GJU
الجامعة الألمانية الأردنية
German Jordanian University

Request for Proposal (RFP)

GJU PV System 500kWp Expansion

2025

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1. Introduction

1.1. About GJU

The German Jordanian University (GJU) is a public university founded in 2005 by a Royal Decree, in accordance with a memorandum of understanding between the Ministry of Higher Education and Scientific Research of the Hashemite Kingdom of Jordan and the Federal Ministry of Education and Research of the Federal Republic of Germany.

GJU is modelled on the German applied-sciences model, characterized by their focus on putting knowledge into practice and on promoting knowledge transfer. By taking advantage of the best educational practices in both Jordan and Germany, the University has positioned itself as a leader in its field.

GJU recognizes research and research-led teaching as primary responsibilities of its academic staff and places value on fostering, publishing, and disseminating research of the highest quality internationally.

GJU's PV system consists of 6699 PV panels (315 Wp each) and 79 different size inverters from ABB (27.6, 20 and 12.5 kW) and Huawei (25 and 20 kW), for a total system size of 2.11 MWp. The system was completed in 2017 and is monitored using a custom SCADA system. The systems cover approximately 80% of GJU's energy needs.

GJU has a 33-11kV substation, two electrical meters at 11kV, an 11kV electrical network to the building and six 11kV-400V transforms. All PV systems are connected to the low voltage 400V network.

1.2. Project Overview

German Jordanian University's (GJU) energy vision aims at utilizing renewable energy and implementing energy efficiency measures to achieve net zero energy consumption and minimum carbon emissions on its campus. This initiative is part of GJU's "Smarter Green Campus Strategy" which envision a smarter and environmentally friendly campus. The mission of this strategy is to provide suitable energy management, apply conservation of energy opportunities, and utilize available renewable energy resources. Management of water consumption, resources and facilities at the university to achieve smarter and environmentally friendly campus will be through applying advanced scientific and technological approaches and by encouraging and supporting research and development in the relevant fields.

Moving towards this vision GJU is proposing to build an additional 500 kW Photovoltaic power plant as car parks, rooftop and path shading. The proposed addition will contribute to the supply of approximately 100% of GJU's total electrical consumption. This step will be added to

the steps already taken by the university to conserve energy using efficient electrical systems and minimize unnecessary use of electricity. This document is an invitation for suitably qualified local contractors for the full and comprehensive design, build, test, 3-year operation and maintenance of a 500kW photovoltaic generating station at GJU campus. This includes the operation and maintenance of the existing GJU PV system.
Interested bidders shall submit their technical and financial offers along with their design in the following two stages which include the whole work referred to in this contract as follows:-

Stage One:- Engineering, Procurement and Construct (EPC)
This means that the winning bidder shall design, construct, test and successfully commission the project in accordance with the bidder accepted financial offer within (6) Months from the date of commencement.

Stage Two:- Operation, Training and Maintenance
This means that after the successful completion of stage one above, the winning bidder shall operate, train, and maintain the PV power plant (including the existing power plant) for (3) Years starting from the date of acceptance of the final commission, and the starting of the commercial operation date (C.O.D) this shall be extended to the date of final completion, handing-over the project and the issuance of the "Taking-over Certificate". During this period maintenance, including spare parts, is free of charge.
The interested bidders shall submit a financial offer of this contract in accordance with the conditions of payment referred to in clause (14. Method of Payment) of this document.
However, GJU has the right to select the best design solution, construction and operation that satisfy its requirements, needs, campus master plan and interests.

2. General Terms and Conditions

It will be the bidder's sole responsibility and on his own expenses to understand the site nature, environment and all requirements that are related to the tender or that may influence its pricing.
Bidders are encouraged to make a site visit and get acquainted with the existing system. The main requirement is to have a system compatible with the existing equipment.

2.1. The bidder will be fully responsible for verifying any information that may be made available to him. Under no

circumstances will GJU be deemed responsible for the consequences of any such offered information.

2.2. Bidders requiring further information or clarifications may notify GJU in writing to the Works Committee. GJU will respond in writing to any request for information or clarification of the bid.

2.3. To assist in the examination, evaluation and comparison of bids, GJU may ask in writing the bidder for any clarification of the bid. No change in the price or substance of the bid shall be sought, offered or permitted.

2.4. GJU will determine to its satisfaction whether the bidder selected as having submitted the lowest-evaluated responsive bid is qualified to satisfactorily perform the project.

2.5. In determining the winning offer GJU will take into consideration the bidder's financial, technical, production capabilities, and the lifetime of the proposed project. The determination of the winning offer will also take into consideration the documentary evidence of the bidder's qualifications and any other information that GJU deems necessary and appropriate.

2.6. GJU will award the tender to the successful bidder whose bid has been determined to be the most proper responsive bid, provided further that the bidders is determined to be qualified to satisfactorily perform the Contract.

2.7. Bidder / Bidders should submit one offer based on full Design, Construction, procurement, 3-year operation, training and maintenance with spare parts for stages (1 and 2) referred to in this document. Failure to submit any of these stages, bidder shall be disqualified.

2.8. The Tender will be awarded as one lot for "design, construct, procure, operate, train and maintain" in the method of construction referred to in this document that is considered to be the most suitable technical and financial offer to GJU.

2.9. The bidder may consider the specifications in the technical specifications sections as a guideline for the minimum requirements for building the solution that achieve the project goals.

2.10. The bidder must quote clustered prices for all components referred to in their submitted solution (Design) including bill of quantities (BOQ) along with description, specifications, country of origin, prices, manufacturer of equipment, materials, tools, operation, training, and maintenance... etc.

2.11. If any item needed during the installation was not stated in the offer; then it is the bidder's responsibility to provide it at no

additional cost. However, any omission of any part of the (BOQ) shall be deducted from the price of the offers.

2.12. The bidder shall include in their offers itemized and weighed cash flow analysis and method of construction, otherwise the bid / bids might be rejected.

2.13. The bidder has no right to object to the technical and financial evaluation criteria applicable to this tender.

2.14. The bidder should take into consideration that this contract is exempt from all customs duty and taxes (VAT) value added tax, except the stamp fees, and income taxes.

2.15. The bidder must submit all original documents, authenticated and stamped by the signature of the firm.

2.16. The client has the right to terminate the tender without declaring the reasons.

2.17. The Evaluation of the submitted offers is only for the purpose of this tender.

2.18. Any unauthenticated documents will not be considered for the Evaluation.

2.19. The design shall comply with all national and international safety codes in respect of life safety and construction site safety.

2.20. The bidder shall orally present to the client representatives if requested at the conclusion or during the evaluation stage, using power point software or similar electronic format.

2.21. All drawings shall conform to the standard A0, A1 and A2 sizes and their reduced size of A3. All drawings shall be in accordance with the requirements within this Term of Reference and shall be prepared using CAD tools such as AutoCAD and Arch CAD. The working drawings shall be saved in CDs, and the CDs shall be submitted to the client as per these requirements and shall become the property of the client. Drawings should be well organized and easy to identify using file names and access codes.

2.22. The bidder shall submit design documents fully in compliance with the requirements of the following authorities:

- Ministry of Public Work and Housing.
- Ministry of Energy and Mineral Resources.
- Civil Defense Directorate.
- Energy and Mineral Regulatory Commission.
- Jordan Electric Power Company (JEPCO)
- Jordan Standards and Metrology Organization (JSMO)

2.23. The bidder along with the bills of quantities, shall provide detailed calculations of the quantities stated therein. These shall include one copy of quantity take-off's abstract sheets etc. As

indexed, files and readily understandable. One copy of take-off drawings marked up to explain detail calculations shall be provided.

2.24. The bidder who wins the bid shall submit weekly, monthly progress reports during the period of this contract.

2.25. This report shall identify progress on works tasks, estimated completion dates of tasks in comparing with the contract working program, issues and problems etc.

2.26. The bidder who wins the bid (Contractor) shall submit to the satisfaction of the employer representative, and within (14) days of commencement date a working program showing each site operational element, and the planned duration for all activities using a primavera program for the construction period and operation and maintenance period (stage one and two).

3. Tender Format

The tender proposals have to be developed by the bidder and shall include but not limited to the following sections:-

- Overview.
- Detailed hardware and software description.
- Comprehensives and full design, specifications, calculations, drawings, technical details ... etc.
- Bidder qualifications: as requested later in this document.
- Month to month expected electrical generation and (PR) for the lifetime of the project.
- Installation, commissioning, and testing plan.
- Operation, cleaning, and monitoring plans.
- Warranty, maintenance, and after-sale services.
- Supporting documentation (datasheets, drawings, etc.).
- Training plan.
- Quality assurance/quality control plan.
- Completed, signed, and stamped compliance sheet(s) provided in the Annexes of this tender document, as appropriate to the submitted bid(s).
- Financial proposal(s): prices of all components of the proposed solutions in the form of a BOQ. The BOQ shall be in JD, must be clear and itemized, and shall exclude all customs and taxes. If an item is not priced, then the proposal may be considered unsatisfactory, and/or considered to be at no cost.
- Price for 3-year operations must be included and clearly stated.
- Tender bond.

4. Tender Bond

The bidders' offer shall not be considered unless it is accompanied by a tender bond not less than 3% of the contract sum as stated in the form annexed here.
This guarantee should be:-

- Issued by a licensed local bank, approved by the client.
- Issued in the name of GJU. This amount will be paid by the guarantor, on the first demand if it becomes evident that information given by the Contractor contains false statements.
- Valid for not less than (90) days from the opening date of the offers and be renewable for future periods as the (GJU) deems necessary.
- Returned after signing the agreement and a performance security (Bond) has been duly entered into and executed.
- If the successful bidder fails to provide a performance bond and signs the agreement within (14) days of being requested by the client (GJU) to do; so, the full amount of tender bond shall become payable to the client as compensation for such a default.

5. Performance Bond (Security)

This performance bond shall cover the completion time as stated for stages one and two of this contract (i.e. 3 years from the commencement date) and as follows: -

5.1. The bidder who wins the contract (Contractor) is required to obtain a guarantee or performance bond from a bank operating in Jordan and approved by the client (Employer) in respect of due performance of the contract in the form of a bond annexed here or any other form approved by the client in an amount not less than (10%) ten percentage of the total contract sum (contract price), and such bond shall be valid and held by the employer and only released on the final completion and the issuance of the taking over certificate of the whole works by the employer.

5.2. The Contractor shall present the approved performance bond within (14) days of being notified by registered letter that he has been awarded the contract and, in any case, prior to signing of the contract agreement and the awarding decision.

6. Proposal Submission

Bids shall be submitted in two copies including technical and financial proposals. An electronic copy on a CD must be submitted that includes all hardcopy documents and submittals.

7. Bidders Qualifications

The following are the minimum qualifications required for any bidder. The bidder experience shall be considered in the evaluation of the technical and financial offers. References, when applicable, should be included in the offer.

7.1. Bidders should have enough experience and certified technical staff to do the design, installation and support, both sufficient experience and formal qualifications are required, as well as bidders experience in designing of similar projects for at last (5) years, 5 of them –at least- to be executed project.

7.2. Name, experience, certificates and CVs of the engineering staff that will supervise the installation and support should be included.

7.3. The bidder must nominate in the offer a certified project manager who will lead the company project team during the implementation of the project.

7.4. The bidder should demonstrate and within his technical offer a bank certificate confirming his financial capability to carry out the contract and approved the cash flow required for the bank guarantees.

7.5. The bidder should demonstrate that during the last three years the aggregate annual weighted average of turnover of all its members together has been at least equal to the tender price.

8. Training and Operation

8.1. Training

The offer should include onsite training for GJU technical staff. Training must focus on, but not limited to, the following:

- Operation
- Problems and fault analysis
- Software installation and administration for the associated software modules (Software management).
- Configuration
- Data acquisition and monitoring system
- Management PV plant

- Preventive and routine maintenance

The training has to meet the following requirements:

- Offered by a certified instructor both sufficient experience and formal qualifications are required. Instructor must be approved by GJU
- Training must be completed within (30) days from electrical connection at the public electrical network. The training will be replicated twice, once at completion, and repeated at the request of the client during "Stage Two".

8.2. Operation

The contractor is responsible for the complete commercial operation of the facility during Stage (2) as described above. This will be done at no additional charge. Operation will include but not limited to electrical generation, electric power delivery, system monitoring, solar panel cleaning, report creation, prevented, routine maintenance, replacing damaged PV panels and inverters and anything else deemed necessary for proper PV system operation, including the existing system.

9. Implementation, Installation and Testing Plan

More details about the installation and testing are presented in the SOW (Scope of Work). The following rules must be satisfied:-

9.1. The bidders must provide an implementation/installation plan in accordance with the required standard for project management. It must have clear milestones and a timetable.

9.2. All components and equipment must be tested and certified by TUV or equivalent. The complete system must be tested and certified by a third party – Independent Engineering company specialist in the field of photovoltaic plant – as described in the SOW document and in other parts of the tender document and must be approved by the client. If the client does not approve the third party, then a new one must be nominated for approval.

9.3. The contactor must develop reports that include all serial numbers, manufacturer, and country of origin ... etc., of all awarded and delivered equipment, materials ... etc. These reports must be submitted during the design, installation process, and operation and maintenance phases before the final completion of the project.

10. Maintenance Guarantee

The contractor must provide GJU with a "Maintenance Guarantee" in the form agreed by the two parties.

10.1. All work should be maintained free of charge including all required spare parts for 3 years (36 Months) as stated at stage two of this contract starting from the date of final completion, and the issuance of taking over certificate of stage one and stage two together, against a bank guarantee issued in the name of GJU by a licensed local bank in Jordan, accepted by GJU and equal to (10%) of the contract sum which should be submitted by the contractor prior to the final handing over in a form submitted by the contractor and approved by client, and shall be valid and held by the client and only released on the issue of the Defects Liability certificate in accordance with the condition of this contract.

10.2. The maintenance offer should include a maintenance contract with detailed terms for technical support, response time and spare parts needed. Spare parts must include at least"

- 2 inverters of each size used in the design.
- 5% of the total number of PV panels used in the design.

10.3. The successful bidder who wins the bid shall be responsible for all his obligations within the contract as well as the regular cleaning of PV- Modules at "Stage Two" of the works.

10.4. The offer must include a clear method and contact information that GJU technical team can use in case of emergencies.

10.5. Offer of warrantee service must be clear and the bidder must show his commitment for doing the following:

- Response time for problem call.
- Response time for problem solving.
- Response time for software/configuration support call if any.
- Response time for solving software/configuration support.
- Response time for (hardware/software) failure of the system or any other components related.
- Actions that will be taken during failure.
- Response time for failed equipment or any other components replacements.
- Monitoring and reporting of performance of the facility in cooperation with GJU team.

10.6. The maintenance guarantee must also include the current existing PV system (2.11 MWp)

11. Scope of Work

This Scope of Work (the "SOW") is to develop, permit, engineer, design, procure, construct, interconnection, commission, startup and test a turnkey photovoltaic facility which is built to a nameplate capacity of (500) kW and which performs to an agreed upon Performance Guarantee (the "Facility" or the "Project"). These specs are the minimum requirements, and considered to be a guideline, bidders must offer a comprehensive and full design that meet the minimum requirements and that's in accordance with national and international codes and standards.

The PV system design must also include all equipment and components necessary to properly connect to the local grid, while a satisfying all requirements of Jordan Electric Power Company (JEPCO).

The work shall include but not be limited to the following:-

11.1. Bidders must quote in their offers all auxiliary items (Equipment, Machinery, Technical components, cleaning systems, etc.) that needed to produce functional setup. If any item is needed during installation any stage of testing and or commissioning and was not stated in the offer; then it is the bidder's responsibility to provide at no additional cost.

11.2. It is the bidder sole responsibility to make sure that the offered design is complete, checked and approved by a third-party specialist that is nominated by the bidder in his technical offer, and approved by the client. And to make sure that the devices and modules are compatible with each other and compatible with the existing infrastructure at GJU for connection purposes.

11.3. GJU has the right to exclude items and change the quantities when awarding this tender, in order not to exceed the available budget without affecting the technical requirements and actual need.

11.4. Preparation of the site layout plan on GJU campus for the purposes of this project with an area as requested by bidders including but not limited to storm water management, pictorial indications of key equipment features (e.g. access doors for power stations, control enclosures, and switchgears, orientation of foundations and equipment required on site.

11.5. Preparation and submission of tender drawings and tender documents for the photovoltaic generating stations site including infra-structure, footpath network, rainwater mains, electrical network, and lighting.

11.6. All permits must be obtained before any work, procurement or delivery of goods or services is permitted. No payable or billable amounts will be incurred until all approvals are granted by all relevant authorities for the PV system.

11.7. The Contractor will design all aspects of the Facility, including the layout, civil, electrical and structural components. All final design drawings shall be issued by the Contractor for this Project.

11.8. The Contractor will procure, or have procured by Subcontractors, all Materials required to build and commission the Facility according to this SOW and the Project drawings and all applicable codes and standards, with the exception of equipment and materials which are required to be procured, installed or tested by GJU.

11.9. Except as otherwise expressly provided in the Contract, GJU is not responsible for providing any material, labor or services of any kind during the Contractor's execution of the Work. The Contractor is fully responsible for all development, permitting, engineering, procurement, construction, interconnection, startup and testing activities and will deliver a complete, operational and reliable turnkey photovoltaic Project to GJU.

12. DESIGN Specification

The current PV system name plate is 2.11 MW. Permits are for this rating, and it shall not change. The work is to increase the DC capacity of the system, without affecting the AC rating to reduce any permitting requirements. This includes installing new PV systems, integrating with the old system, replacing enough old inverters with new ones that have a higher DC:AC ratio, changing PV string configuration as necessary.

12.1. The Contractor shall design and build a fixed tilt, photovoltaic solar energy generation facility. The Project will be designed and built to operate at a maximum DC voltage of 1500 V. The voltage will be converted to AC using MPPT inverters that are connected to the low voltage grid using the necessary equipment required by the local distribution company.

12.2. Inverters must be Huawei brand, as the university does not want to have several brands on the network for maintenance

and operation purposes. Connection to the electrical meters must be designed in such a way that most of the energy is used by the connected load to each of the electrical meters, to reduce any financial impact of generation/consumption mismatch at the meter level.

12.3. All costs of the design, construction, implementation, modifications, and connections, including all works referred to in this contract shall be borne by the contractor who win this bid.

12.4. PV modules: The modules must be based on polycrystalline or monocrystalline silicon technology and must fulfil the following (or comparable to the following) technical specifications and standards, certified by an official institute if applicable:

- The modules must be Tier 1 manufactured in 2024 or 2025.
- Cell type: monocrystalline or polycrystalline; most effective technology is preferred.
- The output power of the crystalline module should not be less than 600 Wp at standard test condition (STC).
- Module efficiency shall be at least 22%.
- Operating PV temperature ranges between -10°C and + 85°C.
- Module weight should not exceed 30 kg.
- Electrical connection shall be on a robust terminal block in an IP65 junction box or higher.
- The warranty for module defects after installation should be at least 10 years.
- The successful bidder shall provide a manufacturing power guarantee for all PV modules that will be installed that guarantees that the loss of the output is not more than 10% during the first 10 years and up to 20% in total after 20 years. Serial numbers of PV modules must also be provided.
- Mechanical stability – IEC 61215: design qualification and type approval for crystalline silicon terrestrial PV modules.
- PV module safety qualification standard: IEC/EN 61730 for safety class II test.
- Mechanical load tests up to 5400 Pa, damp heat, thermos cycle, humidity, and freeze tests.

12.5. Cleaning system: The Contractor shall supply a cleaning system of the PV modules from dust, debris and birds' waste. The system shall be able to perform intervallic regulated cleaning as well as on-demand cleaning. The cleaning shall be

performed with minimum quantity of water and based on panel manufacturer specifications and recommendations.

12.6. Mounting system: All systems will be roofing top. The modules must be mounted on metallic sub-constructions of suitable height from the roof top and with the necessary declination between 20° to 30° in relation to the horizontal plane to gain the maximum amount of solar radiation and energy production. If building rooftop structure or pathways dictate angel selection, then it must be clearly stated in the design. Determination of the appropriate tilt angle must be based on shade analysis and simulations, which must be included in the technical proposal. The supporting structure must be compatible with the offered PV modules and should be made of aluminum or galvanized steel as long as the specific guarantees are given by the manufacturer for non-corrosion due to weather conditions for outdoor installation. The minimum specifications of the mounting structure are:

- Minimum wind speed of 130 km/h shall be considered for the mounting structure design.
- Made of aluminum or hot-dip galvanized steel or Magnelis for rooftops.
- The aluminum alloy shall be in compliance with the Jordanian Standards (م ق ا \ 380-2 \ 2003).
- The connections must be "High Strength Bolts according to ISO 898-1 Standard Grade8.8".
- The anodizing coating of the aluminum profile shall be according to the British Standards (BS 1615) and level of (GradeAA15) and BS 3987 with color.
- The mounting structure shall be all fitted (no welding).
- A detailed structural analysis shall be submitted considering the Jordanian Loads Code specifying the safety factor.
- The manufacturer's warranty should be at least 10 years.
- The system must be astatically comparable to the currently installed system. Samples must be provided and approved before installation.
- Part of the system will be installed on the top of building C. The rooftop already has a solar thermal system mounted on a metal structure. The system is not functional, part of the work is to remove and dispose of the solar thermal system, and maintain the existing metal structure, to be suitable for the new PV system.

This work includes all necessary metal work as will be explained during the cite visit.

- Walkways that are suitable for cleaning and maintenance work must also be installed and integrated with the structure. The structure of the walkway must be approved by GJU before being installed.

12.7. The on-grid inverters should meet the following specifications:

- The inverters must be **Huawei** Brand.
- The AC power of the inverter must synchronize automatically with the AC voltage and frequency of the grid (3-phase) within the tolerance range specified according to the British Energy Networks Association (ENA) engineering recommendations (G99).
- The inverter(s) shall comply with the EMRC regulations and standards.
- The Inverter should be designed to operate the PV array near its Maximum Power Point (MPP).
- The Inverter should be transformer-less with efficiency at max power of no less than 98% (EURO-ETA / Euro-efficiency).
- The Inverter shall have the following protections: reverse current, input over voltage & over current via fuses.
- DC : AC ratio not less than 1.5
- The Inverter shall be provided with integrated DC switch.
- Temperature operating range: -20 °C to 60 °C.
- Harmonic distortion is less than 3%.
- Protection degree is IP65 or higher (outdoor)
- String level current measurement.
- MODBUS communication (RS232)
- TUV and CE compliant
- The warranty after installation should be for 10 years at least. The warranty must state that the malfunctioning inverter must be exchanged (replacement only) by the manufacturer including all transportation and shipment expenses. The replacement inverter must be identical to, or an improvement upon, the original design of the malfunctioning inverter.
- The inverter must be cooled using natural ventilation.
- The inverter shall have surge protection SPD on the DC and AC side. If the inverter does not support integrated

SPD protection, a separate external SPD must be installed.

- Manufacturer must have local office in Jordan.
- Inverter communications must be compatible with the current GJU SCADA communication requirements.

12.8. PV/AC Cables & Conduits: Must use PV pipes for all conduits, except where cables lay on the ground, then metal conduits or cable tries must be used. The minimum specifications of the PV and AC cables are:

- PV cables shall comply with TUV standards.
- Operation temperature for PV cables should be up to +80°C
- PV cables shall be UV resistant, flame retardant, and with low smoke characteristics.
- PV and AC cables shall comply with local and international standards and the responsible Electricity Distribution Company requirements.
- AC cables shall be insulated, sheathed copper cables drawn from the PV yard up to the connection points and shall be rated at minimum of 600Vac.
- All external cables must be installed inside an outdoor use PVC pipe with UV resistance or galvanized cable tray.
- All cables shall be marked properly by a high-quality weather-proof labeling system so cables can be easily identified.
- The factory warranty shall be not less than 5 years. Certificate required.

12.9. AC Distribution Boxes

- The distribution boxes shall be made of hot coated or galvanized steel; dust and vermin proof, IP65 rating or better.
- The terminals and bus bars shall be appropriately sized; the boxes shall have suitable cable entry with suitable glands arrangement for both input and output cables.
- Suitable markings on the bus bars shall be provided to identify the bus bars.
- The distribution box shall be grounded and for this purpose a suitable ground terminal is to be arranged.
- The distribution box shall be wall-mounted and of the front door opening type.

12.10. Supervisory Control and Data Acquisition (SCADA): the new PV system must integrate into the current GJU PV system SCADA. The contractor must work with the SCADA contractor to integrate all aspects of the project with the SCADA system.

12.11. Applicable Codes and Standards

The Project's engineering, design, construction, startup and testing shall follow the applicable national codes, standards and publications that are in effect by the regulation authorities. In addition, the following standards must be met when applicable:

- UL 1741: Inverters, Converters, Controllers and Interconnection System Equipment for use With Distributed Energy Resources.
- Systems.
- IEC 61173 Overvoltage protection for photovoltaic (PV) power generating systems – Guide.
- IEC 62548:2016 : Photovoltaic (PV) arrays - Design requirements
- IEC 60364-7-712:2002 : Electrical installations of buildings - Part 7-712: Requirements for special installations or locations - Solar photovoltaic (PV) power supply systems
- IEC 62109-1: Safety of power converters for use in photovoltaic power systems
- IEC 62446:2009 : Grid connected photovoltaic systems – Minimum requirements for system documentation, commissioning tests and inspection

12.12. Interconnection

The Contractor shall ensure that the Facility is properly interconnected to the low voltage network using the necessary equipment required by the local distribution company and the governing regulatory. It is the bidder's responsibility to understand, meet, coordinate and submit any necessary permits and studies to interconnect the power station to the power Grid. Any additional equipment required by the local electrical company JEPCO after the grid impact assessment is the responsibility of the bidder at his own expense. The contractor, at his own expense, shall provide all interconnection equipment and structures up to this point of delivery. This includes any switch gear required for proper automatic power disconnect/connect from the grid in case of any internal or external faults or after normal grid conditions have resumed, in accordance with the distribution customer requirements.

12.13. Permits

All Permits required to execute the Work are the responsibility of the Contractor. The contractor shall identify known Permit requirements.

The cost of preparing, filing and obtaining the Permits should be included in the Contract Price. The Contractor shall provide GJU copies of all approved Permits and applications for Permits still in process on the effective date of this Contract.

13. Performance

The bidder offer shall be evaluated depending on the design that clarifies their work plan, and special attention shall be paid to:

13.1. The overall installed capacity delivered to the Point of Common Coupling (PCC) by the PV Modules and Invertors shall not be less than 500kW based on 1000 W/m^2 solar irradiation.

13.2. The bidder should provide an anticipated monthly and annual generation table for the PV station installed at GJU during the expected lifetime of the station. The expected lifetime should be not less than (25) years. This table shall be used as a base line in the Performance Guarantee.

14. Contract Period

The project time for completion is (42) Months distributed as follows: -

14.1. (6) Months for designing, construction, testing and final commissioning from the commencement date until the commercial operation date (C.O.D) and handing over the design and construction as stated at (Stage One) of this contract. There will be a penalty for every unjustified delay. For this contract (Stage one) of work there will be a delay liquidate damage (D.L.D) equal to (600) JD/day for every ununified delay. The maximum period of delay for this contract will not be more than 15% of the project period of construction stage one referred to above, after that GJU has the right to take any action in accordance with the conditions of this contract. If the maximum cost due to any delay and/or to any lack of performance which shall be borne by the contractor exceeds the (20%) of the "Contract Sum", the client shall have the rights due to the contractor failure referred to above to take any other necessary actions (i.e.: Additional deduction of the contract Sum and / or – Additional extension of (Stage Two) of works with cost and damages.) among other action referred to within the General Condition of this contract such as breaching of the contract, and carrying on the work on the expense of the contractor what so ever.

14.2. (36) Months for operation, training including maintenance as stated at (stage two) of this contract, from the (C.O.D) referred to above until the final handing and the taking over and the issuance of the taking over certificate of the whole works of the project successfully. And the starting date of the defect liability period (D.L.P).

15. Penalties

At the date of final handing over / taking over, or at any other date or period within this stage (Stage Two) of the work, the performance of the facility (Plant) should not be less than the contract efficiency capacity, while failure of the contractor to achieve the required performance for any reason what so ever during this period shall give the "Client" the right to apply the performance liquidated damages, and to calculate the cost and damages which shall be borne by the contractor, and the contractor is obligated to carry on all the necessary steps and actions to rectify the defaults and achieving the (100%) contract performance.

Damages for outages will be calculated monthly, as stated in the "Methode of Payment Section" according to:

Damages = (Designed Generation Capacity [kW] – Actual Generation [kW]) × (hours of subpar efficiency [hour]) × (Electricity Rate at time of loss [JD])

The annual penalties that are calculated during stage two:

Penalties = 0.27× ([(500 kW) × (130) × (12)]-[Actual Generation kWh])

As for the existing PV system which is covered under the three-year maintenance warranty, the contractor is responsible for guaranteeing that the system is operating at full capacity. If any parts are not functional for an unreasonable time (which should be reflected in the maintenance agreement response time) then the damages clause above is enforced.

16. General Conditions of the Engineering Services Agreement

16.1. The general conditions of the contract shall be the latest condition of contract for works of civil Engineering construction (FIDIC-Yellow Book) issued by the ministry of public work and housing at Jordan. Tenderers (Bidders) must undertake that they are in possession of their own copy of this document. Any conflict between the tender document conditions and FIDIC (if any), these tender document conditions shall prevail.

16.2. Contract Language: All descriptions, reports, specifications, technical data, tender documents and correspondence between the two parties shall be in English unless otherwise agreed upon between the contractor and the client.

16.3. Law Governing Agreement: The Agreement shall be governed and construed in accordance with the laws in The Hashemite Kingdom of Jordan.

16.4. Agreement in Force: The agreement shall become operative immediately upon signing the contract by the two parties.

16.5. Commencement Date: The contractor shall commence the works within (14) fourteen days after the agreement has come into force.

16.6. Completion Date: The contractor shall complete the whole of the work referred to in this contract, including testing, final commissioning, operation, training and maintenance with spare parts, and taking over the whole work of the project within the period of (42) Months (referred to in this contract) from the commencement date issued by the client or his representative. However, the contractor's attention is brought to the fact that the Employer will not accept sectional completion under any circumstances.

16.7. Liquidated Damages: The contractor shall pay liquidated damages at the rate as follows:-

- In the case of design and build method of construction the (D.L.D) Delay Liquidated Damages within this contract for each ununified delay beyond the design construction, final commissioning (that is the (6) months' time for completion of stage one of the work from the date of commencement) shall be (600) JD/day.

The total (L.D) liquidated damages shall not exceed a ceiling of 20% of the contract Sum.

- In the case of operation, training and maintenance (Stage 2) of the work (36 Months) starting from the Commercial Operational Date (C.O.D). The Performance Liquidated Damages (P.L.D) shall be applied during this period if contractors fail to achieve the "Contract Capacity" performance, the contractor shall pay the owner in respects of all losses expected to be suffered by the owner during this period until achieving the "Contract Capacity" at final commissioning as well as loss of profit on energy not produced. Failure of the contractor to achieve the "Contract Capacity" for any reason whatsoever shall give the owner the right in addition to the above (P.L.D) to apply any necessary action in accordance with the conditions of this contract among other steps, such as breaching of the contract, Termination of the agreement with compensation which shall be borne by the contractor.
- However, If the contractor fails to complete the whole works by the date of completion stated in this contract, then the contractor shall pay or allow to the Employer a sum calculated at the rate stated in the contract as "Liquidated Damages" for the period during which the works shall so remain or have remained incomplete, and the Employer shall deduct such sums from any money due or to become due to the contractor under this contract.

16.8. Variations, Alternations and Additional Works

GJU preserves the right to alter the volume of the works (decrease and / or increase) by 25% and maintain the original prices and rates of the agreement. Should circumstances arise which call for modifications during the implementation of the works, these may be made with mutual consent of both parties and given in writing. The contactor is obliged to carry out all modifications in due time after receiving the client's written order.

16.9. Default of the Contractor: All disputes and differences shall be handled through arbitration.

16.10. Termination of the Agreement by the Client: The client has the right to terminate the agreement for any reason whatsoever, by written order from the client. In such a case the contractor with the client representative will continue to complete the

requirements of the agreement and submit them to the client. The client will give a written notice to the contractor stating his intention to terminate the contract by giving the contractor at least thirty (30) days' time to take appropriate steps to bring work to a close in an orderly manner and to reduce expenditure to a minimum. The client will compensate the contractor according to a mutual agreement or in accordance with the articles stated at general condition (FIDIC), or any other method agreed upon between two parties out of this agreement.

16.11. Settlement of Disputes between the Client and the Contractor: Any disputes or differences arising out of this agreement between the two parties shall be settled either through amicable settlement or by arbitration described in general conditions of this contract and in accordance with the Jordanian Law of Arbitration. Otherwise, disputes shall be settled under the jurisdiction of the relevant courts of the Hashemite Kingdom of Jordan.

16.12. Labor Laws: The contractor shall follow the labor laws and regulations valid in Jordan for the employment of his staff working in Jordan.

16.13. Registration in the Jordanian Engineering Syndicate: The contractor (JV) shall register with the Jordanian Engineering Syndicate as required by for the performance of the services under this agreement.

16.14. Currency: The remuneration of the contractor will be in Jordanian Dinars.

16.15. Insurance: The contractor shall take out, maintain, and produce within (30) days of being awarded the contract, adequate insurance against third party liability and against loss or damage to the works, equipment, machinery, hardware, and panel glass performed by him, and in favor of the University (GJU), The required insurance is meant for professional liability. The insurance company may be Jordanian or non-Jordanian but must be operating in Jordan as well as approved by the Employer. The insurance covers all personnel working on the project whether inside the construction site or in the vicinity of GJU campus.

16.16. General Provisions: The specifications given in this agreement in a conceptual form are to be used as guidelines only. The contractor is expected to optimize these requirements in accordance with state-of-the-art modern PV Station design with respect to functionality, work ability, performance and good utilization and land use, and good utilization of space. The contractor shall secure approvals of the design and all documents and drawings of the project by the authorized

institutions that "Jordan Electric Power Company" and the Ministry of Energy, EMRC as well as the Directorate of Civil Defense.

16.17. Twenty-Five Years Guarantee:

The contractor shall stand answerable for a period of twenty-five years for any collapse, whether total or partial, that may occur as a result of defective, design, manufacturing, structures, executions, their attachments and related works erected by him.

Annex 1: COMPLIANCE Statement

I certify that all the information provided in the offer complies with all terms of the RFP.

Company Director (Name and Signature): Date

Company Stamp/ Seal

الجامعة الالمانية الاردنية		
الاعمال المدنية		

رقم البند	وصف البند	الوحدة	الكمية	سعر الوحدة		السعر الإجمالي	
				فلس	دينار	فلس	دينار
	أعمال دهان الهيكل الحديدي على السطح والمظلة البارزة • أعمال إزالة الدهان القديم (بالطرق المناسبة و التى لا تسبب أي أضرار لتيوبات الحديد - Light Sweep blasting و لا يسمح بإزاله الدهان بالحرق) و عمل الصنفرة اللازمة للأسطح المراد اعادة دهانها (بواسطة ورق الزجاج المرمل – الأخشن ثم الأنعم حسب وضع السطح) و إزالة ما تبقى من أثار الدهان أو أجزاء الدهان الضعيفة و المتقشرة أينما وجدت. • أعمال مسح السطح وإزالة بواقي الدهان بعد الحف والصنفرة وخاصة مناطق التقاء ألواح الصاج. • أعمال معالجة مناطق التقاء تيوبات الحديد مع بعضها ومناطق اللحام بالمعجونة المناسبة الخاصة للحديد (معجونة فيبر) مع الحف والتنعيم. • تطلى السطوح بعد التنظيف مباشرة وخلال يوم واحد بطبقة الدهان التأسيسي Primer المناسب ذو قدرة عالية على الالتصاق ويحمي من امتصاص الرطوبة نوع ايبوكسي Epoxy على كامل ألواح الصاج و السياج. الدهان المستخدم من أجود الانواع Polyurethan Dulux دهانات خارجية مناسبة للأسطح المعدنية أو ما يعادله في الأداء لغايات توحيد الصنف يتم تحضيره من خلال مراكز متخصصة بتركيب الالوان حسب اللون والرقم الذي يحدده المهندس المشرف ويتم تقديم الكتالوجات والمواصفات لاعتماد المهندس المشرف بمدة كافية وبعد عمل عينات حسب طلب المهندس المشرف. وذلك لكامل مساحة الهيكل على السطح و المظلة البارزة . 1- سطح مبنى C بمساحة تقريبية 2360م2 2- سطح مبنى B بمساحة تقريبية 741م2	مقطوع مقطوع	1 1				
	مجموع الصفحة ينقل الى الخلاصة						

الجامعة الالمانية الاردنية		
الاعمال المدنية		

أعمال الدهان الخارجي

المواصفات العامة للدهان المستخدم:

الدهان المستخدم من أجود الأنواع DULUX أو JOTUN دهانات خارجية مناسبة للأسطح المعدنية و/أو الاسمنتية أو ما يعادلها في الأداء لغايات توحيد الصنف المستخدم في الحرم الجامعي لأعمال الصيانة. الدهان يتم تحضيره من خلال مراكز متخصصة بتركيب الألوان.

- دهان الأساس الـ Primer نوع إيبوكسي ماستيك Epoxy mastic coating مميزات الأساس:
  - Primarily designed for maintenance and repair
  - It is a surface tolerant
  - High solids
  - High build product
  - Dry film thickness =150-300 µm
- دهان الوجه الخارجي بولي يوريثان Aliphatic acrylic Polyurethane coating
  - Dry film thickness = 50- 100µm

تحضير الاسطح قبل المباشرة بأعمال صيانة الدهانات وحسب الاصول:

❖ – إزالة طبقة الدهان المتقشر وغير المتماسك وازالة المعجونة عند خط التقاء ألواح الصاج المجلفن مع بعضها بالطرق المناسبة: فراشي سلكية خاصة- ورق الزجاج-تنظيف الاسطح ميكانيكيا Light Sweep Blasting Power Brush بالسفع الرملي.

The blasting process should lightly roughen the surface without removing a significant amount of the galvanized coating and provide a key to adhesion of the paint film. The procedure should be carried out using the following criteria:

- A fine, non-metallic abrasive

- Abrasive size which will pass through a test sieve of nominal aperture size 150µm–180µm.
- Blast pressure 275kPa
- Angle of blasting to surface no greater than 45°
- Distance from surface 350–400 mm
- Nozzle orifice diameter 10– 13 mm of venture type

This controls will ensure that the severity of blasting dose not damage the galvanized surface and should remove only 10µm of surface zinc.

❖ – عمل صنفرة بورق الزجاج (الاخشن ثم الانعم) وحف الاسطح المعدنية وتهيئتها لأعمال الدهان.

❖ – استخدام المعجونة المناسبة عند نقاط التقاء ألواح الصاج المجلفن و/أو ألواح السيمنت بورد.

❖ – إزالة كامل الصدأ بالمواد الخاصة و التي يوافق عليها المهندس المشرف حيثما وجد الصدأ على الاسطح المعدنية.

❖ – يتم مسح السطح وازالة بواقي الدهان ونواتج الحف قبل البدء بطبقة التأسيس والدهان.

❖ – أعمال تأسيس الاسطح المعدنية بدهان ايبوكسي Epoxy.

❖ – أعمال دهان خارجي من Polyurethane Finish وجهين على الأقل وحتى التستير الكامل.

❖ – عدد وجوه الدهان المطلوبة عدا المعالجة والتأسيس لا تقل عن وجهين وحتى التستير الكامل باللون المطلوب.

❖ – يتم عمل عينات دهان في الموقع وبالعدد الذي يحدده المهندس المشرف مهما بلغ عدد العينات.

❖ – يتم اعتماد ألوان وأرقام الدهان حسب موافقة المهندس المشرف قبل توريد الكمية الى الموقع.

❖ – يتم تسليم مراحل العمل الى المهندس المشرف. ولا يسمح بالانتقال من مرحلة التحضير وتأسيس الاسطح الى مرحلة الدهان الا بعد تسليم الاعمال التحضيرية للأسطح المعدنية و/أو الاسمنتية. ويتحمل المقاول مسؤولية إعادة الدهان لأي جزء من الأجزاء لم يتم تسليمها حسب المراحل المطلوبة وحسب الأصول.

❖ – يتم تسليم تنفيذ أعمال الدهان للمهندس المشرف كل وجه على حده.

❖ – لا يسمح بتخفيف الدهان الا حسب تعليمات الشركة الموردة وكما هو وارد على عبوات الدهان الموردة الى الموقع.

❖ – في حال تخفيف الدهان يتم التخفيف بإشراف وحضور الكادر المشرف.

❖ – يلتزم المقاول بتقديم ما يثبت بان تحضير الالوان تم من خلال مراكز معتمدة متخصصة بتركيب الالوان.

❖ – يجب أن تكون كافة مواد الدهان مطابقة للمواصفات القياسية الاردنية ذات العلاقة و محققة إضافة على ذلك لكافة المواصفات الواردة هنا.

- ❖ – على المقاول تقديم كتالوجات كافة المواد الداخلة في الاعمال متضمنا المواد و المواصفات و التركيب و كافة المعلومات اللازمة حسب ما تصدر عن المصنع.
- ❖ – على المقاول تقديم شهادة فحص مخبرية تؤكد مطابقة المواد المنوي استخدامها للمواصفات المذكورة.
- ❖ – التوريد و التخزين:

1- يتم توريد الدهان الى الموقع في العبوات الاصلية و تكون جديدة و غير مفتوحة و مسجل عليها شعار و اسم الشركة المنتجة و تتضمن المعلومات التالية:

1- اسم المنتج.

2- المواصفة القياسية.

3- معلومات التخزين و تاريخ الصنع و رقم الخلطة.

4- المحتوى بالحجم و الوزن.

5- تعليمات الدهان و الاستعمال.

6- اسم و رقم اللون.

2- تخزن الحاويات و العبوات في مخزن الدهان في موقع نظيف و خالي من المواد الغريبة و شروط تخزين حسب تعليمات الشركة الصانعة و يتم حماية المواد من الرطوبة و الزيوت.

- ❖ – يجب على المقاول تقديم السقالات و السلالم و العدد و الادوات الضرورية و خلاف ذلك مما يضمن انجاز الاعمال على أكمل وجه و يحافظ على سلامة العاملين و السلامة العامة.
- ❖ – تنفذ أعمال الدهان من قبل فنيين ذوي خبرة في هذا المجال، و يحق للمهندس الطلب من المقاول أن تجرى أمامه الاختبارات التى تثبت كفاءة أولئك الفنيين لتنفيذ الاعمال المطلوبة و على نفقة المقاول الخاصة.
- ❖ – يجب على المقاول المحافظة على نظافة الاعمال الاخرى نظافة تامة و يشمل ذلك الارضيات و التمديدات الكهربائية و الميكانيكية و كاميرات المراقبة و خلافها، و يتم ذلك بتغطية تلك الاعمال مقدما حسب الاصول باستعمال رقائق البولي اثيلين، و الاشرطة اللاصقة و الشوادر و الخيش و خلاف ذلك. هذا، و ان التزام المقاول بتنظيف كل الاعمال الاخرى من آثار أعمال الدهان، لا يعفيه من الالتزام بما ورد في هذا البند.
- ❖ يتحمل المتعهد كلفة اخذ الاقيسة وحساب الكميات حسب الواقع وحسب طلب المهندس المشرف والتوريد والتنفيذ حسب المواصفات و تزويد الموقع بما يلزم من عدة و مواد وحسب الاصول وحسب تعليمات المهندس المشرف .

طريقة التسليم:

- ❖ ينبغي على المتعهد أن يقوم بتسليم مراحل العمل: تجهيز الاسطح، دهان الاساس، دهان الوجه الأول والنهائي للدهان للمهندس المشرف وحسب الاولويات و أماكن العمل التى يتم الاتفاق عليها.
- ❖ يجب أن تحقق سماكة طبقات الدهان الكلية للأعمال المعدنية بالحد الأدنى سماكة 275µm
- ❖ يتحمل المتعهد كلفة ومسؤولية إصلاح أي عيوب ناتجة عن التنفيذ يطلبها جهاز الإشراف

وصف العمل المطلوب

1- فك و إزالة اللوحات الشمسية (Evacuated tube hot water solar panels) و الخطوط و المواســـير و الأجزاء الميكانيكية المتعلقة و المرتبطة بها والراكبة على قواعد الهيكل المعدني على ســـطح مبنى (C) و مبنى (B) للنظام الشـــمســـي القائم مع جميع ما يلزم من توفير فريق العمل المختص لذلك العمل و العدد و الأدوات اللازمة من روافع وونشات ووسائل نقل وحمل الى الموقع الذي تحدده الجامعة وتسليم هذه المواد الى الجامعة دون الاضرار او الكسر للوحدات الشمسية التي سيتم فكها وتنزيلها من سطح المباني و التي تحتوي على انابيب زجاجية و مجمعات مياه و مواسير و قطع ميكانيكية اثناء الفك و الازالة و النقل و التحميل و التنزيل في الموقع و تجهيزها ليقوم المقاول بعد ذلك بتحميلها و اخذها وفقا لمتطلبات الشرط رقم (2) .

2- على المناقص تقديم عرض سعر لشراء المواد المنزوعة وفقا لوصف البند رقم (1) ويتم تسعير البند بالسالب و يخصم من المجموع الكلي للعطاء وذلك ليتم استلامها من قبل المقاول و إخراجها من الموقع .

رقم العطاء:	الجامعة الألمانية الأردنية	لجنة شراء الأشغال الرئيسية
التاريخ:		أعمال إزالة النظام الشـــمســـي عن الهيكل المعدني لمبنى (C) و (B)

رقم البند	وصف البند	الوحدة	الكمية	سعر الوحدة		السعر الإجمالي	
				فلس	دينار	فلس	دينار
	ملاحظات هامة: • على المناقص زيارة الموقع ومعاينة جميع الاعمال قبل التسعير. **النظام الشمسي لمبنى (C)**						
1	**فك و إزالة اللوحات الشمسية من النوع المغلق(Evacuated pressurized type tube hot water solar panels), و بعدد تقريبي 153 لوحة شمسية مع الخطوط و المواسير و الأجزاء الميكانيكية المتعلقة و المرتبطة بها والراكبة على قواعد الهيكل المعدني على سطح مبنى (C) للنظام الشمسي القائم ,والسعر يشمل جميع ما يلزم من العمالة الماهرة المختصة لذلك العمل و العدد و الأدوات اللازمة و الروافع والونشات ووسائل النقل والحمل الى الموقع الذى تحدده الجامعة دون الاضرار او الكسر للوحدات الشمسية التي سيتم فكها و ازالتها وتنزيلها من سطح المباني و التي تحتوى على انابيب زجاجية و مجمعات مياه و مواسير و قطع ميكانيكية و محابس اثناء الفك و الازالة و النقل و التحميل و التنزيل في الموقع والسعر يشمل أيضا تجهيزها ليقوم المقاول بعد ذلك بتحميلها و اخذها وفقا لمتطلبات البند رقم (2) .**	مقطوع					
2	**تقديم عرض سعر لشراء المواد المنزوعة وفقا لوصف البند رقم 1 ويتم تسعير البند بالسالب و يخصم من المجموع الكلى للعطاء وذلك ليتم استلامها من قبل المقاول و إخراجها من الموقع .**	مقطوع					
	المجموع						

رقم العطاء:	الجامعة الألمانية الأردنية	لجنة شراء الأشغال الرئيسية
التاريخ:		أعمال إزالة النظام الشـــمســـي عن الهيكل المعدني لمبنى (C) و (B)

رقم البند	وصف البند	الوحدة	الكمية	سعر الوحدة		السعر الإجمالي	
				فلس	دينار	فلس	دينار
3	**النظام الشمسي لمبنى (B)** **فك و إزالة اللوحات الشمسية من النوع المغلق (Evacuated tube hot water solar panels Pressurized type) و بعدد تقريبي 84 لوحة شمسية مع الخطوط و المواسير و الأجزاء الميكانيكية المتعلقة و المرتبطة بها والراكبة على قواعد الهيكل المعدني على سطح مبنى (B) للنظام الشمسي القائم ,والسعر يشمل جميع ما يلزم من العمالة الماهرة المختصة لذلك العمل و العدد و الأدوات اللازمة و الروافع والونشات ووسائل النقل والحمل الى الموقع الذى تحدده الجامعة دون الاضرار او الكسر للوحدات الشمسية التي سيتم فكها و ازالتها وتنزيلها من سطح المبنى و التي تحتوى على انابيب زجاجية و مجمعات مياه و مواسير و قطع ميكانيكية و محابس اثناء الفك و الازالة و النقل و التحميل و التنزيل في الموقع والسعر يشمل أيضا تجهيزها ليقوم المقاول بعد ذلك بتحميلها و اخذها وفقا لمتطلبات البند رقم (4) .**	مقطوع					
4	**تقديم عرض سعر لشراء المواد المنزوعة وفقا لوصف البند رقم 3 ويتم تسعير البند بالسالب و يخصم من المجموع الكلي للعطاء وذلك ليتم استلامها من قبل المقاول و إخراجها من الموقع .**	مقطوع					
	المجموع						

الجامعة الالمانية الاردنية		
الاعمال المدنية		

الشروط الخاصة

1- تعتبر شروط عقد الفيديك (الكتاب الفضي) والشروط الخاصة ونظام المشتريات رقم 8 لسنة 2022 المعمول به في الجامعة جزءا لا يتجزأ من وثائق العطاء.
2- تكون مدة العطاء 180 يوما تقويميا.
3- تكون غرامة التأخير (600) دينار عن كل يوم تأخير وبسقف 15٪ من قيمة العقد.
4- على المقاول تعيين مهندس كهرباء/طاقة متجددة بخبرة لا تقل عن 10 سنوات بتفرغ كامل وسيتم حسم 1000دينار شهريا في حال عدم التعيين.
5- على المقاول تعيين مهندس مدني غير متفرغ بخبرة لا تقل عن 10 سنوات وسيتم حسم مبلغ 1000 دينار في حال عدم التعيين.
6- على الشركة أعادة الأوضاع الى ما كانت عليه
7- على المقاول الالتزام بالتنفيذ استنادا الى المواصفات الفنية المرفقة وجدول الكميات والمخططات التي يتم تزويده بها من قبل الجامعة أو من ينوب عنه.
8- على المقاول الالتزام بتأمين كافة العدد اليدوية والكهربائية والعمالة الفنية الكفؤة والمدربة، وبالعدد الذي يمكنه من تنفيذ الأعمال المطلوبة منه على أكمل وجه.
9- على المقاول المحال عليه العطاء تنظيف مواقع العمل اولا باول واخراج الانقاض الى خارج حرم الجامعة الى الاماكن المصرح بها.
10- يتحمل المقاول الذي تتم الاحالة عليه كلفة أية أضرار قد تلحق بممتلكات الجامعة المحيطة بموقع العمل وأية خدمات أخرى، ويتحمل أية كلفة تنتج عن الاضرار التي قد تحدث من قبله أثناء التنفيذ مهما بلغت.
11- على المقاول المحال عليه العطاء تقديم مخططات تنفيذية للعمل قبل المباشرة بالعمل
12- على المقاول الذي تتم عليه الاحالة توخي الحيطة والحذر ومراعاة الانتباه والسلامة العامة أثناء عملية تنفيذ الاعمال المطلوبة منه بموجب الشروط والمواصفات وجدول الكميات والمخططات ويتحمل المقاول تبعات أية أضرار قد تحدث نتيجة عدم التزامه بهذه المتطلبات.
13- يلتزم كادر المقاول بالمحافظة على النظام العام والأخلاق العامة ومراعاة القوانين والأنظمة السائدة في الجامعة.
14- على المناقص زيارة موقع العمل دون أن يتحمل صاحب العمل أية مسؤولية ناتجة عن عدم قيام المناقص بهذه الزيارة فيما يتعلق بالأعمال المنوطة بالعطاء أعلاه.
15- طريقة الدفع: تقوم الجامعة بدفع مستحقات المقاول المالية عن الاعمال المنجزة كيلا هندسيا استنادا الى ما يتم تنفيذه من قبل المقاول على الواقع وبعد اعتماد الجهة المشرفة للعمل/ الاعمال المنفذة وذلك بموجب مطالبة مالية يقدمها المقاول يتم اعتماد النموذج الخاص بها من قبل المهندس.ويكون الحد الأدنى للدفعة المرحلية 50,000.00 دينار
16- على المقاول المحافظة على عزل السطح القائم اثناء التنفيذ ويتحمل كافة المسؤولية التي تنتج عن أي اضرار قد تحدث به اثناء التنفيذ، علما بانه لا توجد أي مشكل تسرب مياه من خلاله في الوضع الحالي.