



## Request for Proposal (RFP)

Commodity/Service Required:	Enhancing NIYANTRAC - Energy Management Application for Indian Railways
Type of Procurement:	Subcontract
Type of Contract:	Firm Fixed Price
Term of Contract:	15 months from the date of award
Contract Funding:	United States Agency for International Development (USAID)
Estimated Price Range	\$200,000 exclusive of local GST
This Procurement supports:	South Asia Regional Energy Partnership (SAREP)
Submit Proposal to:	SAREP-Procurement@rti.org
Date of Issue of RFP:	June 07, 2024
Date Questions from Supplier Due:	June 12, 2024
Date Proposal Due:	June 26, 2024
Approximate Date Purchase Order Issued to Successful Bidder(s):	<b>July 15, 2024</b>

<b>Method of Submittal:</b> Electronic (no hard copies required to be submitted)	
Respond via e-mail with attached document in MS Word / pdf format. The Bidder/Seller agrees to hold the prices in its offer firm for <b>90 days</b> from the date specified for the receipt of offers, unless another time is specified in the addendum of the RFP/RFQ.	
Solicitation Number:	<b>SAREP-RFP-2024-005</b>

### Eligibility Criteria:

1. Since this is a USAID funded project, therefore as per USAID ADS 310, only firms that belong to Geographic Code 937 country can receive a USAID funded subcontract from RTI. Geographic code 937 is defined as - the United States, the cooperating country/recipient country (India in this case), and developing countries other than advanced developing countries, and excluding prohibited sources. For more information on this, please refer to <https://www.usaid.gov/sites/default/files/2022-12/310.pdf>. The list of developing nations is provided at <https://www.usaid.gov/sites/default/files/2022-05/310maa.pdf>. Please note that the Geographic Code 937 restriction flows down to lower tier subcontractors as well.
2. Government entities/undertakings/PSUs and quasi-Government/para-statal entities are not eligible to participate in the bidding and receive a USAID funded sub-contract or a lower tier subcontract



3040 Cornwallis Road ■ PO Box 12194 ■ Research Triangle Park, NC 27709-2194 ■ USA  
Telephone 919.541.6000 ■ Fax 919.541.5985 ■ [www.rti.org](http://www.rti.org)

**Attachments to RFP:**

1. Attachment "A" – Statement of Work
2. Attachment "B" – Instructions to Bidders/Sellers
3. Attachment "C" - Subcontract Terms and Conditions. These are also listed on our website at: [https://www.rti.org/sites/default/files/standard\\_subaward\\_terms\\_and\\_conditions\\_v1\\_11.pdf](https://www.rti.org/sites/default/files/standard_subaward_terms_and_conditions_v1_11.pdf)  
Supplier's delivery of products, performance of services, or issuance of invoices in connection with this Subcontract establishes Supplier's agreement to the Terms.
4. Attachment "D" - Quick start guide to obtaining a SAM UEI number

**All bidders/sellers are responsible to carefully review each attachment and follow any instructions that may be relevant to this procurement.**

**IMPORTANT: Bidders are required to sign off and submit their unconditional acceptance of the Subcontract Terms and Conditions listed in Attachment 'C' along with their bid. The designated signature block is on the last page of Attachment 'C'. Failure to do so will result in the exclusion of their bid from being considered for the resulting subcontract. Also, bidders must sign off on Attachments 'A' and 'B' in the signature blocks provided at the end of each attachment and submit these with their bid proposal**

## Attachment A

### Statement of Work

#### Description of Activity/Service:

##### OBJECTIVE

United States Agency for International Development (USAID) is supporting Indian Railways in achieving net-zero 2030 target through its flagship South Asia Regional Energy Partnership (SAREP) program being implemented by RTI. Under this support the [Energy Efficiency Policy and Action Plan \(IREAP\)](#) was developed and released by Indian Railways in December 2022. One of the key interventions identified under IREAP was the development of IR-NIYANTRAC (Indian Railways Native IoT based Yield Analysis Telemetry Recording and Control) application.

IR-NIYANTRAC consists of IR's own IT application suite aimed at a centralized cloud-based web-portal for managing all the IR assets related with energy distribution, consumption, and energy generation. The objective of this assignment is to cover Action point 2 of the IR's Energy Efficiency Policy and Action Plan (IREAP) - Cloud based centralized web-portal for data management, control and monitoring for EE and RE parameters. The application will be developed and deployed in coordination and supervision of Centre for Railway Information Systems (CRIS).

This assignment aims at cultivating insights and support the decision-making of managers in the Indian Railways workforce towards the best possible operational efficiency utilizing the data from IR-NIYANTRAC. This will be laid out through the enhancement with data analytics, performance benchmarking, and reporting applications.

The broader outcomes envisaged through this assignment include:

- Provide the managers and supervisors at different hierarchy of IR administration with performance metrics and guidance for reducing energy consumption and improve the performance of the assets in the energy system of Railways.
- Catalyze the transformation of on-site operations of electro-mechanical appliances through utilization of the asset level data monitored through NIYANTRAC to provide the managers with recommendations for savings energy, asset performance improvement and reducing the costs.
- A suite of cloud based centralized web portal and mobile application is developed and deployed providing the IR administrative staff in remote monitoring, control and troubleshooting of the energy generating and consuming assets.
- The technical, supervisory, and operational workforce of CRIS and Indian Railways will be trained on the NIYANTRAC and its control mechanisms and the operational efficiency management of the assets under their jurisdiction.

**Service Expectations / Tasks :**

The assignment will require that the sub-contractor to implement the following activities to achieve the above outcomes:

- i. Design and develop **managerial dashboard** for energy management with all assets collated for the users who manage the IR assets (both front-end and back-end of application)
- ii. The dashboard should include drill-down facility for these user groups to disclose energy use and GHG emissions, **collective asset performance and maintenance management**.
- iii. Design and develop **data analytics applications** focusing on analysis of data parameters collected from the assets monitored and controlled through IOT devices, leading to the following outcomes:
  - a. Identification of inefficiencies, and operational issues in the assets
  - b. Report the intervention measures with potential energy savings
  - c. Issue alerts for preventive and predictive maintenance of the assets, aiming at reducing down-time, maintenance costs and achieving energy savings
- iv. Develop a **performance benchmarking application** for users across the hierarchy of IR focusing on energy efficiency, asset performance and cost efficiency.
- v. **Demonstrate working of the NIYANTRAC** application with field communication device and showcase results of analysis (including EE and RE parameters). The contractor will assist CRIS in collecting the relevant data from Indian Railways for NIYANTRAC application.
- vi. Design and develop the **mobile application** (Android and iOS) for the monitoring and control applications for the supervisory staff at IR
- vii. **Training** of the CRIS team and IR officials on the application suite developed (minimum 4 trainings)
- viii. Develop detailed **user manual** for NIYANTRAC
- ix. Procure and ensure successful implementation of necessary external software/tools required to develop, operationalize, and deploy the application

**Deliverables, Timelines, Special Terms and Conditions:**

**DELIVERABLES**

- I. Inception report with detailed work plan and resource mapping according to deliverables
- II. Development of mobile application (Android and iOS) for monitoring & control applications and successfully tested at IR
- III. Development of the managerial dashboard for IR staff and successful testing of the application in one zone
- IV. Development of Energy Data Analytics application and successful testing of application and generation of reports as per requirement of Indian Railways/CRIS
- V. Development of Benchmarking and Performance Tracking application and successfully tested at IR
- VI. Development of Advanced Asset Management application and successfully tested in one zone

- VII. Demonstrate working of the NIYANTRAC application with field communication device and showcase results of analysis (including EE and RE parameters)
- VIII. Code walkthrough to CRIS team and handover of complete source code to CRIS and RTI along with all software stack.
- IX. Development of user manual for understanding of NIYANTRAC application by IR users
- X. Training of CRIS team and IR officials (minimum 4 trainings to be planned in coordination with CRIS/Railway Board)

	<b>Deliverable*</b>	<b>Payment (% of Contract Value)</b>	<b>Deliverable Due Date</b>
1	Deliverable 1: Inception report with detailed work plan and resource mapping according to deliverables	10%	T0 + 0.5 months
2	Deliverable 2: Development of mobile application (Android and iOS) for monitoring & control applications, successfully tested at IR/CRIS	10%	T0 + 2 months
3	Deliverable 3: Development of the managerial dashboard for IR staff, successful testing of the application	10%	T0 + 3 months
4	Deliverable 4: Development of Energy Data Analytics application, successful testing of application, generation of reports	25%	T0 + 9 months
5	Deliverable 5: Development of Benchmarking and Performance Tracking application successfully tested at IR	10%	T0 + 12 months
6	Deliverable 6: Development of Advanced Asset Management application successfully tested	10%	T0 + 12 months
7	Deliverable 7: Pilot demonstration of the application suite across seven use cases (RE and EE) covering one use case per IOT technology	10%	T0 + 13 months
8	Deliverable 8, 9 and 10: <ul style="list-style-type: none"> <li>• Code walkthrough to CRIS team and handover of complete source code to CRIS along with all software stack, tools and all credentials</li> <li>• Development of user manual for understanding of NIYANTRAC application by IR user</li> <li>• Training of CRIS team and IR officials (minimum 4 trainings)</li> </ul>	5%	T0 + 14 months
9	Final completion report providing details of all deliverables	10%	T0 + 15 months

**Notes**

- a. The project will require frequent meetings with Railway board, CRIS, USAID and RTI team. Subcontractor should be proactive participate in providing responses, sincere and productively participate and present in all such meetings.

- b. Subcontractor shall be responsible for inclusion of all the comments, suggestions from CRIS, Railway Board, USAID and its implementing partner – RTI International on deliverables.
- c. All documents (presentations, report, brochure, training materials, handouts, etc) to follow USAID M&B guidelines, edited (content of the text checked to ensure that ideas are clearly and logically expressed), and proofread (content of the text checked over finer detail after the editing stage, to detect errors in spelling, punctuation, grammar and format) before submissions.
- d. The documentation produced should achieve an international standard of professionalism and on par with similar publications of USAID available in public domain.
- e. Subcontractor shall be solely responsible for its acts and deeds during execution of this assignment and shall be solely responsible for any claims due to any damage to sites, arising out of inspection or entire scope of work of this assignment.
- f. Consultant to work with IR officials on day-to-day basis (if need be position full-time staff at IR/CRIS as required) and provide backstopping support by its team as and when required.
- g. Since the overall SAREP Program is being executed by RTI International, it is imperative that the Consultant keeps the SAREP Leadership team fully informed. Further, any decisions that may have an impact on the deliverables, timelines and nature of activities being delivered under this contract need to be taken in consultation with the SAREP Leadership team. All deliverables shall be submitted to the SAREP team for review and feedback. Comments received shall be incorporated and thereafter finalized. All submissions to CRIS/Railway Board and USAID shall be made by the SAREP team. Depending on the nature of deliverable, the Consultant may however submit documents to Indian Railways, after review and feedback from the SAREP team has been incorporated. In all cases, the Consultant shall keep the SAREP Leadership informed of any submissions being made to Indian Railways under the program.
- h. All presentations, face to face or virtual meetings with Indian Railways, CRIS, USAID and other agencies should be led by project manager.

**Budget / Pricing**

Item #	Quantity / Days (if applicable)	Description of Preferred Commodity or Services Specifications	Unit of Measure	Unit Fixed Price (Each)	Total Fixed Price (Each)	Lead Time Availability (Number of Days)
1						
2						
3						
<b>Total Value</b>						

**TRAVEL:** The above prices are inclusive of any required domestic travel. International travel is not authorized.

**4. Period of performance:**

15 Months

By signing this attachment, the bidder confirms he has a complete understanding of the specifications and fully intends to deliver items that comply with the above listed specifications.

Signature:

Title:

Date:


## Attachment “B” Instructions to Bidders/Sellers

1. **Procurement Narrative Description:** The Buyer (RTI) intends to purchase commodities and/or services identified in Attachment A. The Buyer intends to purchase the quantities (for commodities) and/or services (based on deliverables identified in a Statement of Work). The term of the Ordering Agreement shall be from Award Date to the Delivery date of the Offeror unless extended by mutual agreement of the parties. The Buyer intends to award to a single “approved” supplier based on conformance to the listed specifications, the ability to service this contract, and selling price. We reserve the right to award to more than one bidder. If an Ordering Agreement is established as a result of this RFP, supplier understands that quantities indicated in the specifications (Attachment A) are an estimate only and RTI does not guarantee the purchase quantity of any item listed.
2. **Procuring Activity:** This procurement will be made by **Research Triangle Institute (RTI International)**, located at

3040 Cornwallis Road  
Research Triangle Park, NC 27709

*(insert full address of the office)*

who has a purchase requirement in support of a project funded by

United States Agency for International Development (USAID)

*(insert client's name)*

RTI shall award the initial quantities and/or services and any option quantities (if exercised by RTI) to Seller by a properly executed Purchase Order as set forth within the terms of this properly executed agreement.

3. **Proposal Requirements.** All Sellers will submit a quote/proposal which contains offers for all items and options included in this RFP. All information presented in the Sellers quote/proposal will be considered during RTI’s evaluation. Failure to submit the information required in this RFP may result in Seller’s offer being deemed non-responsive. Sellers are responsible for submitting offers, and any modifications, revisions, or withdrawals, so as to reach RTI’s office designated in the RFP by the time and date specified in the RFP. Any offer, modification, revision, or withdrawal of an offer received at the RTI office designated in the RFP after the exact time specified for receipt of offers is “late” and may not be considered at the discretion of the RTI Procurement Officer. The Seller’s proposal shall include the following:

(a)	The solicitation number:
(b)	The date and time submitted:
(c)	The name, address, and telephone number of the seller (bidder) and authorized signature of same:
(d)	Validity period of Quote:



(e)	A technical description of the items being offered in sufficient detail to evaluate compliance with the requirements in the solicitation. This <u>may</u> include product literature, or other documents, if necessary.
(f)	If RTI informs Seller that the Commodity is intended for export and the Commodity is not classified for export under Export Classification Control Number (ECCN) "EAR99" of the U.S. Department of Commerce Export Administration Regulations (EAR), then Seller must provide RTI the correct ECCN and the name of Seller's representative responsible for Trade Compliance who can confirm the export classification.
(g)	Lead Time Availability of the Commodity/Service.
(h)	Terms of warranty describing what and how the warranties will be serviced.
(i)	Special pricing instructions: Price and any discount terms or special requirements or terms ( <u>special note: pricing must include guaranteed firm fixed prices for items requested.</u> )
(j)	Payment address or instructions (if different from mailing address)
(k)	Acknowledgment of solicitation amendments (if any)
(l)	Past performance information, when included as an evaluation factor, to include recent and relevant contracts for the same or similar items and other references (including points of contact with telephone numbers, and other relevant information)
(m)	<b>Special Note:</b> <i>The Seller, by his response to this RFP and accompanying signatures, confirms that the terms and conditions associated with this RFP document have been agreed to and <u>all</u> of its attachments have been carefully read and understood and all related questions answered.</i>
(n)	<b>Unique Entity ID in System for Award Management (SAM):</b> If you already have an active or inactive registration in SAM.gov today, you've already been assigned a Unique Entity ID. It's viewable on your entity registration record in SAM.gov. For those who don't, a quick start guide to obtaining a SAM UEI number as Attachment "D" for reference.

4. **Forms:** Sellers (potential bidders or suppliers) must record their pricing utilizing the format found on Attachment "A". Sellers must sign the single hardcopy submitted and send to address listed on the cover page of this RFP.
5. **Questions Concerning the Procurement.** All questions in regards to this RFP to be directed

to

Naveen Devnani

at this email address:

sarep-procurement@rti.org

The cut-off date for questions is

June 12, 2024

6. **Notifications and Deliveries:** Time is of the essence for this procurement. Seller shall deliver the items or services no later than the dates set forth in the contract that will be agreed by both parties as a result of this RFP. The Seller shall immediately contact the Buyer's Procurement Officer if the specifications, availability, or the delivery schedule(s) changes. Exceptional delays will result in financial penalties being imposed of Seller.
7. **Documentation:** The following documents will be required for payment for each item:
  - (a) A detailed invoice listing Purchase Order Number, Bank information with wiring instructions (when applicable)
  - (b) Packing List
  - (c) All relevant product/service documentation (manuals, warranty doc, certificate of analysis, etc.)
8. **Payment Terms:** Refer to RTI purchase order terms and conditions found in <https://www.rti.org/sites/default/files/rti-purchase-order-terms-and-conditions-v1.16.pdf> , <http://www.rti.org/files/PO FAR Clauses.pdf>, or <http://www.rti.org/files/PO FAR Clauses Commercial Items.pdf>. Payment can be made via wire transfer or other acceptable form. Sellers may propose alternative payment terms and they will be considered in the evaluation process.
9. **Alternative Proposals:** Sellers are permitted to offer "alternatives" should they not be able to meet the listed requirements. Any alternative proposals shall still satisfy the minimum requirements set forth in Attachment A Specifications.
10. **Inspection Process:** Each item shall be inspected prior to final acceptance of the item. All significant discrepancies, shortages, and/or faults must be satisfactorily corrected and satisfactorily documented prior to delivery and release of payment.
11. **Evaluation and Award Process:** The RTI Procurement Officer will award an agreement contract resulting from this solicitation to the responsible Seller (bidder) whose offer conforms to the RFP will be most advantageous to RTI, price and other factors considered. The award will be made to the Seller representing the **best value** to the project and to RTI. For the purpose of this RFP, price, delivery, technical and past performance are of equal importance for the purposes of evaluating, and selecting the "best value" awardee. RTI intends to evaluate offers and award an Agreement without discussions with Sellers. Therefore, the Seller's initial offer should contain the Seller's best terms from a price and technical standpoint. However, RTI reserves the right to conduct discussions if later determined by the RTI Procurement Officer to be necessary.

The evaluation factors will be comprised of the following criteria:

- (a) **PRICE.** Lowest evaluated ceiling price (inclusive of option quantities) .
  - (b) **DELIVERY.** Seller provides the most advantageous delivery schedule.
  - (c) **TECHNICAL.** Items/Services shall satisfy or exceed the specifications described in RFP Attachment A.
  - (d) **PAST PERFORMANCE** - Seller can demonstrate his/her capability and resources to provide the items/services requested in this solicitation in a timely and responsive manner.
- (e) **EVALUATION CRITERIA.**

**Pre-Qualification Criteria (Weight %):**

1. **Approach and Methodology (A&M) (25%) :** Adequacy and quality (The SAREP Technical Evaluation Committee will assess whether the proposed methodology is clear, responds to the Scope of Work, Schedule of deliverables timeline.)
2. **Specific experience in similar or related work (25% ):** The agency should have demonstrable experience of working with CRIS for development and deployment of relevant IT tools, or software platforms.
3. **Subject matter expertise of proposed experts (50%) :**  
Team Composition :
  - a) The consultant team should comprise of at least ten team members (in addition to other personnel) including,
    - i. Project Manager (minimum 15 years relevant experience)
    - ii. Product Owner (Sr. Expert with minimum 10 years relevant experience)
    - iii. Business Analyst (minimum 5 years relevant experience)
    - iv. Minimum 2- UI Designers (minimum 5 years relevant experience)
    - v. Minimum 2- Developers (minimum 5 years relevant experience)
    - vi. Data scientist (minimum 5 years relevant experience)
    - vii. Data analysts (minimum 5 years relevant experience)
    - viii. Quality assurance engineer (minimum 5 years relevant experience)
  - b) Curriculum Vitae for all proposed personnel to be provided that lists the following
    - a. Affiliation/ organization
    - b. Education
    - c. Years of professional experience
    - d. Proposed role in the project
    - e. Relevant experience with respect to the scope of work of this assignment

\*Note: All the deliverables will be acceptable for payment after a small report / presentation is submitted along with approval from CRIS.

**Financial Proposal scoring**

The agency with lowest qualifying financial bid (L1) will be awarded 100% score. Financial Scores for other than L1 will be evaluated using the following formula: Financial Score (Fn) =  $\{(Commercial\ Bid\ of\ L1 / Commercial\ Bid\ of\ the\ Bidder) \times 100\}\%$

**Overall Score** The selection of the consultancy firm shall be based upon the methodology of Quality and cost-based selection (QCBS) with technical and financial weightage as decided by the SAREP Technical Evaluation committee. Technical and financial weightage will be 80:20.

**Financial Proposal scoring** The agency with lowest qualifying financial bid (L1) will be awarded 100% score. Financial Scores for other than L1 will be evaluated using the following formula: Financial Score (Fn) =  $\{(Commercial\ Bid\ of\ L1 / Commercial\ Bid\ of\ the\ Bidder) \times 100\}\%$  **Overall Score** The selection of the agency shall be based upon the methodology of Quality and cost-based selection (QCBS) with technical and financial weightage as 80:20

12. **Award Notice.** A written notice of award or acceptance of an offer, mailed or otherwise furnished to the successful supplier within the time acceptance specified in the offer, shall result in a binding contract without further action by either party.
  
13. **Validity of Offer.** This RFP in no way obligates RTI to make an award, nor does it commit RTI to pay any costs incurred by the Seller in the preparation and submission of a proposal or amendments to a proposal. Your proposal shall be considered valid for 90 days after submission.
  
14. **Representations and Certifications.** Winning suppliers under a US Federal Contract are required to complete and sign as part of your offer RTI Representations and Certifications for values over \$10,000.
  
15. **Certifications.**  
**Certification and Disclosure Regarding Payments to Influence Certain Federal Transactions -** Certification and Disclosure Regarding Payments to Influence Certain Federal Transaction as referenced in FAR 52.203-11 is hereby incorporated into this Request for Proposal as a condition of acceptance.  
  
**Limitation on Payments to Influence Certain Federal Transactions-** Limitation on Payments to Influence Certain Federal Transactions as referenced in FAR 52.203-12 is hereby incorporated into this Request for Proposal as a condition of acceptance.
  
16. **Anti- Kick Back Act of 1986.** Anti-Kickback Act of 1986 as referenced in FAR 52.203-7 is hereby incorporated into this Request for Proposal as a condition of acceptance. If you have reasonable grounds to believe that a violation, as described in Paragraph (b) of FAR 52.203-7 may have occurred, you should report this suspected violation to the RTI's Ethics Hotline at 1-877-212-7220 or by sending an e-mail to [ethics@rti.org](mailto:ethics@rti.org). You may report a suspected violation anonymously.
  
17. **The John S. McCain National Defense Authorization Act for fiscal year 2019 - section 889.** RTI cannot use any equipment or services from specific companies, or their subsidiaries and affiliates, including Huawei Technologies Company, ZTE Corporation, Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, and Dahua Technology Company ("Covered Technology"). In response to this request for proposal, please do not provide a quote which includes any Covered Technology. Any quote which includes Covered Technology will be deemed non-responsive. Additionally, if the United States Government is the source of funds for this RFP, the resulting Supplier shall not provide any equipment, system, or service that uses Covered Technology as a substantial or essential component

**Acceptance:**

Seller agrees, as evidenced by signature below, that the seller's completed and signed solicitation, seller's proposal including all required submissions and the negotiated terms contained herein, constitute the entire agreement for the services described herein.

By: *(Seller Company Name)*

Signature: \_\_\_\_\_

Title:

Date: