



Tender # 20-1153

**Property, Machinery Breakdown & Business
Interruption Insurance for the Year of 2021**

**Central Electricity Generating Company
("CEGCO")**

The Hashemite Kingdom of Jordan

**Period of Insurance
12 Months**

01/01/2021 to 31/12/2021

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1. Invitation to Tender # 20-1153

Dear Sirs,
Central Electricity Generating Co. (CEGCO) requesting insurance proposals covering Property all risk based on new for old replacement insurance coverage including machinery breakdown & business interruption.

The proposals to be submitted subject to the terms, conditions and sums insured included herein, and in accordance with the tender terms and conditions.

You are kindly requested to submit the complete proposal documents to CEGCO not later than 13:00 PM, Amman time, on 26th of October 2020 at CEGCO main offices in Amman – Khalda.

Your offer shall be submitted in sealed envelope to:

The Secretary of Tender Panel
Central Electricity Generating Co.
Tel.: +962 6 5340008 (Ext. No. 3980)
Fax: +962 6 5340800

or by email to: cegcotenders@cegco.jo

2. FORM OF PROPOSAL

**CENTRAL ELECTRICITY GENERATING CO.
P.O BOX 2564 AMMAN 11953 JORDAN**

Dear Sirs,

1. Having examined the conditions of contract, specifications and schedules for above contract, we, the undersigned, offer the said insurance services as described in the specifications and schedules and in accordance with the conditions of tender documents , for the sums of..... in accordance with the tender documents conditions.
2. We agree that this proposal shall be held open for acceptance or rejection for the validity period of 90 days from the date fixed for opening proposals and it shall remain binding upon us and may be accepted at any time before the expiration of that period.
3. Unless and until a formal agreement is prepared and executed, this proposal together with your written acceptance thereof shall constitute a binding contract between us.
4. If our proposal is accepted, we will deliver to Central Electricity Generating Company within 10 days from being called upon to do so a performance bond by a local bank (to be approved by CEGCO) to be jointly and severally bound with us in a sum equal to 10% of the order value. The form of the performance bond will be as attached hereto.

We propose the following bank as surety in this respect:-
.....
.....
.....
.....

5. We understand that you are not bound to accept any proposal you may receive.

Dated thisday of2020
..... Signaturein the capacity of
....., duly authorized to sign proposal for and on behalf of
.....

3. Tender Terms and Conditions

1. The participating bidder must pay a non-refundable participation fees equal to (JD 500) Jordanian Dinars Three Hundred plus 16% sales tax to confirm participation in the tender.
2. Participating bidder must submit bid bond equal to (7%) of total offer price to be valid for 90 days. The bond will be returned to the unsuccessful bidders while the bid bond of winning bidder will be returned after successful submission of performance bond.
3. If the winning bidder apologized to be committed to his offer and order issued from CEGCO side, CEGCO has the right to cash the bid bond without any financial, non-financial and legal compensations and obligations.
4. Winning bidder must submit a performance bond equal to (10%) of total ordered prices. The bond will be valid for one year starting from January 1st 2021 to December 31st 2021. The bond will be returned after successful completion of the services obligations as per tender and order terms and closure of all pending issues/claims (if any).
5. CEGCO has the right to cash the performance bond in case of any breach from contractor to any of his obligations as per tender and order terms without return back to CEGCO for any financial, non-financial and legal compensations and obligations.
6. The bidder acknowledgement should also confirm that the information contained herein shall be treated confidentially and shall not be disclosed to any other person/party, other than as specifically required for the purpose of this tender.
7. The bidder proposals in compliance with this tender must be delivered in writing to the above address not later than (13:00), Amman time, on 26th of October 2020.
8. Any queries relating to the tender documents or submitting a tender, together with any request for clarification or additional information, must not be raised by telephone or personal contact, but must be submitted by e-mail to the contact detailed above. Any response issued will be in the form of answers distributed to all Bidders (with the question).
9. Bidders shall comply with the terms and conditions set forth herein while preparing and submitting its bids. Failure to provide all of the required documents and information, or failure to comply fully with these instructions in any way may result in excluding the bids.
10. Unless otherwise specified, the effective date of the coverage will be 1st January 2021. Policy shall be proposed for one-year terms effective from 1st January 2021. Options for longer terms, if available, might be considered depending on the proposed rates.
11. The participating bidders shall be provided with all the necessary information that may deem important to help or facilitate with their underwriters including advise of the loss history for the risk address or any reasonable information that may require as a matter of legitimate requirement.
12. If it becomes necessary to revise any part of these tender documents, a written addendum will be provided to all participating bidders. CEGCO is not bound by any oral representations, clarifications, or changes made on the written specifications by CEGCO's employees, unless such clarification or change is

provided to bidders in written addendum from an authorized representative of CEGCO.

13. All agents/brokers and insurers involved must be authorized and/or licensed to operate in Jordan.
14. Bidders shall comply with the Jordanian laws and regulations in effect with regard to insurance and reinsurance procedures.
15. Bidders should provide with their proposals a copy of their latest annual Financial Statements together with the following updated financial indicators (as at 31st December 2019).
 - 15.1 Solvency Margin according to formula of Jordan Insurance Commission.
 - 15.2 Ratio of Owners Equity to Paid Up Capital.
 - 15.3 Ratio of total Cash Deposits to total Assets.
 - 15.4 Ratio of total Cash Deposits (and cash equivalent) to total Technical Reserves.
 - 15.5 Figures provided should be as at 31st December 2019.
 - 15.6 The bidder shall consider a reasonable percentage of quota share retention in Jordan. The balance should be reinsured by reputable reinsurers worldwide (highly rated).
16. With their proposal, Bidders shall provide a duly signed and stamped reinsurance slips by minimum 35% from highly rated reinsurers. Leader share should be advised by bidders.
17. The successful Bidder will also be required to provide not later 20th of December 2020, a full list of all their Re-insurers for 100%. Insurance and Re-insurers must be approved by CEGCO prior to the conclusion of placement.
18. A draft policy wording is submitted herewith as an attachment. In addition, the policy should have a Waiver of Subrogation specifically towards the off taker (NEPCO).
19. Bidders shall submit a specimen of the insurance policy and a list of the main endorsements/clauses related to the offered covers. Bidders are also to provide comments on the extent to which the specimen policy wordings will be achieved or improved upon. All deviations from these specifications must be clearly stated in bidder proposal. Any significant limitations of coverage, restrictive conditions, etc., should also be clearly described. STANDARD WORDING SHALL BE REVIEWED BY CEGCO AND WILL BE SUBJECT TO APPROVAL OR REJECTION OR MODIFICATION AND (OR) ADDITION AND OMISSION BEFORE THE ISSUANCE OF OUR FORMAL APPROVAL FOR THE SUCCESSFUL BIDDER.
20. These specifications are not intended to be restrictive with respect to any innovative techniques for providing coverage, if a distinct advantage can be demonstrated, then Bidders advantages shall be taken into careful considerations.
21. Every effort shall be made to compare bids on an equitable basis. Our evaluation to bidders shall consider the limits, terms, conditions and exclusions of the coverage provided by such bidders on the basis of the quality of provided services.

22. CEGCO require that all proposals remain valid for at least 90 days after the due date noted in "7" above.
23. Any termination/cancellation condition of the insurance and reinsurance coverage shall be subject to at least three-month notice prior to the termination date.
24. CEGCO has the right (endorsed on the policy) to extend the insurance period for three months after the original expiry date of insurance, subject to the original terms & conditions and on pro-rata basis.
25. The successful Bidder shall provide CEGCO with the actual insurance policy together with a confirmed list of the reinsurers, shares and S&P/AMB rating as proposed in the bid, and a full copy of the actual reinsurance cover notes and slips.
26. CEGCO shall neither be bound to accept the lowest price nor to accept any offer or to assign any reason for the rejection of any offer.
27. Bidders shall quote the basic insurance rates and/or premiums, before adding taxes, policy fees, or stamps. The Bidders shall take into account that by virtue of exemptions received, the total insurance premium of the property insured at AQABA THERMAL POWER STATION shall exclude all kinds of taxes.
28. The premium payment terms shall be as follows:
 - 28.1 For PD/BI: payable in two equal instalments;
 - 28.1.1 1st instalment (50%) including all applicable taxes and fees to be paid after 90 days from inception date.
 - 28.1.2 2nd instalment (50%) to be paid after 90 days from the 1st instalment.
29. One original and two copies of the offer, must be enclosed in a secure envelope endorsed (insurance proposal) and should be submitted to the secretary of tender panel /CEGCO, by the time stated in the covering letter. CONSIDERING SUBMITTING TECHNICAL & COMMERCIAL PROPOSAL SHALL BE SUBMITTED INDEPENDENTLY (TECHNICAL PROPOSAL TO BE IN A SEPARATED SEALED ENVELOPE AND COMMERCIAL PROPOSAL TO BE IN A SEPARATE SEALED ENVELOPE).

THE SECRETARY OF TENDERING COMMITTEE,
CENTRAL ELECTRICITY GENERATING CO.
P.O. Box 2564 AMMAN 11953 JORDAN
FAX NO. +962 6 5340800
E – MAIL: oshammri@cegco.com.jo
Web Site: - www.cegco.com.Jo

30. If, after receipt of offers, CEGCO finds any difference between prices shown on the form of proposal in writing and in numerals, then CEGCO and the bidder (s) shall consider the price shown in the writing as correct.
31. Proposals will be evaluated using the following criteria:
 - a) Qualifications of the bidder(s):
 - i) Local insurance and reinsurer ranking.
 - ii) Experience in providing the desired insurance and related services
 - iii) Personnel qualifications and experience of the bidder(s) staff – list of key personnel to be provided with their CVs

- iv) References
 - v) Solvency Margin
 - vi) Rating.
 - vii) Quality of after sale service.
 - b) Proposed scope of coverage and work
 - i) Proposed insurance coverage (required two options)
 - ii) Proposed claims handling procedures and support
 - iii) Proposed loss control support
 - c) Proposed Premium
 - i) Proposed insurance coverage premium for both options separately.
 - ii) Other charges (if any).
32. All bids are to be accompanied by a full "Profile of Bidder" as provided for in this document.
33. The person within an invited bidder's organisation to whom this bid has been addressed will be the only person within that organisation recognised in matters relating hereto. Correspondence received from any other person will not be responded to. Bids submitted over the signature of any person other than that to whom this bid has been addressed will not be considered.
34. This tender does not commit CEGCO to enter into a contract, award any services related to these tender documents, nor does it obligate CEGCO to pay any costs incurred in preparation or submission of a proposal or in anticipation of a contract.



4. BIDDER PROFILE

All of the following **must** be provided:-

1. The full name and mailing address of the bidder together with telephone & facsimile numbers and 'e' mail address.
2. Names, Addresses of Shareholders, and details of their individual holdings.
3. Nationality of the Company, Date of Establishment, Issued and Paid Up Capital and Certificate of Commercial Registration.
4. Names of current major clients.
5. Names of Board Members, Name of Chief Operating Officer, Name, age and professional qualifications of the Executive to be responsible for servicing CEGCO Account and Company Organisation Structure.



5. Scope of the Required Insurance Coverage Services

5.1 Property Damage, Machinery Breakdown and Business Interruption following both property damage and machinery breakdown Insurance Policy.

1. **TYPE OF POLICY:** Comprehensive all risks insurance policy subject to replacement new for old and subject to 80% average clause.

2. **ADDRESS INSURED:** Central Electricity Generating Company ("CEGCO")

3. **PERIOD:** from 1st January 2021 to 31th December 2021

4. **INTEREST:**

Section 1 - All Risks of Physical Loss or Damage (Property and Machinery) : All real and personal property owned by CEGCO or the property of anyone else which is in the care, custody and control of the Insured for which the Insured may be held legally liable, including but not limited to machinery, plant, equipment, turbines, distillers, evaporators, generators and boilers, electronic data processing equipment, property in transit, seawater intake, spares, supplies, the shared facilities, pipelines, transmission and distribution lines to customer's sites other than overhead transmission and distribution lines for electricity unless within 1000 feet from the Insured Premises. The values at risk shall be treated as the proposed sum insureds of the described properties in these tender documents as per the attached list that shall form part of the insurance policy with particular reference to the **attached appendices 1 to 4 inclusive.**

Section 2 - Business Interruption: Loss of and/or reduction in revenues and Increased Costs of Working as a result of an interference or interruption to The Business due to Damage Insured under Section 1 and/or otherwise provided under Section 2. The details of values under this section as per the attached list – **appendix 5** -. Considering that the indemnity period for business interruption is 12 Months.

5. **TERRITORIAL LIMITS:** The Hashemite Kingdom of Jordan.

6. **JURISDICTION:** The Hashemite Kingdom of Jordan.

7. **CLAIMS HISTORY:** Please see attached "CEGCO Loss Record" – **Appendix 6.**

8. **THE BUSINESS:** Principally but not limited to the generation, transmission, distribution and sale/trade of electricity through the ownership, operation and maintenance of power plants in The Hashemite Kingdom of Jordan and all ancillary and associated activities of the Insured.

9. **TERMS & CONDITIONS:**

9.1 **Extensions to Section 1 - All Risks of Physical Loss or Damage:**

9.1.1 Capital Additions and Extensions – Automatic Acquisitions (Limit JD 5,000,000 or 10% per location, whichever is the higher)

9.1.2 Civil or Military Authority (Limit of JD 1,000,000 each and every loss)

9.1.3 Expediting Expenses and Additional Hire Charges (Limit: 25% of each claim, maximum JD 5,000,000) E.E.L

9.1.4 Expenses to minimize a loss (Limit : JD 2,500,000)E.E.L

9.1.5 Fire Extinguishing Expenses (Limit : JD 700,000,000) E.E.L

- 9.1.6 Import Duties (Limit of JD 500,000 each and every loss)
- 9.1.7 Minor Works (excluding Advance Loss of Profits) (Limit JD 2,500,000 each and every contract).
- 9.1.8 Property outside the Insured's Premises (Limit JD 2,500,000 each and every loss).
- 9.1.9 Public Authorities Clause (including undamaged property) (Limit: JD 2,000,000 each and every loss)
- 9.1.10 Removal of Debris and Temporary Repairs' of Insured Property (Limit: JD 3,000,000 each and every Event).
- 9.1.11 Liability Towards others limited to JD 5,000,000.000

9.2 Extensions to Section 2 – Business Interruption

- 9.2.1 Additional Increase Cost of Working (Limit: JD 2,000,000 each and every loss)
- 9.2.2 Closure by Public Authorities (Limit: JD 1,000,000 each and every loss)
- 9.2.3 Infectious Disease, Murder or Closure (Limit: JD 1,000,000 each and every loss)
- 9.2.4 Prevention of Access (Limit: 2.5km / JD 1,000,000 e.e.l)
- 9.2.5 Professional Fees (Limit: JD 200,000 each and every loss)
- 9.2.6 Property away from the insured premises (Limit: JD 1,000,000 each and every loss)
- 9.2.7 Public Utilities Clause (FLEXA Perils only) (Limit: JD 1,000,000 each and every loss)
- 9.2.8 Suppliers & Customers (FLEXA perils only and Named Parties) (Limit: JD 2,000,000 each and every loss)

10. General Conditions

- 10.1 Approved Adjusters – [To be agreed mutually by both parties]
- 10.2 Claims Preparation Costs – sub limited to JD 500,000 e.e.l
- 10.3 Control of Claims
- 10.4 Payment(s) on Account/Payment of Claims
- 10.5 Claims Cooperation Clause
- 10.6 3 months cancellation clause
- 10.7 Cut Through Clause
- 10.8 Automatic Extension to Period of Insurance
- 10.9 Waiver of subrogation in favor of NEPCO and subcontractors.
- 10.10 No claim bonus to be applied and the value to be determined by bidder.

11. Declared Values:

- 11.1 Section 1 - All Risks of Physical Loss or Damage: **As per appendix 1 - 4.**
- 11.2 Section 2 – Business Interruption: **As per Appendix 5.**

12. Deductibles: for each and every loss

Site	Property Damage	Machinery breakdown	Business interruption	Earthquake
ATPS	JD 250,000	JD 250,000	30 Days	2% of total sum insured
RGPS	JD 250,000	JD 250,000	30 Days	2% of total sum insured
RPS	JD 150,000	JD 150,000	30 Days	2% of total sum insured
HO, Zarqa Workshop and warehouse	JD 500	-	-	2% of total sum insured

Central Electricity Generating Company

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Appendix (1); Property Breakdown of values for Aqaba Thermal Power Station (ATPS)

Unit # 3 ATPS: Details of insured items including but not limited to the following:	
Description of insured items including but not limited to the following	Price
building with its related facilities	1,500,000.00
turbine with its related accessories	21,650,000.00
boiler with its related accessories	23,500,000.00
transformers and accessories	3,000,000.00
pumps with its related accessories	3,600,000.00
generator with its accessories	3,300,000.00
all accessories including but not limited to motors, fittings, fixtures, connections, cables, pipes...etc.	6,000,000.00
DCS (Control System) with all its accessories	1,620,000.00
Total unit 3	64,170,000.00
Unit # 4 ATPS: Details of insured items including but not limited to the following:	
Description	Price
building with its related facilities	1,500,000.00
turbine with its related accessories	21,650,000.00
boiler with its related accessories	23,500,000.00
transformers and accessories	3,000,000.00
pumps with its related accessories	3,600,000.00
generator with its accessories	3,300,000.00
all accessories including but not limited to motors, fittings, fixtures, connections, cables, pipes...etc.	6,000,000.00
DCS (Control System) with all its accessories	1,620,000.00
Total unit 4	64,170,000.00
Unit # 5 ATPS: Details of insured items including but not limited to the following:	
Description of insured items including but not limited to the following	Price
building with its related facilities	1,500,000.00
turbine with its related accessories	21,650,000.00
boiler with its related accessories	23,500,000.00
transformers and accessories	3,000,000.00
pumps with its related accessories	3,600,000.00
generator with its accessories	3,300,000.00
all accessories including but not limited to motors, fittings, fixtures, connections, cables, pipes...etc.	6,000,000.00
DCS (Control System) with all its accessories	1,620,000.00
Total unit 5	64,170,000.00
Common items for the above 3 units including but not limited to:	
Hydro turbine 3.6 and its all related equipment and accessories including but not limited to fixtures, fittings, cables, connections, pipes, electrical...etc.	2,500,000.00
Demineralization Plant	2,000,000.00
Desalination Plant with its related accessories	600,000.00
Storage Tank # 1 and all its accessories including but not limited to fittings, connections, pumps, etc.	2,000,000.00
Storage Tank # 2 and all its accessories including but not limited to fittings, connections, pumps, etc.	2,000,000.00
Fuel	19,000,000.00
Warehouse Storage Facilities	500,000.00
Spare Parts	6,500,000.00
Total Insured value for ATPS plant common items	35,100,000.00
Unite 1 complete system (decommissioned - thus only salvage value is considered)	445,000.00
Unite 2 complete system (decommissioned - thus only salvage value is considered)	445,000.00
Total Insured Value for ATPS Plant in Jordan Dinars	228,500,000.00

Appendix (2); Property Breakdown of values for Rehab Gas Power Station (RGPS):

1. Unit 12 Frame 9E Gas Turbine		
1	Description	Total Price
1.1	Turbine Flange to Flange with all its related accessories and auxiliaries...etc.	10,000,000.00
1.2	Transformers with all its related accessories and auxiliaries...etc.	1,000,000.00
1.3	Compressors with all its related accessories and auxiliaries...etc.	1,000,000.00
1.4	Generator with all its related accessories and auxiliaries...etc.	1,000,000.00
1.5	Pumps with all its related accessories and auxiliaries...etc.	1,000,000.00
1.6	DCS & Speedtronic control system and equipment with all its related accessories and auxiliaries...etc.	1,000,000.00
1.7	air cooled Condenser cooling towers /fans /gearboxes/motors	500,000.00
1.8	All other mechanical elements including but not limited to accessories, auxiliaries fixtures, fittings, connections, pipes...etc.	1,000,000.00
1.9	All other electrical and electronic elements including but not limited to Motor control centers, cubicals, circuit breakers, switches, accessories, cables...etc.	1,000,000.00
2. Unit 13 Frame 9E Gas Turbine		
2.1	Turbine Flange to Flange with all its related accessories and auxiliaries...etc.	10,000,000.00
2.2	Transformers with all its related accessories and auxiliaries...etc.	1,000,000.00
2.3	Compressors with all its related accessories and auxiliaries...etc.	1,000,000.00
2.4	Generator with all its related accessories and auxiliaries...etc.	1,000,000.00
2.5	Pumps with all its related accessories and auxiliaries...etc.	1,000,000.00
2.6	DCS & Speedtronic control system and equipment with all its related accessories and auxiliaries...etc.	1,000,000.00
2.7	air cooled Condenser cooling towers /fans /gearboxes/motors	500,000.00
2.8	All other mechanical elements including but not limited to accessories, auxiliaries fixtures, fittings, connections, pipes...etc.	1,000,000.00
2.9	All other electrical and electronic elements including but not limited to Motor control centers, cubicals, circuit breakers, switches, accessories, cables...etc.	1,000,000.00
3. Steam Turbine Unit 14		
3.1	Turbine Flange to Flange with all its related accessories and auxiliaries...etc.	10,000,000.00
3.2	Transformers with all its related accessories and auxiliaries...etc.	1,000,000.00
3.3	Compressors with all its related accessories and auxiliaries...etc.	1,000,000.00
3.4	Generator with all its related accessories and auxiliaries...etc.	1,000,000.00
3.5	Pumps with all its related accessories and auxiliaries...etc.	1,000,000.00
3.6	control Room and Control system equipment with all its related accessories and auxiliaries...etc.	1,000,000.00
3.7	air cooled Condenser cooling towers /fans /gearboxes/motors with all its related accessories and auxiliaries...etc.	1,000,000.00
3.8	cooling water heat exchangers pumps / fans/gearbox/motors with all its related accessories and auxiliaries...etc.	500,000.00
3.9	Heat Recovery Steam Generator (HRSG) with all its related accessories	4,000,000.00
3.10	All other mechanical elements including but not limited to accessories, auxiliaries fixtures, fittings, connections, pipes...etc.	1,000,000.00
3.11	All other electrical and electronic elements including but not limited to Motor control centers, cubicals, circuit breakers, switches, accessories, cables...etc.	1,000,000.00
Common items including but not limited to the following:		
4.1	Balance of Plants elements including but not limited to storage tanks, wells, pipes, equipment	500,000.00
4.2	Firefighting system with all its related elements, accessories and auxiliaries	500,000.00
	Diesel Fuel Oil	6,000,000.00
	Spare Parts Inventory	4,000,000.00
	All building facilities containing the above items	1,000,000.00
Total Rehab Insured Value in Jordan Dinars		69,500,000.00

Appendix (3); Property Breakdown of values for Risha Power Station:

1. Unit 4 Frame 6b Gas Turbine		
1	Description	Total Price in JD
1.1	Turbine Flange to Flange with all its related accessories and auxiliaries...etc.	5,000,000.00
1.2	Transformers with all its related accessories and auxiliaries...etc.	1,200,000.00
1.3	Compressors with all its related accessories and auxiliaries...etc.	1,000,000.00
1.4	Generator with all its related accessories and auxiliaries...etc.	1,000,000.00
1.5	Pumps with all its related accessories and auxiliaries...etc.	1,000,000.00
1.6	DCS & Speedtronic control system and equipment with all its related accessories and auxiliaries...etc.	700,000.00
1.7	air cooled Condenser cooling towers /fans /gearboxes/motors	500,000.00
1.8	All other mechanical elements including but not limited to accessories, auxiliaries fixtures, fittings, connections, pipes...etc.	800,000.00
1.9	All other electrical and electronic elements including but not limited to Motor control centers, cubicals, circuit breakers, switches, accessories, cables...etc.	800,000.00
2. Unit 5 Frame 6b Gas Turbine		
2.1	Turbine Flange to Flange with all its related accessories and auxiliaries...etc.	5,000,000.00
2.2	Transformers with all its related accessories and auxiliaries...etc.	1,200,000.00
2.3	Compressors with all its related accessories and auxiliaries...etc.	1,000,000.00
2.4	Generator with all its related accessories and auxiliaries...etc.	1,000,000.00
2.5	Pumps with all its related accessories and auxiliaries...etc.	1,000,000.00
2.6	DCS & Speedtronic control system and equipment with all its related accessories and auxiliaries...etc.	700,000.00
2.7	air cooled Condenser cooling towers /fans /gearboxes/motors	500,000.00
2.8	All other mechanical elements including but not limited to accessories, auxiliaries fixtures, fittings, connections, pipes...etc.	800,000.00
2.9	All other electrical and electronic elements including but not limited to Motor control centers, cubicals, circuit breakers, switches, accessories, cables...etc.	800,000.00
Common items including but not limited to the following:		
4.1	Balance of Plants elements including but not limited to storage tanks, wells, pipes, equipment	400,000.00
4.2	Firefighting system with all its related elements, accessories and auxiliaries	400,000.00
	Diesel Fuel Oil	1,780,000.00
	Spare Parts Inventory	1,000,000.00
	All building facilities containing the above items	350,000.00
Total Risha Insured Value in Jordan Dinars		27,930,000.00

Central Electricity Generating Company

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Appendix (4); Breakdown of values for the Main Offices Building, Solar System and Contents;

Description of Risk to be Insured	Current New Replacement Cost JD
Building; Main offices in Amman. GFA = Gross Floor Area = 6000 m2.	2,500,000.000
Solar System	80,000.000
Contents	250,000.000
Zarqa Warehouse Building and Contents	500,000.000
TOTALS	3,330,000.000

Central Electricity Generating Company

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Appendix (5); Revenue Breakdown of all locations:

ITEM	Annual Revenue in JD
<u>ATPS:</u> Unit 3: JD 10,664,000.000 Unit 4 : JD 10,664,000.000 Unit 5 : JD 10,665,000.000	31,993,000.000
<u>REHAB:</u> GT 12 : JD 5,287,241.000 GT 13 : JD 5,287,241.000 ST 14 : JD 4,758,518.000	15,333,000.000
<u>RISHA:</u> GT 4 : JD 824,754.000 GT 5 : JD 1,966,246.000	2,791,000.000
TOTALS	50,117,000.000

Central Electricity Generating Company

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Appendix (6); Loss History for all plants and sites subject of insurance

1. Loss History:

- 1.1 Clean Loss Record for the past 6 years. The load is moderate to low, and expected to be low for the coming years, due to the new projects being constructed and the few existing ones that generates electric power from solar energy and wind power.
- 1.2 The plants are on a standby basis with moderate to low operation by large.



PRIVATE & CONFIDENTIAL

INDEPENDENT PROFESSIONAL SERVICES

RISK SURVEY ASSESSMENT REPORT

GENERAL EXPOSURES

VALUES OF ASSETS (REPLACEMENT BASIS)

CALCULATION OF PML

IN RESPECT OF:

M/S. CENTRAL ELECTRICITY GENERATING CO.

**Aqaba Thermal Power Station
Rehab Power Station
Risha Power Station
& Zarqa**

THE HASHEMITE KINGDOM OF JORDAN

Presented By:

Reyad Arsalan Est.(RAE)

In association with **GREEN & CO.**

Corporate Surveyors, Assets Valuation Experts & Loss Adjusters
Amman, H.K. of Jordan.

September 2020

Amman, Jordan.

RE: JOR/ RS/JIC/ 911-91/ RA.
DATE: 28 September 2020.

M/S. Central Electricity Generating Company
Amman, Jordan.

RISK SURVEY REPORT

GENERAL (FIRE & ALLIED PERILS)

NAME & ADDRESS	: M/S. Central Electricity Generating Co. Amman, Jordan.
LOCATION OF THE RISK ADDRESS	: Amman, Aqaba, Rehab & Risha.
OCCUPANCY	: CENTRAL ELECTRICITY GENERATING COMPANY.
DATES OF VISIT	: REHAB STATION : 13 JULY 2020. RISHA STATION : 16 JULY 2020. AQABA STATION : 23 & 24 JULY 2020.
VISITED BY	: Reyad Arsalan
REPORT PREPARED BY	: Reyad Arsalan, the manager of R. A. Est. In Association with GREEN & CO. Chartered Loss Adjusters and Surveyors, Amman, Jordan.



Note"1": The owners & management are keen to keep the risk address in an excellent order and shape (availability factor = 98% to 99%).

Note"2": The staff at all risk addresses are highly experienced following strict procedures with discipline and in the required professional levels.

Note"3": the main purpose of this survey is based on studying the adequacy of the proposed sums for insurance based on new replacement values of the assets that are subject to insurance. Thus, CEGCO can submit this report together with tender documents to enable bidders to submit their offers in the best terms, prices and coverages.

SUMMARY:

RISK ADDRESS	REPLACEMENT CURRENT VALUES	NATURE OF PREMISES AT RISK	INSTALLED CAPACITY	LOAD FACTOR
Amman (Main Offices) & Zarqa	J.D 3,330,000.000	BUILDINGS & CONTENTS	NA	N/A
Aqaba Thermal Power Station	J.D 228,500,000.000	POWER G. STATION	390 MW	2%
Rehab Power Station	J.D 69,500,000.000	POWER G. STATION	290 MW	2.4%
Risha Power Station	J.D 27,930,000.000	POWER G. STATION	60 MW	73.5%

PML (On Replacement Basis) : J.D 40 Million.

RISK ADDRESS	Very good	The power plants including but not limited to equipment, machines, auxiliaries and buildings Maintained in high level of efficiency & availability
MANAGEMENT	Very Good	All staff are well experienced.
Risk is Highly Recommended for Insurers due to low load factor and the two main stations (ATPS & REHAB) are set on the availability with minimal load for maintenance requirements and breakdowns exposure.		

Remarks :

This report summarizes the information obtained during the above noted visits. It makes no claim as to completeness.

1. INTRODUCTION:

This report is submitted to M/S. Central Electricity Generating Company (CEGCO) in the Hashemite Kingdom of Jordan. We are an independent Loss Adjusters and Risk Assessors as well as Valuation Experts have been requested by CEGCO for the second time to update and restudy their assets together with risk assessment and the calculation of PML for three power generating stations located in the Hashemite Kingdom of Jordan. We have conducted site visits to the following three locations:

- ✓ Rehab Power Station on the date of 13th July 2020.
- ✓ Risha Power Station on the date of 16th July 2020.
- ✓ Aqaba Power Station on the date of 23rd & 24th July 2020.

During such visits, we have met with the section managers, operating engineers and discussed all areas related to our study in order to prepare this report. We were satisfied about the safety arrangements as well as both the risk addresses and the management at all locations. The amount of information that we were furnished with including details were more than what we have needed for the requested task. The degree of cooperation at each visited site was excellent with high level of transparency. All the information that is needed for this task was provided to us during the mentioned visits and thereafter by mail. The premises at all locations are provided with all safety requirements in accordance with NFPA standards.

2. SCOPE OF WORK:

- 2.1 General Description
- 2.2 Risk Assessment with respect to general and special perils.
- 2.3 Updating values proposed for Insurers.
- 2.4 Calculation of Probable Maximum Loss (PML).

3. METHODOLOGY / APPROACH:

Mainly based on our experience in carrying out similar task for the past 23 years in association with our international partners M/S. Green & Company - Chartered Loss Adjusters , located in the Kingdom of Bahrain.

3.1 Criteria

- 3.1 Physical survey to be conducted with visual inspection and verification of assets.
- 3.2 Collection of the available data from the Client's representatives at each risk address..
- 3.3 Taking Photographs.
- 3.4 Identifying the installed fire and safety system and reporting the safety aspects.
- 3.5 Performance and/or availability.
- 3.6 Identifying the highest value risk zone for the calculation of PML.
- 3.7 Report writing.

4 General Conditions in Jordan:

- 4.1 Ambient Temperature (Amman): Summer 38°C (Dry Bulb), max 45°C. In winter 0° (Dry & Bulb), minimum -5°C.
- 4.2 Altitudes:
 - 4.2.1 Aqaba: 30 m above sea level.
 - 4.2.2 Rehab: 840 m
 - 4.2.3 Risha: 750 m
 - 4.2.4 Amman: 1000 m
- 4.3 Outside Relative Humidity (Amman): Around 35% (summer), & Saturation in winter.
- 4.4 Maximum wind velocity: 130 km per hour.
- 4.5 Prevailing wind : South – Westerly.
- 4.6 Storm: Dusty, Sporadic and Irregular.

5 Exposure Assessment Against General Perils;

5.1 ATPS - AQABA, JORDAN.

Description of risk	Low	Low to Moderate	Moderate To High
Fire and lightning		X	
Seismic movements			X
Explosions		X	
Earthquakes			X
Storm, Tempest and flood	X		
Aircraft	X		
Riots and strikes	X		
Malicious Damage	X		
Subterranean fire	X		
Bursting of pipes & Overflowing water tanks	X		
Machinery Breakdown		X	
Subsidence	X		

Business Interruption: Low to Moderate

5.2 REHAB POWER STATION - JORDAN.

Description of risk	Low	Low to Moderate	Moderate To High
Fire and lightning		X	
Seismic movements	X		
Explosions		X	
Earthquakes	X		
Storm, Tempest and flood	X		
Aircraft	X		
Riots and strikes	X		
Malicious Damage	X		
Subterranean fire	X		
Bursting of pipes & Overflowing water tanks	X		
Machinery Breakdown		X	
Subsidence	X		

Business Interruption: Low.

5.3 RISHA POWER STATION, JORDAN.

Description of risk	Low	Low to Moderate	Moderate To High
Fire and lightning		X	
Seismic movements	X		
Explosions		X	
Earthquakes	X		
Storm, Tempest and flood	X		
Aircraft	X		
Riots and strikes	X		
Malicious Damage	X		
Subterranean fire	X		
Bursting of pipes & Overflowing water tanks	X		
Machinery Breakdown	X		
Subsidence	X		

Business Interruption : Low.

All Electrical and Electronic Systems appears to be in a good shape and well maintained.

All the telephone internal system confirmed that it would not give any problems. Whereas the external system is linked with Jordan Telecommunication, and they would take care of it. The safety PLC (Programmable Logic Controller) System is a compatible one installed with control system. And finally the DCS system (Digital Control System) is also a compatible system, DCS from the control room give signals to operate the plant parameters, the technical room consists of main control station, which connects the field instruments with the control room.

6 Location and Accessibility

- 6.1 Aqaba Location: about 370 Km south of Amman.
- 6.2 Rehab Location: about 65 Km North Amman.
- 6.3 Risha Location: about 380 Km North East Amman.

All locations are accessible with public paved roads and modern communication system is widely available including emergency call arrangements.

7 Exposures / Natural and Special Perils

- 7.1 External fire / explosion exposures are low as the nearest external property for all locations is NEPCO, however, there is safe distance between the boundaries which makes the exposure rather low. Furthermore, CEGCO's stations are set for availability only that means that both the external and the internal fire/explosion exposures from CEGCO to NEPCO and/or the opposite is also low.
- 7.2 The climate is subtropical, extreme temperature range from 5°C to 45°C
- 7.3 Rainfalls occur seldom, in the winter only, and exposure is therefore low. The plants are surrounded by an effective drainage system and by a concrete ditch running along the boundary and within the intermediate access roads of the plant to collect rainwater.
- 7.4 Wind and sandstorms caused no damage so far to the existing property. exposures considered as low.
- 7.5 The exposure to strike, riot and civil commotion is regarded very low. The premises are secured with proper boundary walls and guarded permanently by the company's Security Staff, Police Station, and Armed forces are nearby whenever are needed.

8 Layout and Spacing / Construction:

- 8.1 In general, process units and buildings are laid – out adequately. The spacing of the process units as well as spacing within units are adequate.
- 8.2 The main buildings are concrete structures some other buildings (e.g. the warehouses for raw materials and finished products) are made from non-combustible material (Mixed with Reinforced Concrete and Steel).

- 8.3 The Generating units and utilities are predominantly protected, i.e., Steel Structures, partly fire proofed only. However, as most of the various production steps do not include remarkable fire risks, fire – proofing is not necessary in that case.
- 8.4 Buildings do have effective fire resistant partitions, including heat and smoke detecting systems.
- 8.5 There are several push buttons on the platform to alert the works fire brigade. Furthermore, emergency telephones have been installed at various points.
- 8.6 Water monitors and double outlet hydrants could be found well distributed on several points, all in accordance with NFPA standards.

9 Available Water in Case of Major Fire: Available capacities:

- 9.1 ATPS: 14000M3. (This can last more than 3 hours if used in full scale). The response time for civil defense fire directorate is 4 minutes, thus the available water for firefighting at the mentioned premises more than sufficient.
- 9.2 REHAB:1500 M3. (This can last 90 minutes if used in full scale). The response time for civil defense fire directorate is 5 minutes, thus the available water for firefighting at the mentioned premises more than sufficient.
- 9.3 RISHA:1000M3. (This can last more than 60 minutes if used in full scale). The response time for civil defense fire directorate is 15 minutes, thus the available water for firefighting at the mentioned premises is sufficient.

10 Process Safety

10.1 Process Control:

- 10.1.1 The plant had an integration power distribution and process control building. The control room is equipped with electrical / electronic control devices.
- 10.1.2 The instrumentation is mainly in a good condition.
- 10.1.3 The control rooms / buildings is equipped with fire / smoke detection systems fixed to fire extinguishing facilities and monitors at various points selected by safety department.

10.2 Safety Valves / Flare System

- 10.2.1 Reportedly, the safety valves are checked and maintained regularly.
- 10.2.2 Special Permits for each operation:
 - 10.2.2.1 Hot Works Permits
 - 10.2.2.2 Cold Work Permits
 - 10.2.2.3 Electrical Isolation Certificate Permit
 - 10.2.2.4 Confined Places Certificate Permit
 - 10.2.2.5 Engineering Electrical Certificate Permit.
- 10.2.3 The stations are mostly seton standby mode, the amount of work orders that requires special permits is low. However, there is a routine check programs implemented on regular basis to maintain units availability.

11 Management:

- 11.1 Considered very good at all locations monitored by the central management team in a continuous manner.
- 11.2 Safety measures are taken seriously with intensive training sessions to enhance the safety and awareness of the plant are implemented regularly.
- 11.3 All safety measures due to the current corona virus pandemic are taken into careful consideration and implemented as per the Government rules and regulations at all locations including the main head offices in Amman.
- 11.4 ATPS & REHAB plants have been granted two certificates of excellence in occupational health from social security corporation.

12 Safety Department:

- 12.1 The safety and fire department has the responsibility for the preparation and coordination of emergency plans as CEGCO has its own Health, Safety & Environment Department fully trained and supervised by senior staff in regular and strict basis which follow international practices in this regard.
- 12.2 Further duties include the supervision of repairs / maintenance works and of all fire brigade activities and the firefighting equipment.

13 Standards;

- 13.1 The standards of the firefighting system is in compliance with NFPA standards. The fire pumps are installed within the premises in accordance with NFPA standards, and are regularly inspected by the civil defense fire directorate of Jordan.
- 13.2 Health and safety regulation are complied with in accordance to the health and safety requirements of the Ministry of Health and Safety in Jordan, as well as the Defense Orders that have been issued by the Government during the current pandemic situation.
- 13.3 Other regulations are implemented in accordance with the international standards to maintain the continuation of business and in accordance with the agreed protocols between CEGCO, NEPCO and others.
- 13.4 All power plants have been granted IMS certificates (ISO 9001, ISO 18001, ISO 14001)

14 Operation / Control:

- 14.1 All operators receive regularly repeated training including emergency procedures. An on – call system, providing additional support in case of emergency exits.

15 Maintenance

- 15.1 Personal / Organization: Most of maintenance staff work in the day shift, covering all relevant technical operations. If necessary, an emergency team comprising mechanical, electrical and instrument engineers and technicians can be alerted. The number and the qualification of personnel available are sufficient for most maintenance requirements. Specialists or contractors from abroad are only employed in special cases (if needed).
- 15.2 Maintenance Procedures / Turnarounds: According to maintenance charts, three types of prevention maintenance works exist:
 - 15.2.1 Ordinary day-to-day inspection.
 - 15.2.2 Periodical weekly and monthly inspections as well as every three months.
 - 15.2.3 Annual turnarounds with a shut – down period of 50 days.

- 16 Housekeeping: Very Good. The sites are kept clean and tidy with strict regulation and full supervision by the management of all three stations.

17 Break Down of Values;

17.1 Central Electricity Generating Company (CEGCO); Revenue Breakdown of all locations:

ITEM	Annual Revenue in JD
<u>ATPS:</u> Unit 3: JD 10,664,000.000 Unit 4 : JD 10,664,000.000 Unit 5 : JD 10,665,000.000	31,993,000.000
<u>REHAB:</u> GT 12 : JD 5,287,241.000 GT 13 : JD 5,287,241.000 ST 14 : JD 4,758,518.000	15,333,000.000
<u>RISHA:</u> GT 4 : JD 824,754.000 GT 5 : JD 1,966,246.000	2,791,000.000
TOTALS	50,117,000.000

17.2 CEGCO; Breakdown of assets values for the Main Offices Building and its Solar System and Contents;(Amman main Office Building & Contents and Zarqa Storage buildings & Contents)

Description of Risk to be Insured	Current New Replacement Cost JD
Building; Main offices in Amman. GFA = Gross Floor Area = 6000 m2.	2,500,000.000
Solar System	80,000.000
Contents	250,000.000
Zarqa Warehouse Building and Contents	500,000.000
TOTALS	3,330,000.000

17.3 CEGCO; Breakdown of values for Aqaba Thermal Power Station (APTS):

Unit # 3 APTS: Details of insured items including but not limited to the following:	
Description of insured items including but not limited to the following	Price
building with its related facilities	1,500,000.00
turbine with its related accessories	21,650,000.00
boiler with its related accessories	23,500,000.00
transformers and accessories	3,000,000.00
pumps with its related accessories	3,600,000.00
generator with its accessories	3,300,000.00
all accessories including but not limited to motors, fittings, fixtures, connections, cables, pipes...etc.	6,000,000.00
DCS (Control System) with all its accessories	1,620,000.00
Total unit 3	64,170,000.00
Unit # 4 APTS: Details of insured items including but not limited to the following:	
Description	Price
building with its related facilities	1,500,000.00
turbine with its related accessories	21,650,000.00
boiler with its related accessories	23,500,000.00
transformers and accessories	3,000,000.00
pumps with its related accessories	3,600,000.00
generator with its accessories	3,300,000.00
all accessories including but not limited to motors, fittings, fixtures, connections, cables, pipes...etc.	6,000,000.00
DCS (Control System) with all its accessories	1,620,000.00
Total unit 4	64,170,000.00
Unit # 5 APTS: Details of insured items including but not limited to the following:	
Description of insured items including but not limited to the following	Price
building with its related facilities	1,500,000.00
turbine with its related accessories	21,650,000.00
boiler with its related accessories	23,500,000.00
transformers and accessories	3,000,000.00
pumps with its related accessories	3,600,000.00
generator with its accessories	3,300,000.00
all accessories including but not limited to motors, fittings, fixtures, connections, cables, pipes...etc.	6,000,000.00
DCS (Control System) with all its accessories	1,620,000.00
Total unit 5	64,170,000.00
Common items for the above 3 units including but not limited to:	
Hydro turbine 3.6 and its all related equipment and accessories including but not limited to fixtures, fittings, cables, connections, pipes, electricals...etc.	2,500,000.00
Demeniralzation Plant	2,000,000.00
Desalination Plant with its related accessories	600,000.00
Storage Tank # 1 and all its accessories including but not limited to fittings,connections, pupms, etc.	2,000,000.00
Storage Tank # 2 and all its accessories including but not limited to fittings,connections, pupms, etc.	2,000,000.00
Fuel	19,000,000.00
Warehouse Storage Facilities	500,000.00
Spare Parts	6,500,000.00
Total Insured value for APTS plant common items	35,100,000.00
Unite 1 complete system (decommissioned - thus only salvage value is considered)	445,000.00
Unite 2 complete system (decommissioned - thus only salvage value is considered)	445,000.00
Total Insured Value for APTS Plant in Jordan Dinars	228,500,000.00

17.4 CEGCO; Breakdown of values for Rehab Gas Power Station (RGPS):

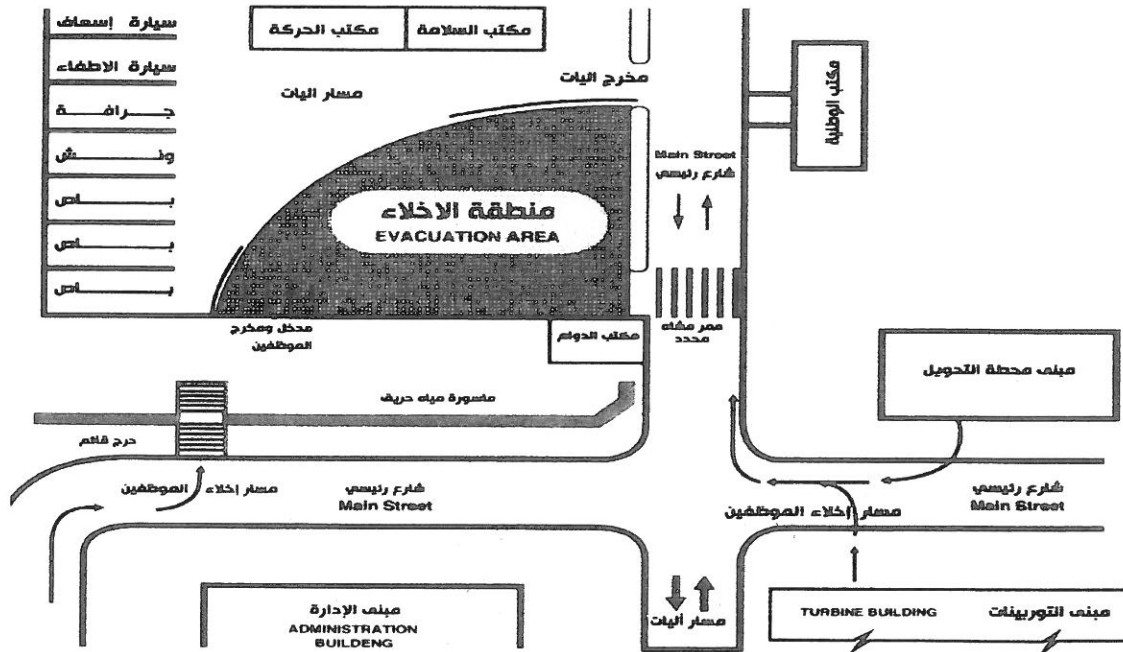
1. Unit 12 Frame 9E Gas Turbine		
1	Description	Total Price
1.1	Turbine Flange to Flange with all its related accessories and auxiliaries...etc.	10,000,000.00
1.2	Transformers with all its related accessories and auxiliaries...etc.	1,000,000.00
1.3	Compressors with all its related accessories and auxiliaries...etc.	1,000,000.00
1.4	Generator with all its related accessories and auxiliaries...etc.	1,000,000.00
1.5	Pumps with all its related accessories and auxiliaries...etc.	1,000,000.00
1.6	DCS & Speedtronic control system and equipment with all its related accessories and auxiliaries...etc.	1,000,000.00
1.7	air cooled Condenser cooling towers /fans /gearboxes/motors	500,000.00
1.8	All other mechanical elements including but not limited to accessories, auxiliaries fixtures, fittings, connections, pipes...etc.	1,000,000.00
1.9	All other electrical and electronic elements including but not limited to Motor control centers, cubicals, circuit breakers, switches, accessories, cables...etc.	1,000,000.00
2. Unit 13 Frame 9E Gas Turbine		
2.1	Turbine Flange to Flange with all its related accessories and auxiliaries...etc.	10,000,000.00
2.2	Transformers with all its related accessories and auxiliaries...etc.	1,000,000.00
2.3	Compressors with all its related accessories and auxiliaries...etc.	1,000,000.00
2.4	Generator with all its related accessories and auxiliaries...etc.	1,000,000.00
2.5	Pumps with all its related accessories and auxiliaries...etc.	1,000,000.00
2.6	DCS & Speedtronic control system and equipment with all its related accessories and auxiliaries...etc.	1,000,000.00
2.7	air cooled Condenser cooling towers /fans /gearboxes/motors	500,000.00
2.8	All other mechanical elements including but not limited to accessories, auxiliaries fixtures, fittings, connections, pipes...etc.	1,000,000.00
2.9	All other electrical and electronic elements including but not limited to Motor control centers, cubicals, circuit breakers, switches, accessories, cables...etc.	1,000,000.00
3. Steam Turbine Unit 14		
3.1	Turbine Flange to Flange with all its related accessories and auxiliaries...etc.	10,000,000.00
3.2	Transformers with all its related accessories and auxiliaries...etc.	1,000,000.00
3.3	Compressors with all its related accessories and auxiliaries...etc.	1,000,000.00
3.4	Generator with all its related accessories and auxiliaries...etc.	1,000,000.00
3.5	Pumps with all its related accessories and auxiliaries...etc.	1,000,000.00
3.6	control Room and Control system equipment with all its related accessories and auxiliaries...etc.	1,000,000.00
3.7	air cooled Condenser cooling towers /fans /gearboxes/motors with all its related accessories and auxiliaries...etc.	1,000,000.00
3.8	cooling water heat exchangers pumps / fans/gearbox/motors with all its related accessories and auxiliaries...etc.	500,000.00
3.9	Heat Recovery Steam Generator (HRSG) with all its related accessories	4,000,000.00
3.10	All other mechanical elements including but not limited to accessories, auxiliaries fixtures, fittings, connections, pipes...etc.	1,000,000.00
3.11	All other electrical and electronic elements including but not limited to Motor control centers, cubicals, circuit breakers, switches, accessories, cables...etc.	1,000,000.00
Common items including but not limited to the following:		
4.1	Balance of Plants elements including but not limited to storage tanks, wells, pipes, equipment	500,000.00
4.2	Firefighting system with all its related elements, accessories and auxiliaries	500,000.00
	Diesel Fuel Oil	6,000,000.00
	Spare Parts Inventory	4,000,000.00
	All building facilities containing the above items	1,000,000.00
Total Rehab Insured Value in Jordan Dinars		69,500,000.000

17.5 CEGCO; Breakdown of values for Risha Power Station:

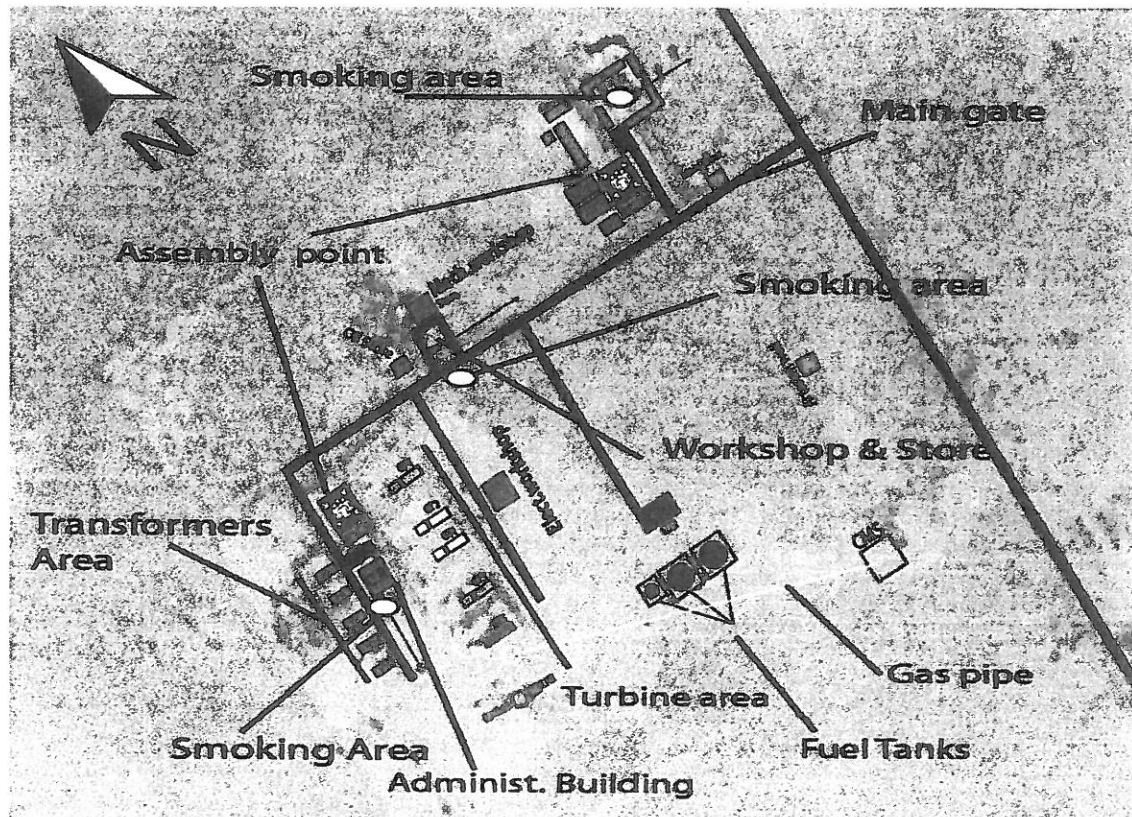
1. Unit 4 Frame 6b Gas Turbine		
1	Description	Total Price in JD
1.1	Turbine Flange to Flange with all its related accessories and auxiliaries...etc.	5,000,000.00
1.2	Transformers with all its related accessories and auxiliaries...etc.	1,200,000.00
1.3	Compressors with all its related accessories and auxiliaries...etc.	1,000,000.00
1.4	Generator with all its related accessories and auxiliaries...etc.	1,000,000.00
1.5	Pumps with all its related accessories and auxiliaries...etc.	1,000,000.00
1.6	DCS & Speedtronic control system and equipment with all its related accessories and auxiliaries...etc.	700,000.00
1.7	air cooled Condenser cooling towers /fans /gearboxes/motors	500,000.00
1.8	All other mechanical elements including but not limited to accessories, auxiliaries fixtures, fittings, connections, pipes...etc.	800,000.00
1.9	All other electrical and electronic elements including but not limited to Motor control centers, cubicals, circuit breakers, switches, accessories, cables...etc.	800,000.00
2. Unit 5 Frame 6b Gas Turbine		
2.1	Turbine Flange to Flange with all its related accessories and auxiliaries...etc.	5,000,000.00
2.2	Transformers with all its related accessories and auxiliaries...etc.	1,200,000.00
2.3	Compressors with all its related accessories and auxiliaries...etc.	1,000,000.00
2.4	Generator with all its related accessories and auxiliaries...etc.	1,000,000.00
2.5	Pumps with all its related accessories and auxiliaries...etc.	1,000,000.00
2.6	DCS & Speedtronic control system and equipment with all its related accessories and auxiliaries...etc.	700,000.00
2.7	air cooled Condenser cooling towers /fans /gearboxes/motors	500,000.00
2.8	All other mechanical elements including but not limited to accessories, auxiliaries fixtures, fittings, connections, pipes...etc.	800,000.00
2.9	All other electrical and electronic elements including but not limited to Motor control centers, cubicals, circuit breakers, switches, accessories, cables...etc.	800,000.00
Common items including but not limited to the following:		
4.1	Balance of Plants elements including but not limited to storage tanks, wells, pipes, equipment	400,000.00
4.2	Firefighting system with all its related elements, accessories and auxiliaries	400,000.00
	Diesel Fuel Oil	1,780,000.00
	Spare Parts Inventory	1,000,000.00
	All building facilities containing the above items	350,000.00
Total Risha Insured Value in Jordan Dinars		27,930,000.00

18 Safety Measures & Procedures Implemented at all Locations:

18.1 AQABA POWER STATION - Evacuation Plan.



18.2 RISHA POWER STATION- Evacuation Plan.



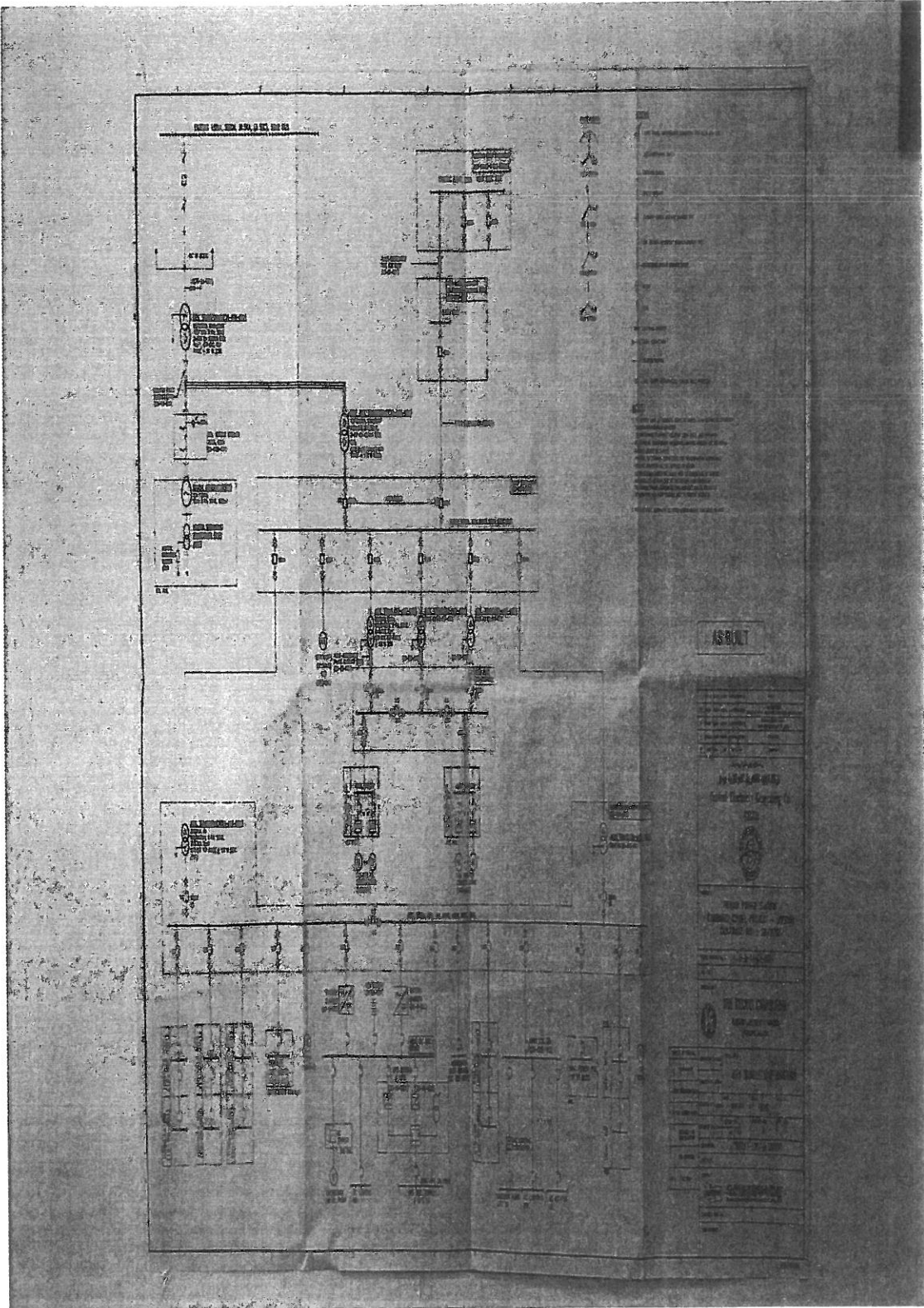
Risha site is equipped with the following:

CO ₂ Extinguisher 10 Kg	29
CO ₂ Extinguisher 5 Kg	13
Powder Extinguisher 10 Kg	3
Powder Extinguisher 12 Kg	19
Hose Reel	2
Hydrant 4"	11
Other fire fighting at the site	
Foam System (the mobile foam trolley systems)	3
Spinkler System for water spray cooling system (used on the fuel tanks)	3
CO ₂ automatic gas flooding system are used on gas turbine	2
Spinkler System operated by deluge (used on the Transformers)	3
Fire Pumps	
Main Electrical Firefighting Pump	1
Emergency Diesel Engine for Firefighting Pump	1
Jokey Pump	1

All the safety equipment mentioned above including the fire pumps are regular maintained and confirm they are effectively operational.

The overall capacity of water used for firefighting is 1000 m³ that can last 90 min. if used in full scale.

18.3 REHAB POWER STATION- LAY OUT PLAN.



Rehab site is equipped with the following:

- JOCKY Fire Pump

Manufacturing	EBARA / Japan
Model No.	150MSFJ3555
Year	1996
Q	12 m ³ /H
H	80 m

- Electric Fire Pump

Manufacturing	EBARA / Japan
Model No.	150MSFJ3555
Year	1996
Q	2100 L/m
H	80 m

- Diesel Engine Fire Pump

Manufacturing	EBARA PUMPS/Japan
Model No.	150MSFJ3555
Year	1996
Q	1500 L/m
H	91 m

- JOCKY Fire Pump

Manufacturing	Chaud-froid industries
Model No.	PV 20+19.41212
Year	2002
Q	5.5 m ³ /H
H	110 m

- Electric Fire Pump

19 Probable Maximum Loss Estimation: EML & PML:

- 19.1 The highest zone in value is unit three at ATPS, Thus based on the highest zone value wise, both EML & PML are calculated accordingly.
- 19.2 E.M.L: Estimated Maximum Loss: E.M.L. = Estimated Maximum Loss; is the extent of the fire likely to occur under normal conditions of activity, occupancy and fire-fighting of the range of buildings concerned. The unusual circumstances (associated or extraordinary) likely to modify the circumstances of the risk are left out.
- 19.3 The premises are equipped by a very good firefighting system and maintained to the highest standards and quality, effectively operational and regularly inspected by specialists.

NAME OF RISK ADDRESS	E.M.L (Estimated Maximum Loss) Property Damage (Physical Material Loss)	E.M.L (Estimated Maximum Loss) Machinery Breakdown (Physical Material Loss)
CEGCO (ATPS); Unit No.3 <i>Total value at the highest zone = J.D 60 million.</i>	On new for old basis: Around 20% X J.D 60 million = JD 12 Million.	On new for old basis: = JD 10 million

- 19.4 P.M.L; Possible Maximum Loss: P.M.L. = Possible Maximum Loss; is that which may occur when the most unfavorable circumstances are more or less exceptionally combined and when as a consequence, the fire is not or is unsatisfactorily fought against and therefore is only stopped by impassable obstacles or by lack of sustenance.

NAME OF RISK ADDRESS	P.M.L (Probable Maximum Loss) Property Damage (Physical Material Loss)	P.M.L (Probable Maximum Loss) Machinery Breakdown (Physical Material Loss)
CEGCO (ATPS); Unit No.3 <i>Total value at the highest zone = J.D 60 million.</i>	On new for old basis: Around 60% X J.D 60 million = J.D 36 to 40 Million.	J.D 20 Million to J.D 25 Million.

- 19.5 Since the load of operation in the selected zone is rather low, whereas, the above calculations have been conducted with consideration to normal operation load

20 Maintenance:

- 20.1 **Maintenance Procedures / Turnarounds:** According to maintenance charts, three types of prevention maintenance works exist:

- 20.1.1 **Ordinary** day to day inspection
- 20.1.2 **Periodical** weekly and monthly inspections as well as every three months
- 20.1.3 **Annual turnarounds** with a shut – down period of mostly 3 weeks depending on the type of repair.
- 20.1.4 **A comprehensive preventive maintenance** software system is installed to monitor, control, manage, and implement the routine plan budget in conjunction with the available spare parts and services within the plant, helping to avoid breakdowns and giving good time to purchase any needed spare parts in case of shortages in the stock.

21 Earthquakes:

- 21.1 Aqaba area has to be considered relatively a rather high exposed seismic zone with a maximum intensity of Mercalli; Zone 3, according to the Munich Re's Earthquake map of Jordan.

Name of Risk Address	Exposed Seismic Zone With Maximum Intensity Of Mercalli According To Jordan	Remarks
Aqaba - ATPS	Zone 3	High

- 21.2 Rehab area has to be considered relatively a rather low exposed seismic zone with a maximum intensity of Mercalli; Zone 1, according to the Munich Re's Earthquake map of Jordan:

Name of Risk Address	Exposed Seismic Zone with maximum Intensity of Mercalli according to Jordan	Remarks
Rehab	Zone 1	Low to moderate

21.3 Risha area has to be considered a very low exposed seismic zone with a maximum intensity of Mercalli ;Zone 0, according to the Munich Re's Earthquake map of Jordan.

Name of Risk Address	Exposed Seismic Zone with maximum Intensity of Mercalli according to Jordan	Remarks
Risha	Zone 0	Low

21.4 Amman area has to be considered relatively a rather moderate exposed seismic zone with a maximum intensity of Mercalli ;Zone 2, according to the Munich Re's Earthquake map of Jordan.

Name of Risk Address	Exposed Seismic Zone with maximum Intensity of Mercalli according to Jordan	Remarks
Amman - West	Zone 2	Moderate

21.5 Therefore there is a chance of property damage resulting from earthquakes, particularly at Aqaba area, but one can never be sure in this respect. However, Jordan has four main zones the highest is zone 3 and the lowest is zone zero. Thus, Zones zero and one are considered rather low exposure as far as earthquakes are concerned.

22 Loss History:

22.1 Clean Loss Record for the past 6 years. The load is moderate to low, and expected to be low for the coming years, due to the new projects being constructed and the few existing ones that generates electric power from solar energy and wind power.

22.2 The plants are on a standby basis with moderate to low operation load by large.

23 Conclusion:

23.1 Firefighting and safety arrangements are in compliance with NFPA standards.

23.2 General exposure for all perils are moderate to low since the load factors of operation is low.

23.3 Gas Turbines inspection:

23.3.1 Combustion inspection: every 8,000 hours operation as per OEM standards.

23.3.2 Hot Gas Path Inspection: every 24,000 operation as per OEM standards.

23.3.3 Major Overhaul: every 48,000 hours operation as per OEM standards.

This report is issued to serve and avail where and when necessary in Amman, Jordan, on 29th of September 2020.

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