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WindEnergy Hamburg is one of the key global meeting points for this transformation. It brings together manufacturers, developers, technology providers, investors and industry professionals while offering a valuable perspective on the direction of the global wind market.

With this special issue, Rüzgar Enerjisi Magazine brings Türkiye's growing wind energy ecosystem to Hamburg. The country has developed strong capabilities across turbine components, electrical equipment, generators, towers, engineering, maintenance, logistics and digital solutions.

The next major step will be offshore wind. Türkiye's planned offshore development could create opportunities far beyond new generation capacity, supporting ports, maritime logistics, cable and steel production, engineering, maintenance and related industrial services. Combined with the country's existing manufacturing base, this could strengthen Türkiye's role in the regional wind energy supply chain.

Our role as a sector publication is to go beyond reporting developments. We aim to provide accurate, independent and reliable information while helping build stronger connections between Türkiye and the global wind energy industry.

During WindEnergy Hamburg 2026, visitors and exhibitors can pick up a complimentary copy of this special issue of Rüzgar Enerjisi Magazine from the designated Media Corner areas at the exhibition.

I hope WindEnergy Hamburg 2026 will create new partnerships, investments and long-term opportunities for our sector.



Mesut Kul | Managing Editor | Rüzgar Enerjisi – MONETA Media Group







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ENERCON continues to power the growth of the Turkish wind energy industry with its pivotal role in transforming the renewable energy landscape and reinforcing the nation's commitment to sustainable power generation. Celebrating 28 years in the country, ENERCON has been at the forefront of technological ad-vancements in the wind energy industry over the past quarter century, aligning its local production investment plans to further strengthen Türkiye's renewable energy infrastructure.

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Mature Capital's four-year track record



Habib Babacan | Founder & Managing Director | Mature Capital

Mature Capital marks its fourth anniversary in September 2026.

Mature Capital focuses exclusively on wind energy projects. The company was founded by Habib Babacan, an experienced professional in Türkiye's wind energy sector.

Mature Capital provides investors with management and strategic advisory services in wind project mergers and acquisitions, project development, portfolio creation and development, as well as executive-level decision support for wind turbine procurement, construction and electrical works during tendering and construction.

15 investors, 22 consultancy projects

Over the past four years, Mature Capital has completed 22 consultancy projects for 15 wind energy investors. These include established investors with multiple wind farms and industrial companies seeking to generate electricity for their own consumption. The client base also includes Turkish investors expanding internationally and investors with whom Mature Capital collaborated throughout the development of wind-plus-storage project portfolios.

Mature Capital provided management support to established investors by helping to optimise ongoing activities, assess challenges from different perspectives, share insights into market segments outside their current operations, and develop solutions to project-specific issues.

The company also provided executive-level management support to industrial investors seeking to meet their electricity needs by installing one or two turbines. This support covered the selection of appropriate consultancy services, feasibility studies and turbine selection.

As interest among Turkish investors in overseas wind energy investments has increased, Mature Capital has supported project-specific requirements and, together with its teams, conducted technical, legal and commercial reviews.

For wind-plus-storage portfolio development, Mature Capital provided executive-level management support through direct involvement in investor projects. The work included consolidating and interpreting advice received across multiple disciplines, identifying gaps between consultancy scopes, guiding project progress and determining priority actions.

Over the past four years, Mature Capital has worked with different investor groups across the sector, providing services for 22 wind projects with a combined installed capacity of 860 MW.

Selected consultancy projects

Details of selected reference projects are provided below.

Continued on next page →


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Investor	Year	Advisory/consultancy project description
Electricity utility	2023	M&A advisory: Completion of the acquisition of an operational 25 MW wind power plant by an electricity utility. Services included M&A advisory, coordination of buyer-seller relations and communications, and due diligence for the buyer.
Turkish conglomerate	2023	Due diligence services: Review of a potential acquisition of an operational 500 MW wind farm in Iowa, United States, including turbine supply and service agreements and reporting of critical points to the investor.
Turkish construction company	2023	Advisory and due diligence: Review of two wind farms under construction in Germany for an Istanbul-based Turkish construction company. The work included reviewing technical documents, setting financial parameters and drafting acquisition offer letters.
Turkish renewable energy component manufacturer	2022–2023	Financial model development and teaser preparation for financing: Development of a financial model and investment teaser for a greenfield manufacturing plant planned by a Turkish renewable energy component manufacturer. Services included presenting the investment to creditors and participating in negotiations.
Textile/yarn manufacturer	2025–2026	Investment advisory and wind turbine procurement: Support for a self-consumption wind energy project for a Turkish textile/yarn manufacturer, including negotiation and signing of a turbine supply and service agreement with Goldwind.
Turkish conglomerate — construction/energy	2026	Due diligence services: Review of a potential acquisition of an operational 50 MW wind farm in Türkiye, including site visits, review of technical documents and evaluation of critical details with the investor.

Thanks to Türkiye's wind energy sector

We would like to thank all the investors who have chosen to work with us on their investments and projects since Mature Capital was established, as well as our colleagues, business partners and the wider wind energy sector in Türkiye.

Mature Capital will continue to provide high-quality, reliable services to wind energy investors and the wider sector in the coming years.



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As wind turbines become more technically complex, cable systems play an increasingly important role in maintaining reliable power, control, signal and communication functions.

Inside a turbine, cables are exposed to mechanical movement, torsional forces, vibration, temperature changes, UV radiation and, depending on the application, oils and chemicals. Cable selection therefore depends not only on electrical capacity, but also on mechanical resistance and suitability for long-term operation.

From nacelle to grid connection

Üntel Kablo develops cable solutions for different sections of the turbine, including the nacelle, tower and power transmission infrastructure.

Within the nacelle, cables support low-voltage power distribution, control systems, sensor communication, data transmission and automation. In the tower, they provide power and control connections between the turbine and transformer while supporting monitoring and communication functions.

The company's wind energy portfolio includes torsion-resistant and fixed-installation power cables, low-voltage rubber and halogen-free cables, medium-voltage cables, control and signal cables, shielded control cables and cables for internal installations and panels.

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Wind turbine cabling must withstand repeated mechanical loads throughout its operating life.

Üntel develops application-specific cables considering vibration and torsion, temperature variations, UV exposure, electromagnetic interference and contact with chemicals or oils.

The company states that its wind energy cable solutions are supported by testing in its accredited laboratories and production processes approved by TÜV Rheinland.

With nearly half a century of manufacturing experience and a portfolio exceeding 25,000 products, Üntel Kablo also supplies demanding applications in oil and gas, offshore and onshore energy, petrochemical, mining and heavy industry.

This experience is increasingly being transferred to wind energy projects, where reliable power and data transmission depends on components designed to perform under constant movement and changing environmental conditions.

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ENERCON E-175 EP5 E2: The real innovation is not the 7 MW rating



A 175-metre rotor and 7 MW rated power are the headline figures of the E-175 EP5 E2. However, one of the features that makes ENERCON's new platform particularly noteworthy is its split-generator design, which aims to make large-scale direct-drive technology practical in terms of logistics, installation and serial production. Rüzgâr Enerjisi Magazine examines the model from the perspectives of engineering, competitiveness, certification, and its manufacturing and installed-capacity footprint in Türkiye.

TECHNICAL SPECIFICATIONS

- 7.0 MW
- 175 m rotor
- approx. 24,050 m² swept area
- approx. 291 W/m² specific power
- 25-year design life
- 112–175 m hub height

The 7 MW power class alone is not enough to assess the turbine

The E-175 EP5 E2 has a rated power of 7.0 MW and a rotor diameter of 175 metres, and is designed with a gearless, variable-speed drivetrain and full-power converter. According to the official technical data, the design life is 25 years; cut-in wind speed is 2.5 m/s and cut-out wind speed is 25 m/s. Hub-height options of 112, 119, 132, 162 and 175 metres allow the turbine to adapt to different site conditions.

A 175-metre rotor has a swept area of approximately 24,050 m². Based on a rated power of 7 MW, this corresponds to a specific power of approximately 291 W/m². This indicates that the design is based not only on rated power but also on a large rotor area intended to increase energy production. For project assessments, however, the more meaningful parameters include rotor area, tower height, net annual energy production (AEP), transport constraints and lifecycle cost.

The real story of the E-175 E2: A split direct-drive generator

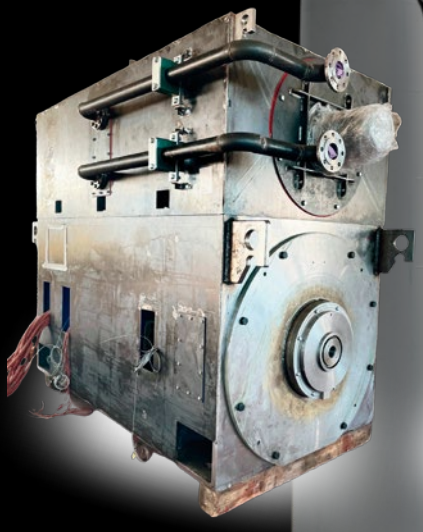
The most notable component of the E2 platform is its disc-shaped, outer-rotor permanent-magnet generator, approximately 10 metres in diameter. The generator can be divided horizontally into two sections in order to address road-transport and lifting constraints, which become increasingly critical as direct-drive systems scale up. According to data published as part of ENERCON's test programme, each generator half has been kept within approximately 4.99 metres of transport width and a 62-tonne weight limit. The installation process has also

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been designed to be carried out using commonly available 800-tonne-class cranes.

The significance of this engineering choice is considerable, because removing the gearbox does not automatically guarantee lower maintenance costs. Large generators, bearing systems, power-electronics equipment and cooling systems bring their own maintenance and service requirements. Several years of commercial operating data will be needed before firm conclusions can be drawn on the E2's operating expenditure (OPEX), critical-component reliability and turbine-availability performance. From an independent review perspective, this remains one of the most important areas requiring confirmation from field data.

Improvement in annual energy production and the certification process

In April 2026, ENERCON announced that, depending on site conditions, the E2 platform had achieved an increase of up to 2.8% in annual energy production (AEP) and reference energy yield. An improvement of a few percentage points can have a material impact on project economics over a 20- to 25-year operating life. However, this improvement should not be interpreted as a fixed increase applicable to all projects. Final energy production continues to depend on project-specific factors such as wake losses, curtailment, air density, turbulence level, grid constraints and turbine availability.

The final IECRE type certificate issued by TÜV SÜD on 24 August 2026 can be regarded as one of the most important structural milestones in the development of the E2 platform. Certification significantly reduces



uncertainty, particularly in permitting, technical due diligence and investor assessments in international markets. However, the financial credibility and financing capability of a new wind turbine are not determined by rated power alone. Bankability is formed by the combination of completed certification, serial-production readiness, warranty and service structures, and an operating history demonstrating long-term field performance.

The E2's position in the 7 MW-plus turbine market

In Windpower Monthly's assessment of 7 MW+ onshore turbines, the E-175 EP5 E2 is positioned in the same segment as European platforms such as the Nordex N175/6.X, Vestas V172-7.2 MW and Siemens Gamesa SG 7.0-170. The comparison also includes Chinese turbine models with rated capacities ranging from 8.5 MW to 11 MW. This illustrates that the increasingly prominent "megawatt race" in the wind industry cannot, on its own, explain project success. Final competitiveness is shaped by the combination of rated power with energy production, capacity factor, logistical feasibility, grid compatibility, reliability and lifecycle cost.

In Windpower Monthly's 2025 Turbines of the Year awards, the E2 received the Gold Award in the 7.0 MW-plus onshore turbine category, ahead of the Nordex N175/6.X and Vestas V172-7.2 MW. An award cannot be regarded as proof of field performance on its own; however, the jury's emphasis on the split outer-rotor permanent-magnet generator design and the logistics concept is an important indication that the points at which the platform differentiates itself from an engineering perspective have also been recognised by the sector.

Türkiye: From a destination market to a manufacturing base

The significance of the E2 platform for Türkiye stems not only from its role as a product sold into the market, but also

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from its relationship with the region's wind-energy supply chain. Looking at publicly announced 2026 orders, a total of 371 MW of E2 capacity has been committed: 70 MW for REGES Elektrik's Demirli project, 140 MW for RT Enerji's Aydın-Denizli project and 161 MW for Polat Enerji's Balıkesir 1 project. This volume indicates that Türkiye has become an important application and reference market for next-generation onshore wind-turbine technologies.

During the same period, ENERCON announced an investment in a rotor-blade factory in Bergama with an annual production capacity of 150 rotor sets, and established strategic manufacturing partnerships with ATEŞ Wind Power and ATEŞ Çelik for the production of generator and hybrid steel tower components. This indicates that the E-175 E2 is moving beyond being only a turbine platform sold in Türkiye and is beginning to integrate into the country's wind-energy industrial ecosystem. The platform is aligned with YEKA's local-content objectives while also connecting with Europe's supply-chain requirements and manufacturing capabilities for large-rotor technologies. From this perspective, the E2 can be regarded as one of the notable examples of Türkiye's transition from a sales market towards a manufacturing and supply-centre role.

Editor's assessment

According to Rüzgâr Enerjisi Magazine, what makes the E-175 EP5 E2 particularly interesting is not simply that it reaches 7 MW, but how it scales direct-drive technology. The completion of the final IECRE type certification and the growing order portfolio indicate that the platform has entered a commercial scaling phase. However, the final assessment will depend on long-term availability performance, service and maintenance costs, the field behaviour



of major equipment and project-specific net annual energy production (AEP) data. For this reason, the key question at WindEnergy Hamburg is not the next increase in rated power, but the extent to which ENERCON can create additional project value from the platform through software, control strategies and operational optimisation.

Sources

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5. Windpower Monthly, "Turbines of the Year 2025" / 7.0 MW-plus onshore turbine assessment. Link

6. ENERCON, Türkiye order and localisation announcements: REGES Elektrik 70 MW; RT Enerji 140 MW; Polat Enerji 161 MW; Bergama rotor-blade plant; ATEŞ Wind Power / ATEŞ Çelik production partnerships. Link

Note: The review is based on publicly available manufacturer documents, an independent industry publication and editorial calculations available as of 25 August 2026. The magazine has not conducted an independent field test of the turbine.



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Wind energy continues to play an important role in the global energy transition, while the growing scale and geographical diversity of projects increase the need for experienced technical teams and reliable field execution.

Nova RES provides installation and service solutions for wind turbine projects in different markets. Its activities cover mechanical and electrical installation, maintenance, major component exchange, technical manpower support and project execution, with a focus on safety, quality and operational reliability.

Through Nova RES OY, Nova RES LDA and Nova RES LLC, the company combines local project requirements with international field experience. Today, Nova RES operates through its presence in Türkiye, Finland, Portugal and Ukraine, supporting customers with technical teams and field-oriented project solutions.

The company has been involved in the maintenance of more than 250 wind turbines across Europe. In recent years, its activities in the Nordic region have included the mechanical and electrical installation of more than 20 turbines at the Oulainen project in Finland and the Fasikan project in Sweden. These projects have contributed to Nova RES's experience in executing wind energy activities under demanding Nordic site and weather conditions.

In addition to installation and maintenance services, Nova RES has supported various projects with MCU manpower and technical teams. These activities include a dedicated MCU project at Knae WF in Sweden.

The company's international references also include the installation of 9 wind turbines at the Yuzhne project in Ukraine and the electrical installation of 16 turbines at a project in Croatia. Outside the European Union, Nova RES has also participated in service activities, particularly in the MENA region.

Experience gained across different countries, project structures and operating conditions continues to strengthen the technical capabilities of the Nova RES team. The company aims to support wind energy projects with experienced personnel, adaptable field solutions and an approach centred on quality, safety and performance.

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With more than a decade of hands-on experience in wind turbine operations, Windrix delivers independent maintenance, repair and parts supply for onshore wind fleets — with specialist expertise in blade repair and gear welding.

Windrix was founded in Türkiye to bring more than ten years of individual field experience under one corporate roof. Its teams have carried out maintenance, troubleshooting and inspection campaigns on turbine platforms of different OEMs, in Türkiye and across international projects — experience that shapes how the company works today: quality-focused, safety-first and committed to keeping its promises.

That field background is what sets Windrix apart as a supply partner. Because its engineers have serviced the components they now source, they help operators identify the right part — not just deliver the requested one. Filters, consumables and critical components follow periodic maintenance cycles, and Windrix anticipates these needs to keep lead times short.

For turbine owners, service companies and plant operators, the result is a single point of contact covering a wide range — from specialist blade repair to yaw and pitch gear welding, from lightning protection retrofits to spare parts logistics — simplifying procurement and reducing downtime in increasingly complex O&M programmes.

> ***"The wind doesn't wait. Access to the right part, at the right time, decides plant performance."***



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SCAN TO MEET US

Engineered for Demanding Wind Loads: Kaleliler Fastening Systems for Wind Energy Applications

By Kaleliler Fasteners Engineering Team

Modern wind turbines place demanding mechanical and environmental requirements on structural connections. Kaleliler Fasteners develops high-strength bolting systems for wind energy applications, combining controlled manufacturing, surface protection, preload performance, testing and traceability.



Kaleliler Fastening Systems for Wind Energy Applications

From onshore turbines exposed to variable wind loads to offshore installations operating in corrosive marine environments, structural connections are expected to perform under repeated loading, vibration and long fatigue cycles. Tower flanges, nacelle structures, foundation interfaces and auxiliary steelwork therefore require fastening systems with consistent mechanical properties, controlled surface conditions and reliable documentation throughout the supply chain.

1. Automated hot forging and surface protection

The performance of a structural bolt begins with the forming process. Kaleliler operates automated robotic hot-forging lines for large-diameter structural bolts up to M48. Controlled induction heating and repeatable forming parameters are used to support consistent grain flow, dimensional stability and mechanical performance in components intended for demanding structural applications.

Surface protection is equally important in wind energy projects, particularly where components are exposed to humidity, salt, temperature variation and long service intervals. Kaleliler uses automated hot-dip galvanizing processes for applicable product groups. Controlled process parameters are intended to provide consistent zinc coating while maintaining the dimensional requirements of the fastening system and its threads.

2. Preloaded and non-preloaded structural bolting

Wind turbine structures include both critical preloaded joints and secondary structural connections. Kaleliler's product portfolio includes CE-marked structural bolting assemblies for applications covered by the EN 14399 and EN 15048 series, subject to the applicable product configuration and declaration of performance.

Preloaded structural bolting assemblies are used where controlled clamping force and resistance to slip or fatigue are central to the joint design. In wind energy projects, these applications can include tower section flanges, foundation-related interfaces and other dynamically loaded steel connections. Non-preloaded assemblies are used in appropriate secondary steel structures, auxiliary frames and infrastructure where the joint design does not require a specified preload.

3. Preload control with factory-lubricated bolting sets

Achieving the required preload during installation depends not only on bolt strength but also on the friction conditions of the complete assembly. This becomes particularly important

Continued on next page →

EVERY BOLT HAS A LOAD TO CARRY.

Wind energy applications require fastening solutions selected according to load conditions, material requirements and operating environment.

Kaleliler manufactures standard and custom fasteners with an application-oriented engineering approach.

8.8 · 10.9 · 12.9

Standard & Custom Production



KALELİLER®
Cıvata / Fasteners

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← Continued from previous page

K-class	Characteristic	Application value
K1	Controlled k-factor range	Suitable for specified preloading procedures where repeatable torque-to-preload behaviour is required.
K2	Tighter control of k-factor scatter	Supports applications where more precise preload control and lower variation are required.

for galvanized fasteners, where uncontrolled friction can affect the relationship between applied torque and resulting clamping force.

For applications requiring defined tightening behaviour, Kaleliler supplies factory-lubricated bolting sets with controlled k-class performance in accordance with the relevant EN 14399 requirements. Depending on the declared product configuration, K1 or K2 performance classes can be used to support repeatable tightening and preload control. K2 represents tighter control of torque coefficient variation than K1 and is therefore relevant where greater precision in torque-to-preload behaviour is required.

4. In-house testing and full traceability

As wind turbine platforms increase in size, fastening systems are required to demonstrate predictable performance under higher loads and more demanding installation conditions. Kaleliler's quality-control infrastructure supports mechanical, impact and torque/preload testing for large-diameter fastening systems, with project-specific test documentation available according to product and customer requirements.

• Torque and preload testing: verification of torque-tension behaviour and clamping performance for applicable bolting assemblies.

• Mechanical and impact testing: tensile strength, proof load, hardness and Charpy V-notch impact testing, including low-temperature requirements where specified.

• Traceability and documentation: delivery batches can be traced to raw-material heat or cast information, supported by EN 10204 3.1 material certificates and applicable CE Declarations of Performance (DoP).

5. Carbon data and evolving European supply-chain requirements

Environmental reporting is becoming a more visible part of European industrial supply chains. For iron and steel products that fall within the applicable scope of the EU Carbon Border Adjustment Mechanism (CBAM), importers increasingly require reliable information on embedded emissions and production-related carbon data.

Kaleliler states that it tracks and reports carbon-related production data to support customer documentation where applicable. The company combines automated manufacturing, controlled heat-treatment processes and raw-material traceability with project-specific reporting requirements. For wind energy OEMs, EPC contractors and component suppliers, this creates a clearer link between mechanical product documentation and the environmental data increasingly requested in European procurement processes.

Fastening systems as part of turbine reliability

Fasteners represent a comparatively small share of a wind turbine's overall component count and investment value, yet they perform a critical structural function. As turbine sizes, hub heights and offshore deployment continue to increase, the requirements placed on bolted connections are becoming more demanding. Manufacturing consistency, controlled preload behaviour, corrosion protection, testing and traceability are therefore becoming integral parts of fastening-system selection rather than stand-alone quality criteria.

Kaleliler positions its wind-energy product range around these requirements, with structural bolting systems designed for demanding onshore and offshore applications and supported by technical documentation for international projects.

About Kaleliler Fasteners

Kaleliler Fasteners (Kaleliler Cıvata Sanayi ve Ticaret A.Ş.) is a Türkiye-based manufacturer of high-strength structural bolting systems and customized fasteners serving wind energy, infrastructure and heavy construction applications. Its production capabilities include robotic hot forging, heat treatment, surface protection and quality-control processes for certified structural fastening systems.

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Scan for more information.

Eawind strengthens its wind turbine service capabilities across Türkiye and Germany



Operating through Avrasya Rüzgar in Türkiye and Eawind GmbH in Germany, Eawind provides inspection, repair, maintenance and component supply services for wind turbines from European and Chinese manufacturers.

Eawind is expanding its technical service activities across Türkiye and Germany, supporting wind farm owners, operators and turbine manufacturers throughout different stages of the turbine lifecycle. The company's service portfolio focuses particularly on wind turbine blades, composite structures, inspection, repair and retrofit applications.

With more than two decades of experience in blade production and repair, Eawind provides field services through different access methods, including rope access, cranes and maintenance platforms. According to company data, its teams have worked on more than 5,000 wind turbine blades across over 600 projects.

The company's technical scope includes blade inspection, structural and cosmetic blade repairs, lightning protection system testing and repair, leading-edge protection applications, retrofits, quality assurance and quality control, tower cleaning, NDT spesific inspections, end-of-warranty inspections and blade disposal and disposal management.

Technical support for different turbine platforms

Eawind provides independent technical services for wind turbine fleets incorporating equipment from manufacturers including ENERCON, Nordex Acciona, Siemens Gamesa and GE. Its teams undertake projects in both Türkiye and Germany, enabling the company to support customers in two established European wind energy markets.

Eawind, as an accredited GWO Training Provider and provides technical trainings for the market and for its own needs. The company places particular emphasis on technician training as blade dimensions, turbine capacities and repair requirements continue to evolve. This approach is intended to maintain consistent working practices across inspection, composite repair and maintenance operations conducted under different site conditions.

Through its Germany-based operation, Eawind GmbH, the company extends its service capabilities to the European market. Its organisational structure in Türkiye and Germany allows technical teams and project resources to be deployed according to the location and requirements of individual wind farms.

Service agreements with Chinese manufacturers

Alongside its work on European turbine platforms, Eawind is also developing its cooperation with Chinese wind energy equipment manufacturers.

According to information provided by the company, Eawind works with Goldwind, Sinoma and Aeolon under service agreements. The cooperation









covers technical service requirements associated with turbines and wind turbine blades supplied by these manufacturers.

This area is expected to become increasingly relevant as Chinese turbine and component manufacturers expand their activities in Türkiye and Europe. Access to trained local service teams can support field response, inspection and repair operations without requiring every technical resource to be mobilised from the equipment manufacturer's home market.

Eawind's experience with both European and Chinese equipment platforms positions the company to address a wider range of blade and turbine service requirements. However, the scope of each assignment is defined by the relevant project, turbine platform and service agreement.

Second-hand wind turbine component supply in Türkiye

Eawind also supplies second-hand wind turbine components to operators in Türkiye. The company's supply activities include turbine parts, wind turbine blades and gearboxes required for operating assets.

The availability of compatible components can be important for older wind farms, particularly when original components have long delivery periods or are no longer included in the manufacturer's current production programme. In these cases, sourcing the correct part requires attention to the turbine model, component specifications and operational requirements of the project.

By combining field inspection and repair capabilities with component sourcing, Eawind aims to provide a broader technical support structure for wind power plants. This service model covers both planned maintenance requirements and technical needs arising during the operational life of a turbine.

With operations in Türkiye and Germany, experience across multiple turbine platforms and service cooperation with European and Chinese manufacturers, Eawind is continuing to develop its role as an independent technical service provider for the wind energy industry.

www.eawind.com

BERDAN CIVATA Strengthens Wind Supply Chain Quality with APQP4Wind Expertise







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Founded in 1980 in Tarsus, Mersin, BERDAN CIVATA manufactures high-strength fastening systems for wind turbine foundations, towers and blades. Its fully integrated industrial facility includes 60,000 m^2 of enclosed production space and supports both standard and project-specific requirements.

The company reports more than 50,000 tonnes of fastening systems supplied for use in over 5,000 wind turbines, including foundation anchor cages, tower connection bolts, blade studs and other safety-critical components.

PREVENTIVE QUALITY PLANNING

Wind turbine fasteners operate under demanding mechanical loads throughout their service life. Material traceability, controlled processes, risk management and robust documentation are therefore essential to structural integrity and reliable operation.

BERDAN CIVATA combines manufacturing, heat treatment, a patented hot-dip galvanizing process designed to prevent hydrogen embrittlement, and testing within the best equipped test laboratory in Türkiye and Europe with the largest scope and capacity.

CUSTOMER VALUE

The company's in-house laboratory is accredited by TÜRKAK in accordance with ISO/IEC 17025. Combined with integrated production, heat treatment and galvanizing capabilities, the laboratory supports verified testing, documented quality assurance and faster technical feedback throughout production.

APQP4Wind-trained specialists further strengthen early risk identification, project documentation and communication with international customers. The training certificates are individual qualifications awarded to participating employees.



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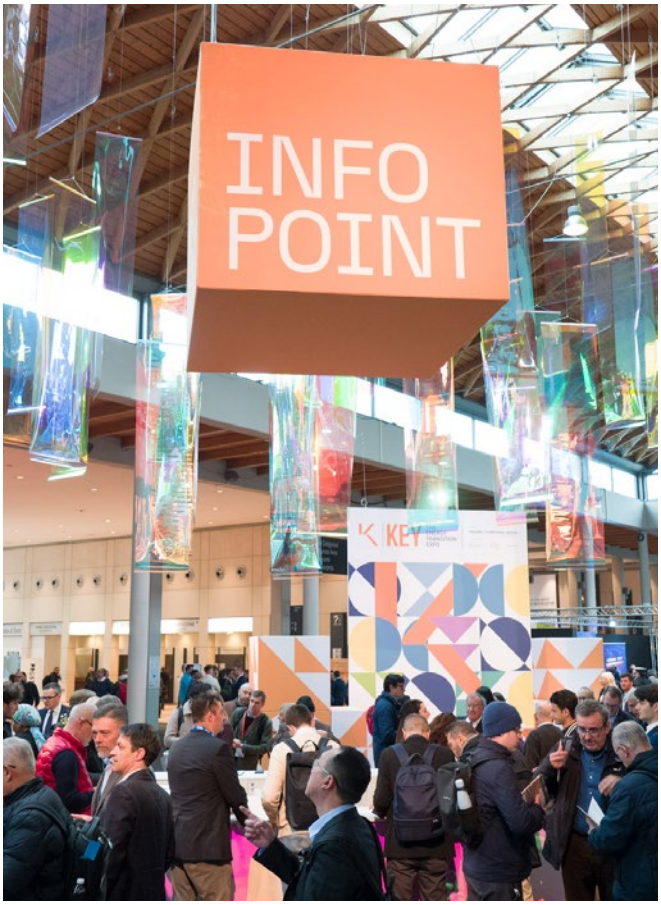
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KEY 2027 to expand wind energy focus across the Mediterranean



The IEG Energy Transition Expo will return to Rimini Expo Centre, Italy, on 10-12 March 2027. Its dedicated WEM area will bring together companies and organisations active across the onshore and offshore wind energy value chain.

KEY - The Energy Transition Expo will return to the Rimini Expo Centre in Italy from 10 to 12 March 2027. Organised by Italian Exhibition Group (IEG), the event will bring together technologies and services for solar power, wind energy, energy storage, hydrogen, energy efficiency, e-mobility and sustainable cities. Its dedicated wind section, WEM - Wind Expo for Med, will focus on developments across both onshore and offshore wind energy.

The 2027 edition is being prepared against a backdrop of continued growth in Türkiye's wind market and industrial supply chain. According to WindEurope, Türkiye installed 2.1 GW of new wind power capacity in 2025, ranking second in Europe after Germany. All of the country's new capacity recorded during the year was onshore.

Alongside new project development, Türkiye continues to expand component manufacturing, engineering expertise and project delivery capabilities. The country's candidacy to host the WindEurope Annual Event 2028 in Istanbul also reflects the sector's aim to strengthen its international visibility and its links with European and Mediterranean markets.

Seven sectors under one exhibition structure

KEY 2027 will retain its cross-sector structure, with seven exhibition areas covering solar energy, wind power, energy storage, hydrogen, energy efficiency, e-mobility and sustainable city solutions. The format is designed to present the energy transition as an interconnected system in which renewable generation, storage, efficiency and electrification develop together.

The exhibition will also include Su.port - Sustainable Ports for the Energy Transition, an area focusing on the role of ports in the energy transition. A dedicated space for start-ups, innovative SMEs and skills development is also planned. The international programme will be supported by hosted buyers, official delegations and trade associations from major energy markets.

WEM to cover the onshore and offshore wind supply chain

Within KEY, WEM - Wind Expo for Med will serve as the area dedicated to the wind energy supply chain. It is expected to bring together turbine and component manufacturers, project

Continued on next page →

KEY

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→ Continued from previous page

developers, investors, engineering companies, service providers, technology suppliers, plant operators and utilities.

The exhibition area will cover solutions supporting the development, construction and operation of onshore and offshore wind projects. For Turkish companies seeking to expand their activities in Europe and the Mediterranean, the event offers a setting for meetings with potential commercial and project partners across different stages of the value chain.

KEY positions WEM as a meeting point for wind markets across Europe, Africa and the Mediterranean basin. Its location within the wider exhibition is intended to connect wind-specific discussions with adjacent subjects such as energy storage, hydrogen, efficiency, electrification and the changing role of ports in energy infrastructure.

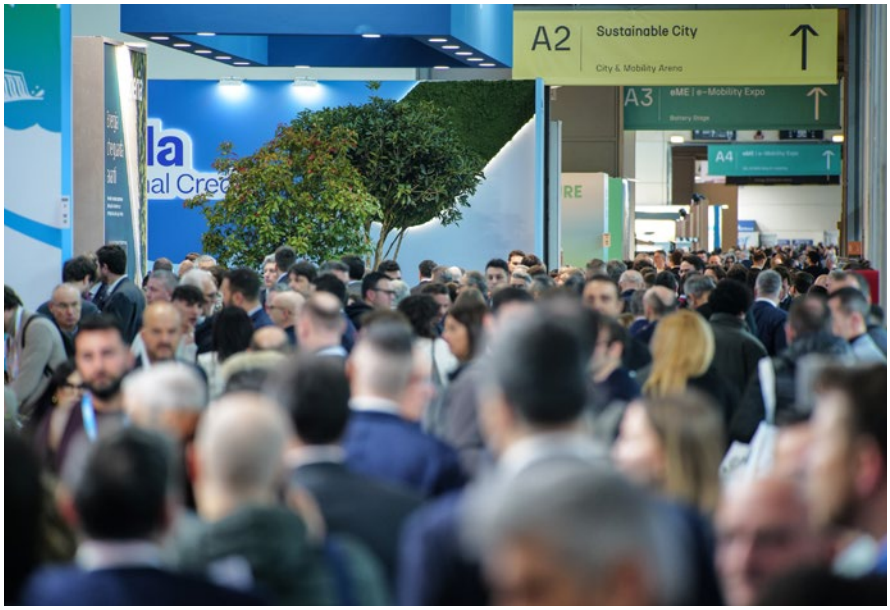
KEY 2026 results set the baseline for the next edition

Figures show that KEY 2026 hosted more than 1,000 exhibiting brands, including 320 from outside Italy. The event also welcomed more than 500 hosted buyers and official delegations. Total attendance increased by 10% compared with the previous edition, with foreign visitors up by 9%.

KEY 2027 will also feature a conference and technical session programme developed with its Technical Scientific Committee. The programme is expected to bring together institutions, industry associations, businesses and the research community to discuss the technical, economic and policy issues shaping the energy transition.

Beyond the exhibition halls, the sessions are intended to provide a forum for comparing market experience, scientific evidence and implementation priorities. This programme will complement the commercial meetings taking place across the seven exhibition sectors and the event's international business network.





The next edition of KEY - The Energy Transition Expo will take place at the Rimini Expo Centre from 10 to 12 March 2027, with WEM continuing as its dedicated platform for the wind energy industry.



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ABP TDS Engineering expands wind tower component production

ABP TDS Engineering is expanding its manufacturing capabilities in wind turbine tower components, supported by international references, certified production processes and scalable capacity.



Integrated engineering from production to storage

ABP TDS Engineering applies an integrated engineering approach across its conveying, storage and industrial manufacturing operations, covering processes from raw material intake to final product storage.

With more than 40 years of industrial experience, the company focuses on product precision, operational continuity and efficiency. Equipment manufacturing and plant installation are managed within the same engineering framework, supporting greater control over field performance.

Growing presence in wind energy

ABP TDS Engineering entered the energy sector in 2016 and has since focused on wind turbine components.

The company manufactures welded and non-welded internal and external tower components, combining its steel and aluminium processing expertise with the technical requirements of the wind industry.

To date, ABP TDS Engineering has produced components for more than 1,500 wind turbines. Its customer references include Nordex, Enercon, Vestas and Siemens, reflecting its participation in the international wind energy supply chain.

Certified and scalable production

ABP TDS Engineering holds ISO 9001, ISO 14001, ISO 45001, TS EN ISO 3834 and TS EN 1090 certifications. These standards cover quality management, environmental performance, occupational health and safety, welding quality and structural steel production.

The company currently has the capacity to manufacture and dispatch up to 90 sections per week, providing a scalable production structure for wind energy and industrial projects.

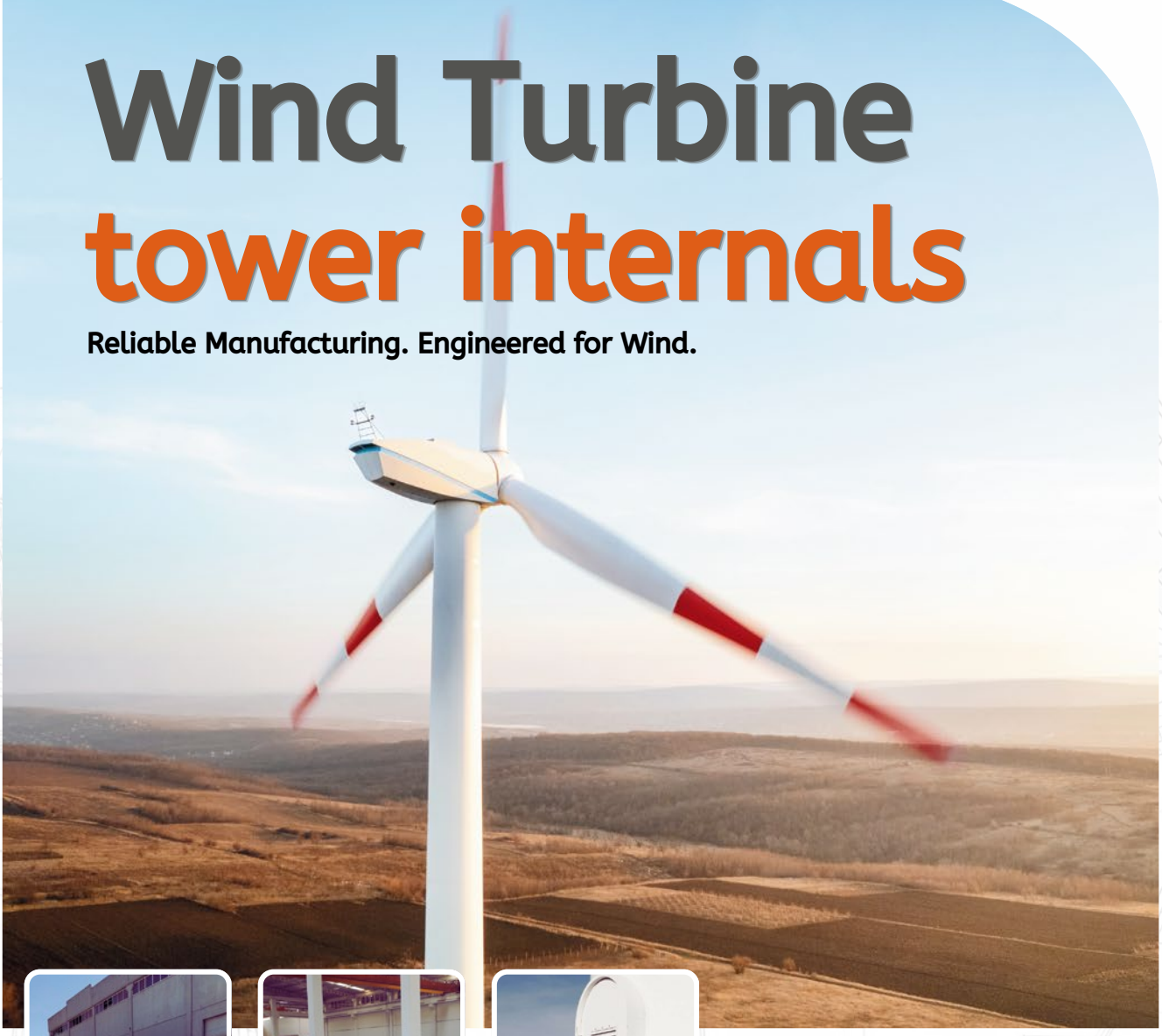
Beyond wind energy, its portfolio includes conveyor systems, steel silos, grain drying equipment and project-specific steel fabrication solutions.

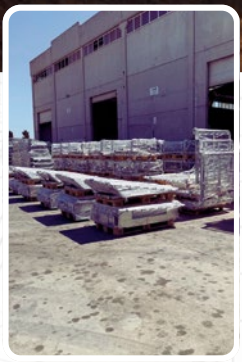
With its certified manufacturing infrastructure, growing wind energy experience and international customer references, ABP TDS Engineering is continuing to strengthen its role as a supplier to both the energy sector and wider industrial markets.

https://abptds.com/en/

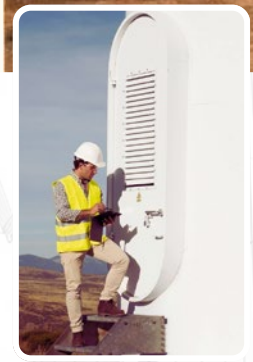
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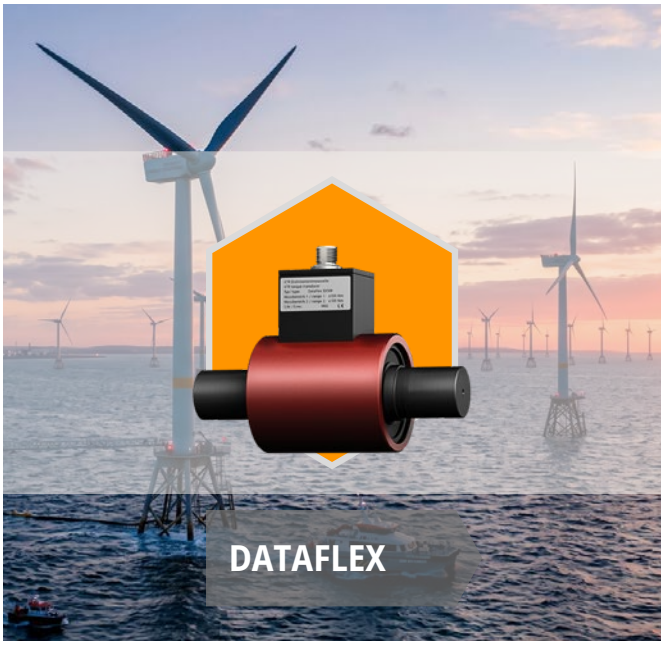
ABP TDS Engineering provides integrated manufacturing solutions for wind turbine components and industrial applications, combining engineering expertise with reliable production capabilities.

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Discover our capabilities
https://abptds.com

Torque, Data and Reliability: Predictive Maintenance in Wind Turbines

As wind turbines move towards higher capacities and offshore applications become more widespread, operational continuity and maintenance planning are gaining importance. Reliable operating data can help identify potential issues earlier and support maintenance decisions based on actual working conditions.



Predictive maintenance focuses on monitoring and evaluating data collected during operation, rather than inspecting equipment only after a failure occurs. This approach can enable maintenance requirements to be identified earlier and interventions to be scheduled according to the condition of the system.

Reliable data is therefore central to understanding equipment behaviour. In wind turbine drivetrains, the precise measurement of parameters such as torque and speed provides valuable information about actual operating conditions.

KTR's DATAFLEX® torque measuring shaft has been developed for the accurate measurement of torque and speed in variable and dynamic drive systems. The system can simultaneously measure four parameters: torque, speed, angle of rotation and direction of rotation. The DATAFLEX product range comprises 11 sizes covering measuring ranges from 10 Nm to 20 kNm.

Its applications include machine monitoring, process control and test bench technology. Combining torque and speed measurement enables the operating behaviour of rotating systems to be assessed more comprehensively.

Measurement technology, however, represents only one part of a predictive maintenance strategy. Its value depends on how the resulting data is interpreted and used to support maintenance decisions.

The importance of data in offshore applications

The role of predictive maintenance becomes particularly relevant in offshore wind turbines, where access and maintenance operations are more complex. Interventions must be coordinated with equipment accessibility and suitable operating conditions.

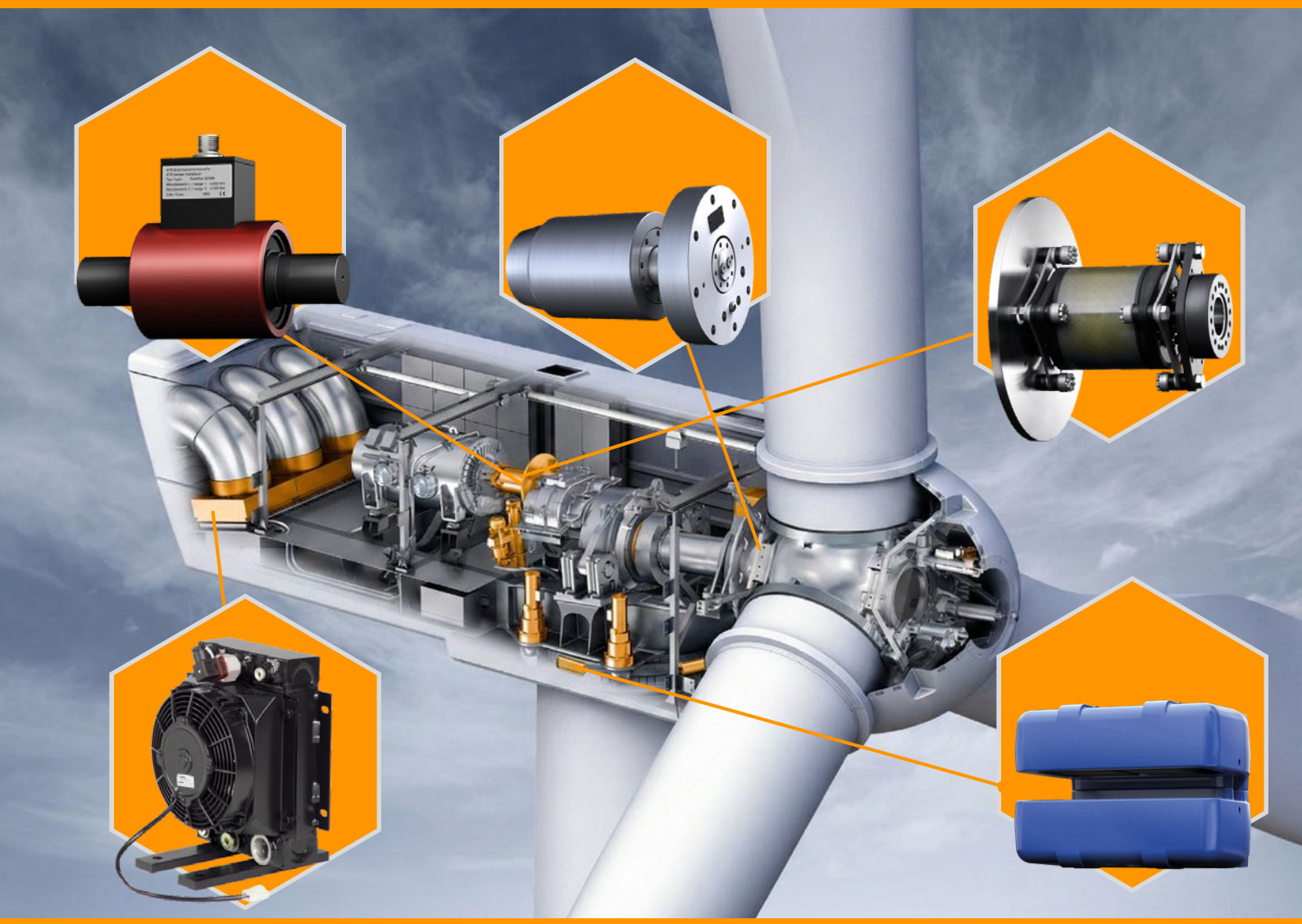
Making drivetrain behaviour more visible can therefore support better-informed maintenance planning. Continuous and accurate measurement of torque and speed can provide useful insight into how the drivetrain performs under actual operating conditions.

The objective is not simply to measure individual values. It is to understand the behaviour of the drivetrain and transform operational data into information that can be used within maintenance processes.

Reliability beyond measurement

Predictive maintenance is also closely linked to the maintenance requirements of the mechanical components used in the system. In offshore applications, where access is more difficult and maintenance operations are more demanding, components with low maintenance requirements and long service lives become increasingly important.

KTR's maintenance-free and low-maintenance coupling solutions are designed to support drivetrain reliability and contribute to reducing the risk of unplanned downtime. When measurement and monitoring technologies are considered together with the reliability of mechanical components, predictive maintenance can become part of a more integrated maintenance strategy.



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KATWIND Takes Field-Based Engineering Expertise from Türkiye to International Markets



As wind turbine fleets expand and mature, demand for specialised engineering, maintenance and rotor blade services is increasing. Türkiye-based KATWIND is developing its field experience and engineering capabilities for projects across international wind markets.

The wind energy sector is increasingly focused not only on new installations, but also on maintaining existing assets, extending turbine lifetimes and managing more complex field operations.

Against this background, KATWIND brings together engineering, project and site management, technical consultancy, wind turbine services, rotor blade inspection and repair, and field operations within an integrated technical structure.

Engineering shaped by the field

KATWIND's approach is based on combining engineering decisions with practical field experience. Wind turbine maintenance requires teams to manage technical requirements alongside weather conditions, access, occupational safety, logistics and project schedules.

This field-based perspective is particularly important in rotor blade operations. According to the company, repairing damage is only one part of the process. Identifying the type and cause of damage, assessing structural conditions, selecting the appropriate repair methodology and documenting the work are all part of the same quality chain.

Rotor blades and composite structures are therefore among KATWIND's main technical focus areas. Its activities include visual and advanced inspections, non-destructive testing, structural damage assessment and composite repairs.

From Türkiye to international markets

KATWIND is also seeking to transfer the engineering and operational experience developed in Türkiye to international projects.

The company identifies Europe, the Balkans, Eastern Europe, Central Asia and North Africa among the regions relevant to its international development strategy.

Working across different markets requires the ability to adapt to varying technical standards, regulations, working cultures and site conditions. KATWIND aims to develop its Türkiye-based experience into a service and engineering model that can be applied consistently across different geographies.

The company positions this approach around the needs of OEMs, investors and field operations, with the objective of acting as an independent technical partner rather than solely as a conventional service provider.

Preparing for an ageing turbine fleet

KATWIND expects the ageing of wind turbine fleets to increase demand for lifetime-extension projects, major component repairs and specialised rotor blade services.

As part of this development, the company is focusing on standardised procedures, quality systems, digital reporting and continuous technical training. The objective is to transform knowledge gained in the field into a repeatable engineering standard that can support projects in different countries.

For KATWIND, the underlying principle remains unchanged: staying close to the field, where engineering decisions, equipment and real operating conditions come together.

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GOWA
Global Offshore Wind Alliance

Amisha Patel, Executive Director of the Global Offshore Wind Alliance, says Türkiye’s estimated 75 GW offshore wind potential, established manufacturing base, skilled workforce and strategic location could position the country as a regional clean energy and manufacturing hub. According to Patel, Türkiye’s 5 GW offshore wind target for 2035 is ambitious but achievable if the right enabling conditions are put in place.



Amisha Patel
Executive Director, Global Offshore Wind Alliance

As Türkiye prepares to launch its first offshore wind tender, the country is entering a decisive phase in the development of its offshore wind market. Establishing a predictable investment framework, coordinating grid and port infrastructure, strengthening domestic supply chains and drawing on international experience will be critical to turning Türkiye’s offshore wind ambitions into commercially viable projects.

In this special interview for Rüzgar Enerjisi Magazine’s WindEnergy Hamburg edition, Amisha Patel, Executive Director of the Global Offshore Wind Alliance (GOWA), discusses Türkiye’s offshore wind potential, investor expectations, the country’s 2035 capacity target and the role that international cooperation could play in developing a competitive offshore wind ecosystem.

How does GOWA assess Türkiye’s offshore wind potential and its prospective role in the global offshore wind market?

Türkiye is entering offshore wind at an important moment for the global industry. Around the world, offshore wind has evolved from a handful of pioneering projects in Northern Europe into a truly global industry. According to the Global Wind Energy Council’s latest market intelligence, more than 92 GW of cumulative offshore wind capacity is now installed worldwide, over 50 GW is under construction, and the sector is expected to add more than 327 GW of new capacity over the next decade.

While Türkiye’s offshore wind market is still in its early stages, the country has many of the characteristics needed for long-term success, including strong natural resources, industrial capabilities, political commitment and an offshore wind roadmap already in place. With plans to launch its first offshore wind tender by the end of 2026 and install its first turbines by 2030-2031, the next few years will be decisive in determining whether Türkiye can successfully transition to a competitive offshore wind industry capable of supporting energy security, economic growth and regional clean energy leadership.

Türkiye has an estimated 75 GW of offshore wind potential, including substantial floating offshore resources. Combined with rapidly growing electricity demand, an established wind manufacturing industry, strong maritime capabilities and major coastal demand centres, Türkiye is well-positioned to become part of the next phase of offshore wind growth.

Offshore wind represents more than a new source of renewable electricity for Türkiye. It is an opportunity to strengthen energy security, reduce dependence on imported fossil fuels, support domestic industry, and position Türkiye as a regional clean energy and manufacturing hub.

These benefits also extend beyond Türkiye's borders. A successful offshore wind industry would establish offshore wind in a region where commercial deployment is still limited, creating opportunities for greater collaboration across the Mediterranean on infrastructure, supply chains and knowledge sharing.

Türkiye's progress will also be watched closely by many emerging markets seeking practical pathways to decarbonisation. The transition to offshore wind provides an important example for other emerging economies. It demonstrates that offshore wind is no longer limited to traditional European markets, helping build confidence amongst governments, investors and development finance institutions.

Türkiye's established manufacturing base, skilled workforce, strategic location between Europe and Asia and strengths in the wind, shipbuilding and maritime industries also position it to become an important supplier to regional offshore wind markets. In addition, its significant floating offshore wind potential could help accelerate the commercialisation of floating offshore wind by expanding the global pipeline of projects and supporting further cost reductions.

When considered together, these factors put Türkiye in a strong position to accelerate its own energy transition while also supporting the global offshore wind industry. As a new market, Türkiye can help diversify



the sector's growth, strengthen supply chains and advance regional collaboration in the Mediterranean.

As COP31 President, Türkiye also has a unique opportunity to demonstrate global leadership by integrating offshore wind into efforts to deliver the global electrification target while advancing broader climate, energy and economic goals.

What are the most important steps Türkiye should prioritise to establish a bankable, transparent and internationally competitive offshore wind market?

Türkiye has made significant progress in establishing the foundations for an offshore wind market, including the development of a clear roadmap and auction framework, and the identification of suitable development zones. These are important first steps towards creating a competitive market capable of attracting experienced international and domestic developers.

Looking ahead, one of the key priorities should be providing long-term policy and revenue certainty. Offshore wind projects are highly capital-intensive, with asset lifetimes typically exceeding 25 years. Investors and lenders therefore require confidence that projects will generate stable and predictable revenues over the long term. International experience has consistently shown that transparent market frameworks and predictable revenue mechanisms can help reduce financing costs and improve the bankability of projects.

Alongside revenue certainty, maintaining a transparent, predictable and competitive auction process, supported by clear permitting pathways, grid planning and long-term deployment signals, will be important to build investor confidence. Early engagement with industry and financial institutions can also help ensure that auction design reflects market realities while encouraging strong competition.

Ultimately, establishing a bankable offshore wind market is about creating a stable investment environment that balances government objectives with investor confidence. Drawing

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on international best practice, while tailoring solutions to Türkiye's national context, will help position the country as a competitive offshore wind market and support the successful delivery of its long-term clean energy ambitions.

From a global investor perspective, what regulatory, financial and technical conditions will be essential for attracting international developers and supply-chain companies to Türkiye's first offshore wind projects?

As a diplomatic-led, multi-stakeholder alliance, GOWA does not advocate for specific national policy choices. Rather, we work with governments, industry and international partners to share global experience and lessons learned from offshore wind markets at different stages of development.

From a global investor perspective, one of the most important considerations is market predictability. Offshore wind requires significant upfront investment in project development, transmission infrastructure, ports and supply chains. Developers, manufacturers and financiers therefore need confidence that projects will move from ambition to delivery.

That begins with a clear and transparent regulatory framework, efficient and predictable permitting processes, and visibility of a long-term project pipeline. Investors will also look for clarity around environmental approvals, grid connection arrangements and project development timelines, as these factors play an important role in reducing project risk. Stable market frameworks that provide confidence in future investment opportunities are also essential to attracting experienced international developers and encouraging supply-chain companies to establish a local presence.

Equally important is coordinated planning for enabling infrastructure. Large-scale offshore wind deployment depends not only on the projects themselves, but also on timely investment in transmission systems, substations, ports and logistics. Planning these investments early helps avoid bottlenecks, reduces delivery risks and provides greater confidence for investors making long-term decisions. Close collaboration between government, industry and stakeholders across the offshore wind value chain is critical ensure infrastructure, supply chains and workforce development progress in step with project delivery.

International experience demonstrates the importance of policy certainty. Countries that have successfully established offshore wind industries have generally provided clear long-term direction, enabling companies to invest confidently in manufacturing facilities, vessels, workforce development and wider supply chains. Reducing regulatory and market uncertainty ultimately lowers investment risk and can help improve access to competitive financing.

Finally, successful offshore wind development depends on more than technical and financial conditions alone. Early and meaningful engagement with coastal communities, fisheries and other ocean users helps build public confidence, reduces project risk and supports more durable outcomes over the lifetime of projects.

Türkiye has already established many of the foundations for offshore wind development. The opportunity now is to focus on implementation by maintaining transparent and predictable market conditions, coordinating infrastructure development, and drawing on international cooperation and global best practice to overcome common challenges and accelerate delivery.

Türkiye has set an offshore wind capacity target of 5 GW by 2035. How realistic is this target, and what needs to happen in the short term for it to be achieved?

The target is ambitious but achievable if the right enabling conditions are put in place.

As mentioned, Türkiye is not starting from scratch. The country has built a successful onshore wind industry over the past two decades, developed strong manufacturing capabilities and possesses considerable offshore wind resources.

The next few years will be decisive.

Planning for transmission infrastructure and ports needs to begin early to avoid future bottlenecks. This needs to be developed alongside the implementation of clear regulatory frameworks, competitive auction mechanisms and streamlined permitting processes, to reduce project risk and attract investment. At the same time, maintaining a visible long-term project pipeline will give manufacturers confidence to expand domestic production and strengthen local supply chains.

One of the greatest advantages for emerging markets today is that they can build on decades of experience from countries that have already faced many of the same challenges. Lessons from mature markets can help governments avoid common pitfalls, accelerate deployment and reduce investment risk.

If these foundations are established, and by learning from mature markets, Türkiye could position itself to deliver on its 2035 target while creating jobs, strengthening energy security and supporting long-term industrial growth.

How could Türkiye benefit from international cooperation and GOWA's global network as it develops its offshore wind ecosystem?

GOWA is a government-led, multi-stakeholder alliance co-founded by the Government of Denmark, the International Renewable Energy Agency (IRENA) and the Global Wind Energy Council (GWEC). We bring together governments, industry, international organisations and civil society to accelerate offshore wind deployment through knowledge sharing, policy dialogue and international cooperation.

International cooperation is essential to build competitive, secure and resilient offshore wind industries.

The sector has built a substantial body of knowledge covering everything from market design and financing structures to supply-chain development, marine planning and stakeholder engagement. For Türkiye, drawing on this global body of knowledge can help inform national decision-making, reduce risk and accelerate market development.

Regional collaboration is also an important part of this. As offshore wind expands into new regions, collaboration between neighbouring countries facing similar opportunities and challenges can help reduce costs, strengthen supply chains, avoid common pitfalls and accelerate market growth.

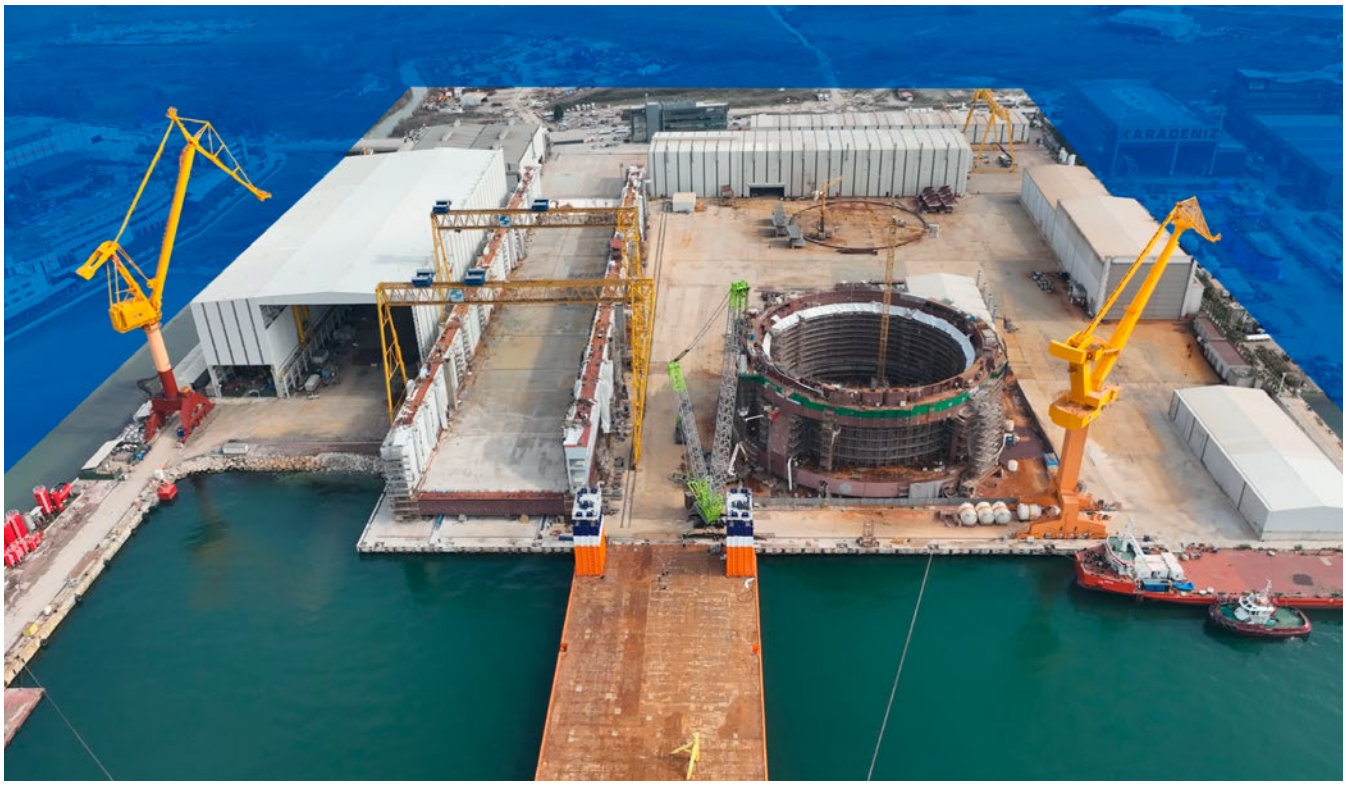
This is where GOWA plays an important role. One of the most valuable aspects of our work is creating opportunities



for governments to learn directly from one another. We connect stakeholders across regions to share lessons, exchange practical experience and identify opportunities for collaboration. We are already supporting regional cooperation initiatives in the Asia-Pacific, and we see significant potential to strengthen similar collaboration in other regions, including around the Mediterranean.

GOWA's role is not to prescribe a single model for development. Every country has different resources, industrial strengths, governance systems and social contexts. Instead, we help governments learn from one another, adapt international experience to local circumstances and access practical tools that support decision-making.

Gemak Group of Companies: Engineering Strength from Past to Future



Established in Istanbul in 1969, Gemak Group of Companies draws on a well-established history spanning more than half a century and today operates as one of the prominent shipyard and heavy industry groups in Türkiye and the Mediterranean region. Since its foundation, the Group has placed quality, reliability and engineering expertise at the heart of its operations, becoming one of the key players in the transformation of the maritime and shipbuilding industries.

With more than 55 years of experience, Gemak Group of Companies specialises in shipbuilding, ship repair and maintenance, conversion projects, large-scale steel structures and offshore steel structures. The Group combines its technical expertise with innovative solutions in every project. Its advanced production infrastructure comprises the Altınova, Tuzla and TGE shipyards, as well as the Neta Steel & Pipe Factory. This enables Gemak to manage every stage—from design to delivery—under one roof and provide turnkey services tailored to customer requirements and high quality standards.

Today, Gemak Group of Companies plays an active role in the offshore wind energy sector, contributing to a more sustainable future. For both floating and fixed-bottom offshore wind projects, the Group carries out the fabrication of heavy steel structures, floating platforms, modules and blocks, as well as integration, assembly and outfitting activities at its own facilities. Offshore transformer platforms and the conversion and capacity-upgrade of wind turbine installation vessels also form an important part of this vision.

All projects are executed in accordance with international standards such as DNV, Bureau Veritas and NORSOK, supported by end-to-end engineering and quality control processes. This approach strengthens Gemak Group of Companies' reputation for reliability and technical competence on a global scale.

Gemak Group of Companies aims to establish itself as a trusted local main contractor in Türkiye's emerging offshore wind energy market, while also providing competitive and sustainable solutions for international investors. With its robust engineering infrastructure, extensive production capacity and industry experience, Gemak Group of Companies is building not only for today, but also for the future.


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AEMOT Strengthens Its Wind Energy Portfolio with Generators, Pitch & Yaw Motors and Advanced Testing



Türkiye-based AEMOT Electric Motors & Generators is expanding its wind energy portfolio with high-efficiency generators, pitch and yaw motors, and advanced testing infrastructure for modern wind turbine applications.

AEMOT develops generator solutions for renewable energy projects in Türkiye and international markets. Its portfolio covers power ratings from 300 kVA to 37,500 kVA, voltage levels between 3 kV and 15 kV, and operating speeds from 150 to 3,000 rpm.

Horizontal generator configurations are developed particularly for wind turbine and hydroelectric applications, while customised solutions with IP56 to IP67 protection classes are available for demanding environmental conditions.

High-efficiency solutions for wind turbines

According to AEMOT, its generator designs target efficiency levels above 98%. Robust steel construction, VPI insulation technology and specialised winding designs are used to reduce vibration and noise.

Brushless excitation technology eliminates carbon brushes and slip rings, helping reduce maintenance requirements and support long-term operational reliability.

AEMOT also offers pitch and yaw motors for wind turbine applications. Pitch motors support blade-angle adjustment according to changing wind conditions, while yaw motors contribute to nacelle positioning in relation to wind direction.

€3 million testing investment

Testing and verification are central to AEMOT's production process. Generators undergo insulation, high-voltage, rotor balancing, vibration, noise and efficiency tests before shipment.

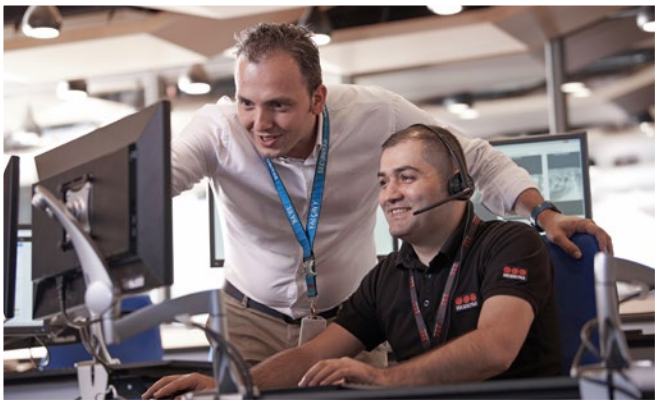
Following an investment of approximately €3 million, AEMOT commissioned a full-load medium-voltage testing system capable of testing motors up to 1.6 MW and generators up to 11 MW.

Exporting to more than 25 countries, AEMOT serves markets across Europe, the Middle East and North Africa. With its generator technologies, pitch and yaw motors, and expanded testing capabilities, the company continues to strengthen its offering for the global wind energy industry.

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Safe and Sustainable Operations in Wind Energy





Semih Yağcı

Energy and Mining Segment Leader, Securitas Türkiye

As wind energy investments expand, the safe and uninterrupted operation of wind farms is becoming increasingly important. Large sites, dispersed turbines, harsh weather conditions and remote operations require an integrated security approach combining physical presence, technology and risk management.

According to the company, Securitas provides security services to approximately 10% of power plants in Türkiye, representing around 12,000 MWe of installed capacity, mainly across wind, solar and hydroelectric facilities. Its services include physical security teams, electronic security systems, 24/7 remote monitoring and operational risk management.

Semih Yağcı, Energy and Mining Segment Leader at Securitas Türkiye, says: “Wind farms are often spread across large areas. Security therefore cannot rely solely on physical presence. Advanced monitoring and rapid response capabilities are also essential, with each facility requiring a model tailored to its location, infrastructure and risk profile.”

Technology and Risk Management

Securitas integrates access control, video surveillance, alarm systems, remote monitoring and emergency response according to each facility’s requirements.

“Safe operations extend beyond preventing theft or unauthorised access,” Yağcı notes. “They also involve protecting critical equipment, identifying potential sabotage risks, maintaining operational continuity and responding rapidly to emergencies.”

Preparing for Changing Risks

Wind farms are frequently exposed to storms, lightning, heavy rainfall and other challenging conditions. Emergency plans, rapid response procedures and measures to protect critical infrastructure therefore form an important part of operational planning.

The integration of Battery Energy Storage Systems (BESS) is also changing the risk profile of wind energy projects. In addition to physical security, these facilities require preparedness for fire, thermal and chemical risks.

“As energy storage becomes increasingly integrated into wind investments, operational safety models must also evolve,” says Yağcı.

Supporting Operational Continuity

Securitas positions its approach around the integration of people, technology and risk management.

“Our goal is not simply to provide security services, but to act as a long-term security partner supporting the continuity of our clients’ investments,” Yağcı says.

Through its experience across energy facilities in Türkiye, Securitas supports wind energy operations with integrated security, monitoring and risk management solutions.

From First Delivery to Long-Term Commitment:

Building Envision's Future in Türkiye



Ashoka Li
Managing Director
Türkiye, Saudi Arabia & Caucasus Region | Envision Energy

In an exclusive interview with Rüzgar Enerjisi Dergisi (Wind Energy Magazine) for the WindEnergy Hamburg 2026 Special Edition, Ashoka Li, Managing Director, Türkiye, Saudi Arabia & Caucasus Region at Envision Energy, discusses the company's growing presence in Türkiye, its localisation strategy, AI-enabled wind technologies, energy storage and Türkiye's potential role as a regional renewable energy hub.

As Türkiye prepares for a new phase of wind energy development, Envision Energy is moving from market entry to long-term project execution. The company's first 232 MW wind project in Türkiye is progressing through delivery, while Envision continues to strengthen its local capabilities in project delivery, service, talent and partnerships.

Speaking exclusively to Wind Energy Magazine, Ashoka Li shares Envision's perspective on Türkiye's wind market, the role of digitalisation and energy storage, opportunities for deeper industrial cooperation, and the company's long-term strategy for Türkiye and neighbouring markets.

"We do not expect to build our position in Türkiye through one project or one announcement. We want to earn it through reliable delivery, strong local partnerships and long-term service."

Türkiye is entering a new phase of wind energy development. How strategically important is the market for Envision?

Türkiye is not just another market on our map. It is a strategic priority.

Geographically, Türkiye connects Europe, Asia and the Middle East. It has strong wind resources, growing electricity demand and a clear national ambition to expand combined wind and solar capacity to 120 GW by 2035. That gives us confidence in the market's growth potential.

For Envision, Türkiye is the anchor of our regional strategy. This is also no longer simply a market-entry story. Our first 232 MW wind project is now moving through delivery, marking an important step from entering the market to building a long-term presence.

We are strengthening our capabilities in Türkiye across project delivery, service,

talent and partnerships. Our ambition is to grow with the Turkish wind industry, project by project, partner by partner and over the long term.

Türkiye already has experienced international and local wind players. What gives Envision confidence that it can build a competitive position?

We have great respect for the international and local companies that have helped build the Turkish wind industry. Our confidence comes from the combination of technology, global experience and the ability to execute locally.

International expansion is not simply about shipping turbines into a new market. The real test is whether you can manage the full project lifecycle, from engineering, certification and logistics to installation, commissioning, service and long-term asset performance.

Our first 232 MW project is progressing through delivery, with turbines being shipped and site activities underway. We have also built a team in Istanbul covering sales, project delivery, logistics and finance, while developing service and spare-parts capabilities for Türkiye and neighbouring markets.

Reliable delivery, local partnerships and long-term service will ultimately determine our position in the market.

Where can AI and digitalisation create the greatest value for wind projects?

At Envision, we increasingly see the wind turbine as a digitally connected energy asset, not only as a piece of hardware.



Our Tianji Weather Foundation Model supports improved wind forecasting and operational optimisation, while the Dubhe Energy Foundation Model helps identify potential risks earlier and enables predictive maintenance. Together, these capabilities can contribute to energy yield, asset availability and lifecycle performance.

Integrated wind and storage control is another important area. As more renewable projects incorporate battery energy storage systems, coordinated control can enable more intelligent scheduling, faster system response and better utilisation of generation and storage assets.

AI should not be technology for technology's sake. Its value is measured by tangible project outcomes: more energy produced, higher availability, more predictable performance, lower operational risk and stronger lifecycle economics.

Localisation is becoming increasingly important in Türkiye. How does Envision approach cooperation with the local supply chain?

For us, localisation is about building an ecosystem, not simply meeting a local-content requirement.

We are already working with Turkish engineering companies, logistics providers, civil contractors and other partners on our first project. As our project pipeline grows, we want the level of local cooperation to grow with it.

Türkiye has a strong industrial base in towers, steel structures, electrical equipment, engineering and construction. We also see opportunities in balance-of-plant engineering, installation, O&M services, BESS integration and, over time, a broader wind supply chain.

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With sufficient market scale, appropriate technology transfer and consistent quality standards, Turkish suppliers could serve not only domestic projects but also neighbouring markets.

Wind and energy storage are increasingly being developed together. How do you see this relationship evolving in Türkiye?

Wind and storage are becoming increasingly connected in Türkiye.

As the share of variable renewable energy grows, flexibility becomes more valuable for both developers and the electricity system. Storage can improve dispatchability, reduce imbalance exposure, help manage curtailment where relevant and create additional opportunities as flexibility and ancillary-service markets develop.

Türkiye is particularly interesting because storage has become closely linked to renewable project development through the regulatory framework for storage-integrated generation.

Envision combines wind, battery storage and digital intelligence with the aim of creating an AI-powered future energy system in which generation, storage and the grid work together as an integrated system.

We also see opportunities to add storage to suitable operating wind farms as the regulatory framework develops.

Could Türkiye also become a regional platform for Envision?

Türkiye has strong potential to become a regional hub, both for Envision and for the renewable energy industry more broadly.



Renewable investment is expanding across the Caucasus and Central Asia, while the Middle East is also moving quickly. Türkiye's location, industrial base, logistics connectivity and mature energy sector give it a natural advantage.

But a regional hub should not be defined simply by the volume of equipment shipped through it. It requires engineering, service, supply-chain, talent and project-development capabilities.

Our approach is therefore to build depth in Türkiye first: projects, teams, partnerships and service capability, followed by a deeper supply chain as volumes grow. Those capabilities can then support neighbouring markets.

Our Istanbul office already coordinates part of our Caucasus activity. We see Türkiye both as an important market in its own right and as a platform for regional growth.

What message will Envision bring to WindEnergy Hamburg 2026?

WindEnergy Hamburg is an important opportunity for us to show how Envision is evolving from a wind turbine manufacturer into a technology partner for the future energy system.

We will introduce our latest onshore and offshore wind turbine platforms, but our focus goes beyond the turbine itself. We are bringing together wind, energy storage and AI to create an AI-powered future energy system designed to deliver greater value across the lifecycle of an energy asset.

The next phase of wind energy will not be defined by turbine size or installed capacity alone. It will be about delivering reliable, bankable and intelligent energy assets at scale.

Envision is ready to be a long-term partner in that journey.

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Doğuhan Enerji and Helios Energy to Meet the Industry at WindEnergy Hamburg 2026





Doğuhan Enerji and Helios Energy are bringing their wind energy experience, developed since 1996, together with their expanding renewable energy activities in Europe to WindEnergy Hamburg 2026. The group will meet with international industry representatives during the exhibition.

Doğuhan Enerji entered the wind energy sector in 1996 by taking part in the construction of Türkiye's first wind power plant. Today, the company is bringing nearly 30 years of engineering and field experience to the European market together with Helios Energy.

With experience covering more than 3,000 MW of installed capacity, 1,000 wind turbines and over 85 renewable energy projects in Türkiye, Doğuhan Enerji has built a technical and operational foundation that now supports the group's international expansion.

Established in Romania in 2022 to extend this experience into European markets, Helios Energy has since expanded its activities to Hungary, Italy, Bulgaria, the United Kingdom and Türkiye, in addition to Romania. Helios Energy and Doğuhan Enerji provide EPC and Sub-EPC services for wind, solar and battery energy storage system (BESS) projects.

The group's scope of services ranges from design and engineering to site mobilisation, civil works including access roads and foundations, electrical and mechanical installation, substation works, as well as SCADA and automation systems. With its own technical teams and equipment capacity, Helios Energy aims to provide direct implementation capabilities across different stages of renewable energy projects.

Building on this experience and its expanding international structure, Doğuhan Enerji and Helios Energy are preparing to take part in WindEnergy Hamburg 2026. The exhibition will provide an important platform for presenting the next stage of a wind energy journey that began in Türkiye and is now expanding across Europe.

In Hamburg, the group plans to meet existing and potential business partners, energy investors, project developers, technology providers and industry professionals while evaluating new project and cooperation opportunities across European markets.

Doğuhan Enerji's nearly 30 years of wind energy experience and Helios Energy's growing Solar, Wind and BESS activities across Europe will come together at WindEnergy Hamburg 2026 under a shared vision for international growth.

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