

Railroad emerges as a key transportation provider in the wind energy market

As Vice President of Industrial Products Sales for BNSF Railway, Katie Farmer has witnessed the railroad's evolution into a 21st century transport provider for 21st century industries such as wind power. PES talks to Katie about the company's growing influence and its 'total transportation package'.

PES: Welcome to PES magazine. Can you explain a little about your company and outline the services you provide for the wind industry?

Katie Farmer: BNSF Railway is a freight railroad company that plays a key role in the global supply chain. We operate along a network of more than 32,000 route miles in 28 states and two Canadian provinces. But broader than that, we serve as a transportation provider for many commodities that are imported and exported through our US ports. Our focus is on using speed, agility and resourcefulness to help expand the global marketplace for goods and services.

All of this is accomplished by a team of individuals who are progressive, resourceful and approachable. We take great pride in providing an easy, relevant choice for all types of shippers in a wide variety of locations.

We're committed to meeting the needs of this emerging market. We realize that transporting oversized wind turbine components from the factories or ports to the wind farms can be a challenge. That's why we offer our customers a total transportation package – everything they need to ensure their components are delivered in a manner that's cost-effective, convenient, environmentally-responsible and damage-free.

We have nearly a decade of experience in shipping wind turbine components and our strength in shipping these components lies in our ability to collaborate with our customers to identify their specific challenges, and then working with them to build a transportation strategy that's suited to their exact needs.

PES: The logistics market for wind turbines is becoming ever more competitive. What benefits does rail offer over other means of transportation?

KF: With rail, you receive a number of significant advantages:

- Availability of equipment dedicated to transporting wind components
- Higher tonnage and capacity limits
- A streamlined clearance process
- Minimal risk of damage to components – we've had no in-transit loss or damage claims in nearly a decade of shipping wind components

And, of course, shippers who choose rail are making an environmentally-responsible decision.

PES: Speaking of the environment, BNSF's environmental initiatives seem impressive. Can you tell us a little more about them?

KF: At BNSF, we believe it is good business and good citizenship to minimize our impact on the planet, and contribute

to the long-term sustainability of every community we serve. Railroads are by far the most environmentally-friendly mode of surface transportation, and BNSF is a leader in the rail industry for the protection of our air, land and water. We are committed to a number of initiatives that are all geared toward making a positive impact on our environment. For example, BNSF is the first railroad in the world to develop an experimental hydrogen fuel-cell locomotive. This locomotive has the potential to reduce air pollution and is not dependent upon oil for fuel. Fuel efficiency is a big initiative for us as well. Over the last 25 years, we have increased our locomotive fuel efficiency by 80 per cent.

PES: We noticed on your website that you have a tool designed to measure carbon output of rail shipments and truck shipments. Can you tell us a little more about it?

KF: As I mentioned earlier, rail is the most environmentally-friendly form of surface transportation. In the past, it's been difficult to illustrate that claim. Now, with BNSF's Carbon Estimator tool, we can quantify the impact we have on the environment. The Carbon Estimator tool measures the amount of carbon emissions we emit on a rail shipment and compares it to the amount of carbon emissions that would be emitted had the same shipment been transported by trucks only.



Of course, there are a variety of variables that affect actual results, but in general, shippers can significantly reduce their carbon footprint by using rail. For instance, by shipping 42 wind turbine blades from Iowa to Washington state, one of our customers was able to save over 135 metric tons of CO₂ equivalent from being emitted into the air – an 82 per cent carbon footprint reduction vs. if the blades had shipped by truck alone. To put that greenhouse gas emissions savings into perspective – that’s the equivalent of recycling 45.5 tons of waste instead of sending it to landfill.

Trucks are an essential part of the wind-energy supply chain, but for the long haul, it only makes sense to utilize a green transportation solution for this green industry. If just 10 per cent of the freight that currently moves by truck were diverted to rail, fuel savings would exceed one billion gallons per year. Readers can measure their own output with our Carbon Estimator tool, available at www.bnsf.com.

PES: How is the BNSF team structured to manage the shipment of wind energy components?

KF: Our approach in serving our customers is a team effort that spans the entire organization, including team members from groups such as equipment, service design, transportation, and the clearance team. We

also have a Business Development group that is specifically dedicated to wind energy. This team’s focus is in fostering the relationships we have with existing customers and developing partnerships with new customers. Our customers also have 24x7 access to our Customer Support team for whatever needs or questions they may have during the transportation process.

PES: How do you see the wind energy market evolving in the coming years?

KF: Over the next few years, we see two primary changes. One is in domestic vs. import production of the wind turbine components. Only a year ago about 60 per cent of the business was on the import side. It is now about 50 per cent. New domestic production is being added every year at an increasing rate. Our Economic Development team has experience in helping companies with the process of developing new facility locations that meet their needs and are optimal for rail transport.

The other key change is that customers are looking for turn-key solutions to their wind projects. The original equipment manufacturers (OEMs) and developers are increasing their visibility and interest in the entire supply chain for the wind farms. As a result, shippers receive better, more consistent service.

PES: Tell us more about the turn-key solutions. What’s included in that?

KF: In conjunction with our 3PL (third-party logistics) partners, including BNSF Logistics, our shippers receive a total transportation package. This includes:

- Engineering diagrams
- Streamlined clearance approvals
- Specialized equipment design
- Competitive rail rates
- Competitive transload fees (crane, labor, storage)
- Detailed trucking solution/costs
- Test shipments on rail
- Rail tracking and tracing reports

PES: You mentioned that the US wind market is partly driven by imported components. Do you serve international ports?

KF: BNSF serves all of the major Gulf and Western US ports directly. We also serve the Eastern ports through a connection with our railroad partners in the Eastern part of the United States. Serving the ports directly streamlines the shipment process. Once off-loaded from the vessels, the turbine components are loaded on our trains where they’re delivered just a few miles from the wind farms.

PES: What particular challenges does the transportation of – often massive – components such as towers, nacelles and blades present?

KF: The primary challenge we face in the transport of these oversized wind turbine components is in the clearance of the components. We've been able to effectively overcome that challenge a couple of different ways: 1) We have a dynamic group of professionals in a variety of departments who make up our clearance team. They work with each of our wind customers to identify the most efficient route to their destination and confirm with absolute certainty that there will be sufficient clearance along the entire route; 2) To address the clearance challenges, BNSF has made capital investments to expand the clearance areas throughout the BNSF network.

We've found it most effective to collaborate with our customers early in the shipping process. Through early and frequent communications with our wind turbine shippers, we are able to minimize potential delays, reduce sources of additional and unnecessary expenses and eliminate the risk of damage to their components. As mentioned earlier, BNSF has never had an in-transit loss or damage claim in nearly a decade of shipping wind components.

PES: How does BNSF embrace a collaborative approach to wind energy transportation?

KF: We take a team approach to successfully transport components to the wind farms. Generally speaking, railroads cannot directly access the exact locations of the wind farms, so we rely on trucking companies to provide service for the last mile to the farm. We

work closely with 3PLs to put together comprehensive transportation packages that include all services. This includes -- but is not limited to -- crane and rigging, loading and unloading, fixture design and placement, trucking, etc. At BNSF, we have the flexibility to meet these transportation needs by including all service options.

PES: Tell us more about the role your transload sites play in the shipment process?

KF: We have nearly two dozen transload sites throughout our network that are capable of handling oversized commodities such as wind turbine components. These sites are located within high-wind resource zones where many of the wind farms of today and tomorrow are being constructed. Through transloading, our customers receive more consistent truck delivery service to the wind farms because it's such a short distance away. The value-added elements of these sites include hundreds of acres of lay-down space, on-site cranes, fencing and lighting for security, and direct access to major highways.

PES: Can you outline your commitment to safety?

KF: Safety is the number one priority at BNSF. A safe and secure railroad network is essential to our nation's future. Today, thanks to decades of hard work and a strong safety focus, the US rail industry is among the safest industries in the world. At BNSF, we lead the industry in many areas of safety,

including the development of new technology designed to further improve the safety of our operation.

BNSF also places great emphasis on ensuring our customers' shipments arrive damage-free. This begins with good, balanced loading. Our Load and Ride Solutions team offers free services ranging from on-site loading evaluations to complete ride-quality monitoring programs.

We will always be strongly committed to ensuring the safety of our operation, our vendors, our employees, and the communities we serve, and are working towards continuous improvement. ■

For more information about BNSF Railway and its operations in the wind market, visit www.bnsf.com/wind. Or, speak directly to someone who can help you with the shipment of your wind components.

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BNSF'S KATIE FARMER TO PRESENT AT WIND-POWER 2010



Interested in hearing more from Katie Farmer, BNSF's Vice President of Industrial Products Sales? Mrs. Farmer will be participating in a panel discussion at AWEA's WindPower 2010 Conference & Exhibition, May 26 in Dallas. The topic will be 'Transportation & Logistics – Getting Components from the Factory to the Field.' For more information, visit www.awea.org.

Ship with BNSF, and breathe easier.



Rail is the most environmentally friendly mode of surface transportation. And that's only one reason shipping wind energy components with BNSF will make you breathe easier. We work with you to create a turn-key, customized solution. We give you support and online tools that make it easy to ship with BNSF. After all, we have served the wind energy industry for nearly a decade, with no in-transit damage claims. Plus we have transload facilities less than 300 miles from most U.S. wind farms, and access to major U.S. ports.

 Learn more at www.bnsf.com/wind.

Visit us at the WindPower 2010
Conference & Exhibition – booth #1027.

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