

 **BORUSAN  
LOJİSTİK**

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Turnkey solutions in wind energy logistics  
**paving your path to the peak!**



# Green solutions from the leader in wind energy logistics.

As Turkey's sector leader, Borusan Lojistik undertakes logistics related project risks. We minimize your costs on the strength of our unrivaled heavy transportation equipment park, not to mention our considerable leverage as a big volume procurer. We offer you a comprehensive range of services and ensure your competitive advantage with turnkey solutions.

## Awards and Certificates



Covered bonded and unbonded warehousing space adding up to **400.000 sqm**

across Turkey **98 land transportation offices, 20 transfer centers**

Employing a **3.500 strong workforce**

A network of **more than 100 international agents**

**Fast and smooth customs clearance** through our strategic partner Bor Gümrük

**Near 3.000 daily runs** in Turkey

Leading the sector in wind energy logistics with **hi-tech engineering solutions that make a difference**

**First logistics company in Turkey** awarded a Recognition for Excellence certificate with a 5-star score



National Quality Achievement Award



> National Quality Top Award



> **First logistics company in the world** inducted in Balanced Scorecard Hall of Fame for Executing Strategy

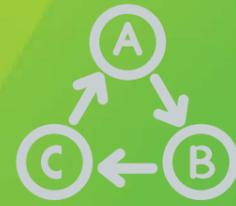


> **First logistics company in Turkey** receiving an IIP (Investors in People) certificate



## Management Systems

- Value Based Management
- Lean 6 Sigma Methodology
  - Voice of Customer Management
  - Target Oriented Management System



## Quality Certificates



- ISO 9001 Quality Management System
- ISO 14001 Environmental Management System
- OHSAS 18001 Occupational Health and Safety Management System
- ISO 10002 Customer Satisfaction and Complaints Handling Standards Certificate
- ISO 50001 Energy Management System
- ISO 14064 Carbon Footprint Verification



## Corporate Processes



### Reliability

We execute your projects with the high quality and integrity that are the hallmarks of Borusan brand. We comply with the law as well as ethical rules in all our activities, demonstrating fairness, goodwill and understanding as we work for mutual gain.



### Customer Services

A single team handles all your sales and operations, and every decision or action we take is geared towards creating value for our customers and our business. Our outstanding customer services provisions include,

- **Insurance:** All components of your shipment enjoy bill of lading coverage; we also offer additional insurance if desired.
- **Reporting:** We readily provide reporting that meets your requirements with all our services.
- **Project Pricing:** We offer the best pricing for long-term project budgeting.



### Initiative and Responsibility

We take charge of the work we are tasked with. We accept calculated risks and turn them into opportunities.



### Contribution to Society

We are involved in several environmental and social responsibility projects. Additionally, we conduct pre-operation surveys and tests to assess and develop options with the smallest possible impact on nature in all our activities.



### Work Health and Safety

Putting **"Safety First"**, we devise all our services with a focus on the safety of the work and workers as well as the society at large. We provide sound and ergonomic work environments to forestall accidents and health hazards.

Above and beyond conforming to Work Health and Safety regulations, we apply lean thinking and technology to create safer environments and services that also meet the specific expectations of our customers.



## Wind Energy Logistics and Project Transportation Services

Borusan Lojistik expertly takes care of every step of energy and project logistics, speeding up customers' work processes with turnkey solutions.

Land Transportation Services

Ship Chartering Services

Port Ownership and Management

On-site Unloading and Installation Services

Project Consultancy Services

Customs Clearance Services



### Land Transportation

We carry out the domestic and foreign transportation of out of gauge or heavy lift loads with our wide range of self-owned lowbed vehicles and our network of contracted providers.

**Survey:** We check for road improvement requirements work coincidental with transportation, ensure equipment suitability, obtain all necessary permits, assign staff for loading - unloading, and develop tailored solutions for every project. We plan cost-conscious and environmentally responsible project processes, conduct port and road assesment as well as field surveys to ensure optimal efficiency, and carry out test runs to reduce risks.

**Timely Dispatch and Delivery:** Thanks to our efficient and competent provider network, we speedily and successfully take care of equipment malfunctions or any unexpected developments on site.

**Control, Monitoring and Reporting:** We assign a dedicated team to manage your operations, and conduct feasibility studies ahead of time to plan the entire process in advance. All transportations are monitored via satellite on a real-time basis, and we provide continuous information flow with timely planning and reports. Borusan Lojistik is equipped to provide customer-specified reporting.



### Ship Chartering

- As Turkey's only logistics company offering ship chartering services, Borusan Lojistik charters 330 ships annually and conducts regular monthly runs for the sea transportation of out of gauge or heavy lift cargo. All ships are monitored online via satellite during our domestic or international transportations.
- We charter river or sea vessels on your behalf.
- Thanks to our regular pipe transportations from Turkey, we are known to ship companies as a sought after freight-owner.
- Our experience in project load transportation as well as a very wide network of providers enables us to pick the vessel best suited to your requirements.
- Our highly-experienced staff includes oceangoing ships' captains.
- We have an excellent reputation in the sector as a reliable ship charterer.
- We arrange partial transportations at favorable terms, offering customers competitive advantage.
- We provide long-term price guaranteeing.



### Port Ownership and Port Management

Borusan Port in Gemlik Turkey is capable of servicing post-panamax vessels.

- Our port boasts the know-how of an expert staff highly experienced in energy logistics regularly called on to supervise operations in other ports.
- Due to our standing and excellent relationships as a port manager, we are able to create synergy with other ports and facilitate operation processes.



### Loading, Unloading and Installation Services

We make a difference with services that include,

- Ship unloading at ports.
- Loading cargo on transportation vehicles at ports or factories.
- Unloading at worksite, ports or factories.
- Installation at destination.



### Project Consultancy Services

Borusan Lojistik provides,

- Road survey reporting.
- Risk analyses.
- On-site monitoring of ship and project operations abroad by our expert staff.
- Assistance with choosing suitable ports.
- Assistance with choosing appropriate equipment for project cargo transportation.
- Assistance with choosing appropriate equipment for cargo loading - unloading.



### Customs Clearance Services

We collaborate with our partner Bor Gümrük to develop fast and reliable customs clearance solutions tailored to customers' requirements.





## Wind Energy Sector

Wind power industry continues to grow, develop, and excel domestically-and equipment manufacturers and special service providers are growing with it. As the industry grows, electric utilities across countries are increasingly adding wind energy to their power supply portfolios as a clean, renewable, and domestic source of electric generation.

Turkey is one of the fastest growing power markets in the world. With very limited oil and gas reserves, Turkey is increasingly turning to renewable energy sources to improve its energy security, seeking to provide 30% of its electricity from renewable energy by 2023.

Turkish market at present has an impressive array of projects in the pipeline. The Turkish Wind Power Association estimates that under the current regulatory framework a total installed capacity of about 10 GW will be reached within the next ten years, but the upshot could be as high as 20 GW with the right amendments to the regulatory framework.

**With a wind power potential exceeding 50 GW Turkey has become one of the leading players in European wind market as well as globally, and was the 10th largest market in the year 2015.**

Turkey's Renewable Energy law allows for the construction of renewable energy projects in national and natural parks, protected regions, conserved forests, wildlife development zones, special environmental protection zones and natural protected areas, provided that the necessary permissions are obtained from the Ministry of Environment and/or regional protection boards.



## Ride the wind with Borusan Lojistik!

Experienced in meeting the exceptional challenges of wind power plant logistics Borusan Lojistik plans and executes your logistics processes down to the smallest detail, providing turnkey solutions in the local or global scale and setting you free to focus on your core business. We believe in going the extra mile for mutual gain, and we extend outstanding services as we advance your investments.

We handle each piece of your cargo as delicately as lacework, transporting colossal wind turbine components with sensitive skill over land and sea. As Turkey's sector leader we undertake all possible risks of your project processes while you can rely on the considerable leverage of a big volume procurer to minimize your costs.

A successful track record in large scale and risky operations testifies to our unwavering focus on Work Health and Safety, as well as to the precision of project management processes.

Sustainability and preservation of natural resources have always been a priority with us. We plan and execute all activities with these principles in mind, and quickly adapt to conditions to develop environmentally sensitive wind energy logistics services.

### Equipment

Borusan Lojistik stands out in turnkey projects with a diverse equipment park. We are also able to promptly bring in any additional equipment as needed thanks to the economies of scale we command as well as our network of competent suppliers and business partners.

In addition to tractors, trailers and semi-trailers, our specialized equipment includes a Rotor Blade Adaptor. One of very few specimens of its kind anywhere in the world, the revolutionary Rotor Blade Adaptor enables us to offer exclusive advantages to our customers in wind power logistics.



## Revolutionizing wind energy logistics in Turkey: Rotor Blade Adaptor

Rotor blades for wind power plants frequently pose a challenge in transportation. The transport is often more difficult as the journey approaches its end, when tight corners or obstacles have to be negotiated. The new adaptor generation Rotor Blade Adaptor provides the right solution in precisely these situations, making it possible to tilt the rotor blades to avoid obstacles such as trees or buildings even more effectively. On steep hills or narrow winding mountainous roads, the position of the rotor blade can be adapted to the route without losing precious hours.

What is more, a wind sensor warns against exceeding a parameterizable wind speed. The new rotor blade adaptor can be mounted and transported on both on a pulled platform trailer combination as well as on self propelled modules, guaranteeing flexible transportation of rotor blades from different manufacturers through the quick release plate and offering customers maximum efficiency as well as cost-effectiveness.



### Technical Specifications of the Rotor Blade Adaptor

- Angle of inclination up to 60°
- Max. rotation angle of the rotor blade  $\pm 110^\circ$
- Maximum stability due to a hydraulically-operated, sliding counterweight in longitudinal and horizontal directions depending on the rotor blade position
- Operating temperature - 20 °C up to + 40 °C
- Radio remote control with display of wind speed, transverse gradient, blade position, ballast position



## Smooth Operations with the Rotor Blade Adaptor

01

Environmentally-friendly



Enabling easier navigation on narrow tracks, the Rotor Blade Adaptor requires fewer trees to be cut when constructing new roads for project transportation and thus alleviates strain on the environment. Lifting the blade with Rotor Blade Adaptor curtails projection span from 60 m to 42 m including vehicle length, and proportionately reduces turning radius. Negative impact rates vary between flat serpentine trails and rough serpentine trails.

02

Cost-effective



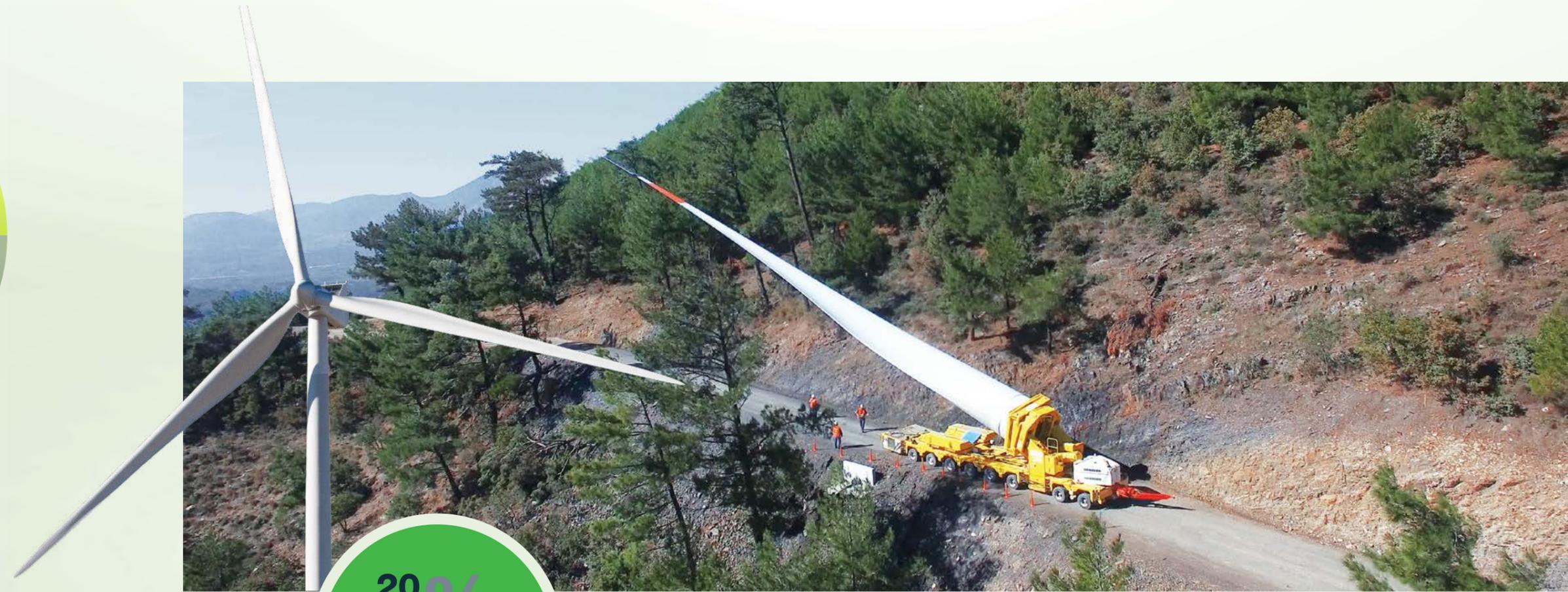
Rotor Blade Adaptor disposes of zigzagging route plans and reduces road expansion work, significantly lowering overall project costs.

03

Speeds up legal processes



The environmentally-friendly logistics operation solutions provided by the Rotor Blade Adaptor facilitates the granting of necessary permits by local authorities concomitant to favorable Environmental Impact Assessment reporting. Involvement of the Adaptor accelerates legal processes, and helps reduce site work or expropriation prices especially on mountainous rough terrain.



20  
30 %

Transportation with the **Rotor Blade Adaptor** cuts down earthmoving work in rough terrains, slashing negative impact by 20 to 30%.

## First Project in Turkey Completed With the Aid of the Rotor Blade Adaptor: Vestas-Borusan EnBW Enerji FUAT Wind Power Station

Borusan Lojistik utilized the Rotor Blade Adaptor to successfully transport 10 wind turbine rotor blades to FUAT Wind Power Station in Kemalpaşa, İzmir. FUAT is a Borusan EnBW Enerji venture, and the rotor blades were manufactured and installed by Vestas.

The operation represented a rare instance of Rotor Blade Adaptor-involving haulage globally, as well as the first of its kind in Turkey. We executed the transportation using the Adaptor to raise colossal 60 m long rotor blades to an angle of 50° on 42 m long vehicles that weighed up to 110 tons when loaded. Thanks to the Rotor Blade Adaptor

we not only reduced road construction costs, we were also able to contribute to the preservation of nature.

The Rotor Blade Adaptor enabled us to avoid excavating nearly 10.000 truckloads of soil. More than 100.000 cubic meters of earth and rocks remained where they belong, together with their living inhabitants.

We saved nearly 2.000 trees with this single operation.

## Borusan Lojistik - green player in a grey sector!

Conscious of our responsibilities as a player in a grey sector that runs on fossil fuel, we take utmost care to ensure the preservation and sustainability of natural resources.



We take a proactive approach to sustainability. We are responsive to customer expectations as we design and develop services and new businesses on the basis of our commitment to contributing to society and our environmentally-minded orientation. With several ongoing projects and achievements to date, Borusan Lojistik proudly stands for the common good.



## Borusan Lojistik - green player in a grey sector!

### We are Head Over Heels for Green

Determined to offset the impact of our extensive fossil fuel use on nature, we launched an ambitious project in 2011 with the slogan “We are head over heels for green!” Collaborating with Turkey’s leading cultural and environmental heritage NGO ÇEKÜL, we pledged to plant a million trees in Borusan Lojistik’s 7 Trees Forest in Ödemiş, İzmir, by 2018. And so far we have completed the planting of 500.000 trees. The project also involves indirect participation of our business partners as we plant a tree in our 7 Trees Forest for each 10 transports and 10 container handlings. In other words,

“When customers choose to work with us, we plant a tree on their behalf for every 10 transports or 10 container handlings they commission.”

By now tree planting has also gained a place as an integral rite in all our ceremonies. We celebrate every employee’s birthday, marriage and new baby with a tree for every occasion.

### Environmentally Focused Operational Practices

Our environmental policies include engaging all our stakeholders, providing necessary information and resources, strict compliance with laws and regulations, preemptive action and continuous improvement.

In keeping with our commitment to preemptive action, we received ISO 14001 Environmental Management Standard certification beginning from 2004.

In 2012 we qualified for ISO 50001 Energy Management System and ISO 14064 Carbon Footprint Verification as the first Turkish logistics company to be awarded both certificates simultaneously.

Through the system established for our Domestic Logistics business unit, we put an end to #10 oil usage and ensured conformity with regulations in fuel consumption in all our land transportation operations (3200 daily runs) including not only our own vehicles and contracted suppliers, but also vehicles leased on the spot market. In this manner we cut down CO<sub>2</sub> emission by 33.294 tons annually.

Committed to making a beneficial difference, we incorporated Rotor Blade Adaptor technology in our operations so as to better protect nature.

### Borusan Port - Certified Green Port

Borusan Port in Gemlik launched a project in 2013, converting all lighting appliances to LED fixtures. In its first phase the project reduced power consumption by 1,2 million kWh annually. The second phase is scheduled to begin in September 2016 targeting an additional 1,5 million kWh reduction.

Equipped with a licenced waste reception facility, Borusan Port also safely disposes of visiting ships’ discharges.

Findings of regular marine water value analyses prove that the water within the boundaries of our port is indistinguishable from the wider sea body in Gemlik Bay in terms of quality. Our work at the port does not impact water values and avoids encroaching on underwater ecology. At present Borusan Port is home to no less than 12 fish species.

We applied thermal treatment to 3000 cubic meters of wood in use at the port, saving 12.332 trees from being cut down so they can continue to meet the oxygen needs of 25.000 persons annually.

Our hard work and diligence resulted in a Green Port Certificate as Borusan Port gained distinction as one of the first Green Ports in the region.

Identified as the green player in a grey sector, Borusan Lojistik upholds its promise to the society and nature.

We have only one Earth, and we are obliged to safeguard life on it.

