

# A clear understanding of the wind industry's unique requirements

Union Pacific operates North America's premier railroad franchise, covering 23 states in the western two-thirds of the United States. PES spoke to Byron Willis and Beth Whited to ask just what that means for the transportation of freight for the wind industry.



**PES:** What are the points of differentiation for Union Pacific compared to other railroads as a wind component hauler?

**Byron Willis:** A growing network of wind distribution centers, a fully integrated logistics solution through Union Pacific Distribution Services, the right equipment and the greenest locomotive fleet in the industry allow Union Pacific to serve wind energy customers like no other transportation company. We were the first railroad to offer door-to-door rail transportation solutions for moving wind turbine components. We are on the Web at [www.up.com/wind](http://www.up.com/wind).

**PES:** What are your advantages compared to over-the-road trucks?

**Beth Whited:** Union Pacific offers several advantages:

- Rail is considerably less expensive due to our ability to simplify logistics and achieve economies of scale
- We own our tracks so we do not require the state-by-state permitting necessary for trucks
- We operate in a more controlled and safer environment
- Trucks add to highway congestion; it takes considerably more trucks to deliver the same number of wind turbines UP can deliver on a single train
- Rail is three times cleaner than trucks in terms of air emissions
- UP can move one ton 830 miles on a single gallon of fuel, the equivalent of your car getting more than 400 mpg

In addition to all these advantages, our transit time is equal to or faster than trucks on average.

**PES:** How did Union Pacific get involved in the wind business and how has UP grown with the wind energy industry?

**Byron Willis:** Customer service, cost efficiency and safe transport have helped us grow from a single train in 2003 to roughly 2,300 carloads in 2008. We have a clear understanding of the wind industry's unique engineering requirements and we work with manufacturers to develop solutions in the areas of securement, transportation equipment, loading and unloading. We develop and manage distribution centers across the U.S. as well as monitor loaded or empty car shipments from origin to destination. The combination of our in-transit visibility, inventory management and single-source billing makes it easy for customers to do business with us.

**PES:** How is Union Pacific Distribution Services (UPDS) integrated into your customer solutions?

**Beth Whited:** With expertise and experience in all transportation modes – rail carload, transload, intermodal, and door-to-door truck – UPDS adds value for customers by providing a single point of contact for logistics solutions. We provide a broad range of options, for wind component customers and many other industries, ranging from managing information to managing shipments all across North America.

**PES:** Do you work directly with manufacturers?

**Byron Willis:** Union Pacific has developed close working relationships with many wind component manufacturers. These relationships have been critical in our ability to implement innovative transportation solutions. We even work with manufacturers to identify locations for distribution center development.

**PES:** What are the benefits of your distribution centers?

**Byron Willis:** Our distribution centers help ensure a smooth transition from rail car to motor carrier for final delivery. Union Pacific and UPDS utilize an efficient chain-of-custody process that provides many services to our customers, including:

- Inbound train coordination
- Rigging and storage
- Project cost control
- Management and visibility of materials, both on and off rail
- Job site delivery schedule coordination
- Inventory and delivery reports
- Site preparation to meet customer specifications
- Shipping device management

**PES:** Tell us about Union Pacific's experience in transporting wind turbine components and how you are prepared to handle continued growth in this market.

**Byron Willis:** We have grown our wind business considerably over the last five years and Union Pacific is committed to the wind industry like no other railroad. By engineering new cars and equipment, enhancing track and building more distribution centers across our 32,000 miles of track, we provide wind customers unparalleled service, efficiency and safety.

We delivered enough wind components in 2008 to build 141 turbines capable of producing enough electricity for 53,000 American homes. Our customers have discovered when it comes to alternative energy, Union Pacific is the primary transportation solution.

Union Pacific has developed close working relationships with many wind component manufacturers. These relationships have been critical in our ability to implement innovative transportation solutions



Beth Whited



Byron Willis

### Cleaner and greener locomotives protect the environment while powering Union Pacific into the future

Trains are already one of America's most environmentally friendly modes of moving freight and Union Pacific is aggressively working to become even cleaner and greener. In fact, Union Pacific has the cleanest locomotive fleet of any North American railroad. Since 2000,

- Union Pacific has added more than 3,300 new fuel-efficient, long-haul locomotives to its fleet
- More than 2,200 older locomotives have been retired and 2,800 locomotive diesel engines have been overhauled or rebuilt
- More than two-thirds of Union Pacific's fleet of 8,400 locomotives have been certified under existing U.S. Environmental Protection Agency Tier 0, Tier 1 and Tier 2 emissions standards

### Pioneering green technology

Union Pacific is committed to reducing emissions and improving air quality

across its operations and the company constantly is developing and evaluating innovative technologies.

- To reduce rail yard emissions, Union Pacific pioneered the Genset switcher, which uses ultra-low emissions, EPA-certified, off-road diesel engines. The Genset reduces emissions of oxides of nitrogen by 80 percent and particulate matter by 90 percent, and reduces fuel use by 37 percent. The Genset meets and exceeds the EPA's Tier 2 locomotive emissions requirements. Union Pacific has the industry's largest Genset fleet with more than 160 in service
- Union Pacific has developed a comprehensive plan to reduce unnecessary locomotive idling time. All new locomotives have automatic stop-start equipment and older locomotives are being retrofitted with it. Locomotive shutdowns can save 15-24 gallons of fuel, per locomotive, per day. Nearly half of Union Pacific's locomotive fleet is now equipped with this technology

### Fuel for thought

Since 1998, Union Pacific has achieved a more than 15 percent improvement in fuel efficiency. Today, the railroad continues to look for new ways to squeeze the most out of every drop of fuel, focusing on conservation through better locomotive technology, engineer training and employee involvement.

- For example, Fuel Masters is an employee-driven conservation program that rewards the fuel-saving efforts of locomotive engineers. More than 6,800 engineers on almost 150 routes are taking part in the program
- In 2008, Fuel Masters helped the railroad reduce fuel consumption by four percent, compared to 2007. For a railroad with 8,400 locomotives moving across 32,000 miles of track, four percent translates into valuable savings in fuel and in 2008 resulted in 58 million gallons saved

For more information, visit [www.up.com](http://www.up.com)



# The smartest way to ship is also the greenest.

Sometimes, the most important breakthroughs come from realizing the potential of something that already exists.

**As it is, shipping by rail is inherently safer, greener and less expensive than shipping by truck. And at Union Pacific, we're building on those advantages.**

We're committed to the wind industry like no other railroad. Engineering new cars and equipment. Enhancing track. Even building distribution centers along our network. With our 32,000 miles of track and in-house logistics services, we offer wind customers unparalleled efficiency:

- One contact.
- One rate.
- Door-to-door shipping.
- Door-to-door monitoring.

And we're dedicated to evolving our services as the industry itself evolves. We see every new challenge as an opportunity for innovation.

Progress has always been at the heart of our mission. Our railroad was founded to support and connect Americans, to help communities truly thrive and grow. For us, serving the wind industry is another way to help our country move forward.

**Visit [www.up.com/wind](http://www.up.com/wind) or call (402) 544-4904 or (402) 544-4805 to find out how we can help you.**

