



# **TERMS OF REFERENCE**

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**SUPPLY & INSTALLATION OF MARINE DIESEL ENGINE**

## 1. BACKGROUND

Agro National Corporation (AgroNat) is a state-owned enterprise formed on 21 April 2020, with the overall mandate of developing the agricultural industry and making it an economically viable industry. To expand agriculture in Maldives and work towards reducing the dependency on imports, the company aims to establish mechanisms to ensure sales of agricultural produce from local farmers and provide income generating opportunities to the farmers.

To address the challenges faced by farmers in timely delivery of agricultural produce to the market, the company is building two purpose-built transport vessels, which will be utilized for transportation of local agricultural produce.

## 2. OBJECTIVES

The main objective of this TOR is to obtain a vendor to supply, deliver, install the engines, and complete the required testing.

## 3. SCOPE OF SERVICES AND EXPECTED DELIVERABLES

- i. Supply and delivery of the engine and related materials according to the specifications provided and agreed.
- ii. Install the engine and complete testing/commissioning, to bring the vessel to operation.

## 4. SPECIFICATIONS FOR MAIN ENGINE

Parameters	Specifications
Engine type	4Cycle, vertical, water-cooled diesel engine
Rating output -PS (kw)/RPM	410 (302)
Number of Cylinders	6 in Line
Fuel injection type	EUI
Cooling system	Indirect sea water cooling with heat exchanger

## 5. MARKING CRITERIA

#	Details	Marks
1	Price	40
2	Delivery Duration (including installation)	10
3	Warranty	5
4	Experience	5
5	Technical evaluation	25
6	Repayment period	15

### 5.1 Price (40% of the Total score)

The highest score shall be awarded to the bid with the lowest bid price. For the remaining bids, points will be given to using the formula below:

$$\text{Price Score} = \frac{\text{Lowest proposed total price from among the bids received}}{\text{Particular Bidder's proposed total price}} \times 40\%$$

### 5.2 Duration (10% of the Total score)

The maximum points allocated under this criterion will be awarded to the bidder with the lowest proposed Delivery Period, and the remaining bidders will be awarded points on a pro rata basis in descending order.

The formula thus used for the computation of the score is as follows:

Delivery Period Score:

$$\frac{\text{Lowest Proposed delivery period from among the bids received}}{\text{Particular Bidder's proposed delivery period}} \times 10\%$$

### 5.3 Warranty (5% of the Total score)

$$\frac{\text{Particular bidders warranty}}{\text{Highest Warranty proposed}} \times 5$$

#### 5.4 Experience (5% of the Total score)

Experience will be considered for the work completed in the last 5 years related to supply and installation of marine engines.

The work experience letter should be on the contractor's letterhead with the contractor's stamp and signature. Marks will be given to a maximum of 5 experience letters. Each letter will carry 1 mark.

#### 5.5 Technical Evaluation (25% of the Total score)

#	DETAILS	MARKS
1	Spare parts availability (Document proof to be submitted)	15
2	1 Operation manual and Parts catalogue (Soft Copy)	5
3	Fuel consumption.	30
4	Compliance with required specifications	50

#### 5.6 Repayment period (15% of the Total score)

$$\frac{\text{Particular Bidder's repayment period}}{\text{Highest repayment period proposed}} \times 15\%$$

**LIST OF MATERIALS**

#	DESCRIPTION	UOM	QTY
	<b>ENGINE RELATED</b>		
1	MARINE DIESEL ENGINE with gearbox and stern arrangement	NA	1
2	Silencer setup complete 6"	NOS	1
3	Exhaust Water lock Muffler 6"	NOS	1
4	Flexible Gland / Shaft Seal	NOS	1
5	BALL VALVE BRASS 2"	NOS	1
6	HOSE CONN M. BRASS 2" X 63	NOS	1
7	ELBOW MF 90DEG 2" BRASS	NOS	1
8	HOSE COUPLER 2" FF	NOS	1
9	WATER STRAINER 2" 2005I (Sea Strainer)	NOS	1
10	HOSE CONN M. BRASS 2"	NOS	2
11	HOSE COUPLER 2" FF	NOS	1
12	EELBOW MF 90DEG 2"	NOS	1
13	SPRING HOSE 2"	FT	15
14	HOSE CLAMP W5 58-61 (2")	NOS	4
15	SPRING HOSE 2"	FT	5
16	HOSE CLAMP W5 58-61 (2")	NOS	4
17	EXHAUST HOSE (ALFA) 5"	FT	8
18	HOSE CLAMP W5 136-145 - 5"	NOS	5
19	Racor Filter FG1200	NOS	1
20	Deck Filler SS	NOS	2
21	Hose Clamp SS HD 1.5"	NOS	4
22	Spring Hose 1.5"	FT	8
23	Overflow Drain Vent ¾" SS	NOS	2
24	Hose Connection ¾" SS	NOS	2
25	Hose Clip SS ¾"	NOS	2
26	Spring Hose ¾"	FT	16
27	Hull Thru 19MM BRASS	NOS	2
28	Hull Thru 1.5" BRASS	NOS	2
29	Hose Connection 1.5" BRASS	NOS	2
30	Hose Clamp SS HD 1.5"	NOS	4
31	Ball Valve 1.5" SS	NOS	2

32	Hose Connection 1.5" BRASS	NOS	1
33	Hose Clamp SS HD 1.5"	NOS	2
34	SS Pipe 2" 6MM	FT	1
35	Hose Connection 1.5" SS	NOS	1
36	Hose Clamp SS HD 1.5"	NOS	4
37	Hose Connection 18MM SS	NOS	1
38	Hose Clamp SS HD ¾"	NOS	3
39	Recor Inlet Outlet Hose Connection BRASS 14MM	NOS	2
40	Hose Connection 14MM (Bend Type)	NOS	1
41	Hull Thru 14MM BRASS	NOS	1
42	Hose Connection 14MM (Bend Type)	NOS	1
43	Hull Thru 14MM BRASS	NOS	1
44	SS Hull Thru 1"	NOS	1
45	SS BALL VALVE 1" 316	NOS	1
46	SS Hose Connection 1"	NOS	1
47	Hose Clamp SS HD 1"	NOS	2
48	Overflow 19MM SS	NOS	1
49	Hull Thru 12MM SS	NOS	1
50	Hose Connection 12MM SS	NOS	1
51	Hose Clip SS ½"	NOS	3
52	Engine Start Battery 200AH	NOS	2
53	Engine Start Battery Switch	NOS	2
54	Fuel tank level gauge	NOS	1
55	Water tank level gauge	NOS	1