NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA, SURATHKAL

DEPARTMENT OF CENTRE FOR SYSTEM DESIGN
POST SRINIVASNAGAR, MANGALORE – 575 025 (D K)

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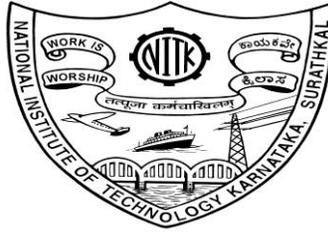
NOTICE INVITING QUOTATION

Notification. No: NITK/CSD/RKVY-COF/ROSPACF/PU-04   dated: 17-01-2024

Name of Goods	**Remotely Operated Solar Powered Aquaculture Farm Light System**
Estimated Amount:	**Rs. 1,90,000.00**
Time for Supply of item after release of Purchase order	**1 Week**
Document Download / Sale Start Date	**18-01-2024 @ 03.30 PM**
Clarification Start Date	**18-01-2024 @ 03.30 PM**
Clarification End Date	**01-02-2024 @ 03.30 PM**
Bid Submission Start Date	**18-01-2024 @ 03.30PM**
Last Date for submission of bids	**01-02-2024 before 03.00 PM**
Bid Opening Date	**02-02-2024 @03.30 PM**
Address for Submission of bids	**Dr.Pruthviraj U Associate Professor, Dept. WR&OF, Professor In charge (Transdisciplinary R & D) Centre for System Design NITK Surathkal-575025 (M): 9972797225, pruthviu@nitk.edu.in**

Notification No: NITK/CSD/RKVY-COF/ROSPACF/PU-04   Date: 17-01-2024

NOTICE INVITING QUOTATION (NIQ)

The National Institute of Technology Karnataka, Surathkal (in short – NITK, Surathkal) is an Institute Of National Importance Under Ministry of Education Govt of India, imparting Technical Education and engaged in Research Activities. It is proposed to procure the items for the departmental academic/research activities.

Sealed Quotations as per the Price Schedule given in this NIQ are invited for the following items subject to the terms and conditions, from the reputed manufacturers or its authorised dealers so as to reach on or before scheduled date and time**.** The quotations in the firm's Business letter head should be address to the "Director, NITK, Surathkal". The envelope shall be superscribed with the Quotation Notification Number and the Name of the Goods for which quotation is submitted.

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Sd/-
HOD

Note: Institute shall not be responsible for any postal delay about non-receipt /non-delivery of the bids or due to wrong addressee.

SECTION-1
Terms and Conditions

1. The rates should be quoted for preferably FOR destination from supply within India.

2. The bidder shall indicate the excise duty exemption for the goods if applicable.

3. The rate quoted should be on unit basis. Taxes and other charges should be quoted separately, considering exemptions if any. The rate should be quoted in INR only

4. Rate quoted should be inclusive of Testing, commissioning and Installation of equipment and Training.

5. Payment: No advance payment will be made. Payment will be made only after the supply of the item in good and satisfactory condition and receipt of performance security by supplier.

6. Guarantee/Warrantee period should be specified for the complete period should be specified in section 3 of this tender document.

7. Period requirement for the supply and installation of item should be specified in section 3 of this tender document.

8. In case of dispute, the matter will be subject to Mangalore Jurisdiction only.

9. **Liquidated Damages:** Timely delivery is the essence of the contract and hence if the Supplier fails to deliver Goods within the original/extended delivery period(s) specified in the contract, the Institute will be entitled to deduct/recover the Liquidated Damages for the delay, unless covered under Force Majeure conditions aforesaid, **@ 1% per week or part of the week of the delayed period** as pre-estimated damages not exceeding 5% of the contract value without any controversy/dispute of any sort whatsoever.

SCHEDULE OF REQUIREMENTS, SPECIFICATIONS AND ALLIED DETAILS
[To be filled up by the Department / Centre of NITK, Surathkal]

Item(s) Name to be Procured   :Remotely Operated Solar Powered Aquaculture Farm Light System

Brief Specifications of the Item(s)   : Attached in Annexure I
(Attach Additional Sheet if necessary)

Quantity   : 1 System

Any other details / requirement   : Nil

Warranty Period required   : 1 Year

Delivery Schedule expected
after placement of Purchase order
(in Weeks)   : 1 Week

PRICE SCHEDULE
[To be used by the bidder for submission of the quotation]

1.   Item Name   :

2.   Specifications
     (Conforming to Schedule of requirements
       Enclose additional sheets if necessary)   :

3.   Currency and Unit Price   :

4.   Quantity   :

5.   Item Cost (Sl No. 3 * Sl. No. 4)   :

6.   Taxes and Other Charges   :
     (i) Specify the type of taxes and duties
         in percentages and also in figures.
     (ii) Specify Other Charges in figures.

7.   Warranty Period   :
     (Conforming to the Schedule of
      requirements)

8.   Delivery Schedule   :
     (Conforming to the Schedule of requirements)

9.   Name and address of the Firm for   :
     placing purchase order

10.   Name and address of Indian authorized
     agent (in case of imports only)   :

Signature of the Bidder: _____

Name   and Designation: _____

Business Address   : _____

                        _____

Place: **Seal of the Bidder's Firm**
Date:

SECTION 4
CONTRACT FORM
[To be provided by the bidder in the business letter head]

1.   (Name of the Supplier's Firm) hereby abide by the delivery schedule mentioned in this document for supply of the items if the purchase order is awarded.

2.   The item will be supplied conforming to the specifications stated in this document without any defect and deviations.

3.   Warranty will be given for the period mentioned in this document and service will be rendered to the satisfaction of NITK, Surathkal during this period.

Signature of the Bidder: _____

Name   : _____

Business Address   : _____

_____

Place :   **Seal of the Bidder's Firm**
Date :

Specifications: REMOTELY OPERATED SOLAR POWERED AQUACULTURE FARM LIGHTS

In the ever-evolving aquaculture landscape, a groundbreaking solution has emerged to address the dual challenges of sustainability and operational efficiency.

This exploration delves into the sophisticated technology underpinning Remotely Operated Solar-Powered Aquaculture Farm Lights, shedding light on its intricate design, myriad benefits, and the transformative impact it holds for the aquaculture industry.

In the quest for sustainable energy solutions, we unravel the Solar-Powered Advantage through the art of harvesting solar energy. Sustainable farming practices take center stage as we examine how solar energy plays a pivotal role in reducing the carbon footprint associated with aquaculture. Additionally, we explore the reliability and resilience that solar power introduces, enhancing overall farm operations.

Advancements in remote control technology revolutionize aquaculture in precision farming. We scrutinize the role of remote operations in achieving precision, delve into the benefits of real-time monitoring for enhanced control and decision-making, and explore how remote troubleshooting and maintenance unleash newfound efficiency in farm management.

Smart farming takes precedence as we investigate the seamless connection of systems for optimal performance. Data-driven insights become a cornerstone in improving yield and resource management, while the intricate dance between humans and technology forms a partnership crucial for navigating the complex aquaculture landscape.

In the realm of environmental impact, a delicate balancing act unfolds as we explore strategies to meet the growing demand for seafood sustainably. Biodiversity conservation emerges as a positive force, influencing aquatic ecosystems for the better. The reduction of environmental footprint becomes a win-win scenario, benefiting both the industry and the natural world. In essence, this paradigm shift in aquaculture practices signifies a holistic commitment to a sustainable and technologically advanced future.

The setup should include an 8-foot pole affixed to a concrete base, equipped with solar-powered aquaculture farm lights. This comprises 5 numbers 40W and 5 numbers 60W LED S-Class solar street lights, featuring remote control functionality. The setup should include an 8-foot pole affixed to a concrete base, equipped with solar-powered aquaculture farm lights. This unit comprises of comprises 40W and 60W LED S-Class solar street lights, featuring remote control functionality.

Integrating remotely operated solar-powered aquaculture farm lights with a web application involves connecting the lights to a microcontroller or IoT (Internet of Things) device that can communicate with the web server. Choose a suitable microcontroller or IoT platform that supports connectivity to both the lights and the web. Common platforms include Raspberry Pi, Arduino, or specialized IoT devices. Utilize communication protocols such as MQTT (Message Queuing Telemetry Transport) or HTTP/HTTPS for data exchange between the lights and the web application. MQTT is often preferred for its efficiency in handling IoT scenarios. Wire the remotely operated solar-powered aquaculture farm lights to the selected microcontroller. Ensure that the microcontroller has the necessary ports or interfaces to control the lights remotely. Develop the logic on the microcontroller to interpret commands from the web application and control the lights accordingly. This may involve programming to turn the lights on/off, adjust brightness, or change

operational modes. Develop APIs (Application Programming Interfaces) on the web server that allow the web application to send commands to the microcontroller. These APIs should handle requests related to light control and status monitoring. Implement Design and develop the user interface of the web application to include controls for the lights. This interface should interact with the web APIs to send commands to the microcontroller and receive real-time status updates from the lights. Implement security measures to protect the communication between the web application and the microcontroller. This may involve using secure communication protocols, such as HTTPS, and incorporating authentication mechanisms. Thoroughly test the integration between the web application and the lights. Ensure that all functionalities work as expected, and implement error handling mechanisms to address any unforeseen issues. Once the integration is successfully tested, deploy the system in the aquaculture farm. Monitor its performance and address any issues that may arise during real-world operations. The installation has to be done at the COLLEGE OF FISHERIES, MANGALORE

For any technical clarifications, contact:

Dr. Pruthviraj Umesh, Associated Professor, Department of Water Resources & Ocean Engineering, National Institute of Technology Karnataka, Surathkal, Srinivasnagar - 575 025, Mangalore, India, Mobile No: 9972797225, pruthviu@nitk.edu.in.