



THE SUPPLY CHAIN HAS BEEN ON THE GREENING EDGE OF INNOVATION BY NATURE OF THE BUSINESS. Doing more with less to reduce waste in time, material, and cost is inherently green.

Although it can be difficult to determine green ROI, many companies, industries, and governments have made great strides pushing the sustainability envelope in regulations, innovation, and compliance. For example, in the United States, the Environmental Protection Agency's Smartway Partnership has engaged shippers, logistics providers, and carriers, creating a cross-industry platform.

Driven by regulation and compliance, consumer demand for greater transparency, and brand exposure, many U.S. companies have shown a genuine interest in joining the sustainability crusade. To pursue these goals through their supply chain operations, they engage like-minded logistics and transportation providers, purchase fuel-efficient lift trucks, and adapt waste-reducing pallet and packaging strategies.

*Inbound Logistics' 75 Green Supply Chain Partners (G75)* highlights sustainability leaders in the logistics and transportation sector. The selection process considers a company's involvement in three areas: participation in public-private partnerships; corporate sustainability initiatives; and collaborative customer-driven projects. Within this context, four benchmarks carry weight in our decision-making: measurable green results, sustainability innovation, continuous improvement, and industry recognition.

As part of our due diligence, *IL* editors solicited more than 200 transportation and logistics companies to complete a questionnaire specifying their sustainability investments and commitment. We also conducted our own research, online and over the phone.

The G75, presented alphabetically, centers on companies that have demonstrated measurable progress over the past few years as they integrate sustainability into their respective enterprises. The list does not include companies that tout technology or intellectual capital as green enablers. It's not just a matter of being a facilitator and responding to customer demand; *IL* values companies that are leading by example.

## ABF Freight System

By using liquefied petroleum gas-powered forklifts in all ABF facilities; recycling all used oil, antifreeze, cleaning solutions, and engine batteries; implementing alternative soil disposal options in lieu of land filling; and ensuring practices are in place to protect the environment, ABF has integrated environmental values into its decision-making processes. The carrier considers the environmental impact of any proposed actions.

## APL

By 2015, APL plans to reduce its cargo transportation- and handling-related greenhouse gas emissions by 30 percent from 2009 levels. To this end, APL introduced 10 new environmentally friendly, energy-efficient vessels, with plans for another 22 to be delivered over the next two years. The ocean carrier also began testing an advanced emission-control technology known as a seawater scrubber, in which seawater is used to scrub contaminants from ship engines and boilers before exiting the ship's exhaust stack, drastically reducing greenhouse gas emissions.

## AL Pallet

AL Pallet provides shippers with 100-percent recyclable or reusable aluminum pallets. The company also offers an incentive-based recycling program to encourage customers to recycle pallets instead of throwing them away. The lightweight pallets allow shippers to load more freight without exceeding weight limits, creating fewer shipments and reducing fuel consumption and carbon emissions.

## Averitt Express

A founding partner of the SmartWay program, Averitt Express consistently looks for creative ways to reduce its carbon footprint. Employees are rewarded with gift cards, new vehicles, and performance bonuses for their efforts to help the carrier with its sustainability program. Averitt makes new equipment purchases with fuel efficiency in mind, and all its facilities recycle as much paper, cardboard, oil, and filters as possible.



## Alliance Shippers Inc.

In support of its environmental efforts, Alliance Shippers Inc. installed a solar array on its Keasbey, N.J., facility, gaining 80-percent energy independence, and reducing carbon emissions at the site by 70 percent. The 3PL consolidates less-than-containerload shipments into full containers to further reduce its carbon footprint; it also moves shipments via intermodal. After a series of engine and reefer replacements, and new equipment purchases, the company's fleet is now 95-percent CARB-compliant.

## BNSF

BNSF began a testing program using liquefied natural gas locomotives to further reduce harmful emissions. BNSF replaced 2,700 locomotives in the past decade with a model that is 15 percent more fuel efficient. The railroad has also equipped 70 percent of its locomotives with idle-control mechanisms that save fuel and reduce emissions by automatically shutting down locomotives that are not in use.



Energy-efficient vessel | APL



Low-emissions forklift | CAT Lift Trucks

## Cardinal Logistics Management Corporation

Cardinal Logistics is committed to improving the environmental performance of its operations through initiatives that increase fuel efficiency, reduce greenhouse gas emissions, and improve air quality. The 3PL stands behind that commitment with investments in fuel-efficient equipment; testing programs with compressed natural gas-powered trucks; fleet modifications to increase miles per gallon; and fleet monitoring technology coupled with driver training in order to identify problems with specific trucks or drivers.

## CAT Lift Trucks

CAT's DP40N1-DP55N1 series lift trucks feature a new diesel engine that increases fuel efficiency by 22 percent and reduces emissions levels. The trucks also meet the Environmental Protection Agency's new Tier 4 Final standards for diesel exhaust, which govern diesel particulate and NOx emissions. CAT also provides a line of electric lift trucks that produce zero emissions.



Lightweight trailer | Celadon

## Celadon

Celadon made myriad changes to its fleet to reduce emissions and fuel consumption. The carrier reduced the weight of 2,149 fleet trucks by 300 pounds each by converting them to aluminum wheels. It removed an additional 260 pounds from 1,899 of those trucks through other modifications. The company also switched its trailer fleet to lightweight trailers, introduced biofuels into the fleet, installed auxiliary power units on all new fleet trucks, and equipped trucks and trailers with fuel-efficient tires.

## CEVA Logistics

CEVA Logistics is greening its global footprint by investing in eco-sustainable sites and improving existing warehouses. These facilities are constructed from recyclable materials, powered by solar energy, and feature eco-efficient lighting. One warehouse in San Pietro Mosezzo, Italy, has been equipped with more than 9,600 photovoltaic panels. The site can produce 2,500 megawatt hours of energy per year, saving 1,300 tons of CO<sub>2</sub> emissions annually.

## C.H. Robinson

C.H. Robinson views sustainability as a way to add value, improve efficiencies, and invest in the long-term success of shippers, contract carriers, growers, employees, and communities. The 3PL offers services that optimize business processes to efficiently use transportation and distribution network resources, ultimately driving out costs and minimizing carbon emissions. For example, the company's produce-sourcing programs help reduce the distance from farm to table. Working directly with growers and retail customers allocates natural resources wisely and builds efficient farm-to-shelf distribution models.

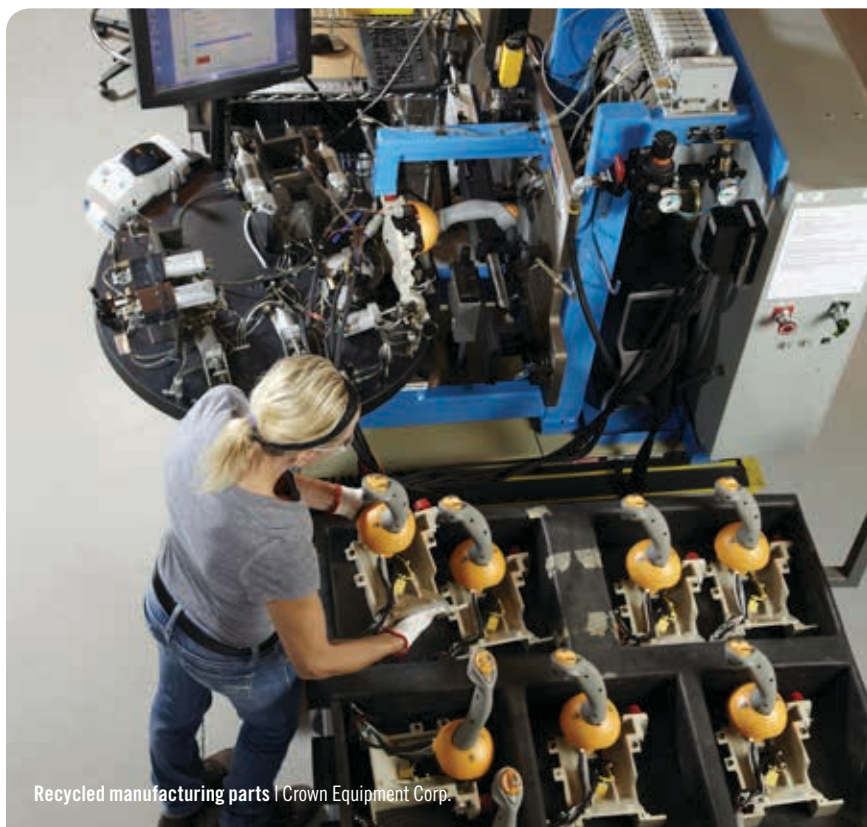


## CHEP

CHEP's Green Lanes program helps companies eliminate empty backhauls by working with third-party transport companies to fill empty trailers. Green Lanes has eliminated more than four million miles of transportation, and six million pounds of CO<sub>2</sub> emissions. CHEP creates its wood pallets using a heat-treating method rather than chemical-treating. It also sources the wood from sustainable tree farms, and encourages repairing, recycling, and reusing pallets, rather than throwing them out.

## Crown Equipment Corporation

Crown provides lift truck users with options to increase their sustainability footprint. The company's lift trucks are made from more than 60 percent recycled steel, and are up to 99-percent recyclable upon retirement. Additionally, Crown's commitment to sustainable manufacturing includes ISO 14001 certification of its environmental management systems, and two manufacturing facilities and one retail location that have achieved zero landfill status. The company also reuses or recycles scrap metal, paper, solid waste, and chemicals used in its manufacturing processes.



Recycled manufacturing parts | Crown Equipment Corp.

## Con-way Inc.

Con-way Inc.'s green efforts extend throughout its subsidiary network. Menlo Worldwide Logistics set up a solar-powered warehouse that provides 90 percent of its own electrical needs, established a zero-waste operation in Kansas City, and obtained Energy Star or LEED certification at three facilities. Con-way Freight began testing a CNG truck pilot program in Chicago, and relighted 200 service center locations, achieving a 50-percent energy savings. Con-way Truckload's energy conservation initiatives resulted in purchasing 140 new tractors with SmartWay-approved engines.

## C.R. England

C.R. England expanded its liquefied and compressed natural gas fleet for testing in some regional and short-haul applications, where the local infrastructure supports the vehicles. The carrier also implemented fuel-efficient TempStack 53-foot refrigerated intermodal containers to reduce carbon emissions, and trained drivers to save fuel by eliminating out-of-route miles, limiting idle time, and controlling their speed.

## CRST International

CRST International is a member of the EPA's SmartWay Transport Partnership, and maintains a top SmartWay score of 1.25. As part of this effort, CRST constantly tests new equipment to improve fuel efficiency. Recent tests include fuel-efficient tires and several brands of trailer side skirts. The company also employs route-mapping software to ensure drivers are using the most efficient routes, and governs trucks at 65 mph to ensure maximum fuel miles per gallon.

## CSX

CSX locomotive engineers are trained on locomotive simulators, where they learn to improve their awareness of fuel-efficient train handling. The company is also utilizing locomotive Event Recorder Automated Download (ERAD) technology that provides feedback to engineers on how to improve fuel efficiency, performance, and safe operations. Over the past four years, ERAD has contributed to CSX saving more than 20 million gallons of fuel. CSX has also put into service several GenSet locomotives, which improve fuel efficiency by 25 percent.



Emissions-reducing rail transport | DB Schenker

## DB Schenker

DB Schenker focuses on improving its customers' carbon footprint. Through its Eco Solutions offering, the 3PL provides solutions for every transportation mode to help companies reduce their CO<sub>2</sub> emissions along the entire transportation chain. Parent company DB Group has also reduced its own specific CO<sub>2</sub> emissions in rail transportation by more than 40 percent. Additionally, the company set a goal to reduce all transport-related emissions by 20 percent by 2020.

## The Dependable Companies

In 2011, Dependable partnered with Premier Power to engineer and install a 1.2-megawatt solar photovoltaic system at its Los Angeles headquarters to offset its daily operational output. Incorporating 5,292 solar modules, the installation is the world's largest rooftop solar system on an industrial high-rise.

## DSC Logistics

DSC helps shippers optimize their networks to deliver carbon footprint reductions. For example, for one large food processing customer, the 3PL identified a savings opportunity by rerouting international shipments from South America through both East and West Coast ports in lieu of West Coast ports exclusively. The network optimization saved the customer \$1 million in transportation costs, while reducing truck miles, carbon emissions, and fuel consumption.



Carbon-neutral shipping | DHL Express

## DHL Express

In 2013, DHL Express expanded its GoGreen environmental services program by introducing carbon neutral shipping to its recyclable DHL Express Envelope. The company calculates the CO<sub>2</sub> emissions associated with handling and transporting every individual DHL Express Envelope, then offsets the carbon impact of these emissions through investments in recognized climate-protection projects.

## The Fabri-Form Company

The Fabri-Form Company's reusable, recyclable plastic pallets, containers, and packaging help shippers reduce the amount of material they dispose of, decreasing the negative impact on the environment while increasing the bottom line. Fabri-Form's products provide a high return on investment and lower transportation costs, and can be repurposed into new product at the end of their lifecycle.



## FedEx

In 2008, FedEx announced it would seek to reduce carbon emissions intensity from its FedEx Express aircraft and improve the fuel efficiency of its vehicle fleet 20 percent by 2020, compared to 2005 performance. Less than five years later, it has nearly achieved these goals. Now the company has increased its aircraft emissions goal to a 30-percent reduction by 2020.

## Freightliner

At the 2012 American Trucking Associations' Summit on Natural Gas in Trucking, Freightliner announced the debut of a customer demonstration program in the United States and Canada for its new Freightliner Cascadia 113 natural gas day cab. Natural gas vehicles can contribute considerable fuel-cost savings, making them a smart choice for increasing profitability while benefitting the environment.

## Geodis Wilson

Since it established its Blue Attitude sustainable development program in 2008, Geodis Wilson has put in place a dedicated governance structure to work with customers and help them maintain their own green strategies. For example, Geodis has adapted its IT capabilities to help shippers optimize scheduling and deliveries within cities, thereby reducing CO<sub>2</sub> emissions and costs.



Materials recycling | GENCO

## GENCO

Through a holistic approach, GENCO provides logistics solutions for the entire product lifecycle. In 2012, the company processed and properly disposed of more than \$5 billion worth of pharmaceutical returns; achieved \$84 million in Lean Six Sigma process improvement cost savings; processed 600 million consumer product returns; and recycled 50 million pounds of materials.



Environmentally responsible port operations | Georgia Ports Authority

## Georgia Ports Authority (GPA)

The GPA has voluntarily undertaken a series of initiatives designed to increase the productivity and capacity of the port in environmentally responsible ways. In 2012, the GPA and its partners developed an electric-powered rubber-tired gantry crane (ERTG) system, the first of its kind in North America. The ERTGs reduce diesel consumption by up to 95 percent per crane. The GPA is also cutting emissions with the use of electric refrigerated container racks. Its current 64 racks power more than 1,500 containers at one time. Supporting poultry and other chilled produce exports, each rack avoids the use of 54,000 gallons of diesel annually. The port will add 20 more racks in 2013.

## Hub Group

Hub Group's expertise converting freight shipments from over the road to intermodal has helped customers significantly reduce their fuel consumption and CO<sub>2</sub> emissions. In 2012 alone, the 3PL prevented 3.5 billion pounds of emissions – the equivalent of planting more than 40 million new trees. To help project CO<sub>2</sub> savings, Hub offers unique dashboard technology that allows customers to track their carbon footprint.

## Inmar

Inmar approaches sustainability by eliminating waste in product that goes to landfill, in redundant processes, and in inefficient transportation models that increase carbon footprint and drive up costs. Its sustainability initiatives have helped convert 3.4 tons of waste to energy, saving more than 3,880 barrels of oil and generating 2,185 megawatt hours of renewable energy – enough to power 190 homes for one year.

## J.B. Hunt

J.B. Hunt has pursued sustainability initiatives such as reducing tractor engine idling through driver incentive programs; installing on-board equipment including direct-fired heaters and auxiliary power units; burning biodiesel fuels; governing top speeds on company-owned equipment to maximize fuel efficiency and safety performance; and converting over-the-road shipments to intermodal.

## Kalmar

Kalmar's DCG150-12 forklift trucks use Cummins EU Stage IIIB / EPA Tier 4i emissions-compliant diesel engines – which feature a diesel particulate filter – cutting particulate emissions by 90 percent, as well as reducing nitrogen oxide emissions by half.



Electric lift truck | Hyster

## Hyster

Hyster recently introduced an optional Environmental Package that allows its electric lift trucks to operate in harsh weather conditions outside a plant. This works well for facilities with multiple buildings, where users can gain efficiencies by operating between buildings inside and out. This new package makes green a viable alternative for industries that traditionally relied exclusively on internal combustion engine lift trucks.



## Kenco

Kenco began working on sustainability dashboards in 2012 with a pilot group of sites it manages for a major manufacturer in the healthcare industry. The dashboards bring together an array of data to display progress on key sustainability metrics such as electricity, natural gas, and water use. Baseline data on each metric is monitored to set goals toward lowering costs, reducing energy use, and producing less waste in customer warehouses.

## Kenworth

Kenworth's assembly plant in Renton, Wash., recently received a 2012 Gold Award presented by the King County (Wash.) Industrial Waste Program. The recognition is for compliance with the plant's industrial wastewater discharge permit. Kenworth's plants in Renton and Chillicothe, Ohio, both hold the ISO 14001:2004 certification for effective environmental management systems established to help build Class 8 trucks in an environmentally sustainable manner.

## Landoll

Landoll supports greener warehouse and manufacturing operations by offering lift trucks powered by lower-emissions fueling alternatives such as LP gas. In addition, battery-powered lift trucks such as the Bendi Electric Narrow Aisle series provide lift capacities up to 4,500 pounds so facilities can improve their carbon footprint without sacrificing power.

## Lufthansa

At its third Climate Care Conference in Frankfurt, Lufthansa Cargo reaffirmed its ambitious plans to reduce emissions 25 percent by 2020 – having already cut emissions by 10 percent. As part of this effort, the airline expects the debut of two Boeing 777 freighters in 2013 will help it meet this goal. The aircraft is the most efficient and quietest freighter of its class, generating approximately 20 percent fewer emissions than the existing MD-11 freighters in the airline's fleet.



Fuel-efficient truck | Lynden

## Lynden

Lynden's truck fleet is among the most fuel-efficient in the nation based on the EPA's SmartWay program criteria. The company has continued to improve its equipment with more efficient engines; aerodynamic side skirts, tanker, and trailer design; wide-base single tires; and idle-reduction equipment. The improved use of routing software has similarly improved fuel savings, as well as on-time delivery.

## MOL

In June 2012, MOL launched a car carrier equipped with a hybrid power supply system that combines solar power generation with lithium-ion batteries, and is preparing to launch a very large iron ore carrier and a Cape-size bulker, both featuring high-efficiency waste heat energy recovery systems. MOL is also reducing NOx, SOx, and other pollutants while at berth by limiting the use of conventional diesel-powered generators and receiving electric power supply from onshore instead.



Onshore electric power supply | MOL





## Murphy Warehouse Company

Murphy Warehouse Company has made environmental sustainability a cornerstone of its long-term business strategy. Through a comprehensive environmental management system, the company has made significant investments – including energy savings and power generation, carbon sequestration, pollution abatement, recycling, and resource management – to upgrade its campuses. At its new 350,000-square-foot Eagan, Minn., logistics campus, Murphy recently completed \$4 million in property upgrades, many of them environmental initiatives, from solar panels to LED lighting.

## NFI

To reduce carbon emissions and improve fuel efficiency, NFI outfitted its Fit Fleet tractors and trailers with Smartway-certified tires, computer-regulated speed governors, biofuel, synthetic oil, automatic tire inflation systems, and electric standby motors on refrigerated trailers. In addition, it recycles the Fit Fleet's tires, electronics, batteries, metals, and waste oil and fluids through EPA-registered recycling companies. NFI also uses propane-powered forklifts, and reduced its plastic wrap use by 57 percent per pallet by using a high-stretch film. Its void fill packaging operations use environmentally friendly, biodegradable void fill materials, and the company has implemented a National Pallet Buy Back Program to recycle the broken pallets accumulated in its distribution facilities.



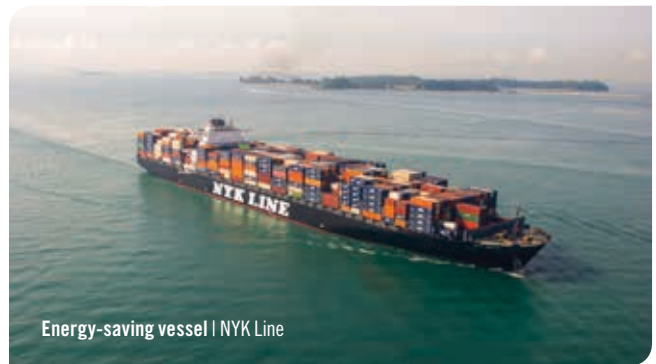
Upgraded rail equipment | Norfolk Southern

## Norfolk Southern

To reduce its carbon footprint, Norfolk Southern has focused on locomotive and facility energy use, its two largest sources of emissions. To address these emissions, the railroad has developed strategies to improve energy efficiencies across its 22-state network. Other initiatives include equipping office buildings and other facilities with more energy-efficient lighting, heating, and cooling systems. It has also incorporated sustainable designs and materials into new construction projects. Norfolk Southern has attained 60 percent of a five-year goal to reduce emissions per revenue ton-mile 10 percent by 2014.

## NYK Line

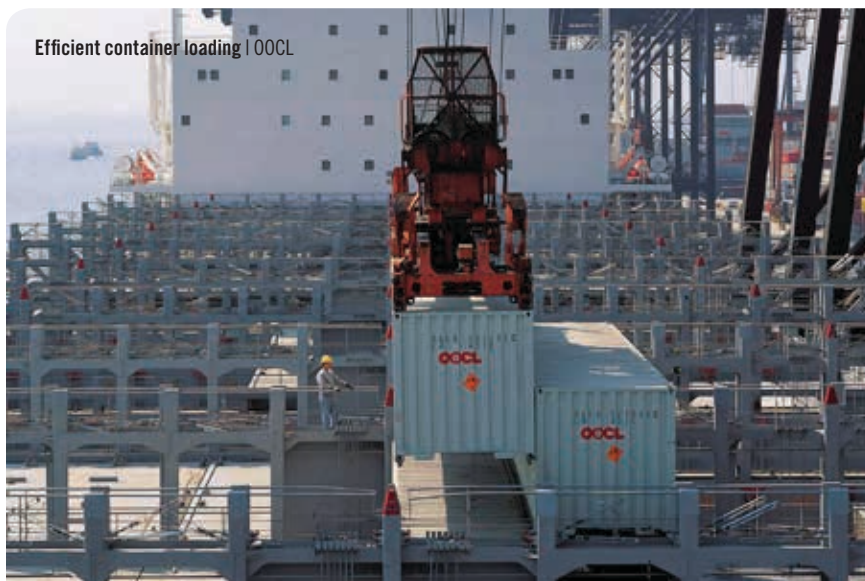
To improve energy and economic efficiency, NYK has installed E-COOL – a next-generation energy-saving fluorescent lighting system – on six NYK-operated car carriers. Since April 2012, the ocean line has replaced approximately 13,000 fluorescent lights with E-COOL, and expects a power-consumption savings of around 40 percent compared to the use of conventional fluorescent lamps. NYK is also promoting fuel savings with its FUELNAVI fuel-consumption monitor, a device that provides a real-time indication of fuel-consumption performance measured as distance traveled per ton (or day) of fuel consumed.



Energy-saving vessel | NYK Line

## Old Dominion Freight Line (ODFL)

ODFL is adopting technologies to reduce emissions and improve fuel efficiency, such as wide-based tires, reduced highway speeds, idle reduction, automatic tire inflation, improved freight logistics, and longer combination vehicles. ODFL is also working on an extensive, ongoing driver training program enhanced by on-board telematics. These combined programs have increased fuel efficiency by four percent since 2010, saving almost 49,000 metric tons of CO<sub>2</sub> – the equivalent of taking more than 10,000 passenger vehicles off the road.



## OOCL

OOCL's efforts to restrain its impact on air quality and climate change have focused on improving its vessels and facilities. In the United States, for example, its vessels comply to the 0.5 percent (for diesel) or 1.5 percent (for gasoline) sulfur content requirements when sailing within 24 nautical miles of the California Baseline and at berth. All new OOCL facilities are equipped with Alternative Maritime Power (AMP) Systems, also known as cold ironing, which allow vessels to use shore-supplied electricity instead of burning fuel when at berth. Using AMP technology has resulted in an average 95 percent reduction in NOx, SOx, and particulate matter emissions per vessel call.



## PECO Pallet

PECO Pallet's pallet pooling network offers a sustainable shipping platform for grocery and consumer goods manufacturers throughout North America. Built from responsibly forested U.S. timber, and kiln-dried to prevent infestation, moisture, and mold, PECO's pallets are constantly reused, repaired, and recycled. PECO's North American network includes more than 500 recovery sites, pallet depots, and manufacturing facilities in strategic locations to reduce transportation costs and fuel consumption. The PECO logistics team also works to ensure full truckloads and fuel-efficient transportation, shipping pallets by rail whenever possible.

## ORBIS Corporation

As a manufacturer of plastic reusable containers, pallets, dunnage, and bulk systems, ORBIS Corporation helps companies reduce their impact on the environment through re-use of packaging to move product throughout the supply chain. At the end of their life, the products can be recovered, recycled, and reprocessed into new packaging products. With its proprietary environmental analysis tool, ORBIS works with companies to evaluate and compare packaging alternatives and calculate environmental impacts, including greenhouse gas emissions, energy usage, and solid waste. In addition, at its Urbana, Ohio, plant, ORBIS replaced its forklift fleet with all-electric forklifts that produce 70 percent fewer smog-forming emissions, and 26 percent less particulate matter.



## Penske Logistics

By ensuring nearly 75 percent of its carriers are EPA SmartWay program partners, Penske Logistics has improved fuel economy to achieve a 32-percent reduction in CO<sub>2</sub> emissions – equivalent to removing from the road more than 16,000 passenger vehicles using 8.8 million gallons of gasoline annually. Penske Logistics is now also SmartWay certified for its transportation management approaches as a logistics provider, and has earned the EPA program's highest rating of 1.25, representing outstanding environmental performance.





Clean diesel tractors | Performance Team

## Performance Team

To maintain and enhance environmental causes and conditions, Performance Team uses clean diesel tractors for its port operations and dedicated retail fleet operations, and maintains an on-terminal transload facility at the Port of Charleston that reduces drayage miles by 85 miles per round trip. The 3PL installed trailer skirts that improved fuel efficiency by up to seven percent, and switched to T-5 fluorescent lighting fixtures at all its locations, cutting electric consumption by half. Finally, implementing SmartWay-approved low roll resistance tires improved fuel efficiency by up to three percent.



Environmental leadership | Port of Long Beach

## Port of Long Beach

Guided by its Green Port Policy, the Port of Long Beach has made substantial improvements in reducing harmful air emissions from port-related operations, improving water quality in the harbor, protecting marine wildlife, and implementing environmentally sustainable practices throughout the port. In addition, it encourages shipping lines' sustainability efforts through its Green Ship Incentive Program, a voluntary clean-air initiative targeted at reducing smog-causing nitrogen oxides by rewarding qualifying vessel operators for deploying their greenest ships to the Port of Long Beach. The port's shore power and clean truck initiatives also contribute to sustainable port operations.

## PITT OHIO

After creating a cross-functional sustainability team, PITT OHIO invested in innovative solutions to improve its energy usage and reduce its carbon footprint, including researching alternative fuel vehicles such as CNG vehicles and electric forklifts, installing panels at new and existing facilities, and upgrading information technology to reduce power. In 2012, PITT OHIO reduced its carbon output by three percent over 2011 levels through improved fleet fuel usage and reduced utility consumption at its facilities.



Solar panels | Port of Los Angeles

## Port of Los Angeles

Through initiatives such as its Clean Truck Program and Alternative Maritime Power, the Port of Los Angeles continually addresses major sources of emissions at the port: ships, trains, trucks, cargo handling equipment, and harbor craft. In June 2013, it announced plans for its Energy Management Action Plan (E-MAP) initiative, designed to improve the port's energy efficiency. With the demand for electricity expected to increase dramatically in coming years, the port is developing the E-MAP as a guide to improve its energy profile into the future and address expanded use of shore power; electric cranes, yard tractors, and other cargo handling equipment; and future automation.

## Port of Seattle

The Port of Seattle was the first in North America to provide infrastructure for two ships to simultaneously utilize shore power and turn off their engines. Its At-Berth Clean Fuels Program encourages shipping lines to voluntarily reduce vessel emissions at the port by incentivizing use of low-sulfur fuels. In 2011, the Port of Seattle set 25-year environmental goals that include reducing air pollutant emissions by 50 percent from 2005 levels.



## Port of Tacoma

As a partner in the Northwest Ports Clean Air Strategy, the Port of Tacoma works to reduce maritime-related air emissions, which fell by as much as 40 percent since 2005. The port also works with tenants and the local utility to retrofit lighting to conserve energy, save money, and provide brighter, safer working conditions. With land available for development, the port also cleans up property contaminated by decades of industrial practices to put it back into productive use.



Filtration boxes | Port of Tacoma

## Purolator

As an integrated freight and parcel solutions provider, Purolator is committed to reducing its environmental impact, and adheres to an established environmental policy that includes greenhouse gas reporting and eco-friendly packaging options. In addition to operating a large hybrid electric vehicle fleet, and training drivers on eco-driving practices, Purolator stays ahead of the curve by continually exploring new technology that contributes to a sustainable future.



Energy-efficient Belgium facility | Prologis

## Prologis

As part of its commitment to renewable energy, Prologis has developed 39 million square feet of facilities meeting sustainable building standards; completed energy efficiency improvements in more than 50 percent of its global property portfolio totaling 270 million square feet; and installed 83 megawatts of solar electric capacity. In 2012, Prologis saved enough energy to power nearly 100 million square feet of its global portfolio – the equivalent of about 40,000 homes.

## Raymond Corporation

Lift truck manufacturer Raymond employs a design philosophy it calls Eco-Performance because it increases productivity while reducing energy consumption on every truck. Raymond's ACR System technology provides quick acceleration and smooth directional changes, which lowers each truck's rate of energy consumption, and adds up to changing batteries less often. One example is Raymond's 9000 Series Swing-Reach trucks. By using up to 40 percent less energy than other lift truck models, the Swing-Reach trucks save as much CO<sub>2</sub> as a car uses over one year. Fewer battery changes mean fewer carbon emissions, maximum ecologic benefits for the planet, and greater energy savings for users.

## Ruan

Ruan is a 2012 SmartWay Excellence Award recipient for its commitment to helping lead the freight industry to a more sustainable future. The carrier operates the largest renewable compressed natural gas-fueled (CNG) Class 8 tractor fleet in the nation. Ruan's environmental program provides guidelines and measures for reducing fuel consumption, reducing or eliminating materials for disposal, preventing pollution, and effectively addressing unauthorized releases. As part of its environmental leadership role, Ruan co-chairs the Environmentally Sustainable Methods for Achieving Responsible Transportation (E-SMART) project, which is developing dairy-specific transportation guidelines to cut carbon dioxide emissions by 165,000 metric tons annually, potentially saving 16.5 million gallons of diesel.



Natural gas-powered truck | Ruan

LNG truck | Ryder



## Ryder

Ryder currently deploys more than 300 natural gas vehicles (NGVs) in customer operations, and expects to have 450 NGVs in service by the end of 2013. The 3PL has made significant investments in maintenance infrastructure in every market where it has NGVs, and will soon open its first two L/CNG fueling stations in California. Ryder provides application and performance feedback to vehicle manufacturers so they can continue to improve their green technology. Ryder is a charter member of the NGV Fleet Forum, a member of the Department of Energy's National Clean Fleets partnership, and the recipient of the 2011 NGV Achievement Award.

## Saia LTL Freight

As a Smartway partner for many years, Saia LTL Freight has limited the speed of its tractors and operated under a no-idling policy. It was the first non-bulk LTL carrier in the United States to earn RC14001 certification through the American Chemistry Council's Responsible Care Program. The rigorous certification reflects Saia's commitment to product stewardship, distribution, community awareness, emergency response, and pollution prevention. In addition, 28 Saia facilities have been certified ISO 9001:2000, the industry standard for a systematic approach to quality management.



CNG fueling station | Saddle Creek



## Saddle Creek Logistics Services

Saddle Creek operates more than 100 trucks that run on compressed natural gas (CNG); this fleet will reduce the 3PL's carbon footprint by 11.4 million pounds in 2013 alone. In addition to the CNG fleet, Saddle Creek's sustainability efforts include controlling speed (65 mph), reducing idle time, using satellite monitoring for optimal vehicle performance, utilizing tire auto-air inflation systems, improving truck utilization, and adding trailer skirts to make tractors more aerodynamic. In its warehouses, Saddle Creek uses motion-sensitive lighting, quick-recharge electric forklifts, and recycling programs.





Swapping fuel tanks | Schneider

## Schneider National

Schneider National's most recent green initiative comprises a complete transition to the latest clean-diesel engines. In 2012, Schneider National replaced one-third of its fleet (3,000 tractors) with EPA-compliant engines, representing the largest equipment investment in the company's history. These tractors have aerodynamic features — including wheel covers — that reduce drag. Most of them also have fairings that have been redesigned to optimize fuel efficiency and improve mileage per gallon, as well as Predictive Cruise Control.



Singapore green hub | SDV

## SDV

Global third-party logistics provider SDV created the SAVE program, an environmental customer solution that makes carbon reduction the new driver of logistics performance. SDV's SAVE program comprises three elements: A CO<sub>2</sub> calculator that lets customers measure the carbon footprint of their supply chains; the design of eco-responsible solutions that optimize the supply chain and reduce CO<sub>2</sub> emissions; and a voluntary carbon-offsetting scheme that lets customers participate in climate change programs.

## South Carolina Ports Authority

The South Carolina Ports Authority's goal is to be the greenest port in the Southeast. To that end, the port has implemented a truck replacement program that incentivizes drivers of old, dirty trucks to buy new, cleaner trucks. The port electrified its ship-to-shore cranes, and plans to electrify the rubber-tired gantry cranes at the new inland port to protect air quality. A new electrified agricultural commodities transload facility will replace existing diesel operations, completely eliminating all emissions from the activity. And a Rapid Rail matchback system ensures the fewest number of unnecessary truck trips.



Green operations | South Carolina Ports Authority

## Swift Transportation

Swift employs the latest technology to reduce the carbon footprint of its Clean Fleet, which utilizes EPA-certified 2007 or newer trucks and trailers, and 2009 tractors. Swift's truck fleet is fully exempt from port "dirty truck" fees, and is California idle-compliant. Swift is a charter member of the EPA's Smartway program.





## TransGroup Worldwide Logistics

TransGroup was the first third-party logistics provider to become a SmartWay partner and continues to work with customers, carriers, and the SmartWay partnership to reduce the environmental impacts of their collective transportation and logistics operations. TransGroup offers TransNeutral, eco-responsible transport logistics solutions that include greenhouse gas-limiting warehousing and distribution services, asset recovery and reverse logistics, end-of-product-lifecycle disposition, and shipment emission metrics.



Eco-friendly lift trucks | TIEM

## Toyota Industrial Equipment Mfg. Inc. (TIEM)

TIEM operates under a global earth charter that promotes environmental responsibility throughout the company. During the manufacturing process at its zero-landfill plant in Columbus, Ind., TIEM analyzes and minimizes the environmental impact of every product at every stage of the production cycle – from design and development to raw material and parts procurement to manufacturing and product disposal. In addition, TIEM requires its top 65 suppliers, who account for more than 75 percent of the materials purchased locally, to be ISO 14001 certified or have an equivalent Environmental Management System. TIEM also requests that all suppliers use environmentally friendly materials and processes.

## U.S. Xpress

Efforts to reduce fuel consumption are the most critical component of U.S. Xpress' sustainability initiatives. These efforts include route optimization; a modern fleet of trucks with fuel-efficient tires, aerodynamic mud flaps, engine governing, and road speed policies; fuel-fired bunk heaters for cold weather; and temperature-sensitive auto shut-off functionality to aid in idle reduction. U.S. Xpress has developed an industry model partnership with the University of Tennessee at Chattanooga's SimCenter for Computational Engineering that allows the company to test truck prototypes before they are manufactured to ensure high performance, improved aerodynamics, and reduced fuel consumption.



Trailer with aero mud flap | U.S. Xpress

## Transplace

Proprietary technology called Optimal Carrier Assignment allows Transplace to search for SmartWay carriers as a selection criterion when multiple carrier choices are available. In addition to selecting SmartWay carriers, Transplace continually evaluates opportunities to convert truckload freight to intermodal or rail. It also employs software tools that enable customers to consolidate orders into environmentally conscious routings, mode selections, and carrier assignments. Transplace works with customers' private and dedicated fleet operations to increase backhauls and reduce the total number of trucks on the road, thus reducing fuel consumption and lowering overall carbon emissions.





Fuel-efficient locomotive | Union Pacific

## Union Pacific

Recent investments illustrate Union Pacific's dedication to sustainability. The rail purchased 100 new fuel-efficient locomotives in 2011, and plans to purchase an additional 200 in 2012, retiring older, less fuel-efficient locomotives. This proactive approach helped reduce UP's fuel consumption rate by 19 percent since 2000, equaling greenhouse gas emissions savings of more than 12 million metric tons. Through an aggressive recycling initiative, in 2011 the rail captured and recycled more than four million gallons of fuel and oil; recycled more than 3,000 tons of paper, cardboard, plastics, and other solid waste; and recycled 250,000 tons of metal.



## UPS

For the fourth year in a row, UPS improved its carbon intensity—keeping its carbon at a lower rate than volume growth. The expeditor also increased its alternative fuel technology and fleet by 35 percent, and logged more than 246 million miles by alternative fuel and advanced technology vehicles. UPS gained more than 100,000 pledges from employees to act more environmentally responsible at home and at work, and launched a new international forestry initiative to plant, protect, and preserve trees.

## UTi

As part of its thinkgreen program, UTi uses its proprietary ECOTool to provide carbon footprint calculations for the emissions associated with any of its third-party logistics services – including all transportation modes and warehousing activities. The company offers network, inventory, and routing optimization, along with packaging and warehouse efficiency improvements, to drive inefficiency out of the supply chain, leading to cost reductions and environmental gains. Its non-asset-based model allows UTi flexibility in brokering freight among an array of carriers against a client's specific green criteria.





## Weber Logistics

Weber's drayage solution uses only clean certified trucks at ports and railyards, meeting EPA standards for clean-diesel trucks. In addition, the third-party logistics provider has purchased machinery that recycles dunnage into packing material to be used as protective filler during shipping, greatly reducing the use of plastic filler. In addition, Weber requires all its vendors to pass a Scope 3 emissions test to ensure they are contributing to the company's sustainability goals.

## Werner Enterprises

Through numerous sustainability initiatives and capital investments, Werner is making strides in improving miles per gallon (mpg) and reducing emissions. Due strictly to mpg improvements from these fuel-savings initiatives, Werner saved more than 77 million gallons of fuel between 2007 and 2012, which equals a reduction of more than 860,000 tons of CO<sub>2</sub> emissions. The carrier's fuel-efficiency initiatives include: the use of aerodynamic trucks and trailers, weight reduction strategies, automated tire inflation systems, the newest diesel engine technology, a computerized truck idling program and paperless log system for drivers, speed management, and continual in-depth testing of the latest fuel-saving technologies.



Electric lift truck | Yale

## Yale

Yale is one of the largest volume producers of zero-emissions electric lift trucks in North America. Innovative transmission designs reduce tire and brake wear in Yale's internal combustion engine (ICE) trucks, which are powered by cleaner-burning alternative fuels. Yale was one of the first lift truck manufacturers to introduce hydrogen-powered fuel-cell trucks. Yale trucks also feature engineering that cuts energy consumption through weight reduction, drive train efficiency, and hydraulic efficiency. All Yale electric lift trucks recapture energy during braking and lowering of loads, allowing the energy to be reused.



Fuel-efficient fleet | YRC

## YRC Worldwide

The motor carrier company promotes pollution prevention, waste reduction, and conservation across its daily operations. YRC Worldwide is a charter partner of the EPA's SmartWay voluntary emissions reduction program, and has been recognized with the SmartWay Excellence Award; YRC also was named a SmartWay Champion. The company's subsidiaries — YRC Freight, Holland, New Penn, and Reddaway — are all undertaking a number of different measures to reduce their emissions profiles. These measures include converting the entire fleet to fuel-efficient tires, switching to synthetic motor oils, and expanding the use of alternative fuels.