the operations face initial teething problems, and take time to stabilize. Therefore, in our view, the capacity utilisation should be kept at lower levels in the initial years (say 30% in the first year ramping upto 40% in second year, 50% in third year, 60% in fourth year and thereafter at 70%).</td><td>This upfront tariff is based on notified guidelines of the Authority. Such exceptional issues pertaining to initial years are not relevant for the subject case.</td></tr>
<tr><td>(c). TPT in their proposal has not followed TAMP norms for ‘calculation of Optimal Yard Capacity’. The deviation are highlighted below:
<table>
<tr><th>Parameter</th><th>TAMP Norm</th><th>TPT assumptions</th></tr>
<tr><td>Coal qty that can be stacked per sq. mtrs. of area</td><td>3.0 tons/sqm</td><td>6.6 tons/sqm for Thermal Coal & 3.5 tons/sqm for Industrial Coal</td></tr>
<tr><td>Turnover ratio of the plot in a year</td><td>12</td><td>32</td></tr>
</table>
Since upfront tariff fixation is on normative basis and not based on detailed design and evaluation, it will be incorrect that the norms are exceeded and not followed. In such a case the whole basis of normative approach is at fault.</td><td>The permissible stack height for stacking Thermal Coal and Industrial Coal in the wharf area is 4.5 mts. and in the reclamation site is 8 mts.

The stacking factor for Thermal Coal in the Coal Stack yard is 7.6 Tonnes/ Sqm. and for Industrial Coal is 4 Tonnes / Sqm. The annual throughput achieved during the years 2006-07 to 2008-09 is furnished as below:
<table>
<tr><th>Years</th><th>Thermal Coal</th><th>Industrial Coal</th></tr>
<tr><td>2006-07</td><td>56.08</td><td>11.65</td></tr>
<tr><td>2007-08</td><td>61.12</td><td>19.21</td></tr>
<tr><td>2008-09</td><td>58.80</td><td>21.13</td></tr>
</table>
The stacking factor of 6.6. tonnes per sq. metre has been reckoned for thermal coal based on a density of 0.95 tonne cum. and stack height of 7 metres. In case of industrial coal, the stacking factor has been reckoned as 3.5 tonne per sq. metre based on density of 0.5 per tonne per sq. metre and stack height of 7 metres. Turnover ratio has been taken as 28 with an estimated evacuation ratio rate of 18,000 tonnes per day. The turnover ratio considered is achievable.</td></tr>
</table>

	(d). Furthermore as per TPT's proposal the stacked cargo is to be evacuated from port by loading into trucks using front end loaders. The evacuation will be mainly by trucks initially and later by rail wagons in addition to trucks. This system of evacuation is inherently inefficient and therefore it is impossible to achieve a turnover ratio of 32 while evacuating by trucks / rail wagons without having mechanised systems. Even in BOT projects of other major ports where sophisticated in motion wagon loaders has been considered for coal evacuation, the turnover ratio considered by them has not been as high as 32. It may be noted that in motion wagon loaders or railway tracks have not been included in the capital cost estimated by TPT.	The evacuation is based on the estimate of 1.10 Lakh tones of yard capacity and evacuation at 18,000 Tons per day. Based on this the turnover ratio is arrived at. Any change will have a chain impact which is outside the purview of current exercise upfront tariff settings.
	(e). The turnover ratio also depends upon timely and sufficient availability of wagons, locomotives and trucks. As no study has been done with regard to cargo evacuation through rail and road, availability of rakes, etc., and understanding other connectivity constraints, to be on the safe and conservative side, we feel the TAMP prescribed turnover ratio of 12 may be considered.	For purpose of upfront Tariff setting, only evacuation by road is envisaged. Rail connectivity is a future proposal for consideration by Port and has no relevance to current exercise. Evacuation and its efficient execution are the responsibility of DBFOT operator Hence, Port's figure of Turnover ratio at 28 is reiterated for adoption.
(ii).	**Calculation of Capital Cost Estimate:**	
	(a). We presume the capital cost and operating cost estimates given in the proposal are only indicative, and therefore, the tariff workings are also indicative. As the cost estimates are not based on Detailed Engineering and prevalent item cost of coal handling equipments, the capital cost cannot be accurately estimated at this stage. Therefore, we believe the actual cost to completion and actual operating costs will be taken into account while fixing the final tariff.	As per TAMP guidelines, no escalation in capital cost is allowed. However, tariff cap is indexed to 60% of WPI every year.
	(b). The capital cost estimate is based on today's item rates and does not take into account any provision for escalation on account of inflation and price escalation even though the project would be implemented over a period of 2-3 years. A provision of atleast 25% should be considered.	Already replied above.
	(c). The capital cost is based on estimates and is not based by detailed engineering. Therefore, provision for Contingency shall be made in the Capital Cost at the rate of atleast 15% to provide for unforeseen situations and as margin for error in estimation. TPT has considered just 3% which is grossly inadequate.	In as much as the capital cost is with respect to current estimation, the question of error in estimation does not arise. 3% towards contingencies proposed is to cover the unforeseen items and not for error in estimation.
	(d). The provision of 5% under the head "Miscellaneous" is quite low considering the fact that this includes costs such as pollution control, fire fighting equipment, upfront payments, Interest during Construction (IDC), working capital margin, miscellaneous equipment, power supply, lighting, etc. For example, considering a three year construction schedule, the IDC alone works out to over 20%. Therefore, in our view the provision under the head "Miscellaneous" shall be atleast 30%.	IDC is included in the miscellaneous cost as per TAMP guidelines.
	(e). The return on capital employed at 16% p.a. is quite low. We believe the return on capital employed should be enhanced to atleast 20% p.a. in order to make project attractive and bankable.	As per TAMP Upfront Guidelines. No deviation.

	(f). The 'Civil Construction Cost estimate' of TPT for Coal Handling activity is Rs.58.60 crores (Berth Apron construction and other civil works) which includes the cost of other civil works of Rs.2.0 crores. We feel the estimate is grossly inadequate considering that it takes into account civil construction cost of stackyard (including ground improvement), rail tracks for stacker / reclaimers, construction of offshore conveyor galleries of about 3.0 km length (as opposed to onshore galleries which are cheaper to construct), construction of offshore transfer towers, truck loading station, marshalling yards, administration building, workshop, electric substation, roads, water supply and drainage system, etc. TPT may provide a breakup of their cost estimates for all these in order to better judge the correct estimate of the cost envisaged by TPT.	Port's figures are reiterated and no change is felt necessary.
	(g). The Capital cost for berth construction considered at Rs.27.00 crores is grossly inadequate considering that it includes the cost of offshore piling (as opposed to land piling which is cheaper), deck for berth, rails for ship unloaders, miscellaneous deck fittings and slope protection work. TPT to provide a breakup of their cost estimates for all these in order to better judge the correct estimate of the cost envisaged by TPT.	This is based on recent tender rate of L1 for construction of NCB - I in TPT. Hence the estimate is reiterated.
	(h). The capital cost for dredging alongside the berth has not been considered which we presume will be taken up by TPT as part of the capital dredging project being undertaken by them and not by the concessionaire.	Yes confirmed.
	(i). Capital cost estimate does not take into account cost of equipment erection and commissioning fees, etc. which forms a necessary and substantial amount of the project cost. Such costs should be included in the capital cost estimate of TPT.	No separate allowance for erection & commissioning is envisaged in upfront tariff guidelines.
(iii).	**Calculation of Operating Cost:** For calculating the Operating cost for coal handling activity, TPT has considered rentals for 'land and other port assets'. Clarification on the land area indicated for calculation of waterfront charges, stackyard and way leave charges for conveyors must be given by TPT, as the land area used in the calculations by TPT are not clear and there seems to be an error.	Furnished in Appendix 9.01 of Techno Economic Feasibility Report.
(iv).	**Calculation of Berth Hire:** The GRT assumed by TPT for 75,000 DWT vessels is 45,750. As per data widely available, the average GRT of 75,000 DWT vessel is 40,000 and not 45,700. Accordingly, the Berth Hire Rates will have to be reworked for this GRT.	Average GRT of 40,000 is considered.
(v).	The free period for storage charges should be reckoned from the time of completion of discharge and not from the day following the day of completion of final discharge from vessel as given by TPT in their proposal. This is a widely accepted practice in all Major Ports and has also been followed in the case of Iron Ore and Coal BOT projects of Paradip Port Trust.	The rates have been proposed as per standard procedure. Therefore no deviation is possible.

6.	**M/s.SICAL Logistics Limited**	
(i).	The present draft of the port is at 10.7 mtrs. TPT proposes to deepen the basin to 14.10 mtrs. and draft at 12.8 mtrs. Will the increased draft be available before the commencement of commercial operations?	Dredging and construction of NCB-II are synchronized.
(ii).	The evacuation from the stockyard is proposed to be through trucks in the initial phase. It will be difficult to evacuate 5.5 MT only through trucks as it will increase the congestion. Hence, it is proposed to make rail wagons available for easy evacuations. Hence, the cost for the equipments required for evacuating through wagons should be considered.	The stacking yard in Hare island is connected by road at present and rail connectivity is under consideration, hence evacuation will not pose any congestion.
(iii).	The capital cost proposed should be explained. There is no breakup given for the equipments which are considered for the estimation of Mechanical works. The assumption made for civil works estimation also needs to be explained.	Detailed breakup furnished.
(iv).	How is the percentage share of capacity to be handled between Thermal Coal and Industrial Coal arrived at? Is the TNEB Coal which is being handled presently excluded for calculating the percentage?	Percentage share of capacity between Thermal Coal and Industrial coal is based on the Traffic preceding in last five years. The TNEB coal which is being handled at Coal Jetty - I & II are excluded for calculating the percentage.
(v).	The optimal yard capacity of 5.5 MT is the limiting factor arriving at berth capacity. Whereas it is noticed that for Berth Hire Calculation, it is assumed at 6.5 MT. The reasons for difference need to be explained.	The Berth hire of 0.2457 is with respect to 7.00 MT.
(vi).	The plot turnover considered at 32 in a year is very high. Considering 132 days of vessel (for handling Thermal Coal) at the berth and a free period of 10 days, the turnover proposed will amount to 320 days of free period and 132 days of vessel operating at the berth which is not considered as a free period. To handle 5.5 MT of cargo in the specified stockyard of 35,000 sq. mtrs. is very difficult. Hence it is suggested to either increase the area of the stockyard proposed or decrease the free period of 10 days given for storage which is an encouraging factor for the parties to hold the cargo for 10 days in the stockyard.	The free period of 10 days is considered at Optimal level taking into plot turn over of 28. The yard capacity is based on TAMP guide lines and being lower of quay capacity is considered as Optimal Capacity as per TAMP guide lines. **Based on revised optimal capacity of 7.00 million tonnes, the percentage of cargo that attracts storage charges works out to 14.3%.**
7.	**L&T Transco Private Limited**	
(i).	**Norms for calculating Capital Cost**: The norms for estimation of Capital Cost capture the miscellaneous cost at 5% of civil and equipment cost. The definition of miscellaneous cost includes pollution control, fire fighting, upfront payment, Interest During Construction (IDC), Working capital margin, miscellaneous equipments, power supply, lighting, etc. The capital cost in Chapter III caters to Contingencies and Supervision charges and does not include Miscellaneous cost, which is required to be considered as per TAMP norms.	The miscellaneous cost @ 5% of civil and equipment cost has been considered in accordance with the provision of Clause 4.0.0 (Norms for calculation of capital cost TAMP Guidelines for Upfront Tariff setting for PPP projects at Major Port Trusts 2008.
(ii).	**Rail Tracks**: It is not clear whether the cost of Formation for rail tracks is included in the capital cost estimate.	Rail Track estimate is not included in the Capital Cost. (The same will be met by the Port as common user facility).
(iii).	**Cost of building, road, water supply**: Unit rates for other Civil Works like buildings, roads, etc., is grossly below the market rates. This may be reviewed and the cost may be revised.	Civil cost estimate is based on works of similar nature recently carried out at Tuticorin Port. Break up costs of Civil works as per guidelines will be prepared

		by the successful bidder based on the detailed engineering carried out by them after choosing the equipment.
(iv).	**Electrical switchgear and control panels**: Estimated for Electrical works looks inadequate for this project since it involves a mechanised coal handling plant. The cost estimate may be reviewed.	Cost estimates prepared based on TAMP guidelines.
(v).	**Cost of construction of berth**: The cost of construction of berth is assumed as Rs.27 crores. The rate assumed is far below the prevailing market rates and hence may be reviewed. As the construction / development is proposed to be done by the concessionaire at their cost, relevant escalation for costs may please be considered for the civil and equipment till the completion of the project, which shall include validity period for the bid proposal, period for achieving financial closure and the construction period.	Civil cost estimates based on works of similar nature of recently carried out.
(vi).	**Cost Estimate**: Confirm whether dredging cost is considered in the cost estimate. The cost estimate does not provide any provisions for the same.	Dredging will be done by the Port only. Hence Dredging cost is not to be considered in the cost estimate.
(vii).	**Equipment Cost**: The cost of 2 unloaders, conveyor system of nearly 1km distance to stackyard and other equipments has been assumed as Rs.185.40 crores. The above estimate needs to be revisited, since the same is below the market price.	These type of equipments were not purchased by any Port recently. Our estimate is based on similar type of equipment. Further, the capital and operating cost has been prepared based on the guidelines of TAMP and as per the prevailing Scale of Rates and is in order.
(viii).	**Conveyor alignment**: (a). The stackyard at Hare island is considered to be 3kms away from the berth but in the RFQ document it is given to be 2kms. Confirm which holds correct and if cost estimates have been taken correctly. (b). The conveyor alignment which currently runs across the sea from the proposed berth to the stack yard at Hare Island. It may be confirmed, if any, environmental clearance has been obtained for the same. (c). If alignment passes through land, the length of the conveyor alignment will considerably increase thus cost estimates have to be revised. Confirm if this has been captured in the cost estimates.	(a). The distance between the Proposed NCB II berth and Stack yard at Hare Island is 3 Km and the cost estimate has been considered accordingly. (b). It has already obtained Environment clearance for the project during August, 2007. Other statutory clearances shall be obtained by the Applicant. (c). The proposed conveyor alignment will be routed in the shallow water region and the sea bed consist of 60 cms. thick silt layer and underneath hard rock which will considerably reduce the depth of foundation and footing level of Pile and hence, there will not be higher cost of the structure foundation. It is for information that TTPS Conveyor from Second Coal jetty is running on the North of North Breakwater for more than one Km under deep water condition and enter inside the Harbour basin near the location of the NCB-II. Taking into account the above, the estimate has been prepared.
(ix).	**Conveyor system**: Confirm whether the maintenance of conveyor which runs through the sea is captured in the operating and maintenance cost estimates.	Repairs and Maintenance cost considered based on TAMP guidelines.

<table>
<tr><td>(x).</td><td>Repairs & Maintenance:
The provision of 7% on the Mechanical and Electrical works is applicable for conveyors in land, for conveyors in open sea the operating and maintenance cost needs to be increased and revised.</td><td>The Operation and Maintenance cost considered based on TAMP guidelines. Hence, no deviation.</td></tr>
<tr><td>8.</td><td>All India Chamber of Commerce & Industries</td><td></td></tr>
<tr><td>(i).</td><td>Berth hire charges:

Two different rates are proposed for vessels carrying thermal coal (0.2727 paise) and for those carrying industrial coal (0.4545 paise) per GRT per hour. It is suggested that uniform rate of 0.2727 paise may be prescribed for both the categories of vessels.</td><td>No comments furnished.</td></tr>
<tr><td>(ii).</td><td>Cargo handling charges:

Proposed handling charge of Rs.202.38 per tonne for thermal coal as well as industrial coal is on the higher side. It has reiterated the comments of Tuticorin Custom House Agents' Association that the cost will be around Rs.100/- per MT for the existing berths with grab discharge. Therefore, the rate of Rs.202.38 per MT is more than double the practically applicable rate and be reduced to a reasonable level.</td><td>No comments furnished.</td></tr>
<tr><td>(iii).</td><td>It has suggested the following amendments in the proposed Scale of Rates:
<table>
<tr><th>As in the proposal</th><th>To be amended as</th></tr>
<tr><td>Clause 1.1.(ii):
'Day' shall mean the period starting from 6 a.m. of a day and ending at 6 a.m. on the following day.</td><td>For the purpose of assessing charges, day may be reckoned as a period of 24 hours.</td></tr>
<tr><td>Clause 1.1.(vii):
"Per day" shall mean per calendar day unless otherwise stated.</td><td>'Per day' may be reckoned as 'Per 24 hours'.

(This can be easily followed since all the operations have been computerized.)</td></tr>
<tr><td>Clause 1.2.(iv):
In calculating the gross weight or measurement by volume or capacity of any individual item, fractions upto 0.5 shall be taken as 0.5 unit and fractions of 0.5 and above shall be treated as one unit, except where otherwise specified.</td><td>Fractions upto and including 0.5 should be taken as 0.5 unit and fractions above 0.5 should be taken as one unit.</td></tr>
<tr><td>Clause 1.2(v)(c):
The delay in refunds will be counted only 20 days from the date of completion of services or on production of all</td><td>The word "later" should be substituted with "earlier".</td></tr>
</table></td><td>No comments furnished.</td></tr>
</table>

	the documents required from the users, whichever is later.		
	Clause 1.2(v)(d): The delay in payments by the users will be counted only 10 days after the date of raising the bills by the Terminal Operator. This provision shall, however, not apply to the cases where payments is to be made before availing the services / use of Port Trust's properties as stipulated in the Major Port Trust Act and / or where payment of charges in advance is prescribed as a condition in the Scale of Rates.	The number of days in this case may also be made 20 days as in the case of refunds, in the previous clause.	
	Clause 2.4: No berth hire shall be levied for the period when the vessels idle at its berths due to break down of Terminal Operator's equipment of power failure or any other reasons attributable to the Terminal Operator.	In addition to this, all other charges incidental for moving the vessel, payable to TPT / Terminal Operator should also be waived.	
9.	**Tuticorin Thermal Power Station**		
	Tuticorin Thermal Power Station is already having two coal jetties exclusively for unloading thermal coal. The NCB-II is not pertaining to Tuticorin Thermal Power Station. Therefore, furnishing comments on the said proposal of TPT does not arise.		

2. A joint hearing in this case was held on 11 January 2010 at the Chennai Port Trust (CHPT) premises. The TPT made a power point presentation of its proposal, interalia, furnishing their clarifications on the comments of the users / potential bidders. At the joint hearing, TPT and the concerned users / organization bodies have made the following submissions:

Tuticorin Port Trust

(i). Port will provide 12.6 hectares of land in Hare Island. Capital Dredging upto the depth of 12.8 mtr will be the responsibility of the Port.

(ii). We propose to handle the entire throughput by Road. We have therefore proposed to have 20 front-end unloaders as against the norm of 4. Rail connectivity may take 6 or 7 years time to come. Licence fee for land is very high compared to other ports.

(iii). Conveyor is considered at double the length because of the site requirement and different grades of coal to be handled.

(iv). We will correct the arithmetical error in yard capacity calculation.

(v). Industrial coal is nothing but coke in our case. Therefore, the density is assumed at 0.5 to determine productivity.

(vi). The rate will be same even if any other bulk commodities are handled.

M/s.SICAL Logistics Limited

(i). Evacuation of entire volume by Road alone may be difficult.

3. The main points made by M/s.SICAL Logistics Limited on the comments of TPT are summarised below:

(i). On one hand it proposes a better productivity than norm prescribed by TAMP and on the other side. While considering the capital cost estimate, however, with reference to the points made by users about miscellaneous cost estimation and other points it states that the port needs to completely follow the norms specified in the TAMP guidelines for upfront tariff setting. Selectively application of the TAMP norm should be avoided.

(ii). The norm of considering escalation in tariff to the extent of 60% of the WPI will be insufficient to account for the overall change in capital cost of the project. Hence the TAMP/Port should factor in the capital cost estimation to arrive at the normative project cost.

(iii). For a project with construction period of 3 years, it is rather impossible to have such low cost of capital for IDC component. TAMP should reconsider the IDC cost/miscellaneous cost which reflects the prevalent market rate / condition for arriving at IDC cost.

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