

Historical Review of the Transportation Analysis Fact of the Week, 1996–2017



David Gohlke
Stacy Davis

October 2017

Approved for public release.
Distribution is unlimited.

DOCUMENT AVAILABILITY

Reports produced after January 1, 1996, are generally available free via US Department of Energy (DOE) SciTech Connect.

Website <http://www.osti.gov/scitech/>

Reports produced before January 1, 1996, may be purchased by members of the public from the following source:

National Technical Information Service
5285 Port Royal Road
Springfield, VA 22161
Telephone 703-605-6000 (1-800-553-6847)
TDD 703-487-4639
Fax 703-605-6900
E-mail info@ntis.gov
Website <http://classic.ntis.gov/>

Reports are available to DOE employees, DOE contractors, Energy Technology Data Exchange representatives, and International Nuclear Information System representatives from the following source:

Office of Scientific and Technical Information
PO Box 62
Oak Ridge, TN 37831
Telephone 865-576-8401
Fax 865-576-5728
E-mail reports@osti.gov
Website <http://www.osti.gov/contact.html>

This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.

Energy and Transportation Science Division

**HISTORICAL REVIEW OF THE TRANSPORTATION ANALYSIS
FACT OF THE WEEK, 1996–2017**

David Gohlke
AAAS Science and Technology Policy Fellow,
Vehicle Technologies Office
U.S. Department of Energy
(currently with Argonne National Laboratory)

Stacy Davis
Energy and Transportation Science Division
Oak Ridge National Laboratory

October 2017

Prepared by
OAK RIDGE NATIONAL LABORATORY
Oak Ridge, TN 37831-6283
managed by
UT-BATTELLE, LLC
for the
US DEPARTMENT OF ENERGY
under contract DE-AC05-00OR22725

(This page intentionally left blank)

Abstract

The Vehicle Technologies Office in the United States Department of Energy hosts a transportation analysis fact of the week on its webpage. As of October 2017, one thousand facts have been published since 1996. Examining the themes of published facts allows one to trace analytical trends determined to be of interest to the public over this time. The most popular themes addressed in the Fact of the Week were vehicle fuel economy, petroleum use and production, vehicle sales, and traveler behavior. Facts on vehicle electrification and advanced combustion technologies have been more popular in the last few years, showing their relevance to the Department of Energy mission.

Acknowledgments

This activity was supported by the Vehicle Technologies Office, Office of Energy Efficiency and Renewable Energy, United States Department of Energy and through a AAAS Science & Technology Policy Fellowship served at the Vehicle Technologies Office.

This report was prepared as an account of work sponsored by an agency of the United States government. Neither the United States government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States government or any agency thereof.

List of Acronyms

AEO	Annual Energy Outlook
DOE	Department of Energy
EIA	Energy Information Administration
EERE	Office of Energy Efficiency and Renewable Energy
EV	electric vehicle
FotW	Fact of the Week
ICE	internal combustion engine
GDP	gross domestic product
HDV	heavy-duty vehicle
HEV	hybrid electric vehicle
VMT	vehicle miles traveled
VTO	Vehicle Technologies Office

Table of Contents

Abstract	v
Acknowledgments	v
List of Acronyms	v
Table of Contents	vi
List of Figures	vii
List of Tables	vii
1. Introduction and History	1
2. Topics of Interest	2
3. Historical Trends for Different Themes	5
Fact Comparison #1 – Most Common Themes	5
Fact Comparison #2 – Fuel Economy and Related Topics	6
Fact Comparison #3 – Traditional Powertrains and Fuels	7
Fact Comparison #4 – Alternative Powertrains and Fuels	8
Fact Comparison #5 – Economic Factors	8
Fact Comparison #6 – Ownership and Infrastructure	9
4. Geographic and Temporal Scope	10
Trends and Snapshots	10
Geographic Scope	10
5. Miscellaneous Trends in the Fact of the Week	12
Appendix A: Description of Specific Fact of the Week Topics	15
Comparison of petroleum production and transportation petroleum consumption – FotW #1000	15
Historical average gasoline price – FotW #985	16
Trends of vehicle fuel economy, vehicle weight, and performance – FotW #969	17
Energy used by different modes of transportation – FotW #953	18
Importance to consumers of fuel economy when purchasing a vehicle – FotW #942	19
Appendix B: Complete List of Facts of the Week	20
References	32

List of Figures

Figure 1. Number of iterations for each original fact of the week	2
Figure 2. Frequency of clusters of facts on the same theme	4
Figure 3. Historical trend for facts on vehicle lightweighting, tires, and aerodynamic drag	5
Figure 4. Historical trend for the most common Facts of the Week	6
Figure 5. Historical trend for facts on fuel economy, emissions, energy, and policy	7
Figure 6. Historical trend for facts on traditional powertrains and fuels	7
Figure 7. Historical trend for facts on alternative powertrains and fuels	8
Figure 8. Historical trend for facts on economic factors	9
Figure 9. Historical trend for facts on vehicle ownership and infrastructure	9
Figure 10. Temporal scope of Facts of the Week	10
Figure 11. Geographic scope of Facts of the Week	11
Figure 12. Temporal and geographic scopes of first 1000 Facts of the Week	11
Figure 13. Gap between repeated facts on the same topic	12
Figure 14. Gap (in days) between publication of consecutive Facts of the Week	13
Figure 15. Number of words in the title of each Fact of the Week	13
Figure 16. Word cloud for most commonly used words in Fact of the Week titles	14
Figure 17. U.S. petroleum production and consumption, FotW #1000 (DOE, 2017c)	15
Figure 18. Annual gasoline pump price, FotW #985 (DOE, 2017a)	16
Figure 19. Characteristics of new light vehicles, FotW #969 (DOE, 2017b)	17
Figure 20. Transportation energy use by mode and fuel type, FotW #953 (DOE, 2016b)	18
Figure 21. Survey responses for most important vehicle attribute, FotW #942 (DOE, 2016a)	19

List of Tables

Table 1. Topics of the Most Repeated Facts of the Week	3
Table 2. List of Every Transportation Analysis Fact of the Week	20

(This page intentionally left blank)

1. Introduction and History

The Vehicle Technologies Office (VTO) in the Office of Energy Efficiency and Renewable Energy (EERE) in the U.S. Department of Energy (DOE) has the mission to reduce petroleum consumption through research and development of new technologies, testing and analysis, government and community stakeholder support, and education. Achieving this goal will strengthen national security, stimulate economic growth, increase affordability of transportation, and improve energy reliability and resiliency. The Transportation Analysis Fact of the Week (FotW) is an outward-facing communication tool on the VTO website used to share interesting analytic results with the public. The typical format for these facts posted online includes a graphic and a textual description, and inclusion of supporting data and references. Topics are broadly related to vehicles, transportation, energy usage, and fuel consumption.

The first Transportation Analysis Fact of the Week was published on July 12, 1996 as a means of highlighting data trends for the DOE Office of Transportation Technologies staff (predecessor office to VTO) and the transportation community at large. The first Fact of the Week was titled “Increase in Annual Light Vehicle Sales 1980–1995”. Since then, one thousand Facts of the Week have been published online; the 1000th Fact of the Week was published on October 23, 2017 – “U.S. Petroleum Production Met Demand from Transportation Petroleum Consumption in 2015”. From 1996 to 2002, these facts were posted online by the Office of Transportation Technologies at <http://www.ott.doe.gov/facts/>, from 2003 to 2008, these facts were posted online at <http://www1.eere.energy.gov/vehiclesandfuels/facts/> by the Vehicle Technologies Office, and since 2009, the facts have been posted at <https://energy.gov/eere/vehicles/transportation-fact-week> (DOE, 2017d). Facts published before 2009 are no longer available on the Department of Energy webpage, but can be accessed online through archive.org (Internet Archive, 2017). The Fact of the Week has been published regularly; since shifting to being hosted on the EERE webpage in 2003, there have been only five temporary breaks in publication (see Figure 14 in Section 5 for greater detail).

The Facts of the Week have a large and diverse audience. From October 2016 through September 2017, there were over 160,000 page views. More than half (52%) of new visitors to the VTO web page come through the Fact of the Week. For more regular visitors, a newsletter subscription has been made available via a voluntary distribution list; this newsletter has over 7,800 subscribers.

Section 1 of this report gives an introduction to the Fact of the Week and historical context. Section 2 looks at specific topics of interest that have been frequently revisited. Section 3 examines the historical trends of different economic, technological, and environmental themes. In particular, the number of facts published on different powertrains and fuels is compared, showing which themes have been of the greatest analytical interest at different times. Section 4 addresses the geographic and temporal scope of each Fact of the Week. Section 5 compares other miscellaneous meta-trends in the Facts of the Week. Appendix A explores five specific topics which have been frequently republished in depth. Appendix B gives a comprehensive list of all 1000 Facts of the Week.

2. Topics of Interest

The Facts of the Week address many topics of interest to the Department of Energy, the Vehicle Technologies Office, and the broader transportation community. These topics are directly related to fuel economy, vehicle technology, and cost to the consumer.

New topics are frequently explored in the Fact of the Week, though certain topics have been presented as facts multiple times. Facts are often repeated when updated data are available, with many updated on an annual or biennial basis. In total, updates of previous facts make up 37% of the 1000 total published facts through 2017.¹ Figure 1 illustrates how often each Fact of the Week topic has been reused. The x-axis represents the original fact number, and the y-axis shows each repetition. For example, FotW #355 compares historical prices for gasoline, diesel, and several alternative fuels; this topic has been re-used a total of six times, as shown in the figure. The topics that have been revisited most often were generally first published early in the history of the Fact of the Week and have had continued updates with the newest available data.

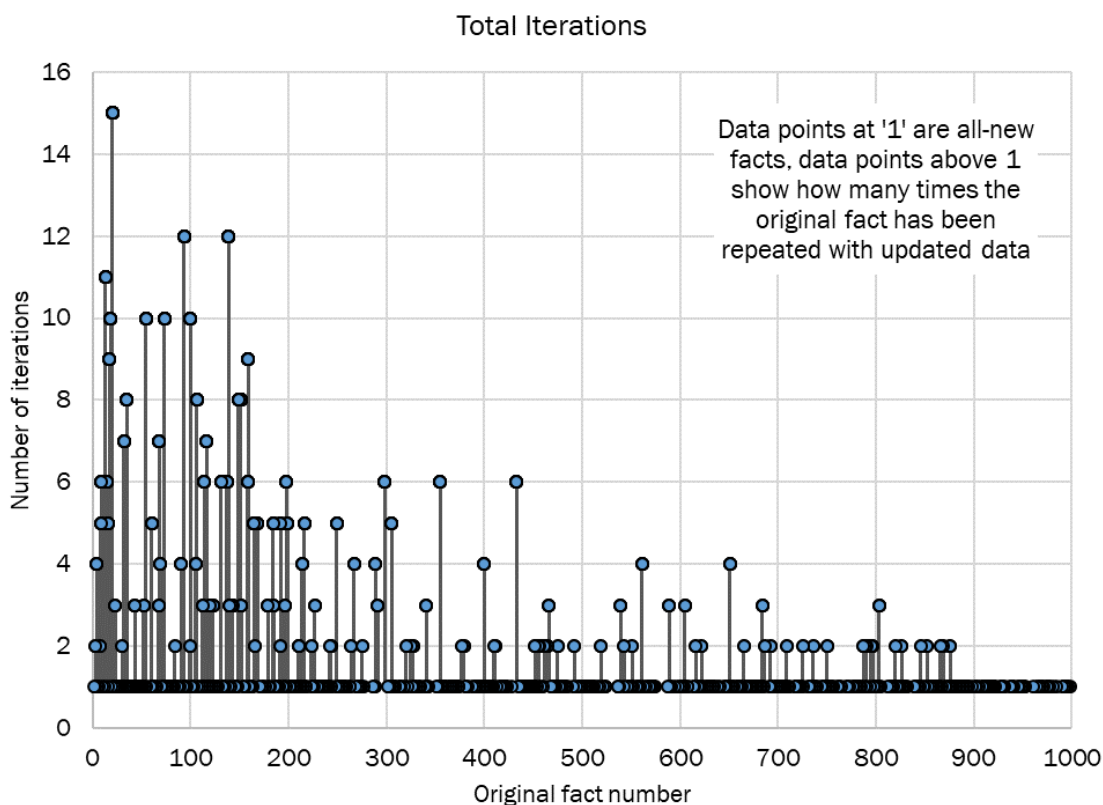


Figure 1. Number of iterations for each original fact of the week

Table 1 details the seventeen different themes from Figure 1 that have been repeated in similar format at least seven times each. Combined, these seventeen themes have been presented as Facts of the Week 161 times. These facts are some of the most popular; the historical price of gasoline is the most visited Fact of the Week from external web searches, with nearly 100,000 visits from October 1, 2016 to September 30, 2017.

¹ There have been 633 unique topics published as Facts of the Week, and 124 of these topics have been updated with the latest data and published again.

Table 1. Topics of the Most Repeated Facts of the Week

Theme	First publication	Most recent publication	Frequency
Importance of fuel economy when purchasing a vehicle	#20 (February 24, 1997)	#942 (September 12, 2016)	15
Sales of light-duty diesel vehicles in Western Europe	#93 (June 15, 1999)	#716 (February 27, 2012)	12
Historic vehicle ownership rates in United States and internationally	#139 (August 7, 2000)	#962 (January 30, 2017)	12
World oil reserves, production, and consumption	#13 (December 2, 1996)	#578 (July 6, 2009)	11
Historical average gasoline pump price	#18 (February 10, 1997)	#985 (July 10, 2017)	10
Light-duty vehicle sales in United States	#54 (February 2, 1998)	#959 (January 9, 2017)	10
Comparison of petroleum production and transportation petroleum consumption	#73 (January 11, 1999)	#1000 (October 23, 2017)	10
Market share of cars and light trucks	#100 (September 29, 1999)	#956 (December 19, 2016)	10
Petroleum portion of total trade deficit	#17 (February 3, 1997)	#593 (October 19, 2009)	9
Comparison of vehicle miles traveled and the price of gasoline	#159 (March 19, 2001)	#906 (January 4, 2016)	9
Worldwide production and sales of light-duty vehicles	#35 (June 30, 1997)	#972 (April 10, 2017)	8
Number of gasoline refueling stations	#106 (November 22, 1999)	#782 (June 3, 2013)	8
Trends of vehicle fuel economy, vehicle weight, and performance	#149 (November 27, 2000)	#969 (March 20, 2017)	8
Historical improvements in fuel economy across U.S. vehicle fleet	#151 (January 1, 2001)	#955 (December 12, 2016)	8
Average price of new light-duty vehicles	#32 (June 11, 1997)	#988 (July 31, 2017)	7
Public opinion surveys about fuels which could replace gasoline	#68 (September 23, 1998)	#944 (September 26, 2016)	7
Growth of vehicle leasing relative to sales	#116 (February 14, 2001)	#810 (December 30, 2013)	7

To allow a deeper dive into various aspects of a single topic, facts are often published in so-called “clusters” of related facts over consecutive weeks. Frequently, two to four facts of the same theme, or from the same source, are published together. Since 2011, the average number of facts in each cluster has grown, showing the shift toward deeper analysis in the Fact of the Week. In Figure 2, each dot represents a single cluster; many of the dots have a value of one, representing an isolated fact, though these are less common than they used to be. The size of clusters of facts over time is growing, especially since 2011. The most consecutive facts on a single theme (8) detailed results from an opinion survey done in 2004 which described people's views on energy-efficient vehicle technologies. Some of the other largest clusters are highlighted in Figure 2.

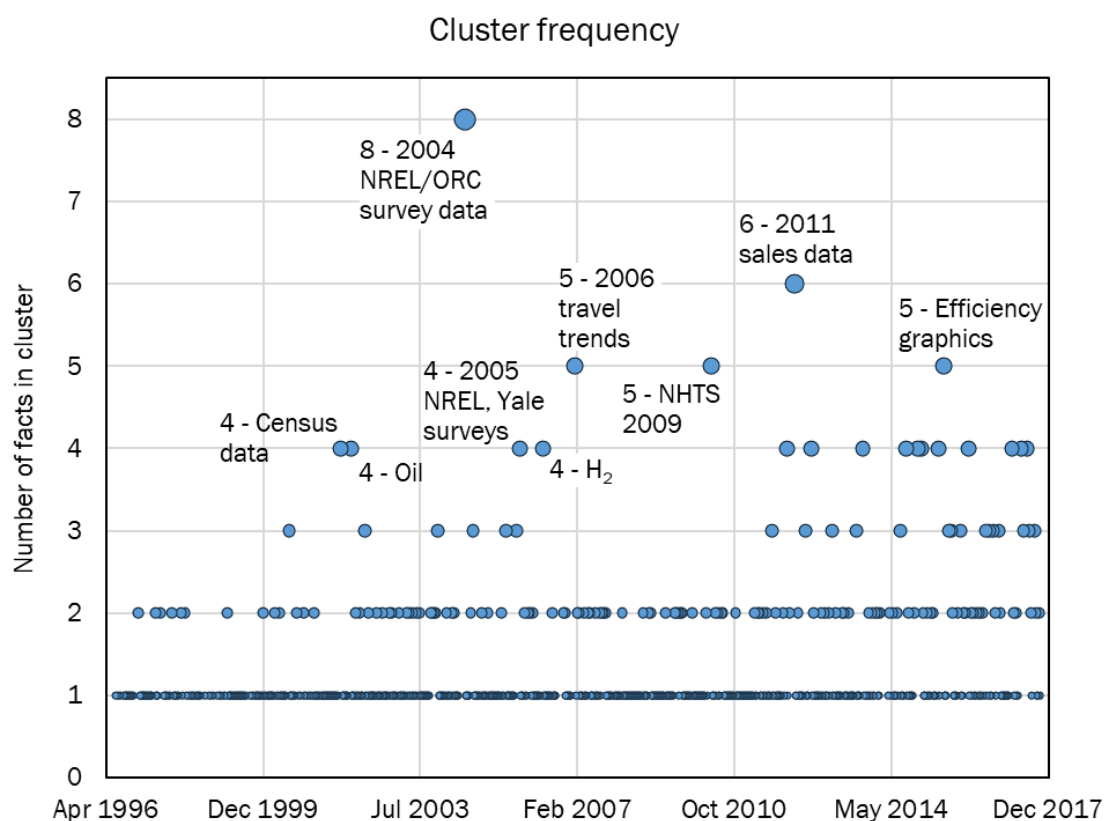


Figure 2. Frequency of clusters of facts on the same theme

The trends of which facts have been published show different topics that have been of interest. For instance, the second-most repeated fact has been about the sale of diesel automobiles in Europe. These vehicles are now very prominent in the European market, having nearly doubled since FotW #93 started tracking diesel sales of passenger cars in 1999. This growth corresponds with frequent publication on the topic, and one can follow the growth trend throughout different countries in Europe using the Fact of the Week. However, after the share of diesel sales reached its maximum in 2011 (ACEA, 2017), this fact has not been updated.

3. Historical Trends for Different Themes

In addition to Facts of the Week on specific topics, broader themes are explored. The historical trends of each of these themes can be studied by noting what themes are present in each fact. The themes are not exclusive; e.g., a fact assessing alternative fuels will be marked for each of the fuels compared, and a fact about fuel economy may also be on combustion and the cost to the consumer. Trends in these facts correlate with research focuses of DOE and interesting trends outside of DOE.

As an illustrative example, Figure 3 represents the Facts of the Week examining energy losses from driving resistance, specifically pertaining to vehicle lightweighting, aerodynamic drag, and tires/rolling friction. Each vertical black line segment represents a single fact that was published on this theme, while the horizontal orange lines represent the cumulative number of facts on the theme. FotW #980–983 comprised a cluster on fuel economy for typical driving, which is shown in this figure as a steep increase in the upper right.

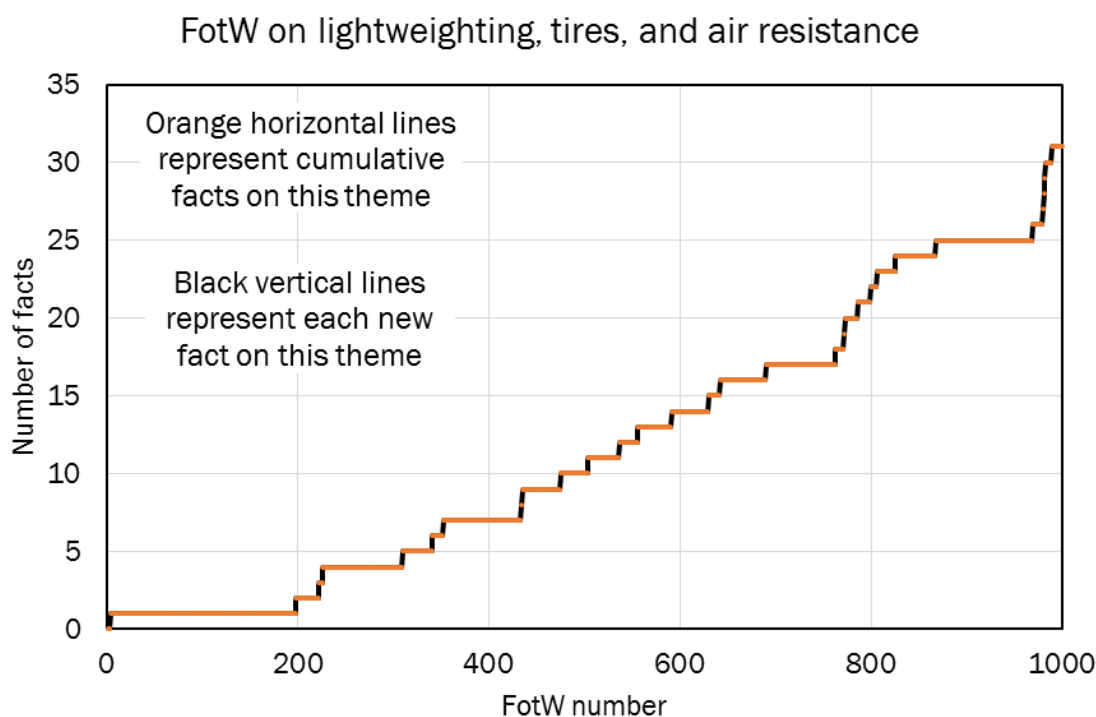


Figure 3. Historical trend for facts on vehicle lightweighting, tires, and aerodynamic drag

The following subsections address several of these themes in greater detail. Figures 4–9 display overall trends in the Facts of the Week, showing cumulative number of facts published over time, graphed in the same manner as Figure 3.

Fact Comparison #1 – Most Common Themes

Figure 4 shows the most popular themes addressed in the Fact of the Week, namely vehicle fuel economy, petroleum use and production, vehicle sales, and traveler behavior. Vehicle sales (e.g., number of sales per year) and petroleum (e.g., price of crude oil) are the most common, and have been highlighted in 15% and 13% of all facts, respectively. Fuel economy and travel behavior have also been examined in over 10% of the facts.

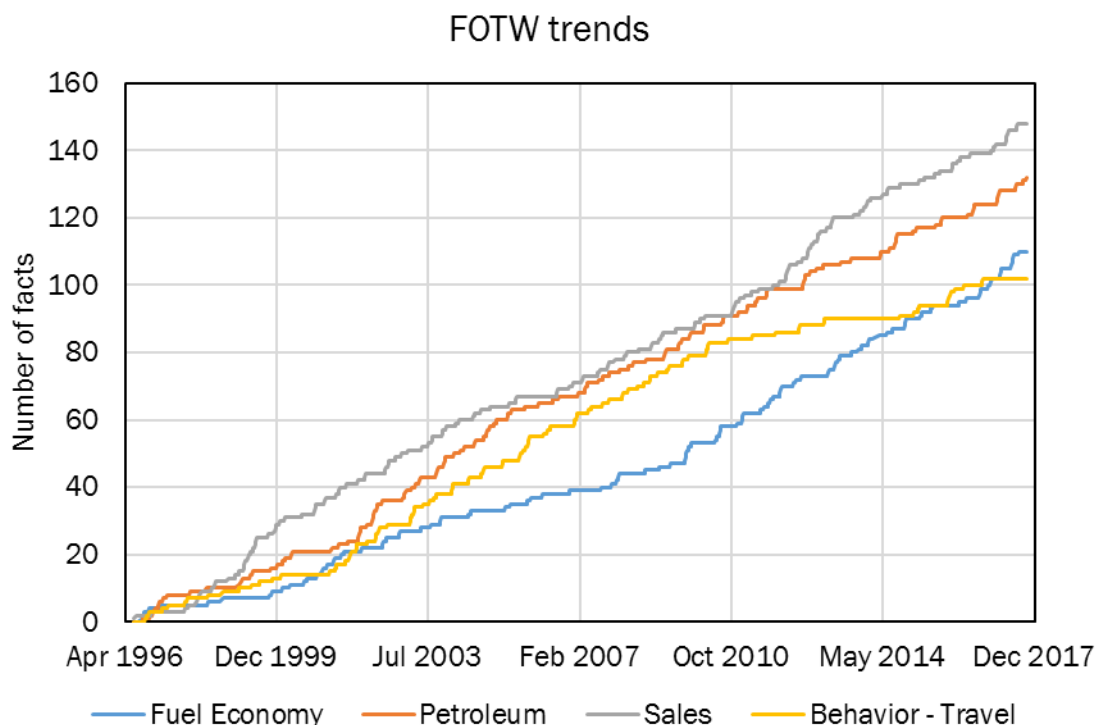


Figure 4. Historical trend for the most common Facts of the Week

Through the decade of the 2000s, facts related to traveler behavior were more frequent (e.g., vehicle miles of travel (VMT) and commute patterns), while in the 2010s, facts related to fuel economy were more frequent (e.g., fuel economy of new vehicles and fuel consumption at different speeds). These Facts of the Week corresponded with changes in behavior and policy external to DOE. From 2000 to 2007 total VMT increased 8%, though VMT did not reach this level again until 2015 (FHWA, 2017). In 2009, new federal fuel economy and greenhouse gas regulations were introduced, and fuel economy reached an all-time high (EPA, 2016).

Fact Comparison #2 – Fuel Economy and Related Topics

Figure 5 shows the cumulative number of facts on fuel economy, emissions, energy, and policy. Many facts in these themes are related—for example, “NHTSA and EPA Finalized Medium and Heavy Truck Fuel Efficiency and Greenhouse Gas Standards through Model Year 2027” is related to fuel economy, emissions, and policy. As noted above, facts related to fuel economy increased as regulations were made more stringent, and facts related to emissions and regulations increased as well. Facts across the broader energy sector have also increased recently, along with the growth in vehicles powered by electricity and natural gas, two fuels with strong historical links outside the transportation sector.

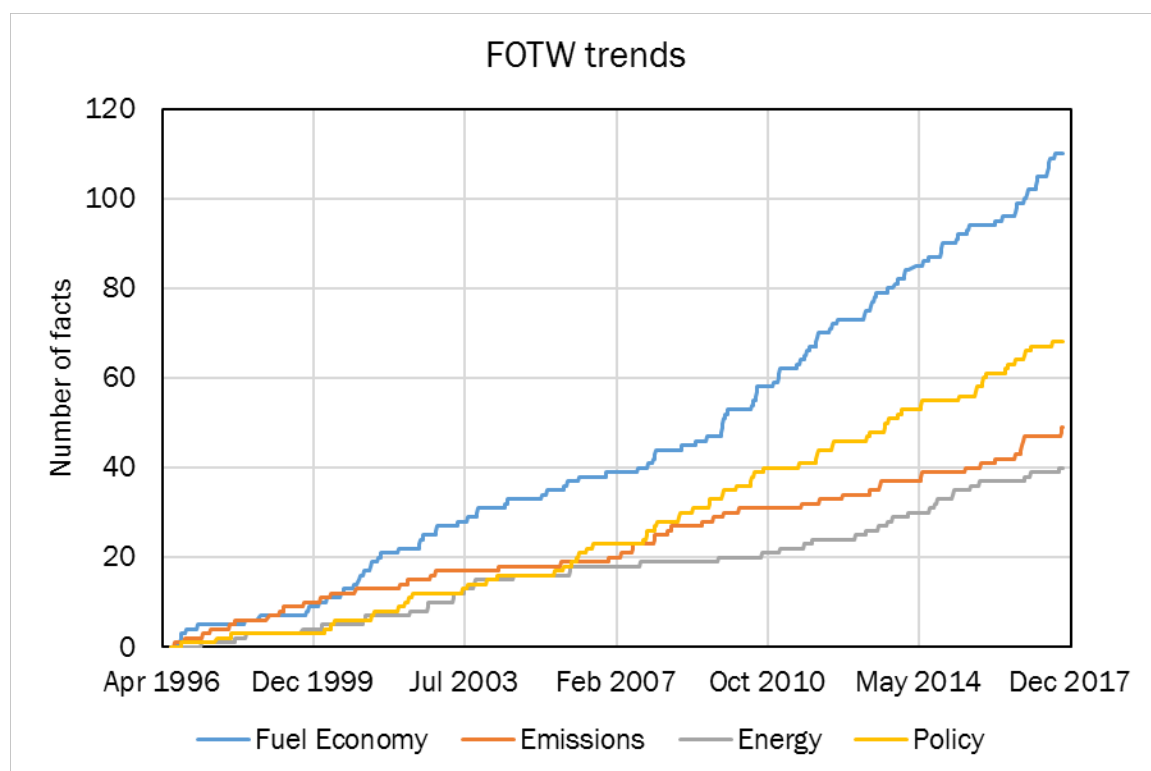


Figure 5. Historical trend for facts on fuel economy, emissions, energy, and policy

Fact Comparison #3 – Traditional Powertrains and Fuels

Diesel and gasoline are traditional fuels for internal combustion engines (ICE). Figure 6 explores the publication of facts related to these petroleum-based fuels. The growth in facts related to combustion in the 2010s is due to the increased focus on advanced technologies to improve fuel economy. Facts on heavy-duty vehicles (HDV) are included here due to their common use of diesel fuel in ICEs.

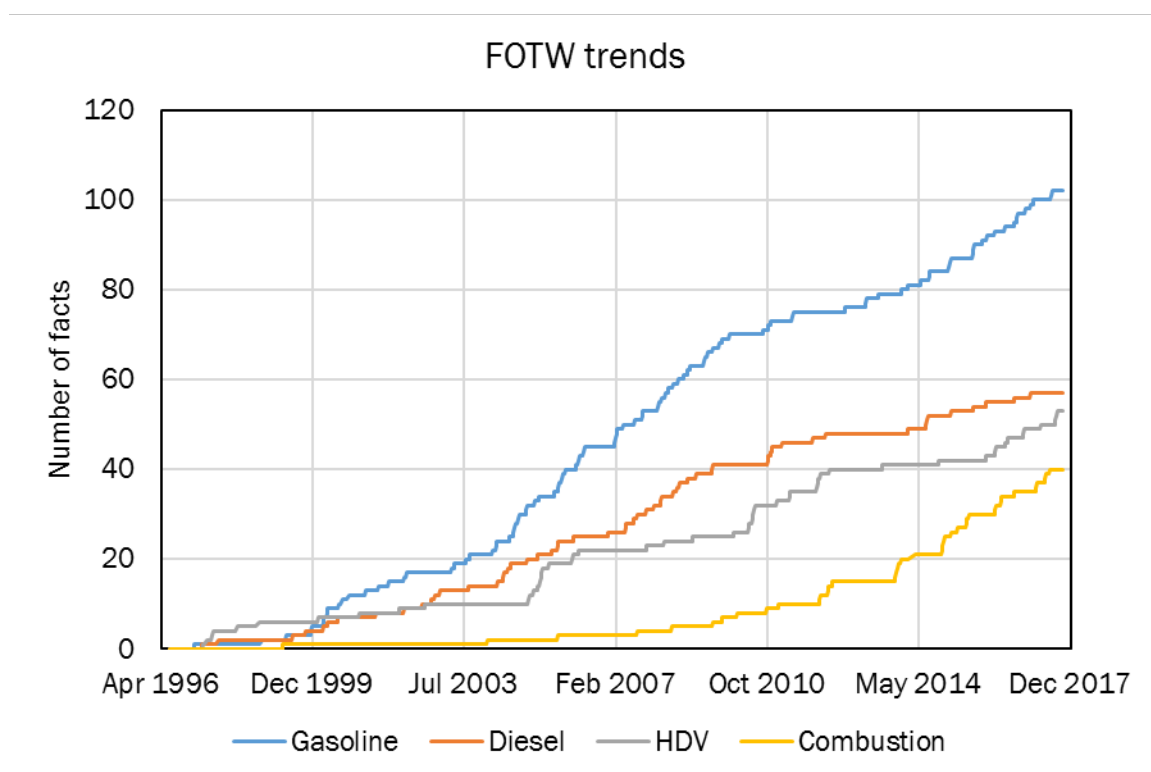


Figure 6. Historical trend for facts on traditional powertrains and fuels

Facts of the Week on gasoline are particularly sensitive to the price of gasoline at the pump. As shown in FotW #985 (DOE, 2017a), gasoline prices were at a historic low in the late 1990s, corresponding to fewer facts on this theme. As gas prices rose in 2000, more facts were published on this theme. Steady gasoline prices in 2001 and 2002 led to fewer facts on fuel prices, but the rapid increase in fuel prices from 2003 to 2008 corresponded with an increase in the number of facts on this theme. Likewise, facts related to diesel fuel rose due both to its increase in price and its potential for greater fuel economy.

Fact Comparison #4 – Alternative Powertrains and Fuels

Figure 7 shows the historical trend for facts from advanced technology powertrains and fuels: electric vehicles (EV), hybrid electric vehicles (HEV), biofuels, and hydrogen. Advanced research at the U.S. Department of Energy on biofuels and hydrogen is being supported by the Bioenergy Technologies Office and the Fuel Cells Technologies Office, respectively, while work on hybrid and electric powertrains has been supported by the Vehicle Technologies Office. HEV facts grew rapidly in the early 2000s. During that same timeframe, total sales of HEVs grew from under 10,000 in 2000 to over 350,000 in 2007. Since then more facts have been published on EVs, corresponding to the growth in sales of mainstream electric vehicles.

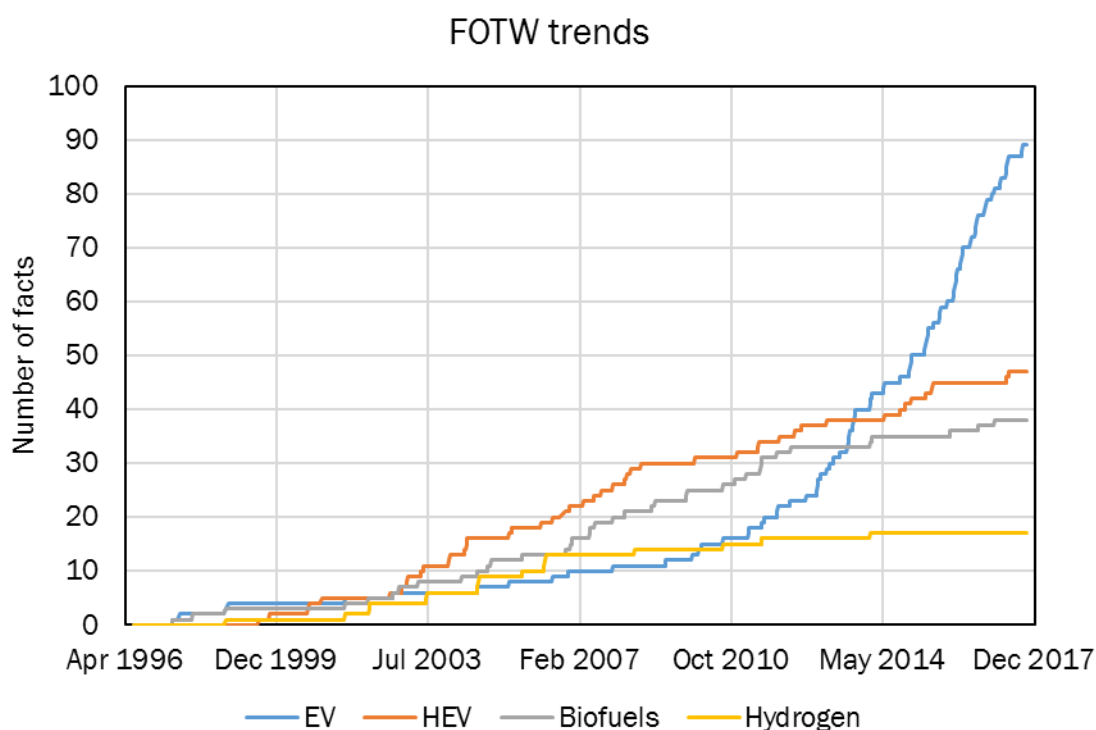


Figure 7. Historical trend for facts on alternative powertrains and fuels

Fact Comparison #5 – Economic Factors

Economic facts are highlighted in Figure 8. The cost to the end-user has always been important, with over 8% of the facts on this theme. The Fact of the Week has recently made a concerted effort to include facts which can be relevant to a broad public audience, with fourteen facts on consumer cost since late-2016, spanning fuel economy suggestions, vehicle sales data, and electric vehicle charging facts.

Since the recession in 2008, facts about manufacturing have been more popular, addressing vehicle production and the related employment impacts. Macroeconomics includes such topics as gross domestic product (GDP) and sector-wide employment. Many of the facts on imports and exports are related to international petroleum markets, though vehicle sales and manufacturing are also included in this theme.

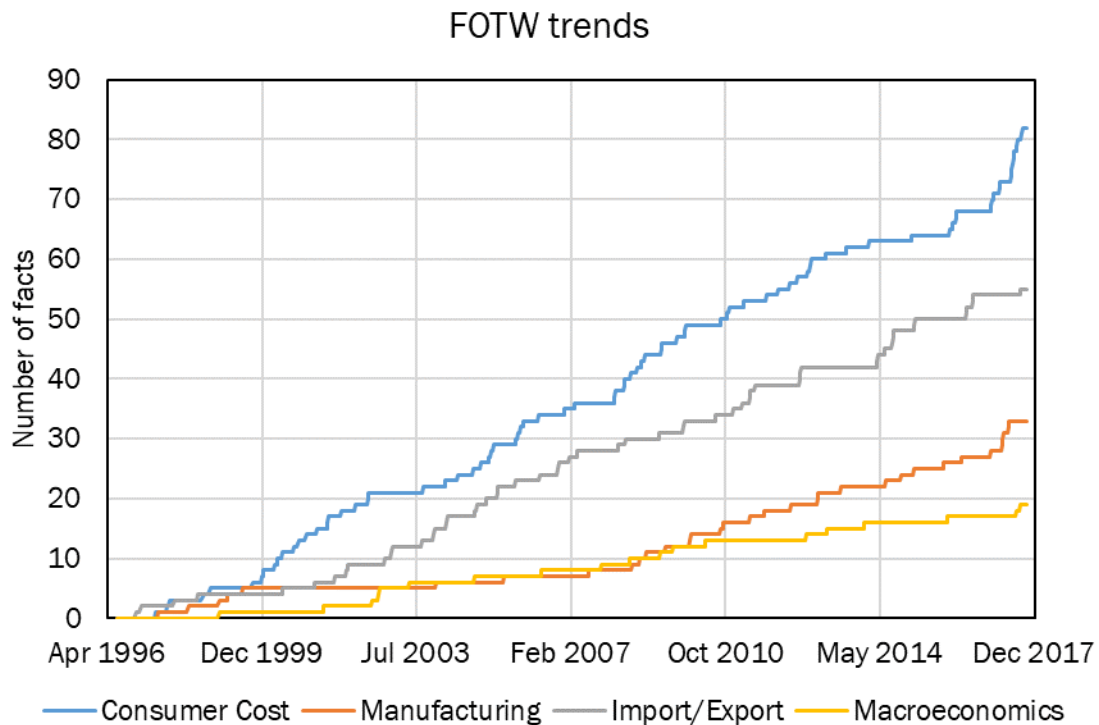


Figure 8. Historical trend for facts on economic factors

Fact Comparison #6 – Ownership and Infrastructure

Figure 9 shows the trends of facts related to vehicle ownership and infrastructure availability. Facts describing vehicle ownership have been reduced in prominence, while facts related to infrastructure (including gas stations, electric vehicle charging, and the roadway network) have become more prominent.

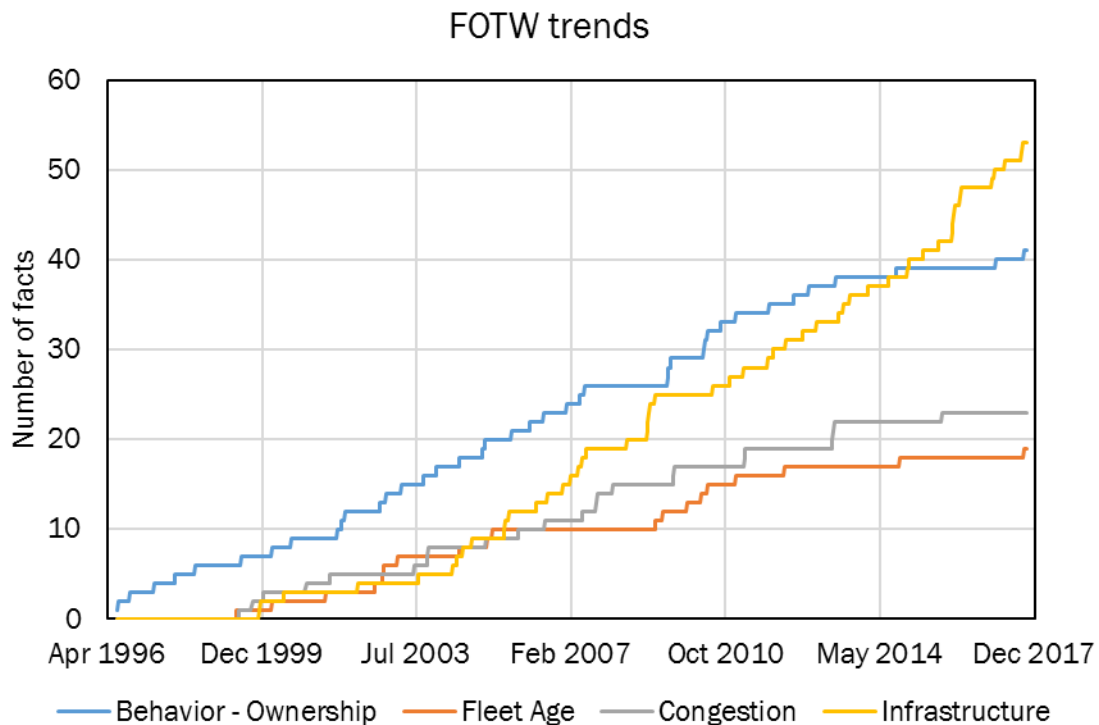


Figure 9. Historical trend for facts on vehicle ownership and infrastructure

4. Geographic and Temporal Scope

This section compares variations in the spatial and temporal scope of Facts of the Week, beyond the broader themes explored in Section 3. The majority of the Facts of the Week present specific data about transportation and energy, but length- and time-scales are important to contextualize the results. In a geographic sense, these facts could address data at a national level or a state level. Similarly, a fact could be presented as a deep dive for a single moment in time, or as a trend, comparing changes as time progresses.

Trends and Snapshots

Figure 10 shows both facts that show a snapshot of a statistic in time as well as those which compare a trend. Through FotW #1000, 53% of facts have compared and contrasted data between years, and 34% of facts have examined a single point in time. Atemporal facts, which are explanatory but are not based on real-world measurement, comprise most of the remainder of the facts. This includes facts explaining a technical concept or describing future policy standards.

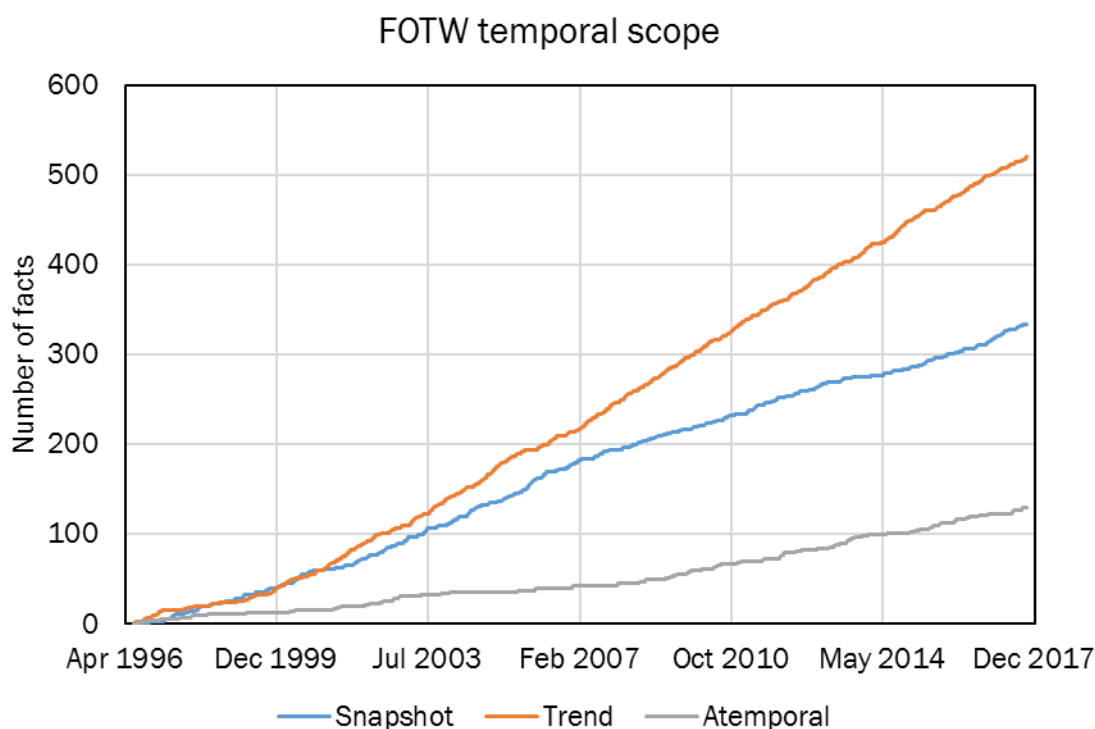


Figure 10. Temporal scope of Facts of the Week

Through 2000 (FotW #150), the numbers of facts with a trend and with a single snapshot were even, but since then, facts showing trends have been more common. After 2006, facts analyzing a single fixed time became somewhat less common, shown as a slight bend in the curve in Figure 10. Often within a cluster, one fact will be published with a snapshot, while a second fact will examine the variation in the trend over time.

Geographic Scope

Figure 11 shows facts that explore topics at different geographic scopes: global, national, state/regional. ‘Global’ refers to data from other countries and broader than just the United States. ‘National’ includes data that is aggregated or averaged across the entire United States (including automobile fleet averages), while ‘state/regional’ refers to facts that delineate differences at that resolution (e.g., crude oil production by state, urban areas with the greatest fuel waste from congestion).

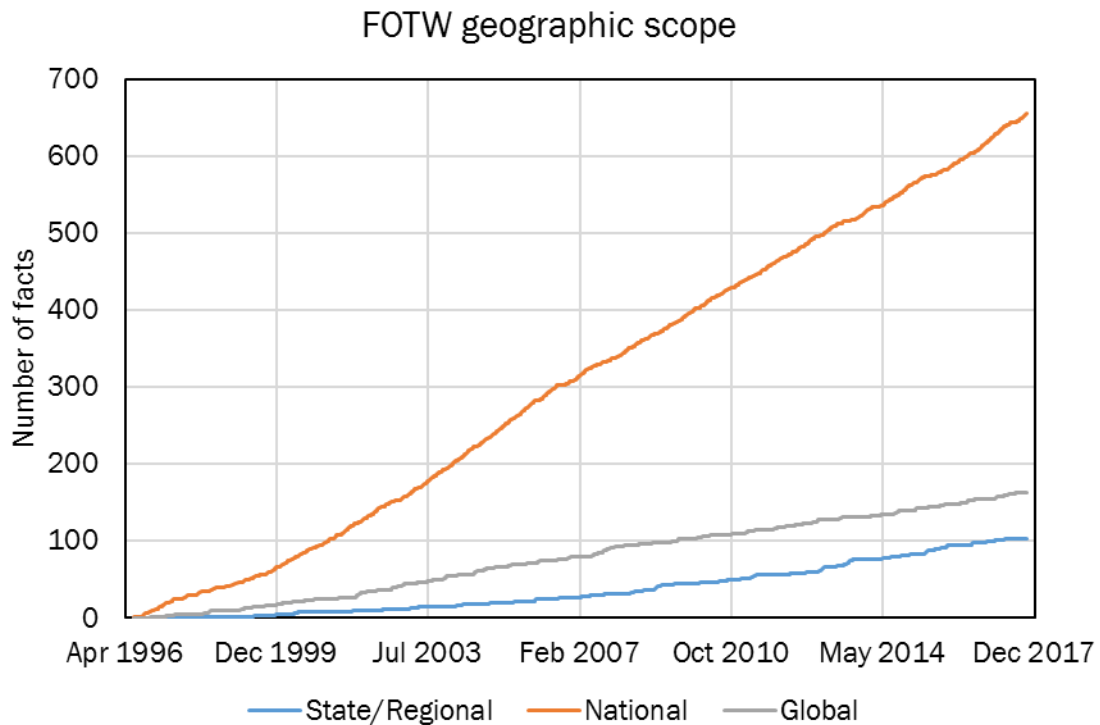


Figure 11. Geographic scope of Facts of the Week

Of the facts that fall into these geographic categories, the vast majority of the data (71%) are aggregated at the national level. About 18% of the data are at the global/international level, while 11% are at the local/regional level. These fractions have not seen much variation since the Fact of the Week was first published.

Figure 12 shows the cumulative fraction of facts published through FotW #1000 with different temporal and geographic scopes, reiterating the prominence of facts showing historical trends and national-scale data.

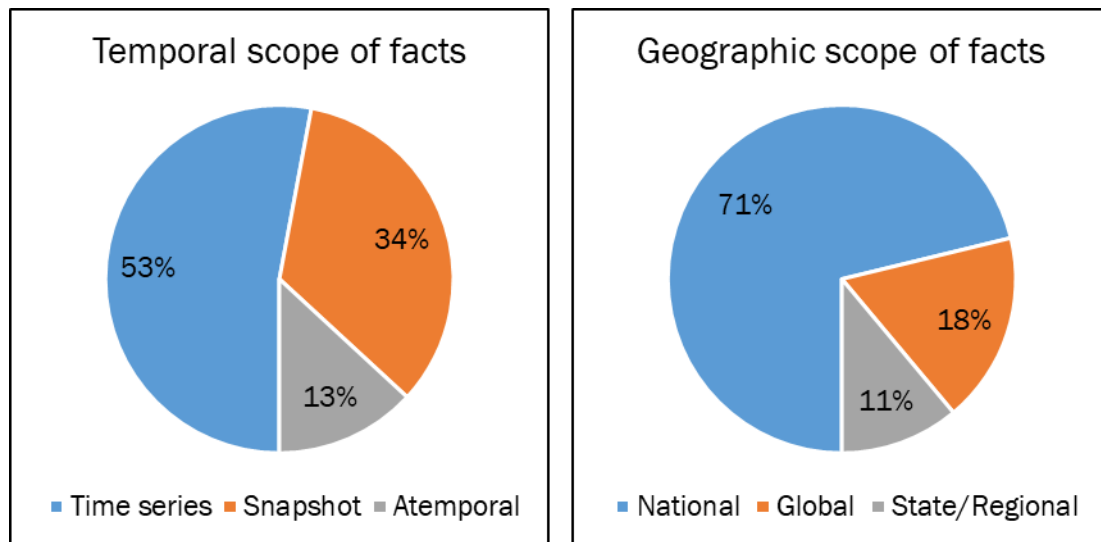


Figure 12. Temporal and geographic scopes of first 1000 Facts of the Week

5. Miscellaneous Trends in the Fact of the Week

In addition to the detailed examination of the topics of the Fact of the Week, some additional contextual information can be derived from looking at the gaps between facts and by looking at their titles.

Figure 13 shows the gap between consecutive facts on the same topic. The x-axis represents a Fact of the Week number, while the y-axis shows how long until the fact was next repeated. The grouping of points below ~100 shows the tendency to repeat facts as data is updated, typically on a 1–2-year timeframe, while the outlier points in the upper left show facts that have been repeated less regularly.

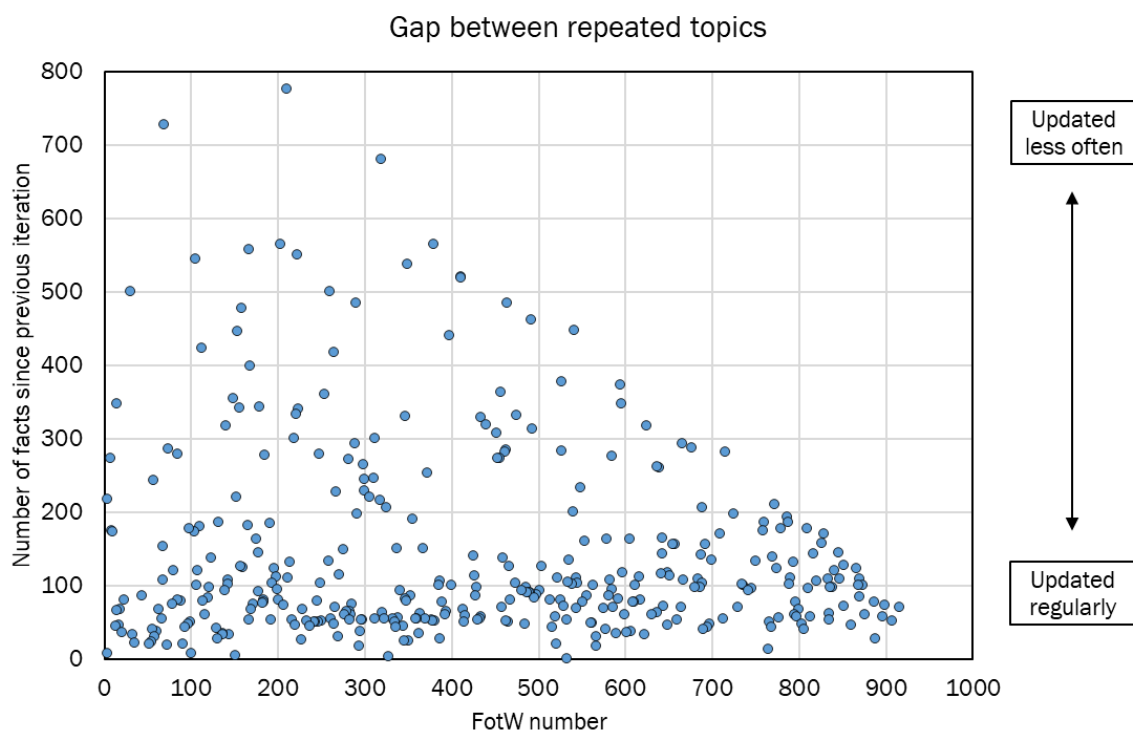


Figure 13. Gap between repeated facts on the same topic

Figure 14 shows the gap (in days) between consecutive Facts of the Week. As noted in Section 1, the Fact of the Week has been published regularly since being hosted on the EERE website 2003.² Before this, the Fact of the Week was generally published weekly, but with less consistency.

² From 2003 to 2017 there were five breaks of more than one week between publications. In 2006, the Fact of the Week was not posted online due to system upgrades; in 2007, the Fact of the Week was not published over winter holidays; in 2013, the Fact of the Week was not published due to the federal government shutdown; and in 2014, the Fact of the Week was twice delayed due to technical website issues.

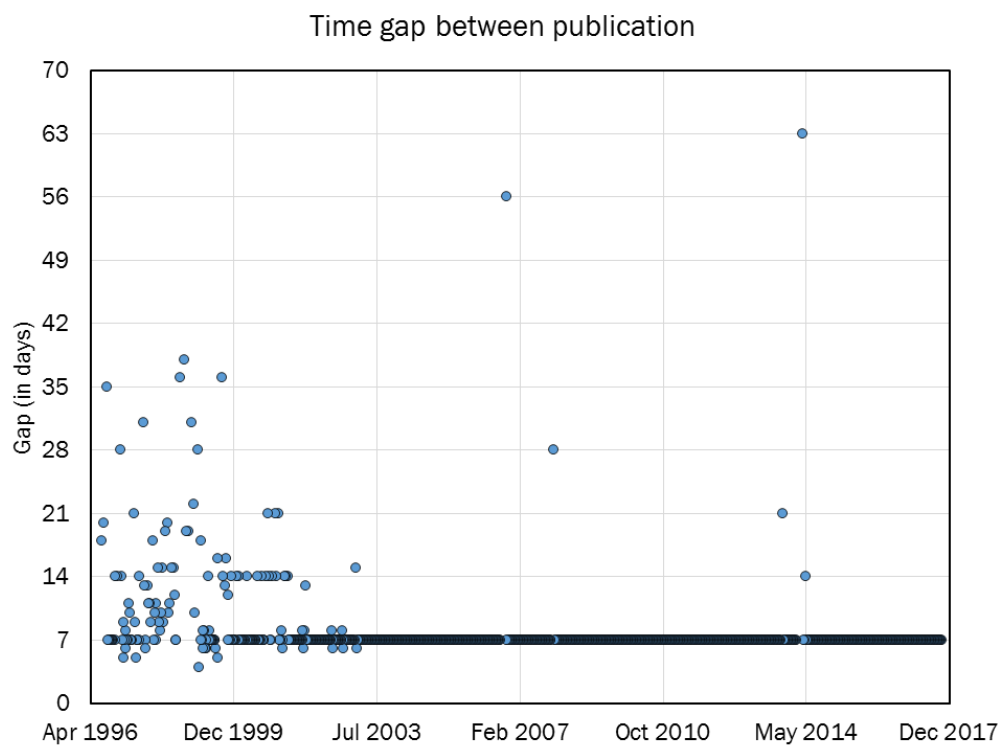


Figure 14. Gap (in days) between publication of consecutive Facts of the Week

The number of words in the title has grown since around 2012. Figure 15 shows the number of words in each title. The moving average trendline shows an upward trend since around FotW #700, growing from an average of around 7–8 words to over 10 words. The general growth of the title length shows a tendency to be more descriptive in titles, and is indicative of a greater nuance in the facts.³

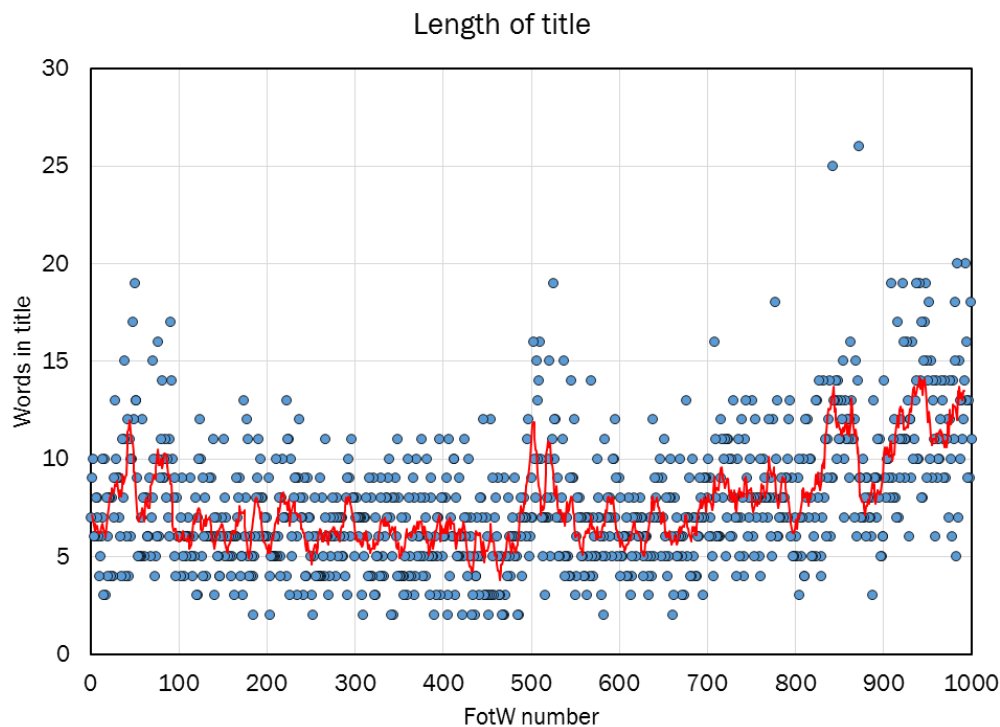


Figure 15. Number of words in the title of each Fact of the Week

³ Prior to November 1999 (FotW #105), the Fact of the Week did not always include descriptive text with the figures.

While less quantitative, a word cloud can also be used to see the most repeated topics in the Fact of the Week. Figure 16 is a word cloud generated using the 250 most common words in the titles of the Fact of the Week, using the online tool available at <https://www.jasondavies.com/wordcloud/> (Davies, 2017). Certain words are particularly clear in this representation: “vehicle(s)”, “fuel”, “gasoline”, “light”, “production”, “transportation”, “petroleum”, “consumption”, “sales”, “oil”, and “economy” are all among the most frequently used words.

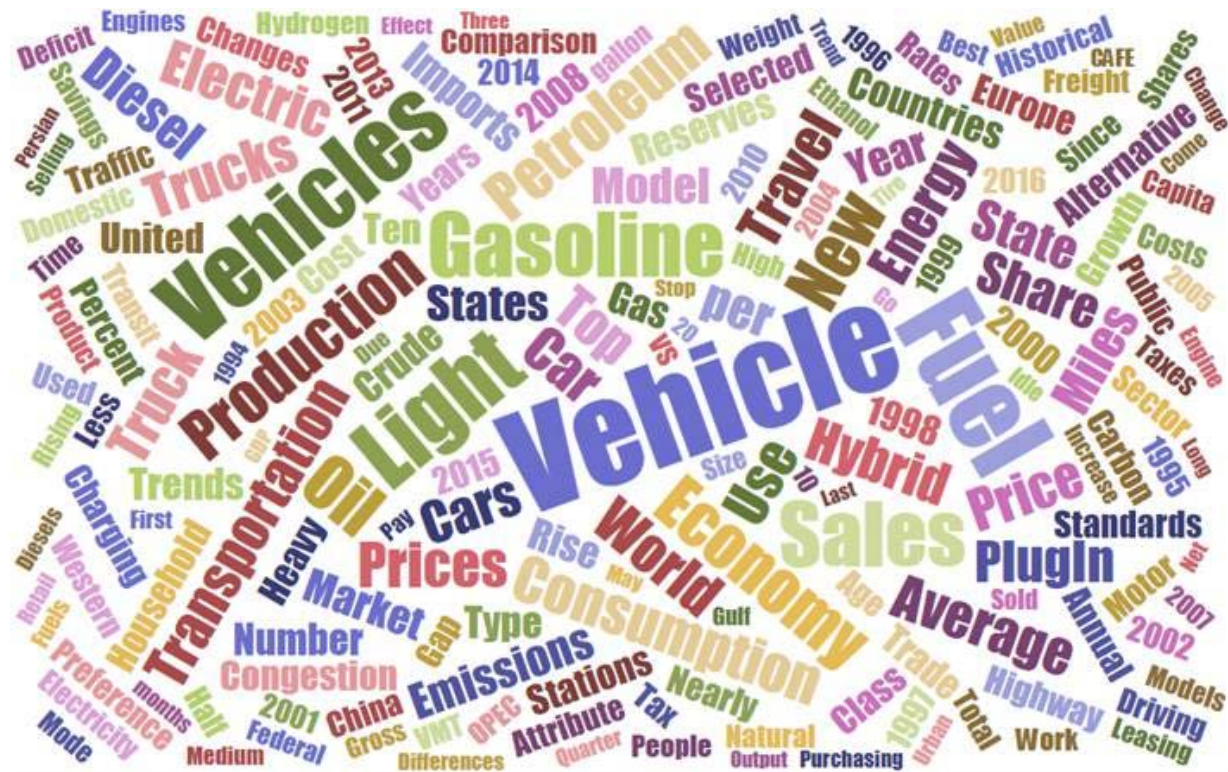


Figure 16. Word cloud for most commonly used words in Fact of the Week titles

Appendix A: Description of Specific Fact of the Week Topics

This section explores five specific topics presented as Facts of the Week, giving summaries of the data therein and underlying context. These are five of the most-repeated and most-referenced Facts of the Week, showing their relationship to work done by the Department of Energy.

Comparison of petroleum production and transportation petroleum consumption – FotW #1000

Figure 17 displays what is colloquially known as the transportation petroleum gap (DOE, 2017c). Prior to 1988, domestic production of petroleum was sufficient to cover all use for transportation in the United States. However, after this the demand for petroleum in the transportation sector outstripped the production in the United States, and by 1998 the petroleum demand from the on-road sector alone was larger than production. More recently, the growth in transportation demand for petroleum has stopped or slowed, and domestic production is at an all-time high level (EIA, 2017b). With improved efficiency and the recession of the late 2000s demand has reduced, and the shale boom of the last decade has increased production. By 2015, domestic petroleum production exceeded usage in the transportation sector once again. This graphic includes both historical data and projections from the U.S. Energy Information Administration's (EIA) Annual Energy Outlook (AEO) 2017 (EIA, 2017a). This graphic was first published in 1999 as FotW #73, has been published a total of 10 times, and was revisited on October 23, 2017 to be the milestone FotW #1000.

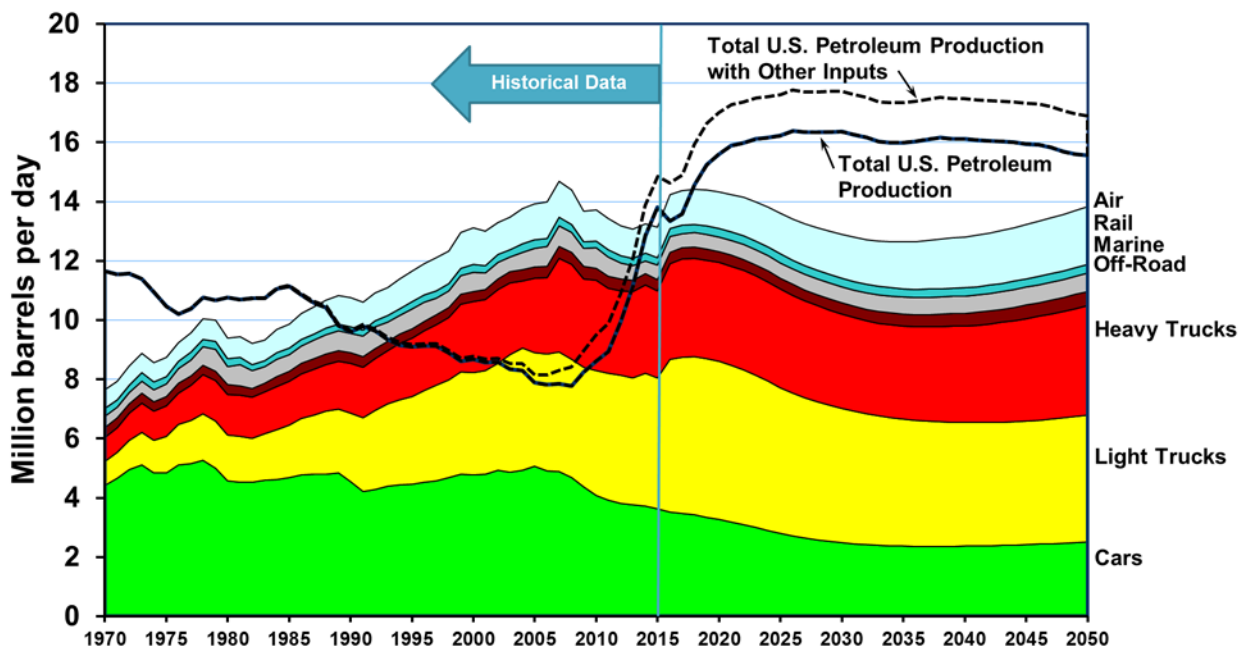


Figure 17. U.S. petroleum production and consumption, FotW #1000 (DOE, 2017c)

Historical average gasoline price – FotW #985

Figure 18 shows U.S. average gasoline prices in both nominal dollars (which was the purchase price at the time) shown in blue, and inflation-adjusted dollars shown in green (DOE, 2017a). Through most of the 20th century, the inflation-adjusted price of gasoline decreased, with the major exception of the oil price shocks of the 1970s and the 1980s. Since 2000, the gasoline price has been less steady, doubling in one six-year span, and twice dropping by over 25% in a single year. This particular topic is the most visited Fact of the Week, and is revisited annually with the latest data and a new updated inflation adjustment factor. This graphic has been repeated 10 times from 1997 to July 10, 2017 (FotW #985).

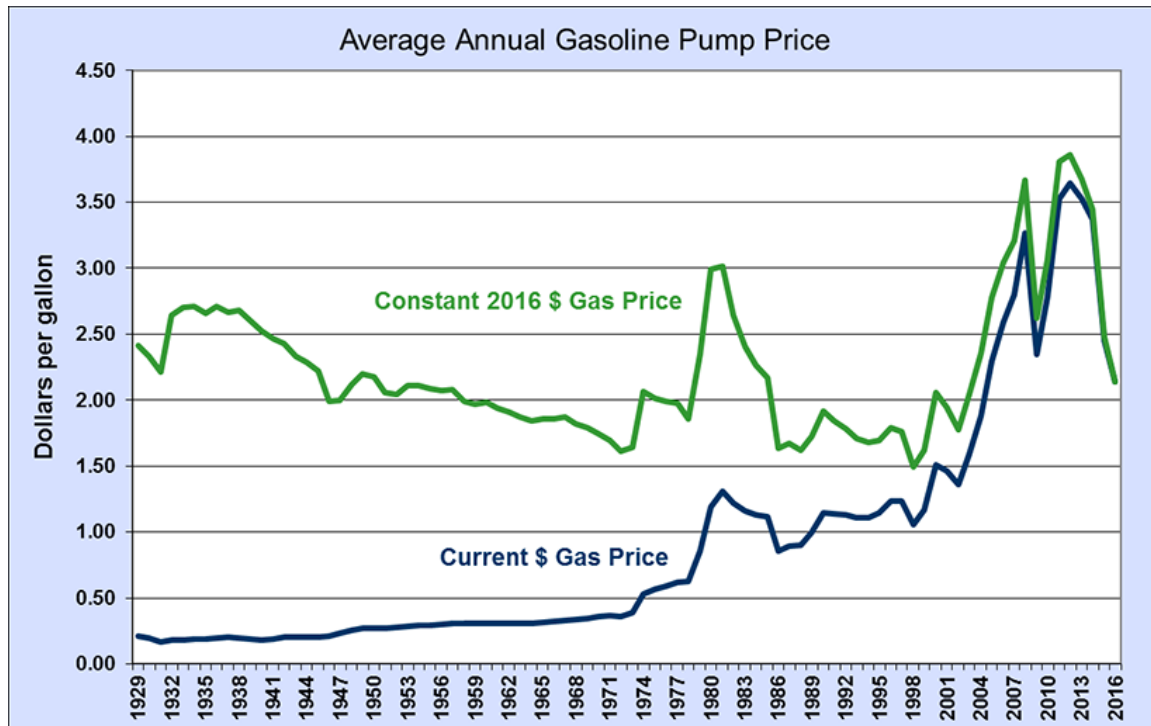


Figure 18. Annual gasoline pump price, FotW #985 (DOE, 2017a)

Trends of vehicle fuel economy, vehicle weight, and performance – FotW #969

Figure 19 shows a comparison of vehicle fuel economy, weight, and performance over time (DOE, 2017b), referencing data published in the EPA Trends Report (EPA, 2016). From the late 1980s through the early 2000s, fuel economy dropped as vehicle weight and horsepower increased. Since 2004, new vehicle fuel economy has increased over 30%. In spite of the increase in fuel economy, vehicle performance has improved, as the average acceleration rate (0–60 mph time) has nearly doubled since 1980. This fact has been explored seven times since 2000, and most recently published as FotW #969 on March 20, 2017.

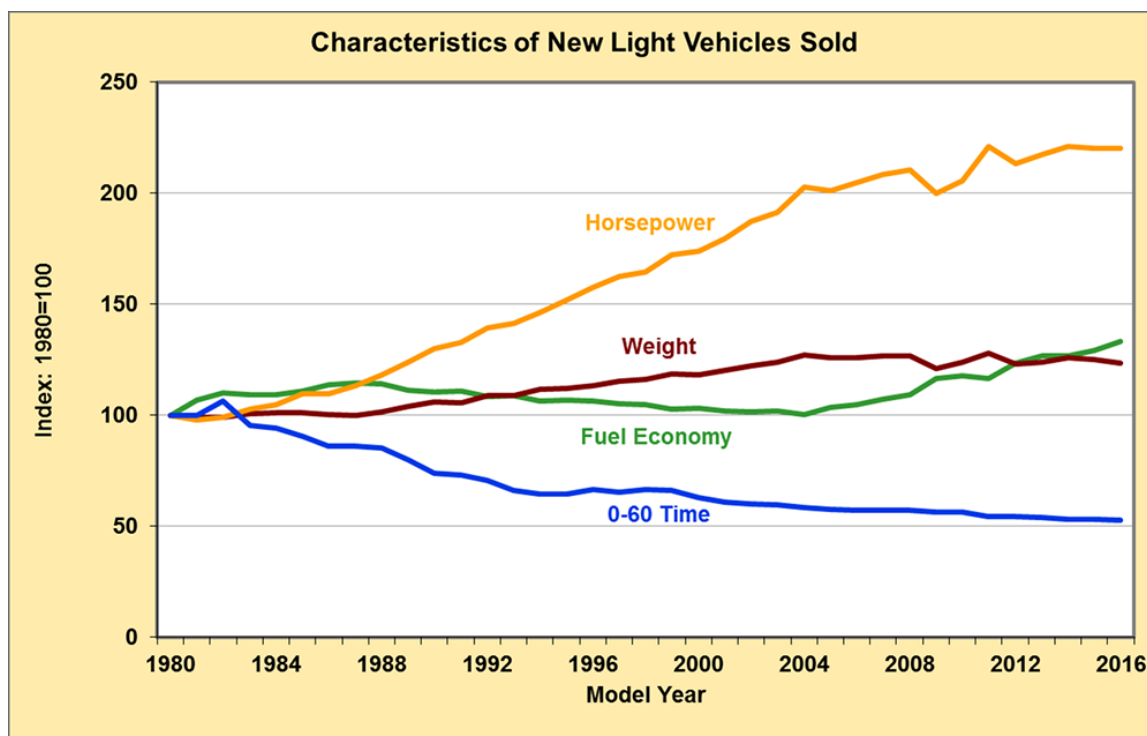


Figure 19. Characteristics of new light vehicles, FotW #969 (DOE, 2017b)

Energy used by different modes of transportation – FotW #953

On-road transportation uses the majority of energy in the transportation sector in the United States. Figure 20 shows this for six different modes of transportation, and further delineates by the fuel (DOE, 2016b). On-road vehicles are powered almost exclusively by petroleum-based liquid fuels; gasoline (including ethanol) is prominent for light-duty vehicles, while medium- and heavy-duty vehicles are mostly fueled by diesel. For airborne travel, jet fuel (green) is the most prominent fuel. Waterborne travel uses a mix of gasoline, diesel, and residual fuel. Rail in the United States is largely powered by diesel, though electricity is used for a small portion. Pipelines are used to ship energy commodities such as natural gas and petroleum products; for this mode, natural gas consumption includes operation of compressors and line loss (EIA, 2017b). This graphic was first published in 2001 as FotW #158 and has been published a total of six times. The most recent publication was November 28, 2016 as FotW #953.

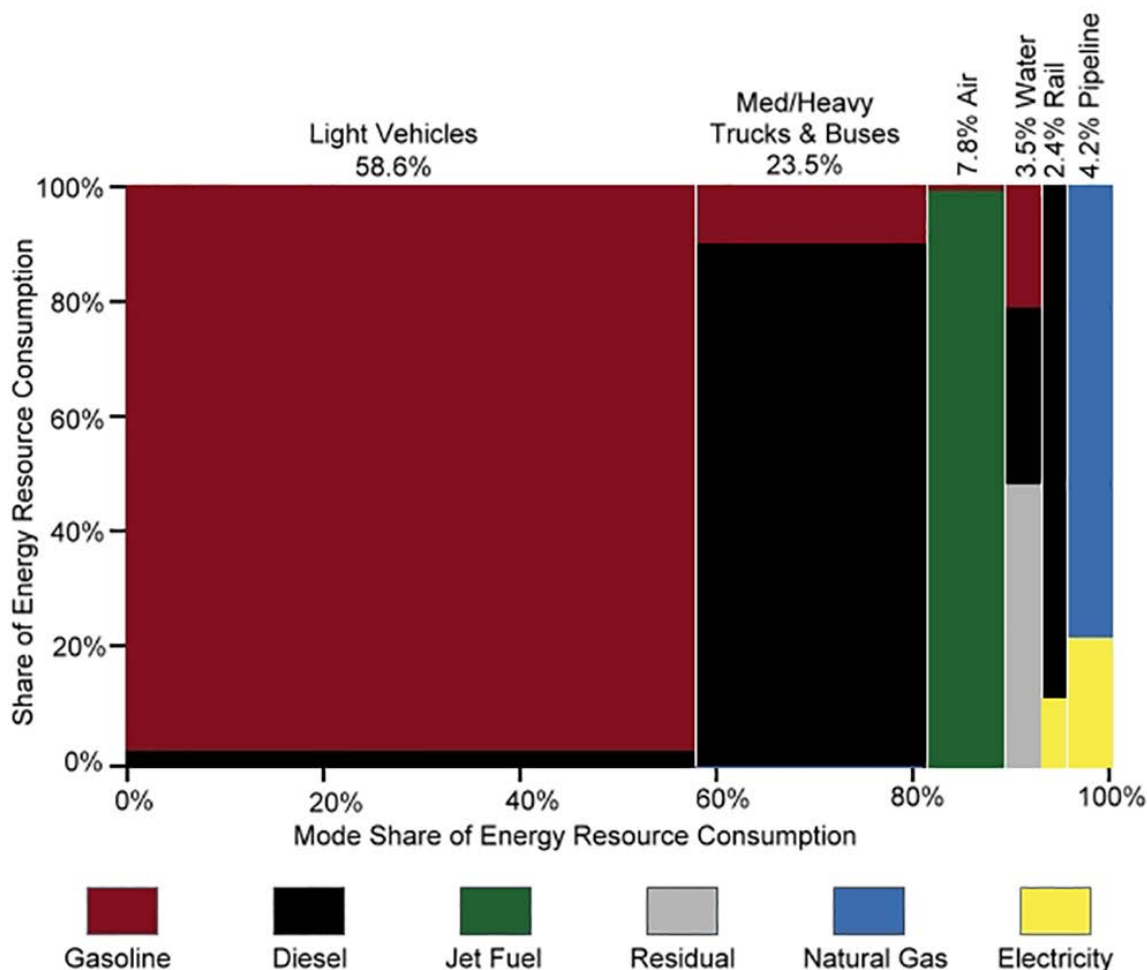


Figure 20. Transportation energy use by mode and fuel type, FotW #953 (DOE, 2016b)

Importance to consumers of fuel economy when purchasing a vehicle – FotW #942

A series of long-standing surveys by J.D. Power and Opinion Research Corporation has asked consumers for their views on different vehicle attributes, including dependability, price, and fuel economy (Singer, 2015). People's opinion on the most important attribute is strongly correlated with the price of fuel, as shown in Figure 21 (DOE, 2016a). When gasoline prices are high, fuel economy is more important, and when gasoline prices are low, dependability and safety hold more prominence. This topic has been the most-often repeated Fact of the Week, at 15 total occurrences, starting in February 1997 when the survey was restarted (Kubik, 2006), and was last published with survey data from 2016 on September 12, 2016.

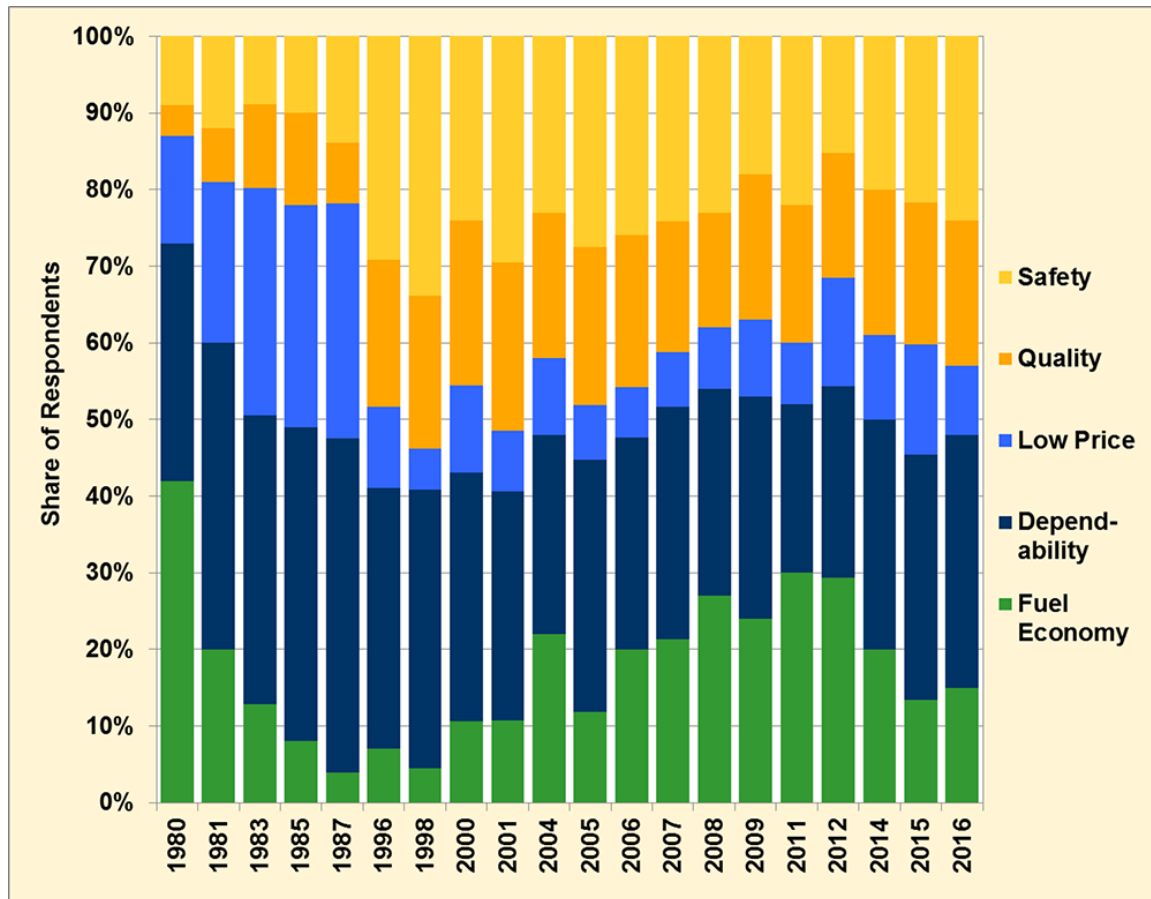


Figure 21. Survey responses for most important vehicle attribute, FotW #942 (DOE, 2016a)

Appendix B: Complete List of Facts of the Week

Table 2 shows a list of every Transportation Analysis Fact of the Week published on the DOE website since 1996.

Table 2. List of Every Transportation Analysis Fact of the Week

Number	Fact Title	Number	Fact Title
1	Increase in Annual Light Vehicle Sales 1980-1995	2	Change in Market Share for 1996 Compared to 1995
3	Changes in Fuel-Cycle Energy Use and Emissions by Alternative Fuel	4	Fuel Economy Declines at Higher Speeds
5	Consumption of Petroleum by End-Use Sector	6	Energy Intensity of Passenger Modes, 1974 and 1994
7	Fines and Taxes Returned to U.S. Treasury	8	Means of Transportation to Work, 1980 and 1990
9	Percent of Vehicles in Multi-Vehicle Households	10	Characteristics of Light Trucks
11	Total Fuel Cycle Analysis II	12	The Value of 2X Fuel Economy
13	World Oil Reserves, Production, and Consumption, 1995	14	Light Truck Share of Light Vehicle Sales 1970 to 1995
15	Imported Oil Use	16	Transportation Oil Use as a Percent of U.S. Oil Production
17	U.S. Trade Deficit	18	Gasoline and Oil Prices in Constant 1995 Dollars
19	Oil Use in the United States	20	Trends in Attribute Preference
21	The Fuel Savings Benefits of Increasing Fuel Economy	22	Most Valuable Vehicle Safety Attribute for Next Purchase
23	VMT Annual Growth Rates	24	Total Output of Refined Petroleum Products, 1994 (mbpd)
25	1995 U.S. Propane Supplied	26	Carbon Dioxide Emissions by Sector in 1995
27	Gasoline and Diesel Fuel Prices for Selected Countries, 1996	28	Oil Use by Heavy Trucks Exceeds Combined Oil Use by Buildings and Utilities
29	Average Annual Vehicle Miles per Household by Trip Purpose (1990)	30	Towing Capacity for Selected 1996 Model Cars and Trucks
31	Top Purchase Factors for Medium and Heavy Vehicle Owners	32	Average Price of a New Car, 1970 to 1996
33	Estimated Number of Alternative-Fueled Vehicles in 1995	34	Total National Emissions by Sector, 1994
35	1996 Worldwide Vehicle Production	36	Heavy Truck Buyers Willingness to Pay Premium for Alternative Fuel Vehicles
37	Payback Period Expected for Alternative Fuel Heavy Vehicles	38	Estimated Number of Electric Vehicles that Automakers Must Sell in New York to Avoid Fines
39	Top Reasons Why Consumers Would Not Buy a Diesel Powered Vehicle	40	Motor Vehicle Death Rates
41	Personal Consumption Expenditures for User-Operated Transportation	42	People 65 and Over Account for Nearly One-Quarter of Domestic Automaker's Sales
43	Passenger Car Operating Cost	44	Change in Number of Residential Vehicles by Type, 1988 to 1994
45	Light Trucks Share of Residential Vehicle Fleet by Region, 1994.	46	Public Perception of U.S. Oil Imports
47	Type of Vehicle Previously Owned Before Buying a Ford Explorer	48	Greenhouse Gas Emissions for Ethanol Based Fuels Relative to Reformulated Gasoline (RFG) on a Fuel Cycle Basis.
49	Percent of Americans that Worry a Great Deal About Selected Environmental Problems	50	Light Trucks Enjoy a Substantial Regulatory Advantage Over Cars - A Comparison of Regulations for Cars and Light Trucks
51	Sales of Selected Vehicle Models in the U.S. 1997 Calendar Year (11 months)	52	Car v. Light Truck Sales in the U.S. 1997 Calendar Year (11 months)
53	Estimate of Transportation Energy Use and Carbon Emissions, 1997	54	U.S. Light Vehicle Sales, 1997
55	U.S. Medium/Heavy Truck Sales, 1997	56	Trends in Vehicle Attribute Preference
57	1997 World Wide Vehicle Production	58	World Oil Reserves, Production, and Consumption, 1997
59	Vehicle Efficiency and Fuel Substitution Show Greater Promise than VMT Reduction Efforts	60	World Natural Gas Reserves, Production, and Consumption, 1996
61	Growth in Motor Vehicles 1940-1996	62	Car and Light-truck Models on the U.S. Market
63	U.S. Trade Deficit (1997 and 1st Quarter, 1998)	64	Global Vehicle Sales by Region 1997
65	U.S. Truck Sales by Class 1993-1997	66	Average Expenditure per New Car 1988-1997
67	BTU per Passenger Mile for U.S. Transit in 1995	68	What Fuel Will Replace Gasoline?
69	U.S. Electric Vehicle Sales/Leases Since Late 1996	70	Estimate of Particulate Matter from Selected Sources, 1990

Number	Fact Title	Number	Fact Title
71	Employees of Motor Vehicles and Related Industries as a Percent of Total U.S. Employment, 1994	72	Car-Truck Sales Split in the U.S. Market Through October 1998
73	Transportation Oil Gap 1970-1997	74	Women's Share of Retail Sales
75	World Oil Consumption, 1950 & 1996	76	The Transportation Sector is Projected to Increase its Share of U.S. Oil Use and Carbon Emissions
77	Vehicle Production in Japan and North America, 1997 & 1998	78	1998 U.S. Sales of Light Vehicles
79	1998 Worldwide Light Vehicle Sales for Top Five Manufacturers	80	Light Truck Market Share of Light Vehicle Market 1908 to 1998
81	Acceleration Time for the Top Selling 1998 Models (seconds to accelerate from 0-60 mph)	82	Carbon Emission Coefficients at Full Combustion (MMTC per Quad)
83	Single Most Important Reason Why Consumers Bought Type of Vehicle	84	U. S. Sport Utility Vehicle Sales 1997 & 1998
85	Gasoline and Oil Prices in Constant 1995 Dollars 1918 to 1999	86	U.S. Sport Utility Vehicle Sales 1976 to 1998
87	Average Annual Miles per Vehicle by Vehicle Type and Age	88	World Oil Reserves, Production, and Consumption, 1998
89	Light Vehicle Market Shares by Type for 1978, 1988, and 1998	90	Congested Travel in Major Metropolitan Areas
91	Percent of Car Sales v. Truck Sales in U.S. for Leading Automakers (First Four Months of 1999)	92	Percent of Vehicle Buyers Who Are Considering an SUV for Their Next Vehicle Purchase
93	Diesel Share of Passenger Car Sales in Western Europe, 1988-1999	94	Being Productive Does Not Translate to Being Profitable
95	Survey Finds Interest in Gasoline-HEVs	96	VMT by Light Truck Type for Selected Purposes, 1995
97	Trends in Attribute Preference	98	World Natural Gas Reserves, Production, and Consumption, 1997
99	Most Important Transportation Problem in 2020	100	U.S. Light Vehicle Sales Shares, 1976-1999
101	Consumer Preferences for Fuel Efficient Vehicles	102	World Fossil Fuel Potential
103	Energy Intensity of Modes of Travel 1970-1997	104	Growth Rate of Light-Duty Vehicle Miles of Travel, 1969-1997
105	Number of New Vehicle Dealerships	106	Number of Refueling Stations
107	Gasoline Prices and Light Vehicle Sales	108	U.S. Light Vehicle Sales Shares, 1976-1999
109	OPEC and OPEC+ Market Shares	110	Annual Costs of Traffic Congestion, 1997
111	Dealer Profits by Market Segment, October 1999	112	Light Vehicle Miles of Travel, 1969-1997
113	Fuel Conservation Equipment on Medium and Heavy Trucks, 1992-1997	114	OPEC and OPEC+ Resource Shares
115	NOx Emissions from Highway Vehicles	116	Light Vehicle Leases, 1984-1995
117	Top Ten Fossil Energy Producing Nations	118	Light Vehicle Scrappage Rates, 1970-1999
119	Retail Gasoline and Diesel Prices Rise in 1999	120	Gasoline Taxes, 1975-1998
121	Automobile Affordability, 1979-1999	122	Potential Fuel Savings of Doubling Fuel Economy
123	U.S. Gasoline and Oil Prices, January 1998 - March 2000	124	Average Gasoline and Diesel Fuel Retail Prices, Jan. 1999 - April 2000
125	Reserve to Production Ratios for Top Ten Oil Producing Nations	126	Transportation Carbon Emissions by Mode
127	State Automobile Registration Fees	128	PNGV Concept Vehicles Presented to the Public in 2000
129	Cost of Automobile Ownership and Operation	130	U.S. Trade Deficit, First Quarter 1999 and 2000
131	State Fuel Taxes, 1998	132	Per Capita Lane Miles by State
133	Accident Fatalities by Vehicle Type, 1998	134	Accident Fatalities by Crash Type, 1998
135	Accidents with Driver Alcohol Involvement by Vehicle Type, 1998	136	Diesel Car Sales, Western Europe, 1999
137	Components of Gasoline Price, June 2000 vs. June 1999	138	Potential Fuel Saved by Increased Efficiency
139	International Vehicle Ownership in 1998 Compared to the U.S. from 1900-1998	140	Gasoline Price Expectations
141	New Vehicle Fuel Cost per Mile, 1978-1999	142	Public Knowledge of Hybrid Electric Vehicles
143	Public Knowledge of Hybrid Electric Vehicle Models	144	Trends in Vehicle Attribute Preference
145	Actions to Reduce Gasoline Expenditures	146	World Vehicle Population, 1960-2020
147	World Vehicle Sales, 1960-2020	148	SUV Sales Pass Pickups in 2000
149	Historic U.S. New Light Vehicle Fuel Economy	150	Most Important Transportation Problem in 2020
151	New Car and Light Truck Fuel Economy, 1975, 1988, and 2000	152	Truck Fuel Economy by Vehicle Weight Class, 1977-1997
153	U.S. Light Vehicle Sales, 2000	154	U.S. Light Vehicle Sales by Manufacturer, 1999-2000
155	U.S. Light Vehicle Energy Use Projections	156	U.S. Automobile Fuel Economy, 1970-2000
157	U.S. Trade Deficit, 1999 & 2000	158	U.S. Highway Energy Use, 1978-1998
159	U.S. Vehicle Travel and Gasoline Price	160	U.S. Petroleum Consumption, 1970-2020
161	Potential Fuel Savings in 2010	162	Public Support for Fuel Conservation Policies

Number	Fact Title	Number	Fact Title
163	Highway Indicators, 1979-1999	164	SUVs Continue to Gain Market Share
165	Gross Domestic Product and Vehicle Miles of Travel, 1960-1999	166	Consumers Pay More for Gas Guzzling Automobiles
167	World Oil Reserves, Production, and Consumption, 2000	168	Light Truck Sales Influence Average Age of Trucks
169	Diesel Car Sales in Western Europe, 1999 and 2000	170	Fuel Economy Saves \$\$\$
171	Passenger Car Operating Costs, 1990-2000	172	The Cost Components of Gasoline
173	Urban Travel Congestion	174	Potential Benefits of Alternative Future On-Road MPG Gains in Light Vehicles in 2010
175	Electricity Chosen over Ethanol and Hydrogen	176	Public Transportation Takes Twice as Long as Driving
177	The Large Growth in Vehicle Leasing May Have Come to an End	178	Trends in New Vehicle Attribute Preference over the Past 20 Years
179	The Costs of Oil Dependence	180	Comparison of Commute Times
181	Carpooling Is Down Again in 2000	182	Households by Vehicle Ownership
183	Means of Transportation to Work	184	State Average Gasoline Prices
185	Household Expenditures	186	Per Capita Vehicles Rising Steadily
187	Highway Crashes and Fatalities in 2000	188	Transit Share of Travel for Selected Worldwide Cities
189	Time Spent on Travel Is Fairly Constant across Countries	190	Growth in Passenger Car Ownership around the World
191	U.S. Oil Consumption Nearly 20 Million Barrels per Day in 2000	192	Where Does Our Oil Come From?
193	Oil Production: OPEC, the Persian Gulf, and the United States	194	Production and Imports/Exports for Top 10 Oil-Producing Countries
195	Public Strongly Supports Requirements for More Fuel-Efficient Cars	196	Highway Vehicle Emissions—1970 to 1999 Comparison
197	What are the big trucks hauling?	198	Average Material Consumption for a Domestic Automobile
199	Best-Selling Cars and Light Trucks, 2001	200	U.S. Light Truck Sales Exceed Car Sales
201	Top 10 Countries with Oil Reserves	202	Urban Motor Vehicle Travel Growing Faster than Rural Travel
203	Federal Motor Fuel Taxes	204	Hydrogen Facts
205	Hydrogen Cost and Worldwide Production	206	Gasoline Stations on the Decline
207	U.S. Greenhouse Gas Emissions Indicators	208	CAFE Standards Reduce Petroleum Use
209	Fossil Fuel Production to Consumption, 1950-2000	210	Crude Oil Prices Since 1870
211	Days of Reserves Stored in the Strategic Petroleum Reserve (SPR)	212	Speed Limits: Are They Rising?
213	Estimates of Vehicle Miles of Travel	214	What Is Made from a Barrel of Oil?
215	Transporting the Oil We Use	216	Telecommuting on the Rise
217	Road Mileage and Travel by Functional Class, 2000	218	Operating Costs by Type of Vehicle - What's the Difference?
219	Average Price of a New Car, 1970-2001	220	World Oil Reserves, Production, and Consumption, 2001
221	Transit Rail Energy Intensity Varies By System	222	Speed versus Fuel Economy: Slow down to get more miles to the gallon
223	Transportation and the GDP	224	Statistics on Class 1, Class 2a, and Class 2b Light Trucks
225	Diesel Share of Light Trucks—Class 1, Class 2a, & Class 2b	226	Tire Inflation Facts
227	Vehicle Miles of Travel (VMT) and Age by Vehicle Type	228	New Light Vehicle Sales Shares, 1976-2001
229	Medium and Heavy Truck Sales	230	Hybrid Electric Vehicles in the United States
231	Transportation's Energy Use per GDP on the Decline	232	World Transportation Energy Consumption per GDP Dollar by Region
233	Vehicles per Thousand People: U.S. Compared to Other Countries	234	2003 Model Year Alternative Fuel Vehicles
235	Full Fuel-Cycle Emissions	236	Business Fleet Vehicles: How Long Are They in Service?
237	Diesel Car Sales in Western European Countries—First Six Months, 2001 and 2002	238	Automobile and Truck Population by Vehicle Age, 2001
239	Motor Vehicle Trade for Selected Countries, 2001	240	Vehicle Ownership Rates Increasing in Developing Nations
241	Biodiesel Lowers Emissions	242	Fuel Economy Leaders for 2003 Model Year Cars
243	Fuel Economy Leaders for 2003 Model Year Light Trucks	244	Sport Utility Vehicle Spotlight
245	Hybrids Gain in Recognition	246	U.S. Oil Imports - Top 10 Countries of Origin
247	Components of Diesel Fuel Price, 2002	248	Top Ten Net Petroleum Importing Countries, 2000
249	Crude Oil Production in the United States	250	Public Knowledge of Hybrid Technology
251	Hybrid Vehicle Sales	252	Driving Irritations

Number	Fact Title	Number	Fact Title
253	Vehicle Age by Type of Vehicle	254	MSA Transit Commuter Trends, 1990-2000
255	Men versus Women: Average Annual Miles per Driver	256	Petroleum Product Prices Rise
257	Vehicle Occupancy by Type of Vehicle	258	Vehicle Ownership Trends 1969-2001
259	Household Travel by Gender	260	Commuting to Work, 1960-2000
261	U.S. Gasoline and Crude Oil Prices, January 1998-February 2003	262	Europeans Favor Renewables Research
263	Europeans Consider Energy Use when Purchasing a Car	264	Production of Ethanol and MTBE
265	State Average Fuel Prices	266	World Oil Reserves, Production, and Consumption, 2002
267	Oil Price Relationship to Economic Growth in the United States, 1970-2002	268	New Hybrids Getting Better Fuel Economy
269	Leasing Rate is Up in 2002	270	U.S. Telecommuting, 1990-2001
271	Attitudes about Hybrid SUVs	272	Why Buyers Are Not Considering SUV Purchases
273	Europeans Charging for Traffic Congestion	274	Americans Willing to Try Hydrogen-Fueled Vehicles
275	Safety Ranks as Top Concern for New Fuels	276	Natural Gas Reserves, Production, and Consumption, 2000
277	Light Truck Sales by Type, 1976-2002	278	Annual VMT Growth Rates
279	Number of Retail Outlets Selling Gasoline, 1993-2002	280	Fines and Taxes Related to Fuel Economy, 1980-2001
281	Historical Light Vehicle Market Share	282	Diesel Sales Continue to Climb in Europe
283	U.S. Trade Deficit, 2001 & 2002	284	U.S. Vehicle Travel and Gasoline Prices, 2001-2003
285	Vehicles per Thousand People: An International Comparison	286	Public Opinion on Oil Dependence
287	Modes of Transport, May 2003	288	Primary Energy Sources by Sector, 2002
289	U.S. Energy Consumption, 2002	290	Top Twenty Congested Cities in the U.S., 2001
291	Traffic Congestion, 2001	292	Most Fuel Efficient MY 2004 Cars by Size Class
293	Most Fuel Efficient MY 2004 Light Trucks by Size Class	294	Best Selling Cars and Light Trucks, Model Year 2003
295	New Light Vehicle Market Shares, 1976-2002	296	Crude Oil Production: OPEC, the Persian Gulf, and the United States
297	Imported Crude Oil: Where Does It Come From?	298	OPEC and Persian Gulf Share of U.S. Imports
299	Light Vehicle Leasing is On the Rise Again	300	World Vehicle Production by Country/Region
301	Number of Household Vehicles Has Grown Significantly	302	More People Can Name Hybrid Cars in 2003
303	Top Ten Countries with Natural Gas Vehicles	304	Hybrid Vehicle Purchases Earn Federal Tax Deductions
305	More V-8 Engines in the U.S.	306	Vehicle Type Differences on Vehicle Miles Traveled
307	Business Travel: By Land or by Air?	308	Holiday Travel 2001
309	Transporting Petroleum	310	Average Material Consumption for a Domestic Automobile
311	Calendar Year 2003 Best Sellers	312	State Average Fuel Prices, 2003 vs. 2004
313	U.S. International Trade by Mode of Transportation, 2002	314	U.S. Trade in Transportation-Related Commodities, 2002
315	China Passenger Car Sales	316	U.S. Gasoline and Crude Oil Prices, January 1998-February 2004
317	State Gasoline Tax Rates	318	Biodiesel Gaining in Popularity
319	Highway Vehicle Emissions – 1970 to 2001 Comparison	320	The National Highway System
321	Days of Reserves Stored in the Strategic Petroleum Reserve	322	Hybrid Vehicle Registrations
323	New Vehicle Attributes	324	Knowledge of Hybrid-Electric Vehicles Continues to Grow
325	Diesel and Hybrid Vehicle Preferences	326	Perception of Diesel Fuel Availability
327	Paying Extra for Fuel Efficient Vehicles	328	Expected Average Annual Miles
329	How Long Do People Plan to Keep Their Vehicles?	330	Fuel Savings Required to Purchase Fuel Efficient Vehicle
331	Off-Highway Diesel Fuel Use	332	New Light-Vehicle Market Shares, 1976-2003
333	Convenience Stores Selling Gasoline	334	China is #2 in Oil Consumption
335	Diesels Continue to Gain Market Share in Europe	336	World Oil Reserves, Production and Consumption, 2003
337	World Natural Gas Reserves, Production and Consumption, 2002	338	What Will Be Used When Gasoline Is Not Available?
339	Who Thinks Hydrogen Is the Best Replacement Fuel for Gasoline?	340	Hydrogen Fuel as a Replacement for Gasoline
341	Tire Recycling	342	Passenger Car Sales in China
343	Reasons for Rejecting a Particular New Car Model	344	Refueling Stations

Number	Fact Title	Number	Fact Title
345	Vehicle Miles Traveled and the Price of Gasoline	346	What Is Made from a Barrel of Crude Oil?
347	The Relationship of VMT and GDP	348	U.S. Trade Deficit, 2001–2003
349	Crude Oil Production: OPEC, the Persian Gulf, and the United States	350	U.S. Oil Imports: Top Ten Countries of Origin
351	Gasohol Use Is Up	352	Automotive Industry Material Usage
353	U.S. Production of Crude Oil by State	354	Gasoline Sales by Grade
355	Comparison of Fuel Prices	356	Trucks and Truck-Miles
357	Growth in Light Truck Registrations	358	Trucks by Weight Class, 1997 and 2002
359	The Petroleum Gap	360	Vehicles per Thousand People: United States Compared with Other Countries
361	Fuel Wasted by Congestion	362	Import Share of Petroleum Consumption at All-Time High
363	Heavy Truck Miles by Age	364	Historical Gas Prices, 1919–2004
365	The Cost of Driving a Car	366	All-Wheel Drive – A Popular Feature on New Cars
367	State Average Fuel Prices, 2003, 2004, and 2005	368	Truck Fuel Types
369	Medium-Truck Miles by Age	370	How the Price of Gasoline Relates to Vehicle Miles Traveled
371	Electronic Features on Heavy Trucks	372	Truck Fuel Economy by Size Class
373	Refueling Practices by Truck Fleet Size	374	Refueling Practices by Truck Size
375	Imported Crude Oil: Where Does It Come From?	376	U.S. Oil Consumption Over 20 Million Barrels per Day in 2004
377	New Vehicle Purchase Preference	378	Trends in Vehicle Attribute Preference
379	Importance of Fuel Economy When Purchasing a Vehicle	380	World Oil Reserves, Production, and Consumption, 2004
381	Hybrid Vehicle Registrations, 2000–2004	382	New Medium and Heavy Truck Registrations by Fuel Type, 2004
383	U.S. Light Vehicle Manufacturing Locations, 2004	384	The National Highway System, 2003
385	Growth in Telecommuting	386	Diesel Car Sales Continue to Thrive in Western Europe
387	Light Vehicle Market Share by Size Class, 1975–2005	388	Proposed Light Truck CAFE Standards
389	More Gasoline Stations in 2005	390	Stretch Commuting
391	Miles Traveled by Age of Driver	392	Household Vehicle Ownership
393	More Interest in Diesel Engines	394	Fuel to Replace Gasoline and Diesel Fuel
395	Effect of High Gasoline Prices on Consumers	396	Public Perceptions about the Seriousness of Selected Environmental and Economic Problems
397	Petroleum Import Share	398	Effect of High Gasoline Prices on Older Adults
399	The "Fair" Price of Gasoline	400	Model Year 2006 Fuel Economy and Fuel Cost
401	Actions Taken Due to Traffic Congestion	402	Reasons for Alternative Transportation for Commuting
403	Travel Changes Due to Rising Cost of Gasoline	404	Better Fuel Economy is Important to Pickup Truck Owners
405	Pickups Off-Road	406	Pickups and Towing
407	Vehicle Fuel Cost vs. Home Heating Cost: Which Causes More Concern?	408	Perceptions on Energy Reduction
409	Personal vs. Business Use of Pickup Trucks	410	Maximum Speed Limits by State, 2005
411	States that Allow Longer Combination Vehicles	412	Freight Activity by Mode Share: U.S. Compared to Other Countries
413	Diesels Claim Nearly Half of the Market in Western Europe	414	The Petroleum Gap
415	Changes in Vehicles per Capita around the World	416	Consumer Views on Gasoline Taxes
417	Why Purchase a Hybrid Vehicle?	418	Consumer Preference on Gasoline Tax vs. Fuel Economy Regulation
419	Freight Ton-Mile Trends by Mode	420	Driving Less Due to Gasoline Prices
421	Knowledge about Hydrogen and Fuel Cells	422	Hydrogen Education
423	Opinions on Hydrogen Fueling Stations	424	Important Factors When Selecting a Fuel Supply
425	The Price of Gasoline and Vehicle Travel: How Do They Relate?	426	The Big Picture on Gasoline Prices
427	Transportation and the U.S. Trade Deficit, 2001-2005	428	Light Vehicle Tax Credits
429	Gross Domestic Product and Vehicle Travel: How Do They Relate?	430	Trends in Vehicle Attribute Preference
431	Would You Buy a Hybrid Vehicle?	432	World Oil Reserves, Production, and Consumption, 2005
433	Road Congestion	434	Scrap Tire Recycling
435	Where Do Scrapped Tires Go?	436	Interstate Travel
437	Motorcycle Sales Are Up	438	China's New Car Registrations
439	U.S. Production of Crude Oil by State	440	Public Attitude on Hybrids 2005

Number	Fact Title	Number	Fact Title
441	Knowledge about E85	442	Automotive Parts Trade between the U.S. and China
443	Motor Vehicle Trade between the U.S. and China	444	Opinions on Plug-In Hybrid Vehicles
445	U.S. Population Growth and Light Vehicle Sales	446	More Likely to Buy a Hybrid or Other More Fuel Efficient Vehicle?
447	World Ethanol Production	448	Fuel Purchasing Habits
449	Biodiesel to Conventional Diesel: An Emissions Comparison	450	Information Sources for First-Time Car Buyers
451	Household Vehicle Trips	452	Driving Differences
453	Household Vehicle Ownership	454	Relationship between Vehicle Miles and the Number of Vehicles in a Household
455	Household Vehicle Miles	456	Oil Imports, Today and Tomorrow
457	Long Lines to Buy Gasoline are a Top Concern	458	Gasoline Price Expectations
459	Best and Worst Fuel to Replace Gasoline	460	Regional Differences on Best Fuel to Replace Gasoline
461	New and Used Light Vehicle Sales	462	Historical U.S. Hybrid Vehicle Sales
463	Transportation is a Large Share of Average Household Expenditures	464	Carbon Dioxide Emissions
465	The Petroleum Gap	466	The Trade Value of Petroleum
467	Refueling Stations	468	World Petroleum Use
469	Growth in Per Capita Rates for Vehicles and Vehicle-Miles	470	Biodiesel Sales
471	Biodiesel Production Facilities	472	The Causes of Traffic Congestion
473	Vehicle-Miles per Licensed Driver	474	Changes in Vehicles per Capita around the World
475	Light Vehicle Weight on the Rise	476	One Million Toyota Hybrids Worldwide
477	E-85 Stations by State	478	U.S. Carbon Dioxide Emissions by Sector
479	U.S. Carbon Dioxide Emissions by Sector, 1990-2006	480	Japan is the Top Vehicle Producer
481	Diesel Car Sales Top Gasoline Car Sales in Europe	482	Refinery Output by World Region
483	Dealer Survey on Small Car Sales	484	Trends in Vehicle Attribute Preference
485	Engine Preferences	486	Teleworking Trends
487	World Oil Reserves, Production, and Consumption, 2006	488	World Natural Gas Reserves, Production, and Consumption, 2005
489	Share of Travel in Congested Conditions	490	Traffic Congestion Wastes Fuel
491	Gasoline Prices: U.S. and Selected European Countries	492	Gasoline Taxes in the U.S. and Selected Countries
493	Market Share - Cars vs. Light Trucks	494	European Priorities When Buying a New Car
495	Oil Price and Economic Growth, 1971-2006	496	Diesel Prices in the U.S. and Selected Countries: Cost and Taxes
497	Fuel Drops to Third Place in the Trucking Industry Top Ten Concerns	498	New Light Vehicle Fuel Economy
499	Alternative Fuel Models: Gains and Losses	500	China is Second Largest in Vehicle Sales
501	Fuel Economy and Annual Fuel Ranges for Vehicle Classes	502	Off-Road Diesel Equipment Facing Tougher Emissions Regulation
503	EPA Revamps Test Procedures and Raises the Bar for Fuel Efficiency Ratings on Light Duty Vehicles	504	Advancements in Automotive Technology Have Favored Performance over Fuel Economy
505	Developing Economies are Rapidly Increasing Their Petroleum Consumption	506	Declining Rate of Highway Fatalities and Injuries is Good News for Safety and Congestion Mitigation
507	The Short-Run Price Elasticity of Gasoline Demand Declined Over the Past Several Decades	508	What Consumers Will Do to Save Three Cents per Gallon
509	With Rising Gas Prices, Consumers Indicate only a Limited Willingness to Change Travel Behavior	510	Eastern Europe Experiences Strong Growth in Light Vehicle Sales While Sales in Western Europe Remain Flat
511	Hybrid and Flex-fuel Vehicles Increase while Diesels Experience a Decline	512	Sales Price for Diesel and Gasoline, 1995-2007
513	Transportation and the U.S. Trade Deficit, 2001-2007	514	Historical U.S. Hybrid Vehicle Sales
515	The Transportation Services Index, January 1990-January 2008	516	The Petroleum Gap
517	State Average Gasoline Prices, April 28, 2008	518	Top 10 States for New Hybrid Registrations, 2007
519	One Gallon of Gasoline Produces 20 Pounds of Carbon Dioxide	520	Average Price of a New Car, 1970-2006
521	The Price of Gasoline in the United States is Inexpensive Compared to Most Other Nations	522	Costs of Oil Dependence 2008
523	Operational Hydrogen Refueling Stations as of January 2008	524	Carbon Footprint of New Light Vehicles Drops Between 1975 and 2007
525	Six and Eight Cylinder Engines are the Most Prevalent among Light Vehicle Model Offerings for the 2008 Model Year	526	Price Breakdown for a Gallon of Gasoline and a Gallon of Diesel

Number	Fact Title	Number	Fact Title
527	Gross Domestic Product and Vehicle Travel: How Do They Relate?	528	Survey Shows Most Americans Expect Gas Prices to Reach \$5 This Year
529	Vehicle Production and Sales by World Region	530	Towing Capacity for Selected 2008 Model Cars and Trucks
531	Preferences for Hybrids and Diesels	532	Trends in Vehicle Attribute Preference
533	Gasoline Excise Tax Rates by State, 2008	534	Diesel Excise Tax Rates by State, 2008
535	Vehicle Miles of Travel (VMT) Declines in 2008	536	Average Used Car Prices Up and Used Light Truck Prices Down
537	Replacing Dual Tires with Single Wide Tires on Class 8 Tractor Trailers Improves Fuel Economy	538	Crude Oil Price Differences
539	Light Vehicle Production by State	540	Gasoline Prices Adjusted for Inflation
541	New Car Prices: The Past 100 Years	542	Transit Trips Increase in 2008
543	Vehicle Trips to Work	544	New Vehicle Leasing, 1997-2007
545	Historical Alternative Fuel Prices Compared to Gasoline and Diesel	546	Automotive Sales Down in all Major World Markets for the Third Quarter of 2008
547	Research and Development (R&D) Spending in the Automotive Industry	548	Number of Gasoline Stations Continues to Decline in 2007
549	Biofuels Corridor extends from the Great Lakes to the Gulf of Mexico	550	Clean Cities Coalitions
551	Truck Stop Electrification Sites	552	Vehicle Miles of Travel by Region
553	Market Share of New Cars vs. Light Trucks	554	Energy Intensity of Light Rail Transit Systems
555	Transit Buses are Relying Less on Diesel Fuel	556	Change in Material Content of Light Vehicles
557	Change in New Car Dealerships by State	558	Transit Vehicle Age and Cost
559	Light Vehicle Sales per Dealership	560	The Transportation Petroleum Gap
561	All Sectors' Petroleum Gap	562	Carbon Reduction of Plug-in Hybrid Electric Vehicles
563	OPEC Petroleum Imports	564	Transportation and the Gross Domestic Product, 2007
565	Household Gasoline Expenditures by Income	566	Vehicle Travel and the Price of Gasoline
567	Cars are Growing Older	568	For Modern Cars, Replacing an Air Filter Will Improve Performance but Not Fuel Economy
569	Gasoline Prices Around the World	570	Automotive Manufacturing Employment Declining
571	Light Truck CAFE Standards – 2006 Reformation	572	CAFE Standards for Model Year 2011
573	Vehicles per Capita by State	574	Vehicles per Licensed Driver Rising
575	Diesel Car Sales in Europe Still Over 50% in 2008	576	Carbon Dioxide from Gasoline and Diesel Fuel
577	Changes in Vehicles per Capita around the World	578	World Oil Reserves, Production, and Consumption, 2007
579	Oil Price and Economic Growth, 1970-2008	580	Traffic Congestion Grows
581	Fuel Wasted in Traffic Congestion	582	Energy Shares by Sector and Source
583	Teleworking Trends	584	The Price of Gasoline and Vehicle Travel: How Do They Relate?
585	Trends in Vehicle Attribute Preference	586	New Vehicle Fuel Economies by Vehicle Type
587	Cash for Clunkers Program – Fuel Economy Improvement	588	Fuel Economy Changes Due to Ethanol Content
589	Proposed Fuel Economy and Greenhouse Gas Emissions Standards	590	Transit Ridership Still Strong in 2009
591	Consumer Reports Tests Vehicle Fuel Economy by Speed	592	The Trade Value of Petroleum
593	Petroleum Accounts for Nearly Half of the Total Trade Deficit	594	Fuel Economy and Annual Fuel Cost Ranges for Vehicle Classes
595	Plug-in Hybrid Vehicle Purchases May Depend on Fuel Savings and Incremental Cost	596	Best and Worst Fuel to Replace Gasoline
597	Median Age of Cars and Trucks Rising in 2008	598	Hybrid Vehicle Sales by Model
599	Historical Trend for Light Vehicle Sales	600	China Produced More Vehicles than the U.S. in 2008
601	World Motor Vehicle Production	602	Freight Statistics by Mode, 2007 Commodity Flow Survey
603	Where Does Lithium Come From?	604	HOT Lanes in the U.S.
605	Light Vehicle Sales by Month, 2008-2009	606	New Vehicles Trend Toward Smaller Engines
607	Energy and Power by Battery Type	608	Changes in Greenhouse Gas Emissions since 1990
609	The Transportation Petroleum Gap	610	All Sectors' Petroleum Gap
611	Top Ten Best Selling Cars and Light Trucks	612	The Distance of Trips to Work
613	Vehicle Occupancy Rates	614	Average Age of Household Vehicles
615	Average Vehicle Trip Length	616	Household Vehicle-Miles of Travel by Trip Purpose
617	Changes in Vehicles per Capita around the World	618	Vehicles per Household and Other Demographic Statistics
619	Transportation Sector Revenue by Industry	620	Class 8 Truck Tractor Weight by Component
621	Gross Vehicle Weight vs. Empty Vehicle Weight	622	Average Length of Light Vehicle Ownership

Number	Fact Title	Number	Fact Title
623	Classification Changes in the CAFE Standards	624	Corporate Average Fuel Economy Standards, Model Years 2012-2016
625	Distribution of Trucks by On-Road Vehicle Weight	626	Fuel Economy for Light and Heavy Vehicles
627	Idle Reduction for Heavy Trucks	628	Truck Stop Electrification Sites
629	Top Ten Misconceptions about Fuel Economy	630	Fuel Economy vs. Weight and Performance
631	Top 10 All-Time EPA Rated Vehicles	632	The Costs of Oil Dependence
633	Alternative Fuel Vehicles	634	Off-highway Transportation-related Fuel Consumption
635	Fuel Consumption from Lawn and Garden Equipment	636	Transportation Energy Use by Mode
637	World Motor Vehicle Production	638	Average Expenditure for a New Car Declines in Relation to Family Earnings
639	Gasoline Tax Rates by State	640	Monthly Trends in Vehicle Miles of Travel
641	Top States for the Production of Cars and Trucks	642	Material Content per Light Vehicle, 1995 and 2008
643	Four Cylinder Engine Installations Continue to Rise	644	Share of Diesel Vehicle Sales Decline in Western Europe
645	Price of Diesel versus Gasoline in Europe	646	Prices for Used Vehicles Rise Sharply from 2008 to 2010
647	Sales Shifting from Light Trucks to Cars	648	Conventional and Alternative Fuel Prices
649	Number of New Light Vehicle Dealerships Continues to Shrink	650	Diesel Fuel Prices hit a Two-Year High
651	Hybrid Vehicles Dominate EPA's Top Ten Fuel Sippers List for 2011	652	U.S. Crude Oil Production Rises
653	Import Cars and Trucks Gaining Ground	654	New Light Vehicle Leasing is Big in 2010
655	New Freight Analysis Tool	656	Consumers Hold onto Vehicles Longer
657	Record Increase for New Light Vehicle Fuel Economy	658	Increasing Use of Vehicle Technologies to Meet Fuel Economy Requirements
659	Fuel Economy Ratings for Vehicles Operating on Electricity	660	Light Vehicle Sales Rise in 2010
661	Population Density	662	World Biodiesel Production
663	Clean Cities Program Petroleum Displacement Estimates for 2009	664	2010 U.S. Petroleum Imports by Country
665	Garage Availability for Plug-in Vehicles	666	Survey says Electric Vehicle Prices are Key
667	Fuel Wasted in Traffic Congestion	668	Time Wasted Due to Traffic Congestion
669	GM Sells More Vehicles in China than in the U.S.	670	Vehicle-Miles of Travel Rises in 2010
671	Average Truck Speeds	672	Freight Gateways in the U.S.
673	U.S. Trade Balance for Transportation Vehicles	674	Petroleum Trade Balance
675	Gasoline Prices by Region, May 2, 2011	676	U.S. Refiners Produce about 19 Gallons of Gasoline from a Barrel of Oil
677	Number of Hybrid Models, 2001-2011	678	Manufacturer Market Share of Hybrid Vehicles, 2010
679	U.S. Imports of Fuel Ethanol Drop Sharply	680	Fuel Economy is "Most Important" When Buying a Vehicle
681	U.S. Ethanol Production, 2001-2010	682	Federal Alternative Fuel Use
683	Federal Tax Credits for the Purchase of Advanced Technology Vehicles	684	Fuel Economy versus Fuel Savings
685	Reasons for Buying a Plug-in Hybrid Vehicle	686	Emissions and Energy Use Model - GREET
687	The Transportation Petroleum Gap	688	All Sectors' Petroleum Gap
689	Energy Use by Sector and Source	690	Characteristics of New Light Vehicles over Time
691	Mexico Surpassed Canada in Vehicle Production	692	Fuel Economy Distribution for New Cars and Light Trucks
693	Average Vehicle Footprint for Cars and Light Trucks	694	Costs of Owning a Vehicle by State
695	New Car Dealerships	696	Top Ten "Real World" Fuel Economy Leaders
697	Comparison of Vehicles per Thousand People in Selected Countries/Regions	698	Changes in the Federal Highway Administration Vehicle Travel Data
699	Transportation Energy Use by Mode and Fuel Type, 2009	700	Biodiesel Consumption is on the Rise for 2011
701	How Much More Would You Pay for an Electric Vehicle?	702	Consumer Preferences on Electric Vehicle Charging
703	Hybrid Vehicles Lose Market Share in 2010	704	Fuel Consumption Standards for New Heavy Pickups and Vans
705	Fuel Consumption Standards for Combination Tractors	706	Vocational Vehicle Fuel Consumption Standards
707	Illustration of Truck Classes	708	Amenities, Safety and Emissions Equipment Make Up an Increasing Share of the Cost of a Car
709	Engine Energy Use: Where Does the Energy Go?	710	Engine Energy Use for Heavy Trucks: Where Does the Energy Go?
711	Top Vehicles around the Globe, 2011	712	Top Vehicles in the U.S., 2011
713	Light Vehicle Sales Continue to Recover	714	Light Truck Sales on the Rise

Number	Fact Title	Number	Fact Title
715	The Average Age of Light Vehicles Continues to Rise	716	Diesels are more than Half of New Cars Sold in Western Europe
717	Availability of Electric Charging Stations Has Increased Dramatically in Recent Years	718	Number of Flex-Fuel Models Offered Increased in 2011
719	Nearly 14% of New Car Sales have Continuously Variable Transmissions	720	Eleven Percent of New Light Trucks Sold have Gasoline Direct Injection
721	Heavy Trucks Move Freight Efficiently	722	Hybrid Vehicles Can Save Money over Time
723	Japan's Earthquake and Tsunami Resulted in Major Losses for Japanese Automakers	724	Gas Guzzler Tax Levied on New Cars with Low Fuel Economy
725	Cylinder Deactivation is More Prevalent in Light Trucks than Cars	726	SUVs: Are They Cars or Trucks?
727	Nearly Twenty Percent of Households Own Three or More Vehicles	728	Average Trip Length is Less Than Ten Miles
729	Secondary Household Vehicles Travel Fewer Miles	730	Fuel Economy of New Light Vehicles is Up 19% from 1980 to 2011
731	Cost-Effectiveness of a Hybrid Vehicle is Highly Conditional	732	Days to Turn Trend by Vehicle Class
733	World's Top Petroleum-Producing Countries	734	OPEC Countries Represent Less Than Half of U.S. Petroleum Imports
735	U.S. Petroleum Exports Are on the Rise	736	Total Petroleum Imports and Net Petroleum Imports: The Difference is Growing
737	Upstream Emissions for Nissan Leaf	738	Number of New Light Vehicle Dealerships Decreasing
739	Light Vehicle Dealership Sales Trends – New Vehicles, Used Vehicles, and Service/Parts	740	Interest in Smaller Vehicles is on the Rise
741	Historical Gasoline Prices, 1929-2011	742	Oil Price and Economic Growth
743	Used Vehicle Sales are Three Times Higher than New Vehicle Sales	744	Average New Light Vehicle Price Grows Faster than Average Used Light Vehicle Price
745	Vehicles per Thousand People: U.S. Compared to Other Countries	746	U.S. Share of World Vehicles Declines
747	Behind Housing, Transportation is the Top Household Expenditure	748	Components of Household Expenditures on Transportation, 1984-2010
749	Petroleum and Natural Gas Consumption for Transportation by State, 2010	750	Electric Vehicle Energy Requirements for Combined City/Highway Driving
751	Plug-in Car Sales Higher in the U.S. Compared to Western Europe and China	752	Western Europe Plug-in Car Sales, 2012
753	Sources of Electricity by State	754	Vehicle Sales in the U.S. and China, 2002-2011
755	Chargepoint, Blink and Nissan Take the Lead in Public Electric Vehicle Chargers	756	Midwest Produces Two-Thirds of All Light Vehicles
757	The U.S. Manufactures More Light Trucks than Cars	758	U.S. Production of Crude Oil by State, 2011
759	Rural vs. Urban Driving Differences	760	Commuting to Work, 1960-2010
761	Smaller Share of Teenagers Have a Driver's License in 2010	762	Sales from Introduction: Hybrid Vehicles vs. Plug-in Vehicles
763	Eighty-four Percent of Scrapped Tires Are Recycled	764	Model Year 2013 Brings More Fuel Efficient Choices for Consumers
765	EPA's Top 10 Conventionally-Fueled Vehicles for Model Year 2013	766	Electricity Prices are More Stable than Gasoline Prices
767	Federal Excise Tax on Gasoline, 1932 - 2012	768	New Light Vehicle Sales and Gross Domestic Product
769	Monthly Trend in Light Vehicle Sales, 2008-2012	770	Changes to the Top Ten Vehicles Sold over the Last Five Years
771	California Zero-Emission Vehicle Mandate is Now in Effect	772	Fuel Economy by Speed: Slow Down to Save Fuel
773	Fuel Economy Penalty at Higher Speeds	774	Fuel Wasted in Traffic Congestion
775	Top Ten Urban Areas for Fuel Wasted due to Traffic Congestion, 2011	776	Fuel Savings from Attempts to Alleviate Traffic Congestion
777	For the Second Year in a Row, Survey Respondents Consider Fuel Economy Most Important When Purchasing a Vehicle	778	Vehicles per Thousand Persons Rising Quickly in China and India
779	EPA's Top Ten Rated Vehicles List for Model Year 2013 is All Electric	780	Crude Oil Reserve to Production Ratio
781	Top Ten Natural Gas Producing Countries	782	Number of Refueling Stations Continues to Shrink
783	Emissions and Energy Use Model - GREET	784	Direct Employment of Motor Vehicle Parts Manufacturing by State
785	Many Cars Pollute Less Despite Increases in Size	786	Use of Lightweight Materials is on the Rise
787	Truck Stop Electrification Reduces Idle Fuel Consumption	788	State and Private Consumer Incentives for Plug-In Vehicles
789	Comparison of State Incentives for Plug-In Electric Vehicle Purchases	790	States Beginning to Tax Electric Vehicles for Road Use
791	Comparative Costs to Drive an Electric Vehicle	792	Energy Consumption by Sector and Energy Source, 1982 and 2012

Number	Fact Title	Number	Fact Title
793	Improvements in Fuel Economy for Low-MPG Vehicles Yield the Greatest Fuel Savings	794	How Much Does an Average Vehicle Owner Pay in Fuel Taxes Each Year?
795	Electric Vehicle Charging Stations by State	796	Electric Vehicle and Plug-In Hybrid Electric Vehicle Sales History
797	Driving Ranges for Electric Vehicles	798	Plug-in Hybrid Vehicle Driving Range
799	Electricity Generation by Source, 2003-2012	800	Characteristics of New Light Vehicles over Time
801	Gasoline Direct Injection Continues to Grow	802	Market Share by Transmission Type
803	Average Number of Transmission Gears is on the Rise	804	Tool Available to Print Used Vehicle Fuel Economy Window Stickers
805	Vehicle Technology Penetration	806	Light Vehicle Market Shares, Model Years 1975–2012
807	Light Vehicle Weights Leveling Off	808	Declining Use of Six- and Eight-Cylinder Engines
809	What Do We Pay for in a Gallon of Gasoline?	810	Leasing on the Rise
811	Light Vehicle Sales Recoveries	812	The Number of Models Achieving 40 MPG or More is Increasing Rapidly
813	New Light Vehicle Fuel Economy Continues to Rise	814	More Choices when Buying Vehicles that Use Advanced Technology and Alternative Fuels
815	Global Sales of Top 10 Plug-In Vehicles	816	Natural Gas Refueling Stations Grow Over the Last Ten Years
817	Conventional and Alternative Fuel Price Trends from 2000 to 2013	818	The Effect of Winter Weather on Fuel Economy
819	Imports of Crude Oil Declining	820	Dollars Spent on Imported Petroleum
821	Best Selling Vehicle by State, 2013	822	Battery Capacity Varies Widely for Plug-In Vehicles
823	Hybrid Vehicles use more Battery Packs but Plug-in Vehicles use More Battery Capacity	824	EPA Sulfur Standards for Gasoline
825	Tier 3 Non-Methane Organic Gases Plus Nitrogen Oxide Emission Standards, Model Years 2017-2025	826	The Effect of Tire Pressure on Fuel Economy
827	Share of Import Cars Declines to less than 30% of Car Sales in 2013	828	Japanese Auto Manufacturers Increase Domestic Production for U.S. Sales
829	The Transportation Petroleum Gap	830	Diesel Light Vehicle Offerings Expand
831	Top Ten States with Diesel Light Vehicles	832	Over Half of the Refueling Stations in the U.S. and Canada Sell Diesel Fuel
833	Fuel Economy Rated Second Most Important Vehicle Attribute	834	About Two-Thirds of Transportation Energy Use is Gasoline for Light Vehicles
835	Average Annual Gasoline Pump Price, 1929-2013	836	Non-OPEC Countries Supply Nearly Two-thirds of U.S. Petroleum Imports
837	Gap between Net Imports and Total Imports of Petroleum is Widening	838	Net Imports of Petroleum were Only 33% of U.S. Consumption in 2013
839	World Petroleum Consumption Continues to Rise despite Declines from the United States and Europe	840	World Renewable Electricity Consumption is Growing
841	Vehicles per Thousand People: U.S. vs. Other World Regions	842	Vehicles and Vehicle Travel Trends have Changed Since 2008
843	Cumulative Plug-in Electric Vehicle Sales are Two and a Half Times Higher than Hybrid Electric Vehicle Sales in the First 45 Months since Market Introduction	844	Electricity Generated from Coal has Declined while Generation from Natural Gas has Grown
845	From 1970 to 2013 the Share of Older Vehicles in Operation has Increased	846	Trucks Move 70% of all Freight by Weight and 74% of Freight by Value
847	Cars were Over 50% of Light Vehicle Production in 2014	848	Nearly Three-Fourths of New Cars have Fuel Economy above 25 Miles per Gallon
849	Midsize Hybrid Cars Averaged 51% Better Fuel Economy than Midsize Non-Hybrid Cars in 2014	850	Automatic Transmissions have closed the Fuel Economy Gap with Manual Transmissions
851	The Average Number of Gears used in Transmissions Continues to Rise	852	Turbocharged Engines Account for 64.7% of all Four-Cylinder Gasoline Car Engines in 2014
853	Stop/Start Technology is in nearly 5% of All New Light Vehicles Produced	854	Driving Ranges for All-Electric Vehicles in Model Year 2014 Vary from 62 to 265 Miles
855	Electric Vehicle Chargers by Network and State	856	Plug-in and Hybrid Cars Receive High Scores for Owner Satisfaction
857	Number of Partner Workplaces Offering Electric Vehicle Charging More Than Tripled Since 2011	858	Retail Gasoline Prices in 2014 Experienced the Largest Decline since 2008
859	Excess Supply is the Most Recent Event to Affect Crude Oil Prices	860	Relationship of Vehicle Miles of Travel and the Price of Gasoline
861	Idle Fuel Consumption for Selected Gasoline and Diesel Vehicles	862	Light Vehicle Production in Mexico More than Doubled in Last Five Years
863	Crude Oil Accounts for the Majority of Primary Energy Imports while Exports are Mostly Petroleum Products	864	Imports of Primary Energy have Declined Sharply Since the Peak Reached in 2007
865	Over Three-Fourths of all Commuters Drove to Work Alone in 2013	866	Light Vehicles Priced from \$30-35,000 Are the Biggest Sellers in 2013
867	Car-Sharing and Ride-Summoning Are a Growing Phenomenon	868	Automotive Technology Has Improved Performance and Fuel Economy of New Light Vehicles

Number	Fact Title	Number	Fact Title
869	Gasoline Direct Injection Captures 38% Market Share in Just Seven Years from First Significant Use	870	Corporate Average Fuel Economy Progress, 1978-2014
871	Most Manufacturers Have Positive CAFE Credit Balances at the End of Model Year 2013	872	Study Finds More than 60% of Millennials and Generation Xers Use the Internet to Find a Car Dealer While Less than Half of Baby Boomers Did
873	Plug-In Vehicle Sales Total Nearly 120,000 Units in 2014	874	Number of Electric Stations and Electric Charging Units Increasing
875	Hybrid Electric Vehicle Penetration by State, 2014	876	Plug-in Electric Vehicle Penetration by State, 2014
877	Which States Have More Battery Electric Vehicles than Plug-in Hybrids?	878	Plug-in Vehicle Penetration in Selected Countries, 2014
879	Greenhouse Gas Abatement Costs for Employer-Subsidized Commuting Options	880	Conventional Vehicle Energy Use: Where Does the Energy Go?
881	Powertrain Efficiency Improvements, 2005 to 2013	882	Hybrid Vehicle Energy Use: Where Does the Energy Go?
883	Hybrid Powertrains are More Efficient than Conventional Counterparts	884	All-electric Vehicle: Where Does the Energy Go?
885	Electricity Generation – Planned Additions and Retirements	886	New Light-Vehicle Leasing Penetration for 2014
887	The United States Supplies 15% of World Petroleum	888	Historical Gas Prices
889	Average Diesel Price Lower than Gasoline for the First Time in Six Years	890	Gasoline Prices Are Affected by Changes in Refinery Output
891	Comparison of State Incentives for Plug-In Electric Vehicle Purchases	892	Over One-Million in Plug-in Vehicle Sales Worldwide
893	Incentives for the Installation of Electric Vehicle Charging Stations	894	U.S. Petroleum Production and Consumption for All Sectors, 1973 through 2040
895	U.S. Petroleum Production and Consumption: The Changing Landscape	896	More than 80% of Transportation Energy Use is Highway Fuel Use
897	Fuel Wasted in Traffic Congestion	898	World Carbon Dioxide Emissions, 1990–2012
899	World Production of Cars and Trucks	900	States Tax Gasoline at Varying Rates
901	States Assessing Fees on Electric Vehicles to Make Up for Lost Fuel Tax Revenue	902	Rural versus Urban Vehicle Miles of Travel by State
903	Vehicle Miles of Travel is up in 2015	904	Gross Domestic Product and Vehicle Travel: Both Increased during 2015
905	Alternative Fuels Account for One-Third of Transit Bus Fuel Use	906	VMT and the Price of Gasoline Typically Move in Opposition
907	Light Vehicle Sales at a Record High in 2015	908	Light Vehicle Sales Rise for Five Consecutive Years
909	Workplace Charging Accounts for About a Third of All Plug-in Vehicle Charging Sessions in the INL EV Project Study	910	Study Shows Average Cost of Electric Vehicle Charger Installations
911	Workplace Charging Increases VMT of Plug-in Vehicles in the EV Project	912	Plug-in Vehicle Owners Take Advantage of Off-Peak Charging
913	The Most Common Warranty for Plug-In Vehicle Batteries is 8 Years/100,000 Miles	914	Plug-in Vehicle Sales Climb as Battery Costs Decline
915	Average Historical Annual Gasoline Pump Price, 1929-2015	916	Fuel Savings/Emissions Reduction was the Top Reason Cited by Truck Fleet Management for Adopting Idle Reduction Technologies
917	Work Truck Daily Idle Time by Industry	918	Global Plug-in Light Vehicle Sales Increased by About 80% in 2015
919	Plug-in Electric Vehicle Charging Options and Times Vary Considerably	920	Electric Charging Stations are the Fastest Growing Type of Alternative Fueling Station
921	Japan Produced the Most Automotive Lithium-ion Batteries by Capacity in 2014	922	Share of Older Population Holding Driver's Licenses is Up and Share of Younger Population Holding Driver's Licenses is Down
923	Cylinder Deactivation was Used in More than a Quarter of New Light Trucks Produced in 2015	924	Twenty Percent of New Cars in 2015 Had Turbochargers
925	Improvements in Fuel Economy for Low-MPG Vehicles Yield the Greatest Savings	926	Petroleum Imports Below \$200 Billion, Lowest Point in Over a Decade
927	The United States Imported Over \$70 Billion Worth of Vehicles and Parts from Mexico in 2015	928	Price Difference between Regular and Premium Gasoline Has Grown Each Year Since 2011
929	Heavy Truck Speed Limits Are Inconsistent	930	Subcompact Plug-in Vehicle Sales Reached 4% of Subcompact Sales in February 2015
931	Plug-in Electric Vehicles Were Available in Nine Different Size Classes in 2015	932	Longer Combination Trucks Are Only Permitted on Some Routes
933	Texas, North Dakota, and the Gulf of Mexico Account for Two-Thirds of U.S. Crude Oil Production	934	OPEC Accounts for Less than One-third of U.S. Petroleum Imports
935	By Volume, Net Petroleum Imports are at Lowest Point Since 1985	936	California Had the Highest Concentration of Plug-in Vehicles Relative to Population in 2015

Number	Fact Title	Number	Fact Title
937	Total Battery Capacity of all Plug-in Electric Vehicles Sold Increased from 2014 to 2015	938	Median All-Electric Vehicle Range Grew from 73 Miles in Model Year 2011 to 83.5 Miles in Model Year 2016
939	All-Electric Vehicle Ranges Can Exceed Those of Some Gasoline Vehicles	940	Diverging Trends of Engine Compression Ratio and Gasoline Octane Rating
941	Mid-term Evaluation of the Corporate Average Fuel Economy Standards May Impact Future Standards for Model Years 2022 to 2025	942	Fifteen Percent of Survey Respondents Consider Fuel Economy Most Important when Purchasing a Vehicle
943	Fuel Economy Being Chosen as the Most Important Vehicle Attribute is Related to the Price of Gasoline	944	Public Opinion of Fuels Which Could Replace Gasoline
945	Vehicle Miles of Travel Has Reached New Highs	946	Driving Alone in a Private Vehicle is the Most Common Means of Transportation to Work
947	Over Half a Million Plug-in Vehicles Have Been Sold in the United States as of September 2016	948	Carbon Dioxide Emissions from Transportation Exceeded those from the Electric Power Sector for the First Time in 38 Years
949	Reduced CO2 Emissions in the Electric Power Sector Will Benefit the Transportation Sector as Electrification Grows	950	Well-to-Wheel Emissions from a Typical EV by State, 2015
951	Medium and Heavy Trucks Account for About a Quarter of Highway Vehicle Fuel Use	952	NHTSA and EPA Finalized Medium and Heavy Truck Fuel Efficiency and Greenhouse Gas Standards through Model Year 2027
953	On-road Transportation Consumes More than 80% of all Transportation Energy	954	Gasoline Taxes in the United States Were Below 20% of the Total Price in 2015
955	New Light Vehicle Fuel Economy at an All-Time High	956	Thirty-four Percent of Light Vehicles Produced in Model Year 2016 were Sport Utility Vehicles
957	List of the Top Ten Most Fuel Efficient Light Vehicles, Model Year 2017	958	Sixty-three Percent of All Housing Units have a Garage or Carport
959	Record Light Vehicle Sales in 2016	960	Electricity and CNG Fuels had the Lowest Price Variability Over the Past 16 Years
961	Alternative Fuel Corridors Established by the Federal Highway Administration	962	Vehicles per Capita: Other Regions/Countries Compared to the United States
963	Share of Petroleum Product Output from Refineries Varies by World Region	964	Motor Gasoline Is Most Common Petroleum Product from U.S. Refineries
965	The United States Produced More Petroleum than Any Other Country in 2015	966	Production of Petroleum in the United States was at an All-time High in 2015
967	\$500 to \$3,850: Wide Range for Model Year 2017 Estimated Annual Fuel Costs	968	All-electric Vehicles Have the Lowest Estimated Annual Fuel Cost
969	New Vehicle Fuel Economy Has Improved 33% From 1980 to 2016	970	Eleven Percent of Motor Vehicles Jobs Focus on Alternative Fuel and Advanced Technology Vehicles
971	Production and Manufacturing Comprise One-Third of Motor Vehicles Jobs	972	Thirteen Percent of Vehicles Worldwide are Produced in the United States
973	Truck Stop Electrification Services to Reduce Idling Are Available in 35 States	974	Plug-in Vehicle Sales Increased 40% in 2016
975	Nearly 60% of All-electric Vehicle Sales in 2016 Were Large Cars and Standard SUVs	976	China has Highest Number of Sales of Plug-in Vehicles in the World
977	Nearly One-Quarter of Vehicles Sold in Norway are Plug-in Vehicles	978	New Technology Penetration in Light Vehicles
979	More than One-Third of New Transmissions in 2016 Had a High Number of Gears	980	Use of Lightweight Materials Has Increased in the Last 20 Years
981	Using a Cargo Box on Top of a Vehicle Can Reduce Fuel Economy by 25%	982	Slow Down to Save Fuel: Fuel Economy Decreases About 14% When Traveling at 70 mph Versus 60 mph
983	Proper Tire Pressure Saves Fuel	984	It is More Efficient to Stop and Restart a Vehicle's Engine than to Idle for as Little as Ten Seconds
985	Average Historical Annual Gasoline Pump Price, 1929–2016	986	The Price of a Barrel of Crude Oil in 2016 Was the Lowest Since 2003
987	What Do We Pay for in a Gallon of Gasoline?	988	The Average Price of a New Light Vehicle was Nearly \$32,000 in 2016
989	The Most Common Price Point for Light Vehicles Sold in 2016 was \$27,000	990	Comparison of Vehicle Efficiencies Using the Air Conditioner versus Windows Down
991	By Mode of Transportation, Freight Tonnage and Freight Value Show Different Trends	992	Motor Vehicles Are One of the Most Valuable Commodities Shipped in the United States
993	By Value, Nearly Three-Fourths of Imports from Mexico and More Than Half of Imports from Canada are Transported by Truck	994	Electric Vehicle Charging Consumes Less Energy than Water Heating in a Typical Household
995	Electric Vehicle Charging at Home Typically Draws Less Than Half the Power of an Electric Furnace	996	Transportation Accounts for Nearly Three Quarters of Petroleum Consumption
997	Average Age of Cars and Light Trucks Was Almost 12 Years in 2016	998	Highway Vehicles Responsible for a Declining Share of Pollutants
999	Despite Rise in Vehicle Miles of Travel, Highway Pollutants in 2016 Are Less Than Half as in 2002	1000	U.S. Petroleum Production Met Demand from Transportation Petroleum Consumption in 2015

References

- ACEA (European Automobile Manufacturers Association), 2017. *Share of Diesel in New Passenger Cars*. Accessed September 29, 2017. <http://www.acea.be/statistics/tag/category/share-of-diesel-in-new-passenger-cars>
- Davies, Jason, 2017. *Word Cloud Generator*. Accessed October 3, 2017. <https://www.jasondavies.com/wordcloud/>
- DOE (U.S. Department of Energy), 2016a. *Fifteen Percent of Survey Respondents Consider Fuel Economy Most Important when Purchasing a Vehicle*. September 16, 2016. <https://energy.gov/eere/vehicles/fact-942-september-12-2016-fifteen-percent-survey-respondents-consider-fuel-economy>
- DOE (U.S. Department of Energy), 2016b. *On-road Transportation Consumes More than 80% of all Transportation Energy*. November 28, 2016. <https://energy.gov/eere/vehicles/fact-953-november-28-2016-road-transportation-consumes-more-80-all-transportation>
- DOE (U.S. Department of Energy), 2017a. *Average Historical Annual Gasoline Pump Price, 1929–2016*. July 10, 2017. <https://energy.gov/eere/vehicles/articles/fact-985-july-10-2017-average-historical-annual-gasoline-pump-price-1929-2016>
- DOE (U.S. Department of Energy), 2017b. *New Vehicle Fuel Economy Has Improved 33% From 1980 to 2016*. March 20, 2017. <https://energy.gov/eere/vehicles/fact-969-march-20-2017-new-vehicle-fuel-economy-has-improved-33-1980-2016>
- DOE (U.S. Department of Energy), 2017c. *U.S. Petroleum Production Met Demand from Transportation Petroleum Consumption in 2015*. October 23, 2017.
- DOE (U.S. Department of Energy), 2017d. *Transportation Fact of the Week*. Accessed September 29, 2017. <https://energy.gov/eere/vehicles/transportation-fact-week>
- EIA (Energy Information Administration), 2017a. *Annual Energy Outlook 2017, with projections to 2050*. Report DOE/EI-0003. [https://www.eia.gov/outlooks/aeo/pdf/0383\(2017\).pdf](https://www.eia.gov/outlooks/aeo/pdf/0383(2017).pdf)
- EIA (Energy Information Administration), 2017b. *Monthly Energy Review*. Accessed September 29, 2017. <https://www.eia.gov/totalenergy/data/monthly/>
- EPA (U.S. Environmental Protection Agency), 2016. *Light-Duty Automotive Technology, Carbon Dioxide Emissions, and Fuel Economy Trends: 1975 through 2016*. Report EPA-420-R-16-010. <https://www.epa.gov/fueleconomy/trends-report>
- FHWA (Federal Highway Administration), 2017. *Highway Statistics 2015: Annual Vehicle Distance Traveled in Miles and Related Data – 2015*. January 2017. <https://www.fhwa.dot.gov/policyinformation/statistics/2015/vml.cfm>
- Internet Archive, 2017. *Internet Archive Wayback Machine*. Accessed September 29, 2017. <https://archive.org/web/>
- Kubik, M., 2006. *Consumer Views on Transportation and Energy (Third Edition)*. Report NREL/TP-620-39047. <https://www.nrel.gov/docs/fy06osti/39047.pdf>
- Singer, Mark, 2015. *Consumer Views on Transportation and Advanced Vehicle Technologies*. Report NREL/TP-5400-64840. <https://www.nrel.gov/docs/fy15osti/64840.pdf>