UP Rajya Vidyut Utpadan Nigam Ltd.
Expression of Interest (EOI)

UPRVUNL invites EOI from experienced agencies for **Geographic Information System (GIS)-based Biomass Supplier Mapping and Global Positioning System (GPS)-enabled Truck Tracking System** for Harduaganj TPS.

Scope:

1. GIS mapping of biomass pellet suppliers (initially 45 firms)
2. Real-time GPS tracking of trucks, from loading point to plant
3. Customised dashboard, alerts and reports
4. Training, commissioning and support

Eligibility: Experience in GIS mapping, GPS vehicle tracking and custom software.

Web link for complete EOI: https://drive.google.com/file/d/1pN4FEzFeMgR-m-YctOtTfowsegUod7Hz/view?usp=drive_link or scan QR code

UPRVUNL reserves the right to accept or reject any or all responses without assigning any reason.

Kindly send all the related documents to the following postal address and email ID on or before 31.10.2026.

Office of the Chief Engineer
Fuel Management Unit,
14th floor, Shakti Bhawan Extension
14 Ashok Marg Lucknow, 226001
Superintending Engineer Contact No.
9415900559, 9415900671
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उत्तर प्रदेश राज्य विद्युत उत्पादन निगम लिमिटेड

अभिरुचि अभिव्यक्ति (Expression of Interest)

उत्तर प्रदेश राज्य विद्युत उत्पादन निगम लिमिटेड (UPRVUNL) द्वारा हरदुआगंज ताप विद्युत गृह (TPS) के लिए **भौगोलिक सूचना प्रणाली (GIS) आधारित बायोमास आपूर्तिकर्ताओं के मानचित्रण तथा ग्लोबल पोज़िशनिंग सिस्टम (GPS) सक्षम ट्रक ट्रैकिंग प्रणाली** हेतु अनुभवी एजेंसियों से अभिरुचि अभिव्यक्ति (EOI) आमंत्रित की जाती है।

कार्य का दायरा:

1. बायोमास पैलेट्स आपूर्तिकर्ताओं का GIS मानचित्रण (प्रारंभ में 45 फर्में)
2. लोडिंग स्थल से संयंत्र तक ट्रकों की रियल-टाइम GPS ट्रैकिंग
3. कस्टमाइज़्ड डैशबोर्ड, अलर्ट एवं रिपोर्ट
4. प्रशिक्षण, कमीशनिंग एवं सहायता

पात्रता: GIS मानचित्रण, GPS वाहन ट्रैकिंग तथा कस्टम सॉफ़्टवेयर में अनुभव।

संपूर्ण EOI हेतु वेब लिंक: https://drive.google.com/file/d/1pN4FEzFeMgR-m-YctOtTfowsegUod7Hz/view?usp=drive_link अथवा QR कोड स्कैन करें।

UPRVUNL बिना कोई कारण बताए किसी भी अथवा सभी प्रतिक्रियाओं को स्वीकार या अस्वीकार करने का अधिकार सुरक्षित रखता है।

कृपया सभी संबंधित दस्तावेज़ निम्नलिखित डाक पते तथा ई-मेल आईडी पर दिनांक 31.10.2026 को अथवा उससे पूर्व भेजें।

कार्यालय मुख्य अभियंता
ईंधन प्रबंधन इकाई,
14वां तल, शक्ति भवन विस्तार
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EXPRESSION OF INTEREST (EOI)

Development and Implementation of GIS-Based Biomass Supplier Mapping and GPS-Enabled Transportation Tracking System for Harduaganj Thermal Power Plant of UPRVUNL

1. Introduction

Uttar Pradesh Rajya Vidyut Utpadan Nigam Limited (UPRVUNL) intends to develop and implement a comprehensive digital solution for geographical mapping of biomass pellet suppliers, vehicle tracking, and transportation monitoring to ensure transparent, efficient, and reliable supply of biomass pellets to its Harduaganj thermal power station.

The proposed system shall initially cover 45 biomass supplier firms and their associated transportation vehicles. The solution shall integrate GIS-based mapping, GPS-enabled truck tracking, centralized monitoring software, and customized software development to enable end-to-end visibility of biomass transportation from the supplier's loading point to the receiving location at Harduaganj thermal power plant of UPRVUNL.

Accordingly, Expression of Interest is invited from eligible and experienced agencies, technology providers, and software development firms having expertise in GIS mapping, GPS-based vehicle tracking, transportation management systems, and customized software solutions.

2. Objectives of the Proposed System

The primary objectives of the proposed system are as follows:

1. To undertake geographical (GIS) mapping of biomass supplier firms (initially 45 firms).
2. To record and digitally map the exact geographical locations of supplier plants, manufacturing units, warehouses, and loading points.
3. To establish GPS-based tracking of trucks transporting biomass pellets from supplier locations to UPRVUNL thermal power stations.
4. To monitor vehicle movement, route adherence, trip progress, and delivery status in real time.
5. To develop customized software for centralized monitoring, reporting, and management of biomass transportation.
6. To improve transparency, accountability, and operational efficiency in biomass supply chain management.

3. Scope of Work

3.0 Initial Scope and Variation in Number of Firms

1. The initial scope of the system covers 45 biomass supplier firms. This number may be changed (increased or decreased) by UPRVUNL in future in accordance with the approved vendor list of biomass suppliers, as revised from time to time.

3.1 GIS Mapping of Biomass Firms

- Conduct geographical mapping of all 45 initially identified biomass supplier firms, and of any firm subsequently added by UPRVUNL as per the vendor list.
- Capture and verify latitude and longitude coordinates of each supplier's manufacturing unit, storage facility, and loading point, wherever applicable.

- Create a centralized digital database containing firm name, address, contact details, plant location, and relevant supplier information.
- Display all mapped firms on an interactive GIS-based digital map.

3.2 GPS-Based Truck Tracking

- Provide a mechanism for GPS-based tracking of trucks transporting biomass pellets.
- Register and map the trucks associated with each supplier firm.
- Track vehicles from the point of loading at the supplier's premises to the designated UPRVUNL receiving location.
- Display live vehicle location, movement, route, trip status, and estimated arrival time, wherever technically feasible.
- Record departure, transit, arrival, and delivery timestamps.
- Maintain historical trip records for verification and audit purposes.
- Generate alerts for prolonged stoppages, unauthorized route deviations, and unusual delays, subject to system configuration and GPS availability.

3.3 Software Development and Integration

The selected agency shall develop and deploy a customized web-based and/or mobile-compatible software application with the following features:

- Centralized dashboard for monitoring all biomass firms (initially 45) and their associated trucks.
- Interactive GIS map showing supplier locations, vehicle locations, and designated UPRVUNL destinations.
- Supplier-wise and vehicle-wise tracking interface.
- Trip creation and monitoring from loading to final delivery.
- Digital recording of vehicle number, supplier name, dispatch details, quantity transported, destination, and delivery status.
- Role-based login and access control for authorized UPRVUNL officials.
- Automated alerts and notifications for delays, route deviations, and other defined exceptions.
- Reports on supplier-wise dispatches, vehicle movement, transit time, and delivery status.
- Data storage, retrieval, export, and historical tracking facilities.
- System security, backup, maintenance, and technical support.

3.4 End-to-End Biomass Transportation Monitoring

The system shall facilitate end-to-end monitoring of biomass transportation through the following stages:

1. Registration of supplier and vehicle.
2. Recording of truck loading and dispatch details at the supplier's premises.
3. Activation of the vehicle tracking trip.
4. Real-time monitoring of truck movement during transit.
5. Recording of arrival at the designated UPRVUNL location.
6. Recording of delivery and closure of the trip.
7. Generation of trip-wise and supplier-wise reports for monitoring and verification.

3.5 Implementation, Training and Support

- Collection and validation of supplier and vehicle data.
- Configuration and deployment of the GIS and tracking platform.
- Testing and commissioning of the complete system.
- Training of designated UPRVUNL personnel.
- Provision of user manuals, technical documentation, and operational guidelines.
- Ongoing software maintenance, troubleshooting, and technical support as specified in the final scope of work.
- The firm may also visit the site at Harduaganj Thermal Power Station, Kasimpur for actual assessment of the work.

4. Expected Deliverables

The selected agency shall provide the following deliverables:

1. GIS mapping database of all biomass supplier firms (initially 45 firms, subject to change by UPRVUNL as per the vendor list).
2. Digital map of supplier locations and designated UPRVUNL destinations.
3. GPS-enabled truck tracking solution.
4. Customized web-based monitoring dashboard and associated software.
5. Supplier-wise, vehicle-wise, and trip-wise reporting modules.
6. Alert and notification mechanism for defined transportation exceptions.
7. User access management and data security arrangements.
8. System testing, commissioning, training, documentation, and support.

5. Eligibility and Technical Capability

Interested agencies should provide details of their relevant experience and capabilities, including:

- Experience in GIS mapping and geospatial data management.
- Experience in GPS-based vehicle tracking and fleet management systems.
- Capability in customized software development and dashboard design.
- Experience in logistics, supply chain, or transportation monitoring projects.
- Details of similar projects executed for government departments, public sector undertakings, or other organizations.
- Technical infrastructure, manpower, implementation methodology, and after-sales support capability.

Documentary evidence of relevant experience and technical capability shall be submitted along with the EOI response.

6. Information to Be Submitted by Interested Agencies

Interested agencies are requested to submit the following information:

1. Brief profile of the agency.
2. Details of previous relevant projects and client references.
3. Proposed technical architecture and implementation methodology.
4. Proposed GPS tracking mechanism and GIS mapping methodology.
5. Software features, dashboard design, and reporting capabilities.
6. Implementation schedule and deployment plan.

7. Details of hardware, GPS devices, communication connectivity, software licences, and other infrastructure requirements, wherever applicable.
8. Proposed annual maintenance, technical support, and service-level arrangements.
9. Indicative project cost, including one-time development costs and recurring charges, wherever applicable.
10. Any assumptions, dependencies, or additional requirements for successful implementation.

7. General Terms and Conditions

- Submission of an EOI shall not automatically entitle any agency to award of work.
- UPRVUNL reserves the right to evaluate the responses and determine the subsequent procurement process in accordance with applicable rules and procedures.
- The final scope of work, technical specifications, eligibility conditions, commercial terms, and implementation timelines shall be defined by UPRVUNL at the appropriate stage.
- All supplier, vehicle, and transportation data shall be handled in accordance with the data security and confidentiality requirements prescribed by UPRVUNL.
- The selected agency shall ensure system reliability, data integrity, and adequate technical support in accordance with the finalized contractual requirements.

8. Conclusion

The proposed GIS mapping and GPS-based transportation tracking system is intended to strengthen monitoring and management of the biomass supply chain for UPRVUNL by providing digital visibility of supplier locations and truck movement from loading at the supplier's premises to delivery at the Harduaganj thermal power station.

Interested and technically competent agencies are invited to submit their Expressions of Interest, along with the proposed technical solution, implementation plan, relevant experience, and indicative commercial details, for consideration by UPRVUNL.

Uttar Pradesh Rajya Vidyut Utpadan Nigam Limited (UPRVUNL) Harduaganj Thermal Power Plant