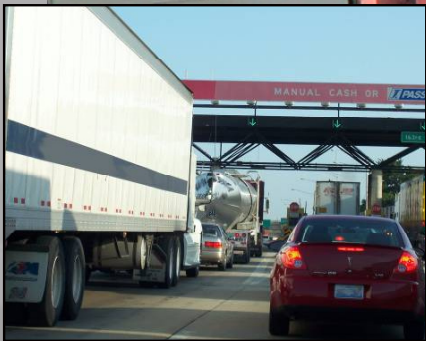


# An Analysis of the Operational Costs of Trucking: A 2014 Update

September 2014



Prepared by the American Transportation Research Institute

# **An Analysis of the Operational Costs of Trucking: 2014 Update**

September 2014

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## **LIST OF ACRONYMS**

ATA	American Trucking Associations
ATRI	American Transportation Research Institute
BLS	Bureau of Labor Statistics
CFO	Chief Financial Officer
CNG	Compressed Natural Gas
CPH	Cost per Hour
CPM	Cost per Mile
CSA	Compliance, Safety, Accountability
EIA	Energy Information Administration
FHWA	Federal Highway Administration
FMCSA	Federal Motor Carrier Safety Administration
FPM	Freight Performance Measures
LCV	Longer Combination Vehicle
LNG	Liquefied Natural Gas
LTL	Less-than-Truckload
MPH	Miles per Hour
NDA	Non-Disclosure Agreement
P&D	Pick-up and Delivery
RAC	Research Advisory Committee
R&M	Repair and Maintenance
TL	Truckload
VMT	Vehicle Miles Traveled

## **INTRODUCTION**

The American Transportation Research Institute (ATRI) first published an *Analysis of the Operational Costs of Trucking* report in 2008 to provide more accurate marginal cost data on motor carrier operations. ATRI's original literature review identified previous studies that reported cost calculation findings ranging from \$32 per hour to over \$370 per hour<sup>1</sup>; figures which were considered unreasonably high or low by industry stakeholders. Additionally, some of these studies calculated costs using highly subjective "value of time" calculations that may extend far beyond direct costs – resulting in dramatic variability for industry costs depending on the metrics used.

Consequently, ATRI undertook research to document and quantify motor carriers' key operational costs, stratified by fleet size, sector, and region of the country. The goal of the research was to accurately identify current operational costs based on real-world data provided directly from motor carriers. The resulting dataset could then be used by both motor carriers as a high level benchmarking tool, and by government agencies for various transportation impact analyses.

This research was initially identified as a top research priority in 2008 by ATRI's Research Advisory Committee (RAC)<sup>2</sup>. The RAC sought to better inform policymakers on the impact that new and ostensibly inefficient transportation funding strategies could have on freight movement. The trucking industry, being heavily reliant on the 4 million miles of roadway in the United States, has a vested interest in efficient, effective, and equitable funding and maintenance of the transportation system.

Due to the popularity of the initial report, ATRI now updates the "ops cost" research on an annual basis, making minor adjustments and improvements to the data collection methodology. Since its original publication in 2008, ATRI has received over 4,600 requests for the *Analysis of the Operational Cost of Trucking* reports. To improve and streamline data collection, ATRI initiated a process for obtaining sensitive fleet cost data on an annual basis. This report includes the most recent 2013 cost data.

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<sup>1</sup> ATRI. *An Analysis of the Operational Cost of Trucking*. Arlington, VA. (2008)

<sup>2</sup> The American Transportation Research Institute (ATRI) Research Advisory Committee (RAC) is comprised of industry stakeholders representing motor carriers, trucking industry suppliers, labor and driver groups, law enforcement, federal government, and academics. The RAC is charged with annually recommending a research agenda for the Institute.



## **RESEARCH OBJECTIVE**

In order to remedy the lack of current and accurate trucking industry operational cost data, ATRI conducted research in 2008<sup>3</sup>, 2011<sup>4</sup>, 2012<sup>5</sup>, and 2013<sup>6</sup> to generate more precise cost metrics. Although several previous studies have attempted to quantify these costs, the use of highly subjective value of time metrics produced immensely inconsistent results that were considered inaccurate by industry stakeholders. These varying results can be detrimental to both the trucking industry and public sector transportation planners seeking objective, standardized data. For instance, lower operational cost estimates have been used to downplay the value or significance of certain transportation programs, while unreasonably high figures have been used to minimize the impact of raising new revenue via innovative financing initiatives.

The result is a standardized survey methodology that captures and analyzes sensitive motor carrier operational costs. The data presented in this report reflects 2013 cost data collected from a wide range of motor carriers. With the addition of this 2013 data, ATRI now has six complete years (2008 – 2013) of detailed operational cost data.

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<sup>3</sup> ATRI. An Analysis of the Operational Costs of Trucking. Arlington, VA. (2008)

<sup>4</sup> ATRI. An Analysis of the Operational Costs of Trucking. Arlington, VA. (2011)

<sup>5</sup> ATRI. An Analysis of the Operational Costs of Trucking. Arlington, VA. (2012)

<sup>6</sup> ATRI. An Analysis of the Operational Costs of Trucking. Arlington, VA. (2013)

## **METHODOLOGY**

This year's analysis expanded on the data collection methodology used in previous years. Three new questions were added to this year's survey to obtain additional information on the types of commodities hauled, average duration of equipment retention, and use of electronic logging devices (ELD). By expanding use of its online survey system, ATRI was able to improve response and data processing efficiency. The data collection form emphasized common industry operational and financial metrics, and was beta-tested with several motor carriers. Specifically, the research team solicited technical guidance and review from industry financial officers or those with working knowledge of motor carrier cost structures. Prior to full distribution, the data collection form was modified several times based on the reviewers' recommendations.

Given the highly competitive nature of the trucking industry and the extreme sensitivity associated with corporate financials and expenditures, the operational cost information was collected confidentially from motor carriers and the data is presented in aggregate form only. ATRI also provided survey respondents with non-disclosure agreements (NDA) as requested.

Data collection efforts commenced in May 2014 and data request forms were sent electronically and via certified mail to a representative group of for-hire carriers which included truckload (TL), less-than-truckload (LTL), and specialized fleets. Several industry mechanisms were used for additional outreach, including targeted mailings and emails, news alerts, and coverage in major industry news outlets. Responses were collected through early-September 2014. An online survey was also made available for participants to enter their data. All responses were carefully reviewed by the research team for clarity and the research team contacted respondents to clarify any ambiguous responses as needed.

The survey's composition was primarily focused on components and sub-components of carrier marginal costs per mile (CPM) to accurately capture different industry business models. In order to convert line-item CPM figures into a total marginal cost per hour (CPH) figure, a GIS-generated, industry-vetted average operational speed of 39.98 miles per hour (MPH) was used in these calculations. It should be noted that this speed relates to moving trucks and includes all roadway speeds rather than solely highway speeds.<sup>7</sup>

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<sup>7</sup> ATRI derived this speed using several datasets from the ATRI/Federal Highway Administration (FHWA) Freight Performance Measures (FPM) program. ATRI analyzed one full week of national FPM data in each of the four seasons in 2010 (February, May, August, October). This dataset consisted of over 110 million truck speed data points. The average speed figure was also validated by multiple motor carriers from various sectors of the industry. The 39.98 mph figure more accurately represents an average operational speed since it includes speeds in all types of operational conditions.

To ensure representativeness, ATRI then weighted survey responses to reflect average percentages of the major for-hire sectors. Compared to national averages, TL carriers were slightly over-represented in the survey sample while LTL carriers were under-represented (Table 1). Weighting the responses to the national industry averages yielded more balanced results.

**Table 1: For-Hire Industry Sector Breakout**

Industry Sector	ATRI Survey Respondents	U.S. Trucking Industry <sup>8</sup>
Truckload	75%	52%
Less-Than-Truckload	9%	24%
Specialized	16%	24%

Where applicable, cost data were cross-tabulated by factors such as fleet size, operating sector, and operating region. Again, the data collected are presented in aggregate form in order to protect proprietary carrier information.

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<sup>8</sup> ATA. American Trucking Trends: 2005-2006. Arlington, VA. (2007)

## **SURVEY RESPONDENT DEMOGRAPHICS**

Survey respondents operate 30,083 trucks, which accrued an estimated 3.5 billion miles in 2013. These carriers also utilized 84,784 trailers in their operations. As previously noted, for-hire fleets were grouped into three major industry sectors; TL, LTL, and specialized (see Glossary for sector descriptions). While respondents were generally representative of the for-hire segment, the aggregated data was weighted to the national industry average of 52 percent for TL, 24 percent for LTL, and 24 percent for specialized.<sup>9</sup> Additional sector analyses can be derived using the truck/trailer configuration data.

Survey respondents were also asked to indicate their fleet size and annual revenue. The majority of respondents represented small- to mid-sized fleets, while 13 percent represented large fleets with revenue over \$100 million annually (Table 2).

**Table 2: Fleet Size by Annual Revenue**

<b>Revenue</b>	<b>Percent</b>
Less than \$10 million/year	40%
\$10-\$100 million/year	47%
Greater than \$100 million/year	13%

Among survey respondents, the majority of fleets operated truck-tractors, as opposed to straight trucks or other types of power units, and the most prevalent trailer types were 53- and 28-foot trailers (Table 3).

**Table 3: Survey Respondent Truck/Trailer Type, Average Truck Age, and Average Miles Driven per Year per Truck**

<b>Equipment Type</b>	<b>Number of Trucks/Trailers</b>	<b>Average Age (Years)</b>	<b>Average Miles Driven per Year per Truck</b>
Straight Trucks	557	7.6	32,901
Truck-Tractors	29,523	3.9	118,800
Other Trucks	3	7.0	65,000
<b>Total Trucks</b>	<b>30,083</b>		
28' Trailers	28,779	7.9	
45' Trailers	1,478	12.3	
48' Trailers	14,683	9.5	
53' Trailers	33,723	6.5	
Other Trailers	6,121	7.6	

<sup>9</sup> Ibid.

Additionally, survey respondents were asked to provide the number of vehicles that ran on an alternative fuel (i.e. a fuel other than diesel or bio-diesel blend). Approximately four percent of respondents, a two percentage point increase from last year's study, reported fleets using alternative fuel vehicles, all of which ran on compressed natural gas (CNG). Currently, natural gas, (CNG and liquefied natural gas [LNG]) is the fastest growing fuel in the transportation sector. With a projected average annual growth rate of 11.9 percent from 2011 to 2040 driven primarily by demand for use in heavy duty vehicles<sup>10</sup>, the percentage of carriers operating alternative fuel vehicles will likely increase, albeit slowly, in subsequent years.

Recognizing that fuel costs are one of the top two cost centers for motor carriers, survey respondents were asked if their fleet utilized speed limiters. The majority of respondents (87%) reported doing so. Of those respondents, 51 percent utilized speed limiters on 100 percent of their trucks while another 41 percent used the devices on 70 to 99 percent of their fleet. Similar to last year's results, the most common maximum speed setting was 65 MPH, although this figure sometimes varies within fleets based on operations and driver performance.

Participants were asked to estimate the percentage of their drivers' trips across four different categories. As shown in Table 4, respondents were nearly evenly split between the trip types, with regional trips and inter-regional trips being the most common (33% and 24%, respectively).

**Table 4: Survey Respondent Trip Types**

<b>Trip Type</b>	<b>Survey Respondent Percent of Trips</b>
Local pick-ups and deliveries (less than 100 miles)	22%
Regional pick-ups and deliveries (100-500 miles)	33%
Inter-regional pick-ups and deliveries (500-1,000 miles)	24%
National (over 1,000 miles)	21%

The percent of VMT by region was also solicited from survey respondents. Table 5 compares respondents' percentage of U.S. VMT by region in 2013 to commercial truck registrations in the U.S. As can be seen, the Northeast, Southeast, and West were slightly over-represented. The finding may relate to the common occurrence of base-stating fleets in certain areas for cost-saving purposes, independent of where the truck operates. Additionally, a small percentage of the total VMT reported by survey respondents (2%) was in Canada (data not included in Table 5), and a reported 18 percent of VMT were non-revenue earning or "empty" miles.

<sup>10</sup> *Annual Energy Outlook 2013 with Projections to 2040*. U.S. Energy Information Administration, Office of Integrated and International Energy Analysis, U.S. Department of Energy. Washington D.C. (April 2013)

**Table 5: Survey Respondent Truck VMT and National Truck Registrations by Region**

Region	Survey Respondent Percent of Miles Traveled in U.S.	U.S. Percent of Truck Registrations
Midwest	32%	39%
Northeast	13%	8%
Southeast	22%	20%
Southwest	10%	13%
West	21%	20%

As previously mentioned, there were three new questions added to this year's survey to assess emerging issues. The first concerned motor carrier use of electronic logging devices (ELD) to log driver hours-of-service. The response was split almost evenly with 53 percent of respondents reporting some ELD use. It is assumed that this figure will increase rapidly as the industry responds to the upcoming Federal Motor Carrier Safety Administration (FMCSA) ELD usage mandate expected in 2016.<sup>11,12</sup>

The second new question asked about equipment trade cycles, or the frequency of vehicle turnover. Table 6 shows that trailers are held an average of 12.2 years, while truck-tractors are replaced on average every 6.6 years. Additionally, respondents report an average of over 795,000 miles before replacing tractors.

**Table 6: Survey Respondent Equipment Trade Cycle**

Equipment Type	Average Number of Years Until Replacement	Average Miles Driven Until Replacement
Straight Trucks	9.0	356,254
Truck-Tractors	6.6	795,455
Trailers	12.2	500,010

In the third new question, participants were asked to identify the primary commodities hauled. General freight accounted for one-quarter of responses, followed by refrigerated food (19%) and manufactured goods (9%) as the top three responses.

The surveys were completed by high level managers and executives who have extensive knowledge of the financial workings of the organizations, namely Presidents, Chief Financial Officers (CFOs), General Managers and fleet owners. The fleets

<sup>11</sup> DOT Proposes Use of Electronic Logbooks to Improve Efficiency, Safety in Commercial Bus & Truck Industries. Federal Motor Carrier Safety Administration, US Department of Transportation. (13 March 2014). Available Online: <http://www.fmcsa.dot.gov/newsroom/dot-proposes-use-electronic-logbooks-improve-efficiency-safety-commercial-bus-truck>

<sup>12</sup> Jalliet, James. *Logging Device Mandate Could Come in 2016, Outlines Hardware Spec's, Harassment Provisions*. Overdrive Online. March 13, 2014. Available online: <http://www.overdriveonline.com/eld-mandate-specifics-on-harassment-and-devices-industry-groups-split-on-rules-support/>



represent long haul to local pick-up and delivery carrying a vast assortment of different commodities and operating across the U.S. Additionally, the fleets cover the continuum of fleet size and revenue levels. As such, ATRI considers the data a fairly representative sample of the industry population from which to draw current operational cost data.

## **COST CENTERS**

There are a number of underlying influences and externalities that impact motor carrier operational costs. For that reason some line-item costs are more easily measured than others. These may include fuel and tire costs, as opposed to labor costs – which can be impacted by experience, performance and differing compensation models. Finally, in several instances ATRI worked closely with carriers to cull out certain costs that straddle both fixed and marginal metrics. An example is insurance which is generally considered a fixed-cost, but is typically based on truck VMTs as a measure of risk or exposure.

ATRI chose to document and analyze those cost centers most closely associated with driver/vehicle operations, effectively representing a motor carrier's marginal costs (MC).

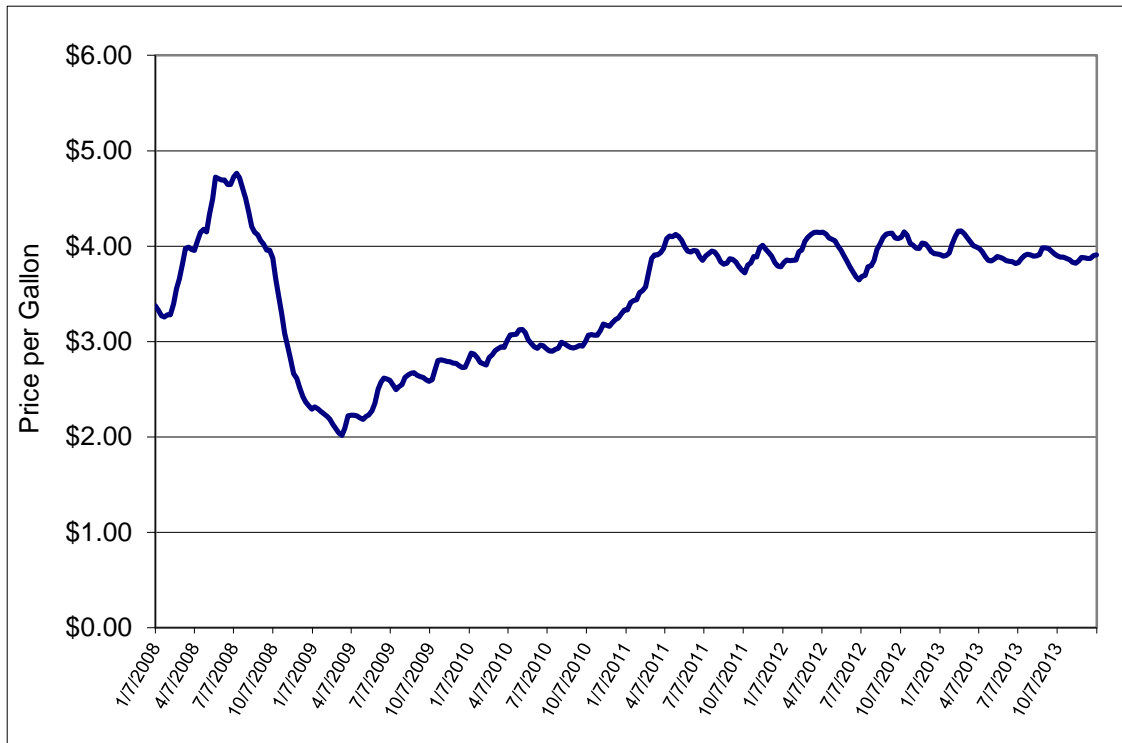
### **Fuel**

Petroleum prices rose to an unprecedented level in July of 2008, reaching over \$145 per barrel before decreasing dramatically in late 2008 with the start of the Great Recession. This translated to average U.S. diesel prices of well over \$4.50 during the summer of 2008 (Figure 1). However, by March of 2009 diesel prices had fallen to \$2.02 per gallon. With an improving economy, prices rose steadily through 2010 before stabilizing in 2011 and 2012.<sup>13</sup>

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<sup>13</sup> Gasoline and Diesel Fuel Update. U.S. Energy Information Administration. Available Online: <http://www.eia.gov/petroleum/gasdiesel>

**Figure 1: Average U.S. On-Highway Diesel Prices, 2008 – 2013<sup>14</sup>**

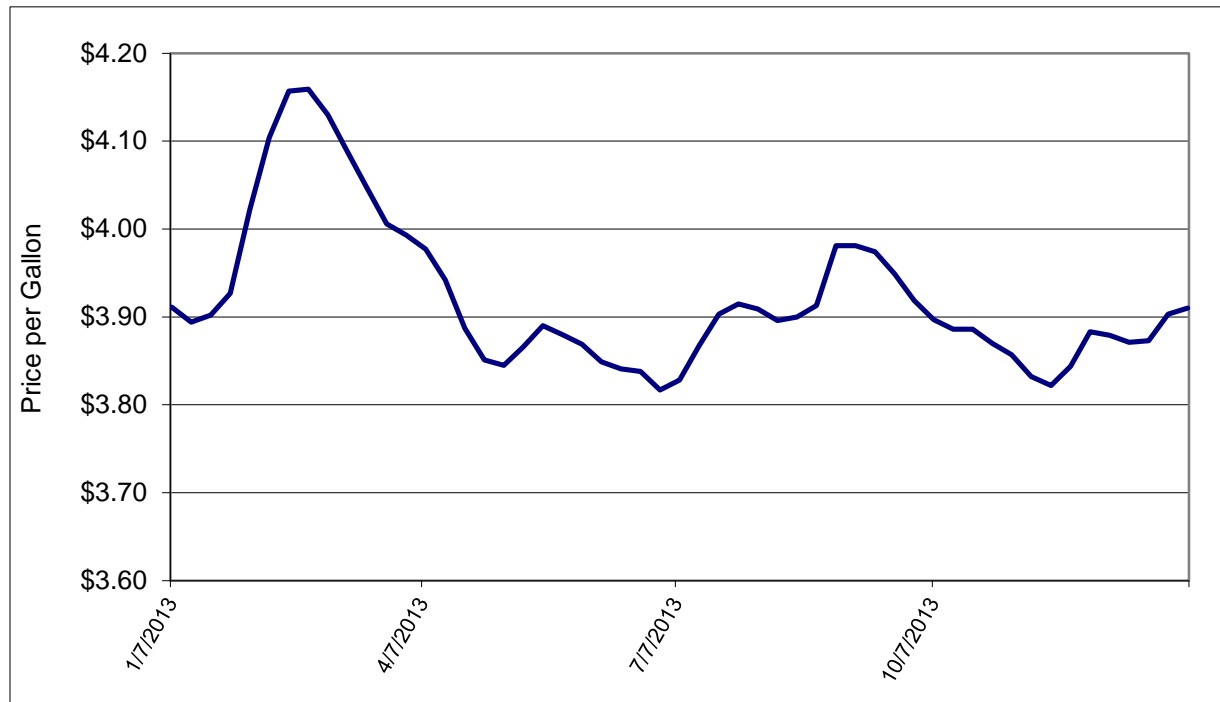


The beginning of 2013 saw very volatile diesel prices, rising to a high of \$4.16 per gallon from \$3.89 per gallon, and then dropping back to \$3.90 within the first quarter. However, after this short period of price volatility the price stabilized for the remainder of the year hovering around the \$3.90 mark<sup>15</sup> (Figure 2).

<sup>14</sup> Gasoline and Diesel Fuel Update. U.S. Energy Information Administration. Available Online: <http://www.eia.gov/petroleum/gasdiesel>

<sup>15</sup> Ibid.

**Figure 2: Average U.S. On-Highway Diesel Prices, 2013<sup>16</sup>**



Fuel costs have consistently been the biggest MC influence across all of the years ATRI has conducted this study, and generally account for approximately 30 – 40 percent of a motor carrier's CPM.<sup>17</sup> Due to the relatively stable prices experienced throughout 2012 and 2013 (average of \$3.97 and \$3.95, respectively), it is unlikely that average carrier fuel cost per mile would change dramatically in this year's analysis. Furthermore, the Energy Information Administration (EIA) forecasts a decline in diesel price through 2015, which will likely result in lower marginal fuel costs for carriers in coming years.<sup>18</sup>

## Equipment

The age, type, and turnover of a motor carrier's equipment can affect a number of operating costs including lease and purchase payments, repair and maintenance, insurance premiums, permits and special licensure, and tire costs. This year's survey respondents accounted for approximately 30,000 trucks, 85,000 trailers, and over 3.5 billion vehicle miles traveled in 2013. Additionally, respondents appear to be holding their equipment for slightly over 10 years on average, which will likely decrease leasing

<sup>16</sup> Gasoline and Diesel Fuel Update. U.S. Energy Information Administration. Available Online: <http://www.eia.gov/petroleum/gasdiesel>

<sup>17</sup> ATRI. An Analysis of the Operational Costs of Trucking. Arlington, VA. (2013)

<sup>18</sup> Short-Term Energy Outlook. U.S. Energy Information Administration. Available Online: [http://www.eia.gov/forecasts/steo/pdf/steo\\_full.pdf](http://www.eia.gov/forecasts/steo/pdf/steo_full.pdf)

and purchase costs and subsequently increase the repair and maintenance costs associated with maintaining an aging fleet. Meanwhile, insurance costs remained fairly constant compared to 2012 due to motor carriers avoiding higher insurance costs for newer and additional vehicles. Based on extremely high new truck orders and sales in 2014, insurance will likely increase in future years.

## **Driver Pay**

A severe and growing shortage of qualified drivers continues to impact the industry. The American Trucking Associations (ATA) estimated a shortage of 25,000 drivers at the end of 2013.<sup>19</sup> Driver downsizing during the recession, an aging workforce, and high training costs for new drivers have reduced the number of truck drivers in the U.S. Additionally, construction and natural gas production have grown dramatically recently, and carriers must compete with these high paying jobs for drivers. It is still unclear exactly how large of an impact the driver shortage will have on labor costs, as the industry continues to expand its workforce. On top of this, the new CSA and PSP safety management systems have made “safe” drivers less common and more valuable to carriers. The U.S. Bureau of Labor Statistics (BLS) projects that employment for heavy and tractor-trailer truck drivers will increase by 11 percent through 2020, resulting in over 192,000 new jobs,<sup>20</sup> presuming a qualified driver pool exists to accommodate this demand estimate. In the meantime, increased driver wages and benefits will likely be needed in order to make sure that motor carriers retain their most qualified and skilled drivers.

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<sup>19</sup> American Trucking Associations. American Trucking Trends. Arlington, VA. (2013)

<sup>20</sup> Bureau of Labor Statistics. Occupational Outlook Handbook, Heavy and Tractor-Trailer Truck Drivers. Available online: <http://www.bls.gov/ooh/transportation-and-material-moving/heavy-and-tractor-trailer-truck-drivers.htm>

## **FINDINGS**

### **Average Marginal Costs**

Motor carrier operating costs behaved generally as expected when considering the operating environment of 2013. In order to remain consistent with the previous operational cost analyses, marginal costs were once again divided into two general categories, vehicle- and driver-based, which included the following line items:

- Vehicle-based
  - Fuel
  - Truck/trailer lease or purchase payments
  - Repair and maintenance
  - Truck insurance premiums
  - Permits and special licenses
  - Tolls
- Driver-based
  - Wages
  - Benefits

Table 7 displays the average cost per mile for all sectors based on the survey data. The analysis found that the average CPM was \$1.676, an approximate 4 cent increase over the 2012 figure. Table 8 displays the average annual cost per hour established by utilizing the 39.98 miles per hour assumption previously described, and amounts to a total of \$67.00 per hour. Both of these figures are above the six year medians of \$1.643 and \$65.68 respectively.

**Table 7: Average Marginal Costs per Mile, 2008-2013**

<b>Motor Carrier Costs</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
<i>Vehicle-based</i>						
Fuel Costs	\$0.633	\$0.405	\$0.486	\$0.590	\$0.641	\$0.645
Truck/Trailer Lease or Purchase Payments	\$0.213	\$0.257	\$0.184	\$0.189	\$0.174	\$0.163
Repair & Maintenance	\$0.103	\$0.123	\$0.124	\$0.152	\$0.138	\$0.148
Truck Insurance Premiums	\$0.055	\$0.054	\$0.059	\$0.067	\$0.063	\$0.064
Permits and Licenses	\$0.016	\$0.029	\$0.040	\$0.038	\$0.022	\$0.026
Tires	\$0.030	\$0.029	\$0.035	\$0.042	\$0.044	\$0.041
Tolls	\$0.024	\$0.024	\$0.012	\$0.017	\$0.019	\$0.019
<i>Driver-based</i>						
Driver Wages	\$0.435	\$0.403	\$0.446	\$0.460	\$0.417	\$0.440
Driver Benefits	\$0.144	\$0.128	\$0.162	\$0.151	\$0.116	\$0.129
<b>TOTAL</b>	<b>\$1.653</b>	<b>\$1.451</b>	<b>\$1.548</b>	<b>\$1.706</b>	<b>\$1.633</b>	<b>\$1.676</b>

**Table 8: Average Marginal Costs per Hour, 2008-2013**

<b>Motor Carrier Costs</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
<i>Vehicle-based</i>						
Fuel Costs	\$25.30	\$16.17	\$19.41	\$23.58	\$25.63	\$25.78
Truck/Trailer Lease or Purchase Payments	\$8.52	\$10.28	\$7.37	\$7.55	\$6.94	\$6.52
Repair & Maintenance	\$4.11	\$4.90	\$4.97	\$6.07	\$5.52	\$5.92
Truck Insurance Premiums	\$2.22	\$2.15	\$2.35	\$2.67	\$2.51	\$2.57
Permits and Licenses	\$0.62	\$1.15	\$1.60	\$1.53	\$0.88	\$1.04
Tires	\$1.20	\$1.14	\$1.42	\$1.67	\$1.76	\$1.65
Tolls	\$0.95	\$0.98	\$0.49	\$0.69	\$0.74	\$0.77
<i>Driver-based</i>						
Driver Wages	\$17.38	\$16.12	\$17.83	\$18.39	\$16.67	\$17.60
Driver Benefits	\$5.77	\$5.11	\$6.47	\$6.05	\$4.64	\$5.16
<b>TOTAL</b>	<b>\$66.07</b>	<b>\$58.00</b>	<b>\$61.90</b>	<b>\$68.21</b>	<b>\$65.29</b>	<b>\$67.00</b>

While marginal cost points can have variability from year to year, the respective cost share ratio of each of the line-items tends to remain relatively stable over time (Table 9). As discussed previously, fuel now consistently represents the largest share of total average marginal cost for motor carriers, followed by driver wages and equipment lease or purchase payments. Driver benefits, repair and maintenance, insurance premiums, permits and licenses, tires, and toll costs have each consistently represented 10 percent or less of average total marginal costs throughout the years of this study.

**Table 9: Share of Total Average Marginal Cost, 2008-2012**

<b>Motor Carrier Costs</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
<i>Vehicle-based</i>						
Fuel Costs	38%	28%	31%	35%	39%	38%
Truck/Trailer Lease or Purchase Payments	13%	18%	12%	11%	11%	10%
Repair & Maintenance	6%	8%	8%	9%	8%	9%
Truck Insurance Premiums	3%	4%	4%	4%	4%	4%
Permits and Licenses	1%	2%	3%	2%	1%	2%
Tires	2%	2%	2%	2%	3%	2%
Tolls	1%	2%	1%	1%	1%	1%
<i>Driver-based</i>						
Driver Wages	26%	28%	29%	27%	26%	26%
Driver Benefits	9%	9%	10%	9%	7%	8%
<b>TOTAL</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>



As previously noted, the analysis stratified motor carrier responses by operating sector where applicable. Given the different operational conditions for each sector, the total average marginal costs varied fairly significantly. LTL carriers once again reported the highest operating costs in 2013, followed by specialized, and TL (Table 10). LTL carriers can have higher operating costs for a variety of reasons, including but not limited to:

- increased marginal costs associated with frequent pick-up and delivery (P&D) operations in congested urban areas, including higher fuel and maintenance costs;
- increased overhead costs of handling many smaller shipments several times and associated dock personnel labor costs;
- need for multiple terminals located near urban areas and the associated need for more equipment; and
- increased labor costs that are associated with LTL-oriented collective bargaining contracts.

**Table 10: Average Total Marginal Costs by Sector, 2008-2013**

Sector	2008	2009	2010	2011	2012	2013
LTL	\$1.81	\$1.43	\$1.76	\$1.93	\$1.79	\$1.84
Specialized	\$1.87	\$1.67	\$1.61	\$1.79	\$1.73	\$1.67
TL	\$1.48	\$1.36	\$1.43	\$1.57	\$1.51	\$1.60

## Line-Item Cost Centers

### *Fuel Costs*

As previously discussed, petroleum prices rose to an unprecedented level in July 2008, reaching over \$145 per barrel before decreasing dramatically in late 2008. During the summer of 2008 on-highway diesel prices averaged more than \$4.50 per gallon nationally but by March 2009, prices had dropped to \$2.02 per gallon.<sup>21</sup> Fuel prices have steadily increased since then, averaging \$2.47 per gallon in 2009, \$2.99 in 2010, \$3.84 in 2011, \$3.97 in 2012, and \$3.95 in 2013.<sup>22</sup>

Consistent with the EIA data, survey respondents indicated that fuel costs fell significantly from 63.3 cents per mile in 2008 to 40.5 cents per mile in 2009; they were once again on the rise from 2010 to 2013. Calculated on an annualized basis, the average fuel CPM was 48.6 in 2010, 59.0 cents in 2011, 64.1 cents in 2012, and 64.5 cents in 2013, the highest value reported to date. Furthermore, fuel costs now account for 38 percent of total annual carrier costs, which is the second largest share documented by ATRI in the six years since initiating this research. Analyzed by sector,

<sup>21</sup> Gasoline and Diesel Fuel Update. U.S. Energy Information Administration. Available online: <http://www.eia.gov/petroleum/gasdiesel>

<sup>22</sup> Ibid.

TL carriers reported the highest fuel CPM (65.3 cents), followed by LTL and specialized carriers (63.6 cents each).

While it is difficult to predict future trends in fuel prices, primarily due to international political volatility, the EIA has indicated that fuel prices in the U.S. should be very stable through 2015<sup>23</sup> – driven in large part by the significant increase in domestic petroleum production.

### *Equipment Lease or Purchase Payments*

Truck and trailer payments were classified as a quasi-operational cost since many motor carriers purchase additional trucks and trailers in response to capacity constraints in high-demand times. Survey respondents indicated that truck/trailer lease or purchase payments continued their downward trend and averaged 16.3 cents in 2013. This is likely a sign that fleets have kept their equipment longer than normal and have therefore avoided new lease or purchase payments. In fact, recent ATA analyses confirm that new truck sales are primarily replacing older trucks that are too expensive to maintain. That same ATA analysis shows that truck capacity from 2008 to present actually declined slightly. However, recent research by an industry source also indicates that Class 8 equipment replacement schedules follow a cyclical pattern, peaking every fourth or fifth year.<sup>24</sup> They go on to project that “a strong equipment replacement cycle should begin between 2014 and 2015,” a prediction that is currently coming to fruition as truck and trailer orders are up 71 percent<sup>25</sup> and 44 percent,<sup>26</sup> respectively in the first half of 2014.

### *Repair and Maintenance*

Several factors impact a carrier’s R&M costs, such as the age of the trucks and trailers, the vehicle configuration used, and the technologies that are installed. Average R&M costs for survey respondents were 14.8 cents per mile in 2013, a slight to moderate increase from the 13.8 cents per mile reported in 2012. The increase in 2013 R&M costs corresponds to an overall average fleet age increase from 7.3 years in 2012 to 7.8 years in 2013.

While specialized carriers had reported the highest R&M costs in 2008, the LTL sector has reported the highest costs in 2009 through 2013 (Table 11). The higher costs

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<sup>23</sup> Short-Term Energy Outlook (STEO). U.S. Energy Information Administration. Available online:

[http://www.eia.gov/forecasts/steo/pdf/steo\\_full.pdf](http://www.eia.gov/forecasts/steo/pdf/steo_full.pdf)

<sup>24</sup> Kilcarr, S. Fleets ready to begin Class 8 replacement cycle. Fleet Owner. July 29, 2013. Available online: <http://fleetowner.com/equipment/fleets-ready-begin-class-8-replacement-cycle>

<sup>25</sup> *Class 8 Orders Hit Second-Best July Ever*. TruckingInfo. August 5, 2013. Available online: <http://www.truckinginfo.com/channel/equipment/news/story/2014/08/class-8-orders-hit-second-best-july-ever.aspx>

<sup>26</sup> *Net Trailer Orders Up 44% So Far in 2014: ACT*. Trailer Body Builders. August 27, 2014. Available online: <http://trailer-bodybuilders.com/trailers/net-trailer-orders-44-so-far-2014-act>

experienced by LTL carriers are likely due to the extra wear on their vehicles associated with P&D operations in congested urban areas.

**Table 11: Repair and Maintenance Costs by Sector**

Sector	2008	2009	2010	2011	2012	2013
LTL	\$0.09	\$0.16	\$0.15	\$0.18	\$0.18	\$0.18
Specialized	\$0.12	\$0.14	\$0.14	\$0.16	\$0.14	\$0.13
TL	\$0.10	\$0.10	\$0.11	\$0.14	\$0.11	\$0.14

### *Truck Insurance Premiums*

Another quasi-operational cost, truck insurance premiums can vary widely between carriers – particularly based on miles-traveled exposure. Many larger fleets self-insure or utilize umbrella policies which do not easily equate to per-truck unit costs. Additionally, property and liability insurance costs still apply while a truck is unoccupied and stationary. The insurance cost center was ultimately included, however, since most insurance risk assessments are based on mileage exposure and vehicle replacement costs. Carriers often pay liability and cargo premiums by the mile (except for excess coverage). Since physical damage coverage is calculated by tractor/trailer value, the premium can be divided by the total miles traveled to obtain the cost per mile.

According to the motor carriers surveyed, commercial truck insurance premiums decreased slightly in 2013, averaging 6.4 cents per mile. Similar to 2012, specialized carriers reported the highest insurance CPM (7.4 cents), while TL carriers reported the lowest (5.7 cents), and LTL carriers reported an average cost of 7.1 cents per mile.

### *Permits and Special Licenses*

The average permitting and licensing CPM for all carrier respondents was 2.6 cents in 2013, which was slightly higher than the 2.2 cents found in 2012. Permit and licensing expenses have been the most volatile cost center for carriers over the past six years. Since these costs are highly dependent on a carrier's type of operation and geographic coverage, a portion of these year-over-year fluctuations may be due to variability in survey respondent populations each year. In addition, it is assumed that government agencies can, and do, turn to these "fees" as a revenue-generation tool when political forces preclude raising "taxes."

Not surprisingly, specialized carriers reported the highest permitting costs of all three sectors, averaging 3.1 cents per mile. LTL and TL carriers reported an average CPM of 3.0 and 2.2 cents, respectively.

## *Tires*

Since tires are a petroleum-based product, tire costs increase in response to higher oil prices. After remaining relatively stable in 2008 and 2009 (3.0 and 2.9 cents, respectively), survey respondents reported that tire CPM was again increasing. Carriers indicated that tire CPM rose considerably to 3.5 cents in 2010, 4.2 cents in 2011, 4.4 cents in 2012, and fell to 4.1 cents in 2013. In 2013, specialized carriers paid the most per mile in tire costs (4.5 cents), followed by TL carriers (4.1), and LTL carriers (3.9).

## *Tolls*

Tolls can be a significant cost for motor carriers and are highly dependent on the carrier's region of operation. Many carriers try to avoid tolls whenever possible since shippers rarely reimburse a carrier for toll-related expenses. Similar to 2012, the average toll CPM for all respondents was 1.9 cents in 2013. Motor carriers that operated in the Northeast had the highest average toll costs (3.9 cents per mile) while carriers that operated in the West had the lowest toll costs (1.1 cents per mile).

## *Driver Wages and Benefits*

Most over-the-road or long-haul truck drivers are paid on a per-mile basis while LTL P&D drivers are generally paid by the hour. Survey respondents indicated that average truck driver pay per mile was 44.0 cents in 2013, which is an increase over the 41.7 cents reported in 2012. In terms of hourly wages, the 2013 CPM figure translated to \$17.60. It is important to note that recent increases in new entrant truck drivers somewhat masks moderate increases in existing driver wages. This phenomenon was first identified in the 2012 analysis.

Across the three major industry sectors, driver wages mimicked sector trends in total costs for 2013; LTL carriers reported the highest driver wages (53.9 cents per mile), followed by specialized carriers (45.0 cents per mile), and TL carriers reported the lowest (39.0 cents per mile).

The number of carriers utilizing team drivers, who alternate driving the same truck during a trip, declined to 19 percent in 2013 from the 2012 figure of 25 percent. Of those respondents, the average wage per mile for a company team driver was 37.0 cents in 2013. The driver benefits CPM also increased from 2012 to 2013 (from 11.6 to 12.9 cents).

## Cost Trends

After decreasing by four percent from 2011 to 2012, the total average marginal costs increased by three percent from 2012 to 2013 (Table 12). Rising fuel, repair, insurance, permit, tolls, driver wage, and driver benefits costs just outweighed falling lease and purchase and tire costs.

**Table 12: Average Marginal Cost Trends**

Motor Carrier Cost Centers	2008-2009 Change	2009-2010 Change	2010-2011 Change	2011-2012 Change	2012-2013 Change
<i>Vehicle-based</i>					
Fuel Costs	-36%	20%	21%	9%	1%
Truck/Trailer Lease or Purchase Payments	21%	-28%	2%	-8%	-6%
Repair & Maintenance	19%	1%	22%	-9%	7%
Truck Insurance Premiums	-3%	9%	14%	-6%	2%
Permits and Licenses	84%	39%	-4%	-43%	18%
Tires	-5%	24%	18%	5%	-6%
Tolls	3%	-49%	39%	8%	3%
<i>Driver-based</i>					
Driver Wages	-7%	11%	3%	-9%	6%
Driver Benefits	-11%	26%	-6%	-23%	11%
<b>TOTAL</b>	<b>-12%</b>	<b>7%</b>	<b>10%</b>	<b>-4%</b>	<b>3%</b>

Table 13 shows the cost trends broken out by sector. LTL carriers reported the largest increase in cost from 2012 to 2013, while specialized and TL carriers reported a three percent increase and a four percent decrease, respectively.

**Table 13: Average Marginal Cost Trends by Sector**

Sector	2008-2009 Change	2009-2010 Change	2010-2011 Change	2011-2012 Change	2012-2013 Change
LTL	-8%	5%	10%	-3%	6%
Specialized	-21%	23%	10%	-7%	3%
TL	-11%	-4%	11%	-3%	-4%

## Cost by Region

Average marginal costs were also calculated by region of operation in the U.S. (Table 14).<sup>27</sup> Carriers operating predominantly in the Southeast reported the lowest average cost (\$1.615), while carriers operating heavily in the Northeast reported the highest average (\$1.756).

**Table 14: Average Marginal Cost per Mile by Region, 2013**

<b>Motor Carrier Cost Centers</b>	<b>Midwest</b>	<b>Northeast</b>	<b>Southeast</b>	<b>Southwest</b>	<b>West</b>
<i>Vehicle-based</i>					
Fuel Costs	\$0.639	\$0.691	\$0.634	\$0.682	\$0.608
Truck/Trailer Lease or Purchase Payments	\$0.138	\$0.165	\$0.145	\$0.129	\$0.190
Repair & Maintenance	\$0.137	\$0.154	\$0.159	\$0.182	\$0.183
Truck Insurance Premiums	\$0.065	\$0.062	\$0.053	\$0.071	\$0.081
Permits and Licenses	\$0.044	\$0.037	\$0.026	\$0.042	\$0.034
Tires	\$0.031	\$0.024	\$0.020	\$0.029	\$0.034
Tolls	\$0.022	\$0.039	\$0.014	\$0.028	\$0.011
<i>Driver-based</i>					
Driver Wages	\$0.437	\$0.453	\$0.443	\$0.402	\$0.423
Driver Benefits	\$0.135	\$0.131	\$0.121	\$0.112	\$0.122
<b>TOTAL</b>	<b>\$1.647</b>	<b>\$1.756</b>	<b>\$1.615</b>	<b>\$1.677</b>	<b>\$1.687</b>

<sup>27</sup> See survey in Appendix A for regions; Canada was excluded from this analysis.



## **CONCLUSION**

Due to the success of the previous *Operational Cost of Trucking* analyses and the industry's continued interest in benchmarking data, ATRI has updated the previous research with 2013 data. This initiative documented, analyzed and tabulated operational cost data collected directly from for-hire motor carriers as a mechanism for disseminating accurate, real-world operational cost information to industry stakeholders. In addition to serving as a high-level motor carrier benchmarking tool, the objective of this research was to ensure that the appropriate data inputs were available for transportation planning and investment models in order to estimate realistic costs and benefits that accrue to commercial operators on the nation's transportation system.

Motor carriers operate in an extremely competitive market, generating very thin profit margins; they must therefore be particularly attentive to all expenses, especially marginal costs. Based on data provided directly from motor carrier survey respondents, the average marginal CPM in 2013 was \$1.676 for the for-hire segment of the trucking industry. This figure was slightly higher than the average CPM of \$1.633 found in 2012.

The cost increases are generally attributed to several key line-items, led by fuel and the growing driver shortage. While fuel cost trends appear to be stabilizing, that is not the case with the driver shortage. This high driver demand over supply ratio is putting considerable pressure on carriers to increase driver pay and benefits in order to retain their most experienced and skilled drivers.

In terms of share, fuel costs and driver wages continue to represent the majority of costs for motor carriers (64% in 2013, a slight decrease from 65% in 2012). Finally, increasing freight demand, new government regulations, and an aging workforce will continue to intensify numerous line-item costs in trucking. While not directly addressed in this analysis, growing shipper demand for limited truck capacity is driving up truck pricing, which will certainly help carriers weather future cost increases.

## **GLOSSARY**

**For-hire carrier** – a motor carrier that offers freight transportation services to the general public.

**Less-than-truckload carrier** – hauls a quantity of freight less than that required for the application of a truckload rate, usually less than 10,000 pounds. Typically maintains a “hub and spoke” model whereby carriers pick up smaller shipments, often on a set route, and return to a base terminal where the packages are unloaded, sorted and consolidated with other shipments going to similar locations. Line haul drivers move the shipments between terminals while pick-up and delivery (P&D) drivers deliver shipments to their final destination.

**Longer Combination Vehicle** – a combination vehicle consisting of a power unit (tractor) pulling more than one trailer. Common trailer configurations include doubles (two 28 foot trailers), Rocky Mountain doubles (one 40 to 53 foot trailer and one 28 foot trailer) and turnpike doubles (two 33 to 53 foot trailers).

**Higher Productivity Vehicle** – includes combination vehicles that are longer or heavier than vehicle weight or dimension regulations typically allow.

**Private carrier** – companies whose primary business is not hauling freight for-hire but that own or lease a fleet of trucks in support of their primary business.

**Shipper** – a company that hires a transportation company to move its freight.

**Specialized carrier** – includes flatbed trailers, tank trucks and agricultural-based carriers as well as carriers dedicated to hauling government munitions, radioactive waste and carriers utilizing specially permitted oversize/overweight loads.

**Straight truck** – a vehicle with the cargo body and tractor mounted on the same chassis.

**Tractor semitrailer** – a combination vehicle consisting of a power unit (tractor) and a semitrailer.

**Truckload carrier** – hauls a quantity of freight that fills a semitrailer, usually more than 10,000 pounds. Generally hauls a dedicated load of freight for one customer (shipper) to one destination (consignee). Many TL carriers will specialize in moving a specific type of freight (e.g. refrigerated or hazardous materials).

## APPENDIX A

### OPERATIONAL COSTS OF TRUCKING SURVEY



## OPERATIONAL COSTS OF TRUCKING SURVEY

The American Transportation Research Institute (ATRI) is conducting a strategic survey of **for-hire** motor carriers to update its previous reports on truck operational costs. ATRI is seeking those marginal costs associated with operating a truck in **2013**. The findings of this survey will be used in various research studies relating to industry productivity, driver issues and fuel efficiency.

In addition, ATRI will send all respondents an advance copy of the report (see page 5 to provide your contact information).

**Your survey responses will be kept completely CONFIDENTIAL. Due to the sensitivity of this research, under NO circumstances will we release any of your personal or organizational information.**

**1) What is your company's annual trucking-related revenue? (Exclude brokerage/logistics revenue)**

Less than \$10 million/year	<input type="checkbox"/>
\$10-\$100 million/year	<input type="checkbox"/>
Greater than \$100 million/year	<input type="checkbox"/>

**2) What is your primary for-hire business type? (Select one)**

Truckload	<input type="checkbox"/>
Less-Than-Truckload	<input type="checkbox"/>
Specialized	<input type="checkbox"/>
Other (please specify):	<input type="checkbox"/>

**3) What is the primary type of commodity that your company hauls? (While your company may haul multiple commodities, select only the most frequent type hauled)**

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li><input type="checkbox"/> Agricultural Products</li> <li><input type="checkbox"/> Automotive Parts or Vehicles</li> <li><input type="checkbox"/> Construction/Building Materials</li> <li><input type="checkbox"/> Forest Products</li> <li><input type="checkbox"/> Garbage or Sanitation</li> <li><input type="checkbox"/> General Freight</li> <li><input type="checkbox"/> Hazardous Materials</li> <li><input type="checkbox"/> Heavy Machinery/Equipment</li> <li><input type="checkbox"/> Household Goods</li> <li><input type="checkbox"/> Industrial Gases</li> <li><input type="checkbox"/> Intermodal Containers</li> <li><input type="checkbox"/> Livestock</li> <li><input type="checkbox"/> Manufactured Goods</li> </ul> | <ul style="list-style-type: none"> <li><input type="checkbox"/> Mine Ores</li> <li><input type="checkbox"/> Modular/Mobile Homes</li> <li><input type="checkbox"/> Paper Products</li> <li><input type="checkbox"/> Petroleum Products</li> <li><input type="checkbox"/> Refrigerated Food</li> <li><input type="checkbox"/> Retail Store/General Merchandise</li> <li><input type="checkbox"/> U.S. Mail/Parcel Service</li> <li><input type="checkbox"/> Other (please specify):</li> <li><input type="checkbox"/> Don't Know</li> </ul> |
|---|--|

- 4) What is your company's fleet size, average age and average number of miles (including owner operators) traveled in a year for each equipment type?

Equipment Type	Number of Assets	Average Age (in years)	Average Miles Per Year Per Unit
Straight Trucks			
Truck-Tractors			
28' Trailers			
45' Trailers			
48' Trailers			
53' Trailers			
Other (please specify):			

- 5) How long do you typically keep your equipment? (Specify years or miles)

Equipment Type	Avg. Trade Cycle	Years	Miles
Straight Trucks		<input type="checkbox"/>	<input type="checkbox"/>
Truck-Tractors		<input type="checkbox"/>	<input type="checkbox"/>
Trailers		<input type="checkbox"/>	<input type="checkbox"/>

- 6) Are any of the trucks in your fleet powered by an alternative fuel (i.e. do not run exclusively on diesel or gasoline)?

☐ Yes
 ☐ No
 ☐ Don't Know

If yes, please indicate the number of trucks in your fleet that use each of the alternative fuels listed below.

Alternative Fuel	Number of Trucks
Compressed Natural Gas (CNG)	
Liquefied Natural Gas (LNG)	
Electricity	
Hybrid engine	
Other (please specify):	

- 7) Does your company currently use Electronic Logging Devices (ELDs) for Hours-of-Service recordkeeping (also known as Electronic On-board Recorders, or EOBRS)?

☐ Yes
 ☐ No
 ☐ Don't Know

If yes, what percentage of your company's trucks used ELDs in 2013?

% of trucks

- 8) Are any of the trucks in your fleet speed limited or governed?

☐ Yes
 ☐ No
 ☐ Don't Know

If yes, please provide the maximum speed setting and the percent of your fleet governed at that speed.

Maximum Speed (mph)	Percent of Trucks

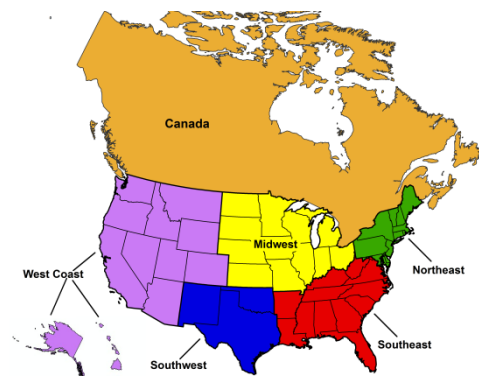
- 9) Based on your fleet's IFTA miles, what percentage of your drivers' trips are in the following categories?

(Total must sum to 100%)

Local pickups and deliveries (less than 100 miles)	
Regional pickups and deliveries (more than 100 miles, less than 500 miles)	
Inter-regional pickups and deliveries (more than 500 miles, less than 1,000 miles)	
National (greater than 1,000 miles)	
<b>Total:</b>	<b>100%</b>

- 10) Please estimate the percentage of miles traveled by your fleet (include owner operator miles) in the following regions. (Total must sum to 100%)

Region	% of Total Miles
Midwest	
Northeast	
Southeast	
Southwest	
West	
Canada	
<b>Total</b>	<b>100%</b>





**2013 Operational Costs**

**11) Please list the pay per mile (\$/mile) or pay per hour (\$/hour) rates for the following types of SINGLE drivers in 2013. (If there are multiple pay rates for the same type of driver please use the average pay rate.)**

Type of Pay	Company Driver/ Company Truck	Leased Driver/ Company Truck	Leased Driver/ Leased Truck	Owner Operator
Pay per Mile <sup>1</sup>	\$	\$	\$	\$
Benefits per Mile <sup>2</sup>	\$	\$	\$	\$
Pay per Hour <sup>1</sup>	\$	\$	\$	\$
Benefits per Hour <sup>2</sup>	\$	\$	\$	\$

<sup>1</sup> Pay include only base pay. Do not include benefits, incentives and bonuses.

<sup>2</sup> Benefits include employer contributions to medical insurance, per diem and other financial benefits to the driver that are a standard part of employment. Do not include incentives and bonuses.

**12) Do you provide any additional financial incentives and/or bonus pay for SINGLE drivers that are not part of their regular wages?**

Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	Don't Know	<input type="checkbox"/>
-----	--------------------------	----	--------------------------	------------	--------------------------

**If yes, what was the average incentive and/or bonus pay paid per driver in 2013? (Please report as an annual average paid per driver.)**

\$	/ Average per Driver in 2013
----	------------------------------

**13) Do you employ team drivers?**

Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
-----	--------------------------	----	--------------------------

**If yes, please list the pay per mile (\$/mile) or pay per hour (\$/hour) rates for the following types of drivers who drove as part of a TEAM in 2013.** (Please use the pay rate for each individual driver, not the team rate. If there are multiple pay rates for the same type of driver, please use the average pay rate.)

Type of Pay	Company Driver/ Company Truck	Leased Driver/ Company Truck	Leased Driver/ Leased Truck	Owner Operator
Pay per Mile <sup>1</sup>	\$	\$	\$	\$
Benefits per Mile <sup>2</sup>	\$	\$	\$	\$
Pay per Hour <sup>1</sup>	\$	\$	\$	\$
Benefits per Hour <sup>2</sup>	\$	\$	\$	\$

<sup>1</sup> Pay include only base pay. Do not include benefits, incentives and bonuses.

<sup>2</sup> Benefits include employer contributions to medical insurance, per diem and other financial benefits to the driver that are a standard part of employment. Do not include incentives and bonuses.

**14) Do you provide any additional financial incentives and/or bonus pay for TEAM drivers that are not part of their regular wages?**

Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	Don't Know	<input type="checkbox"/>
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**If yes, what was the average incentive and/or bonus pay paid per individual driver in 2013?** (Please report as an annual average paid per driver.)

\$	/ Average per Driver in 2013
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**15) Please list your 2013 costs per mile for the following key cost centers:** *(If the amount equals zero, please enter 0. If the line item does not apply to your operation, please enter N/A.)*

Expense Type	2013 Cost per Mile
Repair & Maintenance (Include R&M costs for all trucks and trailers; do not include tire-related expenses.)	\$
Tires (Include all purchase, maintenance, re-treading and replacement costs.)	\$
Fuel Costs (Include all transportation fuel; do not include fuel surcharge revenue.)	\$
Truck Insurance Premiums (Include all liability, cargo and umbrella policy premiums.)	\$
Truck and Trailer Lease or Purchase Payments (Include all interest/fees associated with the payments; do not include depreciation tax benefits.)	\$
Tolls	\$
Permits & Special Licenses (Include oversize/overweight permits, HazMat, etc.)	\$
Other (please specify): _____	\$
<b>Total</b>	<b>\$</b>

**16) What percent of your total annual miles were non-revenue/dead-head miles in 2013?**

% of total 2013 miles
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**Thank you! We greatly appreciate your participation.**

**Please enter your contact information below. Occasionally ATRI will follow up with survey respondents to clarify answers. Your information will be kept strictly confidential.**

<b>Company</b>	<b>Contact Name</b>	
<b>Street Address</b>	<b>Position/Title</b>	
<b>City</b>	<b>State</b>	<b>Zip</b>
<b>Phone</b>	<b>Email</b>	



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