UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

TERMS OF REFERENCE

For the provision of services related to design, supply, delivery, commissioning of a Solar Greenhouse in Saveh refugee settlement in the Islamic Republic of Iran

1. GENERAL BACKGROUND INFORMATION

The United Nations Industrial Development Organization (UNIDO) is the specialized agency of the United Nations that promotes industrial development for poverty reduction, inclusive globalization, and environmental sustainability. The mandate of UNIDO is to promote and accelerate inclusive and sustainable industrial development (ISID) in developing countries and economies in transition.

UNIDO has a country office in Tehran, which is responsible for representing the organization in the host country and promoting UNIDO as an effective partner for development. It is responsible for supporting, inter alia, formulation, and monitoring technical cooperation projects and programs, in collaboration with UNIDO relevant technical departments and other appropriate organizational units.

UNIDO is implementing a three-year project entitled ‘Developing sustainable settlements for Afghan refugees in the Islamic Republic of Iran’ aimed at developing sustainable settlements for 18,000 of the most vulnerable Afghan refugees living in five of the most populated settlements in Iran. The project is funded by the Republic of Korea. The project has selected the five most populated Afghan refugee settlements in Markazi, Yazd, Semnan, Kerman, and Khorasan as pilot project intervention sites.

One of the objectives of the project is to implement sustainable infrastructure technologies to improve refugees’ livelihood through low-carbon energy, waste, and water infrastructure. The key target group of the project will be the refugees residing in the settlements (with special attention to youth and women), to strengthen their capacities and access to job opportunities through vocational training and appropriate action plans.

The project document can be found at this link.
2. **AIM OF THE PROJECT**

The project aims to erect a greenhouse in Saveh settlement to improve agricultural infrastructure in refugee settlement and as well as the livelihoods of refugees by providing them with a source of income. Currently, there is no greenhouse in this settlement.

The greenhouse will not only produce local food but also create job and income opportunities primarily for women and other unemployed individuals of the settlement by selling the final products.

The project is implemented in close collaboration with **BAFIA** (Bureau for Aliens and Foreign Immigrants Affairs) is the governmental agency under the Ministry of Interior of Iran that is in charge of the management of all the refugee settlements in Iran. BAFIA is one of the main project stakeholders of the project. In addition, each settlement has a Refugee Settlement Authority responsible for day-to-day administration.

3. **THE SCOPE OF THE PROPOSED CONTRACTED SERVICES**

The scope of the services include the technical design, supply and carrying out works on turn-key basis of a 500m² solar greenhouse in Saveh refugee settlement.

Proposed contracted services will include:

1. **Technical design of turn-key Solar Greenhouse**: Detail technical design and blueprint of the layout of 500 m² the year-round solar greenhouse including the specifications on required insulation including underground insulation, irrigation, passive solar heating system maximizing the use of solar energy, for both light and heat. Sketches showing design elements such as connection to electricity and water system, orientation towards the south, aspect ratio and the most suitable latitude and shape to collect sunlight as well as local climate conditions. The contractor shall also provide all safety requirements in line with standards in the industry.

2. **Supply, transportation and installation of a Solar Greenhouse**: see below the table

<table>
<thead>
<tr>
<th>No</th>
<th>Item</th>
<th>Technical Specification</th>
<th>Quantity/ Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ground preparation</td>
<td>Ground leveling and other required work to prepare the ground for greenhouse (please find attached BoQ for details on the required ground preparation activities)</td>
<td>500 m²</td>
</tr>
<tr>
<td>2</td>
<td>Structure of greenhouse made of polycarbonate or equivalent material</td>
<td>Including preparation, production, assembly, and installation of the structure. <strong>The glass is not acceptable considering the shattering risk.</strong> The structure of the greenhouse should be durable against the local climate conditions (winds, hail etc.).</td>
<td>500 m²</td>
</tr>
<tr>
<td>3</td>
<td>Irrigation system</td>
<td>Irrigation system should cover all the greenhouse and should be adjustable</td>
<td>Covering 500 m²</td>
</tr>
<tr>
<td></td>
<td>Item</td>
<td></td>
<td></td>
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<td>---</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Cooling feature (designed for the local climate)</td>
<td>Greenhouse should have a cooling feature through roll-up sidewalls or open roof ventilation</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Passive Solar Heating system (designed for the local climate)</td>
<td>As required for the greenhouse</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Ambient and pen thermometer</td>
<td>Water-resistant, pen style, stainless steel sensing tips, direct measuring, portable</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Humidity meter</td>
<td>The three-in-one soil tester</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Adjustable ventilation system with low and high vents</td>
<td>As required to keep the plants healthy, should be design not to under or over ventilate</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Sprayer</td>
<td>As required for the greenhouse</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Health and safety equipment incl. electricity safety of the greenhouse</td>
<td>Including designing, supply and implementation of health and safety equipment</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Transportation and freight INCOTERMS (2010)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Provide on-site instructions on the operation of the greenhouse</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Installation and commissioning (including electricity work)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Insurance at 110% of the total cost of the equipment</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The contractor should provide on-site instructions on the operation of the system, maintenance and control, and workplace safety.

There is electricity network in the settlement that can be connected to the greenhouse to supply the electricity need, e.g., for ventilators and irrigation system. There is a water pipe connection as well that can be connected to the irrigation system.

Bidders are invited to visit Saveh refugee settlement during the bidding stage to assess the required site work in order to help with preparing their proposals. Visiting refugee settlement requires entry permission from BAFIA. UNIDO experts will support bidders with obtaining visit permissions and accompany them during their visit. Please mind that obtaining the visit permission would take 7 to 10 days. Should a bidder be interested to visit the settlement, please submit a written request to the contact points indicated in the instructions to bidder’s document. Visits will not be possible with less than 1 week to the submission deadline.

**Delivery Terms [INCOTERMS 2020]:** Transportation of all listed items is to be DPU (Delivered at Place Unloaded).

**Language of the technical documents:** All technical documentation, including catalogues, instructions and operating manuals, shall be in Farsi.

**Taxes:** Bids must be exclusive of VAT and other applicable indirect taxes.

**Warranty Requirements:** Bidder shall provide standard manufacturers’ warranties for all listed items.
4. GENERAL TIME SCHEDULE AND DELIVERABLES

The Contractor will report to the UNIDO HQ in Vienna and UNIDO Tehran Office. All draft and final deliverables are subject to the approval by UNIDO.

The main deliverables will be:

1. Inception Report and technical design:
2. Commissioning Report and photos verifying the activation and the completed installation of greenhouse in the settlement;
3. Final Report including instructions and guidelines on how to operate the greenhouse.

<table>
<thead>
<tr>
<th>Reports</th>
<th>Tentative Time Schedule*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inception Report and technical design</td>
<td>2 weeks after signing the contract</td>
</tr>
<tr>
<td>Commissioning Report</td>
<td>6 weeks after signing the contract</td>
</tr>
<tr>
<td>Final Report</td>
<td>7 weeks after signing the contract</td>
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</tbody>
</table>

*Bidders can propose an alternative time plan.

All documents should be provided to UNIDO in one electronic copy, consisting of the following electronic files:

- PDF file;
- Original work files (WORD, POWERPOINT, EXCEL, etc.);
- High-quality photographs from the settlement.

The electronic copy should be provided via e-mail. All deliverables and related documents should be provided in English.

5. QUALIFICATION REQUIREMENTS AND EVALUATION CRITERIA

The bidders should confirm that they are able to have representatives in Iran and able to visit the site to perform on-the-ground survey and delivery of the turn-key greenhouse system. In case of limitations due to the pandemic, the modality of survey and implementation shall be discussed in a joint meeting with the counterpart.

Qualification Requirements:

- Certificate of incorporation and license to provide the services/works under the Terms of Reference, including legal authorization to perform construction works in Iran, including valid construction license;
- At least 5 years in business, including years of experience in providing services, supply of equipment and installation of turn-key greenhouses.
- Confirmation of no conflict of interest (e.g. none of the bidder’s key personnel is associated - financial, family, employment wise - with concerned UNIDO officials, UNIDO experts/consultants recruited under the relevant project or with UNIDO’s Counterpart);
- Confirmation that no fees, gratuities, rebates, gifts, commissions or other payments, other than those shown in the offer, have been given, received, or promised in connection with the selection process or in contract execution;
• Confirmation of satisfactory past performance and that the bidder is not debarred from business with the United Nations and other organizations;

• Confirmation that the bidder did not participate in the preparation of the concerned procurement process or the bidding documents, including, but not limited to, the technical specifications, terms of reference, and the scope of works, being subsequently used by UNIDO;

• Confirmation of no conflict of interest between or among bidders. A bidder may be considered to have a conflict of interest, if the bidder:
  - directly or indirectly controls, is controlled by or is under common control with another bidder;
  - receives or has received any direct or indirect subsidy from another bidder;
  - has the same legal representative as another bidder;
  - has a relationship with another bidder, directly or through common third parties, that puts it in a position to influence the bid of another bidder, or influence the decisions of UNIDO regarding the bidding process;
  - submits more than one bid in the bidding process, for example, on its own and separately as a joint venture partner with another bidder. A bidder’s submission of more than one bid will result in the disqualification of all bids in which such bidder is involved; or

• Any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the works that are the subject of the bid.

**Evaluation Criteria:**

• Compliance with the technical requirements and delivery terms as specified in Annex 1.

*The bidders shall confirm that they are aware of the political implications when working in Iran, in particular concerning sanctions, money transfer in USD currency to bank accounts, visa issuance as well as logistical arrangements. The bidders shall also confirm that they are familiar with the political situation in Iran and the region, including applicable national and international laws. In addition, the bidders shall confirm that USD payments are accepted and shall provide a duly completed and signed Bank Information Form along with the proposal. Regardless of the information provided, transactions to the bank account of the bidder may be subject to additional checks and verifications.*

### 6. GENERAL CONTRACTOR REQUIREMENTS

Specifications are provided to establish minimum design and construction standards.

The design and selection of materials for the greenhouse shall be appropriate for the environmental conditions of 40+ degrees centigrade ambient temperature, strong winds, high solar exposure, and all the weather conditions including snow, heavy rain and hail.

All materials should be the best quality available within the local market. Materials that are manufactured should have a recognized international certification for manufacturing such as CE markings.

All procured equipment must be installed and commissioned in accordance with all manufacturers: (i) conditions of use, (ii) installation and operational guidelines, and (iii) all applicable safety codes.
During and at completion of ground preparation work, debris shall not be allowed to spread unnecessarily into adjacent areas or to accumulate in the work area itself. All such debris, excess and discarded construction materials shall be cleaned up and removed at the completion of the job and/or at the end of each workday. Final payment will be dependent on the removal of all construction debris, demolition debris and rubbish with proper disposal off-site.

UNIDO and project counterpart officials may inspect the site at various points in the construction process to ensure that work is being conducted in accordance with the drawings.

The Contractor is required to provide a supervisor to supervise all construction works. This supervisor is required to be present, on site, during all working hours and will also be responsible for compiling daily construction reports (with photos).

UNIDO may, AT ANY TIME, suspend work on the project, if necessary. A Suspension of Work Notice may be issued for, but not limited to, non-compliance with any of the above specified requirements or procedures. Contractor consideration for any suspension or stoppage of work shall be evaluated based on the appropriate contract clause.

All work shall meet the standards specified herein and shall conform to approved and accepted standards for the industry, environmental and work safety regulations for construction works and comply with all applicable building codes in the Islamic Republic of Iran.

7. PROJECT MOBILIZATION

The Contractor shall start work at the site no later than one (1) week after signing the contract and permission is granted by BAFIA and Saveh refugee settlement administration.

Prior to commencement of the work, the Contractor and any subcontractors, whose presence is necessary or requested, shall conduct virtual or in-person meeting UNIDO project coordinator to discuss and develop a mutual understanding relative to the details of the execution of this contract. This will include but not limited to the following:

- Updated project schedule to reflect the start date;
- List of project supervisors and foremen with full contact details;
- Establish daily progress reporting system;
- Site safety requirements and other risks;
- Other aspects of this project that warrant clarification and understanding.

Safety & Security:

UNIDO places a very high priority on the safety and security of workers at project-linked work site(s). One area that UNIDO will monitor closely is the efforts made by the Contractor to ensure the safety of workers at the work site covered by this contract. The Contractor shall be solely responsible for risk assessments and managing health and safety issues associated with this project. Based on these risk assessments, Contractors shall provide to each employee Personal Protective Equipment (PPE) that will protect the employee from work related hazards. At a minimum PPE shall consist of eye protection, hard hats, and closed toe shoes. Other PPE such as gloves and dust masks are also recommended. These items must be provided at the Contractor’s expense.
Quality Control:

The Contractor is responsible for quality control and shall establish and maintain an effective quality control plan. The quality control system shall consist of plans, procedures, and organization necessary to produce a product, which complies with the contract requirements. The Contractor’s site supervisor will be held responsible for the quality of work on the job. The site supervisor is the individual with the responsibility for the overall management of the project on behalf of the Contractor.

Workmanship Guarantees and Warranty Coverage:

The Contractor shall guarantee the quality and completeness of all his work, supplies and services specified in this ToR.

Mechanical, electrical, performance and safety guarantees for the equipment supplied, and processes/technologies transferred should be provided for six (6) months after obtaining the acceptance certificate for installed and commissioned equipment.

The Contractor is responsible for the correction of Defective Materials and Workmanship for twelve (12) months after the date of the Certificate of Acceptance of the Work and receipt of the signed project completion letter. Any Work found to be defective or non-conforming to the Contractor shall correct it as soon as possible after receipt of written notice from UNIDO to do so.

8. PROJECT COMPLETION, ACCEPTANCE & SITE RECEIVING/HANDBOVER

A Letter of Project Completion, signed by the UNIDO Project Coordinator, will be issued to the Contractor after the following tasks have been completed:

- Final inspection of project by the UNIDO Project Coordinator, UNIDO technical expert, BAFIA expert and settlement authority;
- Resolution and completion of final list of any open items and tasks; and
- Final report.

Responsibility of Contractor:

- The contractor will ensure monitoring of its activities through its technicians and accept UNIDO staffs to participate in any part of the surveying field visits or meeting without obstruction.
- The contractor shall submit UNIDO the inception, commissioning and final reports
- The Contractor must have liability insurance for the works and its workers. The contractor must be insured against damage and loss of property during construction due to various factors such as natural disaster and civil unrest. All workers at the site should also be insured against injury and loss of life.
- The Contractor will be responsible for all activities related to the provision of the services and the acts or omissions of all employees, agents or other representatives, and authorized subcontractors providing the services on its behalf.
- UNIDO will not be held responsible for any accident, illness, loss or damage which may occur during the provision of the services or any claims, demands, suits, judgments, arising there from, including for any injury to the Contractor’s employees, or to third parties, or
any loss of, damage to, or destruction of property of third parties, arising out of or connected to the Contractor’s work or performance under the Contract.

- The Contractor shall make and thereafter maintain, in compliance with national legislation, provision for adequate insurance to cover such risks as damage to property and injuries to persons, as well as third party liability claims.

- The personnel assigned by the contractor to provide the services will not be considered in any respect as being employees or agents of UNIDO. Nothing in the Contract or in any document or arrangement relating thereto shall be construed as conferring any privileges or immunities of UNIDO on the contractor, its personnel or any other persons providing the services on its behalf.

- Nothing in the contract or in any document relating thereto, shall be construed as constituting a waiver of privileges or immunities of UNIDO, or as its acceptance of the jurisdiction of the courts of any country over disputes arising out of the Contract.

- In providing the services, the contractor shall conform to all national laws applicable to its activities and its relations to third parties, including employees. The Contractor shall promptly correct any violations thereof and shall keep UNIDO informed of any conflict or problem arising in relation to national authorities.

- The Contractor shall take all reasonable precautions to avoid any conflict of interest in the implementation of the services and shall inform UNIDO without delay of any situation constituting or likely to entail a conflict of interest including any UNIDO personnel having an interest of any kind in the Contractor’s activities.

- Unless authorized in writing by UNIDO, the Contractor shall not advertise or otherwise make public that it has a contractual relationship with UNIDO, nor shall the Contractor, in any manner whatsoever use the name or emblem of UNIDO, or any abbreviation of the name of UNIDO.

- To comply with disclosure requirements and enhance transparency, UNIDO may release and/or publish the following information about this Contract: (i) the name and nationality of the Contractor; (ii) a brief description and location of the Services provided; and (ii) the total value of the Contract. The Contractor specifically consents to the release and/or publication of such information. UNIDO will not release or publish information that could reasonably be considered confidential or proprietary.

- This Contract is not subject to payment by UNIDO of any levies, taxes, registration duties or any other duties or charges whatsoever. The Contractor shall duly pay taxes, duties and other charges in accordance with prevailing laws and regulations applicable to the Contractor.

- The Contractor will undertake all reasonable efforts to ensure that none of the funds received from UNIDO under this Contract are used to provide support to individuals or entities associated with terrorism.

UNIDO may suspend or cancel all or part of the Contract, obtain the Services elsewhere and make corresponding adjustments to any payments that may be due to the Contractor, if the Contractor fails to make delivery, or perform to a standard considered acceptable to UNIDO. Subject to consultation with the Contractor, the determination of UNIDO, relating to this provision, shall be binding.
9. LANGUAGE REQUIREMENTS

- All the technical reports and related documents including training should be provided in Farsi. Farsi (Persian) is primarily used for communications with the beneficiaries and governmental stakeholders.

- English must be used for communications with UNIDO. Inception Report and technical design report, Commissioning Report and Final Report should be in English.

10. APPLICATION PROCEDURE

Interested and qualified bidders shall submit their written proposals in English comprising of:

- **Technical proposal** (including proposed approach and methodology, copies of certifications, licenses as well as references of similar projects completed in the past). All deviations including the proposed timeline from the Terms of Reference should be indicated in the proposal.

- **Financial proposal** providing a detailed breakdown of the offered price and including all costs in USD.

The bidders shall submit their complete proposals by email to RFP1100163963@unido.org. In case of inquiries, please contact Mr. A. Ahmed at a.ahmed@unido.org (copying CC: j.kraus@unido.org and k.panganiban@unido.org).

The List of Annexes:

Annex I: Technical and financial evaluation;
Annex II: Experience/previous contracts;
Annex III: Client References;
Annex IV: Geographical location and coordinates of the target settlement in Saveh;
Annex V: Weather and Solar Irradiation in Saveh;
Annex VI: Bill of quantities (See separate document).
ANNEXES

Annex I: Technical and financial evaluation

Evaluation of Proposals
Evaluation of the technical proposal will be made based on its responsiveness by applying the evaluation criteria. In the event that only one offer is responsive, UNIDO shall ensure that the price is reasonable and consistent with the market rates for items of a similar nature and represents good value for money.

<table>
<thead>
<tr>
<th>Company submitting proposal</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1 Qualification requirements, authorisations and financial capacity along with technical compliance of bid documentation (i.e. legally authorized to perform construction works in Iran incl. valid construction license). This may include submission of company profile.</td>
<td>Exclusion criteria – non-compliance or non-response for any factor means not qualified</td>
<td></td>
</tr>
</tbody>
</table>

Qualified

<table>
<thead>
<tr>
<th>Specifications, Supply and Performance</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1 Understanding of – and conformity to the scope of services: This will include a construction management plan, quality control plan and safety plan.</td>
<td></td>
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</tr>
<tr>
<td>2.2 Evidence of three (3) turn-key greenhouse contracts awarded and served within the past 5 years proving relevant international/regional experience.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.3 Evidence of bidder’s relevant quality management system qualifications such as ISO 9001.</td>
<td></td>
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</table>

Technically acceptable

The Technical Proposal must also include documentation that will allow a line-by-line verification of the item criteria listed in the RFP descriptions.
Annex II: Experience/previous contracts

<table>
<thead>
<tr>
<th>No</th>
<th>Name of the Employer/C</th>
<th>Name and location of the work</th>
<th>Contract start and completion Dates</th>
<th>Contract value or Contract Price (USD)</th>
<th>Contract value undertaken by you (USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
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<td>2</td>
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</tbody>
</table>

Note:
1. Bidders to provide documentary evidence of a minimum of 3 reference works awarded and served within the past 5 years proving relevant experience in supplying any of the items/equipment/services/training offered in response to this RFP.
2. Bidders are required to complement the information in the table above with a copy of the respective Contract/purchase order(s).
3. Information provided on each contract shall clearly indicate the type and quantities of items and technical specifications.

Annex III: Client References

<table>
<thead>
<tr>
<th>No</th>
<th>Name of the Client</th>
<th>Postal Address</th>
<th>Telephone</th>
<th>Email address</th>
<th>Contact name</th>
<th>Website (if any)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
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</tbody>
</table>

1. Bidders to provide documentary evidence of a minimum of 3 reference works awarded and served within the past 5 years proving relevant experience in supplying any of the items/equipment/services/training offered in response to this RFP.
2. Bidders are required to complement the information in the table above with a copy of the respective Contract/purchase order(s).
3. Information provided on each contract shall clearly indicate the type and quantities of items and technical specifications.
Annex IV: Geographical location and coordinates of the target settlement in Saveh

This settlement is located 25 km east of Saveh city in Markazi province. It is built on a land area of about 500 hectares. There is an access road to the city, which has been asphalted.

Figure 1- Geographical location (Source: Google Maps)
Annex V: Weather and Solar Irradiation in Saveh

Weather: Markazi is one of the coldest regions in Iran with an average daily high temperature of only 22°C. The climate widely corresponds to Central European weather conditions. It is cold, wet, with a few summer months. Several months of the year, it is warm to hot at temperatures continuously above 25°C, sometimes up to 37°C (WorldData, 2020).

![Figure 2- The maximum temperature diagram for Saveh province (Source: Meteoblue, 2020)](image)

The yearly rainy period lasts for around 7.3 months between October – May. In this period, around 30-days-long heavy rain period is observed in November with the average total accumulation of 28 millimeters of rainfall. The rainless period of the year lasts for 4.7 months, from May to October. The least rain falls around mid-July, with an average total accumulation of only 3 millimeters. (Weatherspark, 2020).
Figure 3- Yearly irradiation (kWh) per m² in Markazi (Source: PVSOL)

The annual global irradiation in giving location is 1.724 kWh/m². On average, during summer months, the irradiation is the highest at the amount of 225 kWh/m² per month.