



CUSTOMER CASE STUDIES

Discover how we support leading players in the wind energy sector



CONTEXT

Case Study 1 - Wind Energy East Africa energy metering verification

One of the world's leading wind turbine manufacturers (OEMs) and maintenance service providers for both onshore and offshore wind energy.

OUR ASSIGNMENT

Apave performed on-site testing and measurements, including:

- Low-voltage electrical parameter measurements (U, I, P, Q, S at < 1,000 V)
- On-site accuracy testing of high-precision energy meters across the entire metering chain (combined meter, VT, and CT system configuration)

CHALLENGES

A leading wind turbine OEM appointed us to verify compliance and test the accuracy of the energy metering system for a wind farm in East Africa prior to its commercial operation.



KEY BENEFITS

Here is how this intervention delivered concrete value prior to commercial operations:

- **Revenue assurance:** Independent certification of metering data to comply with PPAs and guarantee accurate billing.
- **Risk mitigation:** Ensured total integrity across the entire measurement chain (meters, VTs, and CTs) to eliminate grid connection disputes.

CONTEXT

Case Study 2 - Offshore wind France Compliance and commissioning support

Construction of an offshore wind farm 16.3 km off the French coast, comprising 62 wind turbines over 75 km² and a central offshore substation stepping up the voltage from 66 kV to 250 kV before grid transmission.

CHALLENGES

The core challenge was to ensure local regulatory compliance and workforce safety throughout a complex offshore project, securing the mandatory certifications required to activate electricity sales revenues.

OUR ASSIGNMENT

- Electrical design validation for both wind turbines and the offshore substation, alongside support for operational procedures
- Personnel safety inspections, subsea and onshore cable connection monitoring, and initial compliance verification
- Technical construction supervision for the dedicated maintenance base
- Regulatory support and liaison with French authorities



KEY BENEFITS

Apave's involvement delivered tangible value at every stage of the project:

- **Accelerated the electricity supply contract activation:** Secured the compliance certificate required to activate the Electricity Supply Contract.
- **End-to-end compliance & safety:** Ensured on-site safety and equipment compliance across all project phases.
- **Regulatory alignment:** Streamlined alignment between local regulations and international project standards.

CONTEXT

Case Study 3 - Offshore wind United States Wind turbine blade inspection

As part of monitoring the integrity of its offshore assets, a wind turbine manufacturer commissioned Apave to carry out an inspection and non-destructive testing (NDT) campaign on an offshore wind farm located in the United States.

OUR ASSIGNMENT

Apave carried out an inspection campaigns to assess the structural condition of offshore wind turbine blades, combining :

- Internal visual inspection using an autonomous rover
- External ultrasonic non-destructive testing performed via rope access using our unique battery-powered, automated scanners

KEY BENEFITS

Clear insight into blade condition: Combined internal visual inspections and external ultrasonic testing provide evidence of the blades' structural condition.

Assessment of potential damage: Inspection findings support the assessment of structural damage potentially caused by lightning strikes or operation.

Integrated expertise: Advanced NDT capabilities, rope access proficiency and wind energy experience brought together within one inspection campaign.

CHALLENGES

The main objective of this intervention was to evaluate the structural impact of lightning strikes on 100-meter offshore wind turbine blades and determine whether operation had caused any structural damage.



The benefits of Apave's support

Partnering with Apave for your onshore or offshore wind project means de-risking your investments, maximizing operational performance, and streamlining compliance throughout the entire facility lifecycle.

- **A single partner for all your needs:** comprehensive, tailored support from initial design right through to commissioning your wind farm.
- **Benefit from maximum responsiveness in the field:** our global network of branch offices and subsidiaries guarantees rapid deployment and deep expertise in local requirements for all your wind energy projects.
- **Risk mitigation:** our independent technical expertise secures your investments, speeds up regulatory approvals, and simplifies financing for your wind energy projects.



[We're here to support you](#)

[Let's work together to support your wind power projects](#)