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TARIFF AUTHORITY FOR MAJOR PORTS

G. No.80

New Delhi

4 March 2016

NOTIFICATION

In exercise of the powers conferred by Sections 48 and 50 of the Major Port Trusts Act, 1963 (38 of 1963), the Tariff Authority for Major Ports hereby disposes of the proposal received from the Kolkata Port Trust (KOPT) for fixation of Reference Tariff for transfer of POL cargo at 2 Single Buoy Moorings (SBMs) with connected pipeline facilities proposed to be set up by KOPT on Design, Build, Finance, Operate, Transfer (DBFOT) basis.

(T.S. Balasubramanian)
Member (Finance)

Tariff Authority for Major Ports

Case No. TAMP/56/2015-KOPT

Kolkata Port Trust

Applicant

ORDER

(Passed on this 26th day of October 2015)

This case deals with the proposal received from Kolkata Port Trust (KOPT) vide its letter dated 21 July 2015 for fixation of Reference tariff for transfer of POL cargo at 2 Single Buoy Moorings (SBMs) with connected pipeline facilities proposed to be set up by KOPT on DBFOT basis.

2. On initial verification of the proposal of KOPT, it was seen that there were some information gaps in the proposal submitted by KOPT. Accordingly, the KOPT was requested vide our letter dated 31 July 2015 to furnish the requisite information. After a reminder dated 20 August 2015, the KOPT vide its letter dated 24 August 2015 has responded. The information sought by us and the response of KOPT thereon are tabulated below:

Sr. No.	Information sought by us	Response of KOPT
(i)	The KOPT to furnish the proposed Performance Standards.	The concessionaire is going to install two moorings connected by sub-sea pipelines. Through this facility, the transfer of POL between the mother vessel and the daughter vessel will be done by the pumps of either the mother vessel or the daughter vessel. Hence, no performance standard is envisaged.
(ii)	The KOPT to furnish the copy of the approval of the Board of Trustees of the Port Trust approving the Tariff proposal.	The proposal has been sent to the Authority with the approval of Chairman. However, the matter is being placed before the Board for post facto approval. The sanction details of the Board will be sent to the Authority immediately after the Board meeting is held and Resolution is passed. (Thereafter, the KOPT vide its letter dated 17 September 2015 has stated that the Board of Trustees of KOPT vide its Resolution dated 7 September 2015 has agreed to sanction the proposal. The relevant extract of the Resolution reproduced below: “The Trustees were informed that pending approval of the Trustees, the matter of fixation of rates for setting up of mooring facilities for transshipment of liquid cargo had already been taken up with TAMP which had given a hearing on 4.9.2015. The TAMP notified rate was required before issuing RFP Document. As such, post-facto approval of the Board to the upfront tariff proposal was requested. The trustees, after discussion, agreed to sanction the proposal.”)
(iii)	The KOPT to furnish the list of users/prospective bidders, who are to be taken on consultation on the proposal in reference.	The KOPT has furnished the List of users/prospective bidders.

3.1. The main points made by the KOPT vide its letter 21 July 2015 are summarised below:

- (i). KOPT proposes “Development of 2 Single Buoy Mooring (SBM) with sub-sea connecting pipeline” for handling POL cargo within its limit. The proposed system will be used for transfer of POL cargo between the mother and daughter tankers. The daughter tankers carrying POL will move between the SBM site and the oil terminals of Haldia dock Complex.
- (ii). The said scheme will be implemented on Design, Build, Finance, Operate, Transfer (DBFOT) basis following the procedure laid down by the Ministry of Shipping. KOPT has already invited application through RFQ for the said project.
- (iii). The concessionaire of the said project will levy tariff on the users of the facilities as per the upfront tariff to be determined with the approval of the TAMP. The upfront tariff has been computed by KOPT on the basis of cost estimate etc. of the project determined by M/s. i-Maritime Consultancy Pvt. Ltd. in the Feasibility Report.

3.2. The highlights of the proposal as given by KOPT are as follows :

- (i). The Haldia Dock Complex (HDC) is located in territorial water of KOPT. An industrial belt is located 50 Km Southwest of Kolkata near the mouth of Hooghly River.
- (ii). A host of port-based industries and storage operators of different liquid cargo are handling different types of liquid cargo at HDC comprising of Crude, POL (Products), Crude Edible Oil, Industrial Chemicals, LPG, etc. by using 3 riverine oil terminals and few berths inside the impounded dock of HDC. The cumulative liquid cargo handling capacity of HDC at present is 21 million tonnes per annum. KOPT has already taken action to increase the capacity by another 6 million tonnes by setting up the 4th oil terminal at Haldia Dock-II about 12 kms. upstream of HDC.
- (iii). With a view to increase throughput of liquid cargo at HDC by obviating draft constraints, HDC has designed a project comprising of 2 nos. CALM type mooring (Catenary Anchor Leg Mooring) separated from each other by around 500 meter and connected by multiple submarine pipelines.

The submarine connection will have arrangement with PLEM (Pipeline end manifold) for bi-directional flow. As per this arrangement, the importers will bring their mother tankers at one of the moorings and transfer the cargo into a daughter vessel to be moored at the 2nd mooring. Reverse operation will take place in case of export of liquid bulk cargo. The entire project will be installed within KOPT limit having adequate draft for handling fully laden mother tankers upto VLCC / ULCC specifications.

- (iv). The mooring arrangement envisaged will benefit the trade in increasing their cargo throughput at HDC at a reduced overall logistic cost because of the following advantages:-
 - (a). To import/export cargo by fully laden Mother Tankers.
 - (b). Optimal utilization of the liquid cargo handling infrastructure already created by the importers / exporters at Haldia.
 - (c). Low turn round time of the mother tankers who will be handled in the deep sea without requiring to come to HDC.
- (v). In view of the above advantages, it has been decided to set up a system comprising of 2 Moorings with all ancillary infrastructure and submarine pipelines

connecting the 2 Moorings for transfer of different types of liquid cargo between the 2 moorings at Sandhead region within the limits of KOPT and existing jetties / berth at Haldia Dock Complex through Public Private Participation (PPP) on “DBFOT” basis.

(vi). Physical feature of the facility proposed to be developed comprise of the following

(a). Single Point Moorings - 2 numbers with following attachments:

- (i). Anchoring System
- (ii). Mooring Chains
- (iii). Pipeline Mainfold
- (iv). Remote operating valves
- (v). Ground system
- (vi). Sub-marine hoses
- (vii). Floaters/hoses

(b). Pipelines for transfer of different categories of POL from SBM-1 to SBM-2. The mother Vessels carrying the cargo will be anchored alongside one SBM and the daughter vessel will anchor at the 2nd SBM. The cargo will be transferred from the mother to daughter or vice a versa through sub-sea pipelines.

(vii). There are no guidelines / norms prescribed for assessment of optimum Floating Storage Operation capacity (FSO), capital and O&M cost etc. in respect of the FSO facilities proposed to be created by KOPT. Hence, the capital cost has been estimated in the Feasibility Report considering the capital cost in TAMP order no. TAMP/15/2010-KPT dated 18 January 2011 as base price and by considering wholesale price index on compounding basis for 5 years for escalating the price to 2015 levels.

(viii). **Optimal Capacity:**

(a). Capacity calculation at Floating Storage Offloading (FSO):

Sr. No.	Particulars	
(i)	Mother Vessel Capacity (CF)	1,00,000 tonnes
(ii)	Daughter Vessel Capacity (CD)	23,000 tonnes
(iii)	Pumping rate (Mother Vessel to Daughter Vessel)	3000 tph
(iv)	Time Required to Load one Daughter Vessel (ii/iii)	7.67 Hrs
(v)	Time required for other peripheral activities (iv+v)	6 Hrs
(vi)	Total Time to Load Daughter Vessel (td)	13.67 Hrs
(vii)	Average Distance between the Mother Vessel location and Berth	130 Km
(viii)	Sailing Time from Mother Vessel to Berth (tS)	$=130 / (10 \times 1.852) = 7 \text{ Hrs}$
(ix)	Loading Rate at Jetty	2000 tph
(x)	Berthing, Draft survey, documentation etc	3.50 Hrs
(xi)	Time to Unload	11.50 Hrs
(xii)	Waiting For Tide	3 Hrs
(xiii)	Draft survey, documentation, un-berthing	2 Hrs
(xiv)	Vessel turnaround at berth (x+xi+xii+xiii)	20.0 Hrs
(xv)	Sailing Time from berth to Mother Vessel (tS)	$=130 / (10 \times 1.852) = 7 \text{ Hrs}$
(xvi)	Turnaround Time of Daughter Vessel (tT)	$=47.67 \text{ Hrs} \sim 48.0 \text{ Hrs}$

		= 2 days
(xvii)	Minimum Number of Daughter Vessels Required (N)	= tT = 2
(xviii)	Annual maintenance / technical Downtime of SBM	20 days
(xix)	Limiting weather criteria	90 days
(xx)	Total System availability	255 days ~ 70%
(xxi)	Number of daughter vessel trips per year (T) (xx/xvii) (Note:1)	= 255 / tT = 255 / 2.0 ~ 127.5 trips
(xxii)	Capacity of Daughter Vessel System = Trips per vessel X Number of DV X Capacity of DV = T X N X CD (xxi* xvii*ii)	5.865 million tonnes

Note 1:

Sr.No.	Particulars	UOM	
(A)	Total Time taken for Cargo transfer operations from Mother Vessel to Daughter Vessel		
(i)	Time required to load one daughter vessel (Daughter vessel Capacity/ Pumping rate) i.e (23,000 /3000)	Hours	7.67
(ii)	Time required for other peripheral activities	Hours	6
(iii)	Sailing time from Mother Vessel to Jetty (t _s)	Hours	7
(iv)	Total time taken for Daughter vessel (i+ii)		20.67
(B)	Total time for unloading at Jetty and to go back to mother vessel		
(i)	Unloading rate at jetty (23000 tonnes / 2000 tonnes per hour)	Hours	11.5
(ii)	Time for Berthing, Draft survey, Waiting for tide, Draft survey, documentation, unberthing]	Hours	8.5
(C)	Sailing time from berth to mother vessel	Hours	7
(iii)	Total time for unloading at jetty (i+ii+iii)	Hours	27
(vii)	Turnaround Time of Daughter Vessel (A+B)	Hours	47.67
(viii)	Total system availability	days	255.5
(ix)	Number of Daughter Vessel		2
(x)	No. of Trips Per Vessel (Total System availability / Turnaround time of Daughter Vessel) i.e (viii/vii)		127.5

(b). Capacity Calculation of Berthing System :

Sr. No.	Particulars	
(i)	Daughter Vessel Capacity (C _D)	23,000 tonnes
(ii)	Pumping rate at Berth	2000 tph
(iii)	Time required to unload one Daughter Vessel (i/ii)	11.50 Hrs
(iv)	Time required for other peripheral activities	5.5 Hrs
(v)	Waiting for tide	3 Hrs
(vi)	Turnaround time of Daughter Vessel at Berth (t _D) (vi+v+vi)	20 hrs
(vii)	Available Working Days (Y)*	255 days
(viii)	Capacity of Daughter Vessel System = 330 Days/turnaround time of DV x	7.038 million tonnes.

	Capacity of DV $(Y/t_D) \times C_D$	(255 days x 1.2 times turnaround per day# x 23000 tonnes) #[24 hours a day/ 20 hours for turnaround per day = 1.2 turnaround per day]
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Note: Due to Annual Maintenance / Technical Maintenance time of 20 days annually at SBM and Weather limiting 90 days of operations, Daughter vessel system will be available for balance number of days 255 days for operation and only therefore utilise the berth during the balance of days.

(c). Optimal Capacity System Capacity

Sr. No.	Particulars	
(i)	Daughter Vessel System (a)	5.865 million tonnes
(ii)	Berthing System (b)	7.038 million tonnes
(iii)	System Capacity = Minimum of the above capacities (a) or (b)	5.865 million tonnes

- (d). In the event that there is substantial rise in demand, users can provide vessels which have higher pumping capacity so that turnaround time is reduced considerably thereby increasing system capacity.
- (e). The basis of share of Cargo / Vessel assumed in Capacity calculation is not applicable as the entire output has been considered on the basis of pumping capacities and not on cargo / vessel specifications.
- (f). The guidelines for upfront tariff for setting up of PPP projects – 2008 of TAMP does not cover any guideline for fixation of Tariff for SBM to handle liquid cargo. Hence, the pumping rate of the vessel for estimating the handling rates and the optimum capacity has been adopted.

3.3. The proposal of the KOPT is as follows :

Sr. No.	Particulars	Rate
(i).	Marine charges on Mother and Daughter vessel	₹40.15 per GRT
(ii).	Cargo transfer charges at SBM between Mother vessel and Daughter vessel	₹254.33 per Metric Tonne

The details of the Capital Cost, Operating Cost, Annual Revenue Requirement and the Scale of Rates as proposed by KOPT in its proposal dated 21 July 2015 is discussed in the later part of this order.

4. In accordance with the consultative procedure prescribed, the proposal of KOPT dated 21 July 2015 along with port's letter dated 24 August 2015 was forwarded to the concerned users / user organisations and prospective bidders (as forwarded by KOPT) seeking their comments by 02 September 2015. None of the users/user organisations/ prospective bidders have furnished their comments.

5.1. With regard to Performance Standards, since the KOPT in its letter dated 24 August 2015 had stated that it does not envisage any Performance Standard, it was communicated to KOPT vide our letter dated 26 August 2015 that as per Clause 2.2 of the Reference tariff Guidelines 2013, the reference tariff proposal has to be filed along with the Performance standards. Further, the prescription of 'Performance Linked Tariff' from the second year of operation onwards at 15% over and above the indexed Reference Tariff is linked to the achievement of the Performance standards by the operator as per clause 2.9 of the 2013 Guidelines. Accordingly, the KOPT was again requested to furnish the Performance Standards.

5.2. In this regard, the KOPT vide its letter dated 17 September 2015 has furnished the following Performance Standard, among other things :

Sl. no.	Parameters	Performance Standard
1.	Gross pumping output from mother tanker to daughter vessel and vise-versa.	3000 tonnes per hour

6. On a preliminary scrutiny of the proposal, it was found that additional information/ clarifications were required from KOPT on various points. Therefore, we have vide our letter dated 02 September 2015 requested KOPT to furnish the additional information/ clarification. After a reminder dated 14 September 2015, KOPT vide its letter dated 17 September 2015 has responded. While furnishing the information/ clarification sought by us, the KOPT has revised the Cost Calculation and the Scale of Rates. The revised cost calculation and Scale of Rates furnished by KOPT are discussed in the subsequent paragraph. The information sought by us and the reply of KOPT thereon are as follows:

Sr. No.	Information/ clarifications sought by us.	Reply of KOPT
(A).	General:	
(i)(a)	Clause 2.2. of the Revised Tariff Guidelines of 2013, inter alia stipulates that the Reference Tariff will be the highest tariff fixed for that commodity in the concerned Major Port Trust under the 2008 Tariff Guidelines. The said Clause also stipulates that in case no tariff has been fixed for a commodity at a major port trust or if the highest tariff fixed for a particular commodity in the concerned major port trust does not represent the project proposed to be developed, then concerned major port trust can propose to this Authority any other tariff fixed under 2008 tariff guidelines in any other major port trust, which is representative enough for that commodity giving detailed and sufficient justification. On a preliminary scrutiny of the proposal, it is seen that the KOPT has considered the capital cost of its Single Buoy Mooring (SBM) project based on the SBM project at Kandla Port Trust (KPT). In this connection, the KOPT is seen to have considered the capital cost of the SBM at KPT as base and escalated the costs so as to arrive at the present capital costs. Consequently, the various components of operating cost, are also seen to be determined based on a specific percentage of the capital cost as	Due to draft constraints, the importers of POL products at Haldia are incurring dead freight cost in bringing POL products to HDC. As such, KOPT has been considering various options in addressing the said issue in the similar lines considered for transshipment of dry bulk cargo at deep draft locations. In keeping with the above objective, the project proposed by KOPT envisages installation of two single point moorings connected by sub-sea pipeline. This project will be utilized for transfer of POL between mother tankers and the daughter tankers. Hence, the project is designed mainly for addressing the dead freight cost element presently being incurred by the POL importers. The SBM project considered by Kandla Port Trust is based on transfer of crude by sub-sea and shore based pipelines from mother tankers directly into the crude oil terminals constructed on shore. The project cost is based on construction of one SBM and other associated facilities and single pipeline connectivity covering a distance of about 17.5 kms. and not two SBMs and three short pipelines of about 500 meters each.

	considered in the SBM project at KPT. In this regard, the KOPT to explain the reason for not adopting the tariff of SBM at KPT and instead coming up with a proposal for fixation of rate for SBM based on the 2008 tariff guidelines.	Therefore, the capital cost and variable cost structures of the two projects for handling POL vessel are going to be different. Moreover, as the proposed project of KOPT is for handling POL product of various categories covering different parties whose average productivity is lower than that of crude and considering the limitation of cargo assurance for the project and that the optimal capacity will depend upon the evacuation abilities of the daughter vessels at low draft situation in the Haldia channel, the optimal capacity of the proposed mooring arrangement of KOPT is going to be lower than that of Kandla Port Trust. In view of the above, KOPT has proposed a different rate for the project facilities based on 2008 guidelines. However, the capital cost of the project component have been taken from the Tariff Order of Kandla Port Trust in respect of SBM facility.
(b)	Emerging from the approach adopted by KOPT for estimation of capital cost is the concern for correct estimation of capital cost for fixation of viable and reasonable tariff. The KOPT to confirm that the estimate of capital cost reflect the current market price.	The tariff calculations have been recalculated on the basis of capital cost considered by TAMP in the Tariff Order issued in respect of SBM facilities of Kandla Port Trust vide order dated 02.01.2015.
(B). Capacity:		
(i)	The Table 8.1. of the Feasibility Report has considered the capacity of the mother vessel at 1,00,000 tonne whereas the proposal of KOPT has considered the capacity at 1,15,000 tonnes. The basis for considering the capacity of the Mother Vessel at 115000 tonnes to be furnished.	The Port stated that the figure of 115000 was mentioned inadvertently in the Check List forwarded to TAMP. This will be 100000 tonnes as considered by the Consultant.
(ii)	Similarly, the basis for considering the capacity of the Daughter Vessel at 23000 tonnes to be furnished.	The proposed project will be utilized for importing POL products like Naphtha etc. by the local industries. The average parcel load of 23000 was assessed on the basis of parcel load of import Naphtha tankers brought by HPL. (The KOPT has furnished a Statement showing assessment of Average parcel Load and GRT of 30 no of vessels carrying Naptha).
(iii)	The pumping rate of a mother vessel to daughter vessel at 3000 tonnes per hour to be validated with basis.	M/s. Haldia Petrochemicals Ltd. are undertaking Naphtha transfer operations from mother to daughter at Vizag Port for bringing Naphtha to Haldia. The pumping rate of transferring POL from mother to daughter was assessed on the basis of indications received from Haldia Petrochemicals Ltd.
(iv)	The KOPT is seen to have considered 6	

	hours towards other peripheral activities for a daughter vessel at the sea. In this regard, KOPT to clarify/ furnish the following:																					
(a)	The basis for considering the time of 6 hours.	The average time of 6 hours has been considered on the basis of indications received from HPL during interaction. From the details of 30 Naptha tankers, it can be seen that on an average, each vessel was at the berth for about 6.944 hours when the cargo was not being pumped. This has been taken into account while considering the peripheral time of 6 hrs. [The details of 30 Naptha tanker as furnished by KOPT does not reflect the details of vessels being at berth for about 6.944 hours, as stated by KOPT.]																				
(b)	The average time taken by the POL vessels towards other peripheral activities during last three years at KOPT.	AVERAGE TIME SPENT BY OIL TANKERS AT HDC DURING LAST THREE YEARS <table><tr><th>Year</th><th>Average Time spent by tankers at Oil Terminals from Hauled In to Commenced Work (in hours)</th><th>Average Time spent by tankers at Oil Terminals from finished work to Hauled Out (in hours)</th><th>Effective Working time (in hours)</th><th>Total time at berth (in hours)</th></tr><tr><td>2012-13</td><td>2.80</td><td>7.56</td><td>18.37</td><td>28.73</td></tr><tr><td>2013-14</td><td>2.92</td><td>7.24</td><td>17.63</td><td>27.79</td></tr><tr><td>2014-15</td><td>2.95</td><td>7.08</td><td>16.05</td><td>26.08</td></tr></table>	Year	Average Time spent by tankers at Oil Terminals from Hauled In to Commenced Work (in hours)	Average Time spent by tankers at Oil Terminals from finished work to Hauled Out (in hours)	Effective Working time (in hours)	Total time at berth (in hours)	2012-13	2.80	7.56	18.37	28.73	2013-14	2.92	7.24	17.63	27.79	2014-15	2.95	7.08	16.05	26.08
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(c)	The breakup for the time of 6 hours.	The 6 hours of time considered for peripheral activities will be spent prior to commencement of cargo transfer operations and after completion of cargo transfer operations at the mooring facilities. The said time will be required for various activities relating to customs formalities, draft survey, connection / disconnection of hoses, This has been assessed by the Consultant on a lump sum basis. Similar time for peripheral activities are also required for the POL vessels for discharge of cargo at the berths.																				
(v)	The loading rate of the daughter vessel at the jetty at 2000 tonnes per hour to be validated with basis.	In the Statement of Assessment of Average parcel load and GRT of Vessels, the effective output of 30 naphtha tankers was 1206 tonnes. The Consultant has assumed 2000 tonnes per hour as the output at the berth.																				
(vi)	The KOPT is seen to have considered 3.50 hours towards berthing, draft survey, documentation, and another 3 hours towards waiting for tide, another 2 hours towards draft survey, documentation and un-berthing of a daughter vessel at the																					

	jetty. In this regard, KOPT to clarify/ furnish the following:																					
(a)	The basis for considering each of the time factor of 3.50 hours, 3 hours and 2 hours.	From the details given in statement of Average time spent by oil tankers at HDC during last 3 years, it may be seen that the POL vessels during the last 3 years had taken about 3 hours of time to commence work after berthing. This time is required for draft survey, customs formalities, etc. 3.5 hours which includes the time required for berthing of the daughter vessels in addition to 3 hours of time required after berthing. Further, from the statement, it can be seen that, the POL vessels that worked at Haldia during last 3 years had to wait for more than 7 hours on an average after completion of work. This includes time required for getting favourable tide. As against 7 hours, time of 5 hours has been assumed for sailing out of the daughter vessel after cargo discharge which may be possible by assuming higher cargo discharge productivity at berth at 2000 tonnes per hour to ensure that the entire work of daughter vessel gets completed within 20 hours from the time of berthing so that it can avail the next favourable tide. It is, therefore, evident that the overall time of 8.5 hours assumed in respect of daughter vessels at berth is within the average time (about 10 hours) spent by POL tankers at Haldia oil jetties.																				
(b)	The average time taken by the POL vessels towards each of the time factor as mentioned above during last three years.	AVERAGE TIME SPENT BY OIL TANKERS AT HDC DURING LAST THREE YEARS <table><tr><th>Year</th><th>Average Time spent by tankers at Oil Terminals from Hauled In to Commenced Work (in hours)</th><th>Average Time spent by tankers at Oil Terminals from finished work to Hauled Out (in hours)</th><th>Effective Working time (in hours)</th><th>Total time at berth (in hours)</th></tr><tr><td>2012-13</td><td>2.80</td><td>7.56</td><td>18.37</td><td>28.73</td></tr><tr><td>2013-14</td><td>2.92</td><td>7.24</td><td>17.63</td><td>27.79</td></tr><tr><td>2014-15</td><td>2.95</td><td>7.08</td><td>16.05</td><td>26.08</td></tr></table>	Year	Average Time spent by tankers at Oil Terminals from Hauled In to Commenced Work (in hours)	Average Time spent by tankers at Oil Terminals from finished work to Hauled Out (in hours)	Effective Working time (in hours)	Total time at berth (in hours)	2012-13	2.80	7.56	18.37	28.73	2013-14	2.92	7.24	17.63	27.79	2014-15	2.95	7.08	16.05	26.08
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(c)	The breakup for each of the time factor of 3.50 hours, 3 hours and 2 hours.	Break up is already provided in the proposal. As already stated, the overall time of 8.5 hours considered is well within the average time of 10 hours spent by the POL tankers at Haldia oil jetties for undertaking peripheral activities including tide.																				
(vii)	Considering the deployment of 2 number of Daughter Vessels, the capacity of the Daughter Vessel System at the Floating Storage Offloading (FSO) has been	The success of this project will largely depend upon end to end logistic cost of the users taking into account the transfer tariff as well as daughter vessel freight.																				

	arrived at 5.865 MMTPA. Simultaneously, the capacity of the Daughter Vessel System at the Berthing System has been worked out by KOPT at 7.038 MMTPA. Thereafter, considering the lower of the capacity among the two capacities as worked out above, the optimal capacity for the SBM facility has been restricted to 5.865 MMTPA, being the capacity of the Daughter Vessel System at the FSO. Since the capacity of the Daughter Vessel System at the FSO is seen to be the limiting factor, if in this context, the number of Daughter Vessels is considered at 3, then it will increase the capacity of the Daughter Vessel System at the FSO and it will no longer be the limiting factor. The KOPT to, therefore, explore the possibility of increase in the number of Daughter Vessels so as to make optimum utilization of the SBM facility.	By taking three daughter vessels, the daughter vessel freight cost may increase, unless there are sufficient cargo for optimal utilization of all the three daughter vessels. According to Consultant, the total traffic throughput of POL product at HDC is going to be in the region of 6.3 million tonnes in 2020-21. Moreover, there are possibilities of the mother vessel calling at Haldia after part transfer into the daughter vessel. This may further bring down the need for additional daughter vessels. In keeping with all the above factors and considering that the objective of the project is to address the dead freight cost presently being incurred by the POL importers at Haldia, only two daughter vessels have been considered for the project for which the capacity has been kept as 5.865 MTPA.
(viii)	The KOPT in its proposal has indicated that in the event there is a substantial rise in demand, users can provide vessels with higher pumping capacity so that the turnaround time is reduced considerably thereby increasing the system capacity. In other words, according to KOPT itself, increase in the system capacity with the deployment of vessels with higher pumping capacity is possible and cannot be ruled out. This may lead to a situation where the successful BOT operator for the SBM would be in a position to handle much more than the capacity envisaged now and by adopting the higher rates for the SBM (which would now be worked out based on the lower pumping capacity daughter vessels), the chance of the operator at KOPT making windfall gain in the future, cannot be ruled out. To avoid occurrence of such a scenario, it may be appropriate for the KOPT to consider deployment of daughter vessels with the maximum pumping facility at the proposed facility. In this connection, KOPT to also confirm that no other daughter vessels with the higher pumping facility can be deployed at the facility.	It is reiterated that the SBM facility for POL product proposed by KOPT is aimed for bringing down the dead freight cost and will be utilized by the industries like Haldia Petrochemicals, MCPI, IOCL, BPCL, HPCL, Reliance Industries etc. The POL product handled by each of the industries are different with different productivity because of various properties intrinsic to the different products. In absence of handling crude by the proposed facilities, KOPT does not see significant rise in POL handling at HDC by the industries concerned and therefore, the possibilities of the PPP operator making windfall profit does not arise. Moreover, the present level of productivity of the daughter vessels at the berths is also not expected to cross 2000 tonnes per hour as this assessed productivity is substantially higher than the average productivity of about 1200 tonnes per hour actually achieved at HDC. In view of above, although the proposed system can handle higher volume of cargo but the same can only materialize in the event of handling crude traffic at Haldia. However, IOCL have already created SBM facilities at Paradeep with pipeline connectivity upto Haldia, Barauni and Assam for which they are not likely to offer any crude traffic at the proposed mooring facility of KOPT. While summarizing, it may be stated that the capacity assessed is in line with the POL traffic likely to be handled at Haldia in the near future.
(C).	Capital Cost	
(i)	For the calculation of capital costs, the KOPT appears to have placed reliance on	The capital cost has been re-assessed on the basis of Kandla Port Tariff Order

	the capital costs considered in the KPT tariff Order no. TAMP/15/2010-KPT dated 18 January 2011 relating to the SBM facility at KPT. In this regard, it is relevant to mention here that subsequently, on the ground that the project did not materialize, the KPT had restructured its SBM project and had approached this Authority for fixation of Reference tariff for the SBM facility. Accordingly, this Authority vide its Order no. TAMP/60/2014-KPT dated 2 January 2015 has approved Reference tariff for the SBM facility at KPT. The KOPT, if it so desires, to review its proposal on the lines of the restructured SBM project at KPT. The Order no. TAMP/60/2014-KPT dated 2 January 2015 is hosted in the website of this Authority.	dated 02 January 2015.
(ii)	The capital cost of a SBM at ₹148.23 crores as considered in the KPT Order of January 2011 has been escalated by 6.47% (being the WPI indices for metals) on compounding basis for 5 years and brought to the level of ₹202.84 crores as applicable for the year 2015. Thus, the cost of 2 SBMs has been considered by KOPT at ₹405.68 crores in the calculation. In this regard, the KOPT to clarify/ furnish the following:	
(a)	The reason for not estimating the individual cost elements relating to the SBM based on the prevailing market rates and instead, placing reliance on the capital cost of SBM as prevalent in the year 2010 in the case of KPT and then escalating it to arrive at the capital cost as of the year 2015.	It is not relevant as KOPT has now considered the capital cost as per approval accorded by TAMP for SBM facilities of Kandla Port Trust vide Tariff Order dated 02.01.2015.
(b)	Justification for adopting the wholesale price index (WPI) relating to metals at 6.47%.	Same as above.
(c)	Documentary evidence in support of the WPI so adopted.	Same as above.
(d)	The reason for adopting a common wholesale price index relating to metals at 6.47% for all the years under consideration instead of considering the year on year indexation.	Same as above.
(iii)	The capital cost of Sub-marine Pipelines at ₹443.68 crores (for pipeline of length of 19.5 kms) as considered in the KPT Order of January 2011 has been escalated by 3.4% (being the WPI indices for steel pipes and tubes) on compounding basis for 5 years and brought to the level of ₹41.28 crores as applicable for the year 2015 for 1.535 kms. in the calculation by the KOPT. In this regard, the KOPT to clarify/ furnish the following:	
(a)	The reason for not estimating the cost of the Pipelines based on the prevailing market rates and instead, placing reliance	The capital cost of pipeline has been re-assessed on the basis of Kandla Port Tariff Order dated 02 January 2015.

	on the capital cost of Pipelines as prevalent in the year 2010 in the case of KPT and then escalating it to arrive at the capital cost as of the year 2015.	
(b)	The reason for adopting the wholesale price index relating to steel pipes and tubes at 3.4%.	It is not relevant as the KOPT has now considered the capital cost as per approval accorded by TAMP for SBM facilities of Kandla Port Trust vide Tariff Order dated 02 January 2015.
(c)	Documentary evidence in support of the WPI so adopted.	Same as above.
(d)	The reason for adopting a common wholesale price index relating to steel pipes and tubes at 3.4% for all the years under consideration instead of considering the year on year indexation.	Same as above.
(e)	The basis for envisaging deployment of pipelines of about 1.535 kms at the proposed facility.	Same as above.
(f)	The reason for adopting a common wholesale price index relating to metals at 6.47% for all the years under consideration instead of considering the year on year indexation.	Same as above.
(iii)	The capital cost of Sub-marine Pipelines at ₹443.68 crores (for pipeline of length of 19.5 kms) as considered in the KPT Order of January 2011 has been escalated by 3.4% (being the WPI indices for steel pipes and tubes) on compounding basis for 5 years and brought to the level of ₹41.28 crores as applicable for the year 2015 for 1.535 kms. in the calculation by the KOPT. In this regard, the KOPT to clarify/ furnish the following:	
(a)	The reason for not estimating the cost of the Pipelines based on the prevailing market rates and instead, placing reliance on the capital cost of Pipelines as prevalent in the year 2010 in the case of KPT and then escalating it to arrive at the capital cost as of the year 2015.	The capital cost of pipeline has been re-assessed on the basis of Kandla Port Tariff Order dated 02 January 2015.
(b)	The reason for adopting the wholesale price index relating to steel pipes and tubes at 3.4%.	It is not relevant as the KOPT has now considered the capital cost as per approval accorded by TAMP for SBM facilities of Kandla Port Trust vide Tariff Order dated 02 January 2015.
(c)	Documentary evidence in support of the WPI so adopted.	Same as above.
(d)	The reason for adopting a common wholesale price index relating to steel pipes and tubes at 3.4% for all the years under consideration instead of considering the year on year indexation.	Same as above.
(e)	The basis for envisaging deployment of pipelines of about 1.535 kms. at the proposed facility.	Same as above.
(D). Operating Costs:		
(i)	The KOPT to furnish documentary evidence in support of the rate of depreciation considered at 12.66% for	As per Company's Act, 2013. (The KOPT vide its e-mail dated 21

	SBM and 3.17% for the sub-sea pipelines.	September 2015 has furnished the relevant extract of the Depreciation Rate chart as per Part 'C' of Schedule - II of the Companies Act 2013).																				
(ii)	KOPT to furnish documentary evidence in support of hire charges of ₹200000/- per day per tug (for 2 tugs) and ₹300000/- per month per pilot (for 2 pilots).	The Tug hire cost has been modified to ₹150000 per day as considered for transloading facilities approved by TAMP vide order dated 08.01.2015. However, the fuel consumption cost was not considered in the earlier proposal. The operating expenses towards fuel has been taken as ₹5.40 crores per annum per tug as considered for the transloading arrangement. Two pilots will be required for berthing of mother and daughter tankers alongside the moorings, for which an amount of ₹3,00,000/- has been considered as the monthly salary of the pilots for working at deep sea points.																				
(iii)	Further, with regard to the hire charges of tug, in the Order dated 08 January 2015 relating to fixing of tariff for the Transloading facility at KOPT, the tug hire charges have been considered at ₹150000/- per day per tug. In view of this position, the KOPT to justify the hire charge of tug at ₹200000/- per day per tug.	The tug hire charges have been revised to ₹1,50,000/- per tug per day. (₹ in lakhs) <table><tr><th>Marine Charges</th><th>Tug Hire</th><th>Pilotage</th><th>Total</th></tr><tr><td>Annual charter hire charge (@ Rs 1.5 lakhs per tug per day) for 2 tugs</td><td>1095.00</td><td>-</td><td>1095.00</td></tr><tr><td>Fuel cost for 2 tugs (as per estimation done for transloading of dry bulk cargo as the usage pattern will remain the same)</td><td>1080.00</td><td>-</td><td>1080.00</td></tr><tr><td>Salary and wages of 2 Pilots @ of Rs 300000 per month per pilot</td><td>-</td><td>72.00</td><td>72.00</td></tr><tr><td>Total</td><td>2175.00</td><td>72.00</td><td>2247.00</td></tr></table>	Marine Charges	Tug Hire	Pilotage	Total	Annual charter hire charge (@ Rs 1.5 lakhs per tug per day) for 2 tugs	1095.00	-	1095.00	Fuel cost for 2 tugs (as per estimation done for transloading of dry bulk cargo as the usage pattern will remain the same)	1080.00	-	1080.00	Salary and wages of 2 Pilots @ of Rs 300000 per month per pilot	-	72.00	72.00	Total	2175.00	72.00	2247.00
Marine Charges	Tug Hire	Pilotage	Total																			
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Salary and wages of 2 Pilots @ of Rs 300000 per month per pilot	-	72.00	72.00																			
Total	2175.00	72.00	2247.00																			
(iv)	The need to deploy two number of tugs for the facility and consequently two number of pilots thereon, throughout the year to be justified when the optimum capacity is calculated at the optimization factor at 70% of the facility.	The two tugs will be required for berthing of mother and daughter vessels alongside two moorings. As also, one of the tugs will be used for various other conservancy functions like firefighting, oil spillage management, housing of the pilots, as also for movement of customs officials to the off shore point. Incidentally, in the case of transloading arrangement, one multipurpose vessel and one tug was considered. As against this, in the present proposal, two tugs are considered on charter hire basis. Two pilots will be required for performing their duties in rotation for the whole year.																				
(v)	In the planning and execution of project through Public Private Partnership (PPP) mode so far, the PPP operators are allowed by the Major Port Trusts to operate the berth and levy berth hire charges, apart from levy of handling,	In the instant cast, the SBM facilities will be installed at a place beyond the pilotage limit of KOPT. The operation of berthing of the mother and daughter tankers will be done by the SBM operator by his own pilots and the responsibility for the same																				

	storage and miscellaneous charges. Pilotage and Port dues for the vessel calling at the BOT berth are collected by the concerned Major Port Trusts. The Marine charges proposed by KOPT leviable at the SBM for provision of marine related services includes Pilotage charges. The KOPT to examine whether the BOT operator can be permitted to deploy pilot and collect pilotage.	will remain with the operator. However, the pilotage of the daughter vessel including berthing / un-berthing operations at Haldia oil jetties / berths will be done by the KOPT pilots.
(E).	Scale of Rates:	
(i)	The proposal of the port (as seen from the draft Scale of Rates) is to levy marine charges on mother vessels calling at the SBM against provision of required marine related services and for levy of cargo transfer charge at SBM between Mother vessel and Daughter vessel. However, tariff arrangement for transfer of cargo by daughter vessel from SBM to Jetty has not been proposed. Incidentally Table 9.5 of the Feasibility Study makes a mention about tariff for daughter vessel system at ₹200.20 per tonne. The KOPT to examine this matter and respond.	The tariff arrangement for daughter vessel has not been proposed as the same is a ship freight for carriage of cargo from the SBM point after transfer to Haldia oil jetties or vice-versa and not port related charges.
(ii)	In the calculation of Marine charges, the KOPT is seen to have considered the average GRT of the Mother Vessel at 64000. The basis for considering the same may be explained.	The average GRT of the vessels of 100000 DWT is in the range of 64000.
(iii)	In the calculation of Marine charges (in Table 9.6 of the Feasibility Study), based on the hire charges of tugs as well as that of the pilots and considering the average GRT of the vessel, the marine charges to be levied on the Mother Vessel has been worked out at ₹40.57 per GRT. However, in the draft Scale of Rates, the marine charges has been indicated at ₹40.15 per GRT. The correct position may be clarified.	The marine charges have been recast. (The revised workings /details are furnished by KOPT).

7.1 A joint hearing in the case in reference was held on 04 September 2015 at KOPT premises. At the joint hearing, the KOPT made a brief power point presentation of the proposal. Thereafter, the KOPT and the concerned users/ user organisations/ prospective bidders have made their submissions.

7.2. As decided at the joint hearing, the concerned users/ user associations/ prospective bidders were requested vide our letter dated 08 September 2015 to furnish their comments on the proposal filed by KOPT to us and KOPT. This was followed by a reminder dated 14 September 2015.

7.3 In this connection, one of the prospective bidders, M/s. Scomi Group (Malaysia) (Scomi) has furnished their comments vide its email dated 18 September 2015 to KOPT and to us simultaneously.

7.4. Despite agreeing during joint hearing and as communicated to KOPT vide our letter dated 08 September 2015, the KOPT has not responded to the comments furnished by Scomi, till finalisation of this case.

8. As stated earlier, the KOPT while furnishing the additional information/ clarification vide its letter dated 17 September 2015 has revised its proposal. It is to state that the KOPT has

retained the optimal capacity calculations as furnished by it in its July 2015 proposal and has revised only the capital cost and operating cost estimates. A comparative position between the initial proposal of KOPT of July 2015 vis-à-vis the revised proposal of September 2015 is given below:

(i). Detailed Breakup of Capital Cost

Sr.No.	Items	Qty.	July 2015 (₹ in Lakhs)	September 2015 (₹ in Lakhs)
(i)	SBM with associated facilities	2	40,568.00	35,848.00
(ii)	Submarine Pipeline from SBM – 1 to SBM	1.535 KM	4,128.00	3,049.00
(iii)	Miscellaneous works @ 5% of capital Cost		2,235.00	1,949.00
Grand Total			46,931.00	40,846.00

(ii). Other O&M Cost

Sr.No	Item	Norm adopted	July 2015 (₹ in Lakhs)	September 2015 (₹ in Lakhs)
(i)	Power and Fuel cost		0	0
(ii)	Repair & Maintenance	@ 2% of capital cost	939.00	817.00
(iii)	Insurance	@ 1% of capital cost	469.00	408.00
(iv)	Depreciation	@ 12.66% of capital cost for mooring and @ 3.17% of capital cost for sub-sea pipeline [excluding misc cost, straight line method of depreciation as per the companies act, 2013 (revised depreciation rates)]	5,530.00	4,635.00
(v)	Other expenses	@ 1% of capital cost	469.00	408.00
Total O&M Cost			7,407.00	6,268.00

(iii). Annual Revenue Requirement

Sr. No.	Particulars	July 2015 (₹ in Lakhs)	September 2015 (₹ in Lakhs)
(i)	16% of Capex	7,508.00	6,535.00
(ii)	Operating cost	7,407.00	6,268.00
(iii)	Total	14,915.00	12,803.00
(iv)	Capacity of the system	5.865 MT	5.865 MT
Tariff		₹ 254.33 per ton	₹ 218.29 per ton

(iv). Marine Charges.

Marine charges will be applicable for the usage of tug assistance and pilot requirement. Tugs will also function as the fire float. Marine charges are chargeable on the basis of per GRT of the vessel.

Sr. No	Particulars	July 2015 (₹ in Lakhs)			September 2015 (₹ in Lakhs)		
		Tug Hire	Pilotage	Total	Tug Hire	Pilotage	Total

(i)	Annual charter hire charge (@ ₹1.5 lakhs per tug per day) for 2 tugs	1,460.00 (2 Nos of Tugs.×₹ 2 lakhs per day×365 days)		1,460.00	1095.00 (2 Nos of Tugs.×₹ 1.5 lakhs per day ×365 days)	-	1,095.00
(ii)	Fuel cost for 2 tugs (as per estimation done for transloading of dry bulk cargo as the usage pattern will remain the same)	-	-	-	1080.00	-	1,080.00
(iii)	Salary and wages of 2 Pilots @ of ₹ 300000 per month per pilot	-	72.00 (3Lakhs×2 pilots×12m)	72.00	-	72.00 (3Lakhs×2 pilots×12 m)	72.00
Total		1460.00	72.00	1,532.00	2,175.00	72.00	2,247.00

(v). Estimation of Marine Charges per GRT basis.

Sr. No.	Particulars	July 2015			September 2015		
		Tug Assistance	Pilotage	Total	Tug Assistance	Pilotage	Total
(i)	Operating Cost. (₹ in Lakhs)	1460.00	72.00	1532.00	2175.00	72.00	2247.00
(ii)	Total GRT per annum (in lakhs)	37.76	37.76	37.76	132.11	132.11	132.11
(iii)	Marine Charges per GRT basis	₹ 38.67 Per GRT	₹ 1.91 Per GRT	₹ 40.57 per GRT	₹ 16.46 per GRT	₹ 0.55 per GRT	₹ 17.01 per GRT

(Note: It is assumed that there will be two tugs and two pilot boats will be required and assumed expense is ₹2.0 lakhs per day per tug and ₹3.0 lakhs per month towards Pilot boats.)

(vi). Scale of rates

Since the entire cargo is going to be POL, the concession factor for coastal cargo has not been loaded in the tariff calculated.

(a). Marine Charges on Mother Vessels and Daughter vessels:

Sr. No.	Description of vessel	July 2015	September 2015
		Rate in ₹ per GRT	Rate in ₹ per GRT
(i)	Vessel engaged in Foreign trade	40.15	17.01
(ii)	Vessel engaged in Coastal trade	Not Applicable	Not Applicable

(b). Cargo Transfer Charge at SBM between Mother Vessel and Daughter Vessel:

Sr. No.	Commodity	Unit	July 2015		September 2015	
			Rate in ₹		Rate in ₹	
			Foreign	Coastal	Foreign	Coastal
(i)	POL Product	Per Metric Tonne	254.33	Not Applicable	218.29	Not Applicable

(vii). Performance standard

Sr. no.	Parameters	Performance Standard
(i)	Gross pumping output from mother tanker to daughter vessel and vise-versa	3000 tonnes per hour

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

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

- (i). In order to benefit the trade in increasing their liquid cargo throughput at HDC at a reduced logistic cost and to ensure optimal utilisation of the liquid cargo handling infrastructure already created by the importers/ exporters at Haldia, the KOPT has envisaged development of 2 Single Buoy Moorings (SBMs) with connected pipeline facilities for transfer of POL cargo on DBFOT basis. The proposal under reference is for fixation of reference tariff for transfer of POL cargo at 2 SBM with connected pipeline facilities proposed to be set up by KOPT. The proposal is based on the Revised Guidelines for Determination of Tariff for Projects at Major Ports, 2013 issued by the Ministry of Shipping (MOS).
- (ii). Clause 2.2. of the Revised Tariff Guidelines of 2013, inter alia, stipulates that the Reference Tariff will be the highest tariff fixed for that commodity in the concerned Major Port Trust under the 2008 Tariff Guidelines. The said Clause also stipulates that in case no tariff has been fixed for a commodity at a major port trust or if the highest tariff fixed for a particular commodity in the concerned major port trust does not represent the project proposed to be developed, then concerned major port trust can propose to this Authority any other tariff fixed under 2008 tariff guidelines in any other major port trust, which is representative enough for that commodity giving detailed and sufficient justification.

With regard to the proposal in reference, the capital cost of the KOPT SBM project is seen to be based on the capital cost of the SBM project at Kandla Port Trust (KPT). While the capital costs of the KPT SBM has been considered as base by KOPT, the KOPT has not adopted the upfront tariff of SBM at KPT instead come up with a proposal for fixation of rate for SBM based on the 2008 tariff guidelines, by adopting the capital cost of the KPT SBM. The KOPT SBM project envisages installation of two single point moorings connected by sub-sea pipeline and transfer of the POL cargo to the jetty through daughter vessels, whereas, the KPT SBM is based on transfer of crude by sub-sea and shore based pipelines from mother tankers directly into the crude oil terminals constructed on shore. Thus, there is a difference in the manner of handling cargo at KPT and KOPT, thereby resulting in difference in the capital cost and variable cost structures of the two projects. Further, in the proposed project of KOPT, since the optimal capacity of the KOPT SBM is dependent on the evacuation ability of the daughter vessels at low draft situation in the Haldia channel, the optimal capacity of the proposed mooring arrangement of KOPT is going to be lower than that of KPT. Therefore, there is justification for the port to not adopt the upfront tariff of SBM at KPT.

- (iii). Before proceeding ahead with the analysis of this case, it is relevant here to state that the tariff guidelines of 2008 for upfront tariff fixation prescribe norms/ guidelines for dedicated facilities such as coal, iron ore, container, liquid handling terminal and multipurpose cargo terminal. The guidelines of 2008 for upfront tariff fixation do not prescribe any exclusive norms / guidelines for handling any type of cargo at Single Point Mooring (SPM)/ Single Buoy Mooring (SBM). In view of this position, when the KPT had earlier come up with a proposal for fixation of upfront tariff for its SBM project, the matter was referred to the Ministry of Shipping (MOS). The MOS in response, vide its letter dated 9 June 2010 had stated that the Indian Maritime University (IMU) has been engaged to examine the said matter and to furnish its report and had advised this Authority to undertake fixation of upfront tariff for SPM at KPT based on the parameters applicable for liquid bulk handling with reference to SPM operation carried out at the KPT, Cochin Port and Paradip Port Trust as an interim measure till the guidelines for SPM terminals are finalized. Norms/ guidelines for fixation of tariff for SBM operation following the

principles of 2008 guidelines are not received from MOS. A copy of recommendations made by the (then) Adviser of Indian Maritime University (IMU), engaged by the MOS to formulate norms for SPM operations have also not been received from the MOS.

Since the proposal of KOPT envisages handling of POL cargo, the KOPT is seen to have generally adopted the norms prescribed for the liquid terminal in the 2008 upfront tariff guidelines for estimating the components of operating cost. In the absence of any specific norms prescribed in the 2008 guidelines and in view of urgency expressed by the KOPT for seeking reference tariff for this project, adoption of norms prescribed in the upfront tariff guidelines for a liquid bulk terminal for the purpose of estimation of operating cost, as proposed by KOPT, is accepted and relied upon to the extent relevant to arrive at the reference tariff for this project.

- (iv). The KOPT has filed its proposal in 21 July 2015. Subsequently, based on the information/ clarifications sought by us during the processing of the case, the KOPT under cover of its letter dated 17 September 2015 has forwarded a revised proposal alongwith the Scale of Rates, Performance standards and reply to our letter seeking additional information/ clarification. The revision in the proposal is mainly with reference to change in the capital cost, and the corresponding change in the operating cost. The revised proposal of the KOPT furnished on 17 September 2015 along with the information/ clarifications furnished by KOPT during the processing of the case are considered in this analysis.

- (v). Optimal Capacity:

Optimal capacity has been assessed by KOPT for the Daughter Vessel System and Berthing System. Thereafter, lower amongst the two, has been considered by KOPT as the optimal capacity of the SBM facility.

- (a). Capacity Calculation of Daughter Vessel System

- (i). Considering the capacity of the Daughter Vessel at 23000 tonnes and based on the number of daughter vessel trips at 127.5 trips per annum, and based on the deployment of 2 no. of daughter vessels, the KOPT has arrived at the capacity of the Daughter Vessel System at 5.865 MMTA.
- (ii). The capacity of the Daughter Vessel at 23000 tonnes considered by KOPT is reported to be based on the parcel size of Naphtha vessel of HPL handled at HDC in the past and hence relied upon.
- (iii). The number of daughter vessel trips at 127.5 trips per annum, is reported to be based on the following position, as given by KOPT:

Sr. No	Particulars	Parameters	Remarks/ Workings
(A)	Total Time taken for Cargo transfer operations from Mother Vessel to Daughter Vessel		
(i)	Time required to load one daughter vessel (Daughter vessel Capacity/ Pumping rate) i.e. (23,000 tonnes /3000 tonnes)	7.67 Hours	The pumping rate of 3000 tonnes is reported to be based on the indication received from HPL, and hence is relied upon.
(ii)	Time required for other peripheral activities	6 Hours	The time period of 6 hours is reported to be based on the assessment given by the Consultant on a lumpsum basis, and hence is relied upon.
(iii)	Sailing time from Mother	7 Hours	Average distance between

	Vessel to Jetty (t _s)		Mother Vessel at SBM to jetty – 130 kms. Based on the position that the average speed of a Daughter Vessel is 10 nautical miles per hour and based on the conversion factor of 1 nautical mile = 1.852 kms, a Daughter Vessel is expected to cover a distance of 130 kms over a period of 7.02 hours. The parameters as given by the KOPT are relied upon.
(iv)	Total time taken for Daughter vessel (i+ii)	20.67 Hours	(7.67 + 6 + 7) Hours
(B)	Total time for unloading at Jetty and to go back to mother vessel		
(i)	Unloading rate at jetty (23000 tonnes / 2000 tonnes per hour)	11.5 Hours	The unloading rate of 2000 tonnes per hour is reported to be based on the assessment given by the Consultant and hence is relied upon.
(ii)	Time for Berthing, Draft survey, Waiting for tide, Draft survey, documentation, unberthing	8.5 Hours	The time period of 8.5 hours is reported to be based on the assessment given by the Consultant, based on the average time spent by the POL tankers at Haldia oil jetties in the past and hence is relied upon.
(iii)	Sailing time from berth to mother vessel	7 Hours	As in A(ii) above.
(iv)	Total time for unloading at jetty (i+ii+iii)	27 Hours	(11.5 + 8.5 + 7) Hours
(C)	Turnaround Time of Daughter Vessel (A+B)	47.67 Hours	(20.67 +27) Hours
(D)	Total system availability	255.5 days	(365 days x 70% utilisation)
(E)	Number of Daughter Vessel		2
(F)	No of Trips Per Vessel (Total System availability/ Turnaround time of Daughter Vessel) i.e. (D/E)		127.5

- (iv). As stated earlier, the KOPT has envisaged deployment of 2 daughter vessels. Since the capacity of the Daughter Vessel System was seen to be the limiting factor, the KOPT was requested to explore the possibility of increasing the number of Daughter Vessels so as to make optimum utilization of the SBM facility. In this regard, the KOPT is of the view that as per the Feasibility Report, there is no sufficient cargo for optimal utilization of three daughter vessels. The mother vessel, after part transfer of POL cargo into the daughter vessel at the SBMs, may also call at HDC. This will bring down the requirement of additional daughter vessels. Further, KOPT has also stated that in case of deployment of 3rd daughter vessel, it anticipates an increase in the end to end logistics cost, which may affect the success of the project. The KOPT has thus, emphatically, desired to go ahead with deployment of 2 daughter vessels. Based on the

reasoning furnished by KOPT and since deployment of 2 daughter vessels is as per the Feasibility Report and also since none of the users/prospective bidders have commented on the deployment of 2 daughter vessels, the deployment of 2 Daughter Vessels is considered in the analysis.

- (v). Thus, the optimal capacity of the daughter vessel system as, assessed by the port at 5.865 Million tonnes per annum (127.5 trips per vessel per annum x 2 Nos. of Daughter Vessel x 23000 tonnes capacity of the Daughter Vessel) is considered in the analysis.

(b). Capacity Calculation of Berthing System

- (i). Considering that a daughter vessel of a capacity of 23000 tonnes takes 20 hours to turnaround at the jetty, the KOPT has determined the capacity of the Berthing System at 7.038 MMTPA based on the Total available hours of operation at 6120 hours i.e. (255 days x 24 hours).
- (ii). The position of the capacity of the daughter vessel at 23000 tonnes has already been discussed earlier.
- (iii). The turnaround time of 20 hours taken by a daughter vessel is reported to be based on the following position, as given by KOPT:

Sr. No	Particulars	Parameters	Remarks
	Turnaround time of Daughter Vessel at Berth (t_b)		
(i)	Time Required to unload one Daughter Vessel	11.50 hours	As in B (i) in the Table above.
(ii)	Time required for other peripheral activities	5.50 hours	The time period of 5.5 hours and 3 hours is reported to be based on the assessment given by the Consultant, based on the average time spent by the POL tankers at Haldia oil jetties in the past and hence is relied upon.
(iii)	Waiting for tide	3 hours	
	Total turnaround time	20 hours	(11.5 + 5.5 + 3) hours

- (iv). The total turnaround time of Daughter vessel considered by the port is 20 hours. The turnaround time per day estimated by port is 1.2 times per day (24 hours a day / 20 hours for turnaround) for 255 days. Thus, the optimal capacity of the Berthing System has been assessed by KOPT at 7.038 MTPA [(255 days x 24 hours) / 20 hours x 23000 tonnes].

- (c). Thus, the lower of the two capacities has been considered as the optimal capacity of the SBM i.e. 5.865 MTPA.

(vi). Capital cost:

- (a). As stated earlier, there are no norms prescribed for the SBM operations in the 2008 Upfront tariff guidelines. In the absence of any norms for the SBM facility, the list of items included under the head of 'Capital cost' is relied upon and considered, as estimated by the KOPT.

- (b). With regard to the cost of capital assets, the KOPT in its initial proposal of July 2015, had placed reliance and arrived at the capital cost of its SBM on the basis of the KPT tariff Order no. TAMP/15/2010-KPT dated 18 January 2011 relating to the SBM facility at KPT. However, on pointing out to KOPT, that the KPT on the ground that its SPM project did not materialise, has restructured its SPM project and that this Authority vide its Order no. TAMP/60/2014-KPT dated 02 January 2015 has fixed Reference tariff for the restructured project, the KOPT has also considered the capital cost as considered in the order no. TAMP/60/2014-KPT dated 02 January 2015 as base. Thus, taking the base price as considered in the KPT tariff Order and indexing it with wholesale price in index of 6.47% and 3.4% for SBM facility and sub marine pipeline respectively on compounding basis for 5 years, the KOPT has arrived at the capital cost as for the year 2015.
- (c). The total capital cost for the SBM with associated facilities as estimated by the KOPT is ₹408.46 Crores of which ₹358.48 Crores is estimated towards SBM with allied facilities, ₹30.49 Crores for the Pipelines and the balance ₹19.49 Crores for the Miscellaneous Cost.
- (d). Considering the base rate of ₹179.24 crores per SBM from the KPT tariff Order no. TAMP/60/2014-KPT dated 2 January 2015, the cost for the 2 SBM has been estimated by KOPT at ₹358.48 Crores (₹179.24Crores x 2 SBM).

Similarly, the capital cost for the submarine pipeline is estimated by KOPT by taking the base rate of ₹355.67 Crores for 17.5 Kms of the sub marine pipeline from the KPT tariff Order and then proportionately considering it for the 1.535 Kms of the submarine pipelines in its proposal. Thus, the cost for submarine pipelines of 1.535 kms is estimated by KOPT at ₹ 30.49 Crores.

- (e). Further the KOPT has estimated 5% of the capital cost estimates relating to SPM and Pipelines towards miscellaneous capital cost. This is as per the norms prescribed in the guidelines for liquid terminal and hence considered in the analysis. However, there appears to be some error in the calculation of the miscellaneous cost of the KOPT. The Miscellaneous cost at 5% works out to ₹19.45 Crores as against ₹19.49 Crores as estimated by the KOPT.

Thus, the capital cost for the SBM is considered at ₹408.42 Crores as against ₹408.46 Crores estimated by KOPT.

- (f). Return on capital employed is estimated at 16% of the estimated capital cost as per the norm prescribed in the guidelines.

(vii). Operating Cost:

- (a). For estimation of operating cost, as discussed earlier, the KOPT in the absence of any specific norms for SPM operations, is seen to have adopted the norms prescribed for the liquid terminal in the 2008 Upfront Guidelines. The operating cost estimated by the KOPT is discussed hereunder:
- (b). SBM facility and Sub marine Pipeline.
 - (i). The KOPT has not estimated any cost towards Power and fuel for SPM operations as according to the KOPT, SPM operations will be powered by Solar energy. The position as reported by the KOPT is relied upon.

- (ii). The repairs and maintenance cost is estimated at 2% and Insurance cost and Other expenses are estimated at 1% each of the total capital cost for SBM and marine pipelines in line with the norms prescribed in the 2008 guidelines for the liquid bulk terminal. The estimates for these cost items are considered as estimated by the KOPT.
- (iii). Clause 3.5.3. of the tariff guidelines of 2008 stipulates that the depreciation should be calculated following the Straight Line Method (SLM) as per the rates prescribed in the Companies Act 1956. The KOPT has computed depreciation @ 3.17% on capital cost for sub-sea pipeline and 12.66% for the SBM. The KOPT has stated that the rates for the depreciation are as per the rates prescribed in the Companies Act 2013 under the SLM for the relevant group of assets. At our request, the KOPT has furnished documentary evidence in support of the rate of depreciation.

From the details furnished by KOPT it appears that KOPT SBM would be operational on triple shift basis and for that reason the rates of 6.33% as applicable for "Plant and Machinery other than continuous process plant not covered under any specific machinery" for a single shift is doubled up making the depreciation rate of SBM at 12.66%. In this connection, it is relevant to mention here that the rate of depreciation in the case of KPT SPM, has been considered at 10%, as perhaps the KPT SPM envisages a double shift operation, wherein the depreciation rate is to be calculated at 1.5 times of the applicable rate of 6.33%. Since, the rate of depreciation on SBM is seen to be as per the depreciation rate prescribed in the Companies Act, 2013 the same is considered, as estimated by the KOPT.

As regards pipeline, the KOPT, in this proposal has considered the depreciation at the rate of 3.17% stating that the said rate of depreciation is as per the rates prescribed in the Companies Act 2013 under the SLM for the relevant group of assets. In this regard, it is relevant hereto mention that the Jawaharlal Nehru Port Trust (JNPT) in its proposal for fixation of reference tariff for the Additional Liquid Bulk Terminal (ALBT), had indicated that the depreciation on pipelines as per the Companies Act, 2013, will be 4%. Accordingly, this position was relied upon while passing the Order No. TAMP/50/2013-JNPT dated 31 December 2013 in the case of the JNPT. This position was also considered in fixation of common tariff for floating pipeline facility for handling edible oil cargo at KOPT vide order no TAMP/25/2014-KOPT dated 29 October 2014 and also while fixing the tariff for SBM facility at KPT vide order no. TAMP/60/2014- KOPT dated 02 January 2015.

The provisions as per the Companies Act, 2013 suggest that the useful life of pipelines is to be considered as 30 years which translates to a depreciation rate of 3.34% per annum. The depreciation rate considered in the case of JNPT and KPT based on the position indicated by these ports is not found to be off the mark from the rate of 3.17%, as considered by KOPT. Nevertheless, the depreciation on pipeline in the case of KOPT is considered at 4% instead of 3.17% considered by the KOPT, in line with the rate of depreciation considered in the case of JNPT and KPT, as discussed above.

While calculating the depreciation the port has not considered the depreciation on the Miscellaneous capital cost. It is relevant to

mention here that the upfront tariff guidelines of 2008 stipulate, estimating miscellaneous capital cost @5% of the total of the estimated cost. Therefore, depreciation has been considered at relevant rates applicable for SBM and pipelines on the miscellaneous cost as per upfront tariff guidelines 2008.

- (iv). Subject to above analysis, the total operating cost for handling POL at SBM works out to ₹ 65.27 Crores as against the operating cost of ₹ 62.69 Crores estimated by KOPT.

(b). Marine Charges.

- (i). The KOPT has reported proposed hire of two tugs exclusively for SBM operations at a cost of ₹ 150000/- per tug /per day. The tug hire charges of ₹150000/- per day is based on the tug hire charges as considered in the tariff Order no. TAMP/63/2014-KOPT dated 08 January 2015 passed while fixing the tariff for the transloading facility to be set up for handling of dry bulk cargo at Haldia Dock Complex (HDC) at KOPT. The tug hire charge as estimated by the port is taken into account.
- (ii). The fuel cost of Tug is based on the fuel parameters for tug considered for fixing tariff for the transloading facility to be set up for handling of dry bulk cargo at Haldia Dock Complex (HDC) at KOPT. The cost of fuel as estimated by the port is considered.
- (iii). The KOPT has reported to hire 2 pilot for two tugs for a monthly salary of ₹ 300000/- per pilot. The estimated salary for pilots is reported to be based on the feasibility report and hence, relied upon.

Thus, the operating cost of ₹ 2247 lakhs as estimated by the KOPT is considered in the analysis.

- (viii). (a). The total annual revenue requirement from SBM operations works out to ₹ 130.61 Crores which is an aggregate of 16% return on the estimated capital cost at ₹65.34 Crores and operating cost of ₹ 65.27 Crores, as against annual revenue requirement estimated by the KOPT at ₹ 128.04 Crores. The difference in the annual revenue requirement is seen to arise on account of change in the amount of Depreciation as discussed earlier.
- (b). The entire estimated revenue requirement from SPM is proposed to be recovered entirely from the POL handling charges. Accordingly, to meet the estimated annual revenue requirement of ₹ 130.61 Crores over the optimal capacity of 5.865 MTPA, the consolidated handling charge works out to ₹ 222.71 per tonne as against the handling rate of ₹ 218.29 per tonne proposed by the KOPT.

As per the coastal concession policy of the Government, handling of crude including POL is not entitled for any coastal concession. The port has also, therefore, rightly not proposed any concessional tariff in the handling charge for coastal category.

- (ix). For arriving at the proposed rate of Marine Charges, the KOPT has spread over the total Operating Cost pertaining to Marine charges as discussed earlier at ₹ 2247 lakhs over the total GRT of vessel assessed at 132.11 lakhs GRT. The total GRT so assessed by the KOPT is based on the deployment of 59 Mother Vessels with an average GRT of 64000 and 255 Daughter Vessels with an average GRT of 37000. The GRT of the Mother and Daughter vessels is seen to be as per the Feasibility Report. This position is relied upon.

By spreading over the total operating cost over the total GRT, the charges towards tug hire works out to ₹ 16.46 per GRT (₹ 2175 lakhs/ 132.11 lakhs GRT) and towards the pilotage works out to ₹ 0.55 per GRT (₹ 72 lakhs/132.11 lakhs GRT). Thus, the total Marine charges works out to ₹ 17.01 per GRT (₹ 16.46 + ₹ 0.55)

- (x). The KOPT has only proposed the definition of Foreign Vessel and Coastal Vessel. The definition of terms like TAMP, Per Day and Tonne is included in the Reference tariff Schedule in line with the definitions for these terms as prescribed in the Scale of Rates (SOR) of KOPT.
- (xi) The KOPT has proposed some general conditionalities like conditionalities prescribing criteria for categorization of a vessel as a foreign going vessel or coastal vessel, conditionalities prescribing 60% concessional tariff, which are found to be in line with the general conditionalities prescribed in the Upfront tariff schedule of various major port trusts, and hence is prescribed in the Reference tariff schedule of KOPT also.
- (xii). The Government of India in the Ministry of Shipping (MOS) under cover of its letter No. PT-11033/51/2014-PT dated 11 November 2014 has forwarded a copy of the guidelines on priority berthing of coastal vessels at Major Port issued vide letter No. PT-11033/51/2014-PT dated 4 September 2014 to this Authority. Accordingly, this Authority vide its Order no. TAMP/52/2014-Genl. dated 28 November 2014 has, inter alia, approved the replacement of definition of 'Coastal Vessel' prescribed in the existing SOR of all the Major Port Trusts as follows:

“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 Director General of Shipping/ Competent Authority.’

Therefore, the definition of Coastal Vessel as proposed by the KOPT is modified with the above mentioned definition of 'Coastal Vessel'.

- (xiii). The KOPT under the General Terms and Conditions Sr. No 2 (iv) (d) has proposed an incomplete note which simply states that the delay in payment by the users will be counted only 10 days after the date of raising the bills. In this regard, the said note is completed in line with the stipulation prescribed in the Scale of Rates (SOR) of all Major Port Trusts as well as in the Upfront and reference tariff schedule of other major port trusts as follows:

“The delay in payment by the users will be counted only 10 days after the date of raising the bills by the Terminal Operator. This provision shall, however, not apply to the case where payment is to be made before availing the services as stipulated in the Major Port Trust Act, 1963 and / or Prescribed as a condition on the Scale of Rates.”

- (xiv). The KOPT has not proposed some general conditionalities to the effect that the rates prescribed being at ceiling levels; likewise, rebates and discounts being at floor levels. Since the said conditionalities have been incorporated in other Upfront/ Reference tariff schedules of other major port trusts, the same has been incorporated in the reference tariff schedule of the KOPT also.
- (xv). The KOPT under the General Terms and Conditions has proposed a note to the effect that in all cases where charges are levied in US Dollar terms, the exchange rate shall be reviewed once in every 30 days from the date of applicable exchange rate adopted in respect of vessel related charges for vessels staying in the Port for more than 30 days and in such cases, the basis of billing shall change prospectively with reference to the appropriate exchange rate prevailing at the time of review. Since the Reference Tariff schedule approved does not prescribe any tariff denominated in US dollar terms, the proposed note is not found necessary and hence, not prescribed.

- (xvi). Clause 2.2 of the revised tariff guidelines of 2013 requires this Authority to prescribe the Reference Tariff along with the Performance Standards. Though the revised guidelines of 2013 do not require this Authority to go into the Performance Standards proposed by the port it is not unreasonable to assume that the ports would propose reasonable and achievable Performance Standard.

Initially the KOPT stated that performance standards are not applicable for this project. On highlighting the provisions of Clause 2.2 of the 2013 guidelines, the KOPT has proposed performance standard to the effect that the Gross Pumping Output from Mother tanker to Daughter vessel and vice versa would be 3000 tonnes per hour.

This Authority while disposing the Reference Tariff cases has always strived to prescribe Performance Standards, based on output (handling) rate considered in the optimal quay capacity calculation. Incidentally, the Gross Pumping Output from Mother tanker to Daughter vessel and vice versa would be 3000 tonnes per hour, is seen to be in line with the output (handling) rate considered in the optimal capacity calculation of the SBM.

Recognizing that clause 2.2. of the revised guidelines of 2013 requires this Authority to notify the Performance Standard as proposed by the port, the Performance Standard as proposed by the KOPT is notified along with the Reference Tariff Schedule.

11.1. Subject to above, the Reference Tariff Schedule along with conditionalities governing the Reference Tariff has been modified.

11.2. The Reference Tariff Schedule as modified by us is attached as **Annex-I** and the Performance Standards as proposed by KOPT is attached as **Annex-II**.

11.3. In the result, and for the reasons given above, this Authority approves and notifies the modified Reference Tariff Schedule for the SBM alongwith the Performance Standard.

11.4. As per clause 2.5 of the Revised Tariff Guidelines 2013, the Reference Tariff and Performance Standard notified by this Authority shall be mentioned in the bid document and subsequently in the Concession Agreement in respect of PPP Projects. Accordingly, the KOPT is advised to incorporate the Reference Tariff and Performance Standard, in the bid document and subsequently in the Concession Agreement in respect of PPP Project as agreed by the port.

12.1. From the date of Commercial Operation (CoD) till 31st March of the same financial year, the tariff would be limited to the indexed Reference Tariff relevant to that year, which would be the ceiling. The aforesaid Reference Tariff shall be automatically revised every year based on an indexation as provided in para 2.2 of the tariff guidelines of 2013 which will be applicable for the entire concession period.

However, the PPP operator would be free to propose a tariff along with Performance Standard (the "Performance Linked Tariff") from the second year of operation onwards, over and above the indexed Reference Tariff for the relevant financial year, at least 90 days before the 1st April of the ensuing financial year. Such Performance Linked Tariff shall not be higher than 15% over and above the indexed Reference Tariff for that relevant financial year (and this will be the Tariff Cap). The Performance Linked Tariff would come into force from the first day of the following financial year and would be applicable for the entire financial year.

12.2. The proposal shall be submitted to TAMP along with a certificate from the independent engineer appointed under the Concession Agreement of the Project indicating the achievement of Performance Standard in the previous 12 months as incorporated in the Concession Agreement or for the actual number of months of operation in the first year of operation as the case may be.

12.3. On receipt of the proposal, TAMP will seek the views of the Major Port Trust on the achievement of Performance Standard as outlined in para 5 of the tariff guidelines of 2013, within 7 days of receipt.

12.4. In the event of Operator not achieving the Performance Standard as incorporated in the Concession Agreement in previous 12 months, TAMP will not consider the proposal for notifying the Performance Linked Tariff for the ensuing financial year and the Operator shall be entitled to only the indexed Reference Tariff applicable for the ensuing financial year.

12.5. After considering the views of the Major Port Trust, if TAMP is satisfied that the Performance Standard as incorporated in the Concession Agreement has been achieved, it shall notify the performance linked tariff by 15th of March to be effective from 1st of April of the ensuing financial year.

12.6. While considering the proposal for Performance Linked Tariff, TAMP will look into the Performance Standard and its adherence by the Operator. TAMP will decide on the acceptance or rejection of the Performance Linked Tariff proposal based on the achievement or otherwise of the Performance Standard by the operator. Determination of indexed Reference Tariff and Performance Linked Tariff will follow the illustration shown in the Appendix attached to the tariff guidelines of 2013.

12.7. From the third year of operation, the Performance Linked Tariff proposal from the PPP operator shall be automatically notified by TAMP subject to the achievement of Performance Standard in the previous 12 months period as certified by the Independent Engineer. The PPP operator, for the Performance Linked Tariff from the third year onwards, will submit the Performance Linked Tariff proposal along with the achievement certificate from the independent engineer by 1st March and TAMP shall notify by 20th March, the Performance Linked Tariff to be effective from the ensuing financial year.

12.8. In the event any user has any grievance regarding non-achievement by the PPP operator of the Performance Standard as notified by the TAMP, he may prefer a representation to TAMP which, thereafter, shall conduct an inquiry into the representation and give its finding to the concerned Major Port Trust. The Major Port Trust will be bound to take necessary action on the findings as per the provisions of the respective Concession Agreement.

12.9. Within 15 (fifteen) days of the signing of the Concession Agreement, the concerned operator will forward the Concession Agreement to TAMP which will host it on its website.

12.10. The PPP operator shall furnish to TAMP quarterly reports on cargo traffic, ship berth day output, average turnaround time of ships, average pre-berthing waiting time as well as the tariff realized for each berth. The quarterly reports shall be submitted by the PPP operator within a month following the end of each quarter. Any other information which is required by TAMP shall also be furnished to them from time to time.

12.11. TAMP shall publish on its website all such information received from PPP operator. However, TAMP shall consider a request from any PPP operator about not publishing certain data/ information furnished which may be commercially sensitive. Such requests should be accompanied by detailed justification regarding the commercial sensitiveness of the data/information in question and the likely adverse impact on their revenue/ operation of upon publication. TAMP's decision in this regard would be final.

(T.S. Balasubramanian)
Member (Finance)

COMPUTATION OF REFERENCE TARIFF FOR TRANSFER OF POL CARGO AT SINGLE BUOY MOORING (SBM) BETWEEN MOTHER AND DAUGHTER VESSEL AND MARINE CHARGES ON MOTHER AND DAUGHTER VESSEL AT KOLKATA PORT TRUST (KOPT)

(₹ In Lakhs)

Sr. No.	Particulars	UOM	Estimates furnished by KOPT in its proposal dated 21 July 2015	Estimates furnished by KOPT in its revised proposal dated 17 September 2015	Modified by TAMP
I	Optimal capacity of SPM				
(A)	Capacity calculation at FSO				
(i)	Mother Vessel capacity (CF)	Tonnes	100000	100000	100000
(ii)	Daughter vessel capacity (C _D)	Tonnes	23000	23000	23000
(iii)	Pumping rate (mother to daughter vessel)	tonnes per hour	3000	3000	3000
(iv)	Time required to load one daughter vessel (ii/iii)	hours	7.67	7.67	7.67
(v)	Time required for other peripheral activities for daughter vessel	hours	6	6	6
(vi)	Total time to load one daughter vessel (iD) (iv+v)	hours	13.67	13.67	13.67
(vii)	Average distance between Mother vessel location to Jetty	kms	130	130	130
(viii)	Time to cover the distance (tD)	hours	7	7	7
			[130/(10*1.825)] [the speed of the daughter vessel = 10 nautical miles per hr and 1 nautical mile = 1.852 km]	[130/(10*1.825)] [the speed of the daughter vessel = 10 nautical miles per hr and 1 nautical mile = 1.852 km]	[130/(10*1.825)] [the speed of the daughter vessel = 10 nautical miles per hr and 1 nautical mile = 1.852 km]
(ix)	Unloading Rate at Jetty	tonnes per hour	2000	2000	2000
(x)	Vessel turnaround at berth	hours	20	20	20
			[3.5 hrs for Berthing, Draft survey, documentation etc. + 11.5 hrs Time to Unload+ 3 hrs Waiting For Tide+ 2 Draft survey, documentation, un-berthing]	[3.5 hrs for Berthing, Draft survey, documentation etc. + 11.5 hrs Time to Unload+ 3 hrs Waiting For Tide+ 2 Draft survey, documentation, un-berthing]	[3.5 hrs for Berthing, Draft survey, documentation etc. + 11.5 hrs Time to Unload+ 3 hrs Waiting For Tide+ 2 hrs Draft survey, documentation, un-berthing]
(xi)	Sailing time from berth to mother vessel		7	7	7
(xii)	Minimum Number of Daughter Vessels Required (N)		2	2	2
(xiii)	Total system availability	days	255.5 (70% x 365 days)	255.5 (70% x 365 days)	255.5 (70% x 365 days)
(xiv)	Number of daughter vessel trips per year (T) (xiii/xii) (Note:1)	trips	127.5	127.5	127.5
(xv)	Capacity of Daughter Vessel System (xiv * xii * ii)		5.865	5.865	5.865
			(23000 tonnes x 2 daughter vessel x 127.5 trips)	(23000 tonnes x 2 daughter vessel x 127.5 trips)	(23000 tonnes x 2 daughter vessel x 127.5 trips)
(B)	Capacity Calculation of Berthing System				
(i)	Daughter Vessel Capacity (C _D)	tonnes	23000	23000	23000
(ii)	Pumping rate at Berth	tonnes per hour	2000	2000	2000
(iii)	Turnaround time of Daughter Vessel at Berth (t _b)	hours	20	20	20
			[11.5 hrs for Time required to unload one Daughter Vessel + 5.5 hrs for Time required for other peripheral activities + 3 hrs Waiting for tide]	[11.5 hrs for Time required to unload one Daughter Vessel + 5.5 hrs for Time required for other peripheral activities + 3 hrs Waiting for tide]	[11.5 hrs for Time required to unload one Daughter Vessel + 5.5 hrs for Time required for other peripheral activities + 3 hrs Waiting for tide]
(iv)	Available Working Days (Y)*	days	255	255	255
(v)	Capacity of Daughter Vessel System	MTPA	7.038	7.038	7.038
			(255 days x 1.2 times turnaround per day# x 23000 tonnes) #[24 hours a day/ 20 hours for turnaround per day = 1.2 turnaround per day]	(255 days x 1.2 times turnaround per day# x 23000 tonnes) #[24 hours a day/ 20 hours for turnaround per day = 1.2 turnaround per day]	(255 days x 1.2 times turnaround per day# x 23000 tonnes) #[24 hours a day/ 20 hours for turnaround per day = 1.2 turnaround per day]
(C)	Optimum capacity to be considered (Minimum of the above capacities (A) & (B))		5.865	5.865	5.865

Sr. No.	Particulars	UOM	Estimates furnished by KOPT in its proposal dated 21 July 2015	Estimates furnished by KOPT in its revised proposal dated 17 September 2015	Modified by TAMP
II	Capital Cost				
(i)	SPM & Pipelines- Mechanical cost				
(a)	SPM and Allied Facilities (2nos of SBM)	Rs in lakhs	40,568	35,848	35,848
(b)	Pipelines and Installation Cost	Rs in lakhs	4,128	3,049	3,049
(c.)	Miscellaneous [5% on (a) and (b)]	Rs in lakhs	2,235	1,949	1,945
	Sub-Total SPM & Pipelines (i)	Rs in lakhs	46,931	40,846	40,842
III	Operating Cost for handling POL at SBM				
(a)	Repair & Maintenance	Rs in lakhs	938.62	816.92	816.84
			[2% x Rs 46931 lakhs]	[2% x Rs 40846 lakhs]	[2% x Rs 40842 lakhs]
(b)	Insurance	Rs in lakhs	469.31	408.46	408.42
			[1% x Rs 469.31 lakhs]	[1% x Rs 40846 lakhs]	[1% x Rs 40842 lakhs]
(c)	Depreciation	Rs in lakhs	5,530.10	4,635.00	4,893.33
				(12.66%*35848)+(3.17%*3049)	(12.66%*(35848+(35848*0.05))+4%*(3049+(3049*0.05)))
(d)	Other expenses	Rs in lakhs	469.31	408.46	408.42
			[1% x Rs 46931 lakhs]	[1% x Rs 40864 lakhs]	[1% x Rs 40842 lakhs]
	Total O&M Cost	Rs in lakhs	7,407.34	6,268.84	6,527.01
IV	Estimated Annual Revenue Requirement (ARR) & Proposed Tariff				
	Tariff for Two SBM System				
(a)	Total Operating Cost	Rs in lakhs	7,407.34	6,268.84	6,527.01
(b)	Return on Capital Employed @ 16% of the Capital Cost		7,508.96	6,535.36	6,534.70
(c.)	Total Revenue requirement for POL Handling at SPM		14,916.30	12,804.20	13,061.70
(d)	Optimal Capacity (in MTPA)		5.865	5.865	5.865
(e)	Per tonne rate for Rs. Per MT		254.33	218.29	222.71

Sr. No.	Particulars	UOM	Estimates furnished by KOPT in its proposal dated 21 July 2015	Estimates furnished by KOPT in its revised proposal dated 17 September 2015	Modified by TAMP
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Calculation of Marine Charges by KOPT considered by TAMP

Sr.No	Particulars	UOM	Estimates furnished by KOPT in its proposal dated 21 July 2015			Estimates furnished by KOPT in its revised proposal dated 17 September 2015			Modified by TAMP		
			Tug Hire	Pilotage	Total	Tug Hire	Pilotage	Total	Tug Hire	Pilotage	Total
I	Operating Expense										
(i)	Annual charter hire charge	Rs in lakhs				1,095	-	1,095	1,095	-	1,095
(ii)	Fuel cost for 2 tugs	Rs in lakhs				1,080	-	1,080	1,080	-	1,080
(iii)	Salary and wages of 2 Pilots	Rs in lakhs	1,460	72	1,532	-	72	72	-	72	72
	Total Operating Cost	Rs in lakhs	1,460	72	1,532	2,175	72	2,247	2,175	72	2,247
II	Total GRT Per Annum (Note :2)	lakhs	37.76	37.76	37.76	132.11	132.11	132.11	132.11	132.11	132.11
III	Marine Charges per GRT basis	(Rs / GRT)	38.67	1.91	40.57	16.46	0.55	17.01	16.46	0.55	17.01

KOLKATA PORT TRUST

**REFERENCE TARIFF FOR TRANSFER OF POL CARGO AT SINGLE BUOY MOORING (SBM)
BETWEEN MOTHER AND DAUGHTER VESSEL AND MARINE CHARGES ON MOTHER AND
DAUGHTER VESSEL AT KOLKATA PORT TRUST (KOPT)**

1. DEFINITIONS

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

- (i). **“Coastal vessel”** means 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 Director General of Shipping/ Competent Authority.
- (ii). **“Foreign Vessel”** shall mean any vessel other than coastal vessel, Inland vessel, boat and flat.
- (iii). **“Port”** shall mean Kolkata Port Trust.
- (iv). **“TAMP”** shall mean the Tariff Authority for Major Ports constituted under Section 47A of the Major Port Trusts Act, 1963.
- (v). **“Tonne”** shall mean one metric tonne or 1,000 kilograms or one cubic metre.

2. GENERAL TERMS AND CONDITIONS

- (i). The minimum weight /measurement chargeable shall be 1 tonne although the gross weight/measurement may be less than 1 tonne. In case where the charge is on weight basis and the gross weight is not an exact multiple of 100 Kgs, the same will be rounded off to the next higher multiple of 100 Kgs.
- (ii).
 - (a). The Vessel related charges for all Coastal vessels should not exceed 60% of the corresponding charges for other vessels.
 - (b). The cargo /container related charges for all Coastal cargo / containers, other than thermal coal, POL including crude oil, Iron Ore and Iron pellets, should not exceed 60% of the normal cargo / container related charges.
 - (c). In case of cargo related charges, the concessional rate should be levied on all the relevant handling charges for ship-shore transfer and transfer from / to quay to / from storage yard including wharfage.
 - (d). For the purpose of this concession, cargo / 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 from/to Indian Ports carried by vessels permitted to undertake coastal voyage will qualify for the concession.
- (iii). Interest on delayed payments / refunds:
 - (a). The user shall pay penal interest on delayed payments under this Scale of Rates. Likewise, the Service Provider shall pay penal interest on delayed refunds.

- (b) The rate of penal interest will be 2% above the Base Rate declared by the State Bank of India. The penal interest rate will apply to both the Service Provider and the user equally.
 - (c) The delay in refunds will be counted only 20 days from the date of completion of services or on production of all the documents required from the users, whichever is later.
 - (d) The delay in payments by the users will be counted only 10 days after the date of raising the bills by the Terminal Operator. This provision shall, however, not apply to the cases where payment is to be made before availing the services as stipulated in the Major Port Trust Act, 1963 and / or prescribed as a condition in the Scale of Rates.
- (iv).
- (a) A foreign going vessel of Indian flag having a General Trading License can convert to coastal run on the basis of a Customs Conversion Order.
 - (b) A foreign going vessel of foreign flag can convert to coastal run on the basis of a Coastal Voyage License issued by the Director General of Shipping.
 - (c) For dedicated Indian coastal vessels having a Coastal License from the Director General of Shipping, no other document will be required by her to be entitled for coastal rates.
 - (d) The status of the vessel, as borne out by its certification by the Customs or Director General of Shipping, shall be the deciding factor for its classification as 'Coastal' or 'Foreign-going' for the purpose of levy of vessel related charges; and, the nature of cargo or its origin will not be of any relevance for this purpose.
 - (e) The corresponding vessel related rates should be applied depending on the status of the vessel at the time of the incidence of such charge.
- (v). Users will not be required to pay charges for delays beyond a reasonable level attributable to the Service Provider.
- (vi).
- (a) The rates prescribed in this Scale of Rates are ceiling levels; likewise, rebates and discounts are floor levels. The licensee may, if it so desires, charge lower rates and/ or allow higher rebates and discounts.
 - (b) The licensee 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 licensee 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.

3. MARINE CHARGES ON MOTHER AND DAUGHTER VESSELS:

Charges to be levied by the Service Provider on the Mother Vessels and Daughter Vessels calling at the Transloading Facility against provision of required marine related services like tug assistance, fenders as well as for providing conservancy services at the Transloading points.

Sl.No.	Description of vessel	Rate in ₹ per GRT
1.	Vessel engaged in Foreign trade	17.01
2.	Vessel engaged in Coastal trade	Not Applicable

4. CARGO TRANSFER CHARGE AT SBM BETWEEN MOTHER VESSEL AND DAUGHTER VESSEL

SI No	Commodity	Unit	Rate in ₹	
			Foreign	Coastal
1.	POL Product	Per Metric Tonne	222.71	Not Applicable

5. Reimbursement of Cost of additional facilities:

For facilities like Fresh Water Supply to the mother vessel, which the Service Provider may have to arrange by sourcing the same from KOPT; the Service Provider will be entitled to recover the actual cost of same paid by them to KOPT.

6. GENERAL NOTE TO SECTION – 3 TO SECTION – 4 ABOVE:

- (i). 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 2015 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.

The above provision will not be applicable for the fee prescribed under Section 5.

- (ii). From the date of Commercial Operation (CoD) till 31st March of the same financial year, the tariff would be limited to the indexed Reference Tariff relevant to that year, which would be the ceiling. The aforesaid Reference Tariff shall be automatically revised every year based on an indexation as provided in para 2.2 of the tariff guidelines of 2013 which will be applicable for the entire licence period.

However, the Licensee would be free to propose a tariff along with Performance Standard (the "Performance Linked Tariff") from the second year of operation onwards, over and above the indexed Reference Tariff for the relevant financial year, at least 90 days before the 1st April of the ensuing financial year. Such Performance Linked Tariff shall not be higher than 15% over and above the indexed Reference Tariff for that relevant financial year (and this will be the Tariff Cap). The Performance Linked Tariff would come into force from the first day of the following financial year and would be applicable for the entire financial year.

- (iii). The proposal shall be submitted to TAMP along with a certificate from the independent engineer appointed under the Concession Agreement of the Project indicating the achievement of Performance Standard in the previous 12 months as incorporated in the Licence Agreement or for the actual number of months of operation in the first year of operation as the case may be.
- (iv). On receipt of the proposal, TAMP will seek the views of the Major Port Trust on the achievement of Performance Standard as outlined in para 5 of the tariff guidelines of 2013, within 7 days of receipt.
- (v). In the event of Licensee not achieving the Performance Standard as incorporated in the Licence Agreement in previous 12 months, TAMP will not consider the proposal for notifying the Performance Linked Tariff for the ensuing financial year and the Licensee shall be entitled to only the indexed Reference Tariff applicable for the ensuing financial year.
- (vi). After considering the views of the Major Port Trust, if TAMP is satisfied that the Performance Standard as incorporated in the Concession Agreement have been achieved, it shall notify the performance linked tariff by 15th of March to be effective from 1st of April of the ensuing financial year.

- (vii). While considering the proposal for Performance Linked Tariff, TAMP will look into the Performance Standard and its adherence by the Licensee. TAMP will decide on the acceptance or rejection of the Performance Linked Tariff proposal based on the achievement or otherwise of the Performance Standard by the Licensee. Determination of indexed Reference Tariff and Performance Linked Tariff will follow the illustration shown in the Appendix attached to the tariff guidelines of 2013
- (viii). From the third year of operation, the Performance Linked Tariff proposal from the Licensee shall be automatically notified by TAMP subject to the achievement of Performance Standard in the previous 12 months period as certified by the Independent Engineer. The Licensee, for the Performance Linked Tariff from the third year onwards, will submit the Performance Linked Tariff proposal along with the achievement certificate from the independent engineer by 1st March and TAMP shall notify by 20th March, the Performance Linked Tariff to be effective from the ensuing financial year.

PERFORMANCE STANDARD

**REFERENCE TARIFF FOR TRANSFER OF POL CARGO AT SINGLE BUOY MOORING (SBM)
BETWEEN MOTHER AND DAUGHTER VESSEL AND MARINE CHARGES ON MOTHER AND
DAUGHTER VESSEL AT KOLKATA PORT TRUST (KOPT)**

Sl. no.	Parameters	Performance Standard
1	Gross pumping output from mother tanker to daughter vessel and vise-versa	3000 tonnes per hour

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

F.No.TAMP/56/2015-KOPT	:	Proposal received from Kolkata Port Trust (KOPT) for fixation of Reference Tariff for transfer of POL cargo at 2 Single Buoy Mooring (SBM) with connected pipeline facilities proposed to be set up by KOPT on DBFOT basis.
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A joint hearing in this case was held on 22 September 2015 at KOPT Guest house in Kolkata. At the joint hearing, the KOPT and the concerned users/organisation bodies have made the following submissions:

Kolkata Port Trust (KOPT)

- (i). You are all aware about the inherent difficulties of Haldia viz. draft restrictions.
- (ii). Though we handle liquid cargo, we intend to increase the throughput of liquid cargo at Haldia by putting up 2 SBMs in the deep seas within the KOPT limits which would be connected by submarine pipelines.
- (iii). In the proposed project, fully laden mother tankers will be brought at one of the SBMs and the liquid cargo will be transferred to the daughter vessel placed at the 2nd SBM. The daughter vessel will thereafter, carry the cargo to the jetty and discharge the cargo thereat.
- (iv). The optimum capacity of the facility is estimated at 5.865 million tonnes. The capacity of the facility is dependent on the capacity of the daughter vessel. We have considered two daughter vessels in the capacity calculation. If we consider one mother vessel, capacity will go up substantially in the range of 8 Million Tonnes.
- (v). Haldia is a largest hub for handling of liquid bulk cargo, edible oil and other liquid cargo owing to a vast hinterland. The proposed arrangement will be beneficial to the trade as it will reduce the overall logistics cost and also reduce port congestion.
- (vi). It is not correct to compare the charges with regard to one operation alone. It would be more appropriate to compare end to end costing.
- (vii). In the case in reference, since the SBM's as well as the daughter vessels would be handled within the same port area, we will try to see that there is no double levy of marine charges on the daughter vessels.

- (viii). The volume of cargo will not be an issue as we are convinced about getting the cargo when the SBMs commence the operations.
- (ix). The mother and daughter vessels can also be accorded seamless priority berthing.

Aegis Logistics

- (i). It is not clear how much will be levied on the mother and daughter vessels.

(KOPT: For the cargo handled at the SBM, a rate of ₹ 254.33 per MT will be levied. Pilotage component included in the rate of ₹40.57 on account of Marine charges is for berthing of mother vessels alongside the mooring. The marine charges for mooring daughter vessel alongside the mooring may have to be proposed. We will examine)
- (ii). In the case of KOPT SBM, a mother tanker with a liquid cargo of 23000 tonnes will have to shell out close to about US\$ 96000/- for cargo alone, whereas, in contrast, in case of SBM at Vizag, the all-inclusive rate would be about US\$ 50000 – 60000 only.

(KOPT: We have just captured the costs and indicated them. TAMP approved rates will be at ceiling level. We may try to make the rates competitive with regard to the daughter vessels.)

Haldia Petrochemicals Limited

- (i). It will take more time to discharge a mother tanker with a liquid cargo of 23000 tonnes. Congestion at the port will not be taken care of.
- (ii). Further, the capacity of about 6 MMTPA considered by the KOPT is not correct. Based on the current scenario, it should be about 3 MMTPA only.

(KOPT: Today we may have approved 3 Million Tonnes. The capacity of about 6 MMTPA as indicated in the proposal is based on the cargo foreseen in the year 2019-20/ 2020-21, when the proposed project will be operational.)
- (iii). Will daughter vessels carrying the cargo from the mother vessel be given priority at the jetty.

(KOPT: Yes, KOPT will be going for it.)
- (iv). If facility is there, volume will come.

Scomi

- (i). On the whole, the project appears to be based on putting the resources at the maximum best utilization without any room for any exigencies.
- (ii). In the current scenario, the liquid cargo of about 6 MMTPA to be handled at the facility does not appear to be available. (If volume is not there, it will be difficult)
- (iii). Any service provider will look as to how much he will recover the costs.

2. After the Joint hearing, one of the prospective bidders viz. M/s. Scomi Group (Malaysia) (Scomi) has furnished their comments vide its email dated 18 September 2015 to KOPT and to us simultaneously. The KOPT has not responded to the comments of Scomi. The comments of Scomi are given below:

1.	The preliminary proposed tariff of ₹254.33 is applicable subject to the following caveats and stipulations: (a). A commitment of cargo throughput of 5.8 MMTPA: Scomi will enter this agreement on a 'take or pay' basis, i.e if the cargo throughput is not met, the volume not meeting the commitment cargo shall be payable to Scomi based on the above tariff. (b). The above tariff is exclusive of any Indian taxes: Scomi shall revisit the preliminary tariff once Indian taxation concerns have been identified.
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