



**MALDIVES INDUSTRIAL FISHERIES  
COMPANY LTD (MIFCO)**

**COMPETITIVE BIDDING  
FOR  
SUPPLY and INSTALLATION OF GENERATORS  
AT KOODDOO AND THINADHOO**

REFERENCE NO: 134-PRO/I/2023/14 – Version 2  
DATE: 27<sup>th</sup> FEBRUARY 2023

**COMPETITIVE BIDDING FOR**  
**THE SUPPLY AND INSTALLATION OF DIESEL GENERATOR SETS**  
**AT KOODDOO FISHERIES COMPLEX AND SUPPLY AND INSTALLATION**  
**OF GENERATORS AND ELECTRICAL POWER AT THINADHOO**  
**REFRIGERATION COMPLEX**

<b>BID REFERENCE</b>	134-PRO/I/2023/14
<b>REQUEST FOR PROPOSALS (RFP)</b>	15 <sup>th</sup> February 2023
<b>LAST DATE AND TIME FOR RECEIPT OF BIDS</b>	06 <sup>th</sup> March 2023 01:00 pm, Male' Time
<b>TIME AND DATE OF OPENING OF BIDS</b>	06 <sup>th</sup> March 2023 02:00 pm, Male' Time
<b>BID SUBMISSION</b>	Bids should be submitted <b>only to</b> <b>contract@mifco.mv email.</b>
<b>PLACE OF OPENING OF BIDS</b>	Via Microsoft Teams Head Office, Maldives Industrial Company Ltd. Hilaalee Magu, Maafannu, Male Maldives.
<b>ADDRESS OF COMMUNICATION</b>	Procurement Department, Maldives Industrial Fisheries Company, Hilaalee Magu, Maafannu, Male, Maldives



## SECTION I:

# INVITATION FOR BIDS (IFB)



**COMPETITIVE BIDDING FOR**  
**THE SUPPLY, INSTALLATION, SYNCHRONIZATION OF DIESEL GENERATOR SETS**

**SECTION I.**  
**INVITATION FOR BIDS (IFB)**

Maldives Industrial Fisheries Company Ltd (MIFCO), a subsidiary of State Trading Organization Plc. is seeking to purchase, supply and install 2 sets of diesel powered generator for one of its operating centres, Kooddoo, at an extended part the Power House in Kooddoo and connect the generators to the main power grid, synchronize with the existing power grid, test and commission the generator sets.

Mifco also seeks to purchase, supply and install 2 diesel generator sets at a refrigeration complex being built at G. Dh. Thinadhoo and supply power to the new refrigeration complex. Maldives Industrial Fisheries Company is inviting bids from interested and eligible bidders for: purchase, conveyance, installation, synchronizing, testing and commissioning of 3 Phase, 50Hz, 415V, Diesel generators sets, as described in the below table, including their panel board as per technical details given in Section V of this bid document. The generator sets in Kooddoo are to be synchronized with the existing power grid of Kooddoo Fisheries Complex.

Type of Generator Set	Basic Power	Centre	Qty
Diesel powered Heat Exchanger cooled	1250 kVA, 415/220V, 50 Hz	Kooddoo Fisheries Complex, GA. Kooddoo, Maldives	Two
Diesel powered Heat exchanger cooled	1250 kVA, 415/220V, 50 Hz	Thinadhoo Refrigeration Complex	Two

The provisions in the Instructions to Bidders and in the General Conditions of contract (GCC) are based according to the guidelines set in this bid document.

All bids must be accompanied by a bid security as specified in the bid document and must be submitted by email to [contract@mifco.mv](mailto:contract@mifco.mv) on the specified date and time indicated above.

Bids will be opened in the presence of Bidders' representatives who choose to attend on the specified date and time.

In the event of the date specified for bid receipt and opening being declared as a closed holiday for the purchaser's office, the due date for submission of bids and opening of bids will be the following working day at the appointed times.

Site visits from Male to Kooddoo and Thinadhoo will have to be arranged by the bidder and date and time of visit must be informed to MIFCO at least 2 days before the date of visit.



**SECTION II:**  
**INSTRUCTIONS TO BIDDER**  
**(Bid Data Sheet)**



**SECTION II: INSTRUCTIONS TO BIDDERS**

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## A. Introduction

<b>1. Eligible Bidders</b>	
1.1	Invitation for bids is open to all suppliers of Cummins Diesel generators who are authorized by an authentic Cummins dealer. Certificate of authenticity should accompany the bid documents.
1.2	A bidder should not be a party that has undertaken any project with MIFCO in the past that has not been delivered completely.
1.3	A bidder should not be a party that has association with a party that has undertaken any project with MIFCO in the past that has not delivered completely.
1.4	A bidder shall not be under a declaration of ineligibility for corrupt and fraudulent practices issued by any court of law in the Maldives.
<b>2. Cost of Bidding</b>	
2.1	The Bidder shall bear all costs associated with the preparation and submission of its bid, and <b>Maldives Industrial Fisheries Company</b> , hereinafter referred to as "the Purchaser", will in no case be responsible or liable for these costs, regardless of the conduct or outcome of the bidding process.

## B. The Bidding Documents

### 3. Content of Bidding Documents

3.1 The goods required, bidding procedures and contract terms are prescribed in the bidding documents. In addition to the Invitation for Bids, the bidding documents include:

- a. Instruction to Bidders (ITB) ;
- b. General Conditions of Contract (GCC);
- c. Special Conditions of Contract (SCC);
- d. Schedule of Requirements;
- e. Technical Specifications;
- f. Qualification Requirements;
- g. Bid Form, Price Schedule,
- h. Contract Form;
- i. Performance Form;
- j. Manufacturer' s Authorization Form;
- k. Bank Guarantee for Advance Payment Form;
- l. Bid Security Form

3.2 The Bidder is expected to examine all instructions, forms, terms, and specifications in the bidding documents. Failure to furnish all information required by the bidding documents or submission of a bid not substantially responsive to the bidding



documents in every respect will be at the Bidder's risk and may result in rejection of its bid.

#### **4. Clarification of Bidding Documents**

- 4.1 A prospective Bidder requiring any clarification of the bidding documents may notify the Purchaser in writing by email at the Purchaser's mailing address indicated in the Invitation for Bids. The Purchaser will respond in writing to any request for clarification of the bidding documents which it receives no later than 15 days prior to the deadline for submission of bids prescribed by the Purchaser. Written copies of the Purchaser's response (including an explanation of the query but without identifying the source of inquiry) will be sent to all prospective bidders which have received the bidding documents.

#### **5. Amendment of Bidding Documents**

- 5.1 At any time prior to the deadline for submission of bids, the Purchaser may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder, modify the bidding documents by amendment.
- 5.2 All prospective bidders who have received the bidding documents will be notified of the amendment in writing or by cable or by fax, and will be binding on them.
- 5.3 In order to allow prospective bidders reasonable time in which to take the amendment into account in preparing their bids, the Purchaser, at its discretion, may extend the deadline for the submission of bids.

### **C. Preparation of Bids**

#### **6. Language of Bid**

- 6.1 The bid prepared by the Bidder, as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Purchaser shall be written in English language. Supporting documents and printed literature furnished by the Bidder may be in another language provided they are accompanied by an accurate translation of the relevant passages in the English language in which case, for purposes of interpretation of the Bid, the translation shall govern.

#### **7. Documents Constituting the Bid**

- 7.1 The bid prepared by the Bidder shall comprise the following components:
- A Bid Form and a Price Schedule completed as described in the form.
  - A bid security furnished in accordance with ITB Clause 12



## 8. Bid Form

- 8.1 The Bidder shall complete the Bid Form and the appropriate Price Schedule furnished in the bidding documents, indicating the goods to be supplied, a brief description of the goods, and their country of origin, quantity and prices.

## 9. Bid Prices

- 9.1 The Bidder shall indicate on the Price Schedule the unit prices and total bid prices of the goods it proposes to supply under the Contract. However, Bidders shall quote for the complete requirement of goods and services specified under the schedule on a single responsibility basis, failing which such bids will not be taken into account for evaluation and will not be considered for award.
- 9.2 Prices indicated on the Price Schedule shall be entered separately as detailed in Annex 1 – excluding any Maldivian duties.
- 9.3 The Bidder's separation of the price components in accordance with ITB Clause 9.2 above will be solely for the purpose of facilitating the comparison of bids by the Purchaser and will not in any way limit the Purchaser's right to contract on any of the terms offered.
- 9.4 Fixed Price. Prices quoted by the Bidder shall be fixed during the Bidder's performance of the Contract and not subject to variation on any account. A bid submitted with an adjustable price quotation will be treated as non-responsive and rejected, pursuant to ITB Clause 21.

## 10. Bid Currencies

- 10.1 Prices shall be quoted in United States Dollars:

## 11. Documents Establishing Bidder's Eligibility and Qualifications

- 11.1 Pursuant to ITB Clause 8, the Bidder shall furnish, as part of its bid, the documentary evidence of the Bidder's qualifications to perform the Contract if its bid is accepted, shall establish to the Purchaser's satisfaction:
- (a) that, in the case of a Bidder offering to supply goods under the contract which the Bidder did not manufacture or otherwise produce, the Bidder has been duly authorized (as per authorization form in Section X) by the goods' Manufacturer or producer to supply the goods in Maldives.

## 12. Bid Security



- 12.1 Pursuant to ITB clause 7, the bidder shall furnish, as part of its bid, a bid security in the amount as specified in Section V – Schedule of Requirements.
- 12.2 The bid security is required to protect the Purchaser against the risk of Bidder's conduct which would warrant the security's forfeiture, pursuant to ITB Clause 12.7.
- 12.3 Bid security will be denominated in United States Dollars and shall
- (a) At the bidder's option, be in the form of either a certified cheque, letter of credit, a demand draft, or a bank guarantee from a Bank located in the Maldives or by a reputable banking institution selected by the bidder and located abroad.
  - (b) be substantially in accordance with one of the forms of bid security included in Section XI or other form approved by the Purchaser prior to bid submission;
  - (c) be payable promptly upon written demand by the Purchaser in case any of the conditions listed in ITB Clause 12.7 are invoked;
  - (d) be submitted in its original form; copies will not be accepted.
  - (e) Remain valid for original validity period of the bid, or beyond any period of extension subsequently requested under ITB clause 13.2
- 12.4 Any bid not secured in accordance with ITB Clauses 12.1 and 12.3 above will be rejected by the Purchaser as non-responsive, pursuant to ITB Clause 21.
- 12.5 Unsuccessful bidder's bid securities will be discharged/returned as promptly as possible but not later than 30 days after the expiration of the period of bid validity prescribed by the Purchaser, pursuant to ITB Clause 13.
- 12.6 The successful Bidder's bid security will be discharged upon the Bidder signing the Contract, pursuant to ITB Clause 29, and furnishing the performance security, pursuant to ITB Clause 30.
- 12.7 The bid security may be forfeited:
- (a) if a Bidder (i) withdraws its bid during the period of bid validity specified by the Bidder on the Bid Form; or (ii) does not accept the correction of errors pursuant to ITB Clause 21.2; or
  - (b) in case of a successful Bidder, if the Bidder fails:
    - (i) to sign the Contract in accordance with ITB Clause 29; or
    - (ii) to furnish performance security in accordance with ITB Clause 30.

### 13. Period of Validity of Bids

- 13.1 Bids shall remain valid for 90 days after the deadline for submission of bids prescribed by the Purchaser, pursuant to ITB Clause 16. A bid valid for a shorter period shall be rejected by the Purchaser as non-responsive.
- 13.2 In exceptional circumstances, the Purchaser may solicit the Bidder's consent to an extension of the period of validity. The request and the responses thereto shall be



made in writing by email. The bid security provided under ITB Clause 12 shall also be suitably extended. A Bidder may refuse the request without forfeiting its bid security. A Bidder granting the request will not be required nor permitted to modify its bid.

- 13.3 Bid evaluation will be based on the original bid prices.

#### **14. Format and Signing of Bid**

- 14.1 The Bidder shall prepare two copies of the bid, clearly marking each "Original Bid" and "Copy Bid", as appropriate. In the event of any discrepancy between them, the original shall govern.
- 14.2 The original and all copies of the bid shall be typed or written in indelible ink and shall be signed by the Bidder or a person or persons duly authorized to bind the Bidder to the Contract. The latter authorization shall be indicated by written power-of-attorney accompanying the bid. All pages of the bid, except for unamended printed literature, shall be initialed by the person or persons signing the bid.
- 14.3 Any interlineations, erasures or overwriting shall be valid only if they are initialed by the persons or persons signing the bid.
- 14.4 The Bidder shall furnish information as described in the Form of Bid on commissions or gratuities, if any, paid or to be paid to agents relating to this Bid, and to contract execution if the Bidder is awarded the contract.

### **D. Submission of Bids**

#### **15. Delivery address of Bids**

- 15.1 The Bidders shall submit all the documents related to the bid by email to [contract@mifco.mv](mailto:contract@mifco.mv). The Company reserves the right to reject bids addressed to or CC to any other email address.

#### **16. Deadline for Submission of Bids**

- 16.1 Bids must be received by the Purchaser at the address specified under ITB Clause 15.1 no later than the time and date specified in the Invitation for Bids (Section I).
- 16.2 The Purchaser may, at its discretion, extend this deadline for submission of bids by amending the bid documents in accordance with ITB Clause 5, in which case all



rights and obligations of the Purchaser and Bidders previously subject to the deadline will thereafter be subject to the deadline as extended.

### 17. Late Bids

- 17.1 Any bid received by the Purchaser after the deadline for submission of bids prescribed by the Purchaser, pursuant to ITB Clause 16, will be rejected.

### 18. Modification and Withdrawal of Bids

- 18.1 The Bidder may modify or withdraw its bid after the bid's submission, provided that written notice of the modification or withdrawal is received by the Purchaser prior to the deadline prescribed for submission of bids.
- 18.2 The Bidder's modification or withdrawal notice shall be prepared and dispatched in accordance with the provisions of ITB Clause 15. A withdrawal notice may also be sent by email but followed by a signed confirmation copy, post marked not later than the deadline for submission of bids.
- 18.3 No bid may be modified subsequent to the deadline for submission of bids.
- 18.4 No bid may be withdrawn in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder on the bid form. Withdrawal of a bid during this interval may result in the Bidder's forfeiture of its bid security, pursuant to ITB Clause 12.7.

## E. Bid Opening and Evaluation of Bids

### 19. Opening of Bids by the Purchaser

- 19.1 The Purchaser will open all bids, in the presence of Bidders' representatives who choose to attend, **at 02:00 PM on 06<sup>th</sup> March 2023 (Male' time)** in the following online platform:  
**Via Microsoft Teams, Head Office, Maldives Industrial Fisheries Company Ltd. Hilaalee Magu, Maafannu, Male' , Maldives.**
- 19.2 The bidders' names, bid modifications or withdrawals, bid prices, discounts, and the presence or absence of requisite bid security and such other details as the Purchaser, at its discretion, may consider appropriate, will be announced at the opening. No bid shall be rejected at bid opening, except for late bids.



- 19.3 Bids (and modifications sent pursuant to ITB Clause 18.2) that are not opened and read out at bid opening shall not be considered further for evaluation, irrespective of the circumstances.
- 19.4 The Purchaser will record the online session of the bid opening.

## 20. Clarification of Bids

- 20.1 During evaluation of bids, the Purchaser may, at its discretion, ask the Bidder for a clarification of its bid. The request for clarification and the response shall be in writing and no change in prices or substance of the bid shall be sought, offered or permitted.

## 21. Preliminary Examination

- 21.1 The Purchaser will examine the bids to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed, and whether the bids are generally in order. Bids from Agents, without proper authorization from the manufacturer as per Section X, shall be treated as non-responsive.
- 21.2 Arithmetical errors will be rectified on the following basis. If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected. If there is a discrepancy between words and figures, the amount in words will prevail. If the supplier does not accept the correction of errors, its bid will be rejected and its bid security may be forfeited.
- 21.3 The Purchaser may waive any minor informality or non-conformity or irregularity in a bid which does not constitute a material deviation, provided such a waiver does not prejudice or affect the relative ranking of any Bidder.
- 21.4 Prior to the detailed evaluation, pursuant to ITB Clause 22, the Purchaser will determine the substantial responsiveness of each bid to the bidding documents. For purposes of these Clauses, a substantially responsive bid is one which conforms to all the terms and conditions of the bidding documents without material deviations. Deviations from or objections or reservations to critical provisions such as those concerning Performance Security (GCC Clause 7), Warranty (GCC Clause 15), Force Majeure (GCC Clause 25), Limitation of liability (GCC Clause 29), Applicable law (GCC Clause 31), and Taxes & Duties (GCC Clause



33) will be deemed to be a material deviation. The Purchaser's determination of a bid's responsiveness is to be based on the contents of the bid itself without recourse to extrinsic evidence.

- 21.5 If a bid is not substantially responsive, it will be rejected by the Purchaser and may not subsequently be made responsive by the Bidder by correction of the non-conformity.

## 22. Evaluation and Comparison of Bids

- 22.1 The Purchaser will evaluate and compare the bids which have been determined to be substantially responsive, pursuant to ITB Clause 21.
- 22.2 The Purchaser's evaluation of a bid will exclude and not take into account:
- (a) Future sales and other similar taxes, which will be payable on the goods if a contract is awarded to the Bidder;
  - (b) Any allowance for price adjustment during the period of execution of the Contract, if provided in the bid.

## 23. Contacting the Purchaser

- 23.1 Subject to ITB Clause 20, no Bidder shall contact the Purchaser on any matter relating to its bid, from the time of the bid opening to the time the Contract is awarded. If the bidder wishes to bring additional information to the notice of the purchaser, it should do so in writing.
- 23.2 Any effort by a Bidder to influence the Purchaser in its decisions on bid evaluation, bid comparison or contract award may result in rejection of the Bidder's bid.

## F. Award of Contract

### 24. Post-qualification

- 24.1 There will be no post-qualification check for a bidder after a successful bidder is chosen.

### 25. Award Criteria

- 25.1 Subject to ITB Clause 27, the Purchaser will award the Contract to the successful Bidder whose bid has been determined to be substantially responsive and has been determined as the lowest evaluated bid.



## 26. Purchaser's right to vary Quantities at Time of Award

- 26.1 The Purchaser reserves the right at the time of Contract award to increase or decrease by up to 15 percent of the quantity of goods and services originally specified in the Schedule of Requirements without any change in unit price or other terms and conditions.

## 27. Purchaser's Right to Accept Any Bid and to Reject Any or All Bids

- 27.1 The Purchaser reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to contract award, without thereby incurring any liability to the affected Bidder or bidders.

## 28. Notification of Award

- 28.1 Prior to the expiration of the period of bid validity, the Purchaser will notify the successful bidder in writing by registered letter or by email, to be confirmed in writing by registered letter, that its bid has been accepted.
- 28.2 The notification of award will constitute the formation of the Contract.
- 28.3 Upon the successful Bidder's furnishing of performance security pursuant to ITB Clause 30, the Purchaser will promptly notify the name of the winning bidder to each unsuccessful Bidder.
- 28.4 If, after notification of award, a Bidder wishes to ascertain the grounds on which its bid was not selected, it should address its request to the Purchaser. The Purchaser will promptly respond in writing to the unsuccessful Bidder and will discharge its bid security, pursuant to ITB Clause 12.

## 29. Signing of Contract

- 29.1 At the same time as the Purchaser notifies the successful bidder that its bid has been accepted, the Purchaser will send the bidder the Contract Form provided in the bidding documents, incorporating all agreements between the parties.
- 29.2 Within 21 days of receipt of the Contract Form, the successful bidder shall sign and date the Contract and return it to the Purchaser.

## 30. Performance Security

- 30.1 Within 21 days of the receipt of notification of award from the Purchaser, the successful Bidder shall furnish the performance security in accordance with the



Conditions of Contract, in the Performance Security Form provided in the bidding documents or in another form acceptable to the Purchaser. The amount of Performance Security shall be 5% of the total contract value.

- 30.2 Failure of the successful bidder to comply with the requirement of ITB Clause 29.2 or ITB Clause 30.1 shall constitute sufficient grounds for the annulment of the award and the forfeiture of the bid security, in which event the Purchaser may make the award to the next lowest evaluated bidder or call for new bids.

### 31. Corrupt or Fraudulent Practices

- 31.1 It is the policy of Mifco that Bidders, Suppliers, and Contractors, and their agents (whether declared or not), personnel, subcontractors, sub-consultants, service providers and suppliers under Mifco's contracts, observe the highest standard of ethics during the procurement and execution of such contracts.

In pursuance of this policy, Mifco:

- (a) defines, for the purposes of this provision, the terms set forth below as follows:

- (i) "corrupt practice" means the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of a public official in the procurement process or in contract execution;
- (ii) "fraudulent practice" means a misrepresentation or omission of facts in order to influence a procurement process or the execution of a contract;
- (iii) "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of the borrower, designed to establish bid prices at artificial, noncompetitive levels; and
- (iv) "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the procurement process or affect the execution of a contract;
- (v) "Obstructive practice" is:



deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede an investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and /or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation.

- (a) will reject a proposal for award if it determines that the Bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive practices in competing for the Contract in question.

31.2 Furthermore, Bidders shall be aware of the provision stated in sub-clause 24.1 (c) of the General Conditions of Contract.



## SECTION III:

# GENERAL CONDITIONS OF CONTRACT



**SECTION III: GENERAL CONDITIONS OF CONTRACT**

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## General Conditions of Contract

### 1. Definitions

1.1 In this Contract, the following terms shall be interpreted as indicated:

- (a) "The Contract" means the agreement entered into between the Purchaser and the Supplier, as recorded in the Contract Form signed by the parties, including all the attachments and appendices thereto and all documents incorporated by reference therein;
- (b) "The Contract Price" means the price payable to the Supplier under the Contract for the full and proper performance of its contractual obligations;
- (c) "The Goods" means all the equipment, machinery, and/or other materials which the Supplier is required to supply to the Purchaser under the Contract;
- (d) "Services" means services ancillary to the supply of the Goods, such as transportation and insurance, and any other incidental services, such as installation, commissioning, provision of technical assistance, training and other obligations of the Supplier covered under the Contract;
- (e) "GCC" means the General Conditions of Contract contained in this section.
- (f) "SCC" means the Special Conditions of Contract.
- (g) "The Purchaser" means the organization purchasing the Goods, as named in SCC.
- (h) "The Purchaser's country" is the country named in SCC.
- (i) "The Supplier" means the individual or firm supplying the Goods and Services under this Contract.
- (j) "The Project Site" , where applicable, means the place or places named in SCC.
- (k) "Day" means calendar day.



## 2. Application

2.1 These General Conditions shall apply to the extent that they are not superseded by provisions in other parts of the Contract.

## 3. Country of Origin

3.1 For purposes of this Clause "origin" means the place where the Goods are mined, grown or produced, or from which the Services are supplied. Goods are produced when, through manufacturing, processing or substantial and major assembling of components, a commercially recognized new product results that is substantially different in basic characteristics or in purpose or utility from its components.

3.2 The origin of Goods and Services is distinct from the nationality of the Supplier.

## 4. Standards

4.1 The Goods supplied under this Contract shall conform to the standards mentioned in the Technical Specifications, and, when no applicable standard is mentioned, to the authoritative standard appropriate to the Goods' country of origin and such standards shall be the latest issued by the concerned institution.

## 5. Use of Contract Documents and Information

5.1 The Supplier shall not, without the Purchaser's prior written consent, disclose the Contract, or any provision thereof, or any specification, plan, drawing, pattern, sample or information furnished by or on behalf of the Purchaser in connection therewith, to any person other than a person employed by the Supplier in performance of the Contract. Disclosure to any such employed person shall be made in confidence and shall extend only so far as may be necessary for purposes of such performance.

5.2 The Supplier shall not, without the Purchaser's prior written consent, make use of any document or information enumerated in GCC Clause 5.1 except for purposes of performing the Contract.

5.3 Any document, other than the Contract itself, enumerated in GCC Clause 5.1 shall remain the property of the Purchaser and shall be returned (in all copies) to the Purchaser on completion of the Supplier's performance under the Contract if so required by the Purchaser.



## 6. Patent Rights

6.1 The Supplier shall indemnify the Purchaser against all third-party claims of infringement of patent, trademark or industrial design rights arising from use of the Goods or any part thereof in Maldives.

## 7. Performance Security

7.1 Within 21 days of receipt of the notification of contract award, the Supplier shall furnish performance security in the amount specified in SCC.

7.2 The proceeds of the performance security shall be payable to the Purchaser as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract.

7.3 The Performance Security shall be denominated in United States Dollars and shall be in one of the following forms:

- (a) A Bank guarantee or irrevocable Letter of Credit, issued by a nationalized/scheduled bank located in Maldives or a bank located abroad acceptable to the Purchaser, in the form provided in the bidding documents or another form acceptable to the Purchaser; or
- (b) A cashier's cheque, certified cheque, or demand draft.

7.4 The performance security will be discharged by the Purchaser and returned to the Supplier not later than 30 days following the date of completion of the Supplier's performance obligations, including any warranty obligations, unless specified otherwise in SCC.

## 8. Inspections and Tests

8.1 The Purchaser or its representative shall have the right to inspect and/or to test the Goods to confirm their conformity to the Contract specifications at no extra cost to the Purchaser. SCC and the Technical Specifications shall specify what inspections and tests the Purchaser requires and where they are to be conducted. The Purchaser shall notify the Supplier in writing in a timely manner of the identity of any representatives retained for these purposes.

8.2 The inspections and tests may be conducted on the premises of the Supplier or its subcontractor(s), at point of delivery and/or at the Goods final destination. If conducted on the premises of the Supplier or its subcontractor(s), all reasonable facilities and assistance,



including access to drawings and production data - shall be furnished to the inspectors at no charge to the Purchaser.

8.3 Should any inspected or tested Goods fail to conform to the specifications, the Purchaser may reject the goods and the Supplier shall either replace the rejected Goods or make alterations necessary to meet specification requirements free of cost to the Purchaser.

8.4 The Purchaser's right to inspect, test and, where necessary, reject the Goods after the Goods' arrival at Project Site shall in no way be limited or waived by reason of the Goods having previously been inspected, tested and passed by the Purchaser or its representative prior to the Goods shipment.

8.5 Nothing in GCC Clause 8 shall in any way release the Supplier from any warranty or other obligations under this Contract.

## 9. Packing

9.1 The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination as indicated in the Contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the Goods' final destination and the absence of heavy handling facilities at all points in transit.

9.2 The packing, marking and documentation within and outside the packages shall comply strictly with such special requirements as shall be provided for in the Contract including additional requirements, if any, specified in SCC and in any subsequent instructions ordered by the Purchaser.

## 10. Delivery and Documents

10.1 Delivery of the Goods shall be made by the Supplier in accordance with the terms specified by the Purchaser in the Notification of Award. The details of shipping and/or other documents to be furnished by the supplier are specified in SCC.



## 11. Insurance

11.1 The Goods supplied under the Contract shall be fully insured in Maldivian Rupees against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery in the manner specified in SCC.

## 12. Transportation

12.1 Where the Supplier is required under the Contract to transport the Goods to a specified place of destination within Maldives defined as Project site, transport to such place of destination in Maldives including insurance, as shall be specified in the Contract, shall be arranged by the Supplier, and the related cost shall be included in the Contract Price.

## 13. Incidental Services

13.1 The supplier may be required to provide any or all of the following services, including additional services, if any, specified in SCC:

- (a) Performance or supervision of the on-site assembly and/or start-up of the supplied Goods;
- (b) Furnishing of tools required for assembly and/or maintenance of the supplied Goods;
- (c) Furnishing of detailed operations and maintenance manual for each appropriate unit of supplied Goods;
- (d) performance or supervision or maintenance and/or repair of the supplied Goods, for a period of time agreed by the parties, provided that this service shall not relieve the Supplier of any warranty obligations under this Contract; and
- (e) Training of the Purchaser's personnel, at the Supplier's plant and/or on-site, in assembly, start-up, operation, maintenance and/or repair of the supplied Goods.

13.2 Prices charged by the Supplier for incidental services, if not included in the Contract Price for the Goods, shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the Supplier for similar services.



## 14. Spare Parts

14.1 As specified in the SCC, the Supplier may be required to provide any or all of the following materials, notifications, and information pertaining to spare parts manufactured or distributed by the Supplier:

- (a) such spare parts as the Purchaser may elect to purchase from the Supplier, providing that this election shall not relieve the Supplier of any warranty obligations under the Contract; and
- (b) In the event of termination of production of the spare parts:
  - (i) Advance notification to the Purchaser of the pending termination, in sufficient time to permit the Purchaser to procure needed requirements; and
  - (ii) Following such termination, furnishing at no cost to the Purchaser, the blueprints, drawings and specifications of the spare parts, if requested.

## 15. Warranty

15.1 The Supplier warrants that the Goods supplied under this Contract are new, unused, of the most recent or current models and that they incorporate all recent improvements in design and materials unless provided otherwise in the Contract. The Supplier further warrants that all Goods supplied under this Contract shall have no defect arising from design, materials or workmanship (except when the design and/or material is required by the Purchaser's Specifications) or from any act or omission of the Supplier, that may develop under normal use of the supplied Goods in the conditions prevailing in the country of final destination.

15.2 This warranty shall remain valid for 12 months after the Goods or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the Contract, or for 18 months after the date of shipment from the place of loading whichever period concludes earlier, unless specified otherwise in the SCC.

15.3 The Purchaser shall promptly notify the Supplier in writing of any claims arising under this warranty.

15.4 Upon receipt of such notice, the Supplier shall, within the period specified in SCC and with all reasonable speed, repair or replace the defective Goods or parts thereof, without cost to the



Purchaser other than, where applicable, the cost of inland delivery of the repaired or replaced Goods or parts from ex-works or ex-factory or ex-showroom to the final destination.

15.5 If the Supplier, having been notified, fails to remedy the defect(s) within the period specified in SCC, the Purchaser may proceed to take such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the Purchaser may have against the Supplier under the Contract.

## 16. Payment

16.1 The method and conditions of payment to be made to the Supplier under this Contract shall be specified in the SCC.

16.2 The Supplier's request(s) for payment shall be made to the Purchaser in writing, accompanied by an invoice describing, as appropriate, the Goods delivered and the Services performed, and by documents, submitted pursuant to GCC Clause 10, and upon fulfillment of other obligations stipulated in the contract.

16.3 Payments shall be made promptly by the Purchaser but in no case later than sixty (60) days after submission of the invoice or claim by the Supplier.

16.4 Payment shall be made in United States Dollar

## 17. Prices

17.1 Prices charged by the Supplier for Goods delivered and Services performed under the Contract shall not vary from the prices quoted by the Supplier in its bid, with the exception of any price adjustments authorized in SCC or in the Purchaser's request for bid validity extension, as the case may be.

## 18. Change Orders

18.1 The Purchaser may at any time, by written order given to the Supplier pursuant to GCC Clause 31, make changes within the general scope of the Contract in any one or more of the following:

- (a) Drawings, designs, or specifications, where Goods to be furnished under the Contract are to be specifically manufactured for the Purchaser;
- (b) The method of shipping or packing;



- (c) The place of delivery; and/or
- (d) The Services to be provided by the Supplier.

18.2 If any such change causes an increase or decrease in the cost of, or the time required for, the Supplier's performance of any provisions under the Contract, an equitable adjustment shall be made in the Contract Price or delivery schedule, or both, and the Contract shall accordingly be amended. Any claims by the Supplier for adjustment under this clause must be asserted within thirty (30) days from the date of the Supplier's receipt of the Purchaser's change order.

### 19. Contract Amendments

19.1 Subject to GCC Clause 18, no variation in or modification of the terms of the Contract shall be made except by written amendment signed by the parties.

### 20. Assignment

20.1 The Supplier shall not assign, in whole or in part, its obligations to perform under the Contract, except with the Purchaser's prior written consent.

### 21. Subcontracts

21.1 The Supplier shall notify the Purchaser in writing of all subcontracts awarded under this Contract if not already specified in the bid. Such notification, in his original bid or later, shall not relieve the Supplier from any liability or obligation under the Contract.

21.2 Subcontracts must comply with the provisions of GCC Clause 3.

### 22. Delays in the Supplier's Performance

22.1 Delivery of the Goods and performance of the Services shall be made by the Supplier in accordance with the time schedule specified by the Purchaser in the Schedule of Requirements.

22.2 If at any time during performance of the Contract, the Supplier or its sub-contractor(s) should encounter conditions impeding timely delivery of the Goods and performance of Services, the Supplier shall promptly notify the Purchaser in writing of the fact of the delay, its likely duration



and its cause(s). As soon as practicable after receipt of the Supplier' s notice, the Purchaser shall evaluate the situation and may, at its discretion, extend the Supplier' s time for performance with or without liquidated damages, in which case the extension shall be ratified by the parties by amendment of the Contract.

22.3 Except as provided under GCC Clause 25, a delay by the Supplier in the performance of its delivery obligations shall render the Supplier liable to the imposition of liquidated damages pursuant to GCC Clause 23, unless an extension of time is agreed upon pursuant to GCC Clause 22.2 without the application of liquidated damages.

### 23. Liquidated Damages

23.1 Subject to GCC Clause 25, if the Supplier fails to deliver any or all of the Goods or to perform the Services within the period(s) specified in the Contract, the Purchaser shall, without prejudice to its other remedies under the Contract, deduct from the Contract Price, as liquidated damages, a sum equivalent to the percentage specified in SCC of the delivered price of the delayed Goods or unperformed Services for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of the Percentage specified in SCC. Once the maximum is reached, the Purchaser may consider termination of the Contract pursuant to GCC Clause 24.

### 24. Termination for Default

24.1 The Purchaser may, without prejudice to any other remedy for breach of contract, by written notice of default sent to the Supplier, terminate the Contract in whole or part:

- (a) if the Supplier fails to deliver any or all of the Goods within the period(s) specified in the Contract, or within any extension thereof granted by the Purchaser pursuant to GCC Clause 22; or
- (b) If the Supplier fails to perform any other obligation(s) under the Contract.
- (c) If the Supplier, in the judgment of the Purchaser has engaged in fraud and corruption, as defined in GCC Clause 34, in competing for or in executing the Contract.

24.2 In the event the Purchaser terminates the Contract in whole or in part, pursuant to GCC Clause 24.1, the Purchaser may procure, upon such terms and in such manner as it deems appropriate, Goods or Services similar to those undelivered, and the Supplier shall be liable to the Purchaser for any excess costs for such similar Goods or Services. However, the Supplier shall continue the performance of the Contract to the extent not terminated.



## 25. Force Majeure

- 25.1 Notwithstanding the provisions of GCC Clauses 22, 23, 24, the Supplier shall not be liable for forfeiture of its performance security, liquidated damages or termination for default, if and to the extent that, its delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.
- 25.2 For purposes of this Clause, "Force Majeure" means an event beyond the control of the Supplier and not involving the Supplier's fault or negligence and not foreseeable. Such events may include, but are not limited to, acts of the Purchaser either in its sovereign or contractual capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.
- 25.3 If a Force Majeure situation arises, the Supplier shall promptly notify the Purchaser in writing of such conditions and the cause thereof. Unless otherwise directed by the Purchaser in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

## 26. Termination for Insolvency

- 26.1 The Purchaser may at any time terminate the Contract by giving written notice to the Supplier, if the Supplier becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation to the Supplier, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the Purchaser.

## 27. Termination for Convenience

- 27.1 The Purchaser, by written notice sent to the Supplier, may terminate the Contract, in whole or in part, at any time for its convenience. The notice of termination shall specify that termination is for the Purchaser's convenience, the extent to which performance of the Supplier under the Contract is terminated, and the date upon which such termination becomes effective.
- 27.2 The Goods that are complete and ready for shipment within 30 days after the Supplier's receipt of notice of termination shall be accepted by the Purchaser at the Contract terms and prices. For the remaining Goods, the Purchaser may elect:
- (a) to have any portion completed and delivered at the Contract terms and prices; and/or



- (b) to cancel the remainder and pay to the Supplier an agreed amount for partially completed Goods and for materials and parts previously procured by the Supplier.

## 28. Settlement of Disputes

28.1 The Purchaser and the supplier shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute arising between them under or in connection with the Contract.

28.2 If, after thirty (30) days, the parties have failed to resolve their dispute or difference by such mutual consultation, then either the Purchaser or the Supplier may give notice to the other party of its intention to commence arbitration, as hereinafter provided, as to the matter in dispute, and no arbitration in respect of this matter may be commenced unless such notice is given.

28.2.1 Any dispute or difference in respect of which a notice of intention to commence arbitration has been given in accordance with this Clause shall be finally settled by arbitration. Arbitration may be commenced prior to or after delivery of the Goods under the Contract.

28.2.2 Arbitration proceedings shall be conducted in accordance with the rules of procedure specified in the SCC.

28.3 Notwithstanding any reference to arbitration herein,

- (a) The parties shall continue to perform their respective obligations under the Contract unless they otherwise agree; and
- (b) The Purchaser shall pay the Supplier any monies due the Supplier.

## 29. Limitation of Liability

29.1 Except in cases of criminal negligence or willful misconduct, and in the case of infringement pursuant to Clause 6,

- (a) The Supplier shall not be liable to the Purchaser, whether in contract, tort, or otherwise, for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the Supplier to pay liquidated damages to the Purchaser; and



- (b) The aggregate liability of the Supplier to the Purchaser, whether under the Contract, in tort or otherwise, shall not exceed the total Contract Price, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment.

### 30. Governing Language

30.1 The contract shall be written in English language. Subject to GCC Clause 30, English language version of the Contract shall govern its interpretation. All correspondence and other documents pertaining to the Contract which are exchanged by the parties shall be written in the same language.

### 31. Applicable Law

31.1 The Contract shall be interpreted in accordance with the laws of the Republic of Maldives

### 32. Notices

32.1 Any notice given by one party to the other pursuant to this Contract shall be sent to other party in writing or by e-mail or facsimile and confirmed in writing to the other Party' s address specified in SCC.

32.2 A notice shall be effective when delivered or on the notice's effective date, whichever is later.

### 33. Taxes and Duties

33.1 Price should be excluding local custom duties and clearance charges.

33.2 All custom duties and clearance charges after the delivery in Male' will borne by the Purchaser.

33.3 All local vendors should quote price inclusive of GST.

### 34. Fraud and Corruption (mentioned in clause 24)

34.1 It is the Company' s policy that Bidders, Suppliers, and Contractors, and their agents (whether declared or not), personnel, subcontractors, sub-consultants, service providers and suppliers undertaking the company' s contracts or works, observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, the Company.



- (a) defines, for the purposes of this provision, the terms set forth below as follows:
- (i) "Corrupt practice" means the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of a public official in the procurement process or in contract execution;
  - (ii) "Fraudulent practice" means a misrepresentation or omission of facts in order to influence a procurement process or the execution of a contract;
  - (iii) "Collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of the borrower, designed to establish bid prices at artificial, noncompetitive levels; and
  - (iv) "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the procurement process or affect the execution of a contract;
  - (v) "Obstructive practice" is
    - (aa) deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a Company investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and /or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation, or
    - (bb) acts intended to materially impede the exercise of the Company's inspection and audit rights provided for under sub – clause 34.1 (d) below.
- (b) will reject a proposal for award if it determines that the Bidder, directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive practices in competing for the Contract in question;

34.2 Furthermore, Bidders shall be aware of the provision stated in sub-clause 24.1 (c) of the General Conditions of Contract.



## SECTION IV:

# SPECIAL CONDITIONS OF CONTRACT



**SECTION IV:**

**SPECIAL CONDITIONS OF CONTRACT**

The following Special Conditions of Contract shall supplement the General Conditions of Contract. Whenever there is a conflict, the provisions herein shall prevail over those in the General Conditions of Contract. The corresponding clause number of the General Conditions is indicated in parentheses.

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## Special Conditions of Contract

The following Special Conditions of Contract shall supplement the General Conditions of Contract. Whenever there is a conflict, the provisions herein shall prevail over those in the General Conditions of Contract. The corresponding clause number of the General Conditions is indicated in parentheses.

### 1. Definitions (GCC Clause 1)

- (a) The Purchaser is Maldives Industrial Fisheries Company Ltd.
- (b) The Supplier is : .....

### 2. Country of Origin (GCC Clause 3)

All countries in Asia, Europe North America, and South America and Australia are eligible for provision of goods and services.

### 3. Performance Security (GCC Clause 7)

- 3.1 Within 21 days after the Supplier' s receipt of Notification of Award, the Supplier shall furnish Performance Security to the Purchaser for an amount of 5% of the contract value, valid up to 60 days after the date of completion of performance obligations including warranty obligations.

In the event of any correction of defects or replacement of defective material during the warranty period, the warranty for the corrected/replaced material shall be extended to a further period of 12 months and the Performance Bank Guarantee for proportionate value shall be extended 60 days over and above the extended warranty period.

- 3.2 Substitute Clause 7.3 (b) of the GCC by the following:

A cashier' s cheque or banker' s certified cheque or crossed demand draft or pay order drawn in favour of

**Maldives Industrial Fisheries Company Ltd.**



3.3 Substitute Clause 7.4 of the GCC by the following:

The Performance Security will be discharged by the Purchaser and returned to the Supplier not later than 60 days following the date of completion of the Supplier' s performance obligations, including the warranty obligation, under the contract.

3.4 Add as Clause 7.5 to the GCC the following:

In the event of any contract amendment, the Supplier shall, within 21 days of receipt of such amendment, furnish the amendment to the Performance Security, rendering the same valid for the duration of the Contract, as amended for 60 days after the completion of performance obligations including warranty obligations.

#### 4. Inspection and Tests (GCC Clause 8)

The following inspection procedures and tests are required by the Purchaser:

(i) The inspection of the Goods shall be carried out to check whether the Goods are in conformity with the technical specifications attached to the contract and shall be in line with the inspection/test procedures laid down in the Technical Specifications and the General Conditions of contract. Following broad test procedure will generally be followed for inspection and testing of machine.

- The supplier will dispatch the goods to the ultimate consignee after internal inspection testing along with the supplier's inspection report and manufacturer's warranty certificate.
- The purchase will test the equipment after completion of the installation and commissioning at the site of the installation.
- For site preparation, the supplier should furnish all details to the purchaser sufficiently in advance so as to get the works completed before receipt of the equipment.
- Complete items/ accessories as specified in Section V should be supplied, installed and commissioned properly by the supplier prior to commencement of performance test.

(ii) The acceptance test will be conducted by the purchaser/their consultant, or any other person nominated by the purchaser, at its option. The acceptance will involve trouble free operation for seven consecutive days. There shall not be any additional charges for carrying out acceptance tests. No malfunction, partial or complete failure any part of hardware or excessive heating of motors attached or bugs in the software should occur. All the software,



if any, should be complete and no missing modules/sections will be allowed. The supplier shall maintain necessary log in respect of the results of the tests to establish to the entire satisfaction of the purchaser, the successful completion of the test specified.

(iii) In the event of the equipment failing to pass the acceptance test, a period not exceeding two weeks will be given to rectify the defects and clear the acceptance test, failing which the purchaser reserves the rights to get the equipment replaced by the supplier at no extra cost to the purchaser.

Add the following new GCC Clauses:

**GCC 8.6** Manuals and Drawings

8.6.1 Before the goods and equipment are taken over by the Purchaser, the Supplier shall supply operation manual, maintenance manual and parts catalogues of the goods and equipment. These shall be in such detail as will enable the Purchaser to operate and maintain the equipment as stated in the specifications.

8.6.2 The manuals shall be in the ruling language (English) and in such form and numbers as stated in the contract.

8.6.3 Unless and otherwise agreed, the goods and equipment shall not be considered to be completed for the purpose of taking over until such manuals have been supplied to the Purchaser.

**GCC 8.7** For the System & Other Software the following will apply:

The Supplier shall provide complete and legal documentation of hardware, all sub-systems, operating systems, compiler, system software and the other software, as applicable. The Supplier shall also provide licensed software for all software products, whether developed by it or acquired from others. The supplier shall also indemnify the purchaser against any levies/penalties on account of any default in this regard.

**GCC 8.8** Acceptance Certificates:

8.8.1 On successful completion of acceptability test, receipt of deliverables etc. and after the purchaser is satisfied with the working of the system, the acceptance certificate signed by the supplier and the representative of the purchaser will be issued. The date on which such certificate is signed shall be deemed to be the date of successful commissioning of the systems.



## 5. Packing (GCC Clause 9)

Add as Clause 9.3 of the GCC the following:

Packing Instructions: The Supplier will be required to make separate packages for each Consignee. Each package will be marked on three sides with proper paint/indelible ink, the following:

i) Project ii) Contract No. iii) Country of Origin of Goods iv) Supplier's Name, and v) Packing list reference number.

## 6. Delivery and Documents (GCC Clause 10)

Upon delivery of the Goods, the supplier shall notify the purchaser and the insurance company by email the full details of the shipment including contract number, delivery order number and date, description of goods, quantity, name of the consignee etc. The supplier shall mail the following documents to the purchaser with a copy to the insurance company:

- (i) 4 Copies of the Supplier invoice showing contract number, goods' description, quantity, unit price and total amount;
- (ii) Delivery order/acknowledgment of receipt of goods from the consignee(s);
- (iii) 4 Copies of packing list identifying the contents of each package;
- (iv) Insurance Certificate;
- (v) Manufacturer's/Supplier's warranty certificate;
- (vi) Inspection Certificate issued by the nominated inspection agency, and the Supplier's factory inspection report; and
- (vii) Certificate of Origin.

The above documents shall be received by the Purchaser before arrival of the Goods (except where the Goods have been delivered directly to the Consignee with all documents) and, if not received, the Supplier will be responsible for any consequent expenses.

## 7. Insurance (GCC Clause 11)

For delivery of any goods the Supplier is required to deliver at site, the insurance shall be obtained by the Supplier in an amount equal to 110% of the value of the goods from "warehouse to warehouse" (final destinations) on "All Risks" basis including War Risks and Strikes.



## 8. Incidental Services (GCC Clause 13)

The following services covered under Clause 13 shall be furnished and the cost shall be included in the contract price:

- a. Performance of the onsite assembly, commissioning and start-up of the equipment.
- b. Furnishing the detailed operation, maintenance and parts manuals for each item of the supply at each location.
- c. Training the purchaser personnel at the supplier' s office or other facility, in the installation and operation of the equipment.
- d. Maintenance and repair of the equipment at each location during the warranty period including supply of all spares. This shall not relieve the supplier of any warranty obligation under this contract.

## 9. Spare Parts (GCC Clause 14)

Add as Clause 14.2 to the GCC the following:

Supplier shall carry sufficient inventories to assure ex-stock supply of consumables and spares. Supplier shall ensure the availability of after sales service for warranty period.

## 10. Warranty (GCC Clause 15)

- (i) G.C.C. Clause 15.2:

In partial modification of the provisions, the warranty period for the works delivered by the Supplier shall be 36 months from date of completion of the works. Warranty period for the goods delivered under the contract shall be the manufacturers' warranty period starting from the date of acceptance of Goods or additional. The Supplier shall, in addition, comply with the performance and/or consumption guarantees specified under the contract. If for reasons attributable to the Supplier, these guarantees are not attained in whole or in part, the Supplier shall at its discretion either:

- (a) make such changes, modifications, and/or additions to the Goods or any part thereof as may be necessary in order to attain the contractual guarantees specified in the Contract at its own cost and expense and to carry out further performance tests in accordance with SCC 4 ;



- (ii) Substitute Clause 15.4 of the GCC by the following:

“Upon receipt of such notice, the Supplier shall, within the period specified in SCC and with all reasonable speed, repair or replace the defective goods or parts thereof, free of cost at the ultimate destination. The Supplier shall take over the replaced parts/goods at the time of their replacement. No claim whatsoever, shall lie on the Purchaser for the replaced parts/goods thereafter.

In the event of any correction of defects or replacement of defective material during the warranty period, the warranty for the corrected/replaced material shall be extended to a further period of 12 months.”

- (iii) GCC Clauses 15.4 and 15.5:

The period for correction of defects in the warranty period is 20 days.

The supplier shall guarantee a 98% uptime of the system.

If the system gives continuous trouble, more than 3 times in one month during the warranty period, the supplier shall replace the system with new system without any additional cost to the purchaser.

#### Maintenance Service

- i) Free maintenance services shall be provided by the Supplier during the period of warranty.
- ii) The maximum response time for maintenance complaint from any of the destinations specified in the Schedule of Requirements (i.e. time required for supplier' s maintenance engineer to report at the installation after a request call/telegram is made or letter is written) shall not exceed 96 hours.
- iii) It is expected that the average downtime of the item (system) will be less than half the maximum downtime (i.e. defined as number of days for which an item of equipment is not usable because of inability of the supplier to repair it) as mentioned in the form of technical details. In case an item is not usable beyond the stipulated maximum downtime the supplier will be required to arrange for an immediate replacement of the same till it is repaired. Failure to arrange for the immediate repair/replacement will be liable for a penalty of US\$ 50 per day. The amount of penalty will be recovered from the Performance Security guarantee during warranty period.



## 11. Payment (GCC Clause 16)

Payment for Goods and Services shall be made in United States Dollars as follows:

Schedule 1	Payment %	Schedule 2	Payment %
Upon signing of the contract and upon presentation of claim by an invoice	15%	Upon signing of the contract and upon presentation of claim by an invoice	15%
within 30 days of accepting the delivery and acceptance of all items at the corresponding site in schedule I, and upon presentation of claim by an invoice.	40%	within 15 days upon mobilization of the installation team at the particular site and presentation of claim by an invoice.	40%
Successful installation, commissioning and final acceptance, within 30 days after the date of acceptance of final certificate issued by the purchaser' s representative for the respective delivery, upon presentation of claim by an invoice.	40%	Successful installation, commissioning and final acceptance, within 30 days after the date of acceptance of final certificate issued by the purchaser' s representative for the respective delivery, upon presentation of claim by an invoice.	40%
12 months from the date of acceptance of the final certificate issued by the purchaser' s representative for the respective delivery.	5%	12 months from the date of acceptance of the final certificate issued by the purchaser' s representative for the respective delivery.	5%

## 12. Prices (GCC Clause 17)

17.1 Prices payable to the supplier as stated in the contract shall be firm during the performance of the contract.

## 13. Sub-contracts (GCC Clause 21)

Add at the end of GCC sub-clause 21.1 the following:

Sub-contract shall be only for bought-out items and sub-assemblies



**14. Liquidated Damages (GCC Clause 23)**

14.1 For delays:

GCC Clause 23.1 -- The applicable rate is 0.05% per week and the maximum deduction is 15% of the contract price.

**15. Settlement of Disputes (Clause 28)**

The dispute settlement mechanism to be applied pursuant to GCC Clause 28.2.2 shall be as follows:

- (a) In case of Dispute or difference arising between the Purchaser and a domestic supplier relating to any matter arising out of or connected with this agreement, such disputes or difference shall be settled in accordance with prevailing laws of the Republic of Maldives.
- (b) In the case of a dispute with a Foreign Supplier, the dispute shall be settled in accordance with the prevailing laws of the Republic of Maldives.

**16. Notices (Clause 32)**

For the purpose of all notices, the following shall be the address of the Purchaser and Supplier.

Purchaser:

**Maldives Industrial Fisheries Company Ltd**  
**Hilaalee Magu**  
**Maafannu**  
**Male, Maldives**

Supplier: (To be filled in at the time of Contract signature)

.....  
.....  
.....  
.....

**17. Supplier shall regularly intimate progress of supply, in writing, to the Purchaser as under:**

- Quantity offered for inspection and date;
- Quantity accepted/rejected by inspecting agency and date;
- Quantity dispatched/delivered to consignees and date;
- Quantity where incidental services have been satisfactorily completed with date;
- Quantity where rectification/repair/replacement effected/completed on receipt of any communication from;  
Consignee / Purchaser with date
- Date of completion of entire Contract including incidental services, if any; and
- Date of receipt of entire payments under the Contract

(In case of stage-wise inspection, details required may also be specified).

**18. Right to use defective equipment:**

If after delivery, acceptance and installation and within the guarantee and warranty period, the operation or use of the equipment proves to be unsatisfactory, the Purchaser shall have the right to continue to operate or use such equipment until rectifications of defects, errors or omissions by repair or by partial or complete replacement is made without interfering with the Purchaser's operation.

**19. Supplier Integrity:**

The supplier is responsible for and obliged to conduct all contracted activities in accordance with the Contract using state-of-the-art methods and economic principles and exercising all means available to achieve the performance specified in the Contract.

**20. Supplier's Obligations:**

The Supplier is obliged to work closely with the Purchaser's staff, act within its own authority and abide by directives issued by the Purchaser and implementation activities. The Supplier will abide by the job safety measures prevalent in the Maldives and will free the Purchaser from all demands or responsibilities arising from accidents or loss of life the cause



of which is the Supplier's negligence. The Supplier will pay all indemnities arising from such incidents and will not hold the Purchaser responsible or obligated.

The Supplier is responsible for managing the activities of its personnel or sub-contracted personnel and will hold itself responsible for any misdemeanors.

The Supplier will treat as confidential all data and information about the Purchaser, obtained in the execution of his responsibilities, in strict confidence and will not reveal such information to any other party without the prior written approval of the Purchaser.

### 21. Patent Rights:

In the event of any claim asserted by a third party of infringement of copyright, patent, trademark or industrial design rights arising from the use of the Goods or any part thereof in the Purchaser's country, the supplier shall act expeditiously to extinguish such claim. If the supplier fails to comply and the Purchaser is required to pay compensation to a third party resulting from such infringement, the supplier shall be responsible for the compensation including all expenses, court costs and lawyer fees. The Purchaser will give notice to the supplier of such claim, if it is made, without delay.

### 22. Site Preparation and Installation:

The Purchaser is solely responsible for the construction of the hardware sites in compliance with the technical and environmental specifications defined by the Supplier. The Purchaser will designate the installation sites before the scheduled installation date to allow the Supplier to perform a site inspection to verify the appropriateness of the sites before the installation of the hardware.

### 23. Hardware Installation:

The Supplier is responsible for all unpacking, assemblies, wiring, installations, cabling between hardware units and connecting to power supplies. The Supplier will test all hardware operations and accomplish all adjustments necessary for successful and continuous operation of the hardware at all installation sites.

### 24. Hardware Maintenance:

The Supplier will accomplish preventive and breakdown maintenance activities to ensure that all hardware execute without defect or interruption for at least 98% uptime for 24



hours a day, 7 days a week of operation of the machine (*to modify as considered appropriate for each case*) worked on a quarterly basis.

If any critical component of the entire configuration is out of service for more than three days, the Supplier shall either immediately replace the defective unit or replace it at its own cost.

The Supplier will respond to a site visit and commence repair work on the equipment within 24 hours of being notified of equipment malfunction.

### 25. Technical Documentation:

The Technical Documentation involving detailed instruction for operation and maintenance is to be delivered with every unit of the equipment supplied. The language of the documentation should be English.



## SECTION V:

# SCHEDULE OF REQUIREMENTS



**SCHEDULE OF REQUIREMENTS**

	Brief Description	Unit	Quantity	Delivery Schedule	Place of Delivery	Bid Security in US \$
<b>SCHEDULE 1</b>	Diesel Generator Sets as specified in the Technical Specifications.	SET	<b>Four</b>	Within 90 days from the date of award of contract	Maldives Ports Ltd. warehouse at Male port, Maldives	US \$ 15,000.00
	Panel Boards and panel board accessories for the generator sets and all necessary items as described in the technical specifications.	Package	<b>Five</b>	Within 90 days from the date of award of contract.	Maldives Ports Ltd. warehouse at Male port, Maldives	
	Sea water cooled Heat exchangers suitable for the cooling of the generators. (Contractor should specify the size, constructed material and designed water flow rate of the heat exchangers.)	No	<b>Four</b>	Within 90 days from the date of award of contract.	Maldives Ports Ltd. warehouse at Male port, Maldives	
	All other accessories needed for the installation of generators (Please list items and quantities in detail)	Package	<b>Two</b>	Within 90 days from the date of award of contract.	Kooddoo Fisheries Complex, Kooddoo, and Thinadhoo, G Dh Atoll, Maldives.	
	Provision of Operation Manual, Shop manual and Parts Catalogue for the generators and other related accessories.	Package	<b>1 set for each Generator</b>	At the time of installation.	Kooddoo Fisheries Complex, Kooddoo, and Thinadhoo, G Dh. Atoll, Maldives	

	Fire alarm system	Package	one	Within 90 days from the date of award of contract.	Thinadhoo Refrigeration complex, G Dh. Thinadhoo, Maldives.
<b>SCHEDULE II</b>	Installation, synchronization/load sharing with the existing gensets, testing and commissioning of the new generators sets at the extended part of the powerhouse	Package	One	Within 45 days of delivering the generator set to Kooddoo	Kooddoo Fisheries Complex, Kooddoo, Maldives.
	Completion of all electrical installations as specified in the technical specifications for Thinadhoo power installations, Installation, synchronization/load sharing testing and commissioning of the generators sets at the Thinadhoo refrigeration Complex	Package	One	Within 60 days of delivering the generator sets to Thinadhoo Ref. Complex	Thinadhoo Refrigeration complex, G Dh. Thinadhoo, Maldives.
	Installation, synchronization/load sharing with the existing gensets, testing and commissioning of the new generators sets at the extended part of the powerhouse	Package	One	Within 45 days of delivering the generator set to Kooddoo	Kooddoo Fisheries Complex, Kooddoo, Maldives.
	Installation of Fire alarm system	Package	one	At the time of installation to Thinadhoo.	Thinadhoo Refrigeration complex, G Dh. Thinadhoo, Maldives.

## SECTION VI

# TECHNICAL SPECIFICATIONS



## 6.1 TECHNICAL SPECIFICATIONS FOR KOODDOO GENERATOR SETS

(Specification are not limited to what is specified)

### 6.1.1 No. of Generator sets to be supplied:

Total 2 sets as per specification provided below. All the generators are required to be added and synchronized to the existing power grid of Kooddo.

### 6.1.1 Specification of Generator

6.1.1.1 Cummins Diesel Generator Set KTA 50 Series with standard equipment and accessories.

#### a. Generator set Specification

Prime Power	1250 kVA
Output Voltage & Frequency	415 V, 50 Hz
Power Factor	0.8 (lag)
No. of Phases	3 Phase

#### b. Engine Specification

Make	Cummins
Model	KTA 50 G3
No. of Cylinders	16 'Vee'
Aspiration	Turbocharged – After cooled
Bore& Stroke	159 mm x 159 mm
Displacement	50.3 ltrs.
Output – Prime	1470 bhp (1097 kWe)
Method of Cooling	Liquid to Liquid shell & Tube Heat Exchanger type (Water/sea water)
Medium of Cooling	Sea water
Governor / Class	Electronics / A1
Coolant Capacity (engine + Heat Exchanger)	> 440 Ltrs
Sea water flow across Heat Exchanger	Should be adequate to cool the engine at generator full load.



Exhaust Temperature	529 °C
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**c. Alternator Specifications**

Make:	Stamford
Frame size / Model No.	HCK6Z
Voltage regulation	±0.5%
Insulation	Class H
Standard Enclosure	IP 23
Winding Pitch	2 / 3 Pitch
Stator winding	Double layer lap
Rotor	Dynamically balanced
Wave form Distortion	No load <1.8%, no distortion
Telephone interference factor	Better than 50
Total harmonic Factor	Better than 2%

**d. Conformance Standards:**

IS/IEC 60034-1, IS 1460, ISO 8528, ISO 3046, IS 13018, ISO 9001

**e. Accessories:**

- Silencer suitably optimized to reduce noise
- Sturdy base rail
- 4 Nos. 12 V dry uncharged batteries with connecting leads and terminals.
- Heavy duty air cleaner.

**6.1.2 Control Panels**

**a. Control Instruments**

1. The generator governor controller, voltage regulator, sensors and switches should be fixed, equivalent to connect Deep Sea module.
2. Standard generator control system to provide voltage regulation, engine protection, alternator protection, operator interface and isochronous governing.
3. Automatic engine battery charger of charging current 5A/24VDC for offline charging, and additional 10A/24VDC charger for online charging with charging ampere meter. Relays and contactors shall be used with proper ampere rating.

**b. Panel cubicle**

- 1.A control panel cubicle should be provided for each generator set. The panel should be of metal housing suitably coated for harsh weather conditions and fully



waterproof. Panel is to be mounted separate from generator set and located in the main control room.

2. Components such as isolators, bus bars relays, switches, earth fault protectors and instruments to be from reputable manufactures and shall meet relevant international standards.
3. Main Breaker in the panel board is to be ACB draw out type 2500 Amps
4. Deep Sea module Model: DSE 8610 MKII is to be used for each generator control, load sharing, synchronizing, earth fault protection and other necessary protections.
5. Copper Bus bar to be suitably sized and braced to cater for generating power.
6. The control panels of the 3 ne generators are to be connected to existing panels of the existing generator sets by suitably sized cables.
7. Adequate ventilation is to be provided to the panel board.

### 6.1.3 Exhaust Piping

1. Size of the piping to be standard for the generator set with muffler.
2. Exhaust to vent out of the powerhouse over the roof. The muffler should be installed outside the powerhouse building
3. Fixing structure of the exhaust to be permanent and sturdy, duly painted and protected against harsh weather.
4. Exhaust and silencer piping inside the powerhouse should be properly insulated with rock wool and wound with net and then followed by cladding all around with SUS 304 sheets of thickness 1.5 mm.

### 6.1.5 Heat Exchanger

1. Shell and Tube Heat exchanger to use running sea water as medium of cooling.
2. Size, brand, model, designed water circulation rate and material of construction are to be given by the bidder

### 6.1.6 . Cables and Cable trays

1. Main cables and cable tray should be fixed 5000 mm above the ground level; to give space inside power house for the movements for repair and maintenance works of existing generators.

### 6.1.7. Fuel line

1. Fuel line is to be directly laid from fuel day-tank which is located outside the power house and fuel return line is to be connected to the same tank.



## 6.2 TECHNICAL SPECIFICATIONS FOR THINADHOO POWER HOUSE AND ELECTRICAL INSTALLATIONS

(Specification are not limited to what is specified)

### 6.2.1 Power Generation Facility

#### 6.2.1.1 General

The Contractor shall provide new diesel electric generating plant to supply electricity to the refrigeration complex at Thindhoo, G. Dh. Atoll.

### 6.2.2 Power Plant

#### 6.2.2.1 Generators

The scope of work shall include, but not be limited to provision of the following:  
Provision of 2 (two) Diesel engine generator sets, each of 1000kW/1250kVA, 415 V, 50 Hz rating. Each generator set should have its own control panel board with all necessary accessories. Preferred make of generator sets are Cummins KTA series engines coupled with appropriate Stamford generators. Cooling system of the generator sets are to be of sea water cooled shell and tube type heat exchangers. Cooling medium is to be direct sea water.

#### 6.2.2.2 Performance Requirements

##### 6.2.2.2.1 Rating and Quantity

When all of the new generators are running, they shall be capable of supplying the power demand of the Works with concurrent loads as follows: -

The electrical load of the Freezing and Cold Storage complex, as determined by the Refrigeration contractor, when processing and freezing 100T of warm tuna over a 24 hour period.

The electrical load of the Power Generating Facility as determined by the Contractor.

The Power Generating Facility shall be capable of supplying the power demand of the facilities with concurrent loads as follows: -

The electrical load of the Freezing and Cold Storage complex, as determined by the refrigeration contractor, when processing and freezing 100T of warm tuna over a 24 hour period.

The electrical load of the Power Generating Facility as determined by the refrigeration contractor.



A spare capacity allowance based on 30% of the loads for the refrigeration machinery must be installed. If this final requirement results in additional new generators being required than otherwise would have been the case, Tenderer should identify this in their Tender.

In determining the number and rating of generators required, the Contractor must use commercially available generator sizing software provided by the proposed diesel generator manufacturer to determine the required rating. The assessment must include rating adjustments for nonlinear loads and motor starting.

The Employers design envisages that the refrigeration contractor will need to provide two (2) new 1000kWe/1250kVA generator sets in order to meet the above requirements. No fewer than two new 1000kWe/1250kVA, 415V, 50Hz generators shall be provided.

#### 6.2.2.2.2 Efficiency

The Contractor shall provide guarantees for the new diesel electric generators provided at 25%, 50%, 75% and 100% of rated output. The minimum acceptable guarantee at 100% of rated output will be no more than 0.25 litre/kWh.

#### 6.2.2.2.3 Technical Requirements

1. Provision of Prime (PRP) rated, diesel electric generating three sets comprising a diesel fuelled, reciprocating, turbo charged, inter-cooled engine coupled to a three phase 415 V 50Hz synchronous alternator. Each set shall be rated at 1000kWe/1250kVA and shall incorporate: -

Diesel engines with all engine mounted equipment (such as injectors, lubrication, and instruments).

Electronic engine governing and ECU system.

Combustion air systems with inlet filtration, turbo charging and cooling.

Exhaust systems including silencers and expansion provisions.

Cooling water systems for engine jacket and oil cooler.

Starting systems including starter motor, batteries, and alternator.

Synchronous generators complete with excitation system, automatic voltage regulators and neutral earthing switch.

Cabling to the powerhouse 415V switchboard.

Neutral earthing equipment.

First fill of lubricating oil.

Provision of air, fuel and oil filters for twelve (12) months operation.



#### 6.2.2.2.4 Starter System Battery Charging

A central battery charger powered from the powerhouse distribution board shall be provided. The charger shall be sized to supply the battery charging requirements for up to seven (7) diesel electric generators. The battery charger(s) shall be constant voltage type that maintain the battery at or near full capacity and provide automatic replenishment of charge following a discharge. If valve regulated lead acid batteries are proposed, then the charger voltage output control must have temperature compensation provision.

An eyewash station shall be provided in the powerhouse.

Two 230 Volt AC powered portable battery chargers shall also be provided.

### 6.2.3 Electrical system

#### 6.2.3.1 Control Centres

##### 6.2.3.1.1 Powerhouse 415 V Switch Board

The Contractor shall provide a powerhouse 415V switchboard for distribution of the generated power to the Works and other facilities as specified. The switchboard shall be type tested design, metal-clad, free standing and self-supporting with access to equipment mounted inside the panel being from the front and rear. The switchboard shall be located in the powerhouse switch room. Cable entry shall be from the top.

The switchgear shall comprise, as a minimum: -

One draw-out type generator circuit breaker per new or relocated diesel electric generator installed plus one (1) additional generator circuit breakers for future use. Each circuit breaker shall be rated for a 1000kW/1250kVA generator. Nominally 50% of the generators (by rating) shall be connected to one bus and 50% to the other bus.

One neutral earthing contactor for each generator circuit breaker, located in the same tier as the associated generator circuit breaker.

One bus tie circuit breaker, rated at not less than the bus rated current.

Two bus sections, each rated for the electrical loads associated with the Powerhouse, Freezing and Cold Storage, plus 10% spare capacity. Each bus section shall be rated at not less than 5000A.

Outgoing feeder circuit breakers for the Refrigeration Plant MCC, one feeder from each bus section. Each feeder circuit breaker shall be rated not less than 1600A.



One additional spare feeder circuit breaker per bus rated not less than 1250A.

Automatic power factor correction equipment fitted to each bus section.

Two integrated distribution boards (one on each bus section) for the lighting and small power requirements of the powerhouse area and associated office, workshop and ablutions facilities.

Extendable at each end for up to two additional feeder circuit breakers per bus.

The degree of protection for the Powerhouse 415V switchboard shall be at least IP 42.

The Powerhouse 415V Switchgear shall be in compliance with Employers Requirements.

#### 6.2.3.1.2 Powerhouse Control System

The Contractor shall provide a powerhouse control system for the automatic and manual operation of the diesel generating sets.

The Employer prefers use of control system equipment from Deep Sea Electronics Limited (DSE) and has a preference for their equipment. These Employers Requirements have been prepared on the basis of equipment selections from the DSE range and any alternative system proposed by the Contractor must meet or exceed the specifications of the DSE equipment. Should the Contractor propose an alternative system, then full details must be provided with their Tender. Any system offered must have technical support available from within the Maldives Islands.

The Employers preliminary selection of the required control system hardware is as follows: -

One (1) DSE8920 Load Share & Synchronising Control Module shall be installed in the control compartment of each generator circuit breaker provided. It shall be connected to the associated diesel engine by means of the J1339 CAN bus.

One (1) DSE8680 Bus-Tie Controller shall be installed in the control compartment of the bus tie circuit breaker.

One (1) DSE8005 SCADA Suite Software shall be installed on a suitable desktop computer to be located in the powerhouse control room.

Other hardware as required to fulfil the control and monitoring requirements specified herein.

The Contractor shall confirm and adjust this selection to ensure a complete, working, powerhouse control system. The control system shall monitor all



aspects of the connected diesel engine generators. In addition, the following shall be monitored and, where appropriate controlled, by the powerhouse control system:

The open, closed and trip status of all incoming, bus tie and feeder circuit breakers on the powerhouse 415V switchboard.

The digital multi-function meters.

The diesel engine battery charging systems.

The powerhouse day tanks.

The fuel transfer pumps.

Alarm signals from other parts of the Works, including: -

Cold store temperature high alarm (one per cold store)

Cold store underfloor temperature low (one per cold store)

Brine freezing tank underfloor temperature low (2 off)

Provision for at least 16 future digital signals.

The powerhouse control system shall provide automatic and manual start-up, load sharing and shutdown of the diesel generating sets in order to meet the plant electrical demand. In addition, fully manual local control of the diesel generators shall be possible in the event of a fault within the DSE equipment.

The powerhouse control system shall also operate the generator neutral earthing contactors to ensure that the neutral point of one operating generator is always solidly earthed. Interlocks shall be provided to prevent more than one contactor being closed at any time. In addition, to prevent operation of the system unearthed, a second interlock will prevent any generator from being closed onto the switchboard bus if no neutral contactor is closed. The neutral contactor and connections shall be able to carry the full earth-fault current of the generator.

In automatic control, the diesel generator sets shall be automatically started, synchronised and shutdown as required to meet the plant demand. The control system shall manage the generating set droop/isochronous mode selection in order to maintain system frequency and load sharing between operating sets.

In manual control the operator will start and stop the diesel generators via the DSE system, with the DSE system providing control over load sharing and system frequency.

In local manual control the operator will make all selections manually at the relevant generator circuit breaker. Start-up of each generating set shall be accomplished by pressing a start pushbutton. This shall cause the engine and all



necessary auxiliaries to be started in the correct order and with all necessary time delays. A ready for synchronisation lamp shall indicate when the set is ready for switching on-line. Synchronising shall be carried out by manual adjustment of speed and voltage and by manual closing of the generator circuit breaker at the correct instant using a synchroscope mounted on the panel. Once on-line, a "ready for loading" lamp shall illuminate. Load control shall be by manual operation of the speed control switch. Voltage control shall be by the automatic voltage regulators. Frequency control shall be by automatic governors with manual surveillance and maintenance of synchronous time with a standard time. On shutdown, the generator load shall be reduced manually by operation of the speed adjusting pushbuttons, after which the "stop" pushbutton will be pushed. This shall cause the generator circuit breaker to be opened, the set to run down and the auxiliary drives to be stopped in the required sequence and with the correct time staggering.

In all control modes the protective functions shall function to shut down the associated diesel generator for an engine or electrical fault.

#### 6.2.3.1.3 Powerhouse Protection Relaying system

Each diesel generator shall be provided with a generator protection system to detect and shutdown the engine generator for abnormal conditions and faults. The capabilities of the Deep Sea Electronics control equipment may be utilised to provide some, or all, of these functions. As a minimum, each diesel engine generator and associated circuit breaker shall be provided with the following protective functions: -

- Overspeed (12)
- Overcurrent (50/51)
- Earth fault (50N/51N)
- Over frequency (87O)
- Under frequency (87U)
- Reverse power (32P)
- Over voltage (59)
- Under voltage (27)
- Check synch (25)
- Generator winding temperature (49T)
- Cooling water temperature



Bearing temperature (38T)

Bearing vibration (38V)

#### 6.2.3.1.4 Powerhouse DC System

A battery backed 24V DC system shall be provided at the powerhouse to provide uninterruptible power to the powerhouse control and protection systems.

The batteries shall be of sufficient capacity to supply the powerhouse control and protection system load for not less than 2 hours under worst case loading conditions.

### 6.2.3.2 Cabling and Electricity Distribution

#### 6.2.3.2.1 General

All power, instrumentation, control and communications cabling required for the satisfactory operation of the plant shall be provided. Cables shall be supplied complete with all necessary junction boxes, cable ladder, conduits and supports, cable accessories and the like.

The Contractor shall provide cable schedules, drawings and diagrams, and other information as required to document the Contractors design.

All cable selections and installation shall comply with requirements as specified in section 6.2.5.

#### 6.2.3.2.2 Diesel generator Cabling

Cables terminating on the generator sets shall be installed in such a manner that the disconnection and removal of the generator during routine maintenance is easily achievable.

Phase and neutral cables between the diesel generator and the powerhouse 415V switchboard and neutral switching equipment shall be armoured type.

The generator main power cables shall be run on cable ladder. No other cables shall utilise this laddering. A separate ladder system shall be installed for the generator control and instrumentation cabling.

#### 6.2.3.2.3 Sub-circuit and Final Power Cabling

The Contractor shall provide 230V and 415V power cabling from the various MCCs, motor control centres and distribution boards to final loads such as motors, process equipment, lighting and general power outlets.



Main cable routes shall use cable ladder or tray supporting a number of cables. From these main routes, support of final connections to loads may be by cable ladder, tray, conduit, or ducting.

### 6.2.3.3 Lighting and Small Power Installation

#### 6.2.3.3.1 General

This Section details the specific requirements for the lighting and small power services. The scope shall include, but not be limited to: -

Interior artificial lighting systems complete with all luminaires, cabling, and controls.

Secondary lighting system.

General power and welding power outlets.

Power supply for cranes.

Power supplies to ventilation plant.

Exterior and roadway lighting.

The Contractor shall provide all miscellaneous equipment such as lighting poles, supports, ducting, conduit, clips, bolts, screws, terminals, lugs, labels, fixings and cable ties necessary to provide safe, fully operational, reliable systems.

The lighting and small power systems provided shall comply with the requirements of Section 6.2.4. Interior lighting systems shall comply with the requirements of BS EN 12464.

Location	Fitting Type	Average Illumination Level	Switching
Powerhouse	Linear mounted on suspended trunking. IP56 switches.	150 lux	Fittings shall be switched by row. Switches shall be located adjacent to each external exit door and the door from the control room.
Control room	Batten mounted on ceiling. Standard architectural switches.	300 lux	Fittings shall be switched by row with switches located beside each entrance door.



Workshops and storerooms.	Linear mounted on suspended trunking. IP56 switches.	300 lux (workshops) 150 lux (storerooms)	Fittings shall be switched by row with switches located beside each entrance door.
Switch room	Batten mounted on ceiling. Standard architectural switches.	300 lux	Fittings shall be switched by row with switches located beside each entrance door.

### 6.2.3.3.2 Interior Lighting

Exterior lighting shall be provided as below: -

Location	Fitting Type	Illumination Level	Switching
Powerhouse building perimeter	Wall mounted. IP56 fittings and switches	10 lux	Automatic night-time sensing with override from powerhouse control room
Roadway	Pole mounted. IP56 fittings	10 lux	Automatic night time sensing

### 6.2.3.3.3 Emergency Lighting

Emergency safety lighting shall be provided to assure safe egress from all normally occupied areas of the buildings in the event of a failure of the main lighting systems.

Emergency safety lighting shall comply with BS5266 "Code of Practice for the Emergency Lighting of Buildings" and BS EN 1838 "Lighting Applications – Emergency Lighting". The Country Specific requirements for the United Kingdom shall be adopted.

Emergency lighting in the powerhouse and all electrical switch rooms shall be Secondary Lighting as defined by BS EN 1838 and shall provide sufficient illumination for the Employers personnel to operate the diesel generating and electrical switchboard equipment during a power failure event.



#### 6.2.3.3.4 General Purpose outlets

General purpose outlets shall be provided as below: -

Location	Outlet Type	Number of outlets per space	Notes
Power house	3 phase IP56 Plus 1 phase IP56	3 sets	One per diesel generator
Control room	1 phase standard double outlet	At least 8 sets	
Switch rooms	1 phase standard double outlet	At least 1 set per 20m <sup>2</sup> of floor area	

Note that the above quantities do not include any plug/socket arrangements that the Contractor may choose to employ for fixed equipment. The Contractor shall provide supplies/outlets for these items as required by their design. Any such supplies shall meet the outlet type specification for the same building area as specified above.

#### 6.2.3.3.5 Power Supply for Cranes

Cranes shall be supplied either from a main switchboard/MCC or distribution board. Each crane shall be provided with an isolating switch adjacent to the usual park position for the crane. The isolation switch shall have provision for padlocking.

#### 6.2.3.4 Earthing and Lightning Protection

The powerhouse earthing system shall include an earth electrode system which may consist of any combination of the following elements:

A system of interconnected driven rods.

A grid configuration of horizontal buried bare copper tapes or stranded cable.

The powerhouse building reinforcing steel.

The resistance to earth of the earth electrode system shall be not exceed 1 ohm.

A powerhouse earth bus shall be provided which shall comprise a continuous copper cable or strap strategically routed through the powerhouse so as to provide the shortest path from the earthed equipment to ground. The earth electrode shall be directly interconnected to the bus at various locations within the powerhouse. The system shall be interconnected to all electrical plant both inside and outside the plant buildings in accordance with BS 7671 Wiring Rules.



The earthing or grounding system shall be designed generally in accordance with the appropriate clauses of IEEE Std. 80.

The earthing system shall comply with the requirements.

The Contractor shall undertake a lightning risk assessment following the procedures outlined in BS IEC 62305 and provide lightning protection systems for the powerhouse building as deemed necessary by the assessment in order to protect the building, contents and personnel.

In undertaking the assessment, the Contractor shall make conservative selections for the loss types R1, R2 and R4 taking into consideration the number of personnel employed, the remote location and the value of the facility to the Maldivian economy.

#### *6.2.3.5 Data and Communication system*

Data and communications system shall be provided for the powerhouse facility.

These shall comprise: -

A wall mounted data panel located in the control room. The panel shall have a glass front and shall house an ethernet RJ45 type patch panel and space for a rack type ethernet switch.

A fibre optic (8 core minimum) cable from the data panel to the cold store office data panel. The cable shall be buried and protected by a PVC conduit when outside of buildings.

CAT6 data cabling from the data panel to outlets located as follows: -

Control room (two double outlets)

Workshop (one double outlet)

Switch room (one double outlet)

Note that the data and communications system provided under this Part shall be separate to any data/communications systems provided by the Contractor as part of the plant control systems.

#### *6.2.3.6 Fire Alarm System*

A fire alarm system shall be provided for the powerhouse facility. The system shall comprise: -

A fire alarm annunciator panel located adjacent to the external entrance beside the control room.

Heat detectors located in the powerhouse house.

Heat/smoke detectors located in the switch room and stores.

Manually operated call points at each entrance to the complex, and at other intermediate locations as appropriate.



Audible / Visual alert devices provided where they can be seen and heard from all normally occupied spaces, and adjacent to each entrance to the complex.

An alarm signal transmitted to the powerhouse control system.

The fire alarm system shall be designed to an appropriate standard, such as NFPA.

### 6.2.3.7 Works Inspection and Testing

Tests shall be performed at the manufacturer's factory in accordance with the relevant Standards.

#### 6.2.3.7.1 Diesel Generators

The following Factory Acceptance Tests (FATs) shall be performed on each diesel generator:

A full load test, at the rated kilovolt-ampere (kVA) of the generator, for a period of at least 8 hours.

Immediately following the full load test a test of the overload capacity shall be carried out.

A full functional test of all control, protection and operating systems.

Each diesel generator shall be demonstrated as being capable of accepting a single load step equal  $\geq 50\%$  of the continuous rating of the machine while remaining within operating limits

Each diesel generator shall be demonstrated as being capable of accepting a single load step equal to 110% of the most severe single step load in the Contractors plant design profile. The DG shall accept the load without voltage collapse or engine stalling and recover to normal operating speed.

During the testing the following shall be recorded using a high-speed data acquisition system, at intervals not exceeding 1s

Engine temperature;

Engine oil pressure;

Generator voltage;

Generator frequency; and

Generator current.

Electronic copies of the datalogger recordings shall be provided in CSV or Excel format. All other routine tests as required by the nominated Standards shall be conducted.

#### 6.2.3.7.2 Powerhouse 415V Switch Gear

415V switchgear shall undergo factory testing as detailed in Section 6.2.14.



### 6.2.3.7.3 Powerhouse Control System

The powerhouse control system shall be fully factory assembled and tested in conjunction with the Powerhouse 415V factory tests. Simulation devices shall be used to mimic the diesel generator ECU, governor and AVR. As the control system hardware will be installed within the powerhouse 415V switchgear, full testing of the switchgear interfacing shall be undertaken.

The correct operation of all protective functions implemented within the DSE control modules and powerhouse 415V switchgear shall be demonstrated.

The Contractors shall prepare a Factory Acceptance Test (FAT) Plan and shall submit it to the Employer' s Representative for review and approval at least three (3) months before the scheduled start of system FAT.

The FAT Plan shall describe the proposed test configuration, simulation devices, test schedule, and the forms for recording test results.

The Employer' s Representative or representative will witness the FAT upon notification by the Contractor that the system is ready for the FAT.

The FAT shall verify that the system as fully integrated complies with all the specified requirements.

### 6.2.3.8 Site Inspection, Testing and Commissioning

The 415V switchgear and diesel generators, including control and protection system, shall undergo site testing and performance testing as detailed in Section 6.2.3.7.1 and 6.2.3.7.2.

The new generating plant shall undergo Performance Tests to demonstrate that each of the performance guarantees have been met. The Contractor shall provide any necessary temporary loads required to test the new generating plant across their entire operating range and for confirming the performance guarantees.

Following the Performance Tests the generating plant shall be demonstrated to operate reliably and correctly in each operating mode specified. During commissioning of the Works, the power generating facility shall undergo a 168 hour trial operation period during which the facility shall provide the required plant electricity supply without fault. During this period the power generating plant shall be operating in any of the control modes (automatic, manual, etc) as requested by the Employer. Any plant or generator outages that are attributed to the generating plant control system, the new generators, or any other new plant provided as part of the Works will result in a restart of the trial operation. Taking Over of the Works will only take place once the trial operation is successfully completed.



## 6.2.4 Equipment

### 6.2.4.1 Spare Parts and Consumables.

Mandatory spare parts, optional recommended spare parts and consumable are required for the Power Generation Facility.

### 6.2.4.2 Lighting and general Power

#### 6.2.4.2.1 Distribution Boards

##### 6.2.4.2.1.1 General

Distribution boards shall be designed for flush mounting, except for the cubicles incorporated into switchboards or motor control centres.

Unless otherwise specified distribution boards shall be of folded steel construction, thoroughly rigid, with degree of protection at least IP 43.

No door shall be wider than 600 mm. All metal doors shall be adequately earthed with tinned copper straps. All compartments shall be bonded to earth as well.

Busbars shall be rated for a minimum 10kA fault duty and shall be capable of carrying continuously a total load equal to the rated capacity of the incoming isolator without the temperature rise of any component mounted within or on the panel exceeding 20° C.

Interior wiring and connections shall be conveniently accessible and to facilitate this, all panels on which equipment is mounted shall be either hinged, or access for working space provided.

All subcircuit wiring shall terminate on the MCBs and neutral busbars; the maximum number of cables per termination shall not exceed two.

Terminals shall have minimum rating 20 A. Wiring and terminals shall be numbered with number ferrules which shall be clearly readable after installation.

##### 6.2.4.2.1.2 Isolators

Distribution boards shall be fitted with a single load break isolator which when open effectively disconnects all electrical supplies from the panel. All terminals of these isolators shall be shrouded.

Supply isolators shall comply with IEC 60947 and shall be of the quick make/break pattern with provision for padlocking in the "open" position. The fault rating of isolators shall be at least equal to that of the busbars.

These functions may be fulfilled by an incoming MCB.



### 6.2.4.2.1.3 Miniature Circuit Breakers and Residual Current CBs

All subcircuits are to be protected by MCBs. The Contractor shall be responsible for providing fault limiting circuit breakers, if required, on the incomers to his distribution boards to limit fault levels to the required values.

All MCBs shall grouped, as far as possible, according to their functions. They shall be clearly labelled, both on the panels and the associated wiring diagrams.

Groups of up to three MCBs shall be protected by residual current circuit breakers (RCCBs). RCCBs shall be of the integral MCB RCCB type having earth leakage operating current of 30 mA. RCCBs shall comply with BS EN 50664. Grouping of lighting subcircuits protected by RCCBs shall be carefully coordinated such that, on operation of an RCCB, no more than 50% of lighting shall be affected. Lighting for small spaces, less than 30m<sup>2</sup> does not need to comply with the above requirement.

Each distribution board shall be provided with a minimum of 10% or six spare miniature circuit breakers, and associated RCCBs, whichever is the larger.

### 6.2.4.3 Light Fittings

All lighting fittings shall comply with BS EN 60598 "Luminaires" and BS EN 62471 "Photobiological safety of lamps and lamp systems". Light fittings shall be of the high efficiency light emitting diode (led) type unless otherwise approved by the Employer.

In general, linear type led fittings with integral driver are preferred. Lamp drivers shall comply with BS EN IEC 61347 "Lamp Control gear".

All fittings shall have fibreglass reinforced polyester or aluminium housing with polycarbonate prismatic clear diffusers and shall have a protection rating of at least IP54 and minimum impact protection rating of IK08.

Lamps shall have a correlated colour temperature of 4000 K.

Fittings and lamps shall have a rated life of not less than 50,000 hours with ambient temperature in the range +20 to +40 °C.

Light fittings located in food processing areas shall be UV stabilised, shatter proof, glass free, reinforced polyester, watertight to IP 67, and capable of withstanding the corrosive environment. Fittings shall also comply with any applicable HACCP guidelines for food handling areas.

Light fittings for plantrooms, workshops and outdoor locations shall be watertight to IP 65, and metalwork used therein shall be aluminium or light weight, ultraviolet (UV) stabilised reinforced polyester.

Light fittings for office areas shall be batten type, with integral diffuser. Fittings used in change and shower rooms shall be IP65 rated.



All metal exposed to touch shall be earthed.

Except for office and amenities areas, indoor light fittings shall be mounted on extruded aluminium trunking specifically designed for the purpose. All lighting cabling shall be located within the trunking. A PVC cover shall be fitted on the trunking between adjacent luminaires. End caps shall be provided at each end of a trunking section. All cables entering the conduit shall be protected by a grommet or other suitable method. The trunking system shall be chain mounted from the ceiling. Stainless steel fixing hooks shall be used at mounting level and on the fitting and the chain shall be stainless steel. The flexible tails shall be high temperature insulated cable of minimum 1.5 mm<sup>2</sup> cross sectional area. Large fittings shall be supported direct from the roof structure.

All luminaires shall be entirely suitable for satisfactory operation in their installed locations and shall be supported in conformity with best trade practice. Fittings shall be delivered to site in cartons, in which they are to remain until installed. Immediately prior to handing over any areas to the Employer, all luminaries shall be cleaned thoroughly.

All enclosed luminaire shall be insect and vermin proof especially in regards ingress from the ceiling space. Where fittings are to be recessed into building work, openings shall be correctly sized.

Light fittings erected in rows shall be geometrically straight and at the same level except as otherwise required.

High temperature insulation shall be provided in all cases where the temperature approaches or exceeds the design temperature of the normal grade insulation. Wiring in enclosed luminaries shall be fibre glass sleeved.

Road lighting standards shall be galvanised steel posts set in concrete and erected truly vertical. Each lamp post shall be fitted with a weathertight housing containing a suitably rated MCB.

Care shall be taken in positioning lights to ensure that warning signs in the area are well lit to at least the specified level for each area.

#### 6.2.4.4 Emergency Lighting – BS5266

Emergency light fittings shall be of the self-contained led type and shall meet the requirements of BS5266.

Emergency light fittings shall comply with the requirements for the light fittings installed in the same area as specified in 6.2.4.3.

#### 6.2.4.5. Light Switches and socket Outlets

All light switches and sockets shall be high impact polycarbonate to IP 65 and be of the flush pattern and surface mounted where exposed wiring is employed.



Single phase plugs and socket outlets shall be to BS 1363 "13 A plugs, socket-outlets, adaptors and connection units". Three phase plugs and socket outlets shall be 63A rated to BS EN 60309 "Plugs, socket-outlets and couplers for industrial purposes" .

Mounting heights of socket outlets and switches shall be as follows:-

Light Switches - 1350 mm above floor level

Socket Outlets - 530 mm above floor level or 150 mm above bench level

Switches shall generally be located on the locking side of the doors or as otherwise indicated.

Adjacent switches connected to different phases shall be housed in separate boxes or in partitioned boxes. Where a group of switches in a single compartment are supplied from different phases insert a label behind the flush plate stating in red lettering "Danger 415 V".

#### 6.2.4.6. Outdoor Lighting Switching

Outdoor security and roadway lighting shall be provided with automatic night-time/movement detection for switching the lights on & off. A manual switch shall be provided at the feeding distribution board to select the light control "On, Auto, Off" .

### 6.2.5 Cable selection

#### 6.2.5.1 Outer Sheath of Cables

All cables shall include a fire-retardant neoprene, chlorosulphonated polyethylene (CSP), or chlorinated polyethylene (CPE) outer sheath to IEC 60332 Cat A. The sheath shall contain a chemical additive enabling the cable to withstand attack by termites. Such chemicals shall not be carcinogenic.

Details of the fire retardant and termite repellent additives together with certificates proving their effectiveness shall be submitted with the Tender.

#### 6.2.5.2 Cable Testing

Cables shall be tested to BS EN 60811

Copies of type and routine tests for all cables shall be provided.

#### 6.2.5.3 Medium Voltage Power Cables

Medium voltage cables shall be single-conductor or multi-conductor, to IEC 60502. The conductors shall be annealed copper and shall be to BS EN 60228 Class 2 stranded.



A non-conducting stress control layer extruded over the conductor shall be used to reduce electrical stress and suppress energy transfer at the insulation surface. Insulation shall be XLPE with minimum insulation thickness, in accordance with IEC 60502.

The cable shall be shielded using either bare copper tape or bare copper drain wires.

#### *6.2.5.4 415V Power Cables*

415V power cables shall have a minimum of 600/1,000 voltage rating.

All low voltage power cables are to have copper conductors to BS EN 60228 Class 2 stranded and are to be sized and installed in accordance with BS IEC 60287 "Electric cables" and BS 7671 "Wiring Regulations" .

For buried cables, the thermal resistivity of the surrounding sand shall be determined, and cable size selections made accordingly.

The minimum conductor size shall be 1.5mm<sup>2</sup> for lighting circuits and 2.5mm<sup>2</sup> for all other purposes. Neutral and Protective Earth conductors shall be the same size as the phase conductors.

Cable insulation systems shall comply with the following Standards: -

BS EN 50363

BS 7870

BS 7889

IEC 60502.1

All cables exceeding 120 mm<sup>2</sup> conductor size shall use XLPE insulation. Cables under this size may use PVC or XLPE insulation. Conductor insulation colours shall follow BS EN 60446.

The outer sheath of LV power cables shall be black. The voltage rating, year of manufacture, name of manufacturer and cable type shall be embossed on the cable at not less than 1 metre intervals.

#### *6.2.5.5 VFD Cables*

Cables between VFDs and the driven motor shall use shielded cables following the recommendations of IEC TS 60034-25.

In other respects, the cables shall comply with Part 4.38.19.4.

#### *6.2.5.6 Armoured Power Cables*

Where armoured cables are specified, steel wire armoured cables to BS 5467 shall be used.



### 6.2.5.7 Control Cables

Control cable shall be unarmoured, circular, overall screen, PVC insulated multicore with an integral earth conductor. They shall have a minimum of 300/500 voltage rating.

Control cables shall comply with BS EN 50288.

Conductors shall be tinned copper to BS EN 60228 Class 5 flexible, the minimum conductor size shall be 1.5mm<sup>2</sup>.

Each core shall be marked with indelible numbering.

All cores in the any one cable shall operate at the same voltage.

### 6.2.5.8 Instrument Cables

Instrument cable shall be unarmoured, circular, individual screen, overall screen, PVC insulated, multi-pair or multi-triple. They shall have a minimum of 300/500 voltage rating.

Instrument cables shall comply with BS EN 50288.

Conductors shall be tinned copper to BS EN 60228 Class 5 flexible, the minimum conductor size shall be 0.5mm<sup>2</sup>.

Shields shall be aluminium foil bonded to a mylar or polyester film with a stranded, tinned copper, continuous drain wire outside of the shield.

Each pair/triple shall be marked with indelible numbering. Analogue signals shall be run in separate cables from digital signals.

### 6.2.5.9 Panel Wiring

Panel wiring shall be carried out in a neat and systematic manner with cable supported clear of the panels and other surfaces at all points to obtain free circulation of air.

Panel wiring shall be OVC insulated and comply with the requirements of BS 6231 Type BK. Conductors shall be stranded with a minimum cross section area of 1.5mm<sup>2</sup>.

The Contractor shall propose a panel wire colour system to be used throughout the Works. The colour system adopted must clearly:-

Use different colours for 230/400V AC phase and neutral conductor.

Differentiate 24V DC positive and negative conductors.

Clearly identify RTD and analogue signal conductors.

Green and Green/Yellow insulation may only be used for earthing conductors.

Be applied consistently throughout the project.

The use of sleeves for colour identification is not permitted.



### 6.2.5.10 Cable Terminations and Markings

Panel and incoming field wiring shall be number ferruled using slide on cable markers with indelible markings. Wiring systems that rely on terminal number identification only are prohibited.

All panel wiring and outgoing cabling shall be brought out to terminals to facilitate ease of termination. Termination of all wiring at these terminals shall use pre-insulated crimped bootlace ferrules. Segregation shall be provided between 415/230V AC, 24V control and RTD/analogue terminals.

All cables shall be glanded where they enter switchboards, control panels, electrical panels, motor terminal boxes, instruments. In no instance shall a cable be installed without an appropriate gland at both ends. Glands shall maintain the IP rating of the item to which they are being terminated.

All MV cables, LV power cables of 240mm<sup>2</sup> conductor area or larger, and armoured cables shall use stainless steel or chromed brass glands. Other cables may use Nylon, stainless steel or chromed brass glands.

## 6.2.6 Factory Testing

All electrical equipment shall undergo all routine factory tests as defined in the BS IEC Standards to which the equipment has been manufactured. The factory test equipment and the test methods used shall conform to the requirements of the applicable Standard.

The Employer shall be invited to attend all Factory Testing, except that for standard OEM manufacturer product lines.

Factory tests shall include: -

- Point-to-point wiring continuity checks on all circuits to confirm that wiring agrees with the wiring diagrams.
- All 415V/230V panel wiring shall be subjected to a dry dielectric withstand test of 2,000 V to ground for one minute. All 24V and lower panel wiring shall be subjected to
- All panel wiring shall be subjected to an insulation resistance measurement check.
- Functional testing of electrical controls.
- All programmable controllers, protection relays, and other intelligent devices shall be fully configured in the factory and tested to demonstrate correct operation.



## 6.2.7 Site Testing

The electrical installation shall be inspected and tested in full accordance with Part 6 of BS 7671. Following successful completion of the Works inspection and testing certificates shall be issued to verify that the installation has been designed, constructed, inspected and tested in accordance with BS 7671.

Electrical site tests shall include, but not be limited to, the following:

- Point-to-point wiring continuity checks on all circuits to confirm that the final connections agree with the wiring diagrams.
- Verification of equipment earthing.
- Confirmation that all settings comply with the Contractors designs, including fuse selections, circuit breaker settings, protection relay settings and motor protective device settings.
- Inspection and testing of switchgear and motor control centres.
- Insulation resistance and dielectric testing of electrical equipment and cables.
- Phase rotation test on motors.
- Functional testing of electrical controls.
- Functional testing of all equipment including controlling software sequences and devices.

## 6.2.8 Performance Testing

Where performance guarantees are provided for plant items, the Contractor shall demonstrate compliance with the guarantees made.

Where performance tests can be completely and properly conducted in the factory and, if agreed with the Employer, such performance tests may be carried out in the factory. Otherwise, they must be carried out on site.

The Contractor shall provide a detailed test plan outlining the tests to be performed, the standards/criteria to which the plant will be tested, the acceptance criteria, a pro-forma test report and the test programme. A draft of the test plan shall be provided not less than 80 days before the associated performance tests are conducted.



**SECTION VI-A**  
**QUALIFICATION REQUIREMENTS**

(Referred to in Clause 11.1 of ITB (Bid Data Sheet))

1. The bidder should present evidence that the bidder is an authorized distributor of the generators the bidder is offering. This can be in the form of a written document by the manufacturer of the products or equipment specified in the 'Schedule of Requirements' , duly sealed and signed by the manufacturer or by another authorized representative, dealer or distributor. If the certification is by another authorized representative, dealer or distributor, a copy of the original authorization to this representative, dealer or distributor by the original manufacturer of the equipment should be provided. The manufacturer' s authorization should be in prescribed format assuring full guarantee and warranty obligations as per GCC and SCC and a prescribed in Section X.



## SECTION VII:

# BID FORM AND PRICE SCHEDULE



**SECTION VII/1: BID FORM**

Date :.....

IFB No :.....

TO: Maldives Industrial Fisheries Company Ltd.

Gentlemen and/or Ladies :

Having examined the Bidding Documents including Addenda Nos..... *[insert numbers]*, the receipt of which is hereby duly acknowledged, we, the undersigned, offer to supply and deliver the generators, their panel boards and installation, testing and commissioning of the generators in conformity with the said bidding documents for the sum of ..... *(Total bid amount in words and figures)* or such other sums as may be ascertained in accordance with the Schedule of Prices attached herewith and made part of this bid.

We undertake, if our bid is accepted, to deliver the goods in accordance with the delivery schedule specified in the Schedule of Requirements.

If our bid is accepted, we will obtain the guarantee of a bank in a sum equivalent to ..... percent of the Contract Price for the due performance of the Contract, in the form prescribed by the Purchaser.

We agree to abide by this bid for the Bid validity period specified in Clause 13.1 of the Bid Data Sheet and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

Commissions or gratuities, if any, paid or to be paid by us to agents relating to this Bid, and to contract execution if we are awarded the contract, are listed below :

Amount	Dollar	Purpose of Commission or gratuity
Name and address of agent		

(if none, state "none" ).

Until a formal contract is prepared and executed, this bid, together with your written acceptance thereof and your notification of award, shall constitute a binding

Contract between us.

We undertake that, in competing for (and, if the award is made to us, in executing) the above contract, we will strictly observe the laws against fraud and corruption in force in the Maldives.

We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in bribery.

We understand that you are not bound to accept the lowest or any bid you may receive.

Dated this ..... day of ..... 20 .....

\_\_\_\_\_  
*(signature)*

\_\_\_\_\_  
*(in the capacity of)*

Duly authorized to sign Bid for and on behalf of



**SECION VII/2: PRICE SCHEDULE**  
**(SAMPLE FORM is attached as Annex 1)**

**Kooddoo and Thinadhoo Power Supply and Installation- Detail Price Schedule**

*Price in United States Dollar*

*Note: In case of discrepancy between unit price and total price, the unit price shall prevail.*

Signature of the Bidder: \_\_\_\_\_

Name: \_\_\_\_\_

Business Address: \_\_\_\_\_

\_\_\_\_\_

Place:

Date:



## SECTION VII/3: DELIVERY SCHEDULE FOR KOODDOO

(SAMPLE FORM)

Schedule No.	Serial No	Description of Goods and services.	Quantity	Physical unit	Final (Project Site) Destination as specified in BDS	Bidder' s offered Delivery date [to be provided by the bidder]
1	1	Diesel Generator Set	Two	SET		
1	2	Shell and Tube Heat Exchanger	Two	unit		
		Parts for panel board)	One	Lot		
		Individual Items supplying for Installation.	One	Lot		
2	3	Installation of generator including heat exchanger, exhaust piping and fixtures.	One	Lot		
2	4	Installation of Panel board items, electrical connections, synchronization with the existing generators, testing and commissioning.	One	Lot		

Signature of the Bidder \_\_\_\_\_

Business Address \_\_\_\_\_

*Seal of the Bidder*



## SECTION VII/4: DELIVERY SCHEDULE FOR THINADHOO

Schedule No.	Serial No	Description of Goods and services.	Quantity	Physical unit	Final (Project Site) Destination as specified in BDS	Bidder' s offered Delivery date [to be provided by the bidder]
1	1	Diesel Generator Sets	Two	SET		
1	2	Shell and Tube Heat Exchanger	Two	unit		
		Parts for panel board)	One	Lot		
		Individual Items supplying for Installation.	One	Lot		
		Equipment for fire alarm system	Package	One		
2	3	Installation of generator including heat exchanger, exhaust piping and fixtures.	One	Lot		
2	4	Installation of Panel board items, electrical connections and completing all electrical installations described in section 6.2	One	Lot		
		Installation for fire alarm system	Package	One		

Signature of the Bidder \_\_\_\_\_

Business Address \_\_\_\_\_

*Seal of the Bidder*



SECTION VIII:

CONTRACT FORM



## SECTION VIII: CONTRACT FORM

THIS AGREEMENT made the .....day of....., 20... Between ..... (*Name of purchaser*) of ..... (*Country of Purchaser*) (hereinafter called "the Purchaser") of the one part and ..... (*Name of Supplier*) of ..... (*City and Country of Supplier*) (hereinafter called "the Supplier") of the other part :

WHEREAS the Purchaser is desirous that certain Goods and ancillary services viz., (*SUPPLY AND INSTALLATION OF DIESEL GENERATOR SETS AT KOODDOO FISHERIES COMPLEX AND SUPPLY AND INSTALLATION OF GENERATORS AND ELECTRICAL POWER AT THINADHOO REFRIGERATION COMPLEX*) and has accepted a bid by the Supplier for the supply of those goods and services in the sum of ..... (*Contract Price in Words and Figures*) (hereinafter called "the Contract Price").

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement, viz.:
  - (a) the Bid Form, Price Schedule and Delivery Schedule submitted by the Bidder;
  - (b) the Schedule of Requirements;
  - (c) the Technical Specifications;
  - (d) the General Conditions of Contract;
  - (e) the Special Conditions of Contract; and
  - (f) the Purchaser's Notification of Award.
3. In consideration of the payments to be made by the Purchaser to the Supplier as hereinafter mentioned, the Supplier hereby covenants with the Purchaser to provide the goods and services and to remedy defects therein in conformity in all respects with the provisions of the Contract.
4. The Purchaser hereby covenants to pay the Supplier in consideration of the provision of the goods and services and the remedying of defects therein, the Contract Price or such



other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

Brief particulars of the goods and services which shall be supplied/provided by the Supplier are as described in Annex 1 Kooddoo and Thinadhoo generators supply and Installation – detail Price Schedule.

**IN WITNESS** whereof the parties hereto have caused this Agreement to be executed in accordance with their respective laws the day and year first above written.

Signed, Sealed and Delivered by the

said ..... (For the Purchaser)

in the presence of:.....

Signed, Sealed and Delivered by the

said ..... (For the Supplier)

in the presence of:.....



## SECTION IX:

# PERFORMANCE SECURITY FORM



**SECTION IX/1. PERFORMANCE SECURITY FORM**

To: (Name of Purchaser)  
 WHEREAS ..... (Name of Supplier)  
 hereinafter called "the Supplier" has undertaken , in pursuance of Contract (Notification of Award) No..... dated,..... 20... to supply.....  
 .....(Description of Goods and Services) hereinafter called "the Contract".

AND WHEREAS it has been stipulated by you in the said Contract that the Supplier shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as security for compliance with the Supplier's performance obligations in accordance with the Contract.

AND WHEREAS we have agreed to give the Supplier a Guarantee:  
 THEREFORE WE hereby affirm that we are Guarantors and responsible to you, on behalf of the Supplier, up to a total of ..... (Amount of the Guarantee in Words and Figures) and we undertake to pay you, upon your first written demand declaring the Supplier to be in default under the Contract and without cavil or argument, any sum or sums within the limit of ..... (Amount of Guarantee) as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This guarantee is valid until the .....day of.....20.....

Signature and Seal of Guarantors

.....  
 .....  
 .....

Date.....20....

Address:.....

.....  
 .....



SECTION X:

MANUFACTURER' S AUTHORIZATION FORM



**SECTION X**

(Please see Clause 11.1) of Instructions to Bidders)

**MANUFACTURERS' AUTHORIZATION FORM\***

No. \_\_\_\_\_ dated

To

Dear Sir:

IFB No.

We \_\_\_\_\_ who are established and reputable manufacturers of  
*(name and description of goods offered)* having factories at \_\_\_\_\_ *(address of factory)*  
do hereby authorize M/s \_\_\_\_\_ *(Name and address of Agent)* to submit a  
bid, and sign the contract with you for the goods manufactured by us against the above  
IFB.

We hereby extend our full guarantee and warranty as per Clause 15 of the General Conditions  
of Contract and Clause 10 of the Special Conditions of Contract for the goods and  
services offered for supply by the above firm against this IFB.

Yours faithfully,

(Name)

(Name of manufacturers)

Note: This letter of authority should be on the letterhead of the manufacturer and should be signed  
by a person competent and having the power of attorney to legally bind the manufacturer. It  
should be included by the Bidder in its bid.

\* Modify this format suitably in case where manufacturer' s warranty and guarantee are not  
applicable for the items for which bids are invited.



**SECTION XI:**

**BID SECURITY FORM**



## SECTION XI: BID SECURITY FORM

Whereas .....1 (hereinafter called "the Bidder" ) has submitted its bid dated ..... (date of submission of bid) for the supply of ..... (name and/or description of the goods) (hereinafter called "the Bid" ).

KNOW ALL PEOPLE by these presents that WE ..... (name of bank) of ..... (name of country), having our registered office at ..... (address of bank) (hereinafter called "the Bank" ), are bound unto ..... (name of Purchaser) (hereinafter called "the Purchaser" ) in the sum of \_\_\_\_\_ for which payment well and truly to be made to the said Purchaser, the Bank binds itself, its successors, and assigns by these presents. Sealed with the Common Seal of the said Bank this \_\_\_ day of \_\_\_\_\_ 20\_\_.

THE CONDITIONS of this obligation are:

1. If the Bidder
  - (b) withdraws its Bid during the period of bid validity specified by the Bidder on the Bid Form; or
  - (c) does not accept the correction of errors in accordance with the ITB; or
2. If the Bidder, having been notified of the acceptance of its bid by the Purchaser during the period of bid validity:
  - (d) fails or refuses to execute the Contract Form if required; or
  - (e) fails or refuses to furnish the performance security, in accordance with the Instruction to Bidders;



we undertake to pay the Purchaser up to the above amount upon receipt of its first written demand, without the Purchaser having to substantiate its demand, provided that in its demand the Purchaser will note that the amount claimed by it is due to it, owing to the occurrence of one or both of the two conditions, specifying the occurred condition or conditions.

This guarantee will remain in force up to and including forty five (45) days after the period of the bid validity, and any demand in respect thereof should reach the Bank not later than the above date.

.....  
(Signature of the Bank)

---

1 Name of Bidder

