

Agmay
TECHNOLOGIES

SERVICE BROCHURE

Drone Inspection

Towers, turbines, plants and structures, inspected while they stay in service

Visual and radiometric thermal inspection of towers, turbines, solar plants, stacks and structures while they stay in service. High zoom shows the detail; thermal shows what the eye cannot.

- 1,500+ assets inspected
- 50+ towers a day
- Zoom, thermal and LiDAR
- No shutdown needed

OVERVIEW

Find faults without climbing or shutting down

One inspection team covers power, energy, transport and industrial assets. The drone flies at a safe clearance with zoom, thermal and, where needed, LiDAR sensors, while the asset keeps working.

Every finding is checked by an engineer, rated for severity and tagged to its position, so maintenance teams can go straight to the fault.

1,500+
Utility assets inspected

50+
Towers inspected per day

70%
Less inspection time on a 20 km line

Why Agmay

- ✓ No linemen climbing 60-metre high-voltage towers
- ✓ High-zoom cameras show hairline cracks, corrosion and loose hardware
- ✓ Assets stay in service: inspections are non-contact, at safe clearance
- ✓ Radiometric thermal imaging pinpoints failing insulators and loose joints
- ✓ Repeatable waypoint flights to track wear over time
- ✓ DGCA-certified pilots, with airspace checked on Digital Sky before every flight

DRONE OR MANUAL

Drone inspection compared with climbing and rope access

	Drone inspection	Manual inspection
People working at height	None	Linemen climb 60 m towers
Asset shutdown	Not needed	Often required
Hidden faults	Thermal shows hot joints and failing insulators	Visual only


Wind turbines


Solar plants


Construction monitoring


Plant and site surveys

ASSETS

What we inspect

One inspection team for power, energy, transport and industrial assets. Some have their own detailed page and brochure on agmay.in.

Power lines, towers and insulators

Transmission and distribution networks, inspected while energised.

- Towers and insulator strings
- Conductors, joints and fittings
- Vegetation clearance along the line

More: Power line inspection

Substations

Thermal and visual checks without entering live bays.

- Busbars, connectors and clamps
- Transformers and bushings
- Isolators and structures

Solar farms

Thermal hotspot detection across every string.

- Hotspots and failed bypass diodes
- String and module faults
- Soiling and physical damage

More: Solar inspection and cleaning

Wind turbines and telecom towers

Tall structures inspected without climbing.

- Blades, nacelles and towers
- Telecom tower structures and antennas
- Bolts, corrosion and cracks

Bridges, flyovers, dams and canals

Civil structures that are hard to reach from the ground.

- Decks, piers and bearings
- Dam faces and spillways
- Canal linings and embankments

More: LiDAR drone mapping

Buildings, facades and roofs

Building envelopes inspected without scaffolding.

- Facades and glazing
- Roofs and waterproofing
- Thermal checks for leaks and heat loss

Industrial plants

Plant equipment inspected while it keeps running.

- Chimneys and flare stacks
- Storage tanks and silos
- Structures, pipe racks and roofs

Pipelines

Long linear assets followed from the air.

- Route and right-of-way condition
- Exposed sections and supports
- Encroachment and ground movement

Railways

Track, bridges and overhead equipment without track blocks.

- Track and fastenings
- Overhead electrification (OHE)
- Bridges, tunnels and stations

More: Railway inspection

METHODS

How we inspect

The sensor is chosen for the defect you need to find. Most inspections combine two or more.

01

Visual and zoom

High-zoom cameras show cracks, corrosion, missing bolts and damaged fittings from a safe distance.

02

Thermal

Radiometric thermal imaging (640 × 512 on the DJI Matrice 4T) finds hot joints, failing insulators and faulty solar modules.

03

LiDAR

The DJI Zenmuse L3 on the M400 measures conductor sag, clearances and structure geometry as a 3D point cloud.

04

Heavy-lift platform

The DJI M400 carries zoom, thermal and LiDAR payloads, with up to 59 minutes of flight by DJI's figures.

05

Close-proximity flights

Planned close passes around towers, stacks and structures, with our FPV 10″ for close work where a larger aircraft cannot go.

06

AI defect detection

Software screens thousands of images and flags likely defects, and an engineer checks every finding.

HOW IT WORKS

From scope to a saved, repeatable route

1

Scope the job

We agree the assets, defects of interest, outputs and schedule, and review the site on maps.

2

Plan and clear the flight

Airspace is checked on Digital Sky, permissions are arranged where needed and the flight plan is loaded.

3

Fly and capture

A certified crew flies the mission with the right aircraft and sensors, and checks the data on site.

4

Analyse and grade

Images are screened, each defect is checked by an engineer, rated for severity and tagged to its position.

5

Deliver and review

You receive the report and files with a short walkthrough, and the route is saved to fly again.

PROJECTS

Inspections we have delivered

400 KV AND 220 KV TRANSMISSION CORRIDORS

State power transmission utility

Radiometric thermal inspection of towers, insulator strings and substation busbars.

18 severe thermal hotspots (more than 75 °C above normal) found and fixed before they could trip the line.

Equipment: DJI Matrice 4T thermal and DJI M400

KURNOOL AND MAHBUBNAGAR SOLAR PARKS

150 MW utility-scale solar plant

Aerial thermographic audit of PV modules to IEC 62446-3.

420,000 panels audited in 3 days; 280 failed bypass diodes found, raising plant yield by 4.2%.

Equipment: DJI Matrice 4T thermal

CASE STUDY

25 transmission towers in one day

7,630 RGB and thermal images, 129 findings with photo evidence and a dated repair plan, from a survey in Telangana in October 2026.

agmay.in/case-studies/transmission-line-drone-inspection-telangana/

DELIVERABLES

What you receive

- ✓ Defect report with geotagged images of every finding
- ✓ Thermal report with temperature differences
- ✓ AI-assisted defect detection, checked by an engineer
- ✓ Severity rating for each defect
- ✓ 3D models and digital twins of structures, where specified
- ✓ GIS layers or dashboard for the maintenance team

QUESTIONS

Common questions

Do assets need to be switched off during inspection?

No. Drone inspections are non-contact and are flown while the asset stays in service, at safe clearance distances.

What does the report contain?

Each anomaly is listed with its GPS position, annotated zoom image and, for thermal work, the temperature difference, so maintenance teams can go straight to the fault.

Can inspections be repeated on the same route?

Yes. Waypoint missions are saved and re-flown so that changes over time can be compared like for like.

How do I get a quotation?

Send us these and we reply with a scope and a price.

- ✓ The assets and where they are
- ✓ How many, or the route length
- ✓ Visual, thermal, LiDAR, or all three
- ✓ Your timeline

Plan your inspection with Agmay

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