



1. REQUIREMENTS

The Jordan River Foundation (JRF) is seeking quotations from specialized vendors to supply and install a photovoltaic system (solar system) for one of its Centers (QR FCC) located in Amman and as per the below details and specifications.

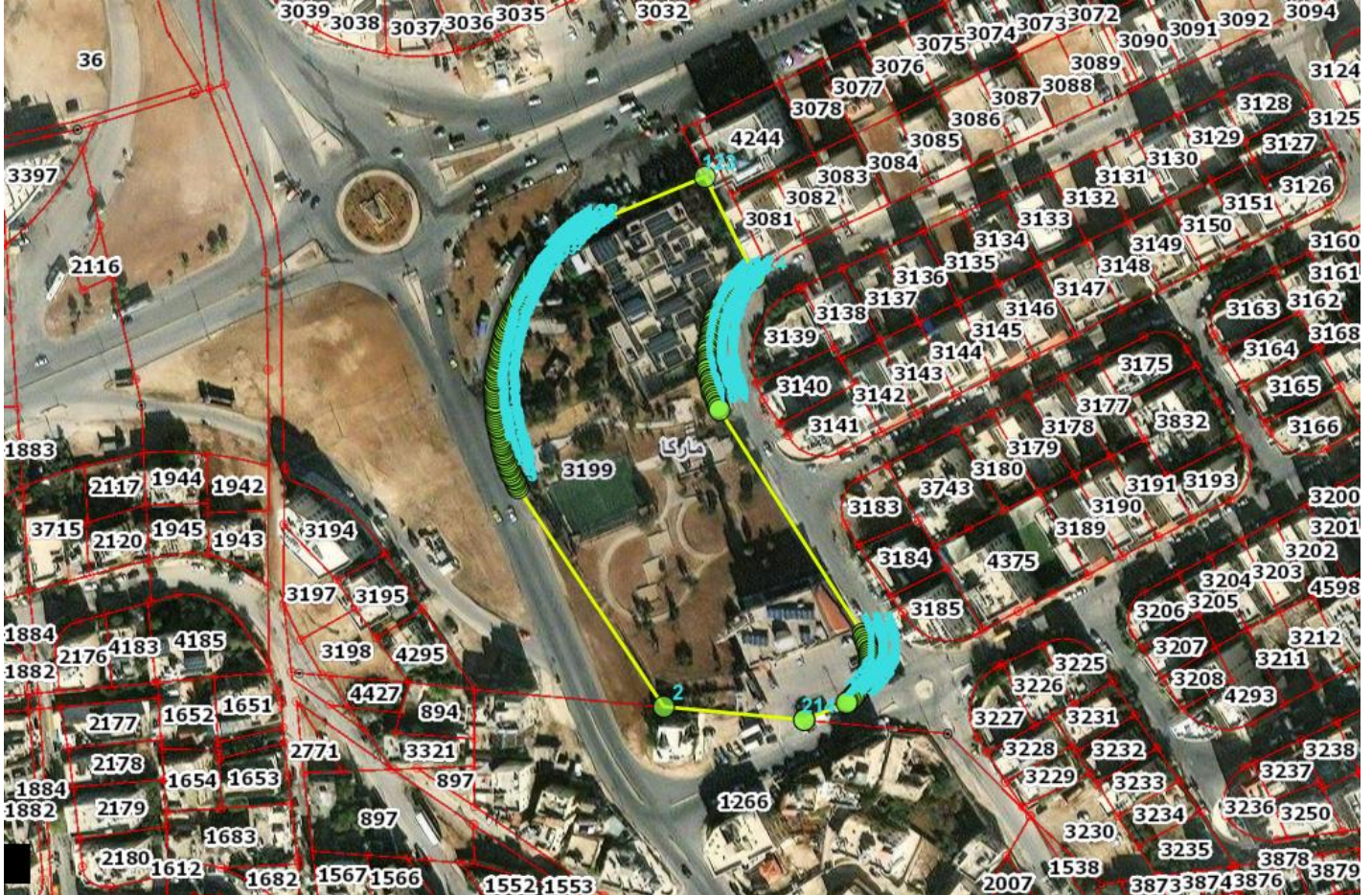
تسعى مؤسسة نهر الاردن لاستدراج عروض اسعار لتوريد انظمة طاقة شمسية لمركز الملكة رانيا للأسرة والطفل – جبل النصر و حسب المواصفات ادناه:

- 1- ألا تقل قدرة النظام عن 30 KWAC ذروة.
- 2- قدرة النظام 33 KWP.
- 3- يجب على المتقدمين للعطاء إحضار كفالة دخول عطاء بقيمة 5% من السعر المقدم.
- 4- يجب على من يرسو عليه العطاء احضار كفالة حسن تنفيذ بقيمة 10% من قيمة الإحالة.
- 5- يجب على من يرسو عليه العطاء احضار كفالة صيانة بقيمة 5% من قيمة الأعمال المنجزه لمدة عامين.
- 6- مدة التنفيذ 30 يوم تقويمي بعد أخذ موافقة شركة الكهرباء.
- 7- يجب على المتقدمين احضار كشف يبين المشاريع المنفذه من قبلهم.
- 8- يجب على المتقدمين احضار السيرة الذاتية لكادر العمل الموجود لديهم.
- 9- يجب على المتقدمين احضار سجل تجاري حديث للشركة و رخصة مهن سارية المفعول.
- 10- يجب أن يكون المتقدم مصنف لدى هيئة تنظيم قطاع الطاقة.

11- يجب تعبأة الملاحق ادناه.

<https://maps.app.goo.gl/QhPfNy4RFFujJxT86> The site location is:

عطاء زيادة قدرة نظام الطاقة الشمسية في مركز الملكة رانيا للأسرة و الطفل في جبل النصر- JRF-P-2024-031



2. General Terms:

- The contractor is responsible for all fees required for obtaining all approvals and permits required for the project including the GIS fees.
- The contractor is responsible to install a PV System based on 2018, and 2019 Energy Consumption of the facility.
- It is the responsibility of the Contractor to submit all the data required from and for the DISCOs and other related parties.

3. System Components Specifications

PV Modules

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The photovoltaic modules have to fulfil the following technical specifications and standards, which have to be certified by an official institute if applicable:

- The photovoltaic modules shall be **monocrystalline** PV technology, **thin-film and polycrystalline modules are excluded**.
 - Only one supplier and one module type (one power class) are acceptable.
 - The output power of the crystalline module should not be less than **530 Wp** at standard test condition (STC).
 - PV manufacturer must be from Tier 1 Solar Panels producers or Jordanian factory with production capacity more than 100 MW/year.
 - Operating PV temperature ranges between $-40\text{ }^{\circ}\text{C}$ & $+85\text{ }^{\circ}\text{C}$.
 - Modules temperature sensitivity at peak power should not exceed $-0.34\%/^{\circ}\text{C}$.
 - The PV modules frame should be made from Anodized Aluminium.
 - The PV modules maximum system voltage should not be less than 1,000 V.
 - The PV module string connectors shall be same manufacturer as used by the module manufacturer.
 - The PV modules should be PID resistant.
 - The PV modules should have a positive power tolerance and measurement uncertainty of $+5\%$ (manufacturer flasher class AAA according to IEC 60904-9).
 - The PV modules shall have individual serial numbers behind each front glass and on the back side of the module.
 - The PV modules' aluminium frame must not directly contact any dissimilar metal.
 - 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 12 years.
- The awarded bidder shall provide a manufacture power guarantee for all PV modules that will be installed with their serial numbers that guarantees that the loss of the output is not more than 10% during the first 12 years and up to 20% in total after 25 years.
- Mechanical stability – IEC 61215: Design qualification and type approval for crystalline silicon terrestrial photovoltaic (PV) modules.
 - PV module safety qualification standard: IEC/EN 61730 for safety class II test.
 - PV module shall be approved according to IEC 60068-2-68 (Blowing Sand Test) latest edition.
 - Along with TUV, CE compliant and UL certification, salt mist/ammonia resistance should be provided.
 - Mechanical load tests up to 5400 Pa, Damp Heat, Thermo Cycle and Humidity and Freeze tests.
 - Flash reports of PV modules (SN, V_{oc} , I_{pmax} ,...) shall be provided.
 - With the PV plant in operation and in the absence of shades, the PV modules must not exhibit hot spots or hot cells.

4. PV Mounting Structures

The modules have to be mounted on metallic sub constructions of suitable height from the ground and with the necessary declination in relation to the horizontal plane, so as to gain the maximum of solar radiation and energy production.



- The mounting structure shall be anti-corrosion, anti-rust and can withstand high humidity, temperature and all special conditions related to the site location.
- All bolts, nuts, and washers for the PV modules' mounting structure must be made of stainless steel.
- The mounting structure shall be anti-corrosion, anti-rust and can withstand high humidity. The Steel shall be hot-dip galvanized according to ASTM A-123 with a galvanization.

5. On- Grid Inverters

The on-grid inverters should meet the following specifications:

- 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 and the EDCOs 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 be provided with integrated DC switch.
- The Inverter shall have the following protections: reverse current, input over voltage & over current via fuses.
- Temperature operating range: -20 °C to 60 °C
- Harmonic distortion is less than 3%.
- Protection degree is IP65 or higher (outdoor).
- TUV and CE compliant.
- Warranty after installation should be for 5 years at least for the inverters
- The inverter must be cooled using natural ventilation if installed outdoors.

6. DC Cables, Connectors and Accessories

The DC cables (main and string) shall be selected and mounted in a way to withstand the external influences on site, such as temperature, UV irradiation, wind, sand and mechanical loads.

The minimum specifications are:

- DC cables shall comply with TUV standards.
- Operation temperature for DC cables should be up to +90 °C.
- All DC cables shall be **copper**, single-core cables and double insulated, **Aluminium conductor is not allowed**.
- DC cables shall be UV resistant, flame retardant, and with low smoke characteristics.



- DC cables shall comply with local and international standards and EDCO's requirement.
- The cables shall not be installed in direct sunlight. Between individual mounting structures, for example, a tube shall be used for protection.
- The cable ties shall be UV resistance.
- All cables shall be marked properly by means of permanently labels at the both ends so that cable can be easily identified.
- The contractor shall use **red DC** cable for positive side and **black cable** for the negative side.
- The label shall provide information about the corresponding inverter, combiner box and string number.
- All cables shall be marked in compliance with IEC 60446-3 category C Basic and safety principles for man-machine interface, marking and identification.
- PV DC connectors for string interconnection shall be of the same brand and type as used by the PV module manufacturer. Connectors of different brands must never be used in the same connection (male-female). It is not allowed to cut the original connectors of the PV module.

7. AC and Control Cables

- AC cables and control cables shall be Copper, XLPE insulated with rated voltage of 0.6/1kV. These cables shall be UV resistant and flame retardant.
- All cables shall be marked in compliance with IEC 60446-3 category C Basic and safety principles for man-machine interface, marking and identification.
- AC cables shall comply with local and international standards and EDCO's requirements.
- All external cables must be installed inside an external use or hot dipped galvanized cable tray with minimum thickness of 1.5 mm.
- Reference codes and standards for All cables:
- IEC 60189-2 Low-frequency cables and wires with PVC insulation and PVC sheath – Part
- 2: Cables in pairs, triples, quads and quintuples for inside installations.
- IEC 60228 Conductors of insulated cables.
- IEC 60502-1 Power cables with extruded insulation and their accessories – Part 1: Cables for rated voltages of 1 kV ($U_m = 1, 2 \text{ kV}$) and 3 kV ($U_m = 3, 6 \text{ kV}$).
- IEC 60502-2 specifies the construction, dimensions and test requirements of power cables with extruded solid insulation from 6 kV ($U_m=7.2\text{kV}$) up to 30 kV ($U_m=36\text{kV}$) for fixed installations such as distribution networks
- Reference codes and standards for cable testing:
- IEC 60885 Electrical test methods for electric cables
- IEC 60332 Tests on electric and optical fiber cables under fire conditions

8. AC Distribution Boards

- The Distribution Boxes shall be made of hot coated or galvanized steel; dust and vermin proof with a protection degree IP65 at least.
- The terminals and bus bars shall be made of tin coated copper and appropriately sized; the boxes shall have suitable cable entry with suitable glands arrangement for both input and output cables.



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- 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 boards shall be designed to meet the requirements of applicable parts of the following Standard's last edition:
- IEC 60038 IEC Standard Voltages
- IEC 60044-1 Instrument Transformers - Part 1: Current Transformers
- IEC 60044-2 Instrument Transformers - Part 2: Inductive Voltage Transformers
- IEC 60051 Direct acting indicating analogue electrical measuring instruments and their accessories
- IEC 60068 Environmental testing
- IEC 60071 Insulation Coordination
- IEC 60085 Electrical Insulation - Thermal Evaluation and Designation
- IEC 60255 Electrical Relays
- IEC 60269 Low Voltage Fuses
- IEC 60445 Basic and safety principles for man-machine interface, marking and identification - Identification of equipment terminals, conductor terminations and conductors
- IEC 60529 Degrees of protection provided by enclosures (IP Code)
- IEC 60865 Short-circuit currents - Calculation of effects
- IEC 60934 Circuit-breakers for equipment
- IEC 61000 Electromagnetic compatibility (EMC)
- IEC 61140 Protection against electric shock - Common aspects for installation and equipment.
- IEC 60664 Insulation Coordination with Low-voltage Systems including clearances and Creepage Distances for Equipment.
- IEC 61008-1 Residual Current operated circuit Breakers without integral overcurrent protection.

9. SUBMISSION REQUIREMENTS:

Vendors must include the following in their quotations:

- A copy of their legal registration.
- **Prices excluding sales tax.**
- Company profile and list of references.
- **Bidders must provide a bid bond with 5% of the total bid value.**

على الموردين المختصين و المهتمين تقديم الوثائق التالية بالاضافة الى عروض الاسعار:

• نسخة عن سجل تجاري + رخصة مهنة سارية المفعول

• الاسعار ان تكون غير شاملة للضريبة العامة على المبيعات



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- على المتقدمين تقديم كفالة دخول عطاء بقيمة 5% من القيمة الاجمالية للعرض المقدم لصالح مؤسسة نهر الاردن.
- نبذة عن الشركة المتقدمة بالاضافة الى اسماء عملاء الشركة التي يتم التعامل معهم في تقديم نفس الخدمات المطلوبة

10. BACKGROUND

The Jordan River Foundation (JRF) is a Jordanian non-profit, non-governmental organization established in 1995 and Chaired by Her Majesty Queen Rania Al Abdullah. JRF works in communities adopting a multi-stakeholder approach that encourages community ownership and proactive involvement of all stakeholders; be it community members, Community Based Organizations (CBOs), local government, youth and women, striving to explore solutions to create sustainable and resilient communities.

JRF celebrates its 25th anniversary this year, marking over two decades of social, economic and cultural interventions that have enhanced the lives of hundreds of thousands throughout the Kingdom. JRF has two main programs - Community Empowerment (CEP) and Child Safety (CSP) programs; in addition to an established Training & Consultancy Division that transfers all the tested models and best practices from both programs and the Handicrafts Design Project, JRF's leading women empowerment project. JRF operates across Jordan (North, Middle, and South), through 8 JRF centers, offices, and showrooms. JRF employs 309 qualified staff with the expertise to successfully manage its operations. JRF is governed by a Board of Trustees that is chaired by Her Majesty Queen Rania Al Abdullah.

Our Vision

A Jordan where solutions are home-grown, where the opportunity to prosper is for all, and where the well-being of our children shapes our future.

Our Mission

To engage Jordanians to realize their full economic potential and overcome social challenges especially child abuse.

Our Approach

Since inception, the Foundation has initiated numerous socio-economic projects for women, children and people who are in need of help which aim to provide employment opportunities that in turn enhance their livelihoods. In tandem, these projects also work towards to enhancing the targeted population knowledge and skills in the production of traditional handicrafts, and in entrepreneurial skills. By integrating and serving community development needs, the Foundation is now recognized nationally, regionally and internationally as an agent for positive change.

11. RESPONSES

- The deadline for receiving questions is **Wednesday 31/07/2024 @ 12pm**
- **Questions to be sent to** procurement@jrf.org.jo.
- **Deadline for receiving quotes in a SEALED ENVELOPE is on 08/08/2024 @ 12pm** to The Foundation's Main Office, 7th Circle, Masoud Bin Saad St.



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- Quotations received after the deadline may be discarded.
- Quotations shall be signed and stamped **and includes a soft copy of the pricing list on a CD or flash drive.**
- Offeror full address shall be provided.
- JRF has the right to cancel, amend or to issue multiple awards for its best interest without prior notice and without any liability.
- Jordan River Foundation accepts no liability to pay for any proposal or other preparatory work undertaken in connection with this RFP.
- Evaluation will be based on lowest price technically acceptable criteria.

يجب ارسال اي اسئلة او استفسارات تتعلق بالعبء في موعد اقصاه يوم **الاربعاء الموافق 2024/07/31** قبل الساعة 12 ظهرا.

- يجب ارسال الاسئلة عبر الايميل الى procurement@jrf.org.jo.
- اخر يوم استلام العروض في الظرف المختوم هو يوم **الخميس الموافق 2024/08/08** قبل الساعة 12 ظهرا و ذلك في مبنى المؤسسة الرئيسي – الدوار السابع، خلف كوزمو، شارع مسعود بن سعد.
- على العروض ان تكون مختومة و تحتوي على كافة معلومات المتقدم **بالاضافة الى نسخة الكترونية عن الاسعار المقدمة (CD أو Flash Memory)**
- يلتزم المتقدم بتزويد المواد بنفس الجودة على كامل مدة التعاقد
- يحق لمؤسسة نهر الاردن الغاء او تجزئة او تعديل العبء حسب ما تراه مناسب و دون سابق انذار
- لا تتحمل مؤسسة نهر الأردن أي التزام بالدفع مقابل أي عرض سعر أو أي أعمال تحضيرية أخرى يتم إجراؤها فيما يتعلق بطلب تقديم العروض.
- يتحمل المورد الخسائر والتكاليف الناجمة عن الاخلال بالموصفات المذكوره في العقد حال توقيعه

تسليم العروض يتم عن طريق الظرف المختوم في مبنى المؤسسة الرئيسي الذي يقع في الدوار السابع خلف كوزمو شارع مسعود بن سعد بجانب المعهد القضائي.

12. Evaluation Criteria

- Evaluation will be based on the lowest-price technically acceptable criteria, yet JRF is not compelled to award the lowest price bidder as quality is important based on the specifications mentioned above.
- التقييم سوف يكون بناء على اقل سعر مطابق للمعايير المطلوبة و لكن المؤسسة غير مجبرة بالاحالة على اقل سعر مقدم حيث ان الجودة مهمة حسب المعطيات المذكورة اعلاه.



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Attachment (1)

ملحق رقم (1)

Bid Cover Page

(MUST BE COMPLETED AND INCLUDED WITH THE OFFER)

صفحة معلومات العطاء / المتقدم (يجب التعبئة و الختم و التسليم مع العرض)

	Offeror's Name / اسم المتقدم
	Offeror's Address/ عنوان المتقدم
	Business Registration Number / رقم السجل التجاري
	Phone Number / رقم الهاتف
	Authorized Representative / اسم الممثل المفوض عن الشركة
	Email Address / البريد الالكتروني
	Offeror's Seal / ختم الشركة



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Checklist of Documentation Being Submitted:

- Bid Cover Page (Attachment 1); filled, signed, and stamped.
- Official Company Documents.
- Specification Sheet and Quotation Form (Attachment 2); filled, signed, and stamped.

قائمة التحقق من الوثائق المقدمة:

- صفحة غلاف العطاء (المرفق 1) ؛ مملوءة وموقعة ومختومة.
- وثائق الشركة الرسمية.
- نموذج المواصفات ونموذج عرض الأسعار (المرفق 2) ؛ مملوء وموقع ومختوم

1. The offeror agrees to provide the item(s) identified in the specifications sheet at the prices therein offered and summarized in Attachment 2 in accordance with the conditions of this solicitation document.
2. This quotation is valid for a period of Ninety (90) calendar days from the proposal closing date established in this RFQ and no variation in price during that period will be allowed.
3. Signature of person authorized to sign the proposal:

1. يوافق مقدم العرض على تقديم العنصر (العناصر) المحددة في ورقة المواصفات بالأسعار المعروضة والملخصة في المرفق (2) وفقاً للشروط وثيقة العطاء.
2. يكون عرض الأسعار هذا صالحاً لمدة تسعين (90) يوماً تقويمياً من تاريخ إغلاق العطاء المحدد في طلب عرض الأسعار هذا ولن يُسمح بأي تغيير في السعر خلال تلك الفترة.
3. توقيع الشخص المفوض:

By virtue of my signature, I hereby acknowledge and certify the accuracy and completeness of the attached quotation.

Name (print): _____

Signature: _____



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**Attachment 2 - Specifications Sheet and Quotation Form - RFQ no. JRF-P-2024-031- عطاء زيادة قدرة نظام الطاقة الشمسية -
في مركز الملكة رانيا للأسرة و الطفل في جبل النصر**

الملحق (2) - نموذج المواصفات ونموذج عرض الأسعار

<u>السعر د.أ</u>	<u>البند</u>
	<u>PV System 30 KWAC</u>



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Attachment 3 - Past Performance and Reference information template – RFQ no. JRF-P-2024-031 - عطاء زيادة قدرة - نظام الطاقة الشمسية في مركز الملكة رانيا للاسرة و الطفل في جبل النصر

الملحق (3) - نموذج المعلومات المرجعية والأداء السابق - رقم طلب عرض الأسعار-031. JRF-P-2024

مدة التعاقد Start/End Dates	قيمة التعاقد مع الشركة Cost of contract (JOD)	معلومات التواصل مع الشركة (هاتف، بريد إلكتروني،...) Client contact information (Name, Email, Phone)	وصف الخدمات المقدمة Description of delivered Service	اسم الشركة Company Name	#
					<u>1</u>
					<u>2</u>
					<u>3</u>

END OF DOCUMENT