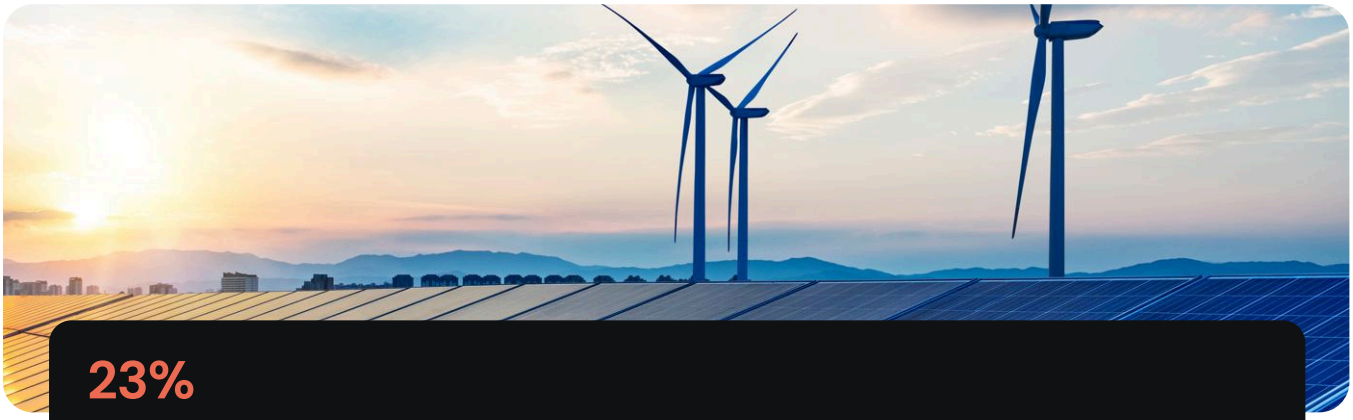
Wind energy · Global

A multi-site wind power producer cut turbine faults by 23% across all its farms

An independent wind power producer standardized preventive maintenance across its wind farms, brought turbine alarms from every site into one view, and recorded every fault with its root cause.



23%
fewer turbine faults across all sites

AT A GLANCE

INDUSTRY
Wind independent power producer

SITES
Utility-scale wind farms in several regions

FLEET
Turbines of varying makes and capacities

SELLS UNDER
Long-term power purchase agreements

FEATURES USED
Maintenance · Connected · Stores

01 The client

The client is an independent power producer running utility-scale wind farms across several regions, with turbines of different makes and capacities.

It sells its power under long-term purchase agreements, so plant availability is revenue. Every turbine depends on good preventive maintenance, quick alarm response and coordination between site teams and contractors.

02 The challenge

Despite experienced site teams, the producer faced recurring turbine faults and uneven performance. Each farm worked its own way, and nobody could see the whole fleet at once.

- Yaw, pitch, hydraulic pressure, gearbox temperature and anemometer alarms kept repeating.
- PM was carried out differently across wind farms and contractors.
- There was no single view of alarm history, PM status or turbine health.
- Technicians logged repairs differently, so root-cause analysis was hard.
- Spare parts used were not linked to faults, so failures repeated.

03 What they set up in Asset Infinity

The producer connected all its wind farms in Asset Infinity, with one set of maintenance plans, one alarm view and one way of recording faults across the fleet.

Maintenance

One PM standard for the fleet

PM templates follow manufacturer guidance but are the same on every farm, with required steps for nacelle, pitch, yaw, hydraulic, cooling and electrical systems.

Connected

Alarms from every farm in one place

SCADA alarms from all sites come in through the API, categorized by turbine, farm, severity and frequency, so the alarms that repeat most stand out.

Maintenance

Faults recorded with root causes

Technicians document each fault with photos, readings and videos, using standard root-cause notes engineers can compare across sites and turbine makes.

Stores

Spares tied to turbine and fault

Every spare used, from yaw motors to pitch cards, is issued against the turbine and the fault, exposing faulty batches and weak repair practices.

04 How it works day to day

Here is how turbine care runs across the fleet now.

SYSTEM	**Schedules PM fleet-wide** Preventive plans by runtime hours or fixed cycles create work orders on every farm from the same templates.
SYSTEM	**Brings in the alarms** SCADA alarms arrive through the API, sorted by turbine, farm and severity, and an alarm that needs action becomes a work order.
SITE TECHNICIAN	**Completes the PM checklist** Required steps for each turbine system cannot be skipped. Readings and photos are recorded in the mobile app.
SITE TECHNICIAN	**Documents the fault** For a fault repair, the technician records photos, readings and a standard root-cause note against the turbine.
STOREKEEPER	**Issues the spare against the fault** Parts are issued to the work order, linking each spare to the turbine and the fault it fixed.
SYSTEM	**Escalates late PM** PM that falls behind on any site escalates, so every farm keeps the same discipline.
RELIABILITY ENGINEER	**Compares across the fleet** Dashboards show PM compliance, alarm trends, fault-prone turbines and site-to-site comparisons.

05 Before and after

	BEFORE	WITH ASSET INFINITY
Turbine faults	Recurring across sites	23% fewer
PM	Different by farm and contractor	One standard with required steps
Alarms	Seen site by site	All farms in one view
Repair logs	Recorded differently	Standard root-cause notes
Spare parts	Not linked to faults	Issued against turbine and fault
Decisions	Siloed at each farm	Made centrally, across the fleet

06 How it rolled out

1

Phased by wind farm. The system was deployed farm by farm across multiple sites, with minimal disruption.

2

SCADA connected, history digitized. SCADA feeds from each farm were connected, and historical fault and PM logs were digitized for trend analysis.

3

Field staff trained. Field staff were trained on PM workflows, alarm logging and root-cause templates.

07 The results

- A major drop in recurring alarms through root-cause visibility
- Higher availability and more power generated across farms
- Better technician accountability and consistent service quality
- Fewer emergency site visits and more efficient maintenance
- Strong insight for long-term reliability planning and capital decisions

08 Why it worked

One standard everywhere

The same PM templates on every farm removed the differences between sites and contractors.

Alarms with context

Seeing alarms from all farms together showed which faults repeated, and where.

Faults and parts connected

Linking spares to faults revealed weak parts and repair practices that site-level records could not show.

09 Looking ahead

With one PM standard, alarms from every farm in one view and root causes recorded the same way everywhere, the producer cut turbine faults by 23% across all sites.

Reliability no longer depends on which farm or contractor does the work. Steadier generation supports the producer's purchase agreements, and the fault history guides long-term planning.

See it on your own assets

A 30-minute demo, set up for a wind farm owner or O&M team.

The client's name is withheld for confidentiality. Results are as reported by the client.

Book a demo

Start a 14-day free trial