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Tariff Authority for Major Ports

No.34

New Delhi,

12 March 2009

NOTIFICATION

In exercise of the powers conferred by Section 48 of the Major Port Trusts Act, 1963 (38 of 1963), the Tariff Authority for Major Ports hereby disposes of the proposal of the Jawaharlal Nehru Port Trust for fixing upfront tariff for the container handling at the Jawaharlal Nehru Port Trust in pursuance of the guidelines for upfront tariff setting for PPP projects at Major Ports which were notified vide Notification No.TAMP/52/2007-Misc. dated 26 February 2008, as in the Order appended hereto.

(Brahm Dutt)
Chairman

Tariff Authority for Major Ports
Case No. TAMP/40 /2008 – JNPT

The Jawaharlal Nehru Port Trust

- - -

Applicant

ORDER

(Passed on this 25th day of February 2009)

This case relates to a proposal dated 27 August 2008 received from the Jawaharlal Nehru Port Trust (JNPT) for setting upfront tariff for a container handling at JNPT 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 salient features of the proposal are as follows:

- (i). The port has worked out two set of calculations. One set of calculation is stated to be strictly on the basis of February 2008 guidelines. The second set of calculations is based on slightly modified norms reportedly to ensure that the normative estimates would be relevant over a significant period in the future and to closely follow the benchmarks used by world class terminals to arrive at normative capital costs and operational costs. Subsequently, the JNPT confirmed that it endorsed the second set of calculations based on slightly modified norms.
- (ii).
 - (a). The representative container terminal shall have a quay length of 1000 metres divided into 3 nominal berths each designed to handle 9000 TEUs+ ships.
 - (b). The quay shall be equipped with 12 super post panamax ship to shore cranes deployed at the rate of 4 cranes per berth.
 - (c). 100 hectare area will be provided towards storage and backup area. The stack yard will be designed to contain 14000 numbers of ground slots.
 - (d). There will be little transshipment and approximately 30% of throughput will be received or dispatched by rail and the balance by road. No stuffing / destuffing / bulk breaking shall be undertaken within the terminal.
- (iii). **Optimum Terminal Capacity:**

The JNPT stated that the optimum capacity of the terminal determined in accordance with the February 2008 guidelines is on the lower side when compared with other world class terminals. Optimum terminal capacity has been, therefore, worked out as per the guideline and as per its independent estimates and the port has adopted the optimum terminal capacity at 23,91,480 TEUs worked out as per the independent estimates. The optimum terminal capacity worked out by JNPT as per guideline and as per the independent estimates are given below:

(a). Optimum Terminal capacity as per guideline:

The optimum quay capacity and the optimum stackyard capacity computed by JNPT in line with the guideline are as follows:

o Optimum Quay capacity :	19,92,900 TEUs
o Optimum yard capacity *:	22,92,949 TEUs

* (In the formula prescribed under Clause 3.2. of the February 2008 guidelines for determination of optimum yard capacity, the norm for the total ground slot requires to be considered at 720 TEUs per hectare. However, the JNPT has considered 14,000 TEUs as ground slots for 100 hectares on the ground that the norm of 720 TEUs per hectare is not feasible)

(b). Optimum Terminal Capacity as per independent estimates:

The optimum quay capacity and the optimum yard capacity computed by JNPT are as follows:

o Optimum Quay capacity@ :	23,91,480 TEUs
o Optimum yard capacity * :	27,51,538 TEUs

@ {In the formula prescribed under clause 3.1 of the 2008 guidelines for determination of optimum quay capacity, the norms prescribe 1 crane for every 100 meters of quay length. Thus, for 1000 meters of quay length, the number of quay cranes work out to 10. However, JNPT has considered capacity based on 12 cranes which works out to 83.33 meters per crane. It is the position of JNPT that the proposed quay length per crane is in lie with the current crane deployment at the container terminal operated by it (85 Meters / Crane) by NSICT (75 Meters / Crane) and by GTIPL (89 Meters / Crane)}

* (In the formula prescribed under Clause 3.2. of the February 2008 guidelines for determination of optimum yard capacity, the norm for the average stack height requires to be considered at 2.5. However, the JNPT has considered average stake height at 3 on the ground that a number of international container ports are operating at this level. Secondly, the JNPT has considered 14,000 TEUs as ground slots for 100 hectares against the norm of 720 TEUs per hectare)

(iv). Capital Cost:

- (a). Civil Cost: The total capital cost for civil works has been estimated reportedly based on the prevalent market prices. The total capital cost for civil works has been bifurcated into two segments; one for calculation of cargo related charges and another for calculation of berth hire charges. The capital cost for civil works for calculation of cargo related charges has been estimated at about Rs. 921.54 Crores.

- (b). Equipment Cost:

It has been stated that the cost of container handling equipments has increased significantly in the last 18 months caused by a combination of factors including the fall in the US\$, the presence of a single dominant supplier and high market demand.

Adopting its independent cost estimates and number of container handling equipments required to handle 23.91 lakh TEUs, the port has estimated equipment cost at Rs. 932.60 Crores.

- (c). A comparative position of the Capital cost under the two different optimal capacity scenarios JNPT is tabulated below:

Sl. No.	Group	As per the Guidelines (Rs. in Crores)			Estimation furnished by JNPT (Rs. in crores)	
1.	Civil Construction cost	As per the estimates given by JNPT: 921.54			921.54	
2.	Container Handling equipment (*) Quay gantry crane	Norms	Calculation	Rs. in Crores	Calculation	Rs. in Crores
		One for 100 m of berth length (10 Cranes for berth length of 1000 mtrs)	10 X 43 Cr	430.00	12 Nos. x Rs.43 crores per QGC	516.00
	Rail mounted gantry crane	One for handling 6 Rakes/day	4 X 15 Crs	60.00	4 Nos. x Rs.15 crores per RMGC	60.00
	Rubber Tyred Gantry crane	Three for each quay gantry crane	30 X Rs.7.50 Crs	225.00	36 Nos. x Rs.7.50 crores per RTGC	270.00
	Reach stacker	One for nine RTGs	4 X Rs. 2.15 Crs	8.60	4 Nos. x Rs.2.15 crores per Reach stacker	8.60
	Tractor Trailer	Six for each Quay gantry crane	60 X Rs 0.65 Crores	39.00	120 Nos. x Rs.0.65 crores per Tractor Trailer	78.00
		TOTAL (2)			762.60	932.60
3.	IT System cost	2% of the sum total of the civil construction and container handling equipment cost.		33.68	Estimated as per norms	37.08
4.	Other Cost including Financing cost and Interest during construction.	10% of the sum total of the civil construction and container handling equipment cost.		168.41	Estimated as per norms	185.41
TOTAL CAPITAL COST				1886.23	2076.63	

- (v). **Operating Cost:**

The operating cost estimated for an optimal capacity of 19,92,900 TEUs and for independent capacity estimation of 23,91,480 TEUs as given by JNPT are tabulated below:

Component	Norm	Cost per Unit In Rs	Operating cost in Rs	
			1992900 TEUs	23,91,480 TEUs
Power	8 Kwh / TEU	10.3 / Kwh	16,42,40,960/-	32,51,45,621@
Fuel	4 Litres / TEU	40 / litre	31,88,64,000	3826,36,800
Civil Repair and Maintenance	1% of Civil Asset	-	10,11,88,314	10,11,88,314
Mechanical & Electrical Equipment repair and maintenance	2% of Cost of Mechanical & Electrical Equipment	-	17,45,48,866	21,29,49,933
Insurance cost	1% of Gross Fixed Asset Value	-	18,84,62,747/-	207663280
Depreciation	As per norms prescribed in Companies Act or any norms prescribed in LA which is higher	-	124,03,86,604/-	143,89,20,119
Licence Fee	As per the rate prescribed in the prevailing SOR	-	26,94,00,000	26,94,00,000
Other Expenses	10% Gross Fixed Assets	-	188,46,27,465	207,66,32,798
Total Operating Cost			434,16,92,955	501,45,36,864

@ JNPT has considered 13.2 Kwh per TEU as against the norm of 8 Kwh per TEU prescribed for calculation of power consumption cost based on the average power

consumption at the three terminals at the JNPT for the period January 2008 to June 2008.

- (vi) The summary of Annual Revenue Requirement and tariff calculation under the two optimal capacity scenarios for considered by JNPT, is tabulated below:

Component	Estimate as per Norms (Amt. In Rupees)	Independent estimate (Amt. In Rupees)
Capital cost	18,84,62,74,651#	20,76,63,27,985
Required Return @ 16% on capital employed	3,01,54,03,944	3,32,26,12,478
Operating cost	4,34,16,92,955	5,01,45,36,864
Annual Revenue Requirement	7,35,70,96,899	8,33,71,49,341
Optimal traffic capacity (TEUs)	19,92,900	23,91,480
Consolidated tariff per TEU (Rupee)	3,692	3,486

The capital cost includes estimated capital cost of equipments. The estimated capital cost of equipments is a product of number equipments as per norms multiplied by cost of such equipments as per independent estimate.

- (vii). The JNPT has furnished draft Scale of Rates for container handling charges, dwell time charges for containers and miscellaneous charges for containers. The following table shows annual revenue requirement across three major tariff categories based on its independent estimate of optimal capacity:

Tariff group	% of revenue allocated	Absolute annual revenue requirement (Rupee)	Equivalent unit revenue per TEU (Rupee)
Container handling charges	90%	7,50,34,34,407	3,138
Ground rent charges	7%	58,36,00,454	244
Miscellaneous charges	3%	25,01,14,480	105
Total	100%	8,33,71,49,341	3,486

2.2. It has been stated that any new terminal operator selected to develop a project on a Design, Build, Fund, Operate and Transfer (DBFOT) basis at JNPT shall have to construct the super structure as well as carryout basin dredging in front of the berth. The JNPT in its letter dated 27 August 2008 had proposed a rate of Rs.0.00488 per GRT per hour as the berth hire charges. Subsequently, the JNPT vide its letter dated 14 October 2008 furnished a revised calculation showing a rate of Rs.2.62 per GRT per hour as the berth hire charges. The workings for the Berth hire charge as given by JNPT in its letter dated 14 October 2008 is given below:

No.	Components	Amt. in Rs.
1	Berth Construction Cost	515,71,63,142
2	Dredging	48,84,31,386
	Total Capital cost (1 + 2)	564,55,94,528
3	Return @ 16% on Capital Cost	90,32,95,124
4	Operating cost	
	- Maintenance	5,15,71,631
	- Insurance	5,64,55,945
	- Depreciation	18,85,62,857
	(Total of 4)	29,65,90,434
5	Annual Revenue Requirement (ARR) (3+4)	119,98,85,558
6	Total GRT of Vessels expected at Optimal Capacity	40,099,995.54
7	ARR to be recovered from each GRT in Rs.	29.92
8	Average GRT per vessel	24863

9	No. of vessels to be handled in a year	1613
No.	Components	Amt. in Rs.
10	No. of Vessels to be handled every day (assuming 365 days of operation)	4.42
11	No. of Vessel to be handled by each berth every day (considering 3 berths)	1.47
12	Total berth hours available in a day (considering 70% berth occupancy) for handling vessel	16.80
13	Total hours spent by a vessel in a berth i.e. Total hours spent by each GRT in the terminal	11.40
14	Berth hire charge per GRT per hour (5 / 13) in Rupees	2.62

3. In accordance with the consultative procedure prescribed, a copy of the proposal from the JNPT was forwarded to the potential bidders or short listed bidders as per the list furnished by JNPT and also to the concerned user organizations for their comments. The comments received from some of the potential bidders and the user organisations were forwarded to JNPT as feedback information. The JNPT has furnished its observations on the comments of the potential bidders and user organizations.

4. On a preliminary scrutiny of the JNPT proposal, the JNPT was requested to furnish additional information / clarifications. The JNPT has furnished its reply. A summary of the queries raised by us and the JNPT's response thereon are tabulated below:

Sr No	Queries raised by TAMP	Reply of JNPT
I.	General	
(i)	A copy of the feasibility study conducted by the port with reference to the proposed container terminal may be furnished.	JNPT is currently in the process of developing 2 terminals over the next 2-3 years. Since the tariffs would be applicable to all terminals in the next 5 years, instead of using the costs of a specific terminal for tariff calculation, it was proposed that the specifications and facilities for a representative container terminal at JNPT be worked out. Such container terminal has been defined in the proposal. As this representative container terminal is essentially a hypothetical container terminal, no feasibility report has been prepared for it.
(ii).	The Report of the Consultant forwarded by JNPT under cover of its letter dated 27 August 2008 contains two set of alternatives for fixation of upfront tariff for a new container terminal at JNPT. As stated in the Consultant's Report, one set of calculation is based on the norms prescribed in the upfront guideline, whereas the second set seeks relaxation in the norms. The Scale of Rates proposed in the Report is based on the Annual Revenue Requirement arrived as per the second set of calculation. It is presumed that the JNPT endorses the second set of calculation contained in the Report of the Consultant.	The presumption is correct
(iii).	The proposal of the JNPT in reference is to fix upfront tariff cap for container terminal based on the proposed development of 1000 metres of quay. The JNPT may explain the rationale behind considering the quay length of 1000 metres as the	The TAMP regulations require that the same tariff be applied to all container terminals built in the five year period after the application has been approved. A 1000 m quay is considered as an optimal quay length for handling 3 reasonably sized vessels of about 250-300 m

	configuration for a standard container terminal at JNPT.	each at a time. Hence this quay length has been considered.																																																					
(iv).	It may be confirmed as to whether the basic features and the terms of concessions applicable to the project of development of 1000 metres of quay will be similar to the future container handling projects at JNPT.	The basic features of the Project are likely to remain the same. However, the specific parameters like quay length, area of reclamation etc. may differ from Project to Project. The terms of the Concession Agreement may change depending upon the guidelines from the Ministry from time to time.																																																					
(v).	It may be confirmed whether the reclamation of land envisaged for the project of 1000 metres of quay length will be a feature for the future container handling projects also.	All the Projects envisaged in JNPT within the next 5 years will require reclamation of land.																																																					
(vi).	The proposal of the JNPT in reference is to fix upfront tariff cap for container terminal based on the proposed development of 1000 metres of quay. In this context, it may be noted that the tariff cap to be prescribed by this Authority would be applicable to all the projects to be bid out for container handling operation at the JNPT during the next five years.	Noted.																																																					
(vii).	(a) 100 hectares of land is considered as storage and backup area for the Terminal. It may be clarified and established as to whether area of 100 hectares is the standard followed by the International Container terminals for a terminal having quay length of 1000 metres.	The backup area of 100 ha for the proposed terminal is proposed to be utilized as follows: <table><tr><th>S No</th><th>Particulars</th><th>Area (in Ha)</th></tr><tr><td>1</td><td>Storage Yard</td><td>50</td></tr><tr><td>2</td><td>Parking area and other internal roads</td><td>20</td></tr><tr><td>3</td><td>Rail Terminal</td><td>15</td></tr><tr><td>4</td><td>Concrete Pavement, RTG tracks and other crossovers</td><td>6</td></tr><tr><td>5</td><td>Landscaping</td><td>9</td></tr><tr><td></td><td>Total</td><td>100</td></tr></table> The back up area and the quay length of the terminals at JNPT are as follows: <table><tr><th>Sl. No.</th><th>Particulars</th><th>Area (in Ha)</th><th>Quay Length (in metres)</th></tr><tr><td>1</td><td>JNPCT</td><td>58</td><td>680</td></tr><tr><td>2</td><td>NSICT</td><td>34</td><td>600</td></tr><tr><td>3</td><td>GTIPL</td><td>64</td><td>712</td></tr><tr><td></td><td>Total</td><td>156</td><td>1992</td></tr></table> The area provided above does not include any area for parking and roads to the Parking area. As there is limited space available for parking for the traffic coming to the proposed terminal, it is proposed that a separate parking area shall be provided by the proposed terminal within the reclamation area, which shall be outside the custom bound area. Therefore, in order to draw a comparison with the existing facilities the parking area requirements in the proposed terminals will have to be excluded. <table><tr><th></th><th>Proposed Terminal</th><th>Existing at JNPT</th></tr><tr><td>Backup Area (in Ha)</td><td>100-20=80</td><td>156</td></tr><tr><td>Quay Length (metres)</td><td>1000</td><td>1992</td></tr><tr><td>Quay length/ Back up area</td><td>1000/80 = 12.5</td><td>1992/156= 12.77</td></tr></table>	S No	Particulars	Area (in Ha)	1	Storage Yard	50	2	Parking area and other internal roads	20	3	Rail Terminal	15	4	Concrete Pavement, RTG tracks and other crossovers	6	5	Landscaping	9		Total	100	Sl. No.	Particulars	Area (in Ha)	Quay Length (in metres)	1	JNPCT	58	680	2	NSICT	34	600	3	GTIPL	64	712		Total	156	1992		Proposed Terminal	Existing at JNPT	Backup Area (in Ha)	100-20=80	156	Quay Length (metres)	1000	1992	Quay length/ Back up area	1000/80 = 12.5	1992/156= 12.77
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		Thus, the estimates assumption is broadly in line with the existing parameters.
	(b). The JNPT may furnish details of the actual area of land available for use and the distribution of available land in terms of storage facility and auxiliary facility at its container terminal. Similar details may be furnished in respect of the other two existing container terminals operating at JNPT.	The total backup area for JNPCT is 58 hectares. The breakup is as given below: Storage area - 42 ha (including RTG tracks and crossovers) Rail terminal area - 4.6 ha The total backup area available at the private terminals at JN Port viz., NSICT is 34 hectares and GTIPL is 64 hectares (including 18 ha under reclamation). The breakup of the Backup area is not available. At all terminals of JNPT, the parking area is not provided in the backup area. It is provided outside the custom bound area at various locations.
	(c). The JNPT proposes to utilize an area of 51 hectares of land towards auxiliary facilities. This utilisation of 51% of land for auxiliary facilities may be justified keeping in view the actual utilisation of land towards auxiliary facilities at the container terminal operated by JNPT and by the private operators at JNPT.	The items considered under auxiliary facilities are not necessarily auxiliary in nature. Area for rail terminal and the area considered for RTG tracks and crossovers are generally considered as a part of stacking area. A clear distinction has been brought out here for clarifying the utilisation of the backup area. For JNPCT, the storage area + RTG tracks works out to 42 ha out of a total of 58 ha. This total does not include parking area. This gives a utilisation factor of $16/58=27.6\%$. For the proposed terminal the comparable utilisation factor works out as $(\text{Landscaping}+\text{rail terminal})/(\text{Total backup area less parking area})$. This gives a utilisation factor of $25/80=31\%$. It is slightly higher on account of some area being kept for an unexpected surge in container traffic.
	Yard Capacity:	
(i).	The parameters considered for calculation of area of 17.5 m ² for one ground slot may be intimated along with the basis for the values attached to the parameters considered in the calculation.	A ground slot holds one TEU. The dimension of a TEU is 20ftX8ft= 160 sq. ft., which works out to an area of 14.86 sq.m. For ease of operation, avoiding damage to the containers and for safety purposes some clearance is provided between consecutive slots. Hence the area works out to 17.5 sq m per slot.
(ii).	The additional area of 17.5 m ² per each slot towards provision of area required for movement of container handling equipments may be justified.	Additional area is required for ease of movement of TTs, RTGCs and for smooth operation. This is as per the international standards.
(iii).	The analysis done by JNPT to arrive at the total ground slots of 14000 TEUs may be furnished.	The area per ground slot has been worked out at 35 sq m. Considering 35 sq. m, the total no of ground slot works out to approx. 286 slots per hectare. Considering a stacking area of 49-50 ha, a total of about 286X49~14,000 slots are needed.
(iv).	The JNPT has considered the average stack height at 3 as against the norm of 2.5 on the ground that international container ports are operating at the average stack height of 3. In this context, the JNPT may	Stack height depends on the type of equipment to be used and its specifications. For an RTGC having 1+5 specification, an average of 3 is considered most suitable. For the proposal we have considered RTGCs

	furnish the actual stack height of containers that prevailed at JNPT container terminal and the private terminals at JNPT during the last three years.	having 1+5 specification hence we have considered an average stack height of 3. The actual stack height prevailing at JNPT and the private terminals at JNPT is as follows:			
		Terminal		Stack Height	
		JNPCT yard			
		- Gravel bed & Import yard		4	
		- ICD & Empty container yard		3	
		- Reefer yard		2	
		- ODC yard		1	
		NSICT		4	
		GTIPL		4.5	
(v).	The JNPT may furnish the container mix viz., foreign containers, transshipment containers, costal containers and others (Over dimensional and hazardous), for operating at the optimal capacity. The break-up in terms of loaded containers, empty of containers and reefer containers under each of the above category of containers may also be furnished.	The JNPT has furnished the numbers and types of containers handled at JNPCT, NSICT and GTIPL giving breakup of containers as Import, Export, Transshipment, ICD, Normal, Reefer, 20', 40' and above 40'.			
		(No. of containers)			
			JNPT	NSICT	GTIPL
		Total	939857	1080424	933275
		20'	65.84%	60.42%	61.68%
		40'	34.01%	39.58%	38.32%
		Above 40'	0.15%	-	-
		Import	44.89%	49.67%	45.58%
		Export	46.81%	44.77%	45.85%
		Normal	96.89%	97.95%	97.89%
III	Capital Cost				
(1).	Civil Cost				
(i).	(a).JNPT is requested to furnish rate analysis in support of the unit rates considered for estimating each component of civil cost along with budgetary quotation wherever obtained.	The figures presented are estimates based on costs incurred at various port terminals in recent times. eg Pipavav Port. Better estimates can be arrived at only on carrying out Engineering and design.			
	(b). In respect of other item of civil construction cost, namely "electrical works" JNPT has estimated a sum of Rs.53.655 crores on lump sum basis. Likewise, JNPT has estimated Rs. 50 lakhs towards mobilization and de-mobilization on lump sum basis under head of "miscellaneous". The estimated cost may be supported with budgetary quotations.				
(ii).	For each component of civil construction cost viz., Basin Dredging, Construction of quay, container yard, buildings, Electrical works and Miscellaneous, JNPT has estimated expenditure towards Miscellaneous items, general items and other items as a percentage of estimated base cost. Such expenditure normally constitutes 4% to 5% of the estimated base cost. However, in the case of buildings and Electrical works, this estimate works out to around 14% and around 7% respectively. Please clarify the reasons for the higher level of estimates considered for Building and Electrical works.	The higher percentage towards Miscellaneous, general and other items is considered for Building and Electrical works on account of the high degree of variance and volatility seen in such costs in the past. A higher percentage helps address the high level of uncertainty associated with such costs.			
(iii).	Capital cost for development of auxiliary	The internal roads considered under the head			

	facilities like internal main roads, internal rail lines & green belt has been considered under "miscellaneous" items of capital cost. Reasons for consideration of internal roads again in estimation of pavement cost under the head of "container yard" may be clarified.	of container yard refer to the internal roads within the container yard. The internal roads considered under the head miscellaneous items refer to other internal roads which are outside the container yard but within the terminal premises.
(iv).	The head of "Miscellaneous" also includes estimates for 'other miscellaneous' expenditure to the tune of Rs. 5 crores. Please list out the items of expenditure considered in the estimate of Rs. 5 crores.	This is an estimate to account for other unforeseen items that may not have been estimated at this stage.
(2)	Equipment cost:	
(i).	The unit cost considered by JNPT for estimation of the equipment cost is seen to be updated reportedly based on the guide prices. The JNPT is requested to furnish budgetary quotations in support of the unit cost considered in the estimate. Please confirm whether the applicable taxes and duties are included in the estimated unit cost.	The JNPT has furnished copies of the Budgetary quotations for cost of RMQC, RMGC and RTG. The unit cost considered includes customs duty under EPCG license. (The unit cost for RMQC as shown in the Quotation is US\$ 92.49 lakhs. It appears that JNPT has considered an exchange rate of Rs.42.84 per US\$ and a Customs duty of 3%. However, the cost as worked out by JNPT in the quotation is Rs.42.84 Crores, whereas as per the details given by JNPT it works out to Rs.40.81 crores. The cost of each RMQC considered by JNPT in its proposal is Rs. 43 Crores. The unit cost for RMGC as shown in the Quotation is US\$ 44.77 lakhs. It appears that JNPT has considered an exchange rate of Rs.39.39 per US\$ and a Customs duty of 3%. However, the cost as worked out by JNPT in the quotation is Rs.18.65 Crores, whereas as per the details given by JNPT it works out to Rs.18.16 crores. The cost of each RMGC considered by JNPT in its proposal is Rs. 15 Crores. The unit cost for RTG as shown in the Quotation is US\$ 14.98 lakhs. The JNPT does not appear to have worked out the rate in Rupees. However, by adopting an exchange rate of Rs. 42.84 per US\$ and Rs. 39.37 per US\$ and by considering the customs duty at 3% the capital cost of RTG works out to Rs. 6.61 Crores and Rs. 6.08 Crores respectively. The cost of each RTG considered by JNPT in its proposal is Rs. 7.50 Crores.)
(ii).	In estimation of capital cost of quay cranes, the cost of super post panamax quay cranes has been considered. Considering deployment of the super post panamax quay crane and taking into account 10 tractor trailers for each quay crane, the productivity of quay crane in terms of moves per hour considered at 25 in optimal quay capacity estimation may be reviewed.	Comments on productivity have been provided in the report supporting the tariff application. The usage of Super post panamax cranes aids in quickly turning around larger sized vessels. However over a long term, with more competition in the Port sector the average productivity is expected to be in the range of 25 moves per hour which is recommended by TAMP in its guidelines.
(iii).	(a). The JNPT has apportioned the IT Cost and Other Capital cost to the base civil cost	Borrowing/financing costs are incidental costs for incurring the capital expenditure required

	and equipment cost and has worked out a revised civil cost and equipment cost. The JNPT may explain the basis adopted for such apportionment.	for the Project. Hence, as per the accounting standards, these costs are apportioned into all other heads.
(iv).	The JNPT has estimated depreciation at the rate of 10.34% and 3.34% on the revised equipment cost and revised civil cost respectively. The depreciation rate prescribed in the Companies Act for IT system is 16.21%. The estimated depreciation may be reviewed.	The same has been rectified.
IV	Operation Cost:	
(1).	Power & Fuel:	
(i).	The JNPT has considered power consumption of 13.21 KWH per TEU as against the norm of 8 KWH/ TEU. The approach adopted by JNPT is based on the actual power consumption of the adjoining container terminals at JNPT. The average power consumption is based on consumption measured for a short period of six months. It is seen that the power consumption adopted by JNPT is around 65% more than the norm prescribed which is on the higher side. Further, the power consumption adopted by JNPT is more mainly on account of handling more reefer containers by GTIPL. The position may be reviewed based on long term average and with reference to the equipment and design considered to capacity estimation and the estimate of power consumption may be modified suitably.	Handling of more reefer containers by GTIPL pushes up the average power consumed. However, it may be noted that the TAMP guideline of 8 units/TEU is the consumption seen in RMQC alone. Additionally, power is consumed in operation of RMGCs and for illumination of the terminal. The calculations have been reworked without considering the power consumed by GTIPL. Hence the average power consumed has been worked out as the average of the power consumed at NSICT and JNPCT. The average comes out to be 12 units/ TEU, which may taken into account..
(ii).	(a). The proposal assumes that the entire 100 hectares of area has to be reclaimed and that JNPT shall charge the lease rentals applicable for undeveloped area as per its Scale of Rates. Please clarify the reasons of treating reclaimed land (done at users cost) at par with undeveloped land. Also confirm whether the proposal to levy the license fee prescribed for undeveloped land in the Scale of Rates of the JNPT on the land to be reclaimed is permissible under the existing notified Scale of Rates of the JNPT.	A specific rate for reclaimed land was worked out for GTI. The rate is 178.91/sq.m/year for the financial year 2009-10. The report has been revised considering the new rates. Subsequently, the JNPT vide its letter dated 19 February 2008 furnished calculations for the rate of lease rental considered by it to estimate the lease rentals, which are summarised below: (i). License fee of Rs.11.13 per sq. mtr. per month for the year 2003-04 as per the Scale of Rates of JNPT escalated at 5% per annum works out to Rs.14.20 for the year 2008-09 and Rs.14.91 for the year 2009-10. (ii). Considering the rate of Rs.14.20 for 8 months for the year 2008-09 and Rs.14.91 for 4 months for the year 2009-10, the rate $[8 \times \text{Rs.14.20} + 4 \times \text{Rs.14.91}] = 1173.24$ $\text{-----} = \text{Rs.14.43}$ of Rs.14.43 12 per sq. mt. per month was considered in raising the yard bill for

		Rs.34500929 for water area of 199108 sq. mtr. against the GTIPL for one year. (iii). Water area was handed over to GTIPL without development cost. As per the Scale of Rates of JNPT, the rate for developed area was Rs.21.30 per sq. mtr. per month with 5% annual escalation. The cost of development for the water area was Rs.3185.728 lakhs. (iv). The rate of Rs.14.91 per sq. met. per month for the year 2009-10 is adopted for calculation of licence fee in the present proposal.
	(b). Please intimate the existing arrangement followed for levy of license fee on the reclaimed land in respect of other private container terminals at JNPT quoting the reference to the provisions of Scale of Rates and copy of latest bills raised in this regard may be furnished.	A specific formula was derived for charging lease rentals for GTI. The JNPT has furnished a Copy of the yard bill dated 8 August 2008 to GTIPL showing an amount of Rs.31.36 crores as the lease rental to GTIPL for the period from August 2008 to July 2009. The lease rentals include the service tax and education cess etc.
V	Operating cost for the berthing activity:	
	Section 4.4 prescribes a norm of 1% of the aggregate of berth construction cost and dredging cost alongside the berth, as maintenance charges. However, the JNPT has excluded dredging cost for calculation of maintenance charges. The estimated maintenance charges may be revised in the light of the guideline.	Maintenance dredging operation is proposed to be carried out by JNPT, hence the relevant maintenance dredging cost is not being incurred by the Private operator. Hence this cost has been excluded for the purpose of calculation of Berth Hire Charges to be recovered by the Private operator.
VI	Scale of Rates:	
(i).	The draft Scale of Rates may have to be drawn up by iteration taking into account the capacity mix, the tariff structure and the pattern of various services offered by JNPT at its terminal as the base so as to achieve the Annual Revenue Requirement. Therefore, the draft Scale of Rates for levy of container handling charges, ground rent charges and miscellaneous charges to meet the Revenue Requirement may be drawn up considering the following : (a). Capacity mix of the proposed optimal capacity. (b). The pattern of services and facilities offered at the existing container terminal operated by JNPT may be taken as the base and may be scaled up to the optimal capacity assessed for the proposed container terminal.	The scale of rates has been derived through an iterative process considering all the factors mentioned herein. The JNPT has furnished a draft Scale of rates prescribing rates and the governing conditionalities.
	(c). The existing Scale of Rates for similar services offered by the JNPT at its existing terminal may be taken as the base.	

	(d). The new Scale of Rates may be derived by iteration taking the scaled up pattern of services and facilities and the existing Scale of Rates for similar services offered at its terminal to arrive at the Annual Revenue Requirement.	
(ii).	The proposed draft Scale of Rates furnished by JNPT does not prescribe conditionalities governing the levy of the rates. The JNPT is requested to furnish a draft Scale of Rates along with the conditionalities governing the levy of the rates. Common definitions and general terms and conditions may also be incorporated in the draft Scale of Rates.	Conditionalities have been inserted in the SOR as per JNPT existing scale of rates.
(iii).	It is seen that JNPT has proposed two alternative draft Scale of Rates for levy of storage charges. The first option proposes less number of slabs as compared to the second option which proposes a higher number of slabs. Significantly, the proposal mentions about the difficulties in implementing the second option. The JNPT is requested of propose a specific slab structure for levy of storage charges.	JNPT is recommending the 2nd option for consideration for scale of rates.
(iv).	Based on the parameters relating to Trade Share and GRT of vessels as given by JNPT, the weighted average GRT of vessels works out to 35,090 as against 24,863 considered by JNPT. Similarly, the average hours spent by a vessel at berth works out to 21.18 hours by considering 25 moves per hour per crane and a utilisation factor of 70% as against 11.40 hours considered by JNPT. Thus, the total GRT hours works out to 1198874760 hours. Considering this total GRT hours, berth hire per GRT per hour works out to Rs.1.0009 to achieve the Revenue Requirement of Rs.119.99 crores (as estimated by JNPT) from levy of berth hire. Therefore, the JNPT is requested to review its calculation of rate of berth hire and revise the rate of berth hire by considering the following parameters : (i). Average GRT of Vessels (ii). Average Parcel size (iii). Ship day output (iv). Average hours at berth (24*(ii)/(iii)) (v). Average GRT hours per vessel (i*iv) (vi). Expected number of vessels (vii). Total GRT hours (v*vi) (viii). Revenue Requirement (ix). Berth hire per GRT per hour (viii/ vii).	(The details furnished by JNPT show that it has maintained the weighted average GRT at 24864 earlier stated by it in its original proposal. Port has not reviewed the proposed berth hire charges considering the parameters suggested by us).

5. The unit revenue proposed by JNPT in its initial proposal and those as per the revised calculations furnished by JNPT is tabulated below:

(Rs. per TEU)			
Sr. No.	Item	As per initial calculation	As per revised calculations
(i).	Container handling charges	3138	3098
(ii).	Ground rent charges	244	241
(iii).	Miscellaneous Charges	105	103

6. A joint hearing in this case was held on 18 February 2009 at the Office of the Authority. At the joint hearing, the JNPT made a power point presentation of its proposal. At the joint hearing, JNPT and the concerned users / user organizations and the short listed bidders made their.

7. The proceedings relating to consultations in this case are available on the records at the office of this Authority. An except of the comments received and arguments made by 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 information collected during the processing of this case, the following position emerges:

- (i). The proposal is to fix upfront tariff cap for container handling at the JNPT at the Terminals to be developed on Public Private Partnership (PPP) basis. The proposal is based on the guidelines for upfront tariff fixation issued by the Ministry of Shipping, Road Transport & Highways in February 2008.

As per Clause 2.2. of the guidelines for upfront tariff setting for PPP Projects at the major ports of February 2008, the tariff caps to be prescribed now would be applicable to all the projects to be bid out for container handling at the Jawaharlal Nehru Port during the next five years. It is noteworthy that the JNPT is well aware of this position.

- (ii). Citing the two container terminal projects to be awarded by JNPT in near future and more particularly, the differences in their size and order of investment, the prospective bidders and some users who are consulted, are split in their views on which of the projects should form the basis for tariff fixation. JNPT has, however, correctly maintained the position envisaged by the Guidelines and formulated its proposal based on a representative container terminal with 1000 mtr quay length. JNPT confirms that the representative container terminal captures all the essential features and requirements of any container terminal to be developed at the Port and the unit cost considered will not significantly vary between projects. Since the upfront tariff cap to be fixed primarily relies on unit cost of various items of expenditure and the tariff set is for unit handling, this Authority is inclined to rely upon the operational and technical judgement of JNPT in choosing a representative container terminal for this exercise. The guidelines categorically require tariff to be set generally for the port as a whole on a normative basis and not with reference to a particular project.

The underlying objective behind this stipulation in the guidelines is perhaps that the bid values will adjust the peculiarities of a specific project. From the point of view of reasonableness, as it can be seen from the analysis, the upfront tariff caps fixed based on the representative container terminal is liberally comparable with the existing tariff at the container terminals of JNPT.

- (iii). The JNPT has in general complied 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 JNPT in some of the parameters are, interalia, discussed in the subsequent paragraphs.

(iv). Optimal Terminal Capacity:

(a). Optimal quay capacity:

- (i). Considering 12 quay cranes on the basis of one quay crane for every 83.33 meters of quay length, the JNPT has assessed the quay capacity at 23,91,480 TEUs. The DPW and GTIPL have sought to argue that the optimal quay capacity should be pegged at 19,92,900 TEUs following the norm of one quay crane for every 100 meters of quay length prescribed in February 2008 guidelines. As per their argument, the proposed container terminal can have a maximum of 10 quay cranes instead of 12 quay cranes considered by the JNPT. The Vadinar Oil Terminal (VOT) has expressed doubts on the feasibility of deploying 12 cranes in the container berth. GTIPL has also referred to some of the selected international terminals to support its argument of restricting the number of quay cranes to 10 @ one per every 100 mtrs of quay length. JNPT is the premier container handling port in the country with its three existing terminals handling more than 50% of the country's container throughput. Instead of going by the position obtaining at distant international ports, if one takes into account the deployment pattern at JNPT, it will clearly show that the modification to the norm proposed by JNPT is for better utilisation and is feasible and achieved already in this country. Reportedly, quay length per quay crane at JNPT, NSICT and GTIPL is 85 mtrs, 75 mtrs and 89 mtrs respectively which fully justifies the proposed level of 12 cranes per 1000 mtrs to be considered in this exercise. The modified level is not only feasible as demonstrated by the existing terminals at JNPT but also required to improve the capacity in order to narrow the gap between the quay and yard capacities which, if not done in this exercise, will only go to artificially push up the tariff while the reality at the operating stage later would be different. Due regard should also be had to the point made by JNPT about recognising the possible developments towards betterment likely to take place over the next 30 years, the period for which the tariff to be fixed now will be in force at the terminal subject to annual escalation. This Authority is, therefore, inclined to accept the modification to the norms suggested by JNPT and consider the capacity calculated based on the independent assessment made by JNPT.

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.

- (ii). Applying the norm for the productivity of the quay crane at 25 moves per hour, TEU to boxes ratio, the number of days of the working in a year and formula for estimation of quay capacity prescribed in the guidelines, the optimal quay capacity is estimated at 23,91,480 TEUs per annum for the proposed container terminal.

(b). Optimum yard capacity:

(i). Ground slots:

Out of the total area of 100 hectares of land earmarked for the terminal, 49 to 50 hectares of area would be reportedly available for storage of containers after providing area for auxiliary facilities like parking area and internal road, rail terminal, tracks and cross-overs and land for green belt and any unexpected surge in container volume.

The port has considered the total ground slots of 14000 as against the norm of 720 TEUs per hectare prescribed in the guidelines. The port has clarified that it has considered modification to the norms after giving due regard to the area required by a standard container, requirement of some space between consecutive container slots for safety reasons and

the additional area required for movement of container handling equipments. The approach adopted by JNPT in calculation of container ground slots, particularly the requirement of additional space to be provided for easy movement of container handling equipments is reportedly as per the international standards. The position reported by JNPT is relied upon as even at the scaled down parameter, the quay capacity will remain as the limiting factor in this case to determine the overall optimal capacity.

(ii). Average stack height:

The upfront tariff guidelines take into consideration an average stack height of 2.5. The proposal, however, considers the stacking height of 3 for determination of optimal yard capacity. The stack height at the other private container terminals at JNPT is in the range of 4 to 4.5 as reported by JNPT. Further, the JNPT has considered in its capital cost estimates, the cost of the handling equipment capable of achieving the proposed 3 high stake height. The average stack height of 3 considered by JNPT is, therefore, relied upon in this analysis.

(iii). Average dwell time:

The upfront tariff guidelines specify average dwell time of export containers at 4 days and for import containers at 2 days, which is considered by JNPT.

The port has considered the export / import ratio at 50:50 based on the existing pattern of trade and the average dwell time works out to 3 days.

- (v). The yard capacity based on the formula prescribed in the guidelines and the modified parameters considered works out to 27,51,538 TEUs. As stated earlier, the assessed optimal quay capacity is 23,91,480 TEUs. As per Clause 3 of the guidelines of February 2008, the optimal capacity of the terminal is the lower of the optimum quay and stack yard capacities. The optimal capacity of the container terminal is, therefore, pegged at 23,91,480 TEUs being the lower of the optimal quay and yard capacities.

(vi). Capital cost:

The total capital cost of the container terminal to achieve the optimal capacity of 2.39 million TEUs is estimated at Rs. 2641.19 Crores of which Rs. 564.56 Crores is allocable to berthing activity and Rs. 2076.63 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 estimated capital cost of the berth comprises Rs. 515.72 Crores being the cost of construction and Rs. 48.84 Crores towards cost of dredging alongside the berth.

- (B). Cargo handling activity:
- (i). Civil Cost:
 The upfront tariff guidelines specify to rely upon the estimates of the port for civil cost necessary for achieving the optimal terminal capacity. Though the documentary proof for the unit rates considered for estimating the civil cost is not furnished, the JNPT has confirmed that the estimates are based on the costs incurred at other ports recently. The estimated capital cost for civil works includes estimated cost for reclamation of land. The JNPT has confirmed that all projects envisaged in the next five years will require reclamation of land. The DP World and GTIPL have questioned the reasonableness of the estimated capital cost for civil works. At the joint hearing, the JNPT has confirmed that the estimated civil costs are based on the updated market rates and are realistic. The civil cost estimates include provision for miscellaneous items and contingencies to take care of any requirement which is not envisaged in the estimates. The estimation of civil cost made by the JNPT at Rs. 921.54 Crores is relied upon.
- (ii). Container handling equipment cost:
- (a). As has been mentioned earlier, the JNPT has proposed 12 quay cranes for the container terminal to achieve the optimal capacity of 2.39 million TEUs. Considering the deployment of 12 quay cranes, the number of Rubber Tyred Gantry Cranes and Reach Stackers / top lift truck considered by JNPT for estimating container handling equipment cost is in line with the normative level of equipment prescribed in the guidelines.
- (b). The guidelines stipulate deployment of one Rail Mounted Gantry Crane (RMGC) for handling 6 rakes per day. The JNPT has estimated that around 30% of the estimated total traffic will be moved by rail. That being so, around 24 rakes may be required per day for which four number of RMGCs are provided for.
- (c). Going strictly by the guidelines, the requirement of tractor trailers will be 72 tractor trailers for 12 number of quay cranes, at the rate of 6 for one RMQC. The JNPT has estimated 10 tractor trailers for each RMQC based on the prevailing operating standards at the existing container terminals at JNPT. Looking to the current deployment of tractor trailers (17 per RMQC) at the container terminal operated by the JNPT and 14 tractor trailers per RMQC reported by GTIPL, the estimate of 120 tractor trailers for 12 RMQCs reflects the prevailing conditions at the JNPT, and hence is accepted. As stated by GTIPL, the tractor trailers may be required not only for quay-side operations but also for rail-side operations, yard operations and inter terminal movements.
- (d). The JNPT has substantiated the estimated capital cost of the equipments with copies of budgetary quotations. The exchange rate applied by JNPT for conversion of budgetary quotations in US \$ is Rs.42.84 in the case of RMQCs and Rs.39.39 for RMGCs. The unit rates of RMQC and RMGC considered by JNPT are relied upon subject to updating the exchange rate prevailing at the time of analysis of this case. The budgetary quotations furnished by the JNPT in US \$ term are converted into Rupee terms applying the exchange rate of 1 US \$ = Rs.47.81 prevailing at the end of the year 2008. This approach is adopted recognising the facts that other cost estimates are at the 2008 price level and the annual escalation of tariff will be with reference to the base of 2008. The customs duty at 3% of the estimated capital cost of RMQC and RMGC as per the duty rate adopted by JNPT is considered. The unit cost of RMQC and RMGC are taken at Rs.44.61 crores and Rs.22.05 crores respectively in this analysis. Following the same

approach, the estimated unit cost of RTG is considered at Rs.7.38 crores.

- (e). No documentary evidence to support the estimated cost of reach-stackers and tractor trailers has been furnished by the port despite a request made in this regard. The estimated cost of reach-stackers and tractor trailers as furnished by the JNPT are relied upon.
- (f). The revised container handling equipment cost subject to the updatation explained above works out to Rs.975.68 Crores as against Rs. 932.60 Crores estimated by the JNPT.
- (iii). IT system cost and other cost:

The capital cost for IT systems and other items are estimated at 2% and 10%, respectively, as per the norms prescribed in the guidelines, of the sum of the civil cost and container handling equipment cost as explained in the preceding paragraph.
- (iv). Based on the above analysis, the aggregate capital cost works out to Rs.2124.89 Crores as against Rs. 2076.64 Crores estimated by the JNPT.
- (vii). The Return on capital employed at 16% on the modified capital cost of Rs.2124.89 Crores works out Rs.339.98 Crores. The VOTL has stressed the need to increase the return on capital employed to 20% on the ground that the Prime Lending Rate (PLR) has increased from 10-11% when 16% ROCE was finalized. It is relevant here to mention that the rate of ROCE is reviewed by this Authority annually to factor the current market parameters and it is accordingly determined at 16% for the year 2008-09, which is uniformly allowed not only in the case of all major port trusts and private terminals but also in setting upfront tariff as per the Guidelines of 2008.
- (viii). Operating cost:
 - (a). Proposing a deviation from the normative level of power consumption, JNPT has arrived at the total power cost on the basis of unit power cost on the basis of unit power consumption of 13.2 KWH per TEU which was subsequently modified to 12 KWH per TEU. The revised unit power consumption norm proposed to be adopted is based on the observed pattern at the existing terminals for the six month period January 2008 – June 2008. According to JNPT, the norm of 8 KWH per unit prescribed in the guidelines does not take into account the requirements other than the working of RMQCs.

In the light of the explanation offered by JNPT, this Authority is willing to consider a deviation from the norm of 8 KWH / hour set in the guidelines. The JNPT was advised by us to determine power consumption with reference to the equipment and facilities considered at the representative container terminal in reference. Such an analysis is not furnished. The measured data at the existing terminals are not for a longer period of time to even out seasonal and cyclic fluctuations. Besides, any new terminal to be set up is reasonably expected to bring in upgraded technology which, going by the current trend, will move towards greater energy efficiency. Factoring for this reasonable expectation, the measured average power consumption reported by JNPT based on the existing position needs to be scaled down. In the absence of any other structured analysis made available, a 10% reduction in the reported average consumption is effected on an adhoc basis and considered in the calculation of total power cost. The unit cost

of power at Rs.10.34 considered by the JNPT in its calculation is substantiated with documentary support.

- (b). Consumption of fuel is considered by JNPT in its proposal at 4 liters per TEU as per the consumption norms prescribed in the guidelines. The unit cost of fuel is updated to Rs. 38.90 prevailing at the later part of the year 2008.
- (c). As per the norms repairs and maintenance cost is estimated 1% of the revised civil cost and 2% of the revised equipment cost. For this purpose, the JNPT has apportioned other capital cost to the civil cost and equipment cost on the ground that other costs mainly comprises of borrowing and financing cost and as per accounting standards, they have to be capitalized.
- (d). Insurance cost is considered at 1% of the revised gross value of fixed assets and other expenses at 10% of the revised gross value of fixed assets as per the norms prescribed in the guidelines.
- (e). Depreciation, as per the guidelines, should be calculated following the depreciation rates for Straight Line Method (SLM) prescribed in the Companies Act, 1956. Accordingly, depreciation is computed at 3.34% on revised civil cost, 10.34% on revised container handling equipment and 16.21% on IT systems.
- (ix). Lease rental is estimated for a total area of 10,00,000 sq. meters of land. The entire 10,00,000 sq. meters of land is to be reclaimed.

The guidelines stipulate that the lease rental is to be considered as per the rates prescribed in the Scale of Rates of the concerned major port trust. As reported by JNPT, the port levies rentals for the water front area allotted to a private terminal (GTIPL), which is supported by documentary proof. Applying an escalation factor of 5% per annum on the rate of Rs. 14.20 per sq. meter per month for the year 2008-09, the port has derived a rate of Rs. 14.91 per sq. meter per month for the year 2009-10. This rate of Rs. 14.91 is considered by the port for calculation of lease rental estimates.

Recognizing that the representative container terminal considered in this exercise is to use the land of 10,00,000 sq meters by reclamation of water area, which incidentally is the position applicable to any terminals to come up at JNPT in the next 5 years, the unit rate for water front area already being levied by JNPT is taken for arriving at the lease rental payment. However, the rate considered by the JNPT is for the year 2009-10. Since the expenditure estimates for the proposed terminal are based on 2008 levels and escalation is to be allowed in tariff with reference to the WPI of 2008, it is appropriate to consider the rate of Rs. 14.20, which is the rate for the year 2008-09.

As an abundant measure of caution, it is made clear that the acceptance of the unit rate for waterfront area is limited to the estimation of rate for determination of lease rental in this case. This should not be construed as an incidental approval to the rate applied by JNPT to raise bill on the GTIPL for the water area, which, it appears necessary to be regularised by including in the approved Scale of Rates of JNPT.

- (x). 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. In the meanwhile, the guidelines prescribed for other terminals for calculation of berth hire applied in this case also. The guidelines in those cases require the

operating cost for berthing services to be estimated 1% of the berth cost. The JNPT has considered maintenance cost at 1% of the berth construction cost. The alongside dredging cost has not been considered for estimation of maintenance cost on the ground that JNPT will carry out the maintenance dredging.

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 for this position was recognized and the cost of insurance and depreciation were considered to assess the Annual Revenue Requirement from berthing service.

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

- (xi). The statement for fixing upfront tariff submitted by JNPT is modified in line with the above analysis. A copy of the statement is attached as **Annex-I**.
 - (a). The total Annual Revenue Requirement for the container handling activity works out to Rs.837.16 Crores which is an aggregate of 16% return on capital cost (Rs.339.98 Crores) and operating cost (Rs.497.18 Crores).
 - (b). The guidelines require 90% of the ARR to be apportioned to handling charges, 7% towards storage charge and 3% to miscellaneous charge. Accordingly, Rs.753.44 Crores is to be realized from container handling charges, Rs.58.60 Crores from storage charge and Rs.25.11 Crores from miscellaneous charges to meet the total ARR of Rs.837.16 Crores.
 - (c). The total Annual Revenue Requirement for the berthing activity works out to Rs.120 Crores which is an aggregate of 16% return on capital cost (Rs.90.33 Crores) and Operating Cost (Rs.29.67 Crores).
- (xii).
 - (a). The guidelines do not prescribe any specific methodology for framing the Scale of Rates. The container handling charges include tariff items for various services. Further, the rates differ based on the type and size of containers.
 - (b). 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 recently setting upfront tariff for container handling at Tuticorin Port Trust.
 - (c). The JNPT has taken the existing Scale of Rates for its terminal as the base to arrive at the proposed Scale of Rates to meet the ARR. With respect to the four types of major container handling activities, namely, movement of containers from ship to Container Yard (CY), Yard to Container Freight Station (CFS), Yard to Railway Flat and Yard to Truck (direct delivery), the JNPT has assumed that the present container traffic mix in the port is likely to be replicated in the proposed standard container terminal.
 - (d). Taking into consideration the actual container mix for the year 2007-08 at container terminal of the JNPT, the port has proposed the container mix for the estimated optimal capacity of the container terminal.

Accordingly, applying the existing rates for container handling activity prescribed in the Scale of Rates of the JNPT for the said four activities, it is seen that the annual revenue works out to only Rs.559.41 crores as against the ARR for container handling activity at Rs.753.44 crores. This requires that the existing handling rates at JNPT are to be increased by 34.69% to meet the revenue target.

- (e). Miscellaneous charges are proposed to be recovered through services provided for reefer monitoring and connection, any additional services provided in the container yard for customs inspection, hatch cover opening and replacing, storage of uncleared goods, etc. The JNPT has not furnished working to verify whether the proposed rates will meet the estimated revenue requirement through levy of miscellaneous charges. Based on the revenue requirement of Rs.24.69 Crores estimated by JNPT and considering the revised revenue requirement of Rs.25.11 Crores, the proposed rates for such miscellaneous service is increased by 1.70%.
- (xiii). 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, the dollar denominated container related tariff and berth hire in this case also are prescribed in rupee terms.
- (xiv). The revenue requirement from berthing service is estimated at Rs.120.00 crores (i.e. Rs.90.33 crores being 16% return on capital cost of Rs.564.56 crores and operating cost of Rs.29.67 crores) at the level estimated by the port.

For the purpose of deriving the unit rate of berth hire from the calculated annual revenue requirement from this activity, the JNPT has assumed six categories of ships depending on the LOA. For each category the proposal assumes average parcel size, average GRT and the share of container to be carried by ships falling under each category. While these basic assumptions are accepted in toto, the methodology adopted to derive unit rate appears to suffer from a logical defect. Since the berth occupancy for each category is basically a function of the ship output, it may not be correct to derive the rate based on a simple average. The berth occupancy for the different category of vessels needs to be determined separately as a vessel output and the parcel size vary considerably between the different categories. If the unit rate proposed by the JNPT is applied to individual category and the annual revenue requirement is calculated, it comes to Rs. 259.48 crores which is 116% higher than the required revenue of Rs.120.00 crores.

The calculation furnished by JNPT is modified to the extent of arriving at the GRT hours for individual category. For this purpose the number of RMQC, deployable which essentially determines the ship output, is considered at the optimum feasible level. The calculation sheet is attached as **Annex-II**. As it can be seen from the calculation sheet, the unit rate of berth hire will be Rs.1.232 per GRT per hour in case of foreign going vessel and Rs.0.739 per GRT per hour for coastal vessel. As has been mentioned earlier, it has already been decided that the upfront tariff will be denominated annually in rupee terms.

- (xv). Since the berth hire charges and container related charges are denominated in Indian rupees, the proposed conditionalities to convert dollar denominated berth hire charges and container related charges become infructuous and hence deleted. Likewise, the conditionality for regular review of exchange rate is also deleted.
- (xvi). Since the upfront tariff fixed is for handling containers, the proposed units like 1 tonne, 1 cubic metre, and 1000 litres for the purpose of calculating dues do not appear to be relevant and hence deleted.
- (xvii). 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 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.
- (xviii). As per Clause 3.8.5. of the guidelines, if any question arises requiring clarification or interpretation of the Scale of Rates and the statement of conditionalities, the matter shall be referred to this Authority. Therefore, the proposed conditionality to refer to the Scale of Rates of JNPT for clarification in case of any doubt or ambiguity is deleted.
- (xix). Since the levy of Service Tax is governed by the relevant statute, the proposed conditionality governing levy of Service Tax is not included in the Scale of Rates.
- (xx). Some of the common condition stipulated in the guidelines of 2005 and uniformly prescribed in the Scale of Rates of other major ports / private terminals such as users not requiring to pay charges for delays beyond reasonable level, stoppage of berth hire after the vessel signaling readiness to sail, non-accrual of storage charge for the period when the operator could not deliver, non-levy of berth hire charges for the period, when a vessel idles at berth due to the reasons attributable to the operator and conditionalities governing the levy of storage charges on abandoned FCL containers / shipper owned containers are included in the upfront tariff schedule.
- (xxi). The proposed conditionalities to govern the levy of berth hire charges and penal berth hire charges are in line with the existing conditionalities prescribed in the Scale of Rates of JNPT.
- (xxii). The rate 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 JNPT.
- (xxiii). A premium of 25% is proposed on hazardous cargo containers over the handling charges by quay crane transportation from quay to yard, yard to CFS, yard to rail and yard to truck over the rate prescribed for normal container. The tariff guidelines of 2005 allow 25% premium on hazardous cargo container over the applicable handling charges. Hence, the tariff proposed for hazardous cargo containers is prescribed at 25% over the revised handling charge prescribed for the normal containers.
- (xxiv). The JNPT has also proposed 100% premium on over dimensional containers. It is relevant here to mention that this Authority has prescribed the premium at the stated level on handling charges of over dimensional containers in case of the container terminal of JNPT, Nhava Sheva International Container Terminal Limited and Gateway Terminals India Private Limited. Based on the position obtained at the existing terminals at JNPT, the 100% premium proposed in the case of over dimensional containers is accepted with suitable modification in the rates.

- (xxv). (a). The JNPT has proposed 2 days free dwell time for import container and 3 days free dwell time for export containers. The free dwell time proposed for ICD (import or export) containers, transshipment loaded containers, and transshipment empty containers are 5 days, 15 days and 7 days respectively. The tariff guidelines of 2005 give the flexibility to individual major ports to propose the number of free storage days. The free period proposed by JNPT is considered for fixing the upfront tariff scheduled of the container terminal.
- (b). It is estimated to recover Rs.57.62 crores through the dwelling time charges of various containers. The recovery through ground rent charges to be made by the operator is sought to be made from non ICD containers only. It is further reported by the port that the dwell time charges can be made for all non ICD import and export volume pertaining to one day dwell time charges.

Based on the revised revenue requirement of Rs.58.6 crores, the storage charge estimated by JNPT is modified following the same approach adopted by JNPT and the differential rate between the slabs followed by JNPT.

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.

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 JNPT. If any action is to be taken against the private operators, the JNPT 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 JNPT 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 tariff caps for the container terminal at JNPT as attached in **Annex-III**.

(Brahm Dutt)
Chairman

FORMULATION OF UPFRONT TARIFF FOR CONTAINER TERMINAL AT JAWAHARLAL NEHRU PORT TRUST (JNPT).

Sr. No	Particulars	Norms prescribed in the guidelines	As proposed by the JNPT		As considere d by TAMP
			Calculation furnished by JNPT	Values considered by JNPT	
I	<u>Optimal capacity</u>				
(i)	<u>Optimal Quay Capacity</u>				
	A = Number of Gantry Cranes deployed for work in an year.	= Berth Length / 100	= 1000 / 83	12	12
	B = Number of working hours of gantry cranes in an year.	= 24 * 365 hours	= 24 * 365 hours	8760	8760
	C = Average number of moves per gantry crane.	= 25 moves per hour	= 25 moves per hour	25	25
	D = TEU ratio	= 1.3	= 1.3	1.3	1.3
	E = 70%	= 70%	= 70%	70%	70%
	Thus, Optimal Quay Capacity = A * B * C * D * E TEUs			2391480	2391480
(ii)	<u>Optimal Yard Capacity</u>				
	G = Total Ground Slot in TEUs	= 720 TEUs per hectare	= 490000 sq. mts / 35 sq. mtr per ground slot = 14000 ground slots	14000	14000
	H = Average Stack height	= 2.50		3.0	3.0
	P = Period in number of days	= 365		365	365
	S = Surge factor	= 1.3		1.3	1.3
	D = Average Dwell Time	= 4 days for Export & 2 days for Import	Average dwelling time considering 50% exports and 50% imports.	3.00	3.00
	Thus, Optimal Yard Capacity = 0.7 *G*H*P_ In TEUs			2751538	2751538
	S * D				
(iii)	Optimal capacity of the Terminal - lower value of the optimal quay capacity and optimal stack yard capacity (in TEUs).			2391480	2391480
II	<u>Capital Cost</u>				
(i).	<u>Container Handling Activity</u>			Rs. in Crores	Rs. In crores
	(a). Civil Cost	As estimated by the Port.			
	(i). Reclamation			530.69	530.69
	(ii). Container Yard			267.81	267.81
	(iii). Buildings			22.29	22.29
	(iv). Electrical			53.66	53.66
	(v). Miscellaneous			47.09	47.09
	Subtotal (a)			921.54	921.54
	(b). Container Handling Equipment Cost	Norms			
	(i) Quay Gantry Crane	1 no. for 100 metres berth length	12 Nos * unit rate Rs.43 crores (12 cranes @ Rs.44.61 crores each considered in our calculation)	516.00	535.34
	(ii) Rail Mounted Gantry Crane	1 no. for handling 6 rakes/ day	4 Nos * unit rate Rs.15 crores (4 RMGCs @ Rs.22.05 crores each considered in our calculation)	60.00	88.19
	(iii)Rubber Tyred Gantry Crane	3 nos. for each Quay Gantry crane	36 Nos * unit rate Rs.7.50 crores (36 RTGs @ Rs.7.38 crores each considered in our calculation)	270.00	265.56
	(iv) Reach Stacker/ Top Lift Truck	1 no. for 9 RTG's	4 Nos * unit rate Rs.2.15 crores (4 Nos. @ Rs.2.15 crores each considered in our calculation)	8.60	8.60
	(v) Tractor Trailers	6 nos. for each Quay Gantry Crane	120 Nos * unit rate Rs.0.65 crores (120 Nos. @ Rs.0.65 crores each considered in our calculation)	78.00	78.00
	Subtotal (b)			932.60	975.68
	Subtotal (a +b)			1854.14	1897.22
	(c) IT System Cost	2% of Civil & Equipment Cost	2% * Rs.1854.14 crores (on Rs.1897.22 crores in TAMP estimation)	37.08	37.94
	(d) Other Cost	10% of Civil & Equipment Cost	10% * Rs.1854.14 crores (on Rs.1897.22 crores in TAMP estimation)	185.41	189.72
	(e). Total Capital Cost (a + b + c + d)			2076.64	2124.89
(ii)	<u>Berthing Activity</u>				
	(a). Berth Construction Cost	As estimated by the Port.		515.72	515.72
	(b). Dredging Cost	As estimated by the Port.		48.84	48.84
	(c). Total Cost (a + b)			564.56	564.56
(iii)	Total Capital Cost of the Project (i+ ii)			2641.20	2689.45

Sr. No	Particulars	Norms prescribed in the guidelines	As proposed by the JNPT		As considere d by TAMP
			Calculation furnished by JNPT	Values considered by JNPT	
III	<u>Operating Cost Estimation</u>				
(i)	<u>Container Handling Activity</u>				
	(a). Power Cost	8 KWH per TEU * Prevailing unit rate	12 KWH * Rs.10.3/ KWH (10.8 KWH * Rs.10.3/ KWH considered by us)	29.56	26.60
	(b). Fuel	4 litres per TEU * Prevailing unit rate	4 litres * Rs.40 per litre (4 litres * Rs.38.90 per litre considered by us)	38.26	37.21
	(b). Repair & Maintenance				
	- Civil Assets	1% of cost of Civil assets	1% of revised civil cost of Rs.1011.88 crores (1% of revised civil cost of Rs.1013.69 crores considered by	10.12	10.14
	- Equipment	2% of cost of Equipments	2% of revised Equipment cost of Rs.1027.67 crores (2% of revised Equipment cost of Rs.1073.25 crores considered by us)	20.56	21.46
	(c). Insurance	1% of Gross fixed assets	1% * Rs.2076.64 crores (1% * Rs.2124.89 crores considered by us)	20.77	21.25
	(d). Depreciation	As per Companies Act or provisions of LA whichever is higher	As per Companies Act	146.07	150.98
	(e). License Fee	As per the Rates prescribed in the Scale of Rates of the concerned Port Trusts	1000000 sq mtres * Rs. 14.91 /sq.mtr. per mth (1000000 sq mtres * Rs. 14.20/sq.mtr. per mth considered by us)	17.89	17.04
	(f). Other Expenses (for terminals having more than 0.5 million TEUs)	10% of Gross fixed assets value	10% * Rs.2076.64 crores (10% * Rs.2124.89 crores considered by us)	207.66	212.49
	Total Operating Cost (a to f)			490.89	497.18
(ii)	<u>Berthing Activity</u>				
	(a). Maintenance Charges	1% of Berth construction Cost	1% of Berth construction Cost	5.16	5.16
	(b). Insurance cost	1% of Gross fixed assets	1% of Gross fixed assets	5.65	5.65
	(c). Depreciation	As per Companies Act or provisions of LA whichever is higher	As per Companies Act	18.86	18.86
	Total Operating Cost (a to c)			29.67	29.67
IV	<u>Annual Revenue Requirement (ARR)</u>				
(i)	<u>Annual Revenue Requirement of Handling Activity</u>				
	(a). Total Operating Cost			490.89	497.18
	(b). Return on capital Employed @ 16%			332.26	339.98
	(c).Total Revenue requirement			823.15	837.16
	Apportionment of Revenue Requirement	% of total ARR			
	(a) Container Handling Charges	90%	90%	740.83	753.44
	(b) Storage Charges	7%	7%	57.62	58.60
	(c) Miscellaneous Charge	3%	3%	24.69	25.11
	(d).Total Revenue requirement		100%	823.15	837.16
(ii)	<u>Annual Revenue Requirement of Berthing Activity</u>				
	(a). Total Operating Cost			29.67	29.67
	(b). Return on capital Employed @ 16%			90.33	90.33
	(c).Total Revenue requirement			120.00	120.00

Annex - II

CALCULATION OF BERTH HIRE CHARGES

LOA (metres)	Average Parcel size (2)	No. of ships (3)	Average GRT (4)	No. of cranes to be deployed (5)	No. of hours vessel stays at berth (6)	GRT Hours
	(Given by JNPT)	(Given by JNPT)	(Given by JNPT)	(Assumed)	(2 / (5 * 22.75 moves)	(3 * 4 * 6)
0-140	434.16	276	8040	2	9.54	21173908
140-180	631.84	530	15200	3	9.26	74580316
180-220	1432.42	317	28000	3	20.99	186288426
220-260	2500.00	239	36000	4	27.47	236373626
260-300	3500.00	239	48000	4	38.46	441230769
300+	4000.00	12	72000	5	35.16	30382418
		1613				990029463

Berth hire Revenue Requirement
 Total GRT hours
 Berth Hire per GRT per hour or part thereof

1199987040 Rupees
 990029463 hours
1.212

Total Revenue Requirement for 96% foreign going vessels + 4% Coastal vessels

GRT Hours of foreign going vessels (990405600 * 96%)

GRT Hours of coastal vessels (990405600 * 4%)

Thus, 950789376 x + 0.6 * 39616224 x = 1199987040

950789376 x + 23769734 x = 1199987040

974559110 x = 1199987040

x (Foreign going) = Rs. 1.232

0.6 * 1.232 (coastal) = Re. 0.739

1199987040

950428284.8

39601179

JAWAHARLAL NEHRU PORT TRUST
UPFRONT TARIFF SCHEDULE FOR CONTAINER TERMINAL

CHAPTER 1 – DEFINITIONS & GENERAL TERMS & CONDITIONS

1.1. DEFINITIONS – GENERAL

- (i). **“Coastal vessel”** shall mean any vessel exclusively employed in trading between any port or place in India to any other port or place in India having a valid coastal licence issued by the competent authority.
- (i) **“Foreign-going vessel”** shall mean any vessel other than Coastal vessel.
- (ii) **“FCL”** means Containers said to contain Full Container Load.
- (iii) **“LCL”** means Containers said to contain Less than full Container Load (Container having cargo of more than one importer/exporter).
- (iv) **“Hazardous container”** means a Container containing hazardous goods as classified under IMO.
- (v) **“Import container”** means a container discharged from one vessel, stored in container yard and transported out through Road or Train.
- (vi) **“Export container”** means a container arrived by road or Train, stored in container yard and loaded on the assigned vessel.
- (vii) **“Port area”** means the custom bound area / Port operational Area of the Port.
- (viii) **“Normal Container”** shall mean general type containers, not falling under special categories mentioned subsequently.
- (ix) **“Reefer Container”** shall mean a refrigerated container used for carriage of perishable goods with provision for electrical supply to maintain the desired temperature.
- (x) **“Hazardous Container”** shall mean a container containing hazardous goods as classified under IMO.
- (xi) **“Transshipment Container”** shall mean a container, which is discharged from one vessel, stored in the yard and transported through other vessel.
- (xii) **“Over dimensional Container”** shall mean a container carrying over dimensional cargo beyond the normal size of standard container and needing special devices like slings, shackles, lifting beam etc. They also include damaged containers and other types which require special devices.
- (xiii) **“Shut out Container”** shall mean a container which enters into the port as an export intake for a particular vessel (as indicated by the Vessel Identification Advice Number, i.e. VIA No.) and is not connected to the particular vessel for reasons whatsoever, then the container is termed to be a shutout container.
- (xiv) **“Back To Town Container”** shall mean a container entering the port for export but unable to be exported for whatever reason and taken back to town.
- (xv) **“VIAN”** means Vessel Identification Advice Number.

1.2. GENERAL TERMS & CONDITIONS

- (i)
 - (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 Licence issued by the Director General of Shipping.
 - (c). In cases of such conversion, coastal rates shall be chargeable by the load port from the time the vessel starts loading coastal goods.
 - (d). In cases of such conversion coastal rates shall be chargeable only till the vessel completes coastal cargo discharging operations; immediately thereafter, foreign-going rates shall be chargeable by the discharge ports.
 - (e). For dedicated Indian coastal vessels having a Coastal Licence from the Director General of Shipping, no other document will be required to be entitled to Coastal rates.
- (ii) The status of the vessel, as borne out by its certification by the Customs or the Director General of Shipping, shall be the deciding factor for classifying into 'coastal' or 'foreign-going' category for the purpose of levying vessel related charges; and, the nature of cargo or its origin will not be of any relevance for this purpose.
- (iii) Vessel related charges shall be levied on Shipowners/Steamer Agents.
- (iv).
 - (a). The Vessel related charges for all Coastal vessels should not exceed 60% of the corresponding charges for other vessels.
 - (b). The container related charges for all Coastal should not exceed 60% of the normal container related charges.
 - (c). In case of container related charges, the concession is applicable on composite box rate. Where itemized charges are levied, the concession will be on all the relevant charges for ship-shore transfer, and transfer from / to quay to / from storage yard as well as wharfage on cargo and containers.
 - (d). For the purpose of this concession, container from a foreign port which reaches an Indian Port 'A' for subsequent transshipment to Indian Port 'B' will also qualify insofar as the charges relevant for its coastal voyage. In other words, cargo/containers from/to Indian Ports carried by vessels permitted to undertake coastal voyage will qualify for the concession.
 - (e). The charges for coastal containers / vessels shall be denominated and collected in Indian Rupee.
- (v). Interest on delayed payments / refunds:
 - (a). The user shall pay penal interest on delayed payments under this Scale of Rates. Likewise, the 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 operator and the 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 operator. This provision shall, however, not apply to the cases where payment is to be made before availing the services / use of Port Trust's properties as stipulated in the Major Port Trust Act and / or where payment of charges in advance is prescribed as a condition in this Scale of Rates.
- (vi). All charges worked out shall be rounded off to the next higher rupee on the grand total of each bill.
- (vii).
 - (a). The rates prescribed in this Scale of Rates are ceiling levels; likewise, rebates and discounts are floor levels. The operator may, if he so desires, charge lower rates and/ or allow higher rebates and discounts.
 - (b). The Operator may also, if it so desires, rationalize the prescribed conditionalities 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 operator should notify the public such lower rates and / or rationalization of the conditionalities governing the application of such rates and continue to notify the public any further changes in such lower rates and / or in the conditionalities governing the application of such rates provided the new rates fixed shall not exceed the rates notified by the TAMP.
- (viii). The users will not be required to pay charges for delays beyond a reasonable level attributable to the operator.

CHAPTER 2 – VESSEL RELATED CHARGES

2. Schedule of Berth Hire Charges

S. No.	Description	Rate per GRT per hour or part thereof (Rs)	
		Foreign - Vessel	Coastal Vessel
1	For Occupying the Berth	1.232	0.739

Notes

- (1). Vessels shall be permitted to occupy the berth for 2 hours after completion of cargo operation without attracting Penal berth hire charges.
- (2). All the vessels shall commence cargo operations within 1 hour from the time the ship is brought along side the berth failing which penal berth hire charges shall be levied as prescribed in (4) below.
- (3). Vessels idling the Terminal facilities due to not being ready to work even though the terminal is ready for its operation shall attract penal berth hire charges as prescribed in Note (4) below. For the purpose of levy of penal berth hire charges, idling shall mean suspension/stoppage for any reason of cargo handling operation continuously for more than two hours.
- (4). Penal berth hire charges shall be levied as follows in addition to berth hire charges beyond 2 hours:

S. No.	Description	Rate Per GRT
1	Upto 6 hrs	Rs 10
2	above 6 hours but upto 12 hours	Rs 15
3	Above 12 hrs	Rs 30

- (5). Penal berth hire charges mentioned above shall not be leviable if the idling of vessel is attributable to the terminal or port or due to adverse tidal conditions or bad weather and rain resulting in stoppage of operation.
- (6).
 - (a). There shall be a time limit beyond which berth hire shall not apply; berth hire shall stop 4 hours after the time of vessel signalling its readiness to sail. The time limit of 4 hours prescribed for cessation of berth hire shall exclude the ship's waiting period for want of favourable tidal conditions or on account of inclement weather or due to absence of night navigation facilities.
 - (b). There shall be a "penal berth hire" equal to one day's berth hire charges for a false signal.
 - (c). The Master / Agent of the vessel shall signal readiness to fail only in accordance with favourable tidal and weather conditions.
 - (d). The time limit of 4 hours prescribed for cessation of berth hire shall exclude the ship's waiting period for want of favourable tidal conditions.
- (7). Berth hire charges shall not be levied for the period, when a vessel idles at berth due to breakdown of port equipment or power failure or any other reasons attributable to the operator.

**CHAPTER 3 – CHARGES FOR SERVICES RENDERED TO CONTAINERS AND
CONTAINERIZED CARGO**

GENERAL TERMS AND CONDITIONS:

- (i). 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 a normal import container and prescribed charges as applicable shall be payable.
- (ii). Containers less than and up to 20' will be reckoned as one TEU (Twenty Equivalent Unit) and more than 20' and up to 40' will be reckoned as one FEU (Forty Equivalent Unit) for the purpose of tariff.
- (iii). All charges for containers more than 20' in length and up to 40' in length will be 150 per cent of the applicable charges prescribed.
- (iv). Containers other than that of standard size requiring special devices/slings/handling will be charged twice the applicable rates. Such containers will also include damage containers and any other type requiring special devices.

3.1. CHARGES FOR HANDLING AND MOVEMENT OF CONTAINERS:

The following consolidated charges for handling and movement of container shall be payable by the Shipping Lines or Agents of vessels or cargo agents for services rendered in respect of containers and containerised cargo passing through the port

A. Normal Containers

S. No	Description	Rate per TEU (in Rs)			
		Foreign Container		Coastal Container	
		Loaded	Empty	Loaded	Empty
1	From Ship to container yard or vice versa	2976.65	2404.22	1785.99	1442.53
2	From Container yard to Railway flat or vice versa (ICD Container Rail only)	1488.32	1488.32	1488.32	1488.32
3	From Container yard to Truck or vice versa (direct delivery and export intake).	457.95	457.95	457.95	457.95

B. Reefer Containers

S. No	Description	Rate per TEU (in Rs)			
		Foreign Container		Coastal Container	
		Loaded	Empty	Loaded	Empty
1	From Ship to container yard or vice versa	2976.65	2404.22	1785.99	1442.53
2	From Container yard to Railway flat or vice versa (ICD Container Rail only)	1488.32	1488.32	1488.32	1488.32
3	From Container yard to Truck or vice versa (direct delivery and export intake).	457.95	457.95	457.95	457.95

C. Hazardous Containers

S. No.	Description	Rate per TEU (in Rs.)	
		Foreign Container	Coastal container
		Loaded	Loaded
1	From Ship to container yard or vice versa	3721.48	2233.16
2	From Container yard to Railway flat or vice versa (ICD Container Rail only)	1860.07	1860.07
3	From Container yard to Truck or vice versa (direct delivery and export intake).	572.43	572.43

D. Transshipment Containers

S. No	Description	Rate per TEU (in Rs)			
		Foreign Container		Coastal Container	
		Loaded	Empty	Loaded	Empty
1	1 - 3000 TEUs	3434.59	2976.65	2060.75	1785.99
2	3001 - 6000 TEUs	3205.62	2747.68	1923.37	1648.61
3	6001 - 9000 TEUs	2976.65	2518.70	1785.99	1511.22
4	Thereafter	2747.68	2289.73	1648.61	1373.84

Notes

- (1). Rate is based on total TEUs brought by the Shipping Lines or agents in the same financial year.
- (2). 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 a normal import container and prescribed charges as applicable shall be payable.

E. Over Dimensional Cargo Containers

S. No	Description	Rate per TEU (in Rs)			
		Foreign Container		Coastal Container	
		Loaded	Empty	Loaded	Empty
1	From Ship to container yard or vice versa	5953.30	4808.43	3571.98	2885.06
2	From Container yard to Railway flat or vice versa (ICD Container Rail only)	2976.65	2976.65	2976.65	2976.65
3	From Container yard to Truck or vice versa (direct delivery and export intake).	915.89	915.89	915.89	915.89

Note: The consolidated charges as above include the following elements, viz. stevedoring, use of Gantry crane, use of transfer crane, wharfage on tare weight of containers, wharfage on containerized cargo, transportation and contribution towards railway infrastructure.

3.2. DWELL TIME CHARGES FOR CONTAINER, STORED IN THE PORT PREMISES:

Sl. No.	Particulars	Rate per container per day or part thereof (in Rupees)		
		Upto 20' in length	Over 20' to upto 40' in length	Above 40' in length
1	Non-ICD/ CFS Import - loaded			
	First 2 days	Free	Free	Free
	3-6 days	364	728	1092
	7-9 days	433	866	1299
	10-12 days	515	1030	1545
	13-15 days	612	1224	1836
	16-18 days	727	1454	2181
	19-22 days	865	1730	2595
	23-26 days	1029	2058	3087
	27-30 days	1223	2446	3669
	Thereafter	1455	2910	4365
2	Non-ICD/ CFS Import - Empty			
	First 2 days	Free	Free	Free
	3-6 days	364	728	1092
	7-9 days	433	866	1299
	10-12 days	515	1030	1545
	13-15 days	612	1224	1836
	16-18 days	727	1454	2181
	19-22 days	865	1730	2595
	23-26 days	1029	2058	3087
	27-30 days	1223	2446	3669
	Thereafter	1455	2910	4365
3	Non-ICD/ CFS Export - Loaded			
	First 3 days	Free	Free	Free
	4-6 days	364	728	1092
	7-9 days	433	866	1299
	10-12 days	515	1030	1545
	13-15 days	612	1224	1836
	16-18 days	727	1454	2181
	19-22 days	865	1730	2595
	23-26 days	1029	2058	3087
	27-30 days	1223	2446	3669
	Thereafter	1455	2910	4365
4	Non-ICD/ CFS Export - Empty			
	First 3 days	Free	Free	Free
	4-6 days	364	728	1092
	7-9 days	433	866	1299
	10-12 days	515	1030	1545
	13-15 days	612	1224	1836
	16-18 days	727	1454	2181
	19-22 days	865	1730	2595
	23-26 days	1029	2058	3087
	27-30 days	1223	2446	3669

Sl. No.	Particulars	Rate per container per day or part thereof (in Rupees)		
		Upto 20' in length	Over 20' to upto 40' in length	Above 40' in length
	Thereafter	1455	2910	4365
5	CFS Import loaded - moved by road			
	First 2 days	Free	Free	Free
	3-6 days	364	728	1092
	7-9 days	433	866	1299
	10-12 days	515	1030	1545
	13-15 days	612	1224	1836
	16-18 days	727	1454	2181
	19-22 days	865	1730	2595
	23-26 days	1029	2058	3087
	27-30 days	1223	2446	3669
	Thereafter	1455	2910	4365
6	CFS Import empty - moved by road			
	First 2 days	Free	Free	Free
	3-6 days	364	728	1092
	7-9 days	433	866	1299
	10-12 days	515	1030	1545
	13-15 days	612	1224	1836
	16-18 days	727	1454	2181
	19-22 days	865	1730	2595
	23-26 days	1029	2058	3087
	27-30 days	1223	2446	3669
	Thereafter	1455	2910	4365
7	CFS Export loaded - moved by road			
	First 3 days	Free	Free	Free
	4-6 days	364	728	1092
	7-9 days	433	866	1299
	10-12 days	515	1030	1545
	13-15 days	612	1224	1836
	16-18 days	727	1454	2181
	19-22 days	865	1730	2595
	23-26 days	1029	2058	3087
	27-30 days	1223	2446	3669
	Thereafter	1455	2910	4365
8	CFS Export empty - moved by road			
	First 3 days	Free	Free	Free
	4-6 days	364	728	1092
	7-9 days	433	866	1299
	10-12 days	515	1030	1545
	13-15 days	612	1224	1836
	16-18 days	727	1454	2181
	19-22 days	865	1730	2595
	23-26 days	1029	2058	3087
	27-30 days	1223	2446	3669
	Thereafter	1455	2910	4365

Sl. No.	Particulars	Rate per container per day or part thereof (in Rupees)		
		Upto 20' in length	Over 20' to upto 40' in length	Above 40' in length
9	ICD Import and Export loaded or empty - moved by rail			
	First 5 days	Free	Free	Free
	5-15 days	727	1454	2181
	16-30 days	1455	2910	4365
	Thereafter	2910	5820	8730
10	Transshipment - Loaded			
	First 15 days	Free	Free	Free
	16-30 days	1455	2910	4365
	Thereafter	2910	5820	8730
11	Transshipment - Empty			
	First 7 days	Free	Free	Free
	8-15 days	865	1730	2595
	Thereafter	2910	5820	8730

Notes:

- (1). The total storage period for a container shall be reckoned from the day following the day of landing upto the day of shipment/delivery/date of removal of the container and includes Sundays and Holidays but excludes Custom notified holidays and port non working days.
- (2). Transshipment containers subsequently changing the mode of dispatch locally or to the container freight station for destuffing/stuffing shall loose the concessional dwell time as prescribed in Item (4) above. Dwell time charges for such containers shall be recovered at par with import containers as prescribed in item no. 1 or 2 as applicable.
- (3). Transshipment containers subsequently changing the mode of dispatch by rail to ICD shall be treated as other ICD containers for the purpose of levy of Dwell time charges fees and shall be charged at the rates in item (4) above. In such cases additional shifting charge will be applicable for movement of container to container yard to ICD yard.
- (4). A container from foreign port landing at the container terminal for subsequent transshipment to an Indian Port on a coastal voyage or vice versa would be charged at 50% of the transshipment charges prescribed for foreign going vessels and 50% of that prescribed for coastal category.
- (5). Normal import containers subsequently changing the mode of dispatch by rail to ICD will enjoy the free period applicable to normal import container only. In such cases additional shifting charges will be applicable for movement of container from container yard to ICD yard.
- (6). The total storage period for a shutout container shall be calculated from the day following the day when the container has become shutout till the day of Shipment/ delivery.
- (7). Over high and over dimensional containers shall attract thrice the normal applicable charges.
- (8). Hazardous containers shall attract 1.25 times the normal applicable charges.

- (9). In case of stuffing the containers inside the port, the dwell time charges will be applicable as follows:
- (i). Prior to stuffing, dwell time charges as applicable to empty containers will be charged.
 - (ii). Free period and dwell time charges as applicable to loaded export containers will be charged from the day following the day of completion of stuffing and intimation to Port.
- (10). In the case of auction containers, after the auction is over, the empty containers will attract the dwell time charges as empty containers from the following day the destuffing is completed.
- (11). The storage charges shall not accrue for the period during which the Terminal is not in a position to deliver containers for reasons attributable to it when requested by the user.
- (12). The storage charges on abandoned FCL containers/shipper owned containers shall be levied upto the date of receipt of intimation of abandonment in writing or 75 days from the day of landing of the container, whichever is earlier subject to the following:
- (i). The consignee can issue a letter of abandonment at any time.
 - (ii). If the consignee chooses not to issue such letter of abandonment, the container Agent/MLO can also issue abandonment letter subject to the condition that,
 - (a) the Line shall resume custody of container along with cargo and either take back it or remove it from the port premises; and
 - (b) the line shall pay all port charges accrued on the cargo and container before resuming custody of the container.
 - (iii). The container Agent /MLO shall observe the necessary formalities and bear the cost of transportation and destuffing. In case of their failure to take such action within the stipulated period, the storage charge on container shall be continued to be levied till such time all the necessary actions are taken by the shipping lines for destuffing of cargo.
 - (iv). Where the container is seized/confiscated by the Custom Authorities and the same cannot be destuffed within the prescribed time limit of 75 days, the storage charges will cease to apply from the day the Custom order release of the cargo subject to lines observing the necessary formalities and bearing the cost of transportation and de-stuffing. Otherwise, seized/confiscated containers should be removed by the line/consignee from the port premises to the Customs bonded area and in that case the storage charge shall cease to apply from the day of such removal.

3.3. CHARGES FOR MISCELLANEOUS SERVICES RENDERED TO THE CONTAINER VESSELS:

A. Reefer Monitoring and Connection

SI No	Description	Rate Per TEU (in Rs.)			
		Foreign Going Vessel		Coastal Vessel (in Rs)	
		Loaded	Empty	Loaded	Empty
1	Additional charges per 4 hours or part thereof for electricity consumption and monitoring of reefer containers	223.27	223.27	223.27	223.27

Note:

Additional electricity charge at the prescribed rates will be applicable in case of Reefer Containers also

B. Other Services Rendered

SI No	Description	Rate Per TEU (In Rs)			
		Foreign Going Vessel		Coastal Vessel	
		Loaded	Empty	Loaded	Empty
1	Shifting of containers from one yard to a another yard within the terminal for customs inspection or any other purpose and subsequent loading of containers for delivery.	1928.23	1928.23	1928.23	1928.23
2	Additional service charges for stacking containers in designated yard for custom examination or for any other purpose by prior arrangement.	226.79	226.79	226.79	226.79

C. Opening of Hatch Cover and Replacing it

SI No	Description	Rate per Hatch Cover (in Rs.)	
		Foreign Going Vessels	Coastal Vessels
1	When placing it on the Quay	3349.57	2009.74
2	Without placing it on the Quay	1339.63	803.78

Note: If only one operation is carried out, half of the hatch cover handling charges as above shall be levied.

D. One Hatch to Another Hatch or within the Same Hatch

SI No	Description	Rate per TEU (in Rs.)			
		Foreign Going Vessels		Coastal Vessels	
		Loaded	Empty	Loaded	Empty
(a)	Hatch to hatch shifting (involving 1 move only)	1116.37	1116.37	669.82	669.82
(b)	Other than (a) mentioned above	4465.93	4465.93	2679.56	2679.56

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SUMMARY OF THE COMMENTS RECEIVED FROM THE PORT USERS / DIFFERENT USER ORGANISATIONS / POTENTIAL BIDDERS AND ARGUMENTS MADE IN THIS CASE DURING THE JOINT HEARING BEFORE THE AUTHORITY.

No.TAMP/48/2008-JNPT

- Proposal from the Jawaharlal Nehru Port Trust for fixation of upfront tariff for PPP Projects at JNPT.

1. A summary of comments received from users / user organisations / qualified bidders and the comments of Jawaharlal Nehru Port Trust (JNPT) thereon are tabulated below:

Sr. No.	Comments of the potential bidders	Comments of JNPT thereon
1.	<u>Lanco Infratech Limited (LIL)</u>	
	(i). It is understood that the present proposal is for fixation of upfront tariff for the proposed 4 th container terminal and will in no way be applicable to the 330m terminal, as the major cost parameters are different.	(i). The upfront tariff shall apply for all container terminals expected to come up in JNPT in the next five years as per the new TAMP guidelines
	(ii). The capacity of Quad tandem trolley i.e., 2 separate trolley shall be around 80-120 tonne. The future world class terminals shall be using such container cranes.	(ii). It is the decision of the BOT operator to employ such a crane. We have considered standard equipment which can give productivity as prescribed in the TAMP guidelines.
	(iii). One slot covers an area of one 20" container i.e., 20"×8=160 sq ft which is equal to 14.86 sq.m and not 17.5 sq.m. To allow movement of RTG and internal roads the slot area is multiplied by 2, hence required area per slot comes to 30 sq m. Hence number of slots = $50 \times 10000 \text{ sq m} / 30 = 16600$. Thus the optimal yard capacity comes to $7 \times 365 \times 16600 \times 2.5 / 1.3 \times 3 = 2718782$ TEUs.	(iii). A ground slot holds one TEU. The dimension of a TEU is 20ft×8ft= 160 sq. ft., which works out to an area of 14.86 sq.m. For ease of operation, avoiding damage to the containers and for safety purposes some clearance is provided between consecutive slots. Hence the area works out to 17.5 sq m per slot.
	(iv). Increased productivity in terms of TEUs handled per meter of quay length only, indicate that there will be ship delays, which may result in congestion at the gate since sufficient evacuation from the port shall be a greatest hurdle. For cost comparisons, the average productivity over the years should be taken into consideration. As mentioned in the table the average TEU per Berth metre for Singapore is 1755 which is reasonable.	The increased productivity in terms of TEUs handled per metre of Quay length is a result of better quality of equipment being used at the proposed terminal. Congestion is seen at terminals where the operating rates exceed 70%. The capacity has been calculated at 70% operating rates and is not likely to lead to congestion if operated at this level.
	(v). 25 moves per hour is low for future container terminals while calculating quay capacity. The GTI is already doing 30 moves per hour. 30 moves per hour can be easily taken as standard which most of the future equipment can achieve.	
	(vi). The optimum quay capacity shall be as = $12 \times 24 \times 365 \times 30 \times 1.3 \times 0.7 = 2869480$ TEUs.	
	(vii). The figure shown for the TEU / hectare of stack yard for calculation of optimum quay capacity for international ports seems to be very high.	TEU/ ha for ports in India and that of international terminals cannot be compared as the custom procedures are different. This leads to a higher requirement for stacking.
	(viii). In the optimum quay capacity, the average staking height of 2.5 should be taken into account instead of 3 since evacuation from the gate may be a problem. Hence, the	(viii). Stack height depends on the type of equipment to be used and its specifications. For an RTGC having 1+5 specification, an average of 3 is

	optimal yard capacity = $0.7 \times 365 \times 16600 \times 2.5 / 1.3 \times 3 = 2,718,782$.	considered most suitable. For the proposal we have considered RTGCs having 1+5 specification. Hence we have considered an average stack height of 3.
	(ix). No comments could be offered on civil construction cost in the absence of design details of the proposed jetty and its allied constructions.	(ix). Agreed. The figures are estimates.
	(x). The future Super Post panamax RMQC shall invariably include double trolley which will handle 4 containers at a time. The cost of such cranes shall be at least 20% more. Hence the cost of each crane may come to around 50 Crores.	(x). The BOT operator is free to make use of such cranes. For the purposes of the proposed terminal, standard cranes have been considered.
	(xi). The current debt cost has increased to 14%. Thus the interest during construction shall be $35\% \times 14$ i.e., 4.9% of the project cost per year i.e., 9.8% for the construction period of 2 years.	(xi). The proposal is based on new TAMP guidelines dated February 26, 2008 and Amendments issued thereafter. The provision of the guidelines shall apply. There is a significant amount of uncertainty associated with the movement of interest rates. The rates considered were prevalent rates at the time of preparation of the report. Currently, the prevailing interest rates are higher than 11%. However, the Government is taking significant steps to reduce the interest rates and the rates are accordingly expected to come down.
	(xii). Other than JNPT, the basis for pricing ratios for other container handling activities is not known. Therefore LIL is unable to comment on the same.	(xii). For JNPT and Gateway the ratios are known and have been used. This is for published tariff and not contracted prices.
2.	Vadinar Oil Terminal Ltd (VOTL)	
	(i). <u>Terminal:</u> It is believed that JNPT tariff proposal is for the 330 meter terminal. However, the tariff workings are based on a 1000 meter terminal. The basis for calculation of costs and tariff for both the terminals would be significantly different, and it is not correct to replicate the tariff workings of 1000 meter terminal project for the 330 meter terminal project. Therefore, the costs and tariff be worked out separately for the 330 meter terminal project.	The proposal is based on new TAMP guidelines dated February 26, 2008 and Amendments issued thereafter. The provision of the guidelines shall apply.
	(ii). <u>Optimal terminal Capacity:</u> (a). The optimal terminal capacity as per TAMP guidelines works out to 1,992,900 TEUs per year whereas JNPT has considered in its tariff working the optimal terminal capacity at 2,391,480 TEUs per year. Obviously, the difference is on account of JNPT considering 12 quay cranes for the given terminal length of 1000 meter as against 10 quay cranes (which is worked out based on TAMP norm of 1 quay crane per 100 meter quay length). The deviation made from the TAMP norms do not seem to be appropriate, as deploying 12 quay cranes appears to be on the higher side and not easily feasible. Furthermore it is seldom that all the 4 cranes/ berth can be	The report supporting the application states that the number of cranes that could be used is significantly higher. 15 cranes could be usefully employed and potentially increase the capacity further. This is supported by the approach of major operators in Hong Kong, Singapore and a range of other ports.

	simultaneously deployed on a single vessel for the full duration of the vessels' stay at berth, as the crane splits on vessels are not uniform, thereby affecting the utilization of cranes considerably. (b). It may be noted that all 4 cranes / berth cannot be fully deployed to work on smaller vessels calling the terminal as the ship's length, the number of bays and total number of container moves are much lesser on smaller vessels as compared to larger vessels thereby affecting the crane utilization considerably. (c). In case, if the higher terminal capacity as proposed by JNPT cannot be realized when project is commissioned, the Concessionaire would incur heavy losses as the tariff would be lower based on the higher terminal capacity. Hence an estimate of 10 quay cranes for 1000m although on the higher side is more reasonable.	
	(iii). <u>Capital cost and Operating cost:</u> (a). It is presumed that the capital cost and operating cost estimates given in the proposal are only indicative, and therefore, the tariff workings are also indicative. As the cost estimates are not based on detailed engineering, the capital cost cannot be accurately estimated at this stage. Therefore, provision for contingency shall be made in the capital cost at the rate of atleast 15% to provide for unforeseen situations and as margin for error in estimation. It is believed that the actual cost to completion and actual operating costs will be taken into account while fixing the final tariff. (b). The capital cost shall also take into account provision for escalation on account of inflation and price escalation of atleast 25% (as the project would be implemented over a period of 2-3 years). (c). The provision of 10% under the head "Other Cost including Financing cost and interest during construction" is low considering the fact that this cost includes costs of miscellaneous assets such as pollution control, fire fighting equipment, miscellaneous equipment, power supply, lighting, etc. and interest during construction, working capital margin etc., For example, considering a three year construction schedule, the interest during construction alone works out to over 20% (given the prevailing high interest rate scenario). Therefore, the provision under the head "other cost including Financing cost and interest during construction" shall be at least 30%. (d). The return on capital employed at 16% is quite low in the present context of high inflation, tight liquidity condition, difficult credit outlook and hardening interest rates. It may be	The proposal is based on new TAMP guidelines dated February 26, 2008 and Amendments issued thereafter. The provision of the guidelines shall apply.

	noted that the return on capital employed of 16% was finalized at a time when PLR rates were close to 10-11%. As the current PLR rates have already increased by 300 – 400 BPS, the return on capital employed shall also be commensurately increased to 20% p.a.	
	(iv). <u>Capacity utilization:</u> (a). Container handling charges are worked out based on 70% capacity utilization which applies to all the years. However, it is pertinent to note that the capacity utilization cannot be ramped upto 70% from the very first year itself. (b). Past experience shows that the capacity utilization ramp up happens over a period of time. Moreover, the operations face teething problems, and take time to stabilize. Therefore, in our view, the capacity utilization shall be kept at lower levels in the initial years (say 30% in the first year ramping upto 40% in second year, 50% in third year, 60% in fourth year and thereafter 70%).	The proposal is based on new TAMP guidelines dated February 26, 2008 and Amendments issued thereafter. The provision of the guidelines shall apply.
3.	ABG Infralogistics Ltd., (ABGIL)	
	(i). The proposal of JNPT is for assessment of upfront tariff for a container terminal which will have quay length of 1000m for berthing super post – panamax / post – panamax container ships and which will have a back-up area of 100 ha adequate to support storage of 2.75 million TEUs. However, in comparison, the project for which RFQ was invited by JNPT and for which ABGIL have applied is for a standalone container terminal of quay length of just 330 m (JNPT has not invited RFQ for any other container terminal) and with a restricted draught of 11.5 m in channel which may not be suitable for berthing of super post panamax / post panamax vessels. The lease period of this 330 meter Terminal is only 18 years (unlike 30 years in all other cases) and has a back up area of just 27 hectares.	The proposal is based on new TAMP guidelines dated February 26, 2008 and Amendments issued thereafter. The provision of the guidelines shall apply. The tariff proposal is for a representative container terminal at JNPT. JNPT has more than 1 terminal lined up for development in the next 5 years.
	(ii). As per upfront tariff guidelines tariff caps once set will apply to all terminals that are bid subsequently in the same port during the next five years. This would mean that once a port project/ terminal is advertised, tariff caps would be set upfront, and these tariff caps would apply to all terminals bid subsequently. Obviously it is not the intention of TAMP to first finalize tariff for a nonexistent project and there after apply that tariff to subsequent projects of the same commodity, even though that project is based on entirely different parameters. Since a bid has been invited for 330 m container terminal, the tariff should be fixed for this project, and this tariff should apply for the next five years for handling containers in JNPT. As stated in para 2.2 of the TAMP guidelines, any terminal that may come up in future at JNPT within next 5 years will have tariff caps as determined for this 330 m terminal with	The upfront tariff caps are worked out for a Representative Container Terminal at JNPT and not a Dream Project. Tariff caps arrived based on this calculation shall apply to all the Projects being bid out subsequently in the next 5 years. JNPT has more than 1 terminal lined up for development on a PPP basis. Using the parameters and costs for any of the terminals for setting tariffs for the next 5 years would carry an inherent bias towards one of the Projects. Hence, a representative container terminal at JNPT is defined based on which an upfront tariff is set for projects at JNPT for the next 5 years.

	appropriate indexation to inflation as per Clause 2.8. of the above referred TAMP notification.	
	(iii). Port trusts are expected to propose upfront tariffs for the PPP projects to enable the bidders to formulate their financial bids. A port trust cannot just propose upfront tariff for some 'dream' project and apply them to projects for which they have already invited RFQ. Therefore, the quay capacity, capital expenditure and operating cost estimates should be reworked realistically and upfront tariff to be proposed in respect of the 330 m container terminal.	The proposal is based on new TAMP guidelines dated February 26, 2008 and Amendments issued thereafter. The provision of the guidelines shall apply.
	(iv). Out of the two sets for assessment of upfront tariff, one set of parameter is based on the guidelines issued by TAMP. The other set is based on the assumptions made by the consultant. As we understand, the purpose of this exercise is to assess upfront tariff for the container terminal at JNPT based on the norms set by TAMP. While some degree of port specific variations may be acceptable, tariff assessment based on different norms proposed by the consultant is entirely beyond the scope of this exercise.	An attempt has been made to make the parameters set by TAMP as realistic and relevant as possible without deviating from the overall methodology prescribed by the guidelines.
	(v). As of date, the diesel price does not reflect the cost, but in future the price subsidy in diesel may be phased out and the additional burden will be gradually passed on to the consumer, particularly the industrial users. In such a situation, the implication of rise in price of diesel on the operating cost will be substantial and this cannot be compensated by escalation in tariff based on WPI. It is, therefore, suggested that the annual adjustment of tariff should provide for complete pass through of increase/ decrease in fuel cost besides general increase linked to WPI provided in the upfront tariff guidelines.	Oil prices are highly volatile and have moved 60-70% both ways in the last 1 year. Hence it is very difficult to have any view with respect to the future oil prices. However, this is under the jurisdiction of TAMP.
	(vi). While providing estimate of cost it may please be ensured that these are based on current prices and are covered for inflationary increases during construction period.	The proposal is based on new TAMP guidelines dated February 26, 2008 and Amendments issued thereafter. The provision of the guidelines shall apply. The query is relating to the guidelines themselves and hence may be addressed to TAMP.
	(vii). No provision has been made for the maintenance workshop equipment and emergency spares to be maintained in the project cost. The rate of interest is assumed at 11% during project construction period. The present market conditions may require provision for a higher rate of interest.	The proposal is based on new TAMP guidelines dated February 26, 2008 and Amendments issued thereafter. The provision of the guidelines shall apply. There is a significant amount of uncertainty associated with the movement of interest rates. The rates considered were prevalent rates at the time of preparation of the report. Currently, the prevailing interest rates are higher than 11%. However, the Government is taking significant steps to reduce the interest rates and the rates

		are accordingly expected to come down.
	(viii). The ROCE is based on the last year's inflation figures. Last 6 months have already seen very high inflation in the range of 10-12%. Hence, ROCE of 16% may not be appear to be adequate towards compensation for the cost of capital.	The proposal is based on new TAMP guidelines dated February 26, 2008 and Amendments issued thereafter. The provision of the guidelines shall apply.
	(ix). It is believed that the license fee payable shall not be more than the amount taken for tariff fixation. It may be confirmed.	The rate for calculation of lease rental as prevalent at the time will apply.
	(x). As the license period for the 330 m project is only 18 years, the standard norms for upfront tariff fixation require appropriate amendments including a higher return on capital employed.	The proposal is based on new TAMP guidelines dated February 26, 2008 and Amendments issued thereafter. The provision of the guidelines shall apply.
	(xi). The recommended tariff (consolidated) of Rs.3883 for loaded and Rs.3312 for empty 20' container is very high as compared to the tariff prevalent not only in JNPT but elsewhere too. This would adversely affect the ability of the terminal to attract traffic in a competitive environment. This will be more particularly to the 330 meter terminal, which suffers from high terminal charges besides other infirmities. Therefore it is important that the terminal charges are kept at the minimum.	The tariff is a result of the analysis carried out based on new TAMP guidelines dated February 26, 2008 giving a return of 16% on capital employed.
	(xii). Higher tariffs would only lead to quoting of excessive revenue share by the bidders. The fact that the port would get a higher revenue share cannot be a valid reason to fix higher tariff. In the instant case of 330 meter container terminal, the investments are not very high and after considering all costs, we feel that the consolidated tariff should not exceed Rs. 1980 per TEU.	
	(xiii). The tariff is only bound to go higher every year when indexed to the increased costs, as stated in the guidelines. In respect of all other container terminals in the country, where tariff has been fixed on the earlier guidelines, it is noted that there is a progressive reduction in tariff as years pass, while in the present case, the tariffs are only bound to increase as years pass by.	Noted
	(xiv). The whole exercise of upfront tariff fixation should not be a mere arithmetical exercise but must be based on realistic assessment of costs and operational revenue. The revenue assessment also must be realistic based on expected throughput rather than the full capacity of the terminal.	TAMP has issued its latest guidelines based on the views of the various participants of the Ports business. The guidelines have subsequently been approved by the Government.
	(xv). At this stage, BOT operator is unaware of the license fee and other conditions including the phasing of the equipments, and therefore, It is suggested that the discussion on upfront tariff may be appropriately deferred.	The upfront tariff caps are to be approved and circulated to the bidders along with the RFP.

2. The comments of other potential bidders/ users, on which we have not received the comments of the JNPT are summarised below:

Shipping Corporation of India (SCI):

- (i). This proposal has been prepared keeping with the guidelines/ assumptions laid down by TAMP, as such SCI has no issues about the methodology used and agrees with the conclusions arrived at.
- (ii). SCI would, however, draw TAMP's attention to the fact that the recent recession and economic slowdown has adversely impacted the import-export trade and volumes have dipped dramatically over the last month. Indian trade too has been adversely affected with the volumes/ freight levels as practically every deep-sea trade has dwindled sharply during the last month.
- (iii). The container handling costs as per the said proposal will be higher than the current rate by about 10%.
- (iv). Increase in the handling costs of containers may affect the competitiveness of Indian trade in the international market place.

Gateway Terminals India Private Ltd (GTIPL):

- (i). Definition of World Class terminal:

JNPT has stated that technical and cost parameters of the proposed terminal place it close to world class terminals. However, the detailed definition of world class terminal is required since it will have direct implication on the Civil and Equipment costs. The world class can be defined with respect to Practices, Equipment and Technology, Automation and container tracking, Design & Civil construction, Productivity and Efficiency, Facilities & support services and size of vessel handling.

- (ii). Calculation of optimal quay capacity:

As against the norm of one QC for 100 meters of Quay length, JNPT has considered one QC per 83 meters of quay length. The norms prescribed by TAMP in 2008 guidelines seems to be reasonable and are in line with International standards. The average quay deployment in some of the leading terminals is well above 100 meters like 114 meters at Shanghai and 112.5 meters at Laem Chebang.

- (iii). Equipment specifications and Cost:

- (a). The specification of RTG in terms of container stack height is not mentioned, to arrive at a market price.
- (b). The number of tractor-trailers (TTs) for inter terminal and intra terminal movement are considered at 120 i.e., 10 tractor-trailers per quay crane as against the norm of 6 TTs per quay crane. However, considering 10TTs per quay crane by JNPT is itself on a lower side, because TTs are required not only for quay side operations but also for rail side, yard and terminal operations. At GTIPL, each quay crane deploys 14 TTs.

Moreover, since the distance between the fourth terminal and existing terminals at JNPT will be more, fourth terminal needs to have more number of tractor-trailers. The design for the tractor-trailers as per world class standards have not been taken into account.

- (c). The unit costs for RMQC and RTGC considered by JNPT are at current prices. However, the unit cost of RMGC considered at Rs.15 crores is lower as compared to the current price of Rs.19.2 Crores.
- (iv). Civil Works:
- (a). Wharf: The proposal calculates civil cost for 1000 meter of quay length and 50 hectares of yard area. It is understood that the fourth container terminal will have a quay length of 2000 meters and would require relocation of existing BPCL jetty by 350 meters. In this context, the following queries are relevant:
- (i). Whether the project will be implemented in two phases - Phase I and Phase II.
 - (ii). The tariff should be based on the civil costs required for construction of 2000 meters of quay length.
 - (iii). The successful bidder is required to construct new suitable liquid cargo berth for relocating BPCL facilities. The construction of 1000 meters quay length needs to be suitably increased to 1350 meters or so. It is not clear who will bear the cost of relocating liquid pipe lines for seamless transfer to liquid berth.
 - (iv). Existing BPCL liquid cargo berth also requires structural strengthening for installation of multi-trolley RMQC which requires very high wheel load capacity civil structure. This cost has not been factored into the civil costs.
- (b). Yard: The proposed terminal will have a yard area of 50 hectares consisting of 14,000 ground slots. To have 14,000 ground slots, the proposed yard area of 50 hectares will not be sufficient. The civil cost for yard therefore needs to be on higher side. The proposal also says about the stacking height of 3 high in the yard which means a larger spread of containers in the yard and therefore may require more yard area.
- (c). It seems that the Civil Costs are on the lower side when compared with the latest concluded civil works at GTIPL. Going by the GTIPL estimates, the reclamation cost for 100 hectares of land will work out to Rs.733 Crores as against the estimate of Rs.530 crores considered by JNPT. Similarly, the cost for paving 91 hectares of land will work out to Rs.530 Crores as against the estimate of Rs.267 crores considered by JNPT. However,
- (i). The reclamation cost depends upon the distance of transportation of the material required to come from and the need for drain if any. Dredging cost also depends upon the dumping location of the unsuitable soil.
 - (ii). It is not clear whether the pavement will be done on 50 hectares or 91 hectares of area including rail terminal, RTG lanes and packing area.
 - (iii). The civil costs are further subject to inflation of steel, cement etc., during the construction phase of two years.

- (iv). The total civil cost works may work out to around Rs.2405 crores as against Rs.1486 Crores estimated by JNPT.
- (v). Clause 2.2. of the upfront tariff guidelines 2008 says that the tariff once set would apply to all terminals that are bid out subsequently in the same port during the next five years for handling identical commodity or for providing similar services. JNPT is in the process of developing fourth container terminal with a quay length of 2000 metres in place of existing liquid jetty and an extension of 330 meters length at North on PPP basis in the next 5 years. The two terminals are slated to be inherently different in terms of their cost of construction, sheer size & design.

The JNPT proposal seeks to develop tariff for both the projects as well as future projects by adopting the standard model of 1000 metres long terminal. A single tariff for all terminals within a port is not feasible as the project specific parameters differ for different terminals (executed during the course of 5 years) based on construction cost, price fluctuations in the major cost determinants like steel, cement, currency fluctuations and technology levels & associated costs.
- (vi). Clause 2.7. of the 2008 TAMP guidelines for upfront tariff setting for PPP Projects maintains that the tariff caps will be reviewed once in five years to adjust any extra-ordinary events or performance norms based on technological advancements. It is not clear as to who will initiate such review, whether the container terminal operator or the port authority. Also, as the tariff caps will be valid for 5 years, inflationary, geographical and technological difference will not be addressed in the capital costs for new PPP Projects. GTIPL is of the opinion that concerned terminal operator's view points need to be considered while reviewing the future tariff caps.
- (vii). As per Clause 2.8. of the upfront tariff guidelines, tariff caps will be indexed to inflation to an extent of 60% variation in WPI. Indexation to WPI which is All-commodity average need to be limited to industrial commodities only. All commodity average which includes mostly retail consumption items does not represent the industrial inflation in true sense. It is also not clear as to why the WPI is further restricted to 60%.

DP World (DPW):

- (i). Optimal Quay Capacity:
 - (a). Based on the present day deployment of cranes at the 3 terminals within the JNPT, the quay capacity in the independent estimates has been worked out as 2,391,480 TEUs by considering that the distance between two quay cranes on the berth should be 83 m. This norm of 83 m between cranes is a distinct deviation from Clause 3.1 of the 2008 TAMP guidelines which specifies that the distance between two cranes be 100 m. Hence, the proposed quay length of 1000 m should, therefore, have a maximum of 10 quay cranes placed on the berth length instead of 12 quay cranes.
 - (b). JNPT should take into account the realistic and present day average crane moves per hour prevalent at the 3 terminals and therefore move away from the standard 25 moves per hour that is prescribed by the Guidelines. JNPT statistics for the past show that hourly crane productivities are in the region of approximately 25.4 moves/ hour at GTIPL, approximately 21.6 at NSICT and approximately 15.7 at JNPT's own terminal. The average would work out to approximately 20.9 moves/ hour. Keeping all other norms as per the Guidelines but simply using the new crane productivity and 83 m spacing between cranes would then amount to a quay capacity of 1,999,357 TEUs and not 2,391,480 TEUs.

- (c). Hence, the quay capacity as calculated by JNPT in Clause 4.2. of the application should not be considered as the quay capacity – rather the normative approach as prescribed by TAMP in its guidelines should be adopted in arriving at the optimal quay capacity which would then be 1,992,900 TEUs.
- (ii). Optimal Yard Capacity:
- (a). Instead of the norm of 2.5 prescribed for the stack height, JNPT has used an average stack height of 3 which leads to a yard capacity of 2,751,538 TEUs. Though JNPT would have based their yard capacity on the designed stack capacity of the yard, it is opined that a stack height of 2.5 as prescribed TAMP guidelines should be maintained.
- (b). Based on stack height of 2.5, the optimal yard capacity of 2,292,949 TEUs as determined in Clause 4.1. of the application should be adopted.
- (iii). Optimal Capacity:
- Since the lower of the optimal quay capacity and the optimal yard capacity must be considered the optimal terminal capacity of the proposed 1000 m berth length would therefore be 1,992,900 TEUs.
- (iv). Capital cost of civil works:
- Accepting the bill of quantities that have been put out by JNPT in the estimating the various cost of civil works, the calculation of the capital cost of civil work works out to Rs.1543.5 crores as against Rs.1486.09 crores as calculated by JNPT in clause 5.1 of their application. The differential of Rs. 57.41 crores arises primarily on account of the following cost item:
- (a). Costs for detailed design and survey have been considered by JNPT at various rates ranging from 0.2% to 4% for the different types of civil works to be undertaken. The prevailing market practices show that consultants engaged for such job generally charge a uniform rate of 1.5% of the total cost of civil works. Hence a rate of 1.5% should be considered for the purpose of calculating this cost item.
- (b). Costs for supervision of construction have been considered by JNPT at various rates ranging from 0.3% to 2.5% for the different types of civil works to be undertaken. Again, based on prevailing market practices, a uniform rate of 2.0% of the total cost of civil works should be considered.
- (c). Contingency costs – JNPT have excluded detailed design and construction costs from the total cost of civil works when calculating the contingency costs. Any increase in the total cost of civil works also impacts/ increases the detailed design and construction costs; hence, it is recommended that detailed design and construction costs should not be excluded from the total cost of civil works when calculating the estimate of contingency costs in a project. Further, the percentage of contingency costs should be considered at a consolidated rate of 5% instead of the 0.5% to 1% assumed in the calculations.
- (v). A comparison between the estimates of civil works considered by JNPT and that made by DP World are tabulated below:

(Rs. in Lakhs)

Sr. No.	Item of Civil Works	As given by JNPT	As given by DP World
1	Dredging	4884.31	5230.22
2.	Reclamation	53069.86	53069.86

3.	Superstructure	51571.63	54681.73
4.	Container yard	26780.65	28616.94
5.	Building	2228.66	2235.19
6.	Electrical	5365.50	5553.94
7.	Miscellaneous	4708.97	4970.29
	Total Civil Works	148609.59	154358.18

- (vi). The prices for container equipment used in the calculations do not accurately reflect the present day costs for such equipment. As a global port and terminal operator, DPW regularly places orders/ takes delivery of sophisticated container handling equipment. Hence DPW is in possession of reliable information concerning cost of equipments. With the general increase in prices of steel and rising global demand for container handling equipments, prices of container handling equipments have seen a dramatic increase. A comparison of the revised prices for container handling equipment (taking into account the exchange rate, customs duties, cess, other duties) with the prices considered by JNPT in its proposal are tabulated below:

Equipment	Cost per unit (Rs. in Crores)	
	As given by JNPT at clause 5.2 of table 2	As given by DPW
Quay Crane	43.00	44.85
Rail Mounted Gantry Crane	15.00	15.22
Rubber Tyred Gantry Crane	7.50	9.79
Reach Stacker	2.15	2.45
Tractor/ Trailer	0.65	0.65

- (vii). DPW agrees with the annual operating cost working except for the treatment relating to depreciation costs. As per Clause 5.2 of the TAMP Guidelines, depreciation is to be considered at the rate provided by the Companies Act, 1956. As per Clause II (ii) C 4 of Schedule XIV of the said Act, Information and Technology (IT) is to be depreciated at 16.21% p.a. under straight line method (SLM) However, in Annexure II of the application, IT has been depreciated at 10.34%. This needs to be rectified.
- (viii) The ARR of Rs.735.70 Crores given by JNPT will now stand revised based on the revised capital costs of civil works, container handling equipments and annual operating costs as explained in the earlier paragraphs. The revised ARR works out to Rs.789.22 Crores.
- (ix). Thus, on the basis of the revised ARR of Rs. 789 Crores and an optimal terminal capacity of 1,992,900 TEUs, the proposed Scale of Rates for the 1000 m berth container terminal at JN Port as calculated in the application will have to be revised.
- (x). Revised Annual Revenue Requirement from Berth Hire Charges: The ARR for berth hire is revised on the basis of the revised Capital expenditure for dredging and Super structure as discussed above. The revised ARR for berth hire works out to Rs.127.33 Crores.
- (xi). Therefore, on the basis of the revised ARR of Rs.127.3 crores in respect of berth hire charges, the tariff for berth hire charges as given in the JNPT application will have to be revised.
- (xii). With reference to revised calculation for berth hire charges the DPW vide its letter dated 5 December 2008 has stated that the JNPT in its original proposal dated 27 August 2008 had assumed the total GRT of vessels expected to call at the 1000 mtr berth as 33,416,663 (TAMP's case) and 40,099,996 (Independent case) whereas in their revised calculation of berth hire charges JNPT has worked on the

assumption that the total GRT expected at optimal capacity will be 40,099,995/1613 vessels.

JNPT has not provided workings for the GRT figures. Therefore, it is difficult for DP World to make any qualitative comments.

JNPT may be called upon to furnish necessary details providing the reasoning as to the number of vessels and the range of GRT for such vessels used by JNPT in its calculations. This will enable DP World to understand how the total GRT of 40,099,995 and 1613 number of vessels have been arrived at. DP World will furnish further comments upon receipt of the clarifications from JNPT.

(A copy of the DP World letter dated 5 December 2008 was forwarded to JNPT vide our letter dated 15 December 2008 for its comments. Response is awaited from JNPT.)

3. A joint hearing in this case was held on 18 February 2009 at the Office of the Authority. At the joint hearing, JNPT and the concerned users / user organizations and the short listed bidders made the following submissions:

Jawaharlal Nehru Port Trust (JNPT)

- (i). The deviations proposed in the norms are based on a careful analysis of the working of 3 container terminals in JNPT and we propose to TAMP to consider the independent assessment given in our proposal.
- (ii). Presentation highlighting the salient points of the proposal was made. Hard copy is given.
- (iii). TAMP guidelines do not require project-wise tariff fixing. We have considered a representative container terminal for setting upfront tariff. In any case, the unit civil and equipment costs are not going to be significantly different in the 330 meter project and 4th container terminal.
- (iv). Civil costs are estimated based on the updated market rates and are realistic. Equipment costs are based on budgetary quotation.

ABG infra Logistics Limited

- (i). Since the project of 330 meter will commence first, tariff should be fixed with respect to the parameters relevant to this terminal.
- (ii). Period of concession is totally different between 330 meter berth and 4th terminal. Physical features are also different. Tariff fixation should capture these differentials.
- (iii). Our analysis shows that the cost for 330 meter should be lower and, therefore, the tariff. Tariff for the 330 meter berth should be around Rs.2078/TEU.

Gateway Terminals India Private Limited (GTIPL)

- (i). In the 4th terminal project, relocation of the existing liquid jetty is involved. The cost proposed by JNPT does not capture this. This compulsion is not there for the 330 meter berth project.
- (ii). Norms for QC is only one per 100 meter. Some international ports operate at this level only. The deviation proposed by JNPT may not be considered.
- (iii). The reclamation cost estimated by JNPT is not realistic.

Container Shipping Lines Association (India) [CSLA]

- (i). Relocation of the existing oil jetty involves substantial cost for the 4th terminal project. This should be factored.

NYK Lines

- (i). 330 meter berth and 4th terminal are completely different and, therefore, tariff should be fixed differently.

DP World Private Limited

- (i). We don't believe that cost of 330 meter berth project will be significantly different from 4th terminal. The unit cost will remain the same in both the cases.
- (ii). The terminals at JNPT are operating at high performance level. Please don't borrow their performance parameters as benchmark and apply to the new terminal.
- (iii). The civil cost estimate may be re-looked at.
- (iv). Don't load any element of civil construction cost to berth hire calculation. Keep berth hire at the existing level and suitably adjust the container handling charges. This will enable to contain the marine related cost and keep the terminals competitive.

Essar Shipping LTd.

- (i). Rate of Depreciation should be at a higher level.
