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Tariff Authority for Major Ports

G No. 103 **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 Chennai Port Trust for setting upfront tariff for container handling 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/47/2009-CHPT

Chennai Port Trust **- - -** **Applicant**

O R D E R

(Passed on this 3rd day of March 2010)

This case relates to a proposal dated 12 November 2009 received from the Chennai Port Trust (CHPT) for fixing upfront tariff for development of Mega Container Terminal on BOT basis at Chennai Port in pursuance of the guidelines for upfront tariff setting for Public Private Participation (PPP) projects at major port trusts notified by the Authority vide Notification No.TAMP/52/2007-Misc., dated 26 February 2008.

2.1. The CHPT has furnished a report of the Consultant (Indian Maritime University) alongwith its proposal. The main points made by the CHPT in its proposal are summarised below:

I. General

(i). The port is planning to build a separate dock / harbour which will facilitate the handing of container vessels of future generation.

(ii). The upfront tariff is to be port specific and not project specific and is to stand valid normally for a period of 5 years as per TAMP guidelines. It is necessary to formulate a standard container terminal specific to Chennai Port and work out the upfront tariff. Such standard container terminal is to be independent of the proposed Mega Container Terminal (MCT). However, the port desires to work out the upfront tariff for the proposed MCT as specific to this project taking into account the estimated project costs and other parameters of the project. There will be two tariff proposals specifying the SOR – one for the standard terminal and another one for the proposed mega terminal. [But, we have received one proposal only]

(iii). The capital estimate for the Project is Rs.3125 Crores as Developer's investment. In addition to the Developer's cost Rs.3125 Crores, IT System Cost at 2% amounting to Rs.34.4 Crores and 10% Financing Cost amounting to Rs.171.90 Crores have also been added as per the TAMP guidelines.

(iv). The Scale of Rates for the proposed Mega Container Terminal is framed based on the various activities that are carried out by the existing Terminal Operator M/s.CCTL.

(v). The tariff has been worked out at Rs.2055.96 per TEU in respect of loaded Foreign Containers as the Base Rate and various rates are worked out for the different types of container handling activities.

(vi). The Breakwater component of the Project and the Berth construction have to be undertaken by the Developer. The berth hire component is considered for the Developer's share of income and accordingly berth hire of Rs.2.03 per GRT per hour is considered for fixing the upfront tariff.

II. Salient features of the project are as follows:

(i). (a). Two breakwaters will be constructed to develop a harbour basin. The length of these breakwaters will be 1.73 Kms. and 2.75 Kms.

(b). The basin will be dredged to a depth of 18 Mtr.

(c). The terminal will be constructed within this newly developed basin and will have length of 2 Kms.

(d). The dredged material will be used to reclaim a land of about 90 hectares behind the berth of the terminal.

(e). Necessary container handling equipment are to be provided.

(f). Other utilities such as water supply, power supply, road, rail linkages, navigational aids, floating crafts etc. also to be provided.

(ii). The optimal capacity of the MCT, civil cost for berth hire services, civil cost for container handling activities, cost of container handling equipment, operating cost of the MCT, Annual Revenue Requirement (ARR) for container handling services and berth services and apportionment of the ARR, as estimated by the CHPT, is given in the following table with comparison of the estimates with the norms prescribed in the upfront tariff guidelines of February 2008:

Sr. No.	Particulars	Norms prescribed in the guidelines	Calculation furnished by CHPT	Estimates by CHPT
I	**Optimal Capacity**			
(i).	**Optimal Quay Capacity**			
	A=Number of gantry developed for work in an year.	=Berth Length/100	=2000/100	20
	B=Number of working hours of gantry crnes in an year.	=24*365 hours	=24*365 hours	8760.00
	C=Average number of moves per gantry crane.	=25 moves per hour	=25 moves per hour	25.00
	D=TUE ratio	=1.3	1.3	1.30
	E=70%	=70%	70%	0.70
	Optimal quay capacity=A*B*C*D*E TEUs			**398580.00**
(ii).	**Optimal yard capacity**			
	G=Total ground slot in TEUs	=720 TEUs per Hectare	=285.71 TEUs per hectare	20000
	H=Average stack height	=2.50	=2.50	3.00
	P=Period or number of days	=365	=365	365.00
	S=surge factor	=1.3	=1.3	1.30
	D=Average dwell time	=4 days for export & 2 days for import	=3 (weighted average)	3.00
	Optimal yard capacity=0.7*G*H*P/S*D in TEUs			**3930770**
(iii).	**Optimal capacity of the terminal- lower value of the optimal quay and optimal yard capacity (in TEUs)**			**3930770**
II	**Capital Cost**			
(i).	**Berth Hire Service**	**Norms wherever prescribed**		**Rs. In Millions**
	(a). Civil cost	As estimated by Port Trust		
	(i). Construction of berth with diaphragm wall 2000 x 30 mtr (75%)			3726
	(ii). Reclamation behind diaphragm wall (0.9 million m^2 x 12 mtr)			9630
	(iii). Special establishment charge			36
	(iv). Contingencies 5%			668
	Total Cost for Berth hire Services			**14060**
(ii).	**Container Handling facilities**			
	(a). Civil Cost			
	(i). Construction of berth with diaphragm wall 2000 x 30 mtr (25%)	As estimated by Port Trust		1242

	(ii). Reclamation behind diaphragm wall (0.9 million m^2 x 12 mtr)			1242
	(iii). Hardening the reclaimed area 0.9 million m^2			2070
	(iv). Providing road facilities			115
	(v). Providing railway facilities			230
	(vi). Providing other infrastructure including IT facilities, canteen, workshop, sub-station, fire fighting, utility, customs, admin. Buildings, etc.			575
	(vii). Providing electrification and water supply arrangements			230
	(viii). Special establishment charge			11
	(ix). Contingencies 5%			285
	Subtotal (a)			**6000**
	(b). Container Handling Equipment			
	(i). Quay gantry Crane	1no. For 100 metres berth length	20	6000
	(ii). Rubber Tyred Gantry Crane	3nos. For ech Quay Gantry crane	2.5 for each quay gantry crane	4000
	(iii). Reach Stacker/ Top Lift Truck	1no. For 9 RTG's	1 for 9 RTG's (approximately)	120
	(iv). Tractor Trailers	6nos. For each Quay Gantry Crane	6 for each quay gantry crane	480
	(v). Workshop equipment	No norm	Lumpsum	37.50
	(vi). Special establishment charge	-	Lumpsum	26.14
	(vii). Contingencies 5%	-	Lumpsum	527.52
	Subtotal (b)			**11191.12**
	Subtotal (a+b)			**17191.12**
	(c). IT system cost	2% Civil & Equipment Cost	2% of Civil and Equipment Cost	**344.00**
	(d). Other cost	10% Civil & Equipment Cost	10% Civil & Equipment Cost	**1719.00**
	(e). Total capital cost for container handling service (a+b+c+d)			**19254.12**
	Total Capital cost of the Project (i) + (ii)			**33314.12**
III	**Operating Cost Estimation**			
		Norms		**Rs. in crores**
	(a). Power Cost	8KWH per TEU* Prevailing unit rate	8KWH*Rs 8.00 per unit.	189
	(b). Fuel	4 Litres per TEU* Prevailing unit rate	4 Litres *Rs 36.00 per Lts	566
	(c). Repair & Maintenance			
	- Civil Assets	1% of Civil assets	1% of Civil assets	60
	- Equipment	2% of Cost of Equipments and electrical cost	2% of Equipment cost & IT system	231
	(d). Insurance	1% of Gross fixed assets	1% of Gross fixed assets	175
	(e). Depreciation	As per Companies Act	As per Companies Act	1413
	(f). Licence Fee	As per the rates prescribed in the Scale of Rates of the concerned Port Trusts	Rs.2606 per 100 sq. mtr per month	281
	(g). Other Expenses (for terminals having more than 0.5 million TEUs)	10% of Gross fixed assets value	10% of Gross fixed assets	1754
	Total operating cost (a to g)			**4669**
IV	**Annual Revenue Requirement ARR**			
(i).	**Container Handling Services**			
	(a). Total operating cost			4669
	(b). Return on Capital Employed @ 16%			3081
	(c). Total Revenue requirement			**7750**
	Apportionment of Revenue Requirement			
	(a). Container Handling Charges	90%	90%	6975
	(b). Storage Charges	7%	7%	542

	(c). Miscelleneous Charges	3%	3%	232
	(d). Total Revenue requirement		100%	7749
(ii).	**Berth hire**			(in crores)
	(a). Operating cost			
	(i). Maintenance Cost	1% of capital cost	1% of capital cost	140.60
	(ii). Insurance cost	1% of capital cost	1% of capital cost	140.60
	(iii). Depreciation	3.34% of capital cost	3.38% of capital cost	475.22
	Total Operating Cost for berth hire service			**756.42**
	(b). Revenue requirement from berthing service			
	(i). Operating cost			756.42
	(ii). ROCE at 16% of Rs.14060 millions			2249.57
	Total Revenue requirement			**3005.99**

(iii). Scale of Rates

The CHPT has drawn up the proposed draft Scale of Rates based on the tariff structure in the existing Scale of Rates of the CCTL. Main points made by the CHPT in framing Scale of Rates for container handling, storage charges, miscellaneous services and berth hire are summarised below:

A. Scale of Rates for container handling

(i). The present Scale of Rates of CCTL which is effective from 9 December 2008 prescribes rates under the eleven tariff heads.

(ii). An analysis of the tariff under each of these groups shows that the charges are prescribed for each activity and the activities are broken into miniscule level which makes the charging system more cumbersome. Moreover, such division is not the practice in BOT terminal functioning in JNPT and the recent publication of upfront tariff by TAMP for TPT and JNPT terminals also do not have such detailing of activities and charges prescribed. Therefore, it is proposed to rationalise the activities and prescribe the activities in tune with the TAMP's order on fixing upfront tariff for BOT terminals. Accordingly, the following are the activities prescribed for the standard terminal:

1. Handling at quay and transportation from quay to container yard or vice-versa and lift on/lift off at container yard from the internal transfer vehicle.

2. Handling at container yard to load onto truck or vice-versa (direct delivery/export intake).

3. Handling at container yard to load onto internal truck and transport to railway yard and load onto flat or vice-versa.

4. Handling Transshipment container.

5. Shifting container within vessel restow without landing.

6. Shifting container within vessel restow via quay.

7. Handling hatch cover without landing on quay.

8. Handling hatch cover with landing on quay.

9. Reefer connection per 4 hrs or part thereof.

10. Shifting container from one place to another place within yard for onshore inspection or for any other purpose.

11. Lift on and Lift off (charge).

(iii). The volume of container handling under each of the above proposed activities and the rate for each of them will form the basis for deriving the SOR.

(iv). As part of the rationalisation of tariff, the following criteria is followed while framing the SOR:

1. No distinction will be made between LCL and FCL containers.

2. The normal containers and reefer containers will be grouped together.

3. The charges for 40 ft. container will be 1.5 times the rate for 20 ft. container.

4. The charges for container of length more than 40 ft. will be 2 times of the rate for 20 ft container.

5. At CCLTL the ratio between the rate prescribed for handling the hazardous and OOG container at the quay is 1.25 times the rate prescribed for normal container. The same ratio will be adopted while prescribing the bundled rate for the standard terminal.

(v). On the basis described above, the ARR taking into account the SOR of CCTL as the base is worked out. This value is found higher and hence required to be reduced by 0.70993 times. Accordingly, this correction factor is applied and SOR for the standard terminal is arrived at and furnished.

B. <u>Scale of Rates for storage</u>

The present status of dwell time for various types of containers is not available from CCTL as there is some dispute on this issue. Hence, in the absence of such data it is considered prudent to adopt the present SOR for dwell time charges of the CCTL with due application of the multiplication factor arrived at for container handling operations. Accordingly, the rates are worked out and furnished.

C. <u>Scale of Rates for Miscellaneous Services</u>

There are various miscellaneous services rendered by the terminal other than those covered under handling and storage. Adopting the same principle applied to arrive at storage charges, the charges for miscellaneous services are worked out.

D. <u>Scale of Rates for Berth Hire</u>

(i). The civil construction cost for berthing activities is estimated at Rs.1406.00 crores. The revenue requirement for berthing activities on the basis of the estimated capital cost is worked out as per TAMP guidelines.

(ii). As the standard terminal is expected to handle vessels of size upto 18000 TEUs, percentage of volume of TEUs that will be carried by vessels of various sizes (demarcated by length) is furnished. This percentage share is based on assumptions.

(iii). The average parcel size for each category of vessel type is estimated based on the current trend obtained from CCTL. Berth hire per GRT per hour is Rs.2.0314.

(iv). The above value is higher as compared to the other terminals due to the break water cost having taken into account. In normal terms, the break water construction cost is to be recovered through port dues. However, as CHPT will levy either additional or separate port dues for the vessels calling at this new terminal, another levy of port dues by BOT operator is considered not appropriate. As the charges (whether in the form of port dues or berth hire) is to be paid by the vessel owner / agent i.e. by the same user, it is proposed that the cost of break water be recovered from berth hire only.

2.2. In continuation of its proposal dated 12 November 2009, the CHPT has mentioned that the consultant for the MCT project has considered the rates adopted for the 2nd container terminal as approved by TAMP for estimation of operating cost.

3. In accordance with the consultative procedure prescribed, a copy of the proposal from the CHPT was forwarded to the users / user organisations, and potential bidders for their comments. The comments received from the various user / user organisations / bidders were forwarded to CHPT as feedback information. The CHPT has responded to the comments of the users / bidders, as decided at the joint hearing in this case.

4. Based on a preliminary scrutiny of the proposal, the CHPT was requested to furnish additional information / clarifications. The CHPT has furnished its reply. The queries raised by us and reply of the CHPT are tabulated below:

Sl. No.	**Queries raised by us**	**Reply of CHPT**
I.	**<u>General</u>**	
(i).	(a). The report of the consultant for upfront tariff formulation has made a mention that the Chennai Port Trust (CHPT) desires to work out the upfront tariff for the proposed MCT as specific to the project. CHPT to note that in terms of Clause 2.2 of the tariff guidelines of February 2008, the tariff cap to be prescribed by the Authority would be applicable to all the projects to be bid out for container handling operations at the CHPT during the next five years.	This Guideline will be adhered to.
	(b). The Report of the consultant states that there will be two tariff proposals specifying the Scale of Rates (SOR) for the standard terminal and another for the proposed MCT. We have received one proposal and it is presumed that the CHPT endorses the SOR filed alongwith the proposal is for the standard container terminal.	The scale of rates filed along with the proposal is for the Mega Container Terminal.
(ii).	The proposal of the CHPT in reference is to fix upfront tariff cap for container terminal based on the proposed development of 2000 meters of quay in the extended harbour on the north eastern side of the existing harbour. The CHPT to explain the rationale	The present and future generation Container Vessels will be having a length of around 300 meters and above. Normally three berths configuration of approximately 1000 meters length form a Terminal. The present two Terminals at Chennai Port Trust are having a length of about

	behind considering the quay length of 2000 meters as the configuration for a standard terminal at CHPT.	900 meters each. On this basis, 2000 meters length is being considered taking into account the future generation Container vessels.
(iii).	CHPT to confirm as to whether the basic features and the terms of concession applicable to the project of development of 2000 meters of quay will be similar to the future container handling projects at CHPT.	The present Mega Container Terminal project will commence its commercial operation after three years from the date of entering into the Concession Agreement, and the Terminal will require certain period of time to attain the Capacity expected for the Terminal. Hence, at this stage, it is pre-mature to say whether the same standard will apply for future Container handling projects also.
(iv).	CHPT to confirm whether the reclamation of land about 90 hectares envisaged for the project of 2000 meters of quay length will be a feature for the future container handling projects also.	The quantum of land required to be reclaimed will depend on project size. As clarified in the earlier point, this can be decided only in the future.
(v).	The CHPT has stated that two break waters will be constructed at an estimated cost of Rs. 963 Crores to develop a harbour basin and the proposed MCT will be constructed within this newly developed basin; and, construction of the breakwater is to be undertaken by the BOT operator. In this context, CHPT to confirm that the MCT operator will be the sole beneficiary of the two breakwaters.	The Port, as the Concession Authority, has full right to develop any non competing facilities, without affecting the maneuverability to handle cargo on both the breakwaters created according to the Concession Agreement prepared for this project.
(vi).	About 90 hectares area behind the berth is proposed to be reclaimed. In this regard, CHPT may clarify the following: (a). It is seen from the estimation of license fee payable by the BOT operator to the CHPT that the entire 90 hectares will be allotted to the operator. Clarify and establish whether 90 hectares of area is the standard followed by the international container terminals for a quay length of 2000 meters.	For any Standard Container Terminal, the depth of the backup area required will be to the tune of 400 to 500 meters. Hence, the area of 90 hectares (2000 m x 450m) conform to the International Standards.
	(b). Out of about 90 hectares of reclaimed area, 70 hectares area is considered as stack yard area in the calculation of optimum yard capacity. CHPT may furnish the details of utilization of the remaining 20 hectares with justification.	The remaining 20 hectares will be utilized for the following facilities: Administrative Building Work shop Sub-Station Gate complex Exchange yard Utilities, Fire fighting Customs and Other miscellaneous facilities
(vii).	For the purpose of assessment of upfront tariff for the container terminal, the CHPT has deviated from some of the norms prescribed in the upfront tariff guidelines of 2008. The port has estimated Annual Revenue Requirement (ARR) and furnished the proposed draft Scale of Rates (SOR). In this regard, the CHPT to note / clarify / furnish the following.	----
II.	**Yard Capacity**	
(i).	Given the 20,000 ground slots for 70 hectares area (286 ground slots per hectare) and following the formula given in the upfront	The yard capacity calculated, given in the proposal, as 3,930,770 TEUs is correct taking into account the average stack height as 3. Though the

	tariff guidelines of February 2008, the optimal yard capacity works out to 45,85,897 TEUs instead of 39,30,770 TEUs arrived at by CHPT. In that case, the quay capacity which is estimated at 39,85,800 TEUs appears to be the limiting factor. If 360 TEUs per hectare is considered as ground slots, as in the case of fixation of upfront tariff for the container handling terminal at the New Mangalore Port Trust (NMPT) recently decided by the Authority and given the optimal quay capacity of 39,85,800 TEUs, the storage area required works out to around 56 hectares. Even if on a presumption that after allocating the 20 hectares area for auxiliary purposes, it appears that allocation of 90 hectares area appears to be on the higher side considering the optimal capacity. It is also to be noted that the entire 90 hectares area is available only after spending considerable expenditure on reclamation and hardening the reclaimed area. In view of this position, the CHPT is to review the estimated area of to be reclaimed and the land sought to be earmarked for storage of containers.	calculation of yard capacity has been done on the basis of average stack height as 3, it was erroneously indicated as 3.5 in the text. The ground slots of 286 per hectare has been adopted for calculation of Optimal quay capacity based on the value given for the JNPT Terminal by TAMP. As per this requirement of ground slots per hectare, the allocation of 90 hectares of land is reasonable and is required.
(ii).	The CHPT has considered an average stack height of 3 as against the norm of 2.5. Please explain the reasons for deviating from the norm. In this context, the CHPT to furnish the actual stack height of containers that prevailed at the private terminals operated at the CHPT during the last three years.	The average stack height of 2.5 as per TAMP Guidelines is acceptable for standard terminals of 300 Mtrs. length, but for Terminals of Mega size, such as the one being planned with 2 Kms. length, the size of the vessel that will be calling at the Terminal and the parcel size of each vessel is much higher compared to the values for a smaller terminal. Hence, a higher average stack height of 3 has been adopted which also is the practice adopted in international terminals. Hence, the optimal yard capacity arrived as 39,85,800 TEUs in the upfront tariff calculation is justified.
(iii).	The CHPT to furnish the container mix viz., foreign containers, transshipment containers, coastal containers and others (over dimensional and hazardous containers) for handling at the optimal capacity. The break-up in terms of loaded containers, empty containers and reefer container under each of the above category of containers may also be furnished.	These details have already been furnished to TAMP and it is available in the working sheet. However, the same is being sent again.
III.	**Capital Cost**	
1.	Civil Cost: (Excluding Berth): (i). (a). Block Cost Estimate { Annex 6(A) } The CHPT has furnished details of the entire work to be carried out, both by the BOT operator and the port, for building the MCT in the Block Cost Estimate (Annex 6A). The Block Cost Estimate is an aggregate of the estimated capital cost of the BOT operator and the CHPT. In the said Block Cost Estimate some errors are noticed. For example, applying the unit rate of Rs. 0.8280	In Annex 6(A), the rate indicated is mentioned as Rupees in Millions which is actually Rupees in lakhs. If this correction is made, the amount shown in the last column is in order. The rate for Item 3(b) has to be taken as 0.0023 as against 0.0012. Similarly, against item no.4, the rate is 0.00115 and the calculated value for the quantity of 1,08,00,000m^3 is Rs.1242 million. However, the rate is shown as 0.0012 instead of 0.00115 due to rounding of the last digit.

	million to the quantity of 60,000 m^2 for construction of berth, the cost estimate for this item of work works out to Rs. 49680 million as against Rs. 4968 Million shown in the Annex 6A. (Refer item no. 1) Likewise, applying the unit rate of Rs. 0.0012 Millions on the quantity of 1,08,00,000 m^3 for land reclamation, the cost works out to Rs. 12960 millions, whereas Rs. 1242.00 Million is shown in the said Annex 6A (refer item no.3). All the workings may be checked thoroughly and the relevant Annexes may be revised suitably.	
	(b). Bloc Cost Estimate - BoT works (Annex-6C) (i). Since the proposal for upfront tariff fixation for the proposed MCT is expected to be disposed of within a short span of time in the year 2010, the escalation in the upfront tariff will be applicable from the year 2011 with reference to the upfront tariff fixed in the year 2010. Therefore, the CHPT to ensure that the unit rates considered in the estimation of civil cost are closer to the market rates prevailing at the end of the year 2009.	The Tariff proposal has been sent based on the estimate already given to the bidders at the time of RFQ and to the Government while submitting the PPPAC Memo.
	(ii). In respect of other items of civil construction cost, namely providing road facilities, railway facilities and other infrastructure facilities etc., CHPT has estimated the cost on Lump Sum basis. The CHPT may confirm whether the estimates made on lump sum basis reflect the market position prevailing in the years 2009 and furnish copy of the Budgetary quotations.	The lumpsum provision reflects the market position prevailing in 2009.
	(iii). CHPT to furnish the details of "Special Establishment Charges" and the estimate in this regard may be justified.	"Special Establishment Charges" are provided at 0.25% of the total cost and is the norm adopted by Chennai Port Trust.
	(iv). The basis for apportionment of the aggregate sum of "Special Establishment Charges (Rs.73.14 Million) to civil cost for container handling (Rs.11.00 million), civil cost for berth hire (Rs.36.00 million) and equipment cost (Rs.26.14 million) to be furnished.	It is worked out on the basis of 0.25% of cost of each of these items.
	(v). Likewise, "contingencies and work charged establishment cost" estimated at around 5% of the sum total of the civil cost to be justified.	Contingency and the work charged Special Establishment cost is taken as 5% as per the norms normally adopted for project work at Chennai Port Trust.
	(vi). CHPT to furnish the basis for apportionment of 25% of berth construction cost to container handling and 75% of berth construction cost to berth hire, out of the total amount of Rs.4968 millions.	For calculation of the capital cost of container handling equipments, only 25% of the Berth cost has been apportioned and the balance 75% is apportioned towards annual revenue requirement for berth hire. The cost towards construction of the berth need to be considered both for container handling as well as for berthing of the ship. For the

		purpose of container handling, only the apron cost has been considered, which is approximately about 25%.
2.	<u>Civil Cost (Berth)</u> (i). (a). The dredging of channel and Harbour basin, among certain other works, is to be undertaken by the CHPT. However, in the Block Cost Estimate (Refer Annex 6A) the dredging cost requires to be shared by the BOT operator also. But, the cost of dredging is not considered by the CHPT in the estimates of capital cost of berth. The position may be clarified.	It is clarified that the entire dredging cost will be borne by CHPT only. Accordingly, the entire cost has been taken into account under the share of CHPT in Annex 6(B). However, the quantities are separately indicated in order to use the same figure for the reclamation behind the diaphragm wall. So, no cost of dredging is accounted under the BOT Operator's cost.
	(b). CHPT to note cost of dredging alongside the berth can only be considered in the capital cost of both for calculation of Berth Hire, as stipulated in the upfront tariff guidelines of 2008.	
	(c). In case, a portion of the dredging cost is to be borne by the BOT operator, for dredging along side the berth, the reason for considering the unit rate (Rs. 0.0023 Million per M3) of dredging for BOT operator at double the unit rate (Rs.0.0012 million per M^3) considered for CHPT may be clarified with justification (Refer Annex 6A).	As the dredging cost is borne by CHPT only, this does not arise.
3.	<u>Equipment cost:</u> (i). The CHPT to furnish budgetary quotations in support of the unit rate considered in the estimation of equipment cost. It may be confirmed whether the applicable taxes and duties are included in the estimated unit cost.	The rates adopted in the estimate have been scrutinized and found to be valid during the end of 2009. Though the budgetary quotations are not available for certain item, the estimate are drawn up broadly based on the experience of IIT during its association with other port project like the recently commissioned Second Container Terminal at Chennai Port for Quay Cranes, RTG, etc., and multi-purpose berth at Ennore Port which is under construction for berthing structure. Considering the high cost of equipment, major equipment manufacturers are not inclined to respond in writing to requests for providing budgetary quotations. However, the rates adopted in the present estimate include applicable taxes, levies and were arrived at based on discussions with major international equipment manufacturers. It is also confirmed that the estimate costs based on LS basis are reasonable and reflect the market position prevailing during 2009.
	(ii). The norms of the upfront tariff guidelines prescribe provision of three number Rubber Tyred Gantry Cranes (RTGs) for each quay crane (QC). The CHPT envisages provision of 20 QCs. In that case, 60 RTGs may be required. The reason for considering less number of RTGs (50) against the norm of 60 RTGs in the estimation of equipment cost may be clarified.	Based on the guideline of the 3 RTG Crane for 1 Quay Crane, 50 Nos. of RTG provided will be adequate for requirement of Mega Container Terminal.
	(iii). Rail mounted Gantry Crane (RMGC) is one of the container handling equipments prescribed in the normative equipment level	RMGC is not considered in the equipment list for the Mega Container Terminal since, both terminals currently in operation in Chennai Port Trust are not

	stipulated in the upfront tariff guidelines. The reason for not considering RMGC in the estimation of equipment cost may be explained.	using RMGC and hence RMGC is not envisaged in Mega Container Terminal.
	(iv). (a). The details of workshop equipment envisaged as a separate item in the estimated equipment cost may be listed out.	Regarding workshop equipment, considering the scale of equipment proposed at the Mega Container Terminal, a provision is made for workshop equipment to enable on-site servicing of the cranes and yard equipments for periodical and breakdown maintenance. Hence, a general provision of not more than 0.5% of the equipment cost is adopted.
	(b). The upfront tariff guidelines do not envisage provision of workshop equipment. The proposed provision of workshop equipment may be justified supported by budgetary quotation for the lump sum of Rs. 37.50 Millions considered in the estimate.	
4.	Operating cost (Containers) (Annex-10): (i). CHPT may confirm whether the rate per unit of power (Rs. 6.00) and the rate per litre of fuel (Rs. 36.00) considered by it in estimation of power and fuel cost are prevailing market rates.	It is as per the prevailing market rate.
	(ii). The CHPT has considered Repairs & Maintenance cost (R&M cost) for IT equipments in addition to the R&M cost estimated for Mechanical & Electrical Equipments. The upfront tariff guidelines of 2008 do not provide for R&M cost of IT equipments. The CHPT may justify the R&M cost for IT equipments estimated at 2% of IT system cost.	IT Equipments have to be considered as part and parcel of Mechanical and Electrical equipment and as such, 2% of the R&M cost is applicable to IT Equipments also. In Annex 10, instead of showing both together, it is individually shown.
	(iii). (a). In the estimation of insurance cost, the CHPT has considered an amount of Rs. 17,535 million which is the aggregate amount of the estimated civil cost, equipment cost and IT system cost (Refer Annex 9). The reason for not taking into account the remaining item of “other cost” (Rs. 1719 millions) of the capital cost in the estimations of insurance cost may be clarified. (b). Likewise, the reason for not considering the “other cost” (Rs.1719 million) of the capital cost in the estimation of other expenses may be clarified.	“Other cost” represents all other miscellaneous cost including Financing cost and interest during the construction phase. As indicated by TAMP this has to be accounted. Taking this into account the cost is revised and revised values are given.
IV.	**License Fee:**	
	(a). The CHPT has considered the rate applicable for open space for estimation of license fee payable by the operator to the CHPT. In this context, it is to be noted that the 90 hectares area is required to be reclaimed by the BOT operator at his cost and spending further considerable amount on hardening the reclaimed area. That being so, the rationale behind equating the license fee applicable for open space with that of license fee for reclaimed area, considering the cost involved in reclamation of land at the cost of the BOT operator, may be explained with justification.	Once the area is reclaimed the land becomes the property of the Port and hence the License fee is leviable for the area reclaimed. In view of this the License fee applicable for the open space has been considered.

	(b). The tariff item in the existing scale of Rates of CHPT for levy of license fee for open space considered for estimation of license fee at Rs. 2606.00 per calendar month or part thereof, for 100 sq. mtr. or part thereof may be quoted.	Refer Item 1(a) Scale 1 miscellaneous charges of Chapter VI of the Scale of rates and after applying the escalation as per the new land policy guideline issued in 2004, the rate has been arrived at. [CHPT has furnished detailed workings]
V.	**<u>Operating cost (Berth) [Annex 13 A]</u>** The CHPT has estimated depreciation at 3.38% of the civil cost. The depreciation rate prescribed in the Companies Act for civil structure is 3.34%. Therefore, the estimated depreciation may be reviewed.	The depreciation calculation will be revised by taking 3.34% only and the error is rectified.
VI.	**<u>Scale of Rates</u>**	
A.	<u>Scale of Rates for container handling activity</u> (i). In the working sheet for calculation of Scale of Rates for container handling activity furnished by the CHPT, it is seen that the CHPT has presumed the container mix obtaining at the CCTL. However, it appears from the working sheet that the ratio of the loaded and empty boxes in the respective sizes (20', 40' 45') of boxes is not based on the position obtaining at the CCTL. The CHPT to furnish the basis for adoption of the ratio of loaded and empty boxes in the respective sizes of boxes for the standard container terminal.	The basis for arriving at the ratio of loaded and empty boxes is furnished. CHPT has modified the percentage share of various types of containers reportedly based on CCTL values.
	(ii). The CHPT has taken the existing Scale of Rates of CCTL as base to formulate the Scale of Rates for the proposed standard container terminal. In the process, the CHPT has grouped the itemised rates existing at the CCTL and has proposed the draft Scale of Rates accordingly. Incidentally, some tariff items for container handling activities at the CCTL are dollar denominated rates. In this context, the CHPT to furnish break-up for the rates considered for all type of containers like Normal, Reefer, Hazardous, OOD, transhipment and Restow to determine the Annual Revenue Requirement (ARR) for the estimated capacity of the standard container terminal at the rates existing at the CCTL giving reference to the tariff item in the existing Scale of Rates of CCTL. The exchange rate considered for conversion of the dollar denominated tariff in Indian rupees in the existing Scale of Rates of CCTL may also be furnished.	The CHPT has furnished the details.
	(iii). The CHPT has not furnished the container mix under foreign and coastal categories, which may be furnished.	As per the details furnished by CHPT, only 20' containers are found at 4.20% of total traffic of 20' containers.
	(iv). The CHPT has proposed concessional rates for handling coastal containers. The estimated Annual Revenue Requirement (ARR) from container handling activity is to be realised from handling foreign and coastal containers. That being so, the concessional rate for coastal containers	The CHPT has furnished the details. It has captured the income realizable from handling 20' coastal containers.

	should be determined taking into consideration the share of the estimated volume of coastal containers and suitable adjustment in the rate for handling foreign containers. The CHPT is accordingly to revise the working sheet furnished by it for calculation of Scale of Rates for container handling activity and furnish, capturing the income realizable from handling coastal containers.	
	(v). With reference to the calculation of income arising out of handling the container at yard, CHPT to furnish the basis for the following: (a). Volume at 0.4% and 0.3% of 20' and 40' container respectively for the activity of movement of containers from container yard to truck or vice versa.	The CHPT has furnished the basis.
	(b). Volume at 0.5% and 0.4% of 20' and 40' containers respectively for the activity of movement of containers from container yard to Railway Flat or vice versa.	
B.	<u>Scale of Rates for storage charges</u> (i). The CHPT has adopted the rates of storage charges prescribed in the existing Scale of Rates CCTL maintaining the free dwell time as obtaining at the CCTL with application of multiplication factor worked out for container handling operation on the ground that the present status of dwell time for various types of containers is not available from CCTL. In this context, the CHPT to clarify / furnish the following:	
	(a). The working sheet furnished by CHPT for calculation of Scale of Rates is with reference to the income arising out of the container handling activity at quay and at the container yard. The multiplication factor of 0.70993 derived by the CHPT is also the ratio between the estimated ARR from container handling activity (90% of total estimated ARR) and the handling income at the CCTL rate for the projected optimal capacity of 3930,770 TEUs. In short, the workings do not take into account either the storage income at the storage rate obtaining at the CCTL or the estimated ARR of Rs.542 millions from storage charges. That being so, the application of multiplication factor on the existing storage rates as obtaining at the CCTL to determine the storage charges for the containers does not appear to be correct.	For calculation of the storage income at the storage, the rate adopted by CCTL has been considered. The data on dwell time of various types of containers (Both import & export) are not available from CCTL which has been explained in the proposal. The storage charges of CCTL in their SoR is based on the dwell time of various containers stored in the container yard and hence reflects the actual position prevailing in the CCTL terminal. The revenue realization is 7% from storage and that from container handling is 90%. Hence, when the present CCTL tariff is accounted to calculate the container handling revenue and to arrive at the multiplication factor the same multiplication factor can be used to arrive at the storage revenue. On this basis, the storage charges of CCTL is moderated by the same multiplication factor to arrive at the SoR for storage. The working sheet has been revised to take into account the coastal containers. As per the details obtained from CCTL, only 20 ft. containers are found in coastal container traffic and this volume has been considered.
	(b). Detailed calculation to show that the revenue at the storage charges proposed in the draft Scale of Rates for different categories of containers would	

	match the ARR of Rs.542 Million estimated from the storage service to be furnished. The percentage of traffic likely to fall in each time slots for each category of containers assumed in the calculation may be indicated explaining the basis for such assumption.	The rates are based on assumption considering the local conditions prevailing.
	(ii). The exchange rate considered for conversion of the dollar denominated storage charges obtaining at the CCTL Scale of Rates in Indian Rupees for prescription of storage charges may be furnished.	The exchange rate for consideration for conversion of the dollar obtained from the CCTL scale of rates is Rs.46.10 per $ (as on 22.1.2010).
C.	<u>Scale of Rates for Miscellaneous Charges</u> The position explained by us in respect of the methodology followed by CHPT for framing Scale of Rates for storage charges is equally true with reference to the Scale of Rates for miscellaneous services proposed by CHPT. The CHPT is, therefore, to furnish a detailed calculation to show that the revenue at the proposed tariff for miscellaneous services proposed to be offered will match the estimated ARR of Rs.232 millions from the miscellaneous services.	As the miscellaneous charges are considered only at 3%, the detailed calculations were not carried out as this type of services are difficult to estimate at this juncture.
D.	<u>Conditionalities</u> The CHPT to include the common conditionalities relating to coastal concession, interest on delayed payments / refunds, etc., as available in the Scale of Rates of other container handling terminals in the major ports.	The following conditionalties are incorporated in the SoR: (a). <u>Coastal Concession</u>: The Cargo/Container related charges for Coastal containers are worked out at 60% of the normal Cargo/Containers related charges. (b). <u>Interest on delayed payments /refunds:</u> (i). The user shall pay penal interest on delayed payments of any charge under this Scale of Rates. Likewise, the operator shall pay penal interest on delayed refunds. (ii). The rate of penal interest will be 14.25% per annum. The penal rate chosen will apply to both the operator and other port-users equally. (iii). The delay in refunds will be counted only 20 days from the date of completion of services or on production of all the documents required from the users, whichever is later. (iv). The delay in payments by the users will be counted only 10 days after the date of raising the bills by the operator. This provision shall, however, not apply to the cases where payment of charges in advance is prescribed in this Scale of Rates.
VII.	**<u>Calculation of berth hire:</u>**	
(i).	Furnish the basis for the average GRT considered for each vessel type taken into account in the calculation for upfront berth hire.	The average GRT is given in Annexure 13-C. [However, the basis for the average GRT is not furnished]

<table>
<tr><td>(ii).</td><td>Confirm that the average parcel size of the vessel assumed in the calculation of upfront berth hire reportedly based on the current trend and the likely technological development in container shipping.</td><td rowspan="2">The details as per the requirements specified in TAMP observation are confirmed.</td></tr>
<tr><td>(iii).</td><td>Confirm that the number of RMQCs deployable is considered at the optimum feasible level.</td></tr>
<tr><td>(iv).</td><td>Workings may be furnished for the number of hours of operations shown in the calculation of berth hire charges.</td><td>[Workings for the number of hours of operation are not available in the working sheet furnished by CHPT]</td></tr>
<tr><td>(v).</td><td>The number of hours of operation for each vessel type has been scaled up by addition of 3 hours for each vessel type for calculation of GRT hours. The reason for addition of 3 hours may be explained with justification. There appears to be errors in deriving the GRT hours for each vessel type, which may be rectified.</td><td>The 3 hours has been added for the time lapse on account of :

(a). Berthing a Vessel in a berth on the commencement of operation

(b).The completion of operation and the re-berthing of the vessel</td></tr>
<tr><td>(vi).</td><td>(a). The CHPT has not proposed berth hire charges for coastal vessels. The port has also not furnished vessels mix under foreign and coastal categories. Please furnish.</td><td rowspan="2">CHPT has furnished draft Scale of Rates including the Scale of Rates for levy of berth hire charges.</td></tr>
<tr><td></td><td>(b). The Authority is mandated by Government direction to prescribe concessional berth hire charges for coastal vessels at 60% of berth hire charges for foreign going vessels.

The existing ARR from berth hire charges is to be realised from handling foreign and coastal vessels. That being so, the concessional rate for coastal vessels should be determined taking into consideration the share of the estimated traffic of coastal vessels and suitable adjustment in the rate for handling foreign cargo.</td></tr>
<tr><td>(vii).</td><td>The draft Scale of Rates furnished by CHPT does not contain Scale of Rates for levy of berth hire charges. The CHPT to include a separate schedule in the draft Scale of Rates for levy of berth hire charges, both for foreign and coastal category. Conditions relating to levy of berth hire charges, as available in the Scale of Rates of other upfront cases for container handling decided by the Authority at JNPT and NMPT should also be included.</td><td>The scale of rate is appended.</td></tr>
</table>

5. A joint hearing in this case was held on 11 January 2010 at the CHPT premises in Chennai. The CHPT made a power point presentation on their proposal and also touched upon the main observations made by the users and potential bidders. At the joint hearing, CHPT and the concerned users / organisation bodies and prospective bidders have made their submissions.

6.1. The CHPT has stated that taking into account all the changes indicated by the CHPT in its response while providing additional information / clarification, the CHPT has furnished revised proposal dated 4 February 2010 after joint hearing for consideration. The modifications noticed in the revised proposal as compared to its original proposal are given below:

(Rs. in Crores)

Sl. No.	Particulars	Original proposal of November 2009	Revised proposal of February 2010
1.	Capacity (in TEUs)	3930770	3930770
2.	Capital Cost	3331.41	3331.11
3.	Operating cost of terminal	466.90	503.00
4.	ROCE at 16%	308.10	308.10
	Revenue Requirement for container handling	**775.00**	**811.00**
5.	Apportionment of Revenue requirement for container handling		
	(a). container handling charges	697.50	729.90
	(b). Ground Rent charges	54.30	56.80
	(c). Miscellaneous charges	23.20	24.30
	Total Revenue Requirement	**775.00**	**811.00**
6.	Correction factor to derive the SOR for standard terminal from the SOR of CCTL	0.70993	0.86405
7.	(a). Operating and maintenance cost including insurance and depreciation of berth	75.642	75.080
	(b). Revenue Requirement from berth hire (i). Operating & maintenance cost (ii). ROCE	 75.642 224.957	 75.080 224.960
		300.599	**300.040**

6.2. Subsequently, the CHPT vide its letters dated 22 February 2010 and 23 February 2010 has modified the calculations relating to estimation of GRT hours for coastal vessels and corrected the arithmetical inconsistencies in grouping of services. In its revised proposal dated 4.2.2010, the CHPT compared the 100% of the ARR, which is the aggregate of handling, storage and miscellaneous charges, with the handling income arrived at the CCTL rates and worked out the correction factor of 0.86405. Only 90% of the ARR is required to be compared with the handling income at CCTL rates. In the further revised proposal dated 23.2.2010 the CHPT has worked out the correction factor of 0.69241 comparing the 90% of the ARR with the handling income estimated by applying the CCTL rates.

7. 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

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

(i). The proposal is for fixation of upfront tariff for container terminal proposed to be developed under PPP mode at the Chennai Port Trust (CHPT).

As per Clause 2.2. of the guidelines for upfront tariff setting for PPP Projects at Major Port Trusts of February 2008, the tariff caps to be prescribed now shall apply to all the projects to be bid out for container handling operations at the CHPT during the next five years. The CHPT has acknowledged this position.

(ii). Subsequent to the joint hearing, the CHPT has made some modifications which are primarily to remove arithmetical inconsistencies in its original proposal dated 12 November 2009 as explained by the port while furnishing additional information / clarifications. The revised calculation furnished by the CHPT alongwith the information / clarifications furnished during the processing of this case is considered in this analysis.

(iii). It has to be recognized that the upfront tariff fixation need not necessarily follow the project parameters but is based on certain pre-decided standards and norms. In JNPT, upfront tariff was set considering a standard terminal configuration for 1000 meters quay length. In this case, the consultants of CHPT had suggested both the options i.e., a standard configuration of 1000 meters and the project specific parameters. The port has chosen to adopt the second option to base the tariff proposal. The reasons adduced by the port for its choice are, however, vague. Nonetheless, it is to be recognized that this project involves not only development of container terminal but also construction of breakwater, the cost of which can only be appropriated artificially to a standard terminal of 1000 meters. Since the breakwater is reportedly designed to cover the terminal of 2000 meters, this analysis takes into account the parameters related thereto.

(iv). The BOT operator is required to bear the cost of construction of two breakwater at an estimated amount of Rs.963.00 crores and recover this cost through the levy of berth hire.

Rates for levy of port dues are already prescribed in the existing Scale of Rates of CHPT which is leviable by the CHPT on all the vessels calling at the CHPT. As the vessels calling at this proposed mega container terminal will be bearing the cost of the new breakwater through berth hire and may not utilize the existing breakwaters of CHPT, there is a case for prescribing a separate port dues leviable by CHPT on these vessels. This issue is, however, relevant while fixing tariff for CHPT. The issue is flagged now so that CHPT should bear in mind this aspect and formulate a suitable proposal at the appropriate time.

(v). The proposal filed by the CHPT generally complies with the guidelines issued for upfront tariff setting vide Notification No. TAMP/52/2007-Misc., dated 26 February 2008. Deviations from the guidelines proposed by the CHPT are, *inter alia*, discussed in the following paragraphs:

(vi). Optimal Terminal Capacity

(a). Optimal quay capacity

Considering 20 quay cranes on the basis of one quay crane for every 100 meters of quay length and applying the norm for the productivity of the quay crane at 25 moves per hour, TEU to box ratio, the number of days of the working in a year as per the norms prescribed in the formula for determination of optimum quay capacity in the upfront guidelines, the CHPT has assessed the quay capacity at 39,85,800 TEUs.

(b). Optimal yard capacity

(i). Ground slots

90 hectares of area is proposed to be reclaimed and allotted to the terminal. The CHPT has clarified that 90 hectares of area for a quay length of 2000 metres conforms to the International standards. This is reportedly based on the requirement of the depth of backup area of around 400 mtrs. per meter of quay length. The CHPT has considered 70 hectares area as stack yard area in the calculation of optimum yard capacity and the balance

20 hectares area is earmarked for auxiliary services like gate complex, administrative building, sub station, utilities, fire fighting etc.

(ii). The upfront tariff guidelines prescribe the norm for ground slots at 720 TEUs per hectare. The CHPT has estimated the optimal yard capacity at 3930770 TEUs taking into consideration the ground slots of 286 TEUs per hectare following the modification considered in the case of JNPT for determination of the yard capacity for its standard container terminal, the upfront tariff of which was decided by this Authority in the year 2009 vide Order dated 25 February 2009.

In the case of upfront tariff fixation for the container terminal at JNPT, though the ground slot was 286 TEUs per hectare was shown in the calculation, it did not influence the result substantially as the quay capacity remained as the limiting factor in that case.

In the case of upfront tariff fixation for the container terminal at New Mangalore Port Trust (NMPT) vide Order dated 30 December 2009, ground slots of 360 TEUs per hectare was considered which was based on the analysis of the NMPT with reference to the area occupied by a container and additional area required for movement of container handling equipment, space between containers etc.,

As the logic put forth by the NMPT that 360 TEUs per hectare can be safely accommodated, same number of ground slots of 360 TEUs per hectare is considered in the instant case also.

(iii). <u>Average Stack Height</u>

The upfront tariff guidelines specify an average stack height of 2.5. The CHPT has proposed the average stack height of 3 and the DP World has insisted to maintain the average stake height at 2.5. To a query posed, the CHPT has sought to clarify that the size of vessels and parcel size of each of vessels anticipated to call at the terminal will be much higher compared to the smaller terminals and the average stack height of 3 is reportedly the practice adopted in international container terminals. Based on the position reported by CHPT the average stack height of 3 is considered. Incidentally, some of the existing container terminals already achieve a stacking height in excess of 3.

(iv). With reference to the deviation in ground slots and average stack height stated above, it is relevant here to mention that Clause 3.2 of the guidelines of February 2008 permits this Authority to make necessary adjustments in the norms based on the justification furnished by the concerned port trust, keeping in view the port specific conditions.

(v). <u>Average dwell time</u>

The upfront tariff guidelines specify average dwell time for export container at 4 days and for import container at 2 days. As per the share of various containers obtaining at CCTL and considered by the CHPT, the import export ratio works out to around 51.40% and 48.60% respectively. In that case, the weighted average dwell time will be around 3.02 as against which the CHPT has considered the average dwell time at 3.

(vi). The yard capacity based on the formula prescribed in the guidelines and subject to the modified norms of ground slots and average stake height, as explained above, the optimum yard capacity works out to 4952769 TEUs as compared to the port's estimates of 3930770 TEUs.

(c). As per the guidelines, optimum capacity of the standard container terminal is considered at 3985800 TEUs per annum being the lower of optimal quay and yard capacities, as against the optimal terminal capacity estimated by CHPT at 3930770 TEUs.

(vii). Capital Cost

The total capital cost of the proposed container terminal is estimated at Rs.3331.11 Crores of which Rs.1405.72 crores is allocable to berthing activity and Rs.1925.39 crores is estimated for container handling services as explained below:

(a). Berthing activity:

Norm for calculation of berth hire has not been specifically incorporated in the guidelines for fixation of upfront tariff for container terminals. This Authority has already recommended to the Government to follow the same methodology prescribed for iron ore, coal, multipurpose cargo and liquid bulk handling berths set out in the guidelines for this category also. As per the guidelines for above said terminals, the capital cost under berthing activity will comprise cost of construction of berth and cost of dredging, if any, carried out alongside the berth as per the estimates by the Port Trust.

The total capital cost for berth hire services is estimated at Rs.1405.72 crores which includes Rs.372.60 crores towards 75% cost of construction of berth, Rs.963.00 Crores towards construction of two break waters, Rs.3.34 Crores towards special establishment charge at 0.25% of the estimated amount of Rs.372.60 Crores and Rs.963.00 Crores towards berth construction cost and breakwater cost respectively. The amount of Rs.1405.72 Crores also includes contingencies estimated at Rs.66.78 Crores at around 5% of the capital cost.

The CHPT has considered 75% of the cost of construction of berth under berthing services and the residual 25% has been considered for container handling facilities. The allocation of the capital expenditure to two different heads made by CHPT is considered as horizontal surface of the berth will be relevant for the container handling activity.

As brought out earlier, the cost of construction of two break waters is to the account of the BOT operator. It is not a general practice to account the breakwater related expenses in berthing activity. More so, the upfront tariff guidelines do not take into account cost of construction of break water for determination of upfront tariff for berth hire. A reference in this regard was made to the Government for advice, if any, on the matter. We have not received the response of the Government till finalization of this case. It is, however, understood that the Government has already cleared the project. Since the expenditure is to be incurred by BOT operator and berth hire is the only vessel related service in this case, there is no other option but to accommodate the breakwater expenses under berth hire.

The estimated ARR from levy of berth hire realizable by the BOT operator, therefore, includes the maintenance as well as return on the estimated capital expenditure of Rs.963 crores on construction of two break waters. The CHPT has reported that it has the right to develop any non competing facilities without affecting the maneuverability to handle cargo on both the break waters. In that case, the benefit of the two break waters will also accrue to the vessel calling at the new facility in future; and, such benefits will be without any additional investment relating to that facility.

If some other facility comes up at a later stage within the new breakwater, then the berth hire fixed for the mega container terminal needs to be reviewed, as it accounts for the entire cost of breakwater. The tariff for the new facility should be set duly factoring the allocable cost of breakwater and the berth hire for the mega container terminal will be revised keeping the Annual Revenue Requirement from Berthing as assessed now, unaltered. This will warrant the CHPT putting in place a proper mechanism for reimbursing the allocable cost by the operator of the new facility to the operator of the mega container terminal. CHPT may ensure inclusion of a proper condition in the License Agreement for mega container terminal for review of the berth hire rates at a later date and also condition in the Licensing for the new facility within the breakwater in reference, if and when developed.

(b). Container handling activity:

(i). The estimated civil cost for container handling facilities includes the estimates for providing road facilities, railway facilities and other infrastructure facilities on lump sum basis. The port was asked to furnish documentary proof to support the estimates. However, no proof has been furnished. The port has confirmed that the lump sum provision reflects the market condition prevailed in 2009. The lump sum provisions as estimated by the CHPT are relied upon, as specified in the Guidelines.

With reference to the other capital cost of civil works like construction of berth, reclamation, hardening the reclaimed area, providing other infrastructure facilities, the DP World has expressed reservation about the inadequacy on some items like cost of detailed design and survey, cost of supervision, hardening of reclaimed area and cost of other infrastructure facilities, etc. The CHPT has relied upon the estimates of IIT-Madras which is reportedly based on the design and detailed project report prepared by them. The guidelines stipulates that the civil cost will be as estimated by the concerned port trust. The estimates of civil cost as estimated by the CHPT are considered in this excercise.

(ii). The number of quay cranes, reach stackers and tractor trailers considered by the CHPT are in line with the normative level of equipment prescribed in the guidelines.

The norm prescribes three RTGCs for each quay crane. That being so, the required number of RTGCs will be 60 for 20 quay cranes whereas the CHPT has considered 50 RTGS. Some bidders have also pointed out this position. The estimates are reportedly broadly based on the experience IIT-Madras during its association with the port projects like the second container terminal at CHPT and the multipurpose berth at Ennore Port.

The normative level of equipment for a standard container terminal includes RMGCs. Based on the position obtaining at the existing container terminals at CHPT, where RMGCs are not used, the CHPT has not envisaged RMGCs for the proposed container terminal.

The position reported by CHPT with regard to the RTGCs and RMGCs is considered.

The CHPT has made a provision towards cost of workshop equipment for servicing of handling equipment. The proposed lump sum of Rs.3.75 Crores considered in the estimate by CHPT for workshop equipment is not supported by documentary proof, though the port was requested to produce the budgetary quotation. Further, the norms prescribed in upfront tariff guidelines do not provide for workshop equipment. In the upfront tariff cases for container handling at the TPT, JNPT and NMPT, no cost towards such equipments were considered separately. As such, this item is excluded from the equipment cost estimation.

The estimated capital cost for equipment includes special establishment charge at 0.25% and contingencies at about 5%.

The DP World has reservations on the unit rate of equipment considered by the CHPT in the estimates. Though, the CHPT could not provide documentary proof in support of unit rates, the estimates are drawn up based on the experience of IIT-Madras during its association with other port projects like the second container terminal at CHPT for quay cranes, RTG etc., and the multipurpose berth at Ennore Port. The port has confirmed that it has scrutinized the unit rates and it has found the unit rates valid as at the end of year 2009. It has further confirmed that the estimates include applicable taxes and levies.

The unit cost of quay cranes at Rs.30.00 Crores, RTGCs at Rs.8.00 Crores and reach stackers at Rs.2.00 Crores considered by the CHPT if seen along with the contingencies (5%) and special establishment charge (0.25%) compares well with the unit cost of quay cranes at Rs.32.50 Crores, unit cost of RTGCs at Rs.8.65 Crores and unit cost of reach stackers at Rs.2.41 Crores considered in the estimation of equipment cost for the standard container terminal at the NMPT which was decided by this Authority recently in December 2009 vide Order dated 30 December 2009.

(c). <u>IT System Cost and Other Cost</u>

The capital cost for IT systems is estimated at 2% of the sum of the civil cost and container handling equipment cost which is as per the norms prescribed in the guidelines.

With respect to capital cost of other items, the consortium of VOTL & EPTL has suggested to make a provision at 30% of the capital cost. As pointed out by the CHPT, the provision of 10% for other items is as per the norm prescribed in the guidelines. The capital cost for other items is estimated at 10% of the sum of the civil cost and container handling equipment cost.

(d). Based on the above analysis, the aggregate capital cost works out to Rs.3326.68 crores as against Rs.3331.11 crores estimated by the CHPT.

(viii). The CHPT has calculated the return on capital employed at 16% of the estimated capital cost. The bidders have observed that 16% is quite low and stressed the need to enhance the ROCE upto 20% to make the project attractive and bankable. It is relevant here to mention that the rate of ROCE was reviewed by this Authority and it was decided to adopt ROCE at 16% for the year 2009-10 to determine tariff for major ports and private terminals. Hence, the Return on Capital Employed at 16% on the modified capital cost is worked out and the ROCE for container handling service works out to Rs.307.35 crores. The ROCE for berth hire service works out to Rs.224.92 crores.

(ix). <u>Operating Cost</u>:

A mention has been made by the CHPT in its letter dated 15 December 2009 that for estimation of operating cost the rates reportedly approved by this Authority for the second container terminal. If the CHPT refers to the second container terminal at CHPT, namely the Chennai International Terminals Private Limited (CITPL), it may be made clear that this Authority has not accorded approval for the operating cost at the CITPL. The estimation of operating cost for the MCT is discussed in the following paragraphs:

(a). The CHPT has estimated the power cost at the consumption rate of 8 KWH per TEU as per the norm.

(b). Consumption of fuel is considered at 4 litres per TEU as per the consumption norm prescribed in the guidelines. The unit cost of fuel considered by CHPT at Rs.36.00 per litre is modified to Rs.34.98 per litre to reflect the market rate prevailing at Chennai.

(c). As per the norms, repairs and maintenance cost is estimated at 1% on the civil assets and 2% on the modified capital cost of mechanical & electrical equipment and modified IT system cost.

The insurance cost is estimated at 1% of the modified sum total gross capital cost of civil, equipment and IT system cost.

(d). Depreciation, as per the guidelines, should be calculated following the depreciation rates for Straight Line Method (SLM) prescribed in the Companies Act, 1956. Depreciation is computed @ 3.34% on civil cost and 10.34% on container handling equipment cost and 16.21% for IT systems as per the rates prescribed in the Companies Act under the SLM for the relevant group of assets.

While calculating depreciation, the other assets at 10% as prescribed in the guideline are duly taken proportionately under civil, equipment cost and IT system cost and depreciated.

(e). Lease rental is estimated for a total area of 9 lakh sq. mtrs. of land to be reclaimed including 2 lakh sq. mtrs. proposed to be allotted by the port for auxiliary services.

The guidelines stipulate the lease rental to be considered as per the rates prescribed in the Scale of Rates of the concerned Major Port Trust. A rate of Rs.2000 / 100 sq. mtr. / month is prescribed which is applicable for levy of licence fee for open space. The port has considered the base rate of Rs. 2000 fixed in the year 2000 and applied the year on year escalation factor of 5% per annum up to March 2004 and thereafter the year on year escalation has been considered at 2% as per the land policy guidelines of March 2004 issued by the Government and arrived adopted a rate of

Rs.2606 / 100 sq. mtr. / per month. The CHPT has furnished a detailed workings for the same.

(f). The total operating cost based on the above analysis works out to Rs.500.87 crores as against Rs. 502.84 crores estimated by the CHPT for container handling service.

(x). For estimating the operating cost for berth hire service, the CHPT has considered maintenance cost and insurance cost each at 1% and 3.34% of the capital cost of berth hire services.

As mentioned earlier, the norms for determination of capital & operating cost for berthing activity are not incorporated in the guidelines for fixation of upfront tariff for the services rendered at the container terminal. The matter has already been referred to the Government and the response of Government is awaited. The guidelines prescribed for other terminals for calculation of berth hire can be applied in this case also as done in the upfront tariff fixation of Container Terminals at JNPT and NMPT.

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 asset will depreciate due to wear and tear also cannot be denied. While fixing upfront berth hire, this position was recognized and the cost of insurance and depreciation were considered to assess the Annual Revenue Requirement from berthing service with reference to upfront tariff fixation of other Major Port Trusts including the proposed Container Terminals at JNPT and NMPT.

In view of the position explained above, 1% of the capital cost towards maintenance, the element of insurance cost at 1% and depreciation at 3.34% of the capital cost are considered while estimating the operating cost for assessment of the revenue requirement from berth hire service.

The total operating cost for berthing service based on the above analysis works out to Rs.46.96 crores as estimated by the CHPT for berthing services.

(xi). The statement for fixing upfront tariff cap for container terminal in line with the above analysis is attached as **Annex - I**.

(a). The total revenue requirement for the container handling activity works out to Rs.808.22 crores which is an aggregate of 16% Return on a capital cost (i.e. Rs.307.35 crores) and operating cost (Rs.500.87 crores).

(b). The guidelines require 90% of the total revenue requirement to be apportioned to handling charge, 7% towards storage charge and 3% towards miscellaneous charge.

Accordingly, Rs.727.40 crores is to be realised from container handling charges, Rs.56.58 crores from storage charge and Rs. 24.25 crores from miscellaneous charges to meet the total revenue requirement of Rs.808.22 crores.

(xii). The guidelines do not prescribe any specific methodology for deriving unit rates in the Scale of Rates for different services from the revenue requirement. The container handling charges include tariff items for various services and further the rates differ based on the type and size of containers.

(xiii). The Scale of Rates for upfront tariff is, therefore, to be drawn up by iteration taking the tariff structure and the pattern of various services offered by other similar functioning terminal as the base so as to achieve the normative annual revenue requirement. The same approach was adopted while setting upfront tariff for container handling at Tuticorin Port Trust, Jawaharlal Nehru Port Trust and New Mangalore Port Trust.

(xiv). (a). The CHPT has drawn up the Scale of Rates based on the tariff structure in the existing Scale of Rates of the CCTL. The itemized rates prescribed in the existing Scale of Rates of CCTL have been grouped to arrive at the composite rate for handling normal & reefer containers, hazardous & ODCs, empty containers, transhipment containers and restows.

(b). Taking into consideration the container mix pattern obtaining at the CCTL, the port has proposed the container mix for the optimal capacity of the container terminal. Accordingly, applying the composite rates arrived at as explained in the previous paragraph, the CHPT has estimated the revenue for the optimal capacity. In the process, the CHPT has considered a volume of 0.90% and 0.70% of 20' and 40' loaded boxes of the optimal capacity as additional volume based on assumption and estimated an amount of around Rs.2.43 Crores as additional income for the purpose of assessing the revenue at CCTL rate for the optimal capacity of the terminal. The additional income is not considered as no separate tariff for this service is to be prescribed.

The revenue at the existing CCTL rates for the revised optimal capacity of 3985800 TEUs works out to Rs.1067.32 Crores as compared to Rs.1054.09 Crores estimated by the CHPT for the optimal capacity of 3930770 TEUs as proposed by them.

As brought out earlier, the ARR for the revised optimal capacity of 3985800 TEUs works out to Rs. 808.22 Crores for container handling services out of which a sum of Rs.727.40 Crores is required to be met from the levy of container handling charges. Comparing the estimated revenue of Rs.1067.32 Crores and the corresponding ARR of Rs.727.40 Crores, the ratio between these two sums works out to 0.68152. That being so, as per the methodology proposed by the CHPT, the composite rates arrived at by the CHPT requires to be adjusted by applying the factor of 0.68152. Incidentally, CHPT has proposed a correction factor of 0.69241.

(xv). In the container mix pattern proposed by CHPT on the lines of container mix obtaining at CCTL, the CHPT has considered empties only in the category of normal containers. No empties in the category of transhipment containers has been considered by CHPT. However, while prescribing a single rate for loaded and empty transhipment containers cargo wharfage as per the existing rate of CCTL has also been included. Since cargo wharfage is not relevant for empty transhipment containers, the proposed rate for empty transhipment is suitably modified by excluding the cargo wharfage.

(xvi). As stated earlier, the CHPT has proposed composite handling rates for all categories of containers. In the process, the composite rate of hazardous and over dimensional containers is worked at 1.25 times of the rate that is applicable for normal containers. However, 25% premium is not considered by CHPT on the wharfage element in line with the position obtaining at CCTL. At CCTL, 25% premium is applicable on handling charges only. In view of this position, the composite rates prescribed in the Scale of Rates for hazardous and ODCs will not exactly reflect 1.25 times of the composite rates of normal containers.

(xvii). (a). The upfront tariff guidelines prescribe norms for dwell time of containers at 4 days for export and 2 days for import. The CHPT has proposed free days at higher level at 4 free days for export laden & empty containers and 3 free days for import laden & empty containers. The BOT operator may not be able to achieve the estimated ARR from storage charges if more number of free days is prescribed than the dwell time as per norms. Therefore, the free dwell time for export laden & empty containers is modified to 3 days and the free dwell time for import laden & empty containers is prescribed at 2 days in line with the prescription made in the upfront tariff cases of container terminals at TPT, JNPT and NMPT. The dwell time proposed in the immediate succeeding slab is modified suitably.

(b). The CHPT has proposed free dwell time of 10 days for ICD loaded and empty containers, 30 days for transhipment containers, 15 days for shut out containers and 3 days in respect of change of status of containers to local delivery. The proposed free dwell time of the said category of containers is in line with the position obtaining at the CCTL.

(c). For deriving the unit rate of storage charge to meet the estimated revenue requirement of Rs.56.58 Crores, the CHPT has considered the multiplication factor of 0.69241 worked out for container handling operation on the ground that the present status of dwell time for various type of container is not available from the CCTL. In this connection, the DP World has termed the approach adopted by the CHPT as arbitrary. DP World which operates CCTL at CHPT could have furnished an alternate analysis based on the factual position which would have perhaps helped in considering its objection in an objective manner. The conversion factor as arrived at for determination of handling activity is considered for deriving the storage charges of the various category of containers.

(xviii). Miscellaneous charges are proposed to be recovered through services provided for fixing of seal, lift on / lift off in the CY, charges for shifting the containers with in the terminal, etc. The CHPT has applied the conversion factor derived to prescribe the container handling charges for proposing the miscellaneous charges. The port has not furnished any other working to show that the proposed rates will meet the estimated revenue requirement through levy of miscellaneous charges. Recognising that miscellaneous services constitute 3% of the total revenue requirement as per the norms prescribed and that they are not substantive services, the existing tariff prescribed in the Scale of Rates of CCTL are reduced by applying the conversion factor of 0.68152 which is required to maintain the normative level of revenue requirement.

(xix). It may be noteworthy that some of the container related tariff items and berth hire for foreign going vessels are prescribed in dollar terms in a few existing terminals. It has already been decided in other upfront tariff cases that prescribing dollar denominated tariff is not appropriate in the upfront tariff cases which will have a validity of 30 years. Firstly, applying a WPI based escalation on a foreign currency is not correct. Secondly, the foreign exchange variation over the next 30 year can not be predicted. In case of any abnormal variations, either the users or the operator will have to bear the incidence, depending on which side the appreciation takes place. This Authority has, therefore, prescribed the upfront berth hire which is normally prescribed in dollar terms in rupee denomination. Following from this decision, all container related tariff and berth hire in this case also are prescribed in rupee terms.

(xx). The total ARR for the berthing services works out to Rs.299.99 Crore which is the aggregate of 16% return on capital cost (Rs.224.92 Crores) and operating cost (Rs.75.07 Crores).

(xxi). For the purpose of deriving the unit rate of berth hire from the estimated ARR from this activity, the CHPT has assumed six groups of vessels according to LOA. The percentage of volume of TEUs that will be carried by vessels of various sizes is based on the assumption of CHPT. The average parcel size for each category of vessel is estimated reportedly based on the current trend prevailing at the CCTL. The assumption made by the CHPT about the various categories of vessels, percentage of volume of TEUs that will be carried by vessels of various sizes and the average size of each category of vessel are relied upon.

(xxii). In response to a point raised by the consortium of VOTL & EPTL regarding number of moves of the quay crane in calculation of berth hire charges, though the CHPT has stated that it has considered 0.9 times of 25 moves, the number of hours of vessel stay at berth furnished by CHPT show that the port has derived the number of hours of vessel stay taking into account 25 boxes per hour adjusting the number of boxes by applying the TEU ratio of 1.3 to derive the moves in terms of TEUs and considering the optimum performance of the quay crane level at 70%, which works out to 22.75 moves per crane per hour, and; accordingly, the number of hour of vessel stay has been calculated for each vessel type.

The number of hour of vessel stay thus arrived at has been scaled up by addition of 3 hours for each vessel type for calculation of GRT hours to account for the time involved in berth and unberthing of the vessel. Since optimal working of 70% is already cosidered, the additional 3 hours has not been considered by us for calculation of number of hours of vessel stay at berth. In any case, no berth hire will accrue to the operator for the time of berthing / unberthing.

(xxiii). The details of share of various containers obtaining at CCTL and furnished by CHPT indicates the share of coastal container at 4.20% of only loaded 20' container. However, the CHPT considered the coastal container in absolute terms (20515 TEUs) as reportedly obtaining at the CCTL instead of 4.20% of the share of the 20' loaded containers in the total optimal capacity of the terminal. When this discrepancy was pointed out, the CHPT vide its communication dated 22 February 2009 considered the coastal volume at 4.20% of the optimal capacity of the terminal, which does not fit into the approach adopted by the CHPT for determination of volume of coastal containers as per the position obtaining at CCTL. Therefore, the coastal volume is taken at 4.20% of the share of the 20' loaded container (97295 TEUs) in the updated optimum capacity of the terminal. The unit rate of berth hire will be Rs.2.25 per GRT per hour in case of foreign going vessels and Rs.1.35 per GRT per hour in case of coastal vessels. Calculation of berth hire charge is attached as **Annex - II**.

(xxiv). Definition of some of the common terms like foreign going vessel, coastal vessel, day and week are included in upfront schedule in line with the definitions prescribed in the Scale of Rates of CHPT and other private terminals operating at the major ports.

(xxv). The conditionalities governing the levy of berth hire has been proposed as per the provision prescribed in the Scale of Rates of CHPT.

However, the rates and conditions for granting ousting priority berthing / priority berthing are not proposed. The rates and conditions for 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 CHPT.

(xxvi). Recognising that conditionalities fixed now would be 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.

(xxvii). Some of the proposed provisions which are not in line with the common prescription at other major ports / private terminals and the provisions of the revised tariff guidelines have been either been deleted or modified.

9.1. 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.

9.2. 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.

9.3. 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.

9.4. 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.

9.5. 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 Chennai Port Trust. If any action is to be taken against the private operator, the Chennai Port Trust shall initiate appropriate action in accordance with the provisions of the relevant Concession Agreement.

9.6. 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 Chennai Port Trust a report containing the terminal's physical and financial performance during the preceding three months.

10. In the result, and for the reasons given above, and based on a collective application of mind, this Authority approves the upfront tariff caps for the container terminal at Chennai Port Trust attached as **Annex - III**.

(Rani Jadhav)
Chairperson

CALCULATION OF UPFRONT TARIFF FOR CONTAINER TERMINAL AT CHENNAI PORT TRUST

Rs. in crores

Sr. No.	Particulars	Norms prescribed in the guidelines	Calculation furnished by CHPT	Estimates by CHPT in tis original proposal dated 12.11.2009	Estimates by CHPT in its revised proposal dated 4.2.2010	Estimates by CHPT as per its revised proposal dated 23.02.2010	Estimates modified by TAMP
I	**Optimal Capacity**						
(i).	**Optimal Quay Capacity**						
	A=Number of gantry developed for	=Berth Length/100	=2000/100	20	20.00	20.00	20.00
	B=Number of working hours of gantry crnes in an year.	=24*365 hours	=24*365 hours	8760.00	8760.00	8760.00	8760.00
	C=Average number of moves per	=25 moves per hour	=25 moves per	25.00	25.00	25.00	25.00
	D=TUE ratio	=1.3	1.3	1.30	1.30	1.30	1.30
	E=70%	=70%	70%	0.70	0.70	0.70	0.70
	Optimal quay capacity=A*B*C*D*E TEUs			**3985800.00**	**3985800.00**	3985800.00	**3985800.00**
(ii).	**Optimal yard capacity**						
	G=Total ground slot in TEUs	=720 TEUs per Hectare	The 286 TEUs per Hectare	20000	20000	20000.00	25200
	H=Average stack height	=2.50	=3.00	3	3	3.00	3
	P=Period or number of days	=365	=365	365	365	365.00	365
	S=surge factor	=1.3	=1.3	1.3	1.3	1.30	1.3
	D=Average dwell time	=4 days for export & 2 days for import	=(4*50%+(2*50 %*)	3	3	3.00	3
	Optimal yard capacity=0.7*G*H*P/S*D in TEUs			**3930769.23**	**3930769.23**	**3930769.23**	**4952769**
(iii).	**Optimal capacity of the terminal- lower value of the**			**3930770.00**	**3930770.00**	**3930770.00**	**3985800.00**
II	**Capital Cost**						
(i).	**Berth Hire Service**	**Norms wherever prescribed**		**Rs. in crores**	**Rs. in crores**	**Rs. in crores**	**Rs. in crores**
	(a). Civil cost	As estimated by Port Trust					
	(i). Construction of berth with diaphragm wall 2000 x 30 mtr			372.60	372.60	372.60	372.60
	(ii). Construction of break water			963.00	963.00	963.00	963.00
	(iii) Special establishment charge (0.25%)			3.60	3.34	3.34	3.34
	(iv) Contingencies 5%			66.80	66.78	66.78	66.78
	Total Cost for Berth Hire Services			**1406.00**	**1405.72**	**1405.72**	**1405.72**
(ii).	**Container Handling facilties**						
	(a). Civil Cost	As estimated by Port Trust					
	(i). Construction of berth with diaphragm wall 2000 x 30 mtr (25%)			124.20	124.20	124.20	124.20
	(ii). Reclamation behind diaphragm wall (0.9 million m^2 x 12 mtr)			124.20	124.20	124.20	124.20
	(iii). Hardening the reclaimed area 0.9 million m2			207.00	207.00	207.00	207.00
	(iv). Providing road facilities			11.50	11.50	11.50	11.50
	(v). Providing railway facilities			23.00	23.00	23.00	23.00
	(vi). Providing other infrastructure including IT facilities, canteen, workshop, sub-station, fire fighting, utility, customs, admin. Buildings,			57.50	57.50	57.50	57.50

Sr. No.	Particulars	Norms prescribed in the guidelines	Calculation furnished by CHPT	Estimates by CHPT in tis original proposal dated 12.11.2009	Estimates by CHPT in its revised proposal dated 4.2.2010	Estimates by CHPT as per its revised proposal dated 23.02.2010	Estimates modified by TAMP
	(vii). Providing electrification and water supply arrangements			23.00	23.00	23.00	23.00
	(viii). Special establishment charge (0.25%)			1.10	1.43	1.43	1.43
	(ix). Contingencies 5%			28.50	28.17	28.17	28.17
	Subtotal (a)			**600.00**	**600.00**	**600.00**	**600.00**
	(b). Container Handling						
	(i). Quay gantry Crane	1no. For 100 metres berth length	20	600	600	600	600
	(ii). Rubber Tyred Gantry Crane	3nos. For each Quay Gantry crane	2.5 for each	400	400	400	400
	(iii). Reach Stacker/ Top Lift Truck	1no. For 9 RTG's	1no. For 9 RTG's (Approx.)	12.00	12.00	12.00	12.00
	(iv). Tractor Trailers	6nos. For each Quay Gantry Crane	6nos. For each Quay Gantry Crane	48.00	48.00	48.00	48.00
	(v) Workshop equipment	No norm	Lumpsum	3.75	3.75	3.75	
	(vi) Special establishment charge (0.25%)	-	Lumpsum	2.61	2.66	2.66	2.65
	(vii) Contigencies 5%	-	Lumpsum	52.75	52.69	52.69	52.50
	Subtotal (b)			**1119.12**	**1119.10**	**1119.10**	**1115.15**
	Subtotal (a+b)			**1719.12**	**1719.10**	**1719.10**	**1715.15**
	(c). IT system cost	2% Civil & Equipment Cost	2% of Civil and Equipment Cost	**34.38**	**34.38**	**34.38**	**34.30**
	(d). Other cost	10% Civil & Equipment Cost	10% Civil & Equipment Cost	**171.91**	**171.91**	**171.91**	**171.51**
	(e). Total capital cost for container handling service			**1925.41**	**1925.39**	**1925.39**	**1920.96**
	Total Capital cost of the Project (i) + (ii)			**3331.41**	**3331.11**	**3331.11**	**3326.68**
III	**Operating Cost Estimation**						
		Norms		**Rs. in crores**	**Rs. in crores**	**Rs. in crores**	**Rs. in crores**
	(a). Power Cost	8KWH per TEU* Prevailing unit rate	8KWH*Rs 6.00 per unit.	18.87	18.87	18.87	19.13
	(b). Fuel	4 Litres per TEU* Prevailing unit rate	4 Litres *Rs 36 per Lts	56.60	56.60	56.60	55.77
	(c). Repair & Maintenance						
	- Civil Assets	1% of Civil assets	1% of Civil assets	6.00	6.60	6.60	6.60
	Mechanical and electrical equipment	2% of Cost of mechanical and electrical equipments	2% of Cost of mechanical and electrical equipments	22.38	24.62	24.62	24.53
	IT equipment		2% of Cost of IT	0.76	0.76	0.76	0.75
	(d). Insurance	1% of Gross fixed assets	1% of Gross fixed assets	17.50	19.25	19.25	19.21

Sr. No.	Particulars	Norms prescribed in the guidelines	Calculation furnished by CHPT	Estimates by CHPT in tis original proposal dated 12.11.2009	Estimates by CHPT in its revised proposal dated 4.2.2010	Estimates by CHPT as per its revised proposal dated 23.02.2010	Estimates modified by TAMP
	(e). Depreciation	As per Companies Act	As per Companies Act	141.30	155.46	155.46	154.63

Sr. No.	Particulars	Norms prescribed in the guidelines	Calculation furnished by CHPT	Estimates by CHPT in tis original proposal dated 12.11.2009	Estimates by CHPT in its revised proposal dated 4.2.2010	Estimates by CHPT as per its revised proposal dated 23.02.2010	Estimates modified by TAMP
	(f). Licence Fee	As per the rates prescribed in the Scale of Rates of the concerned Port Trusts	Rs. 2606/100 sqmt/ per month for 90,0000 sqmtrs.	28.10	28.14	28.14	28.14
	(g). Other Expenses (for terminals having less than 0.5 million TEUs)	10% of Gross fixed assets value	10% of Gross fixed assets	192.54	192.54	192.54	192.10
	Total operating cost (a to g)			**484.05**	**502.84**	**502.84**	**500.87**
IV	**Annual Revenue Requirement ARR**						
(i).	**Container Handling Services**						
	(a). Total operating cost			484.05	502.84	502.84	500.87
	(b). Return on Capital Employed @ 16%			308.07	308.06	308.06	307.35
	(c). Total Revenue requirment			**792.11**	**810.90**	**810.90**	**808.22**
	Apportionment of Revenue Requirement						
	(a). Container Handling Charges	90%	90%	712.90	729.81	729.81	727.40
	(b). Storage Charges	7%	7%	55.45	56.76	56.76	56.58
	(c). Miscelleneous Charges	3%	3%	23.76	24.33	24.33	24.25
	(d). Total Revenue requirement		100%	792.11	810.90	810.90	808.22
(ii).	**Berth hire**			(in crores)	(in crores)	(in crores)	(in crores)
	(a). Operating cost						
	(i). Maintenance Cost	1% of Capital Cost	1% of Capital	14.06	14.06	14.06	14.06
	(ii).Insurance cost	1% of Capital Cost	1% of Capital	14.06	14.06	14.06	14.06
	(iii). Depreciation	3.34% of Capital cost	3.38% of Capital cost	47.52	46.96	46.96	46.96
	Total Operating Cost for berth hire service			**75.64**	**75.07**	**75.07**	**75.07**
	(b). Revenue requirement from berthing service						
	(i). Operating cost			75.64	75.07	75.07	75.07
	(ii). ROCE at 16%			224.96	224.92	224.92	224.92
	Total Revenue requirement			**300.60**	**299.99**	**299.99**	**299.99**

CALCULATION OF BERTH HIRE CHARGES

Annex-II

I Estimation of Container Volume and GRT Hours								
Vessel Type Length in Mtrs. (1)	Percentage of Volume (2)	Container Volume in TEUs (3)	Average GRT per vessel (4)	Average parcel Size in TEUs (5)	No. of Vessels p.a. (6)	Avg. No. of Cranes to be deployed (7)	No. of hrs. Vessel's stay at berth (8)	GRT Hours (9)
(Given by CHPT)	(Given by CHPT)	(As per Col.2)	(Given by CHPT)	(Given by CHPT)	(Col.3 / Col.5)	(Given by CHPT)	(Col.5) / (Col.7*25* 1.3*0.7)	(Col.4*Col.6* Col.8)
<100	5.00%	**199290**	3000	500	**399**	2	10.99	**13155030**
100-150	10.00%	**398580**	7500	1000	**399**	2	21.98	**65775150**
150-200	40.00%	**1594320**	20000	1500	**1063**	3	21.98	**467294800**
200-250	25.00%	**996450**	28000	2000	**498**	4	21.98	**306489120**
250-300	15.00%	**597870**	54000	3000	**199**	4	32.97	**354295620**
>300	5.00%	**199290**	75000	4000	**50**	5	35.16	**131850000**
	100.00%	**3985800**			**2608**	**Total GRT Hours**		**1338859720**

II - Estimation of Container Volume and GRT Hours for Coastal Vessels								
Vessel Type Length in Mtrs. (1)	Percentage of Volume (2)	Container Volume in TEUs (3)	Average GRT per vessel (4)	Average parcel Size in TEUs (5)	No. of Vessels p.a. (6)	Avg. No. of Cranes to be deployed (7)	No. of Hours of Operation (8)	GRT Hours (9)
(Given by CHPT)	(Given by CHPT)	(As per Col.2)	(Given by CHPT)	(Given by CHPT)	(Col.3 / Col.5)	(Given by CHPT)	(Col.5) / (Col.7*25* 1.3*0.7)	(Col.4*Col.6* Col.8)
<100	33.33%	**32432**	3000	500	**65**	2	10.99	**2143050**
100-150	66.67%	**64863**	7500	1000	**65**	2	21.98	**10715250**
Total	100.00%	**97295**			**130**			**12858300**

III GRT Hours for Foreign Vessels (I - II)	**1326001420**

IV Estimation of Berth Hire Charges			
Sl. No.	**Particulars**	**Unit**	**Value**
(1)	Total Revenue Requiment (See Cost Statement)	Rs. in crores	299.99
(2)	Total GRT Hours of Foreign Vessels (See Table 1 below)	Hrs.	1326001420
(3)	Total GRT Hours of Coastal Vessels (See Table 2 below)	Hrs.	12858300
(4)	Total Equivalent GRT Hours for Foreign & Coastal Vessels [(2) + 60% of (3)]	Hrs.	1333716400
(5)	Berth Hire Charges per GRT per Hour for Foreign Vessels [(1) / (4)]	Rs.	2.24927878
	Rounded off to	**Rs.**	**2.25**
(6)	Berth Hire Charges per GRT per Hour for Coastal Vessels [0.6 x (5)]	Rs.	1.34956727
	Rounded off to	**Rs.**	**1.35**

Annex-III

Chennai Port Trust

Upfront Tariff Charges for Container Handling

CHAPTER I

Definitions and General Terms & Conditions

1.1 Definitions

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 terminal or place in India to any other Port or place in India having a valid coastal license issued by the competent authority.

(ii). `Container' shall mean the standard ISO container, suitable for the transport and stacking of cargo and must be capable of being handled as a unit and lifted by a crane with a container spreader.

(iii). `Demurrage' shall mean charges payable for storage of cargo in transit area within the terminal premises beyond free period, as specified in the Scale of Rates.

(iv). `Foreign Going Vessel' shall mean any vessel other than a coastal vessel.

(v). `Free period' shall mean the period during which cargo/container is allowed storage free of demurrage charges/ground rent and this period shall exclude Customs notified holidays and terminal's non-operating days.

(vi). `Hazardous container' shall mean a container containing hazardous goods as classified under International Maritime Organization (IMO).

(vii). `ICD' shall mean Inland Container Depot'

(viii). `Over Dimensional Container' shall mean a container carrying over dimensional cargo beyond the normal size of standard containers and needing special devices like slings, shackles, lifting beam etc. Damaged Containers (including boxes having corner casting problem) and Container requiring special devices for lifting is also classified as Over Dimensional Container.

(ix). `Port' shall mean Chennai Port Trust

(x). `Per day' shall mean a calendar day or part thereof.

(xi). `Reefer Container' shall mean a refrigerated container used for carriage of goods with provisions for electrical supply to maintain the desired temperature.

(xii). `Shut Out Container' shall mean a container, which enters into the terminal as export intake for a particular vessel as indicated by the Vessel Identification Advice No. (VIAN) Container Advance Information List (COPRAR) and is not shipped into the particular vessel for reasons whatsoever.

(xiii). `Transshipment container' shall mean any container, which is discharged from one vessel stored in the container terminal and shipped through another vessel for other port.

1.2 General Terms and 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 its classification as `coastal' or `foreign going' 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 Flag can convert to coastal run on the basis of a Coastal Voyage License issued by the Director General of Shipping

(c). In cases of such conversion, coastal rates shall be chargeable by the load terminal 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 terminals.

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

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

(iv). No claims for refund shall be entertained unless the amount refundable is Rs.100/- or more. Likewise, Terminal Operator shall not raise any supplementary or under charges bills, if the amount due to Terminal is Rs.100/- or less.

(v). Containers less than and upto 20' in length will be reckoned as one TEU for the purpose of tariff.

(vi). Users shall not be required to pay charges for delays beyond a reasonable level attributable to the terminal.

(vii). (a). The rates prescribed in this Scale of Rates are ceiling levels; likewise, rebates and discounts are floor levels. The Terminal Operator may, if it so desire, charge lower rates and/or allow higher rebates and discounts.

(b). The Terminal Operator may also, if it so desire, rationalize the prescribed conditionality governing the application of rates prescribed in the Scale of Rates if such rationalization 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. Provided that the Terminal should notify the public such lower rates and/or rationalization of the conditionality governing the application of such rates and continue to notify the public any further changes in such lower rates and/or in the conditionality governing the application of such rates provided the new rates shall not exceed the rates notified.

(viii). Interest on delayed payment/refunds:

(a). The user shall pay penal interest on delayed payments of any charge under his 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 State Bank of India (SBI). The penal interest rate will apply to both the Terminal Operator and other port users equally.

(c). The delay in refunds will be counted only 20 days from the date 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 of charges in advance is prescribed in this Scale of Rates.

Chapter - II

Charges for Berth Hire

The berth hire charges for the vessels calling at Mega Container Terminal are as per the rates given below and subject to conditionalities given thereunder:-

GRT	Rate per hour or part thereof	
	Foreign going Vessel (in Rs.)	Coastal vessel (in Rs.)
Any volume of GRT	2.25 per GRT	1.35 per GRT

(1) All vessels of war flying the white ensign in the service of the Republic of India but including in times of war, mine sweepers and patrol vessels shall be exempted from the payment of berth hire charges when they occupy berth for a period not exceeding one month in any case and for a period exceeding one month if there are other moorings available for ordinary steamers, but becomes liable for payment of Berth Hire Charges when they occupy alongside berths. All other vessels belonging to the Central Government or State Government shall pay Berth Hire Charges as per the rates specified in the schedule above.

(2) A vessel after completion of discharge or loading or ballasting shall call for the Pilot for sailing within 4 Hours (or within such extension granted by the Consessionaire in writing for stated reasons). If the vessel do not call for the Pilot for sailing within the period of 4 Hours after completion of discharge or loading or ballasting or within such extension granted by the Concessionaire or officials authorized by him, the vessel shall pay Additional Berth Hire Charges at the rate of Rs 9511.58 per hour or part thereof for Coastal vessel and Rs. 158526 per hour or part thereof for Foreign going vessels for the period from the time of expiry of four hours or such extended time granted by Concessionaire or officials authorized by him till the time of calling the Pilot.

(3) The Additional Berth Hire Charges specified in Note 2 shall not be charged for the following cases:-

a. Vessel waiting for tide, draft, etc., to sail for the safety of the vessel.

b. Strike by the Terminal employees.

c. Usage of idle berth within the Terminal with concurrence of Concessionaire or officials authorized by him.

(4) The Berth Hire Charge shall not be levied after the expiry of 4 Hours from the time of calling for the Pilot for sailing.

(5). No berth hire will be charged when the vessels idle at the Terminal berths when operations cannot take place due to breakdown of the equipment or power failure or any other reasons attributable to Concessionaire.

(6). Ousting Priority / Priority berth hire charges. The rates and conditions for granting ousting priority / priority berthing will be governed by extant Government guidelines in this regard and provisions prescribed in the Scale of Rates of Chennai Port Trust.

CHAPTER- III

Charges for Container Operations

2.1 Charges for normal and reefer containers

The container handling charges prescribed for handling and movement of container include the following elements viz. stevedoring, handling by quay crane, lashing and unlashing, stowage planning, wharfage on containers and containerized cargo, movement of container from quay to container yard, handling at container yard including lift on/lift off and delivery/receipt to and from customers, movement to railway yard and charges for all other miscellaneous services not specifically prescribed in the Scale of Rates.

2.1A. Normal and Reefer Containers

Sl. No.	Description	Rate per TEU (in Rs.)			
		Foreign Containers		Coastal Containers	
		Loaded	Empty	Loaded	Empty
1	From ship to container yard and vice-versa				
	Not exceeding 20’ in length	1910.02	1084.76	1146.01	650.86
	Exceeding 20’ and upto 40’ in length	2865.03	1627.14	1719.02	976.28
	Over 40’ in length	3820.04	2169.52	2292.02	1301.71
2	From container yard to truck or vice-versa				
	Not exceeding 20’ in length	241.76	119.72	241.76	119.72
	Exceeding 20’ and upto 40’ in length	362.64	179.58	362.64	179.58
	Over 40’ in length	483.52	239.44	483.52	239.44

2.1B Hazardous and Over Dimensional Containers

Sl. No.	Description	Rate per TEU (in Rs.)	
		Foreign Containers	Coastal Containers
		Loaded	Loaded
1	From ship to container yard and vice-versa		
	Not exceeding 20’ in length	2256.79	1354.07
	Exceeding 20’ and upto 40’ in length	3385.19	2031.11
	Over 40’ in length	4513.58	2708.15
2	From container yard to truck or vice-versa		
	Not exceeding 20’ in length	302.19	302.19
	Exceeding 20’ and upto 40’ in length	453.29	453.29
	Over 40’ in length	604.38	604.38

2.2 Consolidated charges for Transshipment Containers

Sl. No.	Description	Rate per TEU (in Rs.)			
		Foreign Containers		Coastal Containers	
		Loaded	Empty	Loaded	Empty
	Not exceeding 20' in length	1371.86	889.44	823.12	533.66
	Exceeding 20' and upto 40' in length	2057.79	1334.16	1234.67	800.50
	Over 40' in length	2743.72	1778.88	1646.23	1067.33

A container originally declared as transshipment container subsequently moved by rail or road will lose its identity as a transshipment container and shall be treated as normal import container and the prescribed charges as applicable shall be payable.

2.3 Shifting container within vessel (Restows)

Sl. No.	Description	Rate per TEU (in Rs.)	
		Foreign Containers	**Coastal Containers**
		Loaded & Empty	**Loaded & Empty**
1	Shifting within hatch (without landing and re-shipping)		
	Not exceeding 20' in length	344.03	206.42
	Exceeding 20' and upto 40' in length	516.05	309.63
	Over 40' in length	688.06	412.84
2	Shifting via quay (shifting by landing on quay and re-shipping)		
	Not exceeding 20' in length	1011.03	606.62
	Exceeding 20' and upto 40' in length	1516.55	909.93
	Over 40' in length	2022.06	1213.24

2.4. Dwell Time Charges for Container stored in the Terminal

Sl. No	Particulars	Foreign Going & Coastal		
		Rate Per Container per day or Part thereof (in INR)		
		Upto 20' in length	Above 20' and upto' in length	Above 40' in length
1	Import - FCL, LCL &empty			
	First 3 days	Free	Free	Free
	4-15 days	172.80	345.60	518.40
	16-30 Days	345.60	691.20	1036.80
	Beyond 30 Days	691.20	1382.39	2073.59
2	Export - FCL, LCL &empty			
	First 7 days	Free	Free	Free
	8-15 days	172.80	345.60	518.40
	16-30 Days	345.60	691.20	1036.80
	Beyond 30 Days	691.20	1382.39	2073.59
3	ICD - Import & Export - Loaded & empty			
	First 10 days	Free	Free	Free
	11-30 days	172.80	345.60	518.40
	31-45 Days	345.60	691.20	1036.80
	Thereafter	691.20	1382.39	2073.59
4	Transhipment - Loaded & empty			
	First 30 days	Free	Free	Free
	31-45 days	172.80	345.60	518.40
	46-60 Days	345.60	691.20	1036.80
	Thereafter	691.20	1382.39	2073.59

Sl. No	Particulars	Foreign Going & Coastal		
		Rate Per Container per day or Part thereof (in INR)		
		Upto 20' in length	Above 20' and upto' in length	Above 40' in length
5	Shutout- Loaded & empty			
	First 15 days	172.80	345.60	518.40
	16-30 days	345.60	691.20	1036.80
	Beyond 30 Days	691.20	1382.39	2073.59
6	Change of status to local delivery			
	First 3 days	Free	Free	Free
	4-15 days	172.80	345.60	518.40
	16-30 Days	345.60	691.20	1036.80
	Beyond 30 Days	691.20	1382.39	2073.59

Note : For hazardous containers, the storage charges shall be 25% more under the respective slab as given above.

Storage period for a container shall be reckoned from the day following the day of landing upto the day of loading/delivery/removal of container

For purposes of calculation of free time, Sundays, Customs notified holidays and the Terminal’s non-operating days shall be excluded

Transshipment containers whose status is subsequently changed to local FCL/LCL/ICD shall loose the concessional storage charges. The storage charges for such containers shall be recovered at par with the relevant import containers storage tariff.

For Over Dimensional Containers including the wind mill boxes, the storage charges shall be based on the actual number of ground slots the respective container occupies under the respective slab as given above.

2.5 Miscellaneous Charges

General

Particulars	Rates (INR)		
	20’	40’	45’
Fixing of seal	149.93	149.93	149.93
Lift on/Lift off in the CY	482.41	723.62	964.83
Charges for shifting within the terminal	657.84	986.75	1315.67
POD Change	657.84	986.75	1315.67
Additional movement – Terminal to Rail or Rail to Terminal/Charges for extra movement/transportation	657.84	986.75	1315.67
Change of status of Container from Rail to Road or vice-versa	657.84	986.75	1315.67
Charges for export containers arriving in the terminal after the gate cut-off for the particular VIA	657.84	986.75	1315.67
Fixing/removal of hazardous sticker (per container)	74.97	74.97	74.97
One Door open charges per container	449.80	449.80	449.80
Cancellation of documents – per EIR	74.97	74.97	74.97
Non-declaration/Mis-declaration of hazardous containers	2249.01	2249.01	2249.01

Customs Inspection charges

Particulars	Rates (INR)		
	20'	40'	45'
On-wheel Customs Inspection per Container for opening of Container doors on-wheel under Customs Supervision (INR)	299.87	299.87	299.87
Part destuffing/stuffing for Customs Examination–25% or less than 25%	183.64	275.46	367.28
Part destuffing/stuffing – 50% or less than 50%	367.28	550.92	734.55
Full or More than 50% destuffing/ stuffing – per activity	734.55	1101.83	1469.11
Seal Cutting (INR)	149.93	149.93	149.93

Reefer related services

Particulars	Foreign-going Vessel	Coastal Vessel
	INR	INR
Pre-trip inspection (including supply of electricity)	1036.80	622.08
Connection or disconnection services on board a vessel	69.12	41.47
Cleaning of container		
Not exceeding 20' in length	51.84	31.10
Exceeding 20' and upto 40' in length	103.68	62.21
Over 40' in length	155.52	93.31
Supply of Electricity (including connection and disconnection, monitoring of temperature at Reefer yard) per container per 4 hours shift or part thereof		
Not exceeding 20' in length	111.22	66.73
Exceeding 20' and upto 40' in length	166.83	100.10
Over 40' in length	222.44	133.46

Charges for Shut out container / renomination of containers		
Not exceeding 20' in length	768.17	768.17
Exceeding 20' and upto 40' in length	1152.73	1152.73
Over 40' in length	1536.66	1536.66

Others

Particulars	Foreign-going Vessel	Coastal Vessel
	INR	INR
Charges for supply of fresh water to shipping alongside the container berths per 1000 litres or part thereof	234.69	234.69
Charges for clearance of garbage on-board (per ½ cubic meter bag)	175.42	

3. General Note to Schedule under Chapter-II (Charges for Berth Hire) and Schedules (2.1) to (2.5) (Charges for container operations) under Chapter-III:

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 31 March of the following year.

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