

ENSURING A SUSTAINABLE FUTURE

CHECKING FOR A CULTURE OF SUSTAINABILITY

Strategic shippers realize one obvious way to “green up” their operations is to examine supply chains, which include providers, practices and processes. Because the transportation providers they work with are such big pieces of the supply chain puzzle, it makes sense – and cents – to work with those committed to operating as environmentally soundly as possible.

Even with thousands of transportation providers out there, choosing one that is green doesn't have to be confusing or overwhelming. It just requires learning a bit about key sustainability elements, guided by two core questions:

1. Does the transportation provider foster a culture of sustainability?
2. Does the transportation provider invest in a fleet spec with the most energy-efficient equipment?

A BROADER DEFINITION OF SUSTAINABILITY

Being green for the sake of being green will only get a business so far. Shippers need to think about sustainability in terms of a triple bottom line: financial responsibility, social responsibility and the environment.

IT MAY NOT BE EASY BEING GREEN, BUT IT'S EASY TO SPOT!

Hands down, the most crucial ingredient to being a green transportation provider is evidence the company wholly embraces sustainability as part of its culture. Undercover work won't be necessary to ascertain whether the provider in question meets this important criteria.

There are outward signs of it.

FINANCIAL	SOCIAL	ENVIRONMENT
		

To be truly sustainable, any transportation provider needs to be financially stable. It should demonstrate its ability to invest in people, equipment and plans for the future. Ideally, it should have a long track record of success. A company that's been around for a while likely knows how to weather the ebbs and flows of the economy and industry-shifting changes (like the green movement).

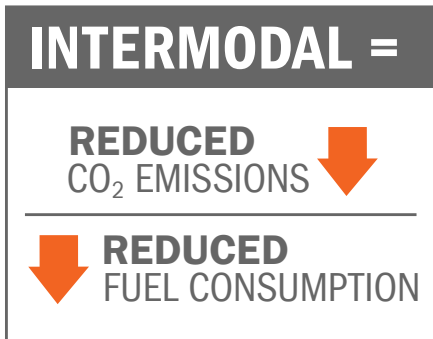
Another element of sustainability is social responsibility. The company should be very comfortable talking about its core values and how its people live them day in and day out. Ask how the transportation providers give back to their communities, too. Charitable donations and projects often provide insight into how a carrier will be when you work together.

OPTIONS GALORE

There is more than one way to get from point A to point B. If a provider only has one mode under its umbrella, its options – and its shippers' options – are limited. What if that's not the most efficient route or mode of transport? That's the beauty of a multimodal provider. Look for a company that offers a broad portfolio of services, particularly featuring truckload, intermodal and brokerage.

Not only are today's transportation providers able to offer direct door-to-door service, but those investing in new EPA-compliant equipment and sustainable operational practices are more energy efficient than ever before.

Shippers can be even greener by moving freight via intermodal service, which is a combined truck and rail move. According to the Association of American Railroads, intermodal is, on average, two times more energy-efficient than truck transport. Today, rail can move a ton of freight an average of 479 miles per gallon of fuel. In fact, moving freight by rail instead of truck lowers greenhouse gas emissions by 75 percent.¹ If just 10 percent of freight that moves on Class 7 and Class 8 trucks moved by rail instead, fuel savings would be around 1.5 gallons per year and annual greenhouse gas emissions would fall by 17 million tons. Another great environmental benefit of intermodal is that it also reduces highway congestion: A single train can take 280 trucks off the highway.



TESTING, TESTING ... 1, 2, 3 ...

Technology evolves daily, which is why any company worth its weight makes sure it's keeping on top of the latest advancements in its field. The best have in-house research and development departments. In the transportation industry, these departments are comprised of engineers who regularly test new products, practices, technology and alternative fuels. This enables it to analyze the benefits touted by manufacturers and select only those that have a significant return on investment. Remember to ask about the provider's research and development program.

SO HAPPY TOGETHER

Engage the transportation provider in a discussion about its relationship with original equipment manufacturers (OEMs). Regular meetings, frequent communication and open feedback are all indicators that the provider has the ear of the OEM. That connection creates real value: the engineers can often help the OEM fix very real performance and efficiency issues before it begins mass production, saving millions of dollars that might have otherwise been spent on maintenance or fuel.

Another important relationship is between the company and its rail providers. Some railroads, like CSX and BNSF, are just more efficient than others because of investments in equipment and corporate cultures. If both are among the greenest in the industry, shippers and carriers working with them become exponentially greener too.

AND THE AWARD GOES TO ...

The phrase "award winning" may be overused, but in the case of choosing a sustainable transportation provider, the more those words pop up in conversations or in print, the better.

Quite a few reputable organizations recognize companies' green efforts. One of the most sought-after honors is the EPA SmartWay Excellence Award. Providers doing due diligence in this area often are members of the SmartWay program, but those knocking it out of the park are honored with the Excellence Award.

A variety of transportation industry publications also herald top performers in the environmental space. Four with prestigious annual awards are *Food Logistics*, *Supply and Demand Chain Executive*, *Inbound Logistics* and *FleetOwner*. If your provider isn't a past winner, quick web searches will likely reveal top candidates.

LEAD THE WAY, THEN REWARD THE WAY

Technology only gets a transportation provider so far on the journey to sustainability; its drivers are also responsible for taking them the rest of the way. A solid driver training program is a “must” on a shipper’s carrier criteria list.

Unless a driver understands how their behaviors impact the environment and the company’s overall operations, the driver isn’t going to drive in the most fuel-efficient ways. Driver simulators are excellent tools for teaching this without wasting fuel. Once used primarily by the military to teach flight navigation, simulators are now being used in a variety of industries. A limited number of trucking companies employ them, so ask if the carriers you’re considering are among those few.

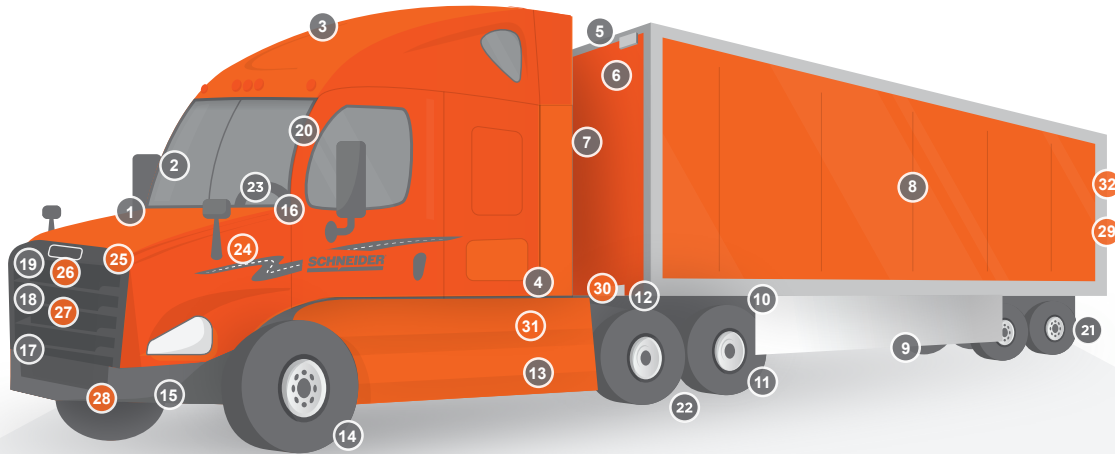
While the goal of a corporate culture is to instill sincere desire to operate in accordance with the company’s beliefs and values, rewarding responsible performance is a best practice in providing incentives for that behavior. Shippers should ask current and potential providers how they reward drivers who deliver best-in-class performance knowing that on-the-road behavior, fuel conservation and emissions reductions go hand in hand. Some carriers instill green driving techniques by providing ongoing driver training and offering bonuses to drivers who achieve MPG goals.

OFFICE SPACE

Certainly, the biggest opportunity for conservation of fuel centers on operations, equipment and drivers, but transportation providers’ facilities can have an impact as well. Make sure the folks who aren’t on the road are doing their part too. Recycling programs, efficient heating, ventilation and air-conditioning systems, and energy-saving lighting can all play their part in operating responsibly.

In recent years, Schneider has implemented 20 key fuel-efficient features within its fleet and continues to identify future solutions that will raise the bar for shipping freight sustainably.

20 KEY FUEL-EFFICIENT FEATURES



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TODAY'S INDUSTRY-LEADING, ENERGY-EFFICIENT INVESTMENTS

Current Features

- 1 2017 GHG engines
- 2 Aero mirrors
- 3 Optimized roof fairing
- 4 Fuel-fired heater and Auxiliary Power Unit for cab cooling and engine-off accessory power
- 5 Trailer-tracking
- 6 Minimal gap with 5th wheel
- 7 Side extenders
- 8 Smooth-side trailers
- 9 Trailer skirting
- 10 Lower axle ratio/downsped engine
- 11 Low-rolling resistance tires and aero wheel covers

- 12 Optimized drivelines/Low friction driveline lubes
- 13 Fuel tank skirts
- 14 Tire compound/tread designs
- 15 Aero bumper
- 16 Adaptive Cruise Control
- 17 Automated manual transmission
- 18 Air ambient temperature sensors
- 19 Ultra low viscosity, high-efficiency motor oil
- 20 Electronics:
 - Road speed limiters
 - Optimized shifting
 - Torque control
 - In-cab communications (ELDs)
- 21 Automatic tire inflation system
- 22 Drive tire fairings
- 23 Terrain-mapping predictive technologies

TOMORROW'S OPPORTUNITIES FOR IMPROVED SUSTAINABILITY

Future Features

- 24 Cameras replace hood mirrors
- 25 Improved aero hood
- 26 Component electrification
- 27 Cool air flow management
- 28 Aerodynamic undertreatments
- 29 Trailer aerodynamic enhancements
- 30 Manufacturer chassis design
- 31 Alternative fuels
- 32 Trailer tails

EVALUATING ENERGY-EFFICIENT EQUIPMENT

The transportation industry has made great strides in the last decade toward the development and implementation of best practice equipment. Top performers embarked on a quest to reduce both fuel consumption and environmental footprint. The result is a simple checklist when examining a particular transportation provider.

- **Engines:** The EPA has guided the industry to a new level when it comes to low-emitting engines. The next phase will be engineering more fuel efficiency. If a large portion of the carrier's fleet is comprised of trucks meeting the latest EPA requirements, it's not only a good sign – it's a great sign. Newer add-ons are predictive cruise control systems, which optimize shifting.
- **Aerodynamic features:** This is a case where little things really do mean a lot. Truck design and aerodynamic additions to the tractor and trailer/container can save a fleet emissions and fuel. The most common features on tractors include side extenders, optimized roof fairings, fuel tank skirts and aerodynamic mirrors and bumpers. Trailers often feature smooth sides, sideskirts and trailer tails. Tires should have wheel covers, optimized drivelines and provide low-rolling resistance. All of these combine to reduce drag and save fuel.
- **Slower speeds:** Carriers who care about conservation know to place speed governors on trucks. It's proven that the slower the vehicle travels, the less fuel it consumes. In fact, a truck traveling at 75 mph consumes 27 percent more fuel than one going 65 mph.
- **No-idle heating/cooling systems:** For decades, drivers who wanted to adjust the temperature in cabs when snoozing at a truck stop needed to idle the engine to do so. No longer. Engine-off solutions now exist.
- **Stackable intermodal containers:** The locomotive is going down the track regardless, so why not get as much freight behind it as possible? When stackable containers are an option, the amount of freight able to make that move multiplies quickly.

Creating a sustainable supply chain may sound complicated, but shippers can achieve it by implementing a fairly simple two-step process. Step One: Evaluate and choose a provider on the basis of its green practices and technologies. Step Two: Hold the provider accountable for practicing what it preaches. If a provider isn't making the green grade, realize it's time to move on.

Transportation moves today are cleaner and more energy efficient than ever before because providers, shippers and consumers are working together, sharing the investment. Smart providers and smart shippers know that a green supply chain drives everyone's business ... and is vital to creating a sustainable future we can all enjoy for generations.

Learn how Schneider has [committed to going green](#).