

# Project Details

## Project Title:

**Drone-Based Thermal Inspection of 400 MW Solar Power Plant – Near Bikaner, Rajasthan**

## Project Description:

The objective of this project is to conduct a comprehensive **drone-based thermal inspection** of a 400 MW solar power plant situated near Bikaner, Rajasthan. The selected vendor will use UAVs equipped with high-resolution thermal cameras to identify defects such as hot spots, faulty panels, string failures, and connectivity issues across the entire plant. The vendor will capture, process, analyze, and deliver georeferenced thermal data with actionable reports to support maintenance and optimization of the plant's performance.

## Terms & Conditions:

### 1. Scope of Work

- Perform aerial thermal inspection of all photovoltaic arrays within the 400 MW facility.
- Detect and document anomalies including hot spots, diode failures, and string-level performance issues.
- Provide detailed geotagged thermal maps, images, and comprehensive analysis reports.

### 2. Vendor Eligibility

- Must have prior experience conducting thermal inspections on solar power plants of at least 100 MW cumulative capacity.
- Must comply with DGCA drone operation regulations.
- Must provide valid GST registration and relevant certifications.

### 3. Timeline

- Vendor must mobilize to site within 7 days of work order issuance.
- Inspection and data collection must be completed within 8-12 working days of site mobilization, depending on weather conditions.
- Final reports must be submitted within 7 days of completing data capture.

### 4. Payment Terms

- **30%** payable after vendor reaches the site and commences mobilization.
- **20%** upon successful completion of data capturing activities.
- **30%** after submission of the draft/final inspection reports.
- **20%** after client verification and acceptance of the delivered data.

### 5. Site Access & Safety

- The client will facilitate necessary permissions and site access.

- Vendors must follow safety protocols during UAV operations to ensure the safety of personnel and infrastructure.
- 6. Data Confidentiality**
  - All collected data, thermal images, and reports shall remain confidential and proprietary to the client.
  - Vendors shall not share or use the data for any purpose other than the scope defined in this project.
- 7. Reporting Requirements**
  - Reports must include a summary of findings, thermal imagery with GPS coordinates of detected anomalies, severity classification, and recommended corrective actions.
  - Deliverables must be provided in both PDF and editable formats.
- 8. Evaluation Criteria**
  - Bids will be evaluated based on technical expertise, experience, equipment specifications, adherence to timeline, and commercial competitiveness.
- 9. Liability**
  - Vendors are responsible for the safety and integrity of their own equipment. Damages to client property caused by negligence will be the vendor's responsibility.
- 10. Force Majeure**
  - Delays resulting from weather or other force majeure events will be mutually reviewed for potential timeline extensions without penalty.

## Eligibility Criteria

To qualify for this project, vendors must meet the following requirements:

- 1. Experience:**
  - Minimum of 2 years' experience conducting drone-based aerial surveys for linear infrastructure projects (e.g., canals, roads, pipelines, or railways).
  - Proven track record of successful completion of at least two similar projects involving raw data capture and GCP placement.
- 2. Certifications & Licenses:**
  - Valid DGCA (Directorate General of Civil Aviation) Remote Pilot License or authorization for commercial drone operations in India.
  - Company registration and GSTIN.
- 3. Technical Capability:**
  - Ownership or guaranteed access to drones equipped with high-resolution cameras and GPS-enabled systems suitable for accurate survey data capture.
  - Availability of RTK/PPK-enabled drone systems or demonstrated methodology for achieving  $\leq 5$  cm GCP accuracy.
- 4. Personnel:**

- Team must include certified drone pilots with demonstrated competence in aerial surveying.
  - Personnel experienced in establishing and measuring GCPs with high precision.
5. **Legal & Regulatory Compliance:**
- No pending litigation or blacklisting by any government department or organization.
  - Compliance with all applicable central and state drone operation regulations.
6. **Financial Stability:**
- Ability to mobilize necessary resources for the timely execution of the project without advance payment.
7. **Portal Access:**
- Ability to access and use the Agniforge Project Portal for project updates and invoice submissions.