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Tariff Authority for Major Ports

G. No. 286 **New Delhi,** **2 November 2010**

NOTIFICATION

In exercise of the powers conferred by Sections 48, 49 and 50 of the Major Port Trusts Act, 1963 (38 of 1963), the Tariff Authority for Major Ports hereby disposes of the proposal received from the Cochin Port Trust for setting upfront tariff for handling Bunker fuel / POL cargo and LPG at Multi-User Liquid Terminal at Cochin Port in pursuance of the guidelines for upfront tariff setting at Major Port Trusts which was notified vide this Authority's Notification No.TAMP/52/2007-Misc. dated 26 February 2008 as in the Order appended hereto.

(Rani Jadhav)
Chairperson

Tariff Authority for Major Ports

Case No. TAMP/58/2009-COPT

Cochin Port Trust **- - - - -** **Applicant**

O R D E R

(Passed on this 3rd day of September 2010)

This case relates to a proposal dated 24 November 2009 from the Cochin Port Trust (COPT) for fixation of upfront tariff for Multi-User Liquid Terminal (MULT) at the Puthuvypeen SEZ on Public Private Partnership basis.

2. In pursuance of the guidelines for upfront tariff setting for Public Private Participation (PPP) projects at Major Ports notified by this Authority on 26 February 2008, the COPT has filed the subject proposal.

3.1. The highlights of the proposal are as follows:

(i). Liquid cargo namely bunker fuel, LPG, other POL cargo excluding crude oil are envisaged to be handled at the multipurpose liquid cargo terminal.

(ii). The proposal envisages the following:

(a). Construction of the Main berth:

✓ for handling Bunker Fuel and other POL cargo (excluding crude oil) (The process includes unloading at the Main Berth and transporting through pipelines upto exchange pit).

✓ for handling LPG by installing unloading arm on the Main Berth. (The unloading arm is expected to be installed by the Indian Oil Company Limited)

(b). Construction of the Barge Loading Berth in the vicinity:

✓ for loading of the Bunker Fuel and other POL cargo in to barges (The movement will be through pipelines from exchange pit to the Barge loading Berth and then loading onto the barges)

(iii). (a). For the development of the project, the port envisages to allot the following:

➢ 15 hectares of water area for main berth

➢ 4 hectares of water area for barge loading berth

➢ 3.5 hectares of port land for operational buildings, roads, etc.

(b). The initial proposal does not envisage any storage facilities for cargo handled.

(iv). The length of the berth is envisaged at 220 metres with a width of 32 metres. The berth is expected to handle vessels upto 80000 DWT and maximum draft of 12 metres.

(v). Optimal Capacity:

(a). The optimum capacity of the Multi User Liquid Terminal is assessed at 4095542 tonnes [i.e. 4.10 Metric Tonnes Per Annum (MTPA)].

(b). The handling rate prescribed in the guidelines and the handling rate considered by the port is tabulated below:

Type of Cargo	Norms for Handling rate prescribed in the guidelines	Handling rate considered by COPT *
Bunker fuel and other POL Cargo	1000 tons per hour	24000 tones per day
LPG	250 tones per hour	6000 tones per day

* Handling rate considered is as per norms converting hourly norms into per day.

(c). The traffic estimated to be handled in the year 2023-24 is taken as the base to determine the cargo share. For assessing the optimal capacity, share of cargo in terms of berth days reckoning the handling rate of each type of cargo is considered as tabulated below:

Type of cargo	Estimated traffic (in MTPA)	Share of cargo traffic	Share of cargo in berth days
Bunker fuel and other POL Cargo	3.02	83.43%	55.72%
LPG	0.6	16.57%	44.28%
Total	**3.62**	**100%**	**100%**

(d). Accordingly, the optimal capacity of the Main Berth is assessed at 4.10 Million Tonnes Per Annum (MTPA). The cargo-wise break up is given hereunder:

Type of Cargo	Optimal capacity in tonnes
Bunker fuel and other POL Cargo	3416723 tonnes
LPG	678819 tonnes
Total	**4095542 tonnes**

(e). The optimal capacity of the Barge Loading Berth is capped at 3.416 MTPA being the optimal capacity assessed for handling bunker fuel and other POL cargo at the Main berth.

(vi). Capital Cost:

(a). The total capital cost of the project is estimated at Rs.124.39 crores.

(b). **Berth cost:**

The total capital cost for construction of the main berth and barge loading berth is estimated at Rs.75.38 crores and Rs.8.43 crores respectively as below:

(**Rs. in crores**)

Sr. No.	Components	Main berth	Barge loading berth
(i).	Cost of construction of berth	61.30	7.96
(ii).	Cost of dredging	14.08	0.47
	Total cost	**75.38**	**8.43**

(c). **Cargo handling Activity**:

Capital cost for cargo handling activity is estimated at Rs.40.58 crores.

- **<u>Main Berth</u>**:

  Since handling rates are different for different types of cargo, the capital cost is allocated across each type of cargo. The capital cost directly related to a particular type of cargo is considered for that category of cargo. The capital cost on common assets such as roads, buildings, water supply, pipelines, etc. are apportioned between the two cargo at the main berth on the basis of share of the berth days for the particular cargo. This is elaborated in the table given in subsequent paragraph

- **<u>Barge loading berth:</u>**

  There is no bifurcation in the capital cost as only one category of cargo is to be handled.

- The break up of the capital cost for cargo handling activity is tabulated below:

(**Rs. in crores**)

Sr. No.		Group	Main berth				Barge loading berth
			Total	**Basis of allocation**	**Bunker Fuel and other POL cargo**	**LPG**	
(i).	Civil construction cost						
	1.	Roads	1.03	On share of cargo in berth days*	0.57	0.46	0.1
	2.	Building, water supply, sewerage, etc.	3.21	Pump house cost of Rs.2.13 crores allocated to LPG and rest on the share of cargo berth days	0.60	2.61	0.32
		Total	**4.23**		**1.17**	**3.07**	**0.42**
(ii).	Equipment cost						
	1.	Marine loading/unloading equipment /flexible hoses	4.08	Direct allocation	4.08	--	0.01
	2.	Pipelines	11.26	Rs.0.69 crores directly allocated to bunker fuel and other POL cargo and rest on the share of cargo in berth days	6.58	4.68	0.59
	3.	Fire fighting equipments	10.53	Direct allocation	---	10.53	1.05
	4.	Power and lighting communication	5.89	On the share of cargo in berth days	3.27	2.61	0.59
		Total	**31.75**		**13.93**	**17.82**	**2.24**
(iii).	Miscellaneous cost (5% of civil and equipment cost)		1.80	On the share of cargo in berth days	0.76	1.04	0.13
		Total cost	**37.79**		15.86	21.93	**2.79**
Total cost of both the berths			**40.58**				

* Share of cargo in terms of berth days is considered at 55.72% for bunker fuel and other POL cargo and 44.28% for LPG.

(vii). The Return on Capital Employed (ROCE) is computed at 16% on the estimated capital cost.

(viii). Annual Operating Cost:

(a). Power cost is estimated considering the consumption norm of 2.4 lakh units / annum / hectare for 18.18 hectares for main berth and 4.32 hectares for barge loading berth. The unit rate of power adopted is Rs.6.055. The total power cost of Rs.2.64 crores estimated for main berth is allocated between LPG and Bunker fuel/ other POL cargo in the share of berth days.

(b). Repairs and Maintenance on civil cost is estimated at 1% on civil assets and 2% on mechanical and equipment cost as per the norms prescribed in the guidelines. Insurance and other expenses are estimated at 1% each on the gross fixed value.

(c). Depreciation is stated to have been computed at per rate prescribed in the Companies Act.

(d). License fee is estimated for water area as well as land area.

License fee is estimated as per the rate proposed by the port at Rs.12 lakhs per acre reportedly based on the proposal filed by it for fixation of lease rent of port lands at Vallarpadam, Puthuvypeen and Goshree areas. For the water area, one third of the rate applicable of the land i.e. Rs.4 lakhs per acre is considered.

(e). Accordingly, the annual operating cost estimated is as follows:

- **Main Berth**:
  The Annual operating cost for the main berth is estimated at Rs.5.25 crores for handling bunker fuel and other POL cargo and Rs.5.27 crores for handling LPG.

- **Barge Loading Berth**:
  The Annual operating cost for the barge loading berth is estimated at Rs.1.51 crores.

(ix). Berth hire:

(a). The estimation of Annual Operating Cost for berth hire services is tabulated below:

(**Rs. in crores**)

Sr. No.	**Group**	**Basis**	**Main berth**	**Barge loading berth**
(i).	Repairs and maintenance of civil assets	1% of capital cost of the berth (excluding capital dredging cost)	0.61	0.08
(ii).	Cost of maintenance dredging	420000 cum for main berth and 10000 cum for barge loading berth (at unit rate of Rs.60 per cum)	2.52	0.06
(iii).	Insurance	1% of capital cost of the berth excluding capital dredging cost	0.61	0.08
(iv).	Depreciation	As per Companies Act	2.52	0.28
		Total	**6.26**	**0.50**

(b). The COPT has included cost of maintenance dredging at Rs.2.52 crores for main berth and Rs.0.06 crores for barge loading berth which is not as per the norms prescribed in the guidelines.

The port has submitted that there is a need to allocate maintenance cost to the operator as the maintenance dredging cost at the Cochin port is high since there is higher rate of siltation as compared to other ports. The COPT, therefore, considers the BOT operator to undertake annual maintenance dredging to the extent considered in the proposal. Accordingly, the port has estimated repairs and maintenance at 1% of the berth construction cost as per the norms prescribed in the guidelines and cost of maintenance dredging is considered separately at actuals.

(x). Annual Revenue Requirement (ARR):

(**Rs. in crores**)

Sr. No.	Particulars	Main berth			Barge loading berth	
		Handling Bunker Fuel and other POL cargo	Handling LPG	Berth hire service	Handling Bunker Fuel and other POL cargo handling	Berth hire service
1.	Total annual operating cost	5.25	5.27	6.26	1.51	0.50
2.	**CAPITAL EMPLOYED**	**15.86**	**21.92**	**75.38**	**2.79**	**8.43**
3.	16% Return on capital employed	2.54	3.51	12.06	0.45	1.35
ANNUAL REVENUE REQUIREMENT (1 +3)		**7.79**	**8.78**	**18.32**	**1.95**	**1.85**

(xi). (a). As per the norm prescribed in the guidelines for liquid bulk terminal, the total revenue requirement is to be apportioned between liquid cargo handling charges and miscellaneous charges in the ratio of 95% and 5% respectively.

(b). As no miscellaneous activities are envisaged to be undertaken by the BOT operator no separate charge is proposed at both the berths. 100% ARR is considered for determining handling charge.

(c). The port has submitted that as per clause 4.3. of the tariff guidelines of March 2005, concessional tariff for coastal cargo is prescribed for all cargo other than thermal coal and POL including crude oil, iron ore and iron ore pellets. Considering the nature of cargo proposed to handled, the port has not proposed concessional tariff for coastal category.

(d). For arriving at the berth hire, the port has considered the following GRT hours for main berth and barge berth:

Particulars	**For Main berth**		**Barge berth**
	Bunker fuel and POL cargo	**LPG**	
(i). Average GRT of vessel (as per feasibility report)	29250	18180	1300
(ii). Berth days	142.36	113.14	-
(iii). Berth hours	3416.72	2715.28	6132
(iv). Total GRT hours	149302886.35		7971600

(xii). The berth hire and handling charges proposed to meet the ARR are given below:

Particulars of the tariff	**At Main Berth**	**At Barge Loading Berth**
Berth Hire	Rs.1.23 per GRT per hour	Rs.2.32 per GRT per hour
Handling charges		
(i). Bunker Fuel and other POL cargo	Rs.22.81 per ton	Rs.5.72 per ton
(ii). LPG	Rs.129.26 per ton	----

3.2. The COPT has submitted the proposed Scale of Rates (SOR) and the feasibility report along with the proposal.

4. In accordance with the consultative procedure prescribed, the COPT proposal was forwarded to the concerned users / user organisations, short listed applicants and prospective users (as per the list provided by the COPT) seeking their comments. The comments received from users / user organisations, short listed applicants and prospective users were forwarded to COPT as feedback information. The COPT had earlier vide letter dated 6 March 2010 furnished its remarks on the points made by the users / user organisations, short listed applicants and prospective users. Subsequently, while furnishing reply vide letter dated 30 June 2010 to the queries raised by us, it has updated some of the comments furnished by them earlier.

5.1. A joint hearing in this case was held on 23 February 2010 at the COPT premises. The COPT made a power point presentation explaining the salient features of the proposal. At the joint hearing, COPT and the concerned users / user organisations, short listed applicants and prospective users have made their submissions.

5.2. At the joint hearing, the COPT was advised to take action on the following points and furnish the requisite information by 3 March 2010:

(i). Pointed response to the observations of the potential bidders made in their written submissions.

(ii). Revisit the proposal particularly with reference to the capacity determination and allocation of capital costs and update the proposal with reference to the revised lease rental proposed by the port.

(iii). The port has at the joint hearing claimed that the lease rent for water area is conventionally levied at 1/3rd of the adjacent area. The claim made the port may be substantiated with reference to the Government policy and any other guidelines on the subject.

6. The COPT has vide its letter dated 6 March 2010 furnished its response to the points decided at the joint hearing which are summarised below:

(i). Capacity determination of MULT berth:
It is requested that TAMP may kindly go by the guidelines for upfront tariff settings for PPP projects issued by TAMP on 25 February 2008, instead of considering a higher handling rate as requested by IOCL.

(ii). Allocation of capital cost across different products:
It is requested that TAMP may kindly consider the allocation that COPT has adopted and the rationale for the same has been explained in our replies to the observations of the potential bidders.

(iii). Revised lease rental proposed by COPT:
For the workings, the lease rentals per hectare considered on the basis of the value given in the Interim Report was Rs.29,65,200/- (Rs.12,00,000 x 2.471). As per the Final Report, the lease rentals at the SEZ area at Puthuvypeen is Rs.29,65,482/-. Hence the difference is only Rs.282 per hectare per annum which does not have much implication on the handling charges.

(iv). Levy of lease rent for water area at 1/3rd of the adjacent land area is not based on any Government policy or other guidelines. Lower lease rent was collected as port had only given the bed of back waters and the activities like reclamation of the land, construction of berth / jetty etc. was done by the user. The bed of backwaters had been allotted on this basis only to Cochin Shipyard, Kerala Fine Arts Society and Lakshwadeep Administration.

7. Based on the reply furnished by the COPT, the port was vide our letter dated 19 March 2010 requested to furnish additional information / clarifications on some points along with revised calculation. The COPT has furnished its reply vide letter dated 30 June 2010. A summary of the queries raised by us and the clarifications furnished by the COPT are tabulated here below:

Sl. No.	Queries raised by us	Reply furnished by COPT
(i).	Capital cost estimation:	
	(a). The proposal states that the capital cost estimated in the feasibility report is Rs.147.38 crores of which Rs.47.75 crores is excluded now in view of change in the scope from that envisaged while preparing the feasibility report. (Feasibility report assumed to handle 1,50,000 DWT vessels and draft upto 16 mtrs; the port now envisages to handle 80,000 DWT vessel and maximum draft of 12 mtrs.) Further, Rs.23.42 crores is added for additional capital cost towards unloading arm for bunker fuel and other POL cargo, fire fighting system for port berth and piping work which is now proposed to be brought under the scope of the BOT operator. Thus, revised capital cost based on this submission will be Rs.123.05 crores (i.e. 147.38 - 47.75 + 23.42). As against this, the project cost is estimated at Rs.22.45 crores at page 7 of the proposal. Further, the aggregate of the capital cost considered in the calculation of upfront tariff both berth hire and handling activity works out to Rs.124.38 crores. This inconsistency in the capital cost figures observed in proposal may please be corrected.	The above mentioned inconsistency arouse due to a correction made in the service tax rate for dredging – which was taken at 12.36% in the IPA report and had been corrected to the current rate of 10.3%. The project structure has been revised as per the directions given from Ministry of Shipping. The revised proposal is submitted.
	(b). The unit rate of unloading arm is stated to be based on quotations obtained in the financial year 2009. Since the financial year 2010-11 is about to commence, the unit rate may be updated to reflect the prevailing rate. Likewise, the conversion rate adopted i.e. 1 Euro = Rs.70 may also be updated with reference to the prevailing exchange rate. Please furnish detailed calculation of the base rate, and customs, duties, etc. added thereon to derive the gross unit rate of unloading arm.	The revised proposal is submitted. New quote for unloading arm (dated 9^{th} April 2010) has been considered in the revised proposal. A copy of the quotation is attached with the proposal and the basis for estimation is submitted.
	(c). Though the port has stated that the prices of raw material were reviewed in November 2009, the capital cost considered in the proposal mostly seems to be based on cost estimated in the feasibility report which was prepared in September 2008. As already mentioned in the guidelines, the capital	In the revised proposal, the cost estimates have been revised based on prevailing market rates/ budgetary quotes.

<table>
<tr><td></td><td>cost of equipment should be updated to capture the prevailing market rate while fixing the upfront tariff cap. The COPT may, therefore confirm that the estimates of both civil and equipment cost reflect the prevailing market rate. The estimates may be substantiated with documentary support in form of budgetary quotations, rate analysis, etc. for those items which are not substantiated with documentary support.</td><td></td></tr>
<tr><td></td><td>(d). The normative list of civil work in the upfront tariff guidelines includes storage yard, tankages amongst other items. The proposal of the port, however, does not include capital cost for storage yard and tank. Storage / evacuation facility envisaged for liquid terminal to achieve the optimal capacity may be explained.</td><td>The project structure has been revised as per the directions given from Ministry of Shipping. In the revised structure 2 hectare land has been allocated for development of storage tanks by the concessionaire. There are also provisions in the Concession agreement to release further land for development of storage tanks which is linked to the traffic that is actually observed at the terminal</td></tr>
<tr><td></td><td>(e). As pointed out by one of the bidders, clarify whether the tax benefits available for the SEZ zone for the proposed liquid terminal is considered by the port while determining the capital cost. If not, the same may be recognised.</td><td>Please refer to the revised proposal. Benefits available for SEZ Zone has been addressed in this proposal and the tariff has been worked out based on this.</td></tr>
<tr><td></td><td>(f). With reference to allocation of the capital assets relating to fire fighting equipment, the IOCL has categorically stated that the foam based fire fighting system proposed by the port cannot be used for LPG. The port may furnish comment on this point made by the IOCL which is not addressed in its reply.</td><td>As suggested by IOCL, the cost of foam tank and foam pump system shall be allocated directly to Bunker fuel and other POL cargo. The cost of this system excluding contingencies, taxes and engineering costs is estimated at Rs.1,00,00,000/-. The tariff has been recalculated based on this.</td></tr>
<tr><td></td><td>(g). Confirm whether the fire fighting system envisaged is exclusively for LPG. If bunker and fuel products are also likely to get the benefit of this facility during the project period then part of the fire fighting system should be allocated to these cargo also on appropriate basis.</td><td>The flash points of key cargo in each category are presented below:

<table>
<tr><th>Cargo</th><th>Flash Point</th></tr>
<tr><td>Propane (~ 20% of LPG cargo)</td><td>-104° C</td></tr>
<tr><td>Butane (~ 80% of LPG cargo)</td><td>-40° C</td></tr>
<tr><td>Marine Fuel Oil (~ 93% of bunker fuel and other POL cargo – as seen in other bunkering destinations like – pls refer section 4.18 of feasibility report)</td><td>65.5° C</td></tr>
</table>

The classification of various liquids based on flammability / combustibility across various standards is presented below:

<table>
<tr><th>Standard/ Flash Point</th><th>< (- 7°C)</th><th>(-7°C to 38°C)</th><th>38°C to 60°C</th><th>60°C to 66°C</th><th>66°C to 93°C</th></tr>
<tr><td>OSHA</td><td>Flammable</td><td>Flammable</td><td>Combustible</td><td>Combustible</td><td>Combustible</td></tr>
<tr><td>ANSI</td><td>Extremely Flammable</td><td>Flammable</td><td>Flammable (< 60°C)</td><td>Combustible</td><td>Combustible</td></tr>
<tr><td>NPFA 30</td><td>Class I</td><td>Class I</td><td>Class II</td><td>Class III</td><td>Class III</td></tr>
<tr><td>CPSC</td><td>Extremely Flammable</td><td>Flammable</td><td>Combustible</td><td>Combustible</td><td></td></tr>
</table>

The fire protection systems have to be designed to incorporate the requirements as mentioned under OISD requirements for handling LPG cargo which are more</td></tr>
</table>

		stringent. Hence LPG cargo is expected to drive significant part of the capital expenditure towards fire fighting systems for the project which is difficult to quantify separately. It would be unfair to allocate the capital expenditure towards fire fighting between LPG and Bunker fuel in the same proportion as share of berth days and this approach was followed.
(ii).	Operating cost estimation:	
	(a). The norms prescribed in the guidelines stipulate estimation of maintenance cost of berth at 1% of the total cost. Accordingly, the maintenance dredging cost will be around Rs.0.15 crores based on the current estimates furnished by the COPT. As against this, the COPT has estimated total maintenance dredging cost of Rs.2.58 crores (for Main Berth and Barge Loading Berth) which amounts to almost 18% of the capital dredging cost. The estimation of maintenance dredging cost is not found to be as per the norms prescribed in the guidelines. The reasons for deviation from the norms prescribed in the guidelines for estimating this expense may be justified.	Reference is drawn to Annexure II – Appendix IV of the original tariff proposal and also Sections 5.2 and 5.6 of the main proposal, which explains the special condition regarding siltation at Cochin Port, which require higher maintenance dredging. The summarised position is given below: (i). The basin of the Cochin Oil Terminal (COT) in Cochin Port is currently being maintained at (-) 13.2 m which is equal to the proposed depth in front of the Main Berth of MULT. Therefore the siltation rate at MULT basin would be comparable to that of COPT basin and so, the same value can be adopted for MULT. (ii). During the year 2005-06, when the Stage I Capital Dredging for providing 12.5 m draft at Rajiv Gandhi Container Terminal (RGCT) was taken up and completed by the port. The channel and basin in front of COT was also deepened to (-) 13.20 m depth at that time. (iii). After deepening of the navigational channels, a reduction in depth of 2.7m was observed in July 2006 in the channel and basin in front of COT immediately after the onset of monsoon. Also, 2/3rd of the total annual siltation of 18.0 Mm3 had occurred by that time. Hence, the reduction in depth for a total annual siltation proportionately worked out as 4.0m. (iv). As per the "Mud Balance Approach" followed by FRH in their Feasibility Study Report for ICTT at Vallarpadam for prediction of future siltation, it has been indicated that after the monsoon, on consolidation of the mud layer, the thickness of siltation will get reduced to 2/3rd of the annual siltation i.e. it will be around 2.7m. (v). Allowing, for a variation of 10%, yearly siltation depth of 3m can be considered to work out the annual siltation in the harbor area. (vi). It is estimated that annual maintenance dredging at the main berth area would be 4,20,000 cum. and 10,000 cum. at barge loading berth which would have to be undertaken by the BOT operator. The same is factored in estimating the operating cost for the respective berth.
	(b). If port maintains channel properly, the high siltation alongside the berth which is cited as a one of the reasons for such high maintenance dredging cost may be contained. Please comment.	It has reiterated that the estimation of maintenance dredging requirement is arrived at based on two sources: • Based on actual extent of siltation observed in the channel and the basin in front of Cochin Oil Terminal

		• Based on technical analysis – based on 'Mud Balance Approach' conducted as part of the feasibility study for ICTT at Vallarpadam for prediction of future siltation Hence, it is requested that TAMP may consider this request for this variation in the estimation of operating cost towards maintenance dredging.
	(c). The estimation of lease rent may be updated based on the revised proposal submitted by the port based on final report of the approved valuer.	Noted, the same has been complied with in the revised proposal.
	(d). The guidelines require lease rent to be estimated as per the rates prescribed in the Scale of Rates approved by the Authority. The lease rent prescribed by the Authority is applicable for the port lands and not for water area. Even the port has admitted that estimation of lease rental for water area adopting 1/3rd of the lease rental for land is not based on any Government policy or guidelines. In the light of the above observation, the deviation proposed by the port from the guidelines need to be justified.	The levy of lease rent for water area at 1/3rd of the adjacent land area is not based on any Government policy or other guidelines. Lower lease rent was collected from M/s.Cochin Shipyard, M/s.Kerala Fine Arts Society and M/s.Lakshadweep Administration as Port had only given the bed of back waters to them and the reclamation of the land was done by the users. The bed of backwaters had been allotted to the said users on this basis only. The lease rent proposed for the 15 hectares of water area is based on 1/3rd of the lease rent for land area.
	(e). The norms prescribed in the guidelines for estimation of power cost is with reference to land area proposed to be allotted. The estimation of power cost by the port on water area is also not found to be as per the guidelines. The reasons for deviation may be explained.	Water area accounts for around 88% of the total area (19 out of the total 21.5 hectares) allocated to the concessionaire for development of the project. The arrangements towards lighting and fire fighting (that will consume a significant share of the total power required for the operations at the terminal) will have to cover the entire area under operation (irrespective of whether it is land or water area). Since the proportion of water area is considerably high in this case as compared to other projects where more area is given on the land side towards setting up of storage facilities, stack yard etc, the power cost has been arrived at based on the total area allocated to the project.
	(f). Based on copy of the electricity bill of Kerala State Electricity Board submitted by the COPT, the unit rate comes to Rs.3.42 (Rs.9203435/ consumption 2689000). As against this, the power cost is estimated based on unit rate of power of Rs.6.005. The unit rate of power adopted in the calculation may be substantiated with copy of the recent bill of Kerala State Electricity Board.	Cost of Electricity to be paid by a customer of KSEB (Kerala State Electricity Board) has two components – a demand charge – which is linked to kVA of Billing Demand / month (which is a fixed component – irrespective of the actual consumption of power), the other component is the Energy charge which is charged per unit consumed. In the case of MULT – it is estimated that the connected load would be 3,000 kVA and which as per the existing tariff structure for HT commercial tariff (KSEB) (Pls refer to the tariff from KESB submitted as part of the TAMP proposal) has a demand charge of Rs.350/kVA of billing demand (3,000 kVA) per month and an Energy Charge of Rs.3.70 per kWhr. For an annual power requirement of 5,160,000 units (in the revised proposal) per unit charge works out to be Rs.6.17 (in revised proposal).
(iii).	(a). As per the clarification received from the Government, LPG cargo is also entitled for coastal concession with reference to the ship shore / shore to yard transfer and wharfage. The port	As per the response given by IOCL, coastal LPG traffic (annual) is expected to be around 350,000 tons per annum (51.56% of Optimal Capacity of LPG) which is considered to arrive at the revised rate for tariff for LPG cargo. The same is reflected in the revised proposal

<table>
<tr><td></td><td>may therefore prescribe concessional rate for coastal LPG with reference to handling charge. The revenue impact of such concession may be considered while determining the tariff so that the estimated revenue requirement can be achieved by the operator.</td><td>submitted.</td></tr>
<tr><td></td><td>(b). Though POL cargo is not eligible for concession in cargo related charge, the vessels carrying such cargo are entitled for concession in vessel related charges. The COPT may consider the impact of coastal concession in the berth hire charge while determining the unit rate.</td><td>The input is considered in the revised proposal. Since Cochin Port is developing a Bunker fuel terminal for the first time, there is no past data to rely on the share of coastal traffic. IPA had taken inputs from Leading firms on their plans for sourcing bunker fuel and other POL cargo (please refer to Appendix 4.03 of the feasibility report). Most players have mentioned both foreign and coastal sources for Bunker Fuel and other POL cargo based on which a share of 50% is assumed for coastal cargo.</td></tr>
<tr><td>(iv).</td><td>The proposal envisages handling of vessels upto 80,000 DWT at the main berth and hence applying 60% factor as a thumb rule for conversion, the GRT of vessel will come to 48000 tonnes. The average GRT of Bunker and POL vessels assumed at 29250 and LPG vessels at 18180 may be justified. The basis of considering average GRT of barge as the barge berth at 1300 tonnes may also be explained. Average GRT of LPG vessels and other POL cargo vessels and the barges handled at the port during the last three years may be furnished.</td><td>GRT of the barge at 1,300 tonnes, Bunker vessel at 29250 and LPG vessels at 18180 are taken as estimated in the feasibility report prepared by Indian Ports Association. Historic data on POL cargo vessels at Cochin Port Trust as requested is given below:

<table>
<tr><th>Year</th><th>No. of Vessels</th><th>GRT (tonnes)</th><th>NRT (tonnes)</th><th>DWT (tonnes)</th></tr>
<tr><td>2007-08</td><td>159</td><td>3,384,058</td><td>2,887,618</td><td>5,091,312</td></tr>
<tr><td>2008-09</td><td>145</td><td>3,219,864</td><td>2,964,652</td><td>4,849,703</td></tr>
<tr><td>2009-10</td><td>197</td><td>4,670,794</td><td>2,137,306</td><td>7,482,922.05</td></tr>
</table>
There is no past data available for LPG cargo, since the LPG terminal is being developed for the first time.</td></tr>
<tr><td>(v).</td><td>From the Flow diagram at page 67, in the Feasibility Report; it is understood that only the bunker is expected to be loaded onto barges through barge loading berth. Whereas, page 9 para 3.2. of the proposal assumes the capacity of barge loading berth at the optimal capacity assessed for handling both bunker fuel and POL cargo. The correct position may be indicated.</td><td>Based on the analysis of replies received from leading firms on the type of cargo that is expected to be handled at MULT, it is seen that majority (5 out of 6 players) are expecting only Bunker fuel and associated POLs (like lubes etc) and LPG to be handled at this terminal. Based on the above, the share of other POL products is expected to be negligible. Hence for ascertaining the capacity of the barge loading berth, the capacity is capped at the optimal capacity at the Main Berth to handle Bunker Fuel.</td></tr>
<tr><td>(vi).</td><td>Analysis done by the port for determining the share of Bunker and other POL products at proposed terminal may be briefly explained.</td><td>Port has accepted the analysis undertaken by Indian Ports Association in the feasibility report for estimating the traffic projections for bunker and other POL products. Based on the analysis of replies received from leading firms on the type of cargo that is expected to be handled at MULT (Appendix 4.03 of the feasibility report) – it can be seen that majority (5 out of 6 players) are expecting only Bunker fuel and associated POLs (like lubes etc) and LPG to be handled at this terminal. Based on the above, the share of other POL products is expected to be negligible.</td></tr>
</table>

8.1. To summarise, the main points made by the COPT in the revised proposal dated 30 June 2010 are:

(i). As against 22 hectares envisaged in the original proposal, the port has proposed to allot 21.5 hectares for the project as given below:

- 15 hectares water area for main berth (no change)
- 4 hectares water area for Barge loading berth (no change)
- 2 hectares for storage facilities (not envisaged in the initial proposal)
- 0.5 hectares of port land for operational facilities like buildings, roads, etc. (3 hectares of land was initially proposed)

(ii). The total project cost estimated is Rs.173.42 crores as against Rs.124.39 crores estimated in the original proposal. The main modifications in the estimation of capital cost are highlighted below:

(a). Revision of capital cost of some items based on recent budgetary quotations.

(b). Upfront payment of Rs.7.45 crores to the COPT for common user infrastructure to be developed by COPT is estimated in the revised proposal. This cost is allocated to main berth, barge berth and storage facility in the ratio of direct capital cost i.e. 61.85%, 5.60% and 32.15% respectively.

(c). Total capital cost towards development of storage tanks is estimated at Rs.54.72 crores which includes the allocation of upfront payment for common infrastructure.

A comparative position of the project cost estimated in its initial proposal and revised proposal is as below:

(**Rs. in crores**)

Sl. No.	**Particulars**	**Initial proposal**		**Revised proposal**	
		Main berth	**Barge loading berth**	**Main berth (Refer notes)**	**Barge loading berth**
1.	**Berth hire activity:**				
(i).	Cost of construction of berth	61.30	7.96	55.02	7.49
(ii).	Cost of dredging	14.08	0.47	14.08	0.47
	Total cost for berth hire activity	**75.38**	**8.43**	**69.10**	**7.96**
2.	**Cargo handling activity:**				
(i).	Civil construction cost				
	(a). Roads	1.03	0.1	0.68	0.06
	(b). Building, water supply, sewerage, etc.	3.21	0.32	7.42	0.48
	Subtotal 2(i)	**4.23**	**0.42**	**8.10**	**0.54**
(ii).	Equipment cost				
	(a). Marine loading/unloading equipment /flexible hoses	4.08	0.0056	2.71	0.0055
	(b). Pipelines	11.26	0.59	10.12	0.57
	(c). Fire fighting equipments	10.53	1.05	11.21	0.09

	(d). Power and lighting communication	5.89	0.59	5.79	0.52
	Subtotal 2(ii)	**31.75**	**2.24**	**29.83**	**1.19**
(iii).	Miscellaneous cost (5% of civil and equipment cost)	1.80	0.13	1.90	0.09
	Total cost for cargo handling activity	**37.79**	**2.79**	**39.83**	**1.82**
3.	**Storage activity**				
(i).	Civil construction cost	Not envisaged			
	(a). Tanks			41.58	-
	(a). Roads			0.36	-
	(b). Building, water supply, sewerage, etc.			2.80	-
	Subtotal 3(i)			**44.74**	**-**
(ii).	Equipment cost				
	(a). Pipelines			2.42	-
	(b). Fire fighting equipments			4.95	-
	(c). Power and lighting communication			0.00	-
	Subtotal 3(ii)			**7.37**	**-**
(iii).	Miscellaneous cost (5% of civil and equipment cost)			2.61	-
	Total cost for Storage activity			**54.71**	**-**
4.	**Total berth-wise cost (1 + 2 + 3)**	**113.17**	**11.22**	**163.64**	**9.78**
5.	**Total project cost**	**124.39**		**173.42**	

Notes:

The basis of allocation of common capital cost at main berth to bunker fuel/ other POL and LPG is as under:

(1). Civil Cost:

- The capital cost for development of roads is apportioned across the two cargo group on the basis of share of berth days (i.e. 55.72% towards Bunker Fuel/other POL cargo and 44.28% towards LPG).

- For buildings, water supply sewerage etc. – the cost of development of pump house (fire fighting for Main Berth) of Rs.2.10 crores is allocated to LPG while the rest of the cost is apportioned across the two cargo on the basis of share of berth days.

(2). Equipment Cost:

- Marine Loading / unloading equipment – Rs.2.71 crores directly allocated to Bunker Fuel and POL cargo.

- Pipelines – Rs.0.67 crores allocated to Bunker fuel / POL cargo. Rest of the cost apportioned on the basis of share of berth days i.e. 55.72% to Bunker fuel / POL cargo and 44.28% towards LPG.

- Fire Fighting Equipment – Rs.1.01 crores allocated to Bunker fuel and POL cargo and Rs.10.20 crores to LPG.

(iii). The optimal capacity of the storage tanks (4 nos.) is assessed at 26460 tonnes per day considering 70% of the maximum storage capacity of the tanks at 42000 KL and density of the bunker fuel and POL cargo at 0.9. (0.7 * 42000 * 0.9= 26460 tons)

(iv). Given below is the comparative statement of the charges proposed as per its initial and the revised proposal:

Sl. No.	Particulars of the tariff	Initial proposal		Revised proposal	
		Main Berth	Barge Loading Berth	Main Berth	Barge Loading Berth
I.	**Berth Hire** (per GRT per hour)	Rs.1.23	Rs.2.32	Rs.1.43 (foreign-going vessel)	--
				Rs.0.86 (coastal vessel)	Rs.2.19 (coastal vessel)
II.	**Handling charges**:				
	(i). Bunker Fuel and other POL cargo (per ton)	Rs.22.81	Rs.5.72	Rs.21.26 (both foreign-going and coastal)	Rs.4.50 (both foreign-going and coastal)
	(ii). LPG	Rs.129.26	----	Rs.154.72 (foreign)	----
				Rs.92.83 (coastal)	
III.	**Storage charge** (per ton per day)	Not proposed		Rs.18.77	---

8.2. In view of the modifications made by the COPT, the revised proposal was forwarded to the concerned user associations, the short listed applicants and prospective users to furnish their comments to TAMP and to the COPT directly. The port was advised to furnish its remarks on receipt of the comments. Indian Oil Corporation Limited, M/s.IOT Infrastructure & Energy Services Limited, M/s.Bharat Petroleum Corporation Limited and M/s.IMC Limited have furnished their comments on the revised proposal to COPT with a copy endorsed to TAMP. The COPT has also furnished its remarks on the comments made by these users/ prospective bidders.

9. On examining the revised proposal and reply furnished, the COPT was vide our letter dated 2 August 2010 advised to furnish additional information / clarifications on few more points. The COPT has furnished its reply vide letter dated 12 August 2010. A summary of the queries raised by us and the clarifications furnished by the COPT are tabulated here below:

<table>
<tr><th>Sl. No.</th><th>Queries raised by us</th><th>Reply furnished by COPT</th></tr>
<tr><td>(i).</td><td>Whilst the port has stated that the cost of unloading arm is revised based on new quotation (i.e. US $ 4,80,000), it has not furnished detailed calculation showing the base rate, exchange rate adopted for conversion and the customs/ duties, if any. The COPT is advised to furnish the requisite details. It may be explained how the tax benefit available for SEZ zone stated to have been considered by COPT as per its reply to (ii)(e) is factored in this case.</td><td>The details of calculation are presented below:
<table>
<tr><th>Item</th><th>Unit Cost</th><th>No. of Units</th><th>Total</th></tr>
<tr><td>Cost of 8” unloading arm (with 3” Vapour recovery lines)</td><td>$ 150,000</td><td>2</td><td>300,000 USD</td></tr>
<tr><td>Cost of ERC</td><td>$ 70,000</td><td>2</td><td>140,000 USD</td></tr>
<tr><td>Cost of installation support</td><td>$ 2,100</td><td>Common for all units</td><td>2,100 USD</td></tr>
</table></td></tr>
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<td></td>
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<table>
<tr><td>Cost of workshop and site training for the equipment</td><td>$ 1,500</td><td></td><td>1,500 USD</td></tr>
<tr><td colspan="3">Total Cost in USD</td><td>$ 443600</td></tr>
<tr><td colspan="3">Conversion Rate (18th July 2010)</td><td>Rs.46.14 per USD</td></tr>
<tr><td colspan="3">Total Cost of unloading arms</td><td>Rs.20,467704</td></tr>
</table>

Presently, the SEZ benefits are not extended to the water area. However, considering that a permanent structure will be constructed which is extending from the SEZ land area, there is a scope for getting the SEZ benefits to this marine infrastructure as well. It is relevant to state that in the case of LNG terminal also, the SEZ benefits were extended to the marine structure. The BOT operator with the assistance of COPT can approach the concerned authorities for availing the benefits for this particular area. In view of this, the tax elements for which exemptions are admissible under SEZ are not taken in the cost estimation. Similarly for the main and the barge berth, the estimation is modified to reflect the tax benefits.
</td>
</tr>
<tr>
<td rowspan="3">(ii).</td>
<td>(a). Explain how 2 hectares of land is determined for the purpose of storage tank facility envisaged in the revised proposal.</td>
<td>The area of 2 hectares shall include the area required for 4 nos. of storage tanks, safe distance to be maintained between the tanks, service roads, drainage and office space.</td>
</tr>
<tr>
<td>(b). Please furnish calculation to show that the 4 storage tanks proposed by the port are sufficient to store the optimal capacity of bunker fuel and other POL cargo assessed at 3.42 million tonnes per annum. If so, then where is the question of the port considering to allot additional land for storage tank in future.</td>
<td>The storage capacity is estimated as following:

Storage capacity = 37800 Tons
Evacuation rate @ 500 Tons/hour and 19 hours/day = 9500 Tons/day

TAMP guidelines prescribe a norm of 16(24*0.7) hours. However, in our calculation we have taken 19 hours in order to meet the optimal capacity of the main berth.

Storage time = 37800/9500 = 4 days
Yearly turn around = 90
Storage capacity = 90*37800 = 3.4 MMTPA

In addition, the unloading and loading operations shall be undertaken simultaneously. Hence, the storage capacity is adequate to handle optimal capacity.</td>
</tr>
<tr>
<td>(c). If additional land for storage tank is envisaged to be allotted by the port in future as stated in the reply, then please explain what is the recourse available to the terminal operator to recover such additional cost of investment as the upfront tariff caps (to be) approved by the Authority are applicable for the entire project period subject to indexation as per clause 2.2. read with 2.8. of the upfront tariff guidelines 2008.</td>
<td>Allotment of additional land is not envisaged at this stage in view of our reply at (b) above.</td>
</tr>
</table>

<table>
<tr>
<td>(iii).</td>
<td>The tax benefits for SEZ considered in the capital cost estimation may be shown item-wise.</td>
<td>SEZ benefits have been considered for all the elements.
<table>
<tr><th>Sl. No.</th><th>Project Component</th><th>SEZ Tax Benefit during construction phase</th></tr>
<tr><td>1.</td><td>Operational Buildings, main barge construction and barge jetty construction</td><td rowspan="11">No central taxes (excise, customs) considered for these elements</td></tr>
<tr><td>2.</td><td>Services – internal roads, water supply and drainage</td></tr>
<tr><td>3.</td><td>Pipelines - berth to exchange pit for diesel,</td></tr>
<tr><td>4.</td><td>Pipelines - exchange pit to barge jetty for diesel</td></tr>
<tr><td>5.</td><td>Pipelines of lube products</td></tr>
<tr><td>6.</td><td>Manifolds at Exchange pits</td></tr>
<tr><td>7.</td><td>Pollution control, Illumination, utilities and common facilities</td></tr>
<tr><td>8.</td><td>Pipelines from exchange pit to and from storage terminals</td></tr>
<tr><td>9.</td><td>Storage Tanks</td></tr>
<tr><td>10.</td><td>Fire protection for storage tanks</td></tr>
<tr><td>11.</td><td>Marine loading equipment</td></tr>
</table>
</td>
</tr>
<tr>
<td>(iv).</td>
<td>Power cost estimated by the COPT forms 28% of the total operating cost estimated for the main berth and 48% of the total operating cost estimated for barge berth. The major area considered by the COPT for estimating the power cost at the main berth and barge berth is water area i.e. 19 hectares and land accounts for only 0.5 hectares. As per the guidelines, the power consumption norm of 2.4 lakh unit per hectare is prescribed towards the general lighting. Lighting and illumination will generally be provided at the operational area. In the light of the above observation, the port is requested to clarify whether the entire 19 hectares of water area will be the operational area and also confirm whether the lighting facility is envisaged for the entire water area as considered by the port. If not, then the COPT may consider to make suitable modification in the estimation of the power cost.</td>
<td>The entire 19 hectares of water area shall not be the operational area. The power cost has been computed for 20% of the 19 hectares water area. This 20% shall be the operational area where vessels are berthed, pipelines and walkways where lighting is required to be provided.</td>
</tr>
<tr>
<td>(v).</td>
<td>It is observed that the port has adopted the highest unit rate of power prescribed for High Tension (HT-IU) Commercial HT i.e. energy charge at Rs.3.70 per unit and fixed demand charge of Rs.350 per KVA/ month. The basis of adopting the Commercial HT tariff for estimating power cost for the multi user liquid terminal may be explained.

The electricity bill of May 2010 furnished by the port shows that the unit rate of power at the COPT is Rs.4.78. In this context, justify the reasons for</td>
<td>Reference is drawn to the layout of the port shown in the Page 15 of the feasibility report. The existing port is developed on a standalone island – Wellingdon Island and the electricity bill of May 2010 is applicable for the port development on this Island (which is a separate connection). Development of MULT is coming up on Puthuvypeen SEZ where the Port has not taken any electricity connection. There is a plan to set up a substation on Puthuvypeen SEZ and the associated distribution network (Please note that utility infrastructure is in the process of</td>
</tr>
</table>

	adopting higher unit rate of power at 6.17 in the upfront tariff determination.	being developed at this SEZ) – and they will be charged at the HT-IU – commercial rate as prescribed by KSEB. Hence the same is taken in the proposal.
(vi).	The following general conditions may be incorporated in the proposed Scale of Rates: *"The users shall not be required to pay charges for delays beyond a reasonable level attributable to the terminal operator."* *"Storage charge on shall not accrue for the period when the operator is not in a position to deliver/load cargo when requested by the user."*	Point Noted and the same shall be included.
(vii).	In the revised proposal, the port has estimated upfront fee for common user infrastructure at Rs.745 lakhs. Please indicate what are common user infrastructure facilities proposed to be offered and the basis of such valuation at Rs.745 lakhs. Also, explain the logic of allocating this cost to the main berth, barge berth and storage in the ratio of the direct capital cost i.e. 61.85%, 5.60% and 32.55% respectively. It may be noted that in the upfront tariff guidelines for liquid terminal, the norm prescribed for estimation of miscellaneous cost at 5% of civil cost and equipment cost covers upfront fee. Hence the deviation made from the guidelines for estimation of separate upfront fee for common user facilities in addition to miscellaneous cost may be justified by the port.	(a). Puthuvypeen area is an under developed area, and COPT has to provide supporting infrastructure like road connectivity, power and drainage etc. for the entire SEZ area. This cost to be incurred by COPT shall be shared by different co-developers in that area. The BOT operator for MULT shall be one of the co-developers, apart from IOCL, BPCL and Petronet LNG Limited (PLL). Since, these are the common infrastructure facilities which will benefit the BOT operator, a part of this cost shall be borne by the BOT operator, which is considered in the upfront tariff calculation. In the draft concession agreement, payment of Rs.7.45 crores for common infrastructure has been incorporated as a condition precedent. (b). Rationale for allocating this cost: Common user infrastructure includes external roads (to the project site) and associated utilities which are used by Main Berth, Barge Berth and the Storage Terminals. An allocation based on direct capital cost will ensure proportionate increase on account of the cost towards common user infrastructure, hence the same is adopted. (c). The payment envisaged from the BOT operator is towards the development of external roads and associated utilities at Puthuvypeen SEZ. It is not in the nature of "upfront fee" as contemplated in the TAMP guidelines. Consequently, the word "upfront fee" shall be replaced by "proportionate cost of common infrastructure (to be incurred by COPT)" in the revised proposal. (d). It is notable that the valuation of land for Puthuvypeen furnished by COPT in the land valuation report recently submitted to TAMP in the lease rental proposal, considers the base value of land in Vallarpadam and has been reduced by 20% in view of the fact that it is located afar from CBD and there is variation in the market value of land. The license fee is for the area allotted. The amount proposed to be

		recovered is for the supporting infrastructure. Hence, both need to be considered in the upfront proposal. The relevant pages of the land valuation report are furnished.
(viii).	In the berth hire calculation for barge berth, considering the optimal capacity assessed at 3.42 million tonnes, and the average disposal rate at 8400 tonnes per day, it will take 406 days (as against the norms of 255.5 days = 365* 70%) to off load the optimal capacity. In terms of hours it will be 9762 hours as against 6132 hours considered by the COPT as per norms in the calculation. The berth hire calculation may be corrected in the light of the above observation.	The berth hire calculations have been revised in the revised proposal.
(ix).	The port has in page 8 of the revised proposal stated that the common capital cost items such as buildings, roads and water supply and drainage between the main berth, barge berth and storage tank in the ratio of the direct capital cost. Like wise, the common costs such as marine fixtures, foam based fire fighting, etc., between the main berth and the barge berth are allocated in the ratio of direct capital cost plus the allocated capital cost. The logic of adopting the capital cost as the base for allocating the common cost may be explained. Can these cost not be allocated on more appropriate basis reflecting the services/ facilities to be offered by these assets to each of the activities?	The use of common elements – like operation buildings, roads, water supply etc cannot be attributed to a single activity. Hence it was felt that it is fair to allocate it on the basis of direct capital cost to ensure that the increase in tariff on account of these elements will be proportionate across these activities. For elements like fire fighting system where the capital cost is predominantly due to one particular cargo, the same is allocated to that cargo. Everywhere else, the logic of direct capital cost is followed.
(x).	The port has stated that project structure originally envisaged has been modified as per the directions from the Ministry. A copy of the said direction from the Ministry may please be forwarded for our records.	In the project proposal originally submitted to Ministry for Public Private Participation Appraisal Committee (PPPAC) approval, the storage tanks were not included in the scope of the BOT operator. After discussion in Feb 2010 with PPP expert at the ministry, the Port was directed to resubmit the PPPAC memo, dropping/deleting the deviations from the Model Concession Agreement (MCA), and verbally directed to restructure the project by including the scope of storage requirement. The Project structure was accordingly modified. The copy of the communication from the Ministry in this regard is furnished.
(xi).	Please clarify whether from the operational functioning of the liquid terminal envisaged by the port, it is compulsory for all the bunker fuel and other fuel cargo to pass through the storage tank. If so, then recognising that the entire cargo will pass through the storage tank and that storage in tanks is only an intermediary facility before the cargo is loaded onto barges, please explain why this tariff cannot be a part of the handling charge? Incidentally, the upfront tariff guidelines for liquid terminal though requires the ports to estimate storage tank facility in the capital cost, it does not envisage prescription of storage charge separately for a liquid terminal. The COPT may please examine and clarify this point.	It is compulsory for all cargo to pass through the storage tank. In the proposal dated 30th June, 2010, separate tariffs were proposed for each activity anticipating the involvement of different agencies in the operations. However, in view of the observations made by TAMP, recognizing that storage is not a separate stand alone operation, the entire calculation for revenue requirement has been merged with the handling activity. The handling at barge berth is also clubbed and a composite rate is proposed. Guidelines stipulate 95% of the revenue requirement to be apportioned towards handling charges and 5% towards miscellaneous charges. However, we do not envisage any miscellaneous charges.

		But to act as a deterrent, and to ensure that the cargo at the barge berth is also evacuated in coordination with the receipt at the main berth and to achieve the optimal capacity of 3.42 MMTPA of the main berth, it is essential to have a deterrent factor. In light of the above, it is prudent to prescribe charges for the storage of cargo beyond 3 days free period. 3 days is the average time required for a parcel size of 25000 tons to be discharged from the storage tank to the barge berth. Hence, it is proposed to allocate 5 % of the total revenue requirement towards the storage charges and 95% towards the handling charge. In the revised proposal, a composite handling rate is proposed for handling at main berth, storage for 3 days and handling at barge berth. Revised calculation is furnished.
(xii).	Storage charge - newly proposed in the revised proposal:	
	(a). The guidelines for liquid terminal envisages investment on storage tank under civil construction cost. As stated earlier, the guidelines, do not stipulate prescription of separate storage charge for a liquid terminal. The reasons for the deviation made from the guidelines by proposing a separate rate for storage activity based on separate cost calculation may be justified.	Same as Sl.No. (xi).
	(b). Explain how the capital cost relating to building, water supply and sewerage are relevant for storage activity.	Administration buildings, water supply and sewerage are required for managing the storage activity hence the cost is allocated.
	(c). No norms are available in the guidelines for determining the optimal capacity of storage tanks for a liquid terminal. The basis of considering the total storage capacity of tanks at 42000 kilolitres i.e. 10,500 kilolitres per tank may be explained. The relevance of applying 70% utilisation factor for determining the capacity of the storage tanks i.e. 37800 tonnes * 70% = 26460 tonnes/ day may also be explained.	Storage capacity of 37,800 i.e. 4 tanks of 10,500 kl each with 0.9 density factor is considered, to meet the optimal capacity assuming that cargo is discharged through barges @ 9500 tons/day. In the revised calculation furnished, the factor of 70% has not been considered.
	(d). Considering the storage charge of Rs.18.77 per tonne per day proposed by the COPT and the optimal capacity of the bunker fuel and POL cargo assessed at 3416723 tonnes and assuming cargo avails 1 day storage facility as per the COPT proposal, the revenue to be recovered from storage charge would be Rs.6.41 crores (i.e. 3416723 tonnes x Rs.18.77/ tonne x 1 day) as against the estimated revenue requirement of Rs.18.13 crores from this service. Please remove the inconsistency and show that the proposed storage charge can adequately cover the revenue requirement estimated from this service.	The storage charges are revised as explained in 12(a) above. It is crucial that the storage facility is optimally utilized and the cargo stored is evacuated at the rate of 9500 tons/day so as to achieve the optimal capacity of the terminal. It is therefore, proposed to prescribe a separate storage rate to act as a deterrent for overstay of cargo beyond the free period of 3 days required for evacuation of cargo from the day following the date of last cargo discharged from the vessel. The revised calculation is furnished.
	(e). The basis of adopting average disposal rate of bunker fuel to the barges at 8400 tonnes/	The same has been modified to 9500 Tons/day by assuming a loading rate of 500 tonnes/hour

	day at the barge loading berth may be explained.	(based on feasibility report given by IPA page 142 – discharge from barge loading berth at 500 tonnes per hour) and assuming 19 hr operations in a day. Kindly refer our comment at ii(b).
	(f). Considering the average disposal rate of 8400 tonnes / day at the barge loading berth and number of hours at 6132 as considered by the COPT in the berth hire calculation (converted into days i.e. 255.5 days), the total quantum of bunker fuel that can be offloaded onto the barges will be 2.146 million tonnes (8400 tonnes / day * 255.5 days) as against the optimal capacity of this cargo assessed at 3.416 million tonnes. There is, therefore, some inconsistency in the calculation which may please be corrected.	The average disposal rate has been modified to 9500 Tons/day. Accordingly, the modified berth hire calculations are modified.
	(g). Number of barges assumed to be berthed simultaneously at the barge loading berth for loading bunker fuel cargo may be indicated. Please show how they are factored in the calculation of storage charge and berth hire charge also.	Only one barge is envisaged at one time at the Barge Loading Berth. The calculation of GRT hours is shown as following: GRT of the barge – 1300 Number of barges required to deliver optimal capacity = 2441 (3.41 MMT/1400 Tons per barge) Hours required for loading each barge – 1400/500 = 2.8 hours Total GRT hours - 2.8*1300*2441 = 8883480 Above GRT hours have been used to estimate berth hire charges.
	(h). Based on the average loading rate onto barge assumed by the port at 8400 tonnes/ day, it will take 4.5 days to evacuate 37800 tonnes of cargo stored in the tank at a particular time. Even if for the time being storage capacity of tanks is considered at 26460 tonnes as factored by the COPT, it will take 3.15 days to evacuate the said cargo. The proposed storage charge of Rs.18.77 tonnes/ per day does not recognise the average number of days the liquid cargo is likely to attract storage charge beyond the free period. The unit rate may be modified in the light of our observation giving the impact of the time factor.	The storage rate has been modified.
	(i). Since the cargo proposed to be handled is multi user, clarify the mechanism envisaged to differentiate the liquid cargo of same category belonging to different users for the purpose of levy of storage charge.	The concessionaire shall store the liquid cargo of different users in different tanks and meter the inflow and outflow from each tank, to ascertain the storage charges accrued to each user.
	(j). Storage charge is leviable after a prescribed free period which is evident from the upfront tariff guidelines prescribed for other cargo terminals. In this context, the port may propose suitable free period for liquid cargo beyond which storage charge is leviable. The general conditions relating to commencement of free period days, days excluded in the computation of free period may be incorporated, if storage charge is to be prescribed separately.	Since the capital cost of storage activity is now considered as a part of the composite handling rate, a free period of 3 days is prescribed. Free period shall commence from the day following the date of last cargo discharged from the vessel.
(xiii).	Additional clarification on maintenance dredging furnished by the port.	The MULT has a berth basin similar to the Cochin Oil Terminal. The basin area for COT is about 22.5 Ha and the maintenance dredging

		quantity is 0.674 million cu.m. The maintenance dredging cost for the last two years for the (@ Rs.52.5/cu.m) and Rs.3.94 crores (Rs.58.5/cu.m) respectively. In the case of MULT the maintenance dredging quantity is 0.42 million cu.m. since the area of the basin is less. A rate of Rs.60/- cu.m has been adopted for estimation and the cost worked out to Rs.2.52 crores seems reasonable.

10. Subsequent to furnishing the replies to the queries raised, the COPT has vide email dated 13 August 2010 and 18 August 2010 furnished a revised cost statement. The main modifications done by the COPT in its revised cost statements dated 13 August 2010 with reference to the earlier revised proposal dated 30 June 2010 is summarised below:

(i). (a). The tax benefits for SEZ is factored in the cost estimation of the marine loading equipment which was not considered earlier.

(b). The exchange rate for conversion of dollar into rupee is updated to the prevailing rate i.e. 1 US $ = Rs.46.70 (ET dated 12.08.2010).

(c). In view of the above modifications, the project capital cost in the final revised proposal is estimated at Rs.17296.55 lakhs as against Rs.17341.52 lakhs estimated in its earlier revised proposal.

(ii). (a). The common capital cost for roads, operational buildings, pollution control facilities and the proportionate share of expenditure payable to COPT for common infrastructure, etc. were earlier apportioned for each activities viz. main berth, barge berth, storage and the cost allocated to main berth was apportioned between LPG and bunker fuel in the share of berth days i.e. 55.72% for bunker fuel and 44.28% for LPG. In the revised calculation, the total of such common costs are allocated between the bunker fuel / other POL cargo and the LPG in the ratio of share of berth days resulting in increase in the capital cost for LPG cargo.

(b). In the capital cost estimation for berthing services, the capital cost of marine fixtures Rs.10.87 lakhs earlier allocated to barge berth has now been shifted to main berth and reasons therefor are not explained.

(iii). (a). The power cost is estimated for 20% of the 19 hectares of water area stated to be the operational area.

The power cost thus estimated is for total 6.3 hectares constituting of land area 2.5 hectares and 20% of the total water area i.e. 3.8 hectares adopting the unit rate of 6.17. The power consumption of 2.4 lakh units per hectare is considered as per the norm prescribed in the guidelines. The total power cost is allocated between the two cargo groups in the share of berth days.

(b). License fee is also estimated for the total area and then allocated between the two cargo groups in the share of berth days.

(iv). The port has vide email dated 18 August 2010 confirmed that the average size of the barge at 1300 GRT and the parcel size of the barge 1400 tones considered in the calculation of berth hire for barge berth are based on the Feasibility Report of this Project submitted by IPA (Page No.143, 144 & 145 of Feasibility Report) and hence it is in order.

(v). The revised capital cost and revenue requirement estimated by the COPT vis-à-vis its proposal dated 30 June 2010 is tabulated below:

(**Rs. in lakhs**)

	COPT proposal dated 30 June 2010			**Revised calculation of COPT dated 13 August 2010**	
	Main berth		**Barge berth**	**Bunker fuel/ other POL cargo**	**LPG**
	Bunker fuel/ other POL cargo	**LPG**			
(i). Capital Cost					
(a). Handling activity	1703.59	2278.61	182.36	7115.88	2475.12
(b). Berth service	6909.99		795.56	**Main berth**	**Barge berth**
				6920.86	784.70
(c). Storage	5471.41	-	-	Capital cost for handling includes storage related cost and barge activity cost	
Total	**17341.52**			**17296.55**	
(ii). Revenue Requirement					
(a). Handling activity					
- Operating cost	453.76	469.11	124.56	705.18	470.63
- 16% ROCE	272.57	364.58	29.18	1138.54	396.02
Total	**726.34**	**833.69**	**153.73**	**1843.72**	**866.65**
(b). Storage charge				Storage and handling at barge berth form part of composite handling activity	
- Operating cost	937.84	-	-		
- 16% ROCE	875.43	-	-		
Total	**1813.26**	-	-		
(c). Berth hire	**Main berth**		**Barge berth**	**Main berth**	**Barge berth**
- Operating cost	592.84		47.54	593.42	46.96
- 16% ROCE	1105.60		127.29	1107.34	125.55
Total	**1698.44**		**174.84**	**1700.76**	**172.52**

(vi). (a). In the earlier revised proposal of 30 June 2010, the COPT had proposed separate tariff for each activities viz. handling of bunker fuel and POL cargo at main berth, storage charge and handling at barge berth. In the revised proposal, the COPT has proposed a single composite rate for handling bunker fuel and other POL cargo at main berth, transfer to storage tank through pipelines, storing the cargo with allowance for 3 days free period, transfer to barge berth through pipelines and loading it onto the barge berth.

(b). The upfront tariff proposed by the COPT as per the final revised calculation is given below:

- Berth hire charges:

Classification	**Foreign-going vessel**	**Coastal vessel**
Main Berth	Rs.1.42 per GRT per hour	Rs.0.85 per GRT per hour
Barge Berth	-	Rs.1.94 per GRT per hour

- Composite handling charges:

Handling charges	Rs. per ton
(i). Bunker Fuel and other POL Cargo for both Foreign going vessels and Coastal vessels	53.96
(ii). LPG - Foreign going vessels	161.20
(iii). LPG - Coastal vessels	96.72

NOTES:

Composite handling charges covers the following:

1. Bunker fuel: Bunker fuel unloaded at main berth from the vessel, transporting through pipe lines to storage tanks through exchange pit, storing the fuel for 3 days in the storage tanks, thereafter transported to barge berth through pipe lines and through exchange pit and loaded to the barges.

2. LPG: It includes wharfage, unloading facility provided and other ancillaries services

- Storage charges:

		Rs. per tonne / day
(i).	Free period	3 days
(ii).	Storage charge:	
	(a). First 2 days after free period	5.40
	(b). 3rd day - 4th day	8.09
	(c). 5th day onwards	10.79

(c). The port proposed to delete the note (4) proposed earlier about levy of additional berth hire for keeping adjacent berth vacant on the grounds that at the main berth only one vessel can be accommodated at a time and hence there will not be a scope for accepting the users request for adjacent berth to be kept vacant.

11. 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 concerned parties will be sent separately to the relevant parties. These details will also be made available at our website http://tariffauthority.gov.in.

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

(i). The proposal of Cochin Port Trust (COPT) in reference is to fix upfront tariff for a multi-user liquid terminal berth to be developed at Puthuvypeen on Public Private Participation (PPP) basis for handling Bunker fuel, other POL cargo and LPG. As per clause 2.2. of the upfront tariff guidelines of 2008, the tariff caps to be prescribed now shall apply to all the projects to be bid out for handling identical cargo viz. Bunker fuel/ other POL cargo and LPG at Cochin Port Trust during the next 5 years.

(ii). (a). As brought out in the earlier part of this Order, the COPT has revised its initial proposal twice. The original proposal filed by the COPT did not envisage the BOT operator to provide the storage facility at the multi-user liquid terminal. Some of the prospective bidders like M/s.IMC, Chennai and Punj Lloyd Ltd. - Consortium raised a concern that storage tank facility is not made an integral part of the facility. The upfront tariff guidelines for liquid terminal include provision of storage tanks. The port was, therefore, advised to explain the reasons for deviation from the guidelines and to clarify the evacuation facility envisaged for liquid terminal. The port has reported that this deviation from the guidelines was also verbally pointed out in a discussion with the Ministry of Shipping when the port was advised to restructure its proposal to include storage tank facility and hence the scope of the project has been modified in the revised proposal dated 30 June 2010, a good 4 months after the joint hearing in this case was held. The COPT has proposed to allot 2 hectares of land for development of storage tank and has also proposed separate storage charge in the said revised proposal.

(b). It is notable that the tariff guidelines of 2008 does not envisage prescription of storage charge based on stand alone costing for the storage facilities. The capital cost related to storage facility form part of the capital cost of the cargo handling activity. The guidelines for all types of terminals envisage determination of annual revenue requirement for cargo handling activity based on the relevant capital and operating costs and apportion the revenue requirement in the range of 90% to 98% for determining the handling rate and to apportion the balance to derive the rate for storage charge and miscellaneous services.

(c). The revised proposal dated 30 June 2010 does not reflect the position explained above, though the port claimed that the entire Bunker fuel / POL cargo would essentially pass through the tank farms. One being pointed out the guidelines position, the COPT modified its proposal vide its letter dated 13 August 2010. In the final revised proposal, port has proposed a composite handling rate for bunker fuel and POL cargo instead of separate rate proposed earlier for individual services on a stand alone calculation. While doing so, separate storage charge is proposed apportioning 5% of the estimated annual revenue requirement instead of the rate derived on stand alone costing earlier.

(iii). The COPT has in general complied with the guidelines issued for upfront tariff setting vide Notification No.TAMP/52/2007-Misc. dated 26 February 2008. Deviations proposed in some of the norms / parameters are, *inter alia*, discussed in the subsequent paragraphs.

(iv). <u>Optimal Capacity</u>:

The optimal capacity of the main berth is calculated at 4095542 tonnes of which 3416723 tonnes pertain to Bunker fuel and other POL cargo and 678819 tonnes of LPG. The optimal capacity of the barge loading berth is pegged at the optimal capacity for handling bunker fuel and other POL cargo at the main berth i.e. 3416723 tonnes as explained hereunder:

(a). The share of bunker fuel / other POL cargo and LPG is estimated at 83.43% and 16.57% reportedly based on the traffic expected to be handled in the year 2023-24. For determining the optimal capacity, the share of the two cargo groups is converted in terms of berth days reckoning the handling rate of each type of cargo groups and is considered at 55.7196% for bunker fuel and other POL cargo and 44.2804% for LPG. The port has not separately given the share of other POL cargo on the ground that it would be negligible. This has been endorsed by some of the prospective bidders / users. In any case, this factor may not have any impact on the final outcome as the handling rate of POL is the same as that of bunker fuel. The share of cargo capacity considered by the COPT is relied upon in this analysis.

(b). The handling rate for bunker fuel / other POL cargo is considered at 24,000 tonnes per day and the handling rate for LPG at 6,000 tonnes per day as per the norms for handling rate prescribed in the upfront tariff guidelines.

The Indian Oil Corporation Limited (IOCL) has requested to consider a higher handling rate of 520 tonnes per hour for LPG cargo considering the advance technology available and recognising the cargo mix of butane and propane at 80:20.

Dismissing the claim made by IOCL, the COPT has insisted that handling norms as prescribed in the guidelines should only be considered. The argument of COPT is that the investment in higher technology should be commensurate with the traffic and the IOCL who will be the sole user of LPG facility has neither committed any minimum traffic guarantee nor has it guaranteed the cargo-mix of butane and propane at the level of 80:20. Traffic projection for Bunker fuel considered even after about 20 year will be lower than the capacity determined as per the norms. Therefore, increasing the LPG handling rate will only artificially reduce the cost to be shared by IOCL. Another notable point is that the capacity of storage tanks and the evacuation facility assessed at barge berth which itself is after improving the utilisation factor cannot match the increased capacity of Bunker Fuel / POL cargo by the IOCL.

The demand of IOCL is to improve upon the norms prescribed in the guidelines. However, in the absence of demand more than 0.6 million tonnes, which is projected by the COPT, the suggestion of the port to determine optimal capacity as per norms is considered.

(c). M/s.Bharat Petroleum Corporation Limited have pointed out the time required for the terminal to achieve the capacity and have requested to consider capacity utilisation at lower levels in the initial year and increase it gradually. M/s.IOT Infrastructure & Energy Services Limited have also echoed the same concern.

It has to be recognised that upfront tariff is to be fixed based on the optimal capacity irrespective of traffic likely to be handled. As required by the guidelines, the upfront tariff fixation exercise will recognise only the optimal capacity of the terminal determined based on the given formula. It is for the concerned bidders to assess volume build up while formulating their financial bid.

(d). The proposal envisages unloading of bunker fuel and POL cargo at the main berth, transfer through pipelines to storage tanks and then loading onto barges. The guidelines of 2008 do not prescribe any handling norms for loading liquid cargo onto barges. Since the entire bunker fuel / POL cargo to be unloaded at the main berth capacity level of 3.42 Million Tonnes (MT) per annum will be evacuated through barges, the optimal capacity of barge berth is also taken at 3.42 MT per annum. The unloading rate of bunker fuel / other POL cargo is considered at 500 tonnes / hour based on the feasibility report which is relied upon in the absence of any separate norm available for loading cargo onto barges.

At the unloading rate adopted by the COPT and adhering to the 70% utilisation factor prescribed in the guidelines, the optimal capacity of barge berth would be 3.06 Million Tonnes (MT) per annum i.e. (500 * 24 hours * 365 * 70%). Citing that evacuation at the barge berth is crucial for achieving the productivity and the optimal capacity determined for the main berth, the COPT has proposed the capacity of the barge berth at 3.42 MT per annum by improving the utilisation factor prescribed in the guidelines so as to avoid mismatch between the optimal capacity of the main berth and barge berth. For the reasons cited by the port and also recognising that the entire Bunker and POL cargo handled at the main berth has to necessarily avail the evacuation facility at the barge berth, the optimal capacity of the barge berth assessed by the COPT at 3.42 MT is accepted.

(v). Capital Cost:

(a). In the first revised proposal dated 30 June 2010, the common capital cost on roads, pipelines, buildings, water supply, proportionate share payable to the port for common infrastructure, etc., were allocated to each activities i.e. main berth, barge berth and storage and the cost of main berth were distributed between bunker fuel cargo / other POL cargo and LPG based on the share of berth days of the respective cargo group. While proposing composite rate for bunker fuel/ POL cargo in the subsequent proposal of August 2010, the port has allocated the entire common capital cost only between the two cargo groups in the share of berth days. The license fee and power cost is also estimated on totality and allocated between the two cargo items in the share of berth days. The revised method of allocation adopted by COPT is found to cast a disproportionate burden on LPG cargo as it does not follow the broad location specific allocation and then to apportion between cargo.

Since the proposal does not envisage LPG cargo to use the storage facility and barge berth which are created for handling bunker fuel/ other POL cargo, it is unreasonable to burden the LPG traffic with the common capital and the operating cost of the storage facility and barge berth. With a view to ensure correct allocation of common capital and operating cost, the basis adopted for capital cost allocation followed in the first revised proposal dated 30 June 2010 is relied upon alongwith the information / clarifications furnished during the processing of this case subject to the modifications made as explained in the subsequent paragraphs.

(b). The objection raised by the IOCL on the allocation of foam based fire fighting to LPG has been addressed by the port in the revised proposal and the cost is directly allocated to bunker fuel and POL cargo. With reference to the another point made by the IOCL that fire fighting system other than foam based should also be apportioned to both the cargo groups, the COPT has clarified that LPG cargo is categorised as Class I product – extremely flammable whereas the bunker fuel in Class III classified as combustible. The fire protection has to be designed to comply the requirement of Oil Industry Safety Directorate (OISD) under the Ministry of Petroleum and Natural Gas. The OISD standards are stringent for LPG which would drive the major cost for the fire fighting system and hence it would be unfair to allocate this cost to bunker fuel. The other points made by the IOCL on allocation of other common capital cost on pipelines, buildings, water supply etc., has been addressed by the COPT. The allocation of capital cost adopted by the COPT in its letter dated 30 June 2010 is relied upon and considered. However, the capital cost allocated for each of the locational activities of handling cargo at main berth, storing at tanks, loading onto barges on stand alone basis are taken together. The capital cost of marine loading equipment is updated as per the revised estimates furnished by the port in its letter dated 13 August 2010 reckoning the tax benefit for this item and updated exchange rate. The capital cost for LPG cargo is considered as estimated by the COPT in its letter dated 30 June 2010.

(c). The liquid terminal to be developed is reported to be in the Special Economic Zone (SEZ) in Puthuvypeen and the concerned BOT operator will be reportedly inducted as a co-developer of the SEZ. The tax benefits available to the developers of SEZ are reportedly considered in the estimation of capital cost. When a clarification was sought on the tax benefit considered in the estimated capital cost of the marine loading / unloading equipment, the port has submitted that the SEZ area is not extended to the water area and tax exemption on this equipment was not considered in the original as well as in the revised proposal of 30 June 2010. However, considering that the jetty where the loading equipment would be installed would be an extension from the land area demarcated as SEZ, the port has reviewed its earlier stand. It has relied upon the approval granted to the adjacent LNG terminal where the SEZ benefits were extended for the marine infrastructure. The port has, therefore, submitted that the BOT operator can apply for extension of SEZ benefits to the marine infrastructure to be developed. Consequently, the effect of taxation is excluded from the capital cost estimate of marine loaders/ unloaders. Since the operator of the multi user liquid terminal will be a co-developer of the SEZ and the marine infrastructure is an approved service in the SEZ, as evident from the approval granted to the adjacent terminal, the submissions of COPT are relied upon.

(d). The capital estimates include Rs.7.45 crores payable to the COPT for common infrastructure facilities to be developed by the port which was earlier termed as upfront payment. In the upfront tariff guidelines for liquid terminal, the estimation of miscellaneous capital cost at 5% of civil cost and equipment cost covers upfront fee apart from other items.

It is relevant to mention that in the upfront tariff fixed for coal handling at General Cargo Berth and multipurpose cargo handling terminal at Visakhapatnam Port Trust (VPT), upfront payment to be made by the operator to VPT for the partly constructed berth handed over by the port to the operator was allowed on the logic that otherwise the operator would have incurred the cost for construction. In the instant case, the estimate of Rs.7.45 crores included in the capital cost is towards for the common infrastructure to be developed by the port which would be outside the area earmarked for the terminal.

The port has clarified that the payment is not in the nature of upfront fee contemplated in the guidelines. The BOT operator for the liquid terminal will be one of the co-developers of the SEZ, apart from IOCL, BPCL and Petronet LNG Limited (PLL). The cost to be incurred by the port for providing supporting general infrastructure like road connectivity, power, and drainage for the entire SEZ area need to be shared by the co-developers. The port has further submitted that the concession agreement to be signed will include the payment of Rs.7.45 crores by the BOT operator to COPT for development of common infrastructure in the SEZ area as a condition precedent.

It is understood from the COPT that the SEZ area may be allotted to different Export Oriented Units. It is not made clear by the port whether any financial benefit other than SEZ tax benefit is likely to accrue to the BOT operator in future being the co-developer. Based on the submissions/ clarification furnished by the port for recognising the proportionate share of expense i.e. Rs.7.45 crores payable by the liquid terminal, this item which is included under the head building, water supply and sewage is considered as the part of capital estimates subject to the condition that if in future any other financial benefit accrues to the operator as the co-developer of the SEZ area, then the position should be reported by the COPT and the BOT operator and in that event, the tariff approved now will be reset maintaining the annual revenue requirement estimated in this exercise.

(e). The break up of capital cost estimated for the multi-user liquid terminal is explained hereunder:

- Handling Activity:

  (i). Civil Construction Cost:
  The upfront tariff guidelines broadly indicate the civil works involved for liquid terminal and require the port to estimate civil cost. The items considered under civil works adhere to the normative list of items stipulated in the guidelines. The guidelines stipulate that the civil cost will be as estimated by the concerned port trust. The estimates of civil cost as estimated by COPT are considered in this analysis.

  (ii). Equipment cost:
  The items considered by the COPT for estimating the equipment cost adhere to the broad list of equipments prescribed in the guidelines for liquid terminal. The port has proposed two unloading arm at the main berth for handling bunker fuel/ POL cargo. For LPG, unloading arm is proposed to be deployed by the IOCL and hence not included in the capital cost estimation.

  (iii). Miscellaneous Cost:
  The miscellaneous capital cost is considered at 5% of the aggregate of the civil and equipment cost as per the norms prescribed in the guidelines.

- Berthing activity:

  As per the upfront tariff guidelines, the capital cost for berth hire services shall include cost of construction of berth and cost of dredging, if any, carried out alongside the berth. The capital cost estimated by the COPT for berthing activity reportedly includes cost of construction of the jetties as well as cost of capital dredging along side the berth. The total capital cost estimated for berthing service including capital dredging is Rs.6909.99 lakhs for main berth and Rs.795.56 lakhs.

(f). M/s.IMC Limited have observed that the storage capacity of 42,000 KL comprising four tanks may not be adequate for achieving the optimal capacity of bunker fuel and other POL cargo. The COPT has furnished an analysis to show the adequacy of storage capacity duly taking into account the loading capacity of the barge berth.

(g). M/s.IOT Infrastructure & Energy Services Limited are of the view that the capital cost estimated by the COPT is under valued as the project estimates have been done in 2008 when prices of all commodities like steel, cement, etc. were very low. The Cochin Port Trust has confirmed that at the instance of some of the prospective bidders and based on the advice rendered by this Authority, it has reviewed all cost elements and revised the estimates based on recent budgetary offers, so as to reflect current market prices. Despite specific request, the COPT has, however, not furnished supporting documents / rate analysis etc., to validate the estimates of capital cost with reference to cost of berth, the unit rate adopted for civil work. The port has confirmed that the departmental rates for recently tendered works in COPT have been adopted for estimating the civil works in is revised proposal. For pipelines, the COPT has furnished the working but it is not supported by any budgetary quotations. The estimation of marine loading and storage tanks is based on budgetary rates recently obtained from the suppliers and has been substantiated with documentary evidence. The exchange rate applied by the COPT for conversion of budgetary quotations in foreign currency is 1 US$ = Rs.46.70 which matches with the rate prevailing at the time of analysis of this case. The civil and equipment cost estimates prepared by the port are with provision for contingencies to take care of any requirement which is not envisaged in the estimates, and engineering / supervision charge. Service tax is considered on the dredging cost. The port has confirmed that the tax benefits for SEZ has been recognised in the estimation of the capital cost. The capital cost estimates furnished by the COPT are relied upon and considered in this analysis.

(h). The total capital cost is estimated at Rs.172965 lakhs. Of the total capital cost, Rs.9591 lakhs is for cargo handling facility which is apportioned at Rs.7312.39 lakhs for Bunker fuel/ POL handling and Rs.2278.61 lakhs for LPG. Rs.6909.99 lakhs is for berthing facility at the main berth and Rs.795.56 lakhs is for the barge berth.

(i). Return on Capital Employed is calculated at 16% of the total capital cost for the respective activities. For the handling activity, the ROCE works out to Rs.1169.98 lakhs for Bunker fuel/ POL cargo, Rs.364.58 lakhs for handling LPG. The ROCE for berth hire service is Rs.1105.60 lakhs for main berth and Rs.127.29 lakhs for barge berth.

(vi). Operating Cost:

(a). The port had initially estimated the power cost for the entire water area of 19 hectares and the land area of 2.5 hectares proposed to be allotted i.e. 21.5 hectares. As per the guidelines, the power consumption norm of 2.4 lakh unit per hectare is prescribed towards the general lighting and illumination which will generally be provided at the operational area. On being pointed out, it has subsequently revisited its proposal and scaled down the estimated power cost with reference to water area. In the final revised working, port has considered 20% of the water area i.e. 3.8 hectares would be the operational area for which power cost is estimated following the consumption norm prescribed in the guidelines. The total power cost estimated for 2.5 hectares of land area and 20% of the water area i.e. 3.8 hectares has been proposed to be allocated between the two cargo groups in the share of berth days.

The revised allocation of power cost made by COPT between the two cargo groups in the final revised proposal is found to cast a disproportionate burden on LPG cargo by not resorting to broad location specific allocation and then to apportion between cargo. For reasons stated earlier, the method of allocation followed by the port in its earlier proposal dated 30 June 2010 is relied upon and the revised area to be illuminated is taken into account.

The unit rate of power considered by the port for estimating the power cost is Rs.6.17 which is reportedly the HT-IU – commercial rate prescribed by Kerala State Electricity Board (KSEB) is relied upon. It is relevant to state that for another private container terminal operating in the COPT, i.e. India Gateway Terminal Private Limited (IGTPL) which is not in the same SEZ area, the estimated power cost reported was Rs.6.87 for the year 2009-10.

(b). The repairs and maintenance cost are estimated at 1% on the civil assets and 2% on the mechanical and electrical equipment, insurance cost and other expenses are estimated at 1% each of the gross fixed assets as per the norms prescribed in the guidelines.

(c). Deprecation on tankages, pipelines and power and lighting is computed @ 13.91%, 10.34% for marine loading / unloading equipment and fire fighting equipment and 3.34% for building, water supply and sewage, etc., which is found to be as per the depreciation rates prescribed in the Companies Act for the relevant group of assets and hence is accepted.

The depreciation rate adopted by the COPT on road is 1.63%. The Companies Act prescribes depreciation rate of 1.63% for Building other than factory building. Depreciation Schedule in the Companies Act do not indicate a separate rate for road. In the upfront tariff at other major ports like the Visakhapatnam Port Trust, Paradip Port Trust, Mormugao Port Trust, etc., depreciation on road has been estimated at 3.34% for all kinds of civil works including road, on the analogy that the investment on roads needs to be written off in 30 years, which is the concession period. That being so, in our calculation, the depreciation on road is computed at 3.34%.

The port has omitted to compute depreciation on the capital cost of Rs.4158 lakhs on storage tank. In our calculation, this has been considered.

(d). The lease rental is estimated on the land area of 2.5 hectares and on the 19 hectares of the water area. The COPT in the revised proposal has adopted the rate at Rs.29,65,482/- per hectare per annum for SEZ area at Puthuvypeen as per the lease rental approved by this Authority in Order No.TAMP/33/2007-COPT dated 4 May 2010.

License fee on the water area is estimated at 1/3rd of the rate prescribed for the adjacent land. The lease rent prescribed in the Scale of Rates is applicable for the port lands and not for water area. When the port was advised to substantiate the deviation with reference to the Government policy or any other guidelines on the subject, the port has admitted that it is not based on Government policy or other guidelines but is a convention followed by the port. The port has justified that lower lease rent is collected on water area as only the bed of back waters is made available by the port and the activities like reclamation of the land, construction of berth / jetty etc. are done by the users and this approach has been followed for such allotments done to Cochin Shipyard, Kerala Fine Arts Society and Lakshwadeep Administration.

Whilst the Government guidelines stipulate principles for determining the lease rental of Major Port Trusts, it is not explicit about the rate to be adopted for water area is licenced for use of any private party. There is no uniformity in application amongst different Major Port Trusts on the license fee / lease rent on the water area licensed by the port.

The matter has been referred to the Ministry of Shipping vide our letter dated 9 June 2010 to evolve necessary guidelines / principles for determination of rates on water area for common application at all the Major Port Trusts. The response of the Government is not received till finalization of this case. In the absence of any clear cut guidelines available in this regard at this juncture, the methodology followed by COPT for estimating the lease rental on water area is allowed.

The allocation of license fee between the two cargo groups is, however, retained as per its earlier proposal dated 30 June 2010 for reasons cited earlier.

(vii). (a). The guidelines require the operating cost for the berthing service to be estimated at 1% of the berth cost.

(b). Maintenance cost of berth is to be estimated at 1% on the capital cost of berth construction and the cost of dredging along side the berth. Based on the norms prescribed, the maintenance cost on the dredging should be Rs.14.07 lakhs for main berth and Rs.0.47 lakhs for barge berth. As against this, the COPT has estimated the maintenance dredging cost at Rs.252 lakhs for main berth and Rs.6.00 lakhs for barge berth. Pointing out high siltation rate at its waters, the port has submitted that the basin at the proposed liquid terminal is comparable to the basin of Cochin Oil Terminal (COT). From the actual maintenance dredging cost incurred by the port for the COT basin at the level Rs.3.54 crores and Rs.3.94 crores respectively in the last two years 2008-09 and 2009-10, it is felt that the estimation of maintenance dredging cost for the liquid terminal as per the norms may not suffice. The port has estimated 0.42 million cubic metre of silt will have to be dredged annually at the liquid terminal as against 0.674 million cu.m. of siltation dredged at COT basin since the area of the basin at the proposed liquid terminal is comparatively less. For barge berth, the COPT has estimated 10,000 cubic metre to be dredged by the BOT operator.

It has to be recognised that in the instant case, apart from dredging along side the berth, the BOT operator has to incur capital dredging for the exclusive channel to the jetty branching from the main channel and also incur maintenance dredging thereon. The port has stated that the Concession Agreement will provide a clause requiring the Concessionaire to maintain a minimum draft of 12 mtrs.

Clause 3.2. of the guidelines for upfront tariff setting give flexibility to this Authority to make necessary adjustment in the norms based on justification furnished by the port and in view of port specific conditions having impact on the norms prescribed in the guidelines.

In view of clarification furnished by the port, this Authority accepts the estimated maintenance dredging cost.

The unit rate of maintenance dredging considered by the COPT is Rs.60/ cubic metre reportedly based on the actual unit cost of Rs.52.5/cu.m and Rs.58.5/cu.m. incurred by the port in the last two years. Since the estimates furnished by the port are reportedly based on the actuals, they are relied upon.

(c). The COPT has considered insurance @ 1% on the berth cost and depreciation @ 3.34% on the aggregate capital cost relating to the berthing activity. Maintenance cost is estimated at 1% only on the construction of berth cost and maintenance dredging cost is estimated separately based on the siltation level assessed for the proposed terminal.

Although the guidelines restrict the operating cost at 1% of the berth cost, the asset requires adequate insurance coverage and the fact that the value of asset will depreciate due to wear and tear also cannot be denied. While fixing upfront berth hire this position was recognized and the cost of insurance and depreciation were considered to assess the Annual Revenue Requirement from berthing service with reference to upfront tariff fixation of other Major Port Trusts.

It is brought out here that the insurance cost considered by the port in upfront tariff fixation of berth hire of various terminals is 1% on the total berth hire activity which has been allowed by this Authority. In the instant case the insurance and maintenance cost has been estimated at 1% only on the berth construction cost as the maintenance dredging cost is estimated separately based on actuals. In view of the position explained above, the element of insurance cost at 1% on the berth cost, depreciation @ 3.34% on the total capital cost for berthing activity are considered in this case also while estimating the operating cost for assessment of the revenue requirement from berth hire service.

In this context, it is noteworthy that clause 3.6. of the guidelines for upfront tariff setting gives flexibility to this Authority to decide on a particular item of expenditure, which it considers for incorporation while computing the upfront tariff cap for which norms are not explicit in the guidelines.

(viii). The statement for fixing upfront tariff submitted by the COPT has been modified in line with the above analysis. A copy of the statement is attached as **Annex - I**.

(a). The total annual revenue requirement from cargo handling service for bunker fuel and POL cargo works out to Rs.2535.06 lakhs which is an aggregate of 16% Return on the modified capital cost estimated at Rs.1169.98 lakhs and modified operating cost of Rs.1365.08 lakhs.

The total revenue requirement from cargo handling service of LPG at the main berth works out to Rs.755.57 lakhs which is an aggregate of 16% Return on capital cost estimated at Rs.364.58 lakhs and modified operating cost of Rs.390.99 lakhs.

(b). The guidelines require 95% of the total revenue requirement to be apportioned to handling charge and 5% each towards miscellaneous charge.

The COPT has proposed to apportion 95% of the total handling revenue requirement estimated from Bunker fuel and POL cargo towards composite handling rate as per the norms prescribed in the guidelines. The port does not envisage any miscellaneous charge. Citing that it is crucial to optimally utilise the storage tanks and to ensure that the cargo evacuation at the barge berth is in a coordinated manner with the receipts at the main berth to achieve the optimal capacity, the port has insisted on prescribing separate storage charge to act as a deterrent factor by apportioning 5% of the estimated annual revenue requirement for this purpose. The port's proposal to prescribe separate storage charge within the over all estimated revenue requirement merits consideration as the rate is proposed to mainly act as a deterrent from overstay of cargo in the tanks which may adversely affect the optimal capacity level envisaged at the main berth.

For LPG, the entire revenue requirement is to be recovered from the composite handling charge as cargo will be directly transferred from the main by the unloading arms installed by the IOCL to the their storage tanks located outside the liquid terminal.

(c). As per the Government policy, concessional tariff are to be prescribed for coastal cargo (other than thermal coal and POL including crude oil, iron ore and iron ore pellets) and coastal vessels which should not exceed 60% of the normal cargo / vessel related charges.

Bunker fuel/ POL cargo are not eligible for coastal concession in the handling charge and hence not considered by the port. Based on the optimal capacity for bunker fuel/ POL cargo assessed at 3.42 MTPA, the composite handling rate to meet the estimated revenue requirement of Rs.2408.31 lakhs from cargo handling service will be Rs.70.49 per tonne as against Rs.53.96 per tonne proposed by the port. The upfront rate proposed by the port seems to be lower than the rate approved which is mainly due to the omission made by the port to consider depreciation on storage tank in its calculation.

For LPG, the port has considered 52% of the optimal capacity i.e. 352986 tonnes per annum would be coastal and has considered the impact of coastal concession.

Based on the optimal capacity of LPG assessed at 0.68 MTPA, the composite handling rate to meet the modified revenue requirement estimated at Rs.755.57 lakhs is Rs.140.54 per tonne for foreign and Rs.84.32 per tonne for coastal as against Rs.161.20 per tonne for foreign and Rs.96.72 per tonne for coastal proposed by the port.

(d). The port has proposed three days free period for storage of liquid cargo in the storage tanks based on the average time required to evacuate through barges the cargo received from a vessel of parcel size 25000 tonnes, at the proposed loading rate in the barge jetty.

The COPT has assumed 25% of the optimal capacity assessed for bunker fuel/ POL cargo i.e. 0.85 million tonnes will attract storage charge after 3 days free period. The basis for considering 25% is, however, not explained by the port.

For determining the storage rate for the first two days after the free period, the port has assumed that the cargo will remain on an average for two days. The rate for the subsequent slabs are proposed 1.5 and 2 times the rate determined for the first slab. Accordingly, it has proposed the rate for the first slab (first two days) at 5.40 per tonne per day, Rs.8.09 per tonne per day for second slab for next two days and Rs.10.79 per tonne per day for the period thereafter.

For the modifications made in the annual revenue requirement assessed by the port, the unit storage charge proposed by the COPT has also been modified and the modified storage charge for the first slab works out to Rs.7.42 per tonne per day or part for the first slab. The rates for the subsequent slabs are derived maintaining the differential as proposed by COPT.

(ix). The annual revenue requirement from berthing service at the main berth is estimated at Rs.1698.44 lakhs (i.e. Rs.1105.60 lakhs being 16% return on a capital cost and operating cost of Rs.592.84 lakhs). The annual revenue requirement from berthing service at the barge berth is estimated at Rs.174.84 lakhs (i.e. Rs.127.29 lakhs being 16% return on a capital cost and operating cost of Rs.47.54 lakhs).

Normally vessel related charges for foreign going vessels are denominated in US dollar terms by converting the rupee value to dollar terms by applying the exchange rate prevailing at the time of notification of the relevant tariff order. This Authority while finalising the upfront berth hire at other major port trusts has already decided to approve the upfront berth hire charge in Rupee term only for the stated reasons.

The GRT is considered for barges at 1,300 tonnes, Bunker vessel at 29250 and LPG vessels at 18180. It is observed that the average GRT of POL vessels handled by the port for the last three years 2007-08 to 2009-10 is in the range of

21200 to 23700. When the proposal envisages handling of vessels upto 80,000 DWT at the main berth and applying 60% factor as a thumb rule for conversion, the GRT of vessel will come to 48000 tonnes whereas the port has assumed the average GRT of Bunker and POL vessels at 29250. When asked to clarify, the COPT has explained that Bunker terminal is being developed for the first time and hence there is no past data available. The GRT of the vessels considered in the computation is reportedly based on the feasibility report. For LPG vessels and barges also no past data is available with the port. The data relating the average GRT of vessel/ barge as furnished by the port reportedly based on the feasibility report and the parcel size of the vessel furnished by the port is relied upon.

The share of coastal vessel is assumed at 50% for bunker fuel/ POL vessel and 52% for LPG based on inputs from leading firms on their plans for sourcing coastal bunker fuel cargo and from IOCL for LPG cargo. The revenue impact of coastal concession is considered while prescribing the berth hire charge.

The berth hire for main berth at Rs.1.421 for per GRT per hour for foreign going vessel and Re.0.852 for coastal vessel is found to meet the revenue requirement as against Rs.1.42 and Re.0.86 per GRT per hour for foreign going vessel / coastal vessel proposed by the port.

For barge berth, a single rate is proposed as all the movement will be through barges. Since the entire revenue requirement is to be met from barges, considering the 60% concession will only be a theoretical exercise. Based on the modified calculation, the berth hire for barge berth is Rs.1.968 per GRT per hour as against Rs.1.94 per GRT per hour proposed by the port.

The detailed computation of berth hire for liquid terminal is furnished in the **Annex - II** attached.

(x). Definition of some of the common terms like foreign going vessel, coastal vessels are included in the upfront schedule in line with the definitions prescribed in Scale of Rates of other major ports / private terminals. The definition of "day" proposed by the COPT is in line with the definition prescribed in the Scale of Rates of the COPT. Definition of "month" is not found to be relevant and hence deleted. Since standard definition of 'GRT' already exists which are commonly applicable, it is not necessary to prescribe separately.

(xi). Some general terms and conditions prescribed in the Scale of Rates of other major ports and private terminals and as stipulated in 2005 guidelines such as status of vessel, classification of vessels into coastal or foreign, coastal concessional conditionalities, berth hire to stop 4 hours after vessel signaling readiness to sail, penal berth hire for false signal, non accrual of storage for the period when the operator is not in a position to effect / deliver / ship the cargo when requested by user for reasons attributable to operator, users not to be charged for delays attributable to the terminal operator, commencement of free days, free days to exclude custom holidays and port non-working days are incorporated in the upfront tariff schedule in line with the general conditions prescribed in the upfront tariff schedule approved by this Authority at other Major Port Trusts.

(xii). The conditionalities proposed by the port specifying the interest on delayed payments / refunds at 13.75% is partially modified to state that the penal rate of interest will be at 2% above the prime lending rate declared by the State Bank of India as prescribed in the upfront tariff schedule of other major port trusts. The other conditions about rounding off the grand total of bill, rates prescribed in Scale of Rates are at ceiling levels and rebates at floor levels, enabling port to rationalise Scale of Rates so as to give relief to users, notifying the lower rates and rationalisation of conditions, rebate in berth hire in case vessel idles due to breakdown or non availability of shore based facilities are approved by this Authority in the other upfront cases and hence approved in this case also.

The COPT has proposed a condition about minimum recovery of Rs.100 per bill / application and another condition that refund shall not be entertained unless the minimum amount is Rs.100. Like wise, it has proposed a condition that supplementary bill shall also not be raised by the operator if the amount is less than 100. These are general conditions prescribed in the Scale of Rates of the COPT and hence are incorporated.

As berth hire is prescribed in rupee terms, the general note (i) proposed by the port for conversion of vessel related dollar denominated tariff into rupee terms is not found relevant and hence deleted.

(xiii). The note 1 and 2 proposed by the COPT listing down the services included in the handling rate for bunker fuel/ POL and LPG are partially modified as follows to cover the composite services as per the revised proposal of the port:

(a). The handling charges for Bunker fuel and other POL is for the composite service of unloading of cargo from a vessel / tanker at the main berth, transportation through pipelines to storage tank via exchange pit, transfer through pipelines from exchange pit to storage tanks, free storage for 3 days in tanks, transfer from storage tank to the barge loading berth through pipelines and exchange pit, loading cargo onto barges at barge berth, wharfage and all other miscellaneous services provided by the operator which are not specifically covered by any other charge in this Scale of Rates.

(b). The handling charge for LPG is for a composite service of unloading at main berth, wharfage, other ancillary services and all other miscellaneous services which are not specifically covered by any other charge in this Scale of Rates provided by the operator.

From the proposal, it is understood that the BOT operator would provide necessary area within its terminal to the IOCL to install unloaders for handling LPG at the main berth and for laying pipelines for transfer of LPG from the main berth to the IOCL's storage facility located outside the liquid terminal.

13.1. As per clause 2.8. of the Guidelines, the tariff caps will be indexed to inflation but only to an extent of 60% of the variation in Wholesale Price Index (WPI) occurring between 1 January 2008 and 1 January of the relevant year. Such automatic adjustment of tariff caps will be made every year and the adjusted tariff caps will come into force from 1 April of the relevant year to 31 March of the following year. In the instant case, since the estimation of capital cost and unit rate of operating cost considered in the upfront tariff calculation are as updated to the year 2010 as reported by the COPT, it is found appropriate and relevant to prescribe the base WPI to be considered for automatic adjustment every year as 1 January 2010.

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

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

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

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

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

14. In the result, and for the reasons given above and based on a collective application of mind, this Authority approves the upfront tariff caps for handling Bunker fuel / POL cargo and LPG at Multi-User Liquid Terminal at Cochin Port Trust attached as **Annex - III**.

(Rani Jadhav)
Chairperson

ANNEX - I

FORMULATION OF UPFRONT TARIFF FOR MULTI USER LIQUID TERMINAL AT PUTHUVYPEEN SEZ IN COCHIN PORT TRUST

(Rs. in lakhs)

Sl. No.	Particulars	Estimates furnished by the CoPT											Estimates considered by TAMP		
		Original proposal dated 21 November 2010				Revised proposal dated 30 June 2010				Revised proposal 13 August 2010					
		Main Berth			Barge Berth	Main Berth			Barge Berth						
		Bunker Fuel & POL	LPG	Total	Bunker Fuel & POL	Bunker Fuel & POL	LPG	Total	Bunker Fuel & POL	Bunker Fuel & POL (Composite Handling)	LPG	Total	Bunker Fuel & POL (Composite Handling)	LPG	Total
I	**Optimal capacity**														
(a)	Share of Vessel Size														
	Percentage share of berth days for handling cargo (S1 & S2)	55.71956%	44.2804%	100%	100%	55.7196%	44.2804%	100%	100%	55.7196%	44.2804%	100%	55.7196%	44.2804%	100%
(b)	Ship day Output (in tonnes per day)														
	Handling Rate for the Cargo (P1 & P2)	24000	6000			24000	6000			24000	6000		24000	6000	
(c)	Optimal Capacity (in tonnes)	**3416723**	**678819**	**4095543**	**3416723**	**3416723**	**678819**	**4095543**	**3416723**	**3416723**	**678819**	**4095542**	**3416723**	**678819**	**4095542**
	Optimal Capacity in million tonnes	**3.42**	**0.68**	**4.10**	**3.42**	**3.42**	**0.68**	**4.10**	**3.42**	**3.42**	**0.68**	**4.10**	**3.42**	**0.68**	**4.10**
II	**Capital Cost**														
(a)	**Cargo Handling Activity**														
(i)	**Civil Construction Cost**														
	Berth Apron and Approach	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Storage Yard	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Tankages	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4158.00	0.00	4158.00	4158.00	0.00	4158.00
	Roads	57.13	45.40	102.53	10.27	37.91	30.13	68.04	6.16	61.29	48.71	110.00	79.87	30.13	110.00
	Buildings, Water Supply, Sewage, etc.	59.99	260.58	320.57	32.09	296.56	445.31	741.87	48.20	479.47	590.67	1070.14	624.82	445.31	1070.14
	Subtotal (i)	**117.12**	**305.98**	**423.10**	**42.36**	**334.47**	**475.44**	**809.91**	**54.36**	**4698.76**	**639.38**	**5338.14**	**4862.70**	**475.44**	**5338.14**
(ii)	**Equipment Cost**														
	Marine loading / unloading equipment / flexible hoses	407.74	0.00	407.74	0.56	270.70	0.00	270.70	0.55	227.88	0.00	227.88	227.88	0.00	227.88
	Pipelines	657.79	468.06	1125.85	58.66	593.83	418.59	1012.42	57.20	893.58	418.59	1312.17	893.58	418.59	1312.17
	Fire fighting Equipments	0.00	1053.03	1053.03	105.43	100.87	1019.70	1120.57	9.13	605.00	1019.70	1624.70	605.00	1019.70	1624.70
	Power and Lighting, Communication	327.94	260.61	588.55	58.92	322.60	256.37	578.97	52.43	351.81	279.59	631.40	375.03	256.37	631.40
	Subtotal (ii)	**1393.47**	**1781.70**	**3175.17**	**223.57**	**1287.99**	**1694.66**	**2982.66**	**119.32**	**2078.27**	**1717.88**	**3796.15**	**2101.49**	**1694.66**	**3796.15**
(iii)	**Miscellaneous [5% on (i) and (ii)]**	**75.53**	**104.38**	**179.91**	**13.30**	**81.12**	**108.51**	**189.63**	**8.68**	**338.85**	**117.86**	**456.71**	**348.21**	**108.51**	**456.71**
	Total Capital Cost for Handling Activity (i + ii + iii)	**1586.12**	**2192.06**	**3778.18**	**279.23**	**1703.59**	**2278.61**	**3982.19**	**182.36**	**7115.88**	**2475.12**	**9591.00**	**7312.39**	**2278.61**	**9591.00**
(b)	**Capital Cost For Berthing Services**									**Main Berth**	**Barge Berth**	**Total**	**Main Berth**	**Barge Berth**	**Total**
(i)	Construction of berth			6130.03	796.20			5502.48	748.65	5513.35	737.78	6251.13	5502.48	748.65	6251.13
(ii)	Dredging cost			1407.51	46.92			1407.51	46.92	1407.51	46.92	1454.43	1407.51	46.92	1454.43
	Total Capital cost for berthing services			**7537.54**	**843.12**			**6909.99**	**795.56**	**6920.86**	**784.69**	**7705.55**	**6909.99**	**795.56**	**7705.55**
(c)	**Storage Activity**	Not envisaged in the original proposal								Capital cost for Storage Activity included under Capital Cost of Cargo Handling Activity for Bunker Fuel & POL.			Capital cost for Storage Activity included under Capital Cost of Cargo Handling Activity for Bunker Fuel & POL.		
(i)	**Civil Construction Cost**														
	Storage Yard					0.00	-	0.00	-						
	Tankages					4158.00	-	4158.00	-						
	Roads					35.80	-	35.80	-						
	Buildings, Water Supply, Sewage, etc.					280.07	-	280.07	-						
	Subtotal (i)					**4473.87**	-	**4473.87**	-						
(ii)	**Equipment Cost**														
	Pipelines					242.00	-	242.00	-						
	Fire Fighting Equipments					495.00	-	495.00	-						
	Power and Lighting, Communication					0.00	-	0.00	-						
	Subtotal (ii)					**737.00**	-	737.00	-						
(iii)	**Miscellaneous [5% on (i) and (ii)]**					**260.54**	**-**	**260.54**	**-**						
	Total Capital Cost for Storage Activity (i+ii+iii)					**5471.41**		**5471.41**							
(d)	**TOTAL CAPITAL COST (a + b + c)**	11315.72			1122.35	16363.59			977.93	17296.55			17296.55		
(e)	**TOTAL PROJECT CAPITAL COST**	12438.07				17341.52				17296.55			17296.55		

Sl. No.	Particulars	Estimates furnished by the CoPT											Estimates considered by TAMP		
		Original proposal dated 21 November 2010				Revised proposal dated 30 June 2010				Revised proposal 13 August 2010					
		Main Berth			Barge Berth	Main Berth			Barge Berth	Bunker Fuel & POL (Composite Handling)	LPG	Total	Bunker Fuel & POL (Composite Handling)	LPG	Total
		Bunker Fuel & POL	LPG	Total	Bunker Fuel & POL	Bunker Fuel & POL	LPG	Total	Bunker Fuel & POL						
III	**Operating Cost**														
(a)	**Cargo Handling Activity**														
(i)	Power Cost (2.4 lakh units per hectare @ Rs.6.17 / unit)	147.30	117.07	264.37	62.79	126.32	100.38	226.70	59.63	51.98	41.31	93.29	71.54	21.75	93.29
(ii)	Repair & Maintenance														
	Civil Assets (1% on capital cost)	1.17	3.06	4.23	0.42	3.34	4.75	8.10	0.54	46.99	6.39	53.38	48.63	4.75	53.38
	Mech. & Elec. items @ 2% of capital cost	27.87	35.63	63.50	4.47	25.76	33.89	59.65	2.39	41.57	34.36	75.92	42.03	33.89	75.92
(iii)	Insurance (1% on Gross fixed assets)	15.86	21.92	37.78	2.79	17.04	22.79	39.82	1.82	71.16	24.75	95.91	73.12	22.79	95.91
(iv)	Depreciation														
	Roads @ 1.63% p.a. (considered at 3.34% in TAMP estimates)	0.93	0.74	1.67	0.17	0.62	0.49	1.11	0.10	1.00	0.79	1.79	2.67	1.01	3.67
	Buildings @ 3.34% p.a.	2.00	8.70	10.70	1.07	9.91	14.87	24.78	1.61	16.01	19.73	35.74	20.87	14.87	35.74
	Unloading arms / fire fighting equpment @ 10.34%	42.16	108.88	151.04	10.96	38.42	105.44	143.86	1.00	86.12	105.44	191.56	86.12	105.44	191.56
	* Tanks, Pipelines & Power and Lighting, communication @ 13.91%	137.12	101.36	238.48	16.36	127.47	93.89	221.36	15.25	173.23	97.12	270.35	754.84	93.89	848.73
(v)	License Fee														
	Land Area	52.56	41.77	94.33	9.44	5.24	4.16	9.40	0.85	41.31	32.83	74.14	69.97	4.16	74.14
	Water Area	82.61	65.65	148.26	39.54	82.62	65.66	148.27	39.54	104.65	83.16	187.81	122.16	65.66	187.81
(vi)	Other Expenses towards salaries and overheads (5% on gross value of assets)	15.86	21.92	37.78	2.79	17.04	22.79	39.82	1.82	71.16	24.75	95.91	73.12	22.79	95.91
	Total Operating Cost	**525.44**	**526.70**	**1052.14**	**150.80**	**453.76**	**469.11**	**922.87**	**124.56**	**705.18**	**470.63**	**1175.81**	**1365.08**	**390.99**	**1756.07**
IV	**Revenue Requirement & proposed tariff**														
(a)	**HANDLING CHARGES**														
(i)	**Revenue Requirement**														
	(a) Total Operating Cost	525.44	526.70	1052.14	150.80	453.76	469.11	922.87	124.56	705.18	470.63	1175.81	1365.08	390.99	1756.07
	(b) Return on Capital Employed @ 16%	253.78	350.73	604.51	44.68	272.57	364.58	637.15	29.18	1138.54	396.02	1534.56	1169.98	364.58	1534.56
	(c) Total Revenue Requirement from cargo handling activity	**779.22**	**877.43**	**1656.65**	**195.48**	**726.34**	**833.69**	**1560.03**	**153.73**	**1843.72**	**866.65**	**2710.37**	**2535.06**	**755.57**	**3290.63**
(ii)	**Apportionment of Revenue Requirement**														
	(a) Handling Charges (95% of ARR)	779.22	877.43	1656.65	195.48	726.34	833.69	1560.03	153.73	1751.53	866.65	2618.18	2408.31	755.57	3163.87
	(b) Storage Charges (5% of ARR)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	92.19	0.00	92.19	126.75	0.00	126.75
	(c) Miscellaneous Charge (0% of ARR)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(d) Total Revenue Requirement from cargo handling activity	**779.22**	**877.43**	**1656.65**	**195.48**	**726.34**	**833.69**	**1560.03**	**153.73**	**1843.72**	**866.65**	**2710.37**	**2535.06**	**755.57**	**3290.63**
(iii)	**Proposed tariff (Rs. per tonne)**														
	Foreign cargo	**22.81**	**129.26**	-	**5.72**	**21.26**	**154.72**	-	**4.50**	⊕ **53.96**	**161.20**	-	**70.49**	**140.54**	
	Coastal Cargo	**Not prescribed**				**21.26**	**92.83**	-	**4.50**	**53.96**	**96.72**	-	**70.49**	**84.32**	
(b)	**BERTH HIRE CHARGES**									**Main Berth**	**Barge Berth**	**Total**	**Main Berth**	**Barge Berth**	**Total**
(i)	**Revenue Requirement**														
	(a) Repairs & Maintenance Charge (1% on captial cost for berth as per norm)	61.30			7.96	55.02			7.49	55.13	7.38	62.51	55.02	7.49	62.51
	(b) Maintenance dredging @ 420000 cu.m. for main berth & 10000 cu.m. for barge berth at Rs.60 per cu.m.	252.00			6.00	**252.00**			**6.00**	**252.00**	**6.00**	258.00	**252.00**	**6.00**	258.00
	(c) Depreciation (@ 3.34%)	251.75			28.16	230.79			26.57	231.16	26.21	257.37	230.79	26.57	257.37
	(d) Insurance (1% on cost of construction of berth)	61.30			7.96	55.02			7.49	55.13	7.38	62.51	55.02	7.49	62.51
	Subtotal (i)	**626.35**			**50.08**	**592.84**			**47.54**	**593.42**	**46.96**	640.39	**592.84**	**47.54**	**640.39**
(ii)	Return on Capital Employed @ 16%	**1206.01**			**134.90**	**1105.60**			**127.29**	**1107.34**	**125.55**	1232.89	**1105.60**	**127.29**	**1232.89**
(iii)	**Total Revenue Requirement from Berthing services (i + ii)**	**1832.36**			**184.98**	**1698.44**			**174.84**	**1700.76**	**172.52**	1873.28	**1698.44**	**174.84**	**1873.28**
(iv)	**Berth hire Charge (Vessels / Barges)**														
	Rate per GRT per hour in Rs. - Foreign	**1.23**			**2.32**	**1.43**			**2.19**	**1.42**	**1.94**		**1.421**	**---**	
	Rate per GRT per hour in Rs. - Coastal	**Not prescribed**				**0.86**			**2.19**	**0.85**	**1.94**		**0.852**	**1.968**	

Sl. No.	Particulars	Estimates furnished by the CoPT											Estimates considered by TAMP		
		Original proposal dated 21 November 2010				Revised proposal dated 30 June 2010				Revised proposal 13 August 2010					
		Main Berth			Barge Berth	Main Berth			Barge Berth						
		Bunker Fuel & POL	LPG	Total	Bunker Fuel & POL	Bunker Fuel & POL	LPG	Total	Bunker Fuel & POL	Bunker Fuel & POL (Composite Handling)	LPG	Total	Bunker Fuel & POL (Composite Handling)	LPG	Total
(c)	**STORAGE CHARGES**														
(i)	**Operating Cost**														
a.	Power Cost (2.4 lakh units per hectare @ Rs.6.17 / unit)					31.89	-	31.89							
b.	Repair & Maintenance														
	Civil Assets (1% on capital cost)					44.74	-	44.74							
	Mechanical & Electrical items @ 2% of capital cost					14.74	-	14.74							
c.	Insurance (1% on Gross fixed assets)					54.71	-	54.71							
d.	Depreciation														
	Roads @ 1.63% p.a.					0.58	-	0.58							
	Buildings @ 3.34% p.a.					9.35	-	9.35							
	Fire fighting equipment @10.34%					51.18		51.18							
	Tankage, Pipelines & Power and Lighting, communication @ 13.91%					612.04	-	612.04		In the revised proposal, considered as a part of Composite Handling service.			In the revised proposal, considered as a part of Composite Handling service.		
e.	License Fee														
	Land Area	Not envisaged in the original proposal				63.89	-	63.89							
	Water Area					0.00	-	0.00							
f.	Other Expenses towards salaries and overheads (5% on gross value of assets)					54.71	-	54.71							
	Total Operating Cost (a to f)					**937.84**		**937.84**							
(ii)	Return on Capital Employed @ 16%					**875.43**		**875.43**							
(iii)	**Total Revenue Requirement from Storage Activity (i + ii)**					**1813.26**		**1813.26**							
(iv)	**Storage Charges (Rs. per tonne per day)**														
	% of cargo attracting storage charges						-			25%	-		25%	-	
	Cargo attracting storage charges (tons)						-			854180.90	-		854180.75	-	
	Revenue Requirement (Rs. in lakhs)						-			92.19	-		126.75	-	
	Average storage days beyond free period of 3 days						-			2	-		2	-	
	Storage Charge per tonne per day (in Rs.)					**18.77**	-				-			-	
	First two days (beyond 3 days free period)						-			**5.40**	-		**7.42**	-	
	Next two days						-			**8.09**	-		**11.13**	-	
	5th day onwards						-			**10.79**	-		**14.84**	-	

⊕ The Handling Charges derived by COPT does not include depreciation on storage tanks amounting to Rs.578 lakhs p.a. Considering the impact of this, the handling charge would have been Rs.70.89 per ton.

* The estimate of COPT does not include depreciation on storage tanks.

Concessional rate for Coastal Cargo handling - LPG

Sl. No.	Particulars	Considered by COPT - 30.6.2010	Considered by COPT - 13.8.2010	Considered by TAMP - 16.8.2010
i.	Total capacity of LPG (tonnes)	678819	678819	678819
ii.	Share of coastal cargo for LPG	52%	52%	52%
iii.	Capacity of coastal cargo (tonnes)	350000	352985.88	352985.88
iv.	Concessional rate for coastal cargo	60%	60%	60%
v.	Adjusted coastal capacity (tonnes)	210000	211791.528	211791.528
vi.	Capacity of foreign cargo (tonnes)	328819	325833.12	325833.12
vii.	Total adjusted capacity (tonnes)	538819	537624.648	537624.648
viii.	Total Revenue Requirement (Rs. in lakhs)	833.69	866.65	755.57
ix.	**Handling Charges for foreign cargo (in Rs. per tonne)**	**154.72**	**161.20**	**140.54**
x.	**Handling Charges for coastal LPG (in Rs. per tonne)**	**92.83**	**96.72**	**84.32**

Annex - II

FORMULATION OF UPFRONT TARIFF FOR MULTI USER LIQUID TERMINAL AT PUTHUVYPEEN SEZ IN COCHIN PORT TRUST

BERTH HIRE COMPUTATION

Furnished by CoPT vide proposal dated 21 November 2009

Sl. No.	Particulars	Unit	Bunker Fuel & POL	LPG	Total	Barges
i.	Average GRT	Tonnes	29250	18180		1300
ii.	No. of berth hours for the cargo	hours	3416.72	2715.28	6132	6132
iii.	GRT hours	hours	99939154.98	49363731.37	149302886.35	7971600
iv.	Revenue Requirement	Rs. in lakhs			**1832.36**	**184.98**
	Berth hire charges	Re per GRT per hour or part thereof			**1.23**	**2.32**

Furnished by CoPT vide proposal dated 30 June 2010

Sl. No.	Particulars	Unit	Bunker Fuel & POL	LPG	Total	Barges
i.	Average GRT	Tonnes	29250	18180		1300
ii.	No. of berth hours for the cargo	hours	3416.72	2715.28	6132	6132
iii.	GRT hours	hours	99939154.98	49363731.37	149302886.35	7971600
iv.	Share of coastal vessels		50%	52%		
v.	Revenue Requirement	Rs. in lakhs			**1698.44**	**174.84**
	Berth hire charges - foreign	Re per GRT per hour or part thereof			**1.43**	**2.19**
	Berth hire charges - coastal	Re per GRT per hour or part thereof			**0.86**	**2.19**

Furnished by CoPT vide proposal dated 13th Aug 2010

Sl. No.	Particulars	Unit	Bunker Fuel & POL	LPG	Total	Barges
i.	Average GRT	Tonnes	29250	18180		1300
ii.	Average Parcel size	Tonnes	25000	7500		1400
iii.	Number of Ships reqd		137	91		2441
iv.	Average time per ship	days	1.04	1.25	2.29	0.12
v.	Number of hours per ship		25.00	30.00	55.00	2.80
vi.	GRT hours	hours	100181250	49631400	149812650.00	8885240
vii.	Share of coastal vessels		50%	52%		50%
viii.	GRT hours for coastal vessels		50090625	25589949.84	75680574.84	4442620
ix.	GRT hours for foreign vessels		50090625	24041450.16	74132075.16	4442620
x.	Revenue Requirement	Rs. in lakhs			1700.76	172.52
xi.	**Berth hire charges - foreign**	Re per GRT per hour or part thereof			1.42	1.94
xii.	**Berth hire charges - coastal**	Re per GRT per hour or part thereof			0.85	1.94

Estimates considered by TAMP

Sl. No.	Particulars	Unit	Bunker Fuel & POL	LPG	Total	Barges
i.	Average GRT	Tonnes	29250	18180		1300
ii.	(a) Handling Rate for Bunker fuel/ LPG	Tonnes/ day	24000	6000		-
	(b) Handling Rate for barges	Tonnes/ hour	-	-		500
iii.	Average Parcel size	Tonnes	25000	7500		1400
iv.	Number of Ships reqd		137	91		2441
v.	Average time per ship	days	1.04	1.25	2.29	-
vi.	Number of hours per ship / barge		25.00	30.00	55.00	2.80
vii.	GRT hours	hours	100181250	49631400	149812650.00	8885240
viii.	Share of coastal vessels		50%	52%		100%
ix.	GRT hours for coastal vessels		50090625	25589949.84	75680575	8885240
x.	GRT hours for foreign vessels		50090625	24041450.16	74132075	0
xi.	Revenue Requirement	Rs. in lakhs			1698.44	174.84
xii.	**Berth hire charges - foreign**	Re per GRT per hour or part thereof			1.421	---
xiii.	**Berth hire charges - coastal**	Re per GRT per hour or part thereof			0.852	1.968

	Working for foreign / coastal vessel rate at Main berth			
	74132075 X + 75680575 * 0.6 X =		1698.44	
	74132075 X + 45408345 X =		1698.44	
	X = Foreign going vessel rate		1.421	
	Coastal vessel rate = 0.6 X		0.852	

ANNEX - III

COCHIN PORT TRUST

UPFRONT TARIFF SCHEDULE FOR MULTI-USER LIQUID TERMINAL

CHAPTER - I

1.1. Definitions - General

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

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

(ii). **"Day"** shall mean the period of 24 hours starting from 06.00 hrs. of a day and ending at 06.00 hrs. on the following day.

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

1.2. General Terms & Conditions

(i). The status of the vessel, as borne out by its certification by the Customs or the Director General of Shipping, is the relevant factor to decide whether vessel is '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.

(ii). (a). The vessel related charges for all coastal vessels should not exceed 60% of the corresponding charges for other vessels.

(b). The cargo related charges for all coastal cargo other than thermal coal, crude including POL, iron ore and iron ore pellets should not exceed 60% of the normal cargo related charges.

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

(d). Cargo from a foreign port, which reaches an Indian Port 'A' for subsequent transhipment to Indian Port 'B' will be, levied the concessional charges relevant for its coastal voyage. In other words, cargo from / to Indian ports carried by vessel 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 terminal operator shall pay penal interest on delayed refunds.

(b). The rate of penal interest will be 2% above the Prime Lending Rate of the State Bank of India.

(c). The delay 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 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 cases where payment is to be made before availing the services where payment of charges in advance is prescribed as a condition in this Scale of Rates.

(iv). (a). For the purpose of calculating the dues the unit by weight shall be 1 tonne or 1,000 kilograms, the unit by volume measurement shall be 1 cubic metre and the unit by capacity measurement for liquids in bulk shall be 1,000 litres.

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

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

(vi). The minimum charge recovered in any one application / bill shall be rupees hundred only (Rs.100).

(vii). No claim for refund shall be entertained unless the amount refundable is Rs.100/- or more. Likewise, terminal operator shall not raise any supplementary or under charge bills, if the amount due to the operator is less than Rs.100/-.

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

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

(c). The operator should notify the public such lower rates and/ or rationalisation of the conditionalities governing the application of such rates and continue to notify the public any further charges in such lower rates and/or in the conditionalities governing the application of such rates provided the new rates fixed shall not exceed the rate notified by the TAMP.

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

CHAPTER - II

VESSEL RELATED CHARGES

2. Schedule of Berth Hire Charges

Sl. No.	Classification	Rate in Rs. per GRT per hour or part thereof
(i).	Vessels at Main Berth:	
	(a). Foreign going vessel	1.421
	(b). Coastal vessel	0.852
(ii).	Barges at Barge Loading Berth	1.968

Notes:

(i). Berth Hire Charges shall be collected for the period from berthing to un-berthing of the vessels.

(ii). (a). Berth hire shall stop 4 hours after the time of vessel signalling its readiness to sail.

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

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

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

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

(iv). No berth hire shall be levied for the period the vessel is compelled to idle at berth operated by the terminal operator for continuous one hour or more due to non-availability / breakdown of equipment or power failure or any other reasons attributable to the terminal operator.

CHAPTER - III

CARGO RELATED CHARGES

3. Schedule of Composite Handling Charges:

(**in Rs. per tonne**)

Sl. No.	Description of commodity	Foreign-going vessels	Coastal vessels
(i).	Bunker Fuel and other POL Cargo	70.49	70.49
(ii).	LPG	140.54	84.32

Notes:

(i). The handling charges for Bunker fuel and other POL is for the composite service of unloading of cargo from a vessel / tanker at the main berth, transportation through pipelines to storage tank via exchange pit, transfer through pipelines from exchange pit to storage tanks, free storage for 3 days in tanks, transfer from storage tank to the barge loading berth through pipelines and exchange pit, loading cargo onto barges at barge berth, wharfage and all other miscellaneous services provided by the operator which are not specifically covered by any other charge in this Scale of Rates.

(ii). The handling charge for LPG is for a composite service of unloading at main berth, wharfage, other ancillary services and all other miscellaneous services which are not specifically covered by any other charge in this Scale of Rates provided by the operator.

4. STORAGE CHARGES ON BUNKER FUEL / OTHER POL CARGO:

(A). Free period: 3 days free

(B). Storage charges on Bunker fuel / other POL cargo after free period:

Description	Rate in Rs. per tonne per day
First two days (beyond 3 days free period)	7.42
Next two days	11.13
5th day onwards	14.84

Notes:

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

(ii). Free period shall be reckoned from the day following the date of last cargo discharge from the vessel.

(iii). Storage charge on cargo shall not accrue for the period when the terminal operator is not in a position to deliver / ship the cargo when requested by the user due to reasons attributable to the terminal operator.

5. GENERAL NOTE TO SCHEDULE (2) to (4) ABOVE:

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

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

F. No.TAMP/58/2009 - COPT - Proposal from the Cochin Port Trust for fixation of upfront tariff for development of Multi-User Liquid Terminal at the Puthuvypeen SEZ on Design, Build, Finance, Operate and Transfer basis.

1. A summary of comments received from concerned users / user organisations / shortlisted applicants and prospective users and reply of Cochin Port Trust (COPT) thereon are tabulated below:

Sl. No.	Comments of users / user organisations, short listed applicants and prospective users	Comments of COPT
(1).	**Indian Oil Corporation Limited**	
(i).	The MULT being proposed by Cochin Port Trust is predominantly a bunker berthing facility which can handle other liquid products as well. Indian Oil plans to utilize the berth for unloading 0.6 MMTPA of LPG constituents comprising of Propane and Butane. The cargo mix of propane and butane will be in the overall ratio of 80:20. We plan to install best possible technologies to ensure that the above liquids are unloaded fast and the berth is free for other users / products.	No specific comments on this point.
(ii).	Capacity of Main Berth: (a). The port has considered the steady cargo share to be achieved by 2023-24 as per the feasibility report. (b). The occupancy of the berth for LPG is not commensurate with the volume of cargo in comparison with Bunker and other POL products. While 3.02 MMTPA of bunker fuels occupy 55.72% of the berth days a mere 0.6 MMTPA of LPG is seen to occupy 44.28% of the berth days. (c). The above calculation is based on an assumed flow rate of 250 MT / Hr for LPG which is the flow rate attainable by transfer systems installed in old generation ships. However proven technologies are now available in the market by which higher flow rates can be attained independent of the facilities available in the ships. (d). A transfer system comprising of booster pumps situated in receiving points duly assisted by suitably positioned sea water based plate type heat exchangers can easily attain a flow rate of 600 MT / Hr for butane and a flow rate of 200 MT/Hr for propane. (e). Thus for a cargo mix of Butane and Propane in the ratio 80:20, the net unloading rate will be <u>0.8 x 600 MT/Hr (Butane) + 0.2 x 200 MT/Hr (Propane) = 520 MT/Hr</u>. (f). We are submitting a need for upward revision in the Net LPG unloading rate at Cochin considering the fact that we are installing the above transfer system at considerable cost for improving the efficiency of unloading operations of LPG in MULT there by improving the overall availability of berth for other products and users.	At the outset, the rationale for investing in superior technology for higher handling rates for LPG is questionable. As per the traffic forecast in the feasibility study – the total traffic expected by the financial year 2024, (which would be around half way into the concession if the concession agreement is signed in FY 2011) is 3.62 MMTPA. Even with the existing handling rates this works out to be just 88.3% of the optimal capacity. Moreover IOCL has not even committed to giving any minimum traffic guarantees for this project. Investments in superior technologies should be taken up only if the terminal is constrained on the handling capacities. As per the project structure – the concessionaire will be making all investments except the unloading arms for handling LPG at the terminal and is compensated by the handling charges for LPG (apart from berth hire). If IOCL is planning to invest in a technology that is giving a handling rate much more than what is required, this will amount to a scenario where IOCL's capital investment in the project will be high which will help IOCL reduce its handling rate, and create capacity that is not required in the near future. Had the option be left to the developer to decide the technology for handling LPG – he would have invested in

(g). The LPG unloading rate may be revised upward from **250 MT/Hr to 520 MT/Hr** giving due consideration to the technological advancement made in this area and the high efficiency achieved in berth operations.

Norm for handling rate

Cargo	Norm for handling rate	Handling rate / day	Proposed handling rate	Proposed handling rate per day
	MT/Hr	MT	MT/Hr	MT/Day
Bunker and other POL	1000	24000	1000	24000
LPG	250	6000	520	12480

Based on the above submission, the revised table will be as follows:

Revised Table 4: Traffic Projection at Steady State

Cargo	Total Traffic in Million Tonnes	Share of Traffic	Share of Berth days	Revised share of berth days*
Bunker and other POL	3.02	83.43%	55.72%	72.36%
LPG	0.6	16.57%	44.28%	27.64%
Total	3.62	100%	100%	100%

(h). Efficiency improvement in LPG unloading operations will also impact on the optimal capacity of the berth. In fact the projected optimal capacity of 4.10 MMT of the berth will get revised to 5.32 MMT as shown below:

Revised Optimal capacity for each cargo

Cargo	Optimal Capacity proposed by COPT (in tonnes)	Optimal Capacity proposed by IOCL (in Tonnes)
Bunker Fuel & Other POL	3416723	4436829
LPG	678813	881489

technologies where the handling rates would be just sufficient to meet the demand. To decide between these conflicting interests it is advisable that we go by the guidelines given by TAMP which is followed by COPT in calculating the tariff for the project.

There is one more operational issue we need to be cognizant of in this case. The upfront tariff is being set for the entire period of the concession. If the tariff is fixed based on a handling rate of 520 MT/hr and if the actual handling rates achieved is less than that – either because of issues with the technology or because of change in the cargo mix (say proportion of propane increasing) the tariffs can neither be revised nor does the operator have any power to claim damages from IOCL (contractually).

Hence it is submitted that the handling rates for LPG mentioned in the TAMP guidelines may be followed for the fixation of tariff.

(iii). **Estimation of capital cost**:

Observation:
The principle of direct allocation of capital cost to a cargo if that is exclusively used for that cargo is just and fair and this principle is agreed in toto. We also fully in unison with the principle that wherever capital cost is shared commonly, the same has to be allocated to different cargo based on berth share days. However, we find that the capital cost allocation for fire fighting facilities for MULT, projected by Cochin Port Trust, is not in conformance to the above principles.

Comments:

(a). Cochin Port Trust has allocated the entire capital cost of fire fighting systems including that for foam to LPG alone.

(b). They have also allocated the entire cost of buildings, water supply and sewerage to LPG.

(a). Regarding allocation of capital cost of fire fighting systems to LPG:

The flash points of key cargo in each category is presented below:

Cargo	Flash Point
Propane (~ 20% of LPG cargo)	-104° C
Butane (~ 80% of LPG cargo)	-40° C
Marine Fuel Oil (~ 93% of bunker fuel and other POL cargo – as seen in other bunkering destinations like – pls refer section 4.18 of feasibility report)	65.5° C

The classification of various liquids based on flammability / combustibility across various standards is presented below:

Standard Flash Point	< (-7°C)	(-7°C to 38°C)	38°C to 60°C	60°C to 66°C	66°C to 93°C
OSHA	Flammable	Flammable	Combustible	Combustible	Combustible
ANSI	Extremely Flammable	Flammable	Flammable (< 60°C)	Combustible	Combustible
NPFA 30	Class I	Class I	Class II	Class III	Class III
CPSC	Extremely Flammable	Flammable	Combustible	Combustible	

(c). The cost of pipelines for POL/Bunker under sl. no. 16,17,18,19,20,21 and 24 in table 3 is seen loaded as common costs where as they are exclusive for bunkers/ POL and are to be directly loaded to it.

The above allocation of costs is against natural justice, unfair and cannot be justified. It is only common knowledge that all POL products and bunker fuels are highly inflammable in nature and for any POL/Bunker jetty firefighting facilities are to be installed whether LPG unloading facilities are installed there or not. For example, the Cochin Oil Terminal operated by Cochin Port Trust has firefighting facilities though it does not have any LPG unloading facility. So it is an established fact that water based firefighting facilities are common for LPG, bunker and POL products and has to be allocated based on berth share days. However, if any firefighting arrangement is exclusive to any one cargo it has to be allocated to that cargo directly. The foam based fire fighting facility can be used only for Bunker and POL products and LPG fire cannot be fought with foam. However it is seen that the cost of foam system is also loaded to LPG.

(d). Similarly, the buildings water supply and sewerage will be used by all users.

The pipeline costs amounting to Rs.0.69 crores are loaded directly to POL / Bunker, while others are shared based on berth days. The same allocation is retained by us in our proposal. It may also be noted that LPG piping cost is not part of the capital cost of the project at all and it is born by IOCL separately.

Submission

(a). **Estimation of capital costs**:
We submit that the capital cost for buildings etc. and that for firefighting equipments excluding that for foam, be taken as common costs whereas that for foam may be allocated directly POL/Bunker. The pipeline costs also may be apportioned as per berth share days. The revised allocation for **POL/Bunker will be Rs.29.57 crores and that for LPG will be Rs.8.23 crores** as shown in the table below:

(**Rs. in crores**)

Description	Total Allocation	Allocation proposed by COPT		Revised allocation proposed by IOCL	
		Bunker/ POL	LPG	Bunker/ POL	LPG
Civil construction					
Roads	1.03	0.57	0.46	0.75	0.28
Buildings, water supply & sewerage	3.21	0.60	2.61	2.32	0.89
Sub Total	**4.24**	**1.18**	**3.06**	**3.07**	**1.17**
Equipment					
Marine Loading/ hoses	4.08	4.08	0	4.08	0
Fire Fighting equipment	10.53	0	10.53	8.52	2.01
Pipelines	11.26	6.58	4.68	8.34	2.92
Power & Lighting	5.89	3.28	2.61	4.26	1.63
Sub Total	**31.76**	**13.94**	**17.82**	**25.20**	**6.56**
Miscellaneous	**1.8**	**0.76**	**1.04**	**1.30**	**0.50**
Total	**37.80**	**15.87**	**21.93**	**29.57**	**8.23**

The fire protection systems have to be designed to incorporate the requirements as mentioned under OISD requirements for handling LPG cargo which are more stringent. Hence LPG cargo is expected to drive significant part of the capital expenditure towards fire fighting systems for the project which is difficult to quantify separately. It would be unfair to allocate the capital expenditure towards fire fighting between LPG and Bunker fuel in the same proportion as share of berth days and this approach was followed.

(b). The point made by the IOC that the entire cost of buildings, water supply and sewerage is allocated to LPG is an incorrect statement. As mentioned under Table 7 of the proposal "For buildings, water supply, sewerage, etc. the cost of development of pump house (for Main Berth) of Rs.2.13 crores is allocated to LPG, while the rest of the cost is apportioned across the two cargo on the basis of share of berth days for the particular cargo". The cost directly allocated to LPG cargo includes the cost for fire pump platform and the pump house which is part of fire-fighting system.

(c). Regarding the IOCL's point that the cost of pipelines for POL/Bunker under sl. no. 16,17,18,19,20,21 and 24 in table 3 is seen loaded as common costs where as they are exclusive for bunkers / POL and are to be directly loaded to it, the following is submitted:

This is an incorrect statement. Please refer Table 7 of the proposed in which it can be seen that these costs are allocated only to the bunker / POL cargo.

(b). **Estimation of operating cost for main berth**:
The operating cost for the main berth may be revised based on the **revised berth share days** proposed by IOCL in Table 4, with the same percentage allocations suggested by COPT. The revised allocation arrived at is highlighted in the table below. **The revised allocation for LPG** is **Rs.2.587 crores** in place of Rs.5.265 crores and that for **Bunker/POL** is **Rs.7.937 crores** in place of Rs.5.26 crores.

<u>Allocation of operating cost</u>

(**Rs. in crores**)

Group	Norm/ Cost	Calculation for total	Operating cost allocation proposed by COPT			Operating cost allocation proposed by IOCL		
			Total	Bunker & POL	LPG	Total	Bunker & POL	LPG
Power	2.4 lakh unit/ annum/ hectare	4.3632	2.640	1.471	1.169	2.640	1.910	0.730
R&M Civil	1% of civil assets	1% x 4.24	0.042	0.012	0.031	0.042	0.031	0.012
R&M Mech	2% cost of Equipments	2% x 31.76	0.635	0.279	0.356	0.635	0.504	0.131
Insurance	1% Gross Value of Assets	1% x 37.8	0.378	0.159	0.219	0.378	0.296	0.082
Depreciation								
(a). Buildings	3.34%	3.34% x 3.21	0.107	0.020	0.087	0.107	0.078	0.030
(b). Roads	1.63%	1.63% x 1.03	0.017	0.009	0.007	0.017	0.012	0.005
(c). Machinery	10.34%	10.34% x 14.61	1.511	0.422	1.089	1.511	1.303	0.208
(d). Pipeline, Power, etc.	13.91%	13.91% x 17.15	2.386	1.372	1.014	2.386	1.753	0.633
Licence fee	Rs.12 lakhs/ acre for land & Rs.4 lakhs/ acre for water	(3.18 x 2.47x12 +15x2.47 X4)/100	2.430	1.354	1.076	2.430	1.758	0.672
Other Expenses	1% of fixed assets value	1% x 37.8	0.378	0.161	0.217	0.378	0.293	0.085
TOTAL			**10.52**	**5.259**	**5.265**	**10.524**	**7.937**	**2.587**

(iv).

<u>The revenue requirement for main berth</u>
The total revenue requirement for POL/Bunker cargo suggested by COPT at Rs.7.8 crores is based on the unfair / inaccurate asset value and operating cost projections for POL/Bunker fuels. As the asset value and operating cost requirements for POL/Bunker cargo is higher the revenue requirement also changes.

<u>Submission</u>:
It is submitted that the revenue requirement for handling POL/Bunker cargo may be revised based on realistic projections based on reliable data **to Rs.12.67 crores** from Rs.7.8 crores.

<u>Table 10 - Revenue Requirement for Handling POL / Bunker Cargo</u>

(**Rs. in crores**)

Item	Asset value proposed by COPT	Revenue requirement proposed by COPT	Asset value proposed by IOCL	Revenue requirement proposed by IOCL
Operating Cost		5.26		7.94
ROCE @ 16%	15.87	2.54	29.57	4.73
Total		**7.80**		**12.67**

No separate comments on this point furnished.

(v).

The total revenue requirement from handling LPG cargo suggested by COPT at Rs.8.77 crores in table 11 is based on highly inflated asset value and operating cost projections. As the actual asset value and operating cost requirements for LPG cargo is much lower, the revenue requirement also changes downward.

Submission: It is submitted that the revenue requirement for handling LPG cargo may be revised based on realistic projections based on reliable data to Rs.3.9 crores from Rs.8.77 crores.

Table 11 - Revenue Requirement for handling LPG Cargo in main berth

(**Rs. in crores**)

Item	Asset value proposed by COPT	Revenue requirement proposed by COPT	Asset value proposed by IOCL	Revised revenue requirement
Operating Cost		5.27		2.59
ROCE @ 16%	21.93	3.51	**8.23**	1.32
Total		**8.77**		**3.90**

No separate comments on this point furnished.

(vi).

Tariff for handling each type of cargo:
As per TAMP guidelines the revenue requirement mentioned under 4.1.3. shall be met by the optimal traffic for each type of cargoes. Since both the optimal traffic flow and the revenue requirements for the cargoes suggested by COPT is to be revised based on realistic projections supported by reliable data the tariff for handling cargo also need to undergo corresponding revisions. The revised tariff for bunker fuel / POL is Rs.28.55/MT whereas that for LPG is Rs.44.29.

Table 12 - Handling charges for each cargo

Type of Cargo	Proposed revenue requirement (Rs. Cr.) - COPT	Proposed optimal traffic (MT)	Proposed handling charge by COPT (Rs/MT)	Revenue requirement as proposed by IOCL (Rs. Cr.)	Optimal traffic as proposed by IOCL (MT)	Handling charge proposed by IOCL (Rs./MT)
Bunker & POL	7.8	3416723	**22.81**	12.67	4413204	**28.55**
LPG	8.77	678813	**129.26**	3.90	876796	**44.29**

Submission: The tariff for handling cargo may be revised based on the actual revenue requirements and the revised optimal traffic for each cargo based on the data submitted. As stated earlier, under CI Transfer systems are available in market capable of transferring 520 MT/Hr of LPG and by installing the same the overall efficiency of unloading operations in MULT can be enhanced. By doing so the optimal traffic in the main berth increases from 4.10 MMT per annum to 5.32 MMT. The revenue requirements of each cargo also need to relooked based on the direct or indirect capital cost and operational cost implications on each of the products. The revised revenue requirement for bunker / POL cargo is Rs.12.97 crores and that for LPG is Rs.3.9 crores.

It is submitted that handling rate for LPG may be revised as Rs.44.29/MT and that for POL/bunker may be taken as Rs.28.55/MT.

No separate comments furnished.

<table>
<tr>
<td>(vii).</td>
<td>Formulation of upfront tariff for berth hire:
For Bunker fuel / POL the tabulated berth days proposed by COPT and revised one proposed by IOCL as derived in Table 4 is shown below:
<table>
<tr><th></th><th>Proposed by COPT</th><th>Revised by IOCL</th></tr>
<tr><td>Berth days</td><td>142.36</td><td>184.87</td></tr>
<tr><td>Berth hours</td><td>3416.75</td><td>4436.83</td></tr>
<tr><td>Avg. GRT</td><td>29250.00</td><td>29250.00</td></tr>
</table>

Similarly that for LPG is tabulated below:
<table>
<tr><th></th><th>Proposed by COPT</th><th>Revised by IOCL</th></tr>
<tr><td>Berth days</td><td>113.14</td><td>70.63</td></tr>
<tr><td>Berth hours</td><td>2715.25</td><td>1695.17</td></tr>
<tr><td>Avg. GRT</td><td>18180.00</td><td>18180.00</td></tr>
</table>

The total GRT Hrs. as proposed by COPT is 3416.75 x 29250 + 2715.25 x 18180 = 149,302, 886.35

The berth hire per GRT/HR proposed by COPT = 18,32,000,00/149,302,886.35
= 1.23 Rs. per GRT per Hr.

The total GRT Hrs. as proposed by IOCL is 4436.83 x 29250 + 1695.17 x 18180 = 160595452.6

The berth hire per GRT/HR proposed by IOCL = 18,32,000,00/ 160595452.6
= 1.14 Rs. per GRT per Hr.

<u>Submission</u>: It is submitted that the berth hire per GRT/Hr may be revised to Rs.1.14 per GRT/Hr in consideration to the revised berth share days proposed by IOCL.</td>
<td>No comments furnished.</td>
</tr>
<tr>
<td>(viii).</td>
<td><u>Summary of Submissions</u>
(a). The proposed tariff for cargo for MULT main berth submitted by COPT are not fully based on facts and on the contrary, are partly based on non sustainable assumptions as pointed out by us. The basic assumptions made by COPT are to be revisited and corrected to get correct and unbiased data to be used as a basis for making the calculations.

(b). The principle, that cost of facilities enjoyed by all cargoes are to be apportioned on the basis of berth share days, and that the cost of that availed by any one type of cargo is to be loaded directly to that cargo alone, is to be strictly adhered to without any bias.

(c). The summary of our submissions which form the basis for fixing of upfront tariff are tabulated as below:
<table>
<tr><th>Basic Parameters</th><th>Bunker Fuel/ POL</th><th>LPG</th></tr>
<tr><td>Norm for handling rate (MT/Day)</td><td>1,000</td><td>520</td></tr>
<tr><td>Share of Berth Days (%age)</td><td>72.36</td><td>27.64</td></tr>
<tr><td>Optimal Capacity (MT)</td><td>44,13,204</td><td>8,76,796</td></tr>
<tr><td>Capital Cost Allocation (in Rs. crores)</td><td>29.57</td><td>8.23</td></tr>
<tr><td>Operating Cost Allocation (in Rs. crores)</td><td>7.93</td><td>2.58</td></tr>
<tr><td>Revenue Requirement (in Rs. crores)</td><td>12.67</td><td>3.9</td></tr>
</table>
</td>
<td></td>
</tr>
</table>

<table>
<tr><td></td><td>(d). <u>Summary of revised upfront tariff for cargo handling in main berth proposed by the IOCL</u>
<table><tr><th>Cargo</th><th>Tariff</th></tr><tr><td>(i).Handling charges:</td><td></td></tr><tr><td>(a). Bunker and POL</td><td>Rs.28.7 per ton</td></tr><tr><td>(b). LPG</td><td>Rs.44.53 per ton</td></tr><tr><td>(ii). Berth hire charges</td><td>Rs.1.14 per GRT per hr.</td></tr></table>
(e). We have no specific requests to make for barge loading berth.</td><td></td></tr>
<tr><td>(2).</td><td>M/s.IOT Infrastructure & Energy Services Limited</td><td></td></tr>
<tr><td>(i).</td><td>Project Cost:
The proposal estimates the project at a value of Rs.122.45 crores. We feel that this project estimate is under valued as the project estimates have been done in 2008 at a time when prices of all commodities like steel, cement, etc. were very low. Considering the time when the project would be executed and taking into account the high inflation and price rise of items like steel, cement, etc., the capital cost for the project would be substantively higher than the estimates.</td><td>The Indian Ports Association (IPA) had conducted the Project Feasibility Study and submitted the report in September 2008, during which time the prices of the raw materials were high. While submitting the proposal to TAMP on 24 November 2009 for the upfront tariff for MULT Project. COPT had reviewed the prices shown in the report with that of the current market price before the same was included in the proposal.
It has subsequently vide letter dated 30 June 2010 confirmed that the estimates of civil and equipments furnished in the revised proposal dated 30 June 2010 reflect the prevailing market rates.</td></tr>
<tr><td>(ii).</td><td>Capacity of Main Berth:
The optimal capacity of the berth is assessed at 4.10 million tonnes per annum. While the traffic projection estimate that the berth would achieve / handle volumes of 3.62 million tonnes in the year 2023-2024. Further more, for the purpose of rate calculation the optimal capacity of 3.4 million tonnes for POL products and 0.6 millions tonnes for LPG has been used to calculate the rate. Traffic projections show that POL product volumes even in 2023-24 would only be 3.02 million tonnes. The basis of using the 100% of optimal volume handling capacity for calculating the rates is incorrect and puts the successful bidder at a disadvantage from the very beginning. As 100% optimal utilisation volumes would not be possible to be attained from day 1 of operations. Hence the probability of the bidder recovering his money along with the expected returns over the life of the concession would be unviable.</td><td>The guidelines issued by TAMP for fixing upfront tariff covers the provisions for estimating the optimal capacity of the terminal. COPT has gone by these guidelines to estimate the optimal capacity of the terminal.</td></tr>
<tr><td>(iii).</td><td>Cargo Capacity for POL and Bunker Fuel:
The value estimates taken into consideration for LPG is fixed and well defined based upon requirements of IOCL. On the other hand the basis of the volume estimates taken for the Bunker Fuel and POL products is unfounded. As per the current product flows and market conditions only bunker fuel handling could be envisaged at this berth / jetty. Possibility of handling any other POL product would be very far fetched. Considering that other than LPG the only other possible product being Bunker fuel, the projects for the volumes are very optimistic. Hence would suggest that the port have a re-look at the numbers and projections.</td><td>The guidelines issued for fixing for upfront tariff covers the provisions for estimating the optimal capacity of the terminal. COPT has gone by these guidelines to estimate the optimal capacity of the terminal. The only reference to the IPA report is to make an assessment of the share of each type of cargo. TAMP guidelines specify that optimal capacity has to be fixed based on 70% utilization for all years and it is not linked to actual traffic / demand that is achievable at the terminal.</td></tr>
</table>

(iv).	Operating Costs: The operating cost projections for both the main berth and the barge jetty in the proposal have not taken into consideration the manpower cost. Cost of Manpower deployment for operations at the jetty would be a considerable amount, as jetty operation for vessel / barge handling is very labour intensive. Cost of salaries for labour and other manpower deployed needs to be considered into the operating cost.	It is estimated as per the norms given in the upfront tariff guidelines.
(3).	**M/s.Bharat Petroleum Corporation Limited**	
(i).	It is understood that the capital costs and operating costs given in the proposal are only indicative and therefore the tariff workings are also indicative. Since cost estimates are not based on detailed engineering, capital cost cannot be accurately estimated at this stage. The upfront tariff is fixed in the proposal based on the capital costs estimated in the IPA Feasibility Study conducted in the year 2008. Therefore, provision needs to be made for adequate tariff adjustments for any upward revision in the project / operating costs.	As per the Guidelines issued by TAMP, upfront tariff has to fixed before the bid process is completed and there are no provisions in the existing guidelines for tariff adjustment based on the actual cost incurred by the developer. COPT has taken assistance of IPA for estimating the capital cost involved in the development of the project and the Tariff calculations have been done based on the estimates (updated to reflect the current market rates) prepared by the technical experts from IPA.
(ii).	The optimal capacity of the terminal has been worked out based on the traffic projections given in IPA report. As per the traffic projections made by IPA, steady state cargo is expected to be achieved only in the year 2023-24. The traffic projections and the share of different types of cargo may undergo changes and therefore adequate compensation by way of tariff adjustments needs to be made in case of such downward variations on a year on year basis. The traffic handled during past years should also be considered while making realistic traffic projections.	The guidelines for fixing for upfront tariff covers the provisions for estimating the optimal capacity of the terminal. COPT has gone by these guidelines to estimate the optimal capacity of the terminal. The only reference to the IPA report is to make an assessment of the share of each type of cargo. Since the Cochin port has not handled LPG cargo in the past bunker handling facilities are being developed here for the first time, we cannot rely on any past traffic information to make this estimation.
(iii).	Optimal capacity has been worked out based on 70% capacity utilization, which applies to all the years. It is pertinent to note that capacity utilization cannot be ramped upto 70% from the very first year. Therefore, it can be kept at lower levels in the initial years and can be progressively enhanced to 70%.	TAMP guidelines specify that optimal capacity has to be fixed based on 70% utilization for all years and it is not linked to actual traffic / demand that is achievable at the terminal.
(iv).	The fixed tariff has to be in line with the tariff prevailing in Major Ports and has to be governed by the prevailing policies and guidelines of TAMP. The tariff also needs to be suitably adjusted for variations in WPI index on a yearly basis. It may also be clarified that whether review of tariff will be undertaken based on any extraordinary events that impact the viability of the project.	The tariff has been fixed based on prevailing policies and guidelines of TAMP which do not have any provisions for comparing the tariff to that at other Major Ports. There are provisions for adjustments to the tariff based on variations WPI (at 60% of change in WPI index as per the guidelines). Regarding the query on review of tariff based on any extra ordinary events the guidelines do not provide for any revision for the project that is already bid out.
(v).	The rationale for fixing 1% of gross fixed assets value as “other expenses” in operating cost estimates and 5% as miscellaneous expenses in estimation of capital costs under handling charge may be clarified.	It is as per the norms given in the upfront tariff guidelines.

(vi).	The details of land rent needs to be fixed in line with land rent being collected by port in various other land zones. Details in this respect may be provided.	Lease rent has been estimated based on a tariff approved and notified by TAMP.
(vii).	Since the terminal is proposed to be built in the Puthuvypeen SEZ area, the advantages, if any, on account of SEZ has not been brought out in the tariff fixation proposal and it's likely impact on revenue collection.	Point noted, the same is incorporated in the revised proposal.
(4).	**Cochin Custom House Agents' Association**	
	No comments to offer.	
(5).	**M/s.IMC, Chennai and Punj Lloyd Ltd. - Consortium**	
(i).	The Cochin Multi-User Liquid Terminal involves only the development of the liquid jetty along with a barge jetty. No back up land will be provided to the concessionaire for the shore storage tanks and hence the Multi-User Liquid Terminal will not have any evacuation facility as part of the project.	The project structure has been revised as per the directions given from Ministry of Shipping. In the revised structure 2 hectare land has been allocated for development of storage tanks. There are also provisions in the Concession agreement to release further land for development of storage tanks which is linked to the traffic that is actually observed at the terminal.
(ii).	Evacuation of liquid cargoes is proposed to be achieved by the following:	
	(a). IOCL's LPG import terminal, which is under early stages of development.	
	(b). The shore storage tank farms, which are proposed to be developed by one or several parties for storing the bunker fuels and other liquids. Land for the storage terminals will be allotted after a tendering process to such parties, who would invest in the shore tanks, pipelines and other facilities and handle the liquid cargoes through the Multi-User Liquid Terminal.	The concessionaire may not have any control on the traffic expected from LPG as the storage and processing facilities are being developed by IOCL alone. For bunker fuel and other POL cargo (excluding crude oil), the concessionaire will be allocated 2 hectare land for development of storage tanks.
	In essence, the traffic build-up for Multi-User liquid terminal is entirely dependent on the development of the shore terminals mentioned in (a) or (b) above. The concessionaire neither has the scope to tap alternate markets (as the cargoes cannot be handled without storage infrastructure) nor has any control on the traffic expected from the LPG and other liquid storage terminals.	
(iii).	Under the above circumstances, the optimal traffic considered for arriving at the unit handling charges for bunker fuel / other petroleum products and LPG is very high. The reasons for our submission are:	TAMP guidelines specify that optimal capacity has to be fixed based on 70% utilization for all years and it is not linked to actual traffic / demand that is achievable at the terminal. Hence this request cannot be considered.
	(a). The optimal traffic considered for bunker fuel is 3.4 million tonnes per annum. This is a very high projection, considering that about 300,000 KL-400,000 KL of shore storage capacity would be required to handle such traffic.	
	(b). If adequate liquid storage capacity is not commissioned in time, then the multi-user liquid terminal would not be able to handle the traffic.	
	(c). The optional traffic of 678,819 MT per annum of LPG is also high, as this traffic is dependent on the LPG import terminal to be set up by IOCL, which generally requires a time period of 3 years for development.	
	(d). From practical considerations, it is quite likely that the LPG terminal would require 2-3 years from the date of commercial operations to achieve the optimal traffic.	

(iv).	In our view, it is highly likely that the optimal traffic for bunker fuels / petroleum as well as LPG would not be achieved in the first three years for the reasons outlined in (ii) and (iii) above. It is, therefore, suggested that the optimal traffic be fixed at reasonably lower levels, at least in the early years of commercial operations, so as to provide the required ROCE to the concessionaire. As the revenue requirement per unit of cargo is based on higher levels of throughputs, the unit rate, i.e., the handling charges indicated in the proposed tariff are very low. For instance, the proposed handling rate of Rs.22.81 per MT for petroleum products at the multi-user terminal is very low compared to the prevailing wharfage of Rs.65 per MT levied at existing berths at Cochin Port. To sum up our views: (a). The traffic for the multi-user liquid jetty is entirely dependent on external developments, i.e., the LPG and liquid terminals to be developed by other parties. (b). It is unlikely that the optimal traffic would be achieved in the first few years of operations as the required storage infrastructure for handling the optimal traffic may not come up in time. (c). As the shore tank farm is not an integral part of the project, the concessionaire cannot cater to alternate demand for handling liquid cargoes in case the implementation of proposed shore storage tank farms is delayed. In view of the above, we request that the optimal traffic is reviewed and the unit tariff increased significantly so that the concessionaire is in a position to achieve the targeted ROCE.	

2. A joint hearing in this case was held on 23 February 2010 at the COPT premises. The COPT made a power point presentation explaining the salient features of the proposal. At the joint hearing, COPT and the concerned users / user organisations, short listed applicants and prospective users have made the following submissions:

Cochin Port Trust

(i). This project is not like the container terminal being developed by DP World. No extensive land development is involved. The estimates the expenses given in the feasibility report are fair and reasonable.

(ii). Licence fee was considered as per interim valuation report. It is to be changed now based on final report received in December 2009.

(iii). Water area rental is taken at $1/3^{rd}$ of the adjacent land. This is a convention followed at this port.

(iv). We have included the capital cost of dredging the exclusive channel to the jetty branching off from the common channel.

M/s. Bharat Petroleum Corporation Limited

(i). The estimates of Capex are only block estimates. It does not recognise the land development cost and soil improvement expenses. The estimates of the feasibility report are grossly understated.

(ii). The project depends entirely on some one else's evacuation facility. Port should allot lands for tank farms to be developed by the terminal operator so that the terminal can provide comprehensive service.

M/s. Indian Oil Corporation Ltd.

(i). We doubt the capacity determination and allocation of cost to LPG. We have detailed the reasons in our written submission.

M/s. IOT Infrastructure & Energy Services Ltd.

(i). Traffic will build up slowly. Capacity can't be achieved from year 1. Therefore, please consider capacity utilisation in a phased manner.

3. In view of the modifications made by the COPT, the revised proposal was forwarded to the concerned user associations, the short listed applicants and prospective users to furnish their comments to TAMP and to the COPT directly. The port was advised to furnish its remarks on receipt of the comments. Indian Oil Corporation Limited, M/s.IOT Infrastructure & Energy Services Limited, M/s.Bharat Petroleum Corporation Limited and M/s.IMC Limited have furnished their comments on the revised proposal to COPT with a copy endorsed to TAMP. The COPT has furnished its comments on the points made by M/s.IOT Infrastructure & Energy Services Limited vide its letter dated 31 July 2010, Indian Oil Corporation Limited and M/s.Bharat Petroleum Corporation Limited vide its letter dated 9 August 2010 and M/s.IMC Limited vide its letter dated 18 August 2010. The summary of comments received from users / user organisations, short listed applicants and prospective users and comments of COPT thereon are tabulated below:

Sl. No.	Comments of users / user organisations, short listed applicants and prospective users	Comments of COPT
(1).	**Indian Oil Corporation Limited**	
(i).	The revised proposal of COPT contain major deviations in the scope of work incorporating an additional capital investment of Rs.70.52 crores, **which were neither discussed in the joint hearing held on 23 February 2010 nor reflected in the RFQ document released by COPT for the connected tender.**	No comments furnished by COPT.
(ii).	Development of storage tanks for bunker fuel and other POL cargo does not appear in tender document. Capital cost of Rs.168.83 crores is noted.	During the pre-bid meeting (RFQ stage), the Applicants had made a request to, to include land area for development of storage tanks as part of the project facilities. Considering inputs from – TAMP (in the letter dated 19th March 2010) as also from the Ministry of Shipping to include storage tanks / facilities for bunker fuel, the same has been added as part of the project facilities.
(iii).	**Project Cost:** • Table 2 - Total project cost with item break up Rs.122.45 crores • The Rate for berthing dolphins is lower at Rs.17.10 crores instead of Its 17.40 crores as per previous estimate. Similarly, the rate for Unloading / Loading arm is also lower at Rs.2.71	• Table 2 – Total project cost with time wise break-up is 168.83 and not Rs.122.45. • Cochin Port trust has relooked at all cost elements to reflect current market prices and tax scenario. The revised estimates reflect the current market prices and relevant tax scenario. For revising the estimates,

<table>
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<td></td>
<td>crores (including contingency, supervisions and applicable taxes and duties) In place of Rs.3.61 crores (excluding Contingency, supervision and applicable taxes and duties)

Items 23 - 26 are additional
Item 26 - there is no back up calculation for the amount of Rs.7.45 crores
Table 3 - Project cost break up across Main berth, barge loading berth and Storage Tanks
Rs.107.03 crores for Main berth and Rs.9.69 crores for Barge loading berth and Rs.52.11 crores for Storage Tanks

In the Item 26 of table 3 Rs.4.6 crores is allocated to main berth for which there is no back up calculation.</td>
<td>departmental rates for recently tendered works in COPT (UTL & Ro-Ro) have been adopted for the civil works budgetary rates recently obtained from the suppliers have been opted for marine fixtures.

Items 23 to 25 are for storage facility which is additional, item number 26 is towards the common user infrastructure that will be developed by Cochin Port on the Puthuvypeen SEZ for use by all co-developers / units coming up in the SEZ
Basis of allocation of Rs.4.6 crores of the 7.45 crores to the main berth is already mentioned in the proposal. Capital costs common to all three segment (Main Berth, Barge Loading Berth and Storage Tanks) – viz – Cost of operational buildings, roads (internal), other services, and payment towards common user infrastructure are allocated to each segment in the ratio of direct costs. This works out to be 61.85% for Main Berth, 5.60% for Barge Loading Berth and 32.55% for Storage tanks. Rs.4.6 crores is 61.85% of Rs.7.45 crores.
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<td>(iv).</td>
<td><u>The capacity projections adopted, by COPT is the same as that made in the earlier proposal. We do not agree due to reasons given below.</u>

The occupancy of the berth for LPG Is not commensurate with the volume of cargo in comparison with Bunker and other POL products, While 3.02 MMTPA of bunker fuels occupy 55.72% of the berth days a mere 0.6 MMPTA of LPG Is seen to occupy 44.28% of the berth days. The above calculation is based on an assumed flow rate of 250 MT /Hr for LPG which is the flow rate attainable by transfer systems installed in old generation ships. However proven technologies are now available in the market by which higher flow rates can be attained Independent of the facilities available in the ships. A transfer system comprising of booster pumps situated in receiving points duly assisted by suitably positioned sea water based plate type heat exchangers can easily attain a flow rate of 600 MT /Hr for butane and a flow rate of 200 MT/Hr for propane. Thus for a cargo mix of Butane and Propane in the ratio 80:20, the net unloading rate will be 0.8 X 600MT/Hr (Butane) + 0.2 X 200 MT/Hr(Propane) = 520 MT/Hr.</td>
<td>Capacity of unloading arms to be installed for handling LPG at the berth cannot be determined just by what is the latest technology available. Over designing a facility to handle cargo will make the project unviable. Presented below is the traffic projections (as per IPA report) and capacity utilization for the years – 2012 to 2022 (expected first 11 years of operation).

<table>
<tr><th>Year</th><th>Traffic (Bunker Fuel and Other POL) (MT)</th><th>Traffic (LPG) (MT)</th><th>Total Traffic (MT)</th><th>Capacity Utilisation</th></tr>
<tr><td>2012</td><td>0.77</td><td>0.6</td><td>1.37</td><td>33%</td></tr>
<tr><td>2013</td><td>0.93</td><td>0.6</td><td>1.53</td><td>37%</td></tr>
<tr><td>2014</td><td>1.13</td><td>0.6</td><td>1.73</td><td>42%</td></tr>
<tr><td>2015</td><td>1.28</td><td>0.6</td><td>1.88</td><td>46%</td></tr>
<tr><td>2016</td><td>1.44</td><td>0.6</td><td>2.04</td><td>50%</td></tr>
<tr><td>2017</td><td>1.63</td><td>0.6</td><td>2.23</td><td>54%</td></tr>
<tr><td>2018</td><td>1.85</td><td>0.6</td><td>2.45</td><td>60%</td></tr>
<tr><td>2019</td><td>2.12</td><td>0.6</td><td>2.72</td><td>66%</td></tr>
<tr><td>2020</td><td>2.28</td><td>0.6</td><td>2.88</td><td>70%</td></tr>
<tr><td>2021</td><td>2.45</td><td>0.6</td><td>3.05</td><td>74%</td></tr>
<tr><td>2022</td><td>2.63</td><td>0.6</td><td>3.23</td><td>79%</td></tr>
</table>
As you can see – the facility will not be utilized to its full optimal capacity of 4.1 MTPA even after 11 years of operation. In this scenario, the rationale for investing in superior technology for higher handling rates for LPG and to increase the overall capacity of the berth is questionable. Moreover IOCL has not even committed to giving any minimum traffic guarantees for this project – not giving contractual guarantees that the cargo mix which is presented of (80% butane and 20% propane) will be adhered to. Investments in superior technologies should be taken up only if the terminal is constrained on the handling capacities.</td>
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<td>As per the project structure – the concessionaire will be making all investments except the unloading arms for handling LPG at the terminal and is compensated by the handling charges for LPG (apart from berth hire). If IOCL is planning to invest in a technology that is giving a handling rate much more than what is required, this will amount to a scenario where IOCL's capital investment in the project will be high which will help IOCL reduce its handling rate, and create capacity that is not required in the near future. Had the option be left to the developer to decide the technology for handling LPG, he would have invested in technologies where the handling rates would be just sufficient to meet the demand. To decide between these conflicting interests it is advisable that we go by the guidelines given by TAMP which is followed by COPT in calculating the Tariff for the project.

There is one more operational issue we need to be cognizant of in this case. The upfront tariff is being set for the entire period of the concession. If the tariff is fixed based on a handling rate of 520 MT/hr and if the actual handing rates achieved is less than that, either because of issues with the technology or because of change in the cargo mix (say proportion of propane increasing) the tariffs can neither be revised nor does the operator have any power to claim damages from IOCL (contractually).

Hence, we submit that the handling rates for LPG mentioned in the TAMP guidelines should be followed for the fixation of tariff.</td>
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<td>(v).</td>
<td><u>Allocation of Capital Cost between LPG and Bunker fuel:</u>

1. Cochin Port Trust has allocated the entire capital cost of fire fighting system including that for foam to LPG alone in the earlier proposal, now they have removed foam from it and loaded the remaining totally to LPG.
2. The cost of development of pump house (Fire fighting) Rs.21 crores is loaded to LPG while the rests is on basis of proportion of berth share days.

Our contention that the cost allocation suggested by COPT is not based on requirement of fire fighting facilities for different products is reiterated, The changes made by COPT from the earlier proposal are only superficial and is not based on any realistic assessment of technical needs of fire fighting operation.

As we have clarified in our submission to TAMP in reply to the earlier proposal of COPT all POL products and bunker fuels are highly inflammable in nature and for any</td>
<td>The cargo allowed on the Main berth are Bunker Fuel and other POL cargo – excluding crude oil. The statement that Bunker fuels are highly inflammable is factually incorrect. To establish the same we would like to present below

The flash points of key cargo in each category:

<table>
<tr><th>Cargo</th><th>Flash Point</th></tr>
<tr><td>Propane (~ 20% of LPG cargo)</td><td>-104^{o} C</td></tr>
<tr><td>Butane (~ 80% of LPG cargo)</td><td>-40^{o} C</td></tr>
<tr><td>Marine Fuel Oil (~ 93% of bunker fuel and other POL cargo – as seen in other bunkering destinations like – please refer section 4.18 of feasibility report)</td><td>65.5^{o} C</td></tr>
</table>

The classification of various liquids based on flammability / combustibility across various standards:

<table>
<tr><th>Standard / Flash Point</th><th>< (- 7^{o}C)</th><th>(-7^{o}C to 38^{o}C)</th><th>38^{o}C to 60^{o}C</th><th>60^{o}C to 66^{o}C</th><th>66^{o}C to 93^{o}C</th></tr>
<tr><td>OSHA</td><td>Flammable</td><td>Flammable</td><td>Combustible</td><td>Combustible</td><td>Combustible</td></tr>
<tr><td>ANSI</td><td>Extremely Flammable</td><td>Flammable</td><td>Flammable (< 60^{o}C)</td><td>Combustible</td><td>Combustible</td></tr>
<tr><td>NPFA 30</td><td>Class I</td><td>Class I</td><td>Class II</td><td>Class III</td><td>Class III</td></tr>
<tr><td>CPSC</td><td>Extremely Flammable</td><td>Flammable</td><td>Combustible</td><td>Combustible</td><td></td></tr>
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</table>

	POL/Bunker jetty fire water pumps are to be installed for pumping water as water is a common medium for fire fighting. Without water, POL fires cannot be fought as water is used as a carrier of foam. That is why the Cochin Oil Terminal operated by Cochin Port Trust has a full-fledged fire water pump house. So it is an established fact by Cochin Port Trust itself that water based firefighting facilities is a basic requirement for foam fighting. Since fire water pumping facility is a common requirement for LPG, bunker and POL products it has to be allocated based on principle of berth share days only, Rs.10.2 crores loaded to LPG has to be apportioned on the basis of above principle acknowledging the technical needs without any bias.	While Butane and Propane are Class I products that are extremely flammable, Bunker fuel is Class III and is classified as combustible. The fire protection systems have to be designed to incorporate the requirements as mentioned under OISD. Requirements for handling LPG cargo are very stringent. Hence LPG cargo is expected to drive significant part of the capital expenditure towards fire fighting systems for the project which is difficult to quantify separately. It would be unfair to allocate the capital expenditure towards fire fighting between LPG and Bunker fuel in the same proportion as share of berth days and this approach was followed. The cost of foam tank and foam pump system shall be allocated directly to Bunker fuel and other POL cargo. The cost of this system excluding contingencies, taxes and engineering costs is estimated at Rs.1,00,00,000/- as mentioned under Annexure I to the TAMP proposal. The water requirement for foam system is much less compared to what is required for fighting a Highly inflammable Class I product and hence the capital cost of pump house is directly allocated to LPG.
(vi).	Estimation of operating cost, revenue requirement, handling charge and berth hire for each class of cargo may be revised based on capital cost allocation as suggested under comment (v).	Since no change is desired on the capital cost allocation between the classes of cargoes as mentioned under the response to comment (v), this suggestion may not be accepted.
(2).	**M/s.IOT Infrastructure & Energy Services Limited**	
(i).	Project Cost: The revised proposal estimates the project at a value of Rs.168.83 crores. The project estimate is under valued as the project estimates have been done in 2008 at a time when prices of all commodities were low. Considering the time when the project would be executed and taking into account the high inflation and price rise of items, the capital cost for the project would be substantially higher than the estimates. **Example:** Cost of Cement has risen from INR 210 per 50 kg bag in 2008 to INR 235 per 50 kg bag. A price rise of approximately 12%, similarly steel and other commodities too have seen a rise in prices in the range of 10-15% over the last two years.	Based on similar comments received from TAMP and prospective Bidders for the proposal submitted in November 2009 regarding Project cost, Cochin Port Trust has subsequently reviewed all cost elements and revised the estimates based on budgetary offers, so as to reflect current market prices. It is also noticed that the prevailing cost of steel and cement is less than that during 2008. Hence, the estimated project cost is not undervalued.
(ii).	(a). It is envisaged that the project shall be developed to handle vessels upto 80,000 DWT and maximum 12m of draft. It limits the capacity of the berth to handle larger vessel which has the following implications: (i). Larger vessels requiring a draft of more than 12m will be diverted to other ports resulting in reduced volume.	Increasing the draft will have an impact on the overall capital cost of the project and can impact the viability of the project. After considering the traffic estimate for Bunker and other POL cargo in the feasibility report prepared by IPA and sample data for tanker dimensions for the required parcel sizes, the specifications for the project (like draft, length of Main Berth, design of mooring arrangements etc) was finalized to ensure that no over capacity is built

	(ii). Also, for the same volume of cargo, the overall time for loading/unloading smaller vessels is higher as compared to a large vessel. This would substantially reduce the berth throughput. Example: It takes longer to load/ unload four vessels of 15,000 tonnes than unload one vessel of 60,000 tonnes. (b). It is mentioned that the Puthuvypeen port experiences high siltation which would require regular dredging. A draft of 12m could limit the vessels handled at the port during the dredging procedure, as only vessels of draft lesser than 12m could be handled. In order to avoid the above mentioned draft issues a slightly higher draft can be considered.	and the project is financially viable. Hence no further change in the specifications is envisaged. The increased cost of dredging on account of higher siltation is already factored in the operating cost considered. COPT has requested TAMP to consider this increased cost. As per the provisions in the Concession Agreement, the Concessionaire will be contractually obliged to maintain a minimum draft of 12 m at all times, during the concession period.
(iii).	Tariff of Storage Tanks: To recover the capital invested, the tariff for the storage tank works out to be Rs.563.1 per tonne for 30 days (calculated at proposed tariff of Rs.18.77 per tonne per day), which is too high, compared to storage facilities at other port.	Tariff is arrived at based on the capital cost incurred in developing the storage tanks and TAMP guidelines. A highly depreciated storage facility can offer a lower rate and still be viable which could be the case in other ports. This concession is for a period of 30 years, and tariff comparison for first year of operation will not give the right picture.
(iv).	Storage Tanks (Capital and Operating Cost Estimates): Like in the case of main jetty and barge jetty, cost towards manpower has not been considered in the operating cost for the storage facility. Based on our experience of operating tank farms across the country, manpower cost contributes almost 20% of the total operating cost. Further, more operations of a storage tank farm like this one would need clearance, certificates and license from various bodies like CCOE, PCB, Weights and Measure. Cost towards issue and renewal of such license has been considered in the operating cost estimates. Scope of facility of a storage tank facility like the one considered in this proposal is not limited to just tanks and pipelines. The facility would need to be fully automated and hence there would be need to install instruments like mass flow meters, Radar Gauges, SCADA etc. Installation of Instrumentation of this kind would result in high capital cost. Capital cost towards the same has not been considered in the estimate. It has requested the port to share the detailed BOQ's / individual elements of cost considered in the estimates.	All cost towards O&M has been considered based on the guidelines of TAMP. There are no provisions in the TAMP guidelines to add additional cost for manpower or other costs like clearance certificates etc. It is expected that these costs will be covered under 'Other Expenses' which is taken at 1% of the Gross fixed assets value. On the cost of Storage tanks – the control instrumentation including radar level transmitter, temperature gauges, PVRV are considered for the tanks while the capital cost of pollution control, illumination, utilities & common facilities including fire protection are captured separately (Refer sl. nos. 22 and 25 of Table no. 2 of the proposal). Broad level BOQ is already shared as part of the proposal. Please refer to Annexure I and II of the proposal. Further detailing has to be undertaken only once the DPR is prepared.

(v).	Apart from the above, M/s.IOT Infrastructure & Energy Services Limited has reiterated the comments made by them earlier on capacity of main berth, operating cost, etc. as furnished by them on the original proposal.	The COPT has also reiterated its remarks furnished on the earlier comments of M/s.IOT Infrastructure & Energy Services Limited.
3.	**M/s.Bharat Petroleum Corporation Limited**	
	The Bharat Petroleum Corporation Limited has reiterated the comments which were communicated earlier on the initial proposal of the COPT.	The COPT has already furnished its remarks on the points made by M/s.Bharat Petroleum Corporation Limited earlier.
4.	**M/s.IMC Limited**	
(i).	**Bunkering Fuel and POL**: (a). It has reiterated that in the initial years of operations, the bunker fuel and other POL cargo traffic is expected to be lower and would gradually increase over the years. Therefore, the optimal traffic of 3.416 million tonnes per annum is a very high projection for the initial years and the terminal would not be able to achieve the targeted returns in the initial years of operation. Even LPG terminal would require 2-3 years from the date of commercial operations to achieve the optimal traffic. We therefore suggest that the optimal traffic is reduced to 0.3 million tonnes per annum. In view of the above, we request that the optimal traffic is reviewed and the unit tariff is increased significantly so that the concessionaire is in a position to achieve the targeted ROCE. (b). Since crude oil cargo is now removed from the cargo basket for this terminal, it would take more number of years for the traffic to reach the steady state levels. It has, therefore, suggested to set the optimal traffic at significantly lower levels so that the unit tariff for the cargo handling charges is adequate to provide the required ROCE to the Concessionaire.	The guidelines issued by TAMP for fixing of upfront tariff covers the provisions for estimating the optimal capacity of the terminal and using that optimal capacity for tariff fixation. Cochin Port Trust has gone by these guidelines.
(ii).	**Storage Capacity for Bunker Fuels and POL**: The proposed storage capacity of 42,000 KL comprising four (4) tanks is grossly inadequate for achieving the optimal traffic of bunker fuel and other POL cargo. Assuming a high storage facility turnaround of 12 times per year (current average in Indian liquid terminals is less than 5 times per year), the total traffic that could be handled works out to about 0.5 million tonnes per year. It has sought clarification as to the COPT's plans for ensuring handling and storage of the balance 2.9 million tonnes of bunker fuels and POL cargo.	The storage capacity at 37800 tons is adequate to handle the optimal capacity. This is shown as following: Storage capacity = 37800 Tons Evacuation rate@500 Tons/hour and 19 hours/ day = 9500 Tons/day TAMP guidelines prescribe a norm of 16(24*0.7) hours. However, in our calculation we have taken 19 hours in order to meet the optimal capacity of the main berth. Storage time = 37800/9500 = 4 days Yearly turn around = 90 Storage capacity available = 90*37800 = 3.4 MMTPA

	It is suggested that the concessionaire must be given the option to increase the storage capacity, if there is such a need to handle the projected throughputs and the storage tariff should be correspondingly revised.	In addition, the unloading and loading operations shall be undertaken simultaneously. Hence, the storage capacity is deemed adequate to handle optimal capacity. Moreover, it may be noted that the storage capacity specified above is only the minimum requirement; the Concessionaire shall have the option to provide more storage capacity. However, the upfront tariff is being set for the entire period of the concession and cannot be revised on providing more storage facility.

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