



TO:
ATT:

SUBJ: Request for Information (RFI)

Reference: Gezer Power Station, gas turbine (Dual fuel) units 11,12,21,22 - Major & Minor Planned Maintenance Outages and Life Time Extension

Dear Sir/Madam,

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

1. Scope of work

A participant shall provide the required information to IEC regarding the organization and performance of planned maintenance outages Minor Inspections & Major Inspections as well as life time extension ("LTE") for the relevant gas turbines described below, taking into consideration that the supplier of the planned maintenance outages shall be required to provide the gas turbine program parts (hot gas path parts) and all other parts required for a.m. planned maintenance activities and LTE (new parts or refurbish parts). See also the planned scope of work document attached hereto.

2. Original General Unit Data

Gezer Power Station is located near Ramle (in the center of Israel). The gas turbines are manufactured by Siemens.

Year of manufacture: 1994

Year of commissioning: 1999

Turbines serial ##: 800250; 800252; 800259; 800262

Type	V94.2 (STG5-PAC 2000E)	
Turbine Nominal Rate	147.6	MW
Air Inlet temperature	19.5	° C
Air Inlet pressure	1.013	bar
Mode of operation	Peaker, daily start and stops	
Fuel Type	Dual fuel	



Generator frequency	50	Hz
Generator type	TLRI 108/36 (air cooled)	
Control system	TXP sppa-t2000 (Simadyn governor) S5 sim and FUM modules	
Protection System	Siemens S5 155F	

3. Operational Data & Outages History

	Gezer 11	Gezer 12	Gezer 21	Gezer 22
First GT Sync.	Jun-1999	Apr-1999	Apr-1999	Jun-1999
First GT Operation on Gas	Sep-2008	Sep-2008	Nov-2008	Oct-2008
Total Number of Starts @ 24.07.2024	5,296	5,159	5,207	5,079
Total Number of OH @24.07.2024	37,309	36,288	35,838	35,048
Total Number of EOH @24.07.2024	97,356	92,246	89,243	89,969

Gezer 11	Gezer 12	Gezer 21	Gezer 22
Jul-2022 - eHGPI 85,677 EOH 4,793 Start	May-2022 - eHGPI 80,293 EOH 4,681 Start	Jun-2021 - eHGPI 70,981 EOH 4,409 Start	Aug-2021 - eHGPI 74,002 EOH 4,386 Start

It is estimated that the units shall have reached 6000 starts by the planned maintenance outages referenced hereunder.

4. Required Information

The participant shall supply IEC with at least the following information regarding the aforementioned scope :

- 4.1. General possibility to supply such kind of service (engineering capabilities, field service capabilities, manufacturing and repair capabilities for parts) and commissioning.
- 4.2. Declaration of the ability to perform refurbishing of parts taken out of units.
- 4.3. Declaration of the ability to supply the gas turbine program spare parts (hot gas path parts) and other parts which may be required such as discs, compressor blades & vanes, inner casing, mixing chamber, burner, parts for LTE etc.
- 4.4. Declaration of ability to upgrade the gas/fuel oil control system Low Pressure Hydraulic (LPH) system to High Pressure Hydraulic (HPH) system.
- 4.5. General estimated schedule of performance of work.
- 4.6. The project budget price.
- 4.7. Any further information participant deems relevant to the scope and the performance of work.



5. Time Schedule

IEC plans to sign the contract with supplier of the above scope in the middle of the year 2025. The performance of the services begins with a Major inspection for one of the units during Q4 2026 and subsequent inspections for the other units. Each Major inspection will be followed with a Minor Inspection thereafter.

6. Reference list

Participant shall provide a reference list of similar scope contracts signed and performed during the previous ten (10) years, which includes at least the following, per contract:

- 6.1. Facility name and name of owner, location (country/region).
- 6.2. Number of units under contracts.
- 6.3. Short description of the contract.
- 6.4. Budget prices of the contract, including main price breakdown.
- 6.5. Age of units and number of operation hours and starts at time of contract performance
- 6.6. Contract term.
- 6.7. Contract person name, telephone number and e-mail.

Please note that IEC reserves the right to request further information from parties who choose to participate in this process.

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.

7. Corporate Information

Please provide the following:

- 7.1. Company's history with special emphasis upon corporate reorganization in the last ten years, licensee and licensor agreements.
- 7.2. ISO 9001 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 your company, its financial, commercial or professional status/situation.

- 7.4. Your company's place within the corporate structure (if applicable), with indications regarding parent companies, subsidiaries and/or affiliates.
- 7.5. Affidavit by 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. 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 purpose 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 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.
- 8.5 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 or for purposes of their development, application, production or construction.
- 8.6 A response to an RFI shall not bestow upon any person responding thereto 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.



9. Submission Deadline

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 27/10/2024

10. Please send your response to the following address:

uri.hasan@iec.co.il
Attention: Mr. Uri Hasan

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

Sincerely,

Uri Hasan



1/09/2024

Planned Generic Contractor Scope for Planned Maintenance Outages (without possible scope for life time extension)

1. Gas Turbine V94.2 - STG5-PAC 2000E

	System/ Equipment	KKS	Part	Activity	Minor	Major
1	Disassembly And preparations	-				
	-	-	-	outside visual inspection, focused at fuel, water, oil, air leakages from connections, flexible pipes, seals, hoses	x	x
	-	-	-	removal of GT instrumentation (where required) - T/A support		x ¹
	-	-	-	removal of turbine fire protection system - T/A support		x ¹
	-	-	-	removal of thermal insulation (where required) T/A support		x ¹
	-	-	-	opening of manhole covers	x	x
2	Air inlet	MBL				
	Filter house	-	-	visual inspection of filter house, air filter, compressor cleaning system, Painting repair	x	x
	Air inlet	-	-	visual inspection and cleaning of compressor inlet compartment and compressor bearing support, Painting repair	x	x
3	Compressor	MBA				
	-	-	IGV	visual/borescope inspection of inlet guide vane (IGV) assembly	x	x
	-	-	1st row vanes	visual inspection of first row compressor vanes	x	x
	-	-	1st row blades	visual inspection of first row compressor blades	x	x
	-	-		Clearance checks on 1st stage compressor rotor blades (where required).	x	x
	-	-	all vanes & blades	borescope inspection of compressor vanes and blades	x	
	-	-	Diffuser	visual inspection of the compressor diffuser	x	x
			all vanes & blades	Cleaning, visual inspection and NDE of blades; recoating of vanes according to maintenance concept		x
				removal of stator blades; cleaning, visual inspection and NDE of vanes; recoating of vanes according to maintenance concept; visual inspection of stator blade carrier and sealing plates (include IGV)		x
	-	-	Disc 1-16	Cleaning, visual inspection and NDE of discs Replacement of Compressor Disc 2		x

x¹ - T/A support – technical advisor support by the contractor. Activity will be performed by IEC

	<u>System/ Equipment</u>	<u>KKS</u>	<u>Part</u>	<u>Activity</u>	<u>Minor</u>	<u>Major</u>
4	Combustion system	MBM				
	-	-	Inner casing	visual inspection of inner casing, transition to mixing chamber, inner surface, welds, inner casing hub	x	x
	-	-		if required: examination on inner casing, support pads, center guide, welds, hub surface		x
	-	-		visual inspection of inner casing centring device, pins, radiation shield and air baffle		x
	-	-	Fuel pipes	visual inspection of fuel pipes	x	x
	-	-	Gas divider	Disassemble , visual inspection and examination of gas divider		x
	-	-		Replace all 16 expansion joint - welding, x-ray, NDT-natural gas certificate.		x
	-	-	Burners	visual inspection of burners	x	x
	-	-		dye checking (NDT) of diffusion burner welds		x
	-	-		if required: removal of burners; if required: disassembly of burners; if required: examination of burners, axial/diagonal swirlers, igniters		x
	-	-		visual inspection of burner inserts		x
	-	-	Flame tubes	visual inspection of flame tube bottom, flame tube, heat shields, tile support ring	x	x
				dimensional checks on combustion chambers and inner casing		x
				inspection and replacement of ceramic tiles(including tieles)		x
	-	-	Mixing chamber	visual inspection of mixing chamber inner surface, transition to tile support ring, welds cooling air ring	x	x
	-	-		visual inspection of mixing chamber; if required: examination inspection on mixing chamber, cooling air ring, manhole inserts, welds		x
	-	-		dye checking (NDT) of mixing chamber welds		x
	-	-		repair by welding/grinding of any fretting of manhole cones, frame tubes, inner casing inlet ring and mixing chamber castellation- material, work process, manpower- by supplier		x

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	<u>System/ Equipment</u>	<u>KKS</u>	<u>Part</u>	<u>Activity</u>	Minor	Major
5	Turbine	MBA				
	Turbine Stator	-	Van es (Nozzles)	visual inspection of first and last rows of vanes without removal of parts	x	
				clearance checks for turbine 1st stage vanes	x	x
				opening of turbine casing (after removal of combustion chambers)		x
				opening and removal of turbine vane carriers (top and bottom)		x
				removal of all stator vanes, cleaning, visual inspection or replacement of turbine vanes according to maintenance concept		x
				visual inspection and if required examination on designate areas of turbine casing and TVC		x
				reassembly of all turbine vanes: 1st and 2nd stage with new/refurbished ones, 3rd and 4th with disassembled and checked vanes- maintenance concept		x
	Turbine Rotor	-	Blades (Buckets)	visual inspection of first and last rows of blades without removal of parts	x	
				clearance checks on turbine 1st and 4th stages blades	x	x
				removal of blades, cleaning, visual inspection and/or NDE or replacement of turbine blades according to maintenance concept		x
				turbine rotor blades reassembly: 1st to 3rd with new/refurbished blades and 4th stage with the checked blades- maintenance concept		x
			Turbine Wheels	visual inspection of seal tips		x
				visual inspection and if required examination on designated areas of turbine discs		x
				visual inspection of L – Ring 1, 2, 3 and X – Ring and anti-rotation pin and repairs based on findings		x
	-	-	all vanes & blades	radial and axial clearance checks (turbine section) at open casings (post-assembly)		x
	-	-	Casing	cleaning and visual inspection of casings contact surfaces, guide segment, centering devices and supports		x
	-	-		cleaning, visual inspection and elongation check casings/carriers bolts		x
6	Bearing	MBD				
	-	-	-	Visual inspection for leakages (compressor & turbine)	x	x
				Replacement of oil hose for lifting oil check axial and radial bearing, thrust bearing pads for wear, surface, NDE Babbitt & bonding		x
7	Exhaust diffuser	MBA				
	-	-	Exhaust	visual inspection of interior flow path surface of exhaust diffuser	x	x
	-	-		exhaust casing internal liner cutting and exhaust casing removal		x
	-	-		repair by grinding & welding of cracking exhaust-		x

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	<u>System/ Equipment</u>	<u>KKS</u>	<u>Part</u>	<u>Activity</u>	<u>Minor</u>	<u>Major</u>
8	GT Auxiliary					
	Protection and control system	MBA, MBD, MBH, MBM	-	Overhauling and functional check of emergency stop valves with actuator; shut-off valves with actuator and blow-off system		x
			-	Visual inspection of the linear/angle actuators flame detectors, vibration sensors, speed monitoring system, shaft-position sensors, end-position & torque switches of all drives, pressure transducers, switches and thermocouples		x
	Regulation devices	MBA	-	visual inspection and functional check of control valves with actuator and actuator for inlet guide vanes		x
	Hydraulic oil system	MBX	-	visual inspection and functional check		x
	Lube and jacking oil system	MBV	-	visual inspection of lube and jacking oil system		x
	Lube and jacking oil system & Turning gear	MBV		Overhauling of lube oil pumps, Overhauling of emergency lube oil pump, Overhauling of - booster pump, Overhauling of jacking oil pump Overhauling of ball valves (Turning gear) + actuators and functional check of valve . actuator - internal check and belt replacement		x
	Purge water system	MBN	-	visual inspection and functional check		x
	Fuel gas system (ball valves)	MBP	-	Overhauling of all gas ball valves + actuators and functional check of valve. actuator - internal check and belt replacement as needed - include Ex certificate (ATEX). Replace with new explosion protected certificated (ball valves) - if needed		x
	Fuel gas system (EHC)	MBP		Replacement to High Pressure		x
	Fuel Oil system (ball valves)	MBN	-	Overhauling of all change over oil ball valves + actuators and functional check of valve. actuator - internal check and belt replacement as needed-include Ex certificate (ATEX). Replace with new explosion protected certificated (ball valves) - If needed		x
	Fuel Oil system (EHC)	MBN	-	Replacement to High Pressure		x
	NOx water system	MBU	-	visual inspection		x
				- Overhauling of NOX water skid (hydraulic unit, valves, control system, pumps)		x
	Turning gear	MBK	-	visual inspection; check for oil supply leakages	x	x
9	Assembly and final checks	-				
	-	-	-	reassembly of all disassembled insulation - T/A support	x ¹	x ¹
	-	-	-	visual inspection for cleanliness (GT, filter house)	x	x

	<u>System/ Equipment</u>	<u>KKS</u>	<u>Part</u>	<u>Activity</u>	<u>Minor</u>	<u>Major</u>
10	Re-commissioning	-				
	Cold Re-commissioning	-	-	checking the settings of control, regulating, protective and measuring devices		x
		-	-	commissioning of turning gear: checks/adjustment of lube oil incl. lifting oil		x
		-	-	pumps test run (main lube oil pumps, aux. pumps, emergency lube oil pumps and lifting oil pumps)		x
	Hot Re-commissioning	-	-	start-up to nominal speed (first fire after outage)		x
		-	-	visual inspection of fuel systems for leakages		x
		-	-	unit on load (breaker on first time)		x
		-	-	data collection and system analysis		x
	Optimization	-	-	optimization of first fuel: loading to base load, determination of base load temperature		x
		-	-	optimization second fuel: change over, loading to base load, determination of base load temperature		x
		-	-	final visual inspection - release for commercial operation		x
		-	-	balancing (if required)		x

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Note :

