

CONVOY

SUSTAINABILITY IN TRUCKING SNAPSHOT

February 2021



KEY INFLUENCES IMPACTING TRUCKING

Tighter labor market for truckers

Trucking companies underperformed relative to the overall labor market in January 2021 for the first time since April 2020, losing 2,900 jobs compared to December. Some of this was to be expected: The normal seasonal pullback after a record online holiday shopping season (and record truckload demand to move packages). But it also begs the question why trucking companies have not been successful at ramping up hiring more aggressively. It is not for lack of effort.

Compensation at transportation and warehousing companies increased 1.4% in Q4-2020 according to the Employment Cost Index published February 2021 — the fastest quarterly increase since 2012, the fourth highest number since 2003, and double the wage increases other workers saw in Q4.

[Read the full freight market report](#) to understand why trucking companies are still struggling to achieve pre-crisis levels, despite rising wages and high unemployment.

Covid-19 impact

The Covid-19 pandemic introduced an unprecedented degree of turmoil into the freight industry: Freight demand initially surged, then collapsed, and then began to steadily march higher as home-bound consumers shifted their spending away from services and toward goods. Even as unemployment climbed to historic highs, many households were able to continue purchasing staples as a result of exceptional public-sector

intervention. From March through December 2020, Americans spent nearly \$90 billion on goods above and beyond what they were on track to spend pre-pandemic; upward of one-third of that additional spending went through e-commerce channels. More goods spending and more home delivery meant new stresses on supply chains even as truckers face new risks to being out on the road.



The increase of millennial owner-operator truckers

The number of owner-operator truckers who are part of the Millennial generation — the cohort of Americans born between 1980 and 1996 — surpassed the number of Baby Boomer (born 1946 to 1964) owner-operators in 2019 and has climbed steadily higher. Gen Xers are still the largest single generation of owner-operators since they overtook

Baby Boomers during the first half of the last decade. But over the past two years, nearly all net growth in the number of owner-operators has been driven by Millennials, who are now one in three owner-operators nationwide — up from one-in-ten in 2015 and one-in-twenty a decade ago.

[Read the full article on trucks.com.](#)

The link between sustainability and supply chain

There is near universal recognition of the importance of sustainability to the transportation industry. In a recent survey of over 120 supply chain leaders, more than 80% of respondents said that sustainability is “important” or “very important” to their business. The pressure to act sustainably is present across all of the geographies and industries. In fact, just 3% of respondents do not believe that sustainability is important to their businesses. While these initial results aren’t surprising, how companies define and manage sustainability can vary widely depending on industry or organizational structure.

The most frequently cited sustainability priority is the reduction of carbon emissions. Climate change is increasingly seen as a defining environmental

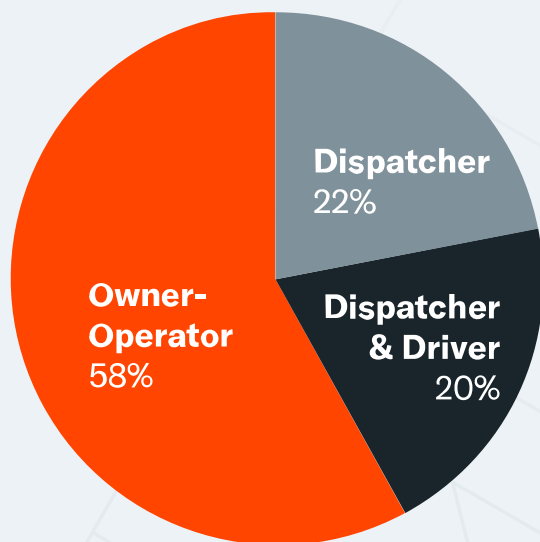
risk for many companies, and the appearance of carbon at the top of this list is not surprising. The transportation industry is responsible for 28 percent of the emissions of the entire country. Any reduction in the per-mile carbon emissions from trucking could have a drastic impact on the country’s ability to reduce emissions to more sustainable levels. Thankfully, many of the other frequently mentioned priorities will have the added benefit of also decreasing carbon dioxide emissions from transportation. For example, implementing efficiency gains, such as reducing the empty miles driven by freight vehicles can result in significant carbon emissions reductions.

[View the full study results here.](#)

RESPONDENT SUMMARY

In February 2021 Convoy surveyed over 474 small and mid-sized trucking companies across the United States to collect a snapshot of sustainability in trucking. Survey participants include dispatchers for fleets and owner-operators. All the results are self reported by the participants.

Respondent breakdown



Dispatcher

Dispatcher and driver

"I dispatch other drivers and also drive my own loads"

Owner-operator

"I dispatch myself and also drive my own loads"

SURVEY HIGHLIGHTS

50% of carriers plan to buy a truck in the next year.

Up from 33% who planned to buy a truck in the next year as reported in our November 2020 survey.

Purchasing plans often fail to materialize. Assuming a truck has a lifespan of about 10-15 years, you would expect 6%-10% of respondents to upgrade in a given year.

75% rate fuel economy as an important consideration when purchasing a truck.

This percentage increased to 94% for those who are considering purchasing a truck within the next year.

- 16%** believe fuel efficiency is somewhat important when purchasing a truck
- 2%** rate fuel efficiency as not important when purchasing a truck
- 7%** have a neutral opinion of the importance of fuel efficiency when purchasing a truck

17% of carriers have completed an eco-driving fuel efficiency training program.

Of those who have completed eco-driving training:

- 46%** feel pressure to reduce carbon emissions in their business
- 92%** believe fuel economy is important when purchasing a truck
- 32%** believe climate change is affecting their community a great deal

36% of carriers feel pressured to reduce carbon emissions in their business.

The top sources of pressure include:

- 22%** government regulation
- 21%** more awareness of the impact of carbon emissions
- 10%** personal motivation
- 7%** reduce operating costs

There are still barriers preventing carriers from purchasing an electric truck. **The top barriers include:**

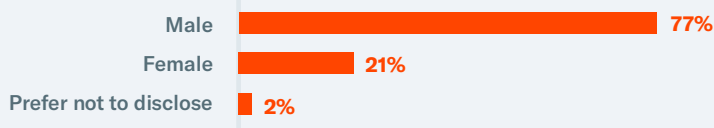


17% of carriers do not experience any barriers to purchasing an electric truck.

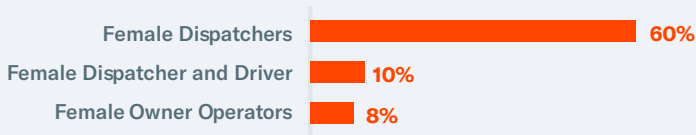
RESPONDENT DEMOGRAPHICS

Based on the findings on our previous [Sustainability Snapshot Report](#), the trucking industry has seen a shift towards broader demographic representation in recent years with 64% of carriers reporting that they are at least 51% owned by a member of a diverse group. According to a recent [American Trucking Associations driver-shortage analysis](#), 40.4% of truck drivers were minorities in 2018, an increase of 13.8% from 26.6% five years earlier. This increase is driven by an expanding industry, driver shortages, and retirements. In the same report, however, 6.6% of drivers identify as female, an increase of only 2% from two decades earlier.

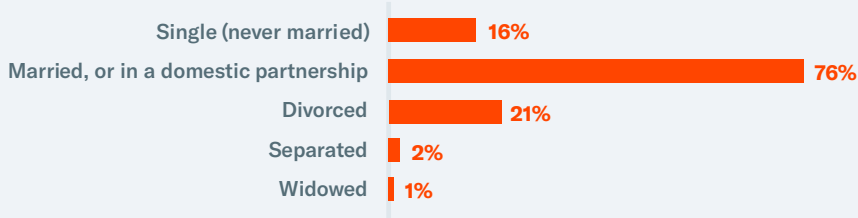
Gender



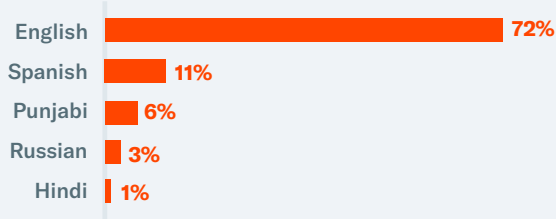
Compared to the overall average, there are significant gender differences when looking at role type:



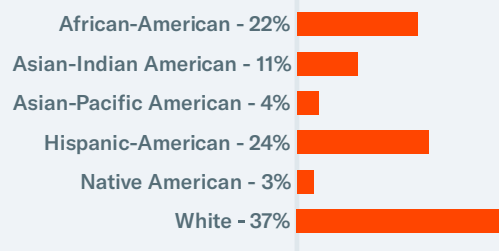
Marital Status



Primary Language



Race

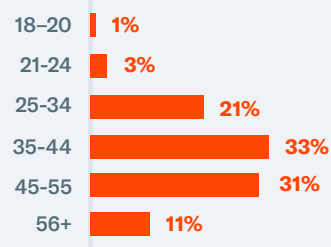


*Respondents can select more than one group

An aging fleet of drivers is one of the main reasons for the driver shortage.

The Bureau of Labor Statistics estimates that the average age of a commercial truck driver in the U.S. is 55 years old. In our survey, 42% of survey respondents were over 45 years old, with the majority of respondents between 35-44 years old.

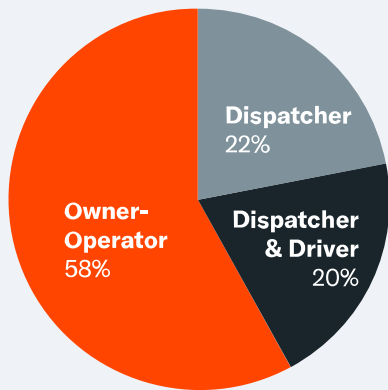
Age



SNAPSHOT METRICS

Business overview

Role



Dispatcher

“I dispatch other drivers”

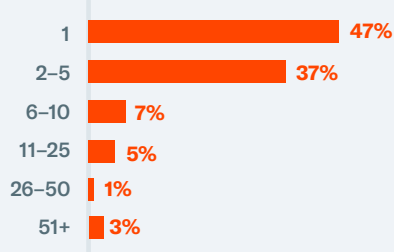
Dispatcher and driver

“I dispatch other drivers and also drive my own loads”

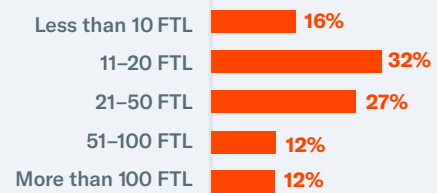
Owner-operator

“I dispatch myself and also drive my own loads”

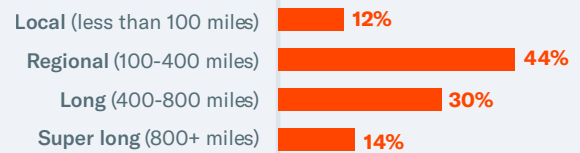
Number of trucks in the fleet



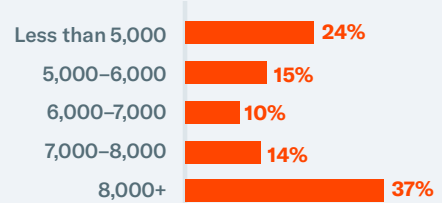
Full truck loads (FTL) hauled in the previous month



Length of typical loads

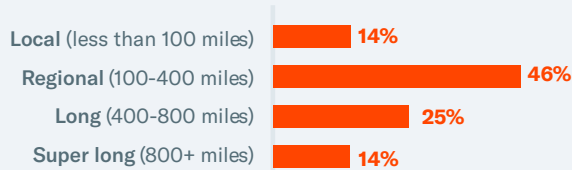


Average number of total miles per truck in the previous month:

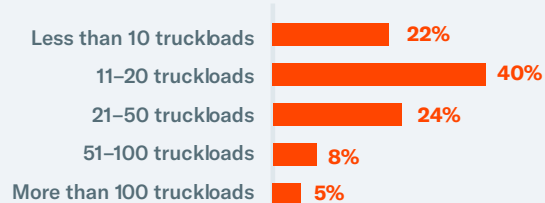


Owner Operator

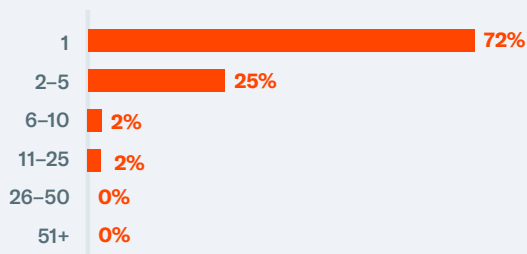
Length of typical loads



Number of truckloads driven last month



Number of trucks in the fleet



Gender



41% Percent of owner operators that plan to purchase a truck within the next year.

79% Percent of owner operators that believe fuel economy is important when buying a truck.

35% Percent of owner operators that feel pressure to reduce carbon emissions in their business.

17% Percent of owner operators who have completed eco-driving training.

Percent of owner operators that feel pressure to reduce carbon emissions in their business.

23% a great deal

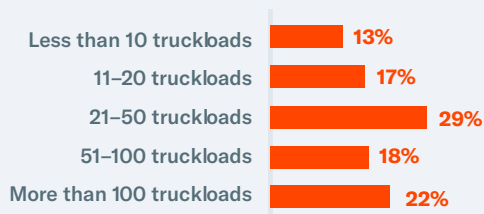
31% some

Dispatcher

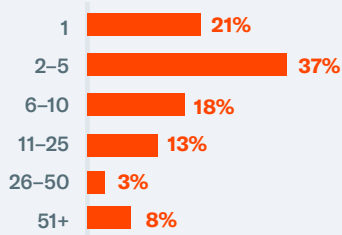
Length of typical loads



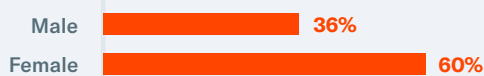
Number of truckloads driven last month



Number of trucks in the fleet



Gender



54% Percent of dispatchers that plan to purchase a truck within the next year.

90% Percent of dispatchers that believe fuel economy is important when buying a truck.

34% Percent of dispatchers that feel pressure to reduce carbon emissions in their business.

13% Percent of dispatchers who have completed eco-driving training.

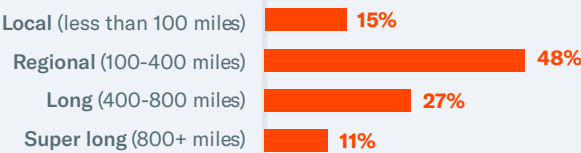
Percent of dispatchers that feel pressure to reduce carbon emissions in their business.

22% a great deal

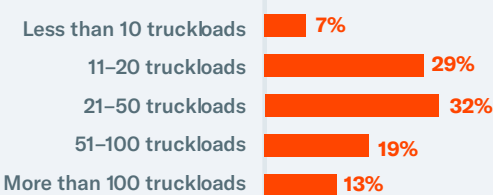
42% some

Dispatcher and Driver

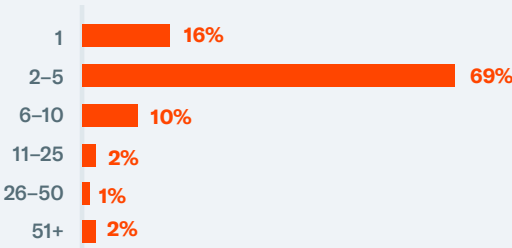
Length of typical loads



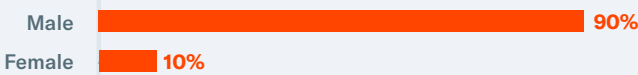
Number of truckloads driven last month



Number of trucks in the fleet



Gender



67% Percent of dispatch drivers that plan to purchase a truck within the next year.

95% Percent of dispatch drivers that believe fuel economy is important when buying a truck.

37% Percent of dispatch drivers that feel pressure to reduce carbon emissions in their business.

23% Percent of dispatch drivers who have completed eco-driving training.

Percent of dispatch drivers that feel pressure to reduce carbon emissions in their business.

23% a great deal

35% some

CLIMATE CHANGE IMPACT TO THE TRUCKING INDUSTRY

Since 1990, transportation has seen the highest absolute growth in emissions as compared with any other cause, and that trend looks primed to continue: freight transport is expected to double by 2040, with **freight emissions easily overtaking those from passenger transportation by 2050.**

In parallel, truckers face increasing challenges to their livelihoods and health from the impacts **of climate change.** The most obvious of these before the COVID-19 epidemic was a bump in fuel prices immediately after catastrophic natural weather events such as hurricanes and tornadoes, which scientists believe are occurring more frequently as a result of climate change.

Drivers are also navigating worsening roads damaged by recent increased incidences of prolonged high temperatures and flood erosion, commonly attributed

In this survey

23%

of carriers noted that global climate change is affecting their communities a great deal

34%

responded that global climate change is somewhat affecting their community

to climate change. When asphalt heats up it softens and expands, which causes cracking and holes; flooding can wash out entire roads, bridges, and tunnels along essential truck routes. The dangers of driving over compromised infrastructure is often further compounded by poor weather and related traffic accidents, delaying truckers and causing late pick up or delivery of their loads – which usually means a dock in pay for the driver.



THE ROAD TO SUSTAINABLE TRANSPORTATION

Inefficiencies in network operations can cause trucks to travel empty, use longer or more congested routes, and idle unnecessarily. These inefficiencies increase fuel consumption and fuel costs. Every driver thinks about fuel because it's the top vehicle related expense.

75% Survey respondents rate fuel economy as a very important consideration when purchasing a truck

94% This percentage increases when the respondent is considering purchasing a truck within the next year.

Some amount of these emissions are unavoidable, especially as we continue to be reliant on fossil fuels to power our transportation vehicles. Even without the mass adoption of EV or alternative fuel vehicles, there are many strategies to improve transportation efficiencies.

Inefficient truck routing and loading and unloading practices also contribute to wasteful fuel consumption. Convoy research shows that 35% of truck miles may be empty miles. In this survey, the regional distance (100-400 miles) represents the biggest share of loads for both the Owner Operators and the Dispatcher and Driver groups, 46% and 48% respectively. It is also this distance that drivers drive empty the most. A carrier that optimizes its freight logistics can save fuel, save time, and improve productivity, generating fuel cost savings and additional revenue.



Convoy's machine learning and technology is based on optimization models to provide more efficient routing solutions than traditional dispatchers can achieve on their own.

Our technology allows routes to be constructed taking into account numerous dynamic factors that include driver hours-of-service rules, pickup and delivery schedules, equipment availability, and empty mileage.

Some amount of these emissions are unavoidable, especially as we continue to be reliant on fossil fuels to power our transportation vehicles. Even without the mass adoption of EV or alternative fuel vehicles, there are many strategies to improve transportation efficiencies.

Innovations such as **Green Appointment Windows** allow trucks to optimize their schedules, travel at off-peak times, and avoid traffic congestion. With more flexibility to deliver and pick up loads, trucking companies can decrease idling, minimize time spent loading and unloading, and use their hours and equipment to haul more freight and generate revenue.

Trimming just 1% of empty miles from one long-haul truck can save over 100 gallons of fuel.

PROGRESS IN IMPROVING THE ENVIRONMENTAL IMPACT OF TRUCKING

The good news is that both the public and private sectors are working to make freight transport more sustainable. Many vehicle manufacturers are pursuing partially or fully electric power units that will comply with the United States Environmental Protection Agency’s (EPA) Cleaner Trucks initiative, which requires lower emissions from heavy-duty trucks in order to reduce the global footprint. The EPA restrictions on heavy-duty trucks are projected to reduce emissions by 270mm metric tons for vehicles built during 2012-2025, which would save **530 million barrels of oil**. Several states have introduced independent legislation to encourage reduced emissions, and California’s Advanced Clean

Trucks (ACT) Rule actually requires that all truck manufacturers produce some sort of non-emission truck alternative **by 2024 – just 3 years from now**.

However, there is still some skepticism of the value of new environmental laws and regulations.

From the survey, respondents noted:

40% Stricter environmental laws and regulations are not worth the cost

45% Stricter environmental laws and regulations hurt the economy





ABOUT CONVOY

Convoy is a tech-enabled trucking network transforming the \$800B trucking industry and logistics ecosystem for truck drivers and shippers. Using technology, Convoy matches reliable trucks with companies that need to ship freight. With Convoy, carriers get access to free tools and resources that allow them to find loads they want, save time, drive fewer miles empty, and get paid quickly. Shippers use Convoy's data-driven insights and industry-leading service levels to improve their supply chain operations and lower costs.



HOW WE SURVEYED

Convoy invited carriers to participate in our survey to look at a snapshot of their operations and perceptions. During February 2021 we received responses from over 470 trucking companies, including dispatchers, owner operators, and drivers.