

**SUBJ: Request for Information (RFI)**

Reference:

**Long Term Service Agreement (LTSA) for IEC's Three (3) MTD 50 Steam Turbines originally manufactured by Škoda Power (Eshkol #4, Hagit #9 and Ramat Hovav #9)**

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Dear Sir/Madam,

The Israel Electric Corporation Ltd. ("IEC") is in process of preparing a list of potential suppliers which IEC may request to participate in a purchasing process to supply above referenced LTSA services.

**1. Contract Scope**

The LTSA in question shall require the supplier to integrate, organize and perform planned maintenance activities for the steam turbine equipment, which is a part of the double shaft combined cycle unit, including schedule minor, medium and major inspections as well as unplanned maintenance activities. The LTSA includes the steam turbine and its main auxiliary equipment.

**1.1. Planned Outages**

1.1.1. The estimated required planned outages scope for the units is as follows:

Unit	Minor Inspection	Medium Inspection	Major Inspection	Expt. Date
Eshkol 4	Every year	Every 2-3 years	After 9-10 years	2025
Hagit 9	Every year	Every 2-3 years	After 9-10 years	2025
Ramat Hovav 9	Every year	Every 2-3 years	After 9-10 years	2025

1.1.2. IEC expects the supplier of the LTSA services to undertake planning, organization and performance of a.m. planned maintenance outages according to a defined outage scope.

1.1.3. Performance of planned outage would include: provision of skilled technical advisers (TAs) and all other experts necessary to support the maintenance of the turbines; from time to time IEC may require the provision of skilled craft labor, paid as extra work.

1.1.4. Major overhaul of the double casing double shell condensing steam turbine Skoda MTD 50 with reheat and with axial steam exhaust.

1.1.5. Supply of necessary steam turbine spare parts for a.m. scheduled and unplanned maintenance, as well as required special maintenance tools.

1.1.6. Engineering support during outages and in connection with IEC operation of the



unit, as may be requested by IEC from time to time.

- 1.1.7. Supply of special services that can be required and should be performed on site during the steam turbine outage: machining, welding, coating, heat treatment, balancing, special metallurgical tests, and etc.
- 1.1.8. IEC will provide qualified craft labors for the planned maintenance outages.
- 1.1.9. All activities performed by Supplier shall be reported to IEC by thorough reports of work. These reports shall include data sheets, measurements, used materials, used spare part list, graphs and adjustment characteristics and etc.

### 1.1. Unplanned Outages

Support of unplanned maintenance either during a planned maintenance outage or during operation of the unit by IEC, which would be paid as extra- work, including:

- 1.1.1. Engineering support.
- 1.1.2. TAs.
- 1.1.3. Parts supply.

The supplier is to be capable to arrange a Fact Finder arrival on site in 3 working days after an unplanned event (failure) and a Team of technical personnel for the remedy works during the first week after the event.

- 1.2. The work permits for all specialists are on the Supplier responsibility.

## 2. IEC intends to sign the LTSA at the end of 2018

### 3. Limits of Scope

The covered equipment shall include:

- 3.1. Steam Turbine ŠKODA MTD 50 including casings, rotors, turning gear, all valves, couplings, bearings, pumps and etc.
- 3.2. Electro-Hydraulic protection and control system.
- 3.3. Lubricating and Control oil supply systems including pumps, filters, tanks, piping and ets.



#### 4. General Data of the Units

Unit	Eshkol 4	Hagit 9	Ramat Hovav 9
Unit Configuration	combined cycle – Double Shaft	combined cycle – Double Shaft	combined cycle – Double Shaft
GT Model (For Information only)	Siemens V94.3A2 - STG5 - 4000F	Siemens V94.3A2 - STG5 - 4000F	Siemens V94.3A2 - STG5 - 4000F
Generator Manufacturer (For information only)	Brush	Brush	Brush
Steam turbine Model (For information only)	ŠKODA MTD 50	ŠKODA MTD 50	ŠKODA MTD 50
GT Synchronization	July 2010	July 2010	November 2010
ST Synchronization	April 2014	August 2013	July 2013

Turbine main features:

Impulse type Turbine with exhaust Axial Flow.

Rated electrical output measured on generator terminals:

Eshkol 138 MW

Hagit 125 MW

Ramat Hovav 122 MW

No. of casings 2 (CSt+19 stages HP Turbine; 9 IP+5 LP stages IP-LP turbine)

No. of streams 1

Nominal speed of turbine 3000 rpm

Nominal speed of generator 3000 rpm

Sense of rotation – Clockwise (Seeing from the generator towards the turbine)

Steam parameters:

Nominal steam pressure immediately upstream the

HP stop and control valves:

Eshkol 136,2 bar

Hagit 134,2 bar

Ramat Hovav 131,3 bar

Operable HP steam pressure range 76.4 ÷ 144 bar

Nominal steam temperature immediately upstream the HP stop and control valves:

Eshkol 559,8 °C

Hagit 559,9 °C

Ramat Hovav 559,4 °C

Operable HP steam temperature range 529.7 ÷ 561.2 °C

Nominal HP steam flow:

Eshkol 255,8 t/h

Hagit 251,8 t/h

Ramat Hovav 246,3 t/h



Main surface condenser. Nominal pressure:

Eshkol 0,0506 bar

Hagit 0,131 bar

Ramat Hovav 0,131 bar

Operational range:

Eshkol 0,0195 - 0,077 bar

Hagit 0,047 - 0,310 bar

Ramat Hovav 0,050 - 0,310 bar

## 5. LTSA –Related Information to be supplied by Participant

5.1. Participant shall provide a reference list of all long term service contracts signed during the previous ten (10) years, which list shall include at least the following information, per LTSA:

- 5.1.1. Company name and facility location (country/region).
- 5.1.2. Number and type of units under contracts.
- 5.1.3. Short description of the services provided by participant in the contract, and whether same were supplied directly by participant or by a sub-contractor.
- 5.1.4. Mode of operation of the units under the contract.

5.2. Reference list of performed planned/unplanned maintenance activities (Minor, Medium and Major Inspections) for ŠKODA MTD 50 steam turbines including works definition.

5.3. General Scope (List of Activities) for each type of Inspections (Major, Medium and Minor) performed by Supplier.

5.4. References about special works performed by Supplier that were connected to specific issues of Skoda originally manufactured Steam Turbines for double shaft CC units: alignments, LSB tests and replacements, bearing replacements, stop and control valves treatments, vibration analysis/ balancing and etc.

5.5. Reference list of spare parts supplied for ŠKODA MTD 50 steam turbines. The list should include the following:

- 5.5.1. Part name ( OEM part number)
- 5.5.2. Date of supply
- 5.5.3. Quantity of parts supplied
- 5.5.4. Lead Time
- 5.5.5. Customer (Company name, Contact person name, telephone, E-mail)
- 5.5.6. Type of supply:
  - 5.5.6.1. Procurement from OEM
  - 5.5.6.2. Procurement from a Dealer (Dealer's details)
  - 5.5.6.3. Self-manufacturing on OEM drawings and procedures
  - 5.5.6.4. Self-manufacturing by reverse engineering
  - 5.5.6.5. Manufacturing by Sub-contractor (Sub-contractor's details)



- 5.6. List of OEM documents and Information Letters related to ŠKODA MTD 50 steam turbine and familiar to Supplier.
- 5.7. Possibility to supply each of the services required in the LTSA as per Article 1 above: (engineering capabilities for planned/unplanned maintenance and support of unit operation, field service capabilities, parts manufacturing and reverse engineering capabilities).
- 5.8. Detail whether each such service would be provided by the main supplier or by a sub-contractor, and if possible, which sub-contractor could be considered.
- 5.9. List of manufacturing and/or relevant repair facilities either operated by participant or available to participant.
- 5.10. If you are not the OEM and are operating under a license granted by an OEM, then name the owner and the license or other means by which you are entitled to use the technology and any limitations on your use thereof.

## 6. Commercial Terms

- 6.1. Applicable law would be Israeli.
- 6.2. Contractor will be liable for buy back obligations towards the state of Israel, as may be applicable.
- 6.3. IEC will be issuing its standard contract for LTSA services with the RFP.

## 7. Corporate Information

The following documents/information shall be provided:

- 7.1. Company's history with special emphasis upon corporate reorganization in the last ten years, licensee and licensor agreements.
- 7.2. ISO 9000 certification approval for design, manufacturing and services including the certification date and validity.
- 7.3. Annual audited report (or the equivalent thereof if not available) for the past three years, products catalogues, company description and any other information relevant to the company, its financial, commercial or professional status/situation.
- 7.4. Company's place within the corporate structure (if applicable), with indications regarding parent companies, subsidiaries and/or affiliates.
- 7.5. Affidavit by a legal counsel or accountant that you are a company in good standing with no current actions or claims regarding bankruptcy, insolvency, liquidation,



voluntary or otherwise placing under administration, receivership, trusteeship or judicial management.

- 7.6. A local Israeli agent name (if applicable), address, phone, fax, E-mail, availability of technical support in Israel.

## **8. Instructions to the Participants**

- 8.1. A participant who wishes to be considered for further evaluation towards inclusion in the contemplated purchasing process shall provide all the details and information requested in this RFI and other prequalification document which may be sent to you.
- 8.2. The sole propose of this RFI and prequalification process is to provide IEC with certain information. Neither participation in this RFI and prequalification process, nor the provision of any information to IEC hereunder or otherwise shall grant participant any right, legal or otherwise, regarding participation in any current and/or future purchasing process conducted by IEC.
- 8.3. Based on participant's responses to this questionnaire, the information stated therein, the opinions received from references listed herein and all other relevant information gathered by IEC, IEC will determine whether to include participant in its list of approved suppliers for this type of contract.
- 8.4. Subject to disclosure requirements under Israeli law, IEC shall keep all information provided in this RFI confidential and shall use it only for its own purpose, in connection with this RFI and prequalification process and/or any other purchasing process undertaken by IEC.
- 8.5. IEC shall not be required, whether pursuant to this document or otherwise, to enter upon any purchase process of any type or kind.
- 8.6. Please note that IEC reserves the right to request further information from parties who choose to participate in this process.
- 8.7. Provision of references to IEC shall be deemed your agreement for IEC to apply to the referenced power station or other named facility for verification, review and receipt of opinions regarding your company.
- 8.8. IEC shall be under no obligation to enter any transaction with any party whomsoever who responds to or participates in any procedure for the Receipt of Information to be used for the purposes of acquisition of services/equipment/systems/goods or data which is the subject of the Request for Information (hereinafter referred to as: "**RFI**") or for purposes of their development, application, production or construction.
- 8.9. IEC shall be entitled to use the information obtained by way of the RFI, as well as any data, solution, process, technique or suggestion contained in any of the responses or documents/response material submitted to IEC related thereto. Without derogating from the above, IEC shall keep any information/data received from any person



responding to the RFI in strict confidence and shall not permit the use or use same for any purpose than for its own needs unless such information must be disclosed subject to a right granted by law.

- 8.10. A response to an RFI shall not bestow upon any person responding thereto (hereinafter referred to as the "**Respondent**") any advantage in any procurement procedure, if such procedure should be publicized at all, and IEC shall not be obliged to include the Respondent in the procurement process.
- 8.11. Any exceptions, changes or additions to these above instructions (whether contained in any response to the RFI or otherwise) shall be devoid of validity and legal effect and shall not obligate IEC.

## **9. Submission Dead Line**

- 9.1. If your company is interested in being considered for possible further participation in this purchasing process, you are requested to submit the above required information by no later than 2018.

## **10. LEGAL STATUS OF THIS RFI:**

IEC shall be under no obligation to enter any transaction with any party whomsoever who responds to or participates in any procedure for the Receipt of Information to be used for the purposes of acquisition of services/equipment/systems/goods or data which is the subject of the Request for Information (hereinafter referred to as: "RFI") or for purposes of their development, application, production or construction.

IEC shall be entitled to use the information obtained by way of the RFI, as well as any data, solution, process, technique or suggestion contained in any of the responses or documents/response material submitted to IEC related thereto. Without derogating from the above, IEC shall keep any information/data received from any person responding to the RFI in strict confidence and shall not permit the use or use same for any purpose than for its own needs unless such information must be disclosed subject to a right granted by law.

A response to an RFI shall not bestow upon any person responding thereto (hereinafter referred to as the "Respondent") any advantage in any procurement procedure, if such procedure should be publicized at all, and IEC shall not be obliged to include the Respondent in the procurement process.

Any exceptions, changes or additions to these above instructions (whether contained in any response to the RFI or otherwise) shall be devoid of validity and legal effect and shall not obligate IEC.

The IEC wishes to thank you for your anticipated participation and cooperation in the successful completion of this RFI.



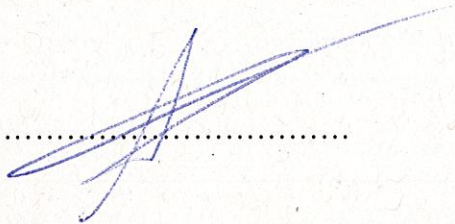
**11. Please send your response to the following address:**

The Israel Electric Corporation Ltd.  
P.O.BOX 10 Haifa, 31000, Israel  
Attention: Mr. Alexander Gutman  
Manager Mechanical Engineering Dprt.  
Generation Division

Responses to this RFI received after the above mentioned date may result in the information supplied being disregarded.

Sincerely,

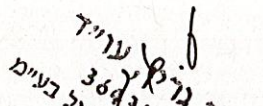
Alexander Gutman .....



Approved by A. Zilberberg  
Deputy VP, Generation and Energy Division



אדם זילברברג  
סגן מנהל  
אגף הייצור למכונות



עופר גולדמן  
מ.ר. 36935  
חבי החשמל לישראל בע"מ