FSS Through Life Cost Data Capture Tool - Tender Data

Purpose

To support the Fleet Solid Support (FSS) tender process, the FSS Through Life Cost (TLC) Data Capt
Authority to identify a range of TLCs contained within the Tenderers' proposals.

This range of TLC estimates will contribute to a submission for approval of support funds later in the d

This Tender Data Capture Tool contains a reduced set of parameters for the Tenderers to complete.

Contents

ure Tool has been developed to allow the

esign life cycle.

Fuel Estimate

Annual Cost for 1 Ship

Sea margin and electrical loss

Title:	Harbour
Basis Speed:	*0*
Operating Condition:	*Domestic & stores handling*
Priority:	*Efficiency/airborne noise*

	Value
Delivered Propulsion Power (kW)	
Electrical demand for propulsion, including mechanical losses (%)	
Electrical Services, excluding mission services (kW)	
Mission services - Electrical loads from Munition Hold HVAC (kW)	
Mission services - Electrical loads from Cargo Refrigeration (kW)	
Mission services - Electrical loads from Cargo and Munitions lifts (kW)	
Mission services - Electrical loads from Cargo and Munitions Cranes (kW)	
Mission services - Electrical loads from RAS (kW)	
Main Engine - Specific Fuel consumption (grams/kWh)	
Generator Engine - Specific Fuel consumption (grams/kWh)	

£0.00

es should be excluded from all inputs, as they are accounted

Capt CAnchor	LitM
0	*5kn*
Standby / small boat transfer / helicopter transfer	*Loiter*
Efficiency/airborne noise	*Fuel Efficiency*
Value	**Value**

Comments:	

l for in later calculations.

Slow Speed Transit	Transit
8kn	*15kn*
Transit/patrol	*Transit*
Fuel Efficiency	*Fuel Efficiency*
Value	**Value**

Fast Transit	Max Speed
18kn	*Maximum*
Urgency	*Urgency*
Speed	*Speed*
Value	**Value**

RAS
12kn
Constant Speed
Effective & safe control
Value

User Guide

User Guide

This tool has three sheets that require input from the Tenderer; these are Tenderer Info, Equipment In

Tenderer Info requires two inputs; the Tenderer name and Date of Submission.

Equipment Inputs has 3 equipment unit and 3 parameters to enter data for. Three point estimating is r
a maturity level (detailed level descriptions in the Control sheet) and a comments box. For each param
enter the source of the data into the comments box.

The Fuel sheet has a single point estimate for each of the parameters and a single comments box for
source.

All other sheets are provided for information and should not be altered by the Tenderer

Units

Please complete the tool in the units specified against each parameter.

Cell Protection

Cell protection has been applied to the sheets such that only yellow input cells can be altered by the Te

puts and Fuel (all yellow sheets).

equired for two of the parameters along with
ıeter and equipment the Tenderer should

the sheet for the Tenderer to add a data

enderer.

Control

Cell Colour Key

Cell Colour	Key
Input	A cell that has a default value which shall be overwritten by the tend
Link (Internal)	A value linked from another cell in this workbook
Calculation	Calculation carried out by the workbook
Total	A cell that combines calculations to provide a total
Check (Error)	A cell that indicates there is an error due to user inputs
Check (Clear)	A cell that highlights correct input of tenderer information

Named Ranges

Estimate Maturity

Class	Description
Class 1	Supplier bid or actual cost
Class 2	Activity based estimating based on agreed schedule of work or bill of material
Class 3	Parametric estimate
Class 4	Analogy estimate
Class 5	Rough order of magnitude (ROM) estimate or judgement from subject matter expert (SME)

erer

)

Tenderer Information

Tenderer Name

Date of Submission

Equipment Inputs

System: Propulsion Plant
Sub-system: *Main Propulsion Units*

	Parameter	Description	Min	ML	Max
1	How many units are there per system?	Where there are more than one of a given unit within the system, specify the number. For example, if there are 2 engines please enter a value of two into the ML. Only a s**ingle point estimate is required.**		-	

Please complete the following questions for one unit.
For example, if there are two engines fill in the below answers for a single engine.

2	Unit Production Cost (£)	This is the production cost of a Unit, based on a given quantity of Units produced.	£ -	£ -	£ -
3	Unit Weight (Kg)	This is the total weight of the Unit.	-	-	-

		Propulsion Plant *Electric Propulsion*			
Maturity	**Source/Comments**	**Min**	**ML**	**Max**	**Maturity**
			-		

		£ -	£ -	£ -	
		-	-	-	

	Electric Plant *Main Electric Power Generation*				
Source/Comments	**Min**	**ML**	**Max**	**Maturity**	**Source/Co**
		-			

	£ -	£ -	£ -		
	-	-	-		

mments

TruePlanning Input

Hardware COTS Items

Propulsion Plant, General

Propulsion Units and Propulsion Diesel Engines, Main Electric Propulsion

Electric Plant, General

Electric Power Generation

Fuel

Parameters used for Fuel Calculations	Value	Units
Sea Margin	15%	
Electrical losses	10%	
Hrs/Year	8760	hours
Density of Fuel	900	kg / m^3
Cost of Fuel	350	£ / m^3

Operating Condition Name	Harbour	Capt CAnchor
Design margin on service load	20.0%	20.0%
Allowance for growth in electrical services	20.0%	20.0%
Proportion of year in each mode	25.0%	10.0%
Total Propulsion power demand (kW)	0	0
Total Electrical services demand (kW)	0	0
Annual consumption in each mode (kg)	0	0
Annual cost in each mode (£)	0	0

TOTAL:

Annual Cost - 1 Ship	0
Annual Cost - 2 Ships	0

Annual Cost - 3 Ships	0

Number per Next High Level			Purchase Price	
Min	ML	Max	Min	ML
-	-	-	-	-
0	0	0	£0.00	£0.00
0	0	0	£0.00	£0.00
-	-	-	-	-
0	0	0	£0.00	£0.00

Justification / Reference

Scientific Journal, ship service speeds and sea margin, 2016 page 44
Industry Practice for Generator electrical losses
365 days x 24 hours
ISO 8217 2017
Economic Forecast Assumptions 2018/19, Defence Economics (Table 9, Page 2

LitM	Slow Speed Transit	Transit	Fast Transit	Max Speed
10.0%	10.0%	10.0%	10.0%	10.0%
10.0%	30.0%	30.0%	30.0%	30.0%
5.0%	15.0%	30.0%	10.0%	5.0%
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

Weight of Structure			
Max	Min	ML	Max
-	-	-	-
£0.00	0	0	0
£0.00	0	0	0
-	-	-	-
£0.00	0	0	0

:1)

RAS
15.0%
30.0%
0.0%
0
0
0
0