

**Project ID # VAN009**

# Transportation Data Programs:

## Transportation Energy Data Book, Vehicle Technologies Market Report, and VT Fact of the Week

*Principal Investigator:*

**Stacy Davis**

**June 11, 2015**

**2015 U.S. DOE Hydrogen and Fuel Cells Program and Vehicle Technologies Office Annual Merit Review and Peer Evaluation Meeting**

***June 8-12, 2015***

ORNL is managed by UT-Battelle for the US Department of Energy

***This presentation does not contain any proprietary, confidential, or otherwise restricted information***



# Overview

## Timeline



- Project start date: October 2014
- Project end date: September 2015
- Percent complete: 80%

## Barriers



- Barriers addressed
  - *Multi-Year Program Plan 2011 - 2015*  
Section 2.6 Outreach, Deployment and Analysis A, B, C
  - Section 3.2 Program Analysis

## Budget



- Total project funding
  - \$575K / year
- Funding received in FY14: \$575K
- Funding for FY15: \$518K

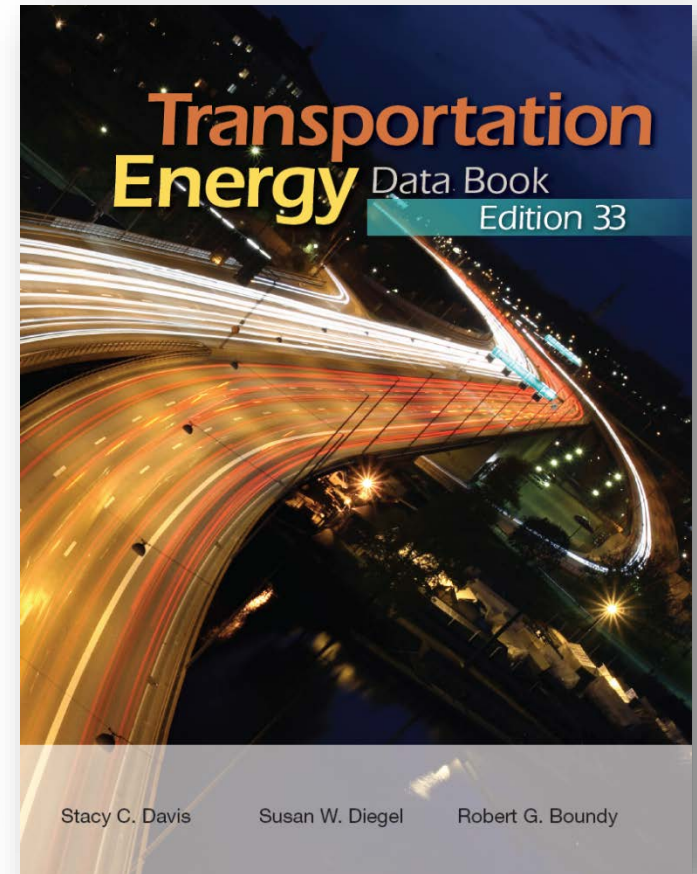
## Partners



- Collaboration with:
  - Energy Information Administration
  - U.S. Department of Transportation
  - U.S. Environmental Protection Agency
  - Argonne National Laboratory
  - National Renewable Energy Laboratory
  - Ward's Automotive
  - Crain Communications

# Transportation Energy Data Book Relevance

- This long-running project has been active at Oak Ridge National Laboratory since 1975. We are currently working on **Edition 34**.
- The purpose of the project is to draw together, under one cover, transportation data from diverse sources, to resolve data conflicts and inconsistencies, and to produce a comprehensive document.
- Policymakers, transportation analysts, and VTO staff require quality historical data and information on the transportation sector to affect good decisions for the future.
- The Data Book supports VTO public outreach and allows VTO staff and EERE Public Affairs Office to provide quick responses to outside queries.



Website address:  
<http://cta.ornl.gov/data/>



# Vehicle Technologies Market Report Relevance

- The *Vehicle Technologies Market Report* began in 2009 and six editions have been published thus far.
- This report details the major trends in U.S. light-duty vehicle and medium/heavy truck markets and contains data on an individual manufacturer level.
- Special attention is given to the progress of high efficiency and alternative fuel technologies, in accordance with VTO's mission.
- The report supports VTO public outreach and allows VTO staff and EERE Public Affairs Office to provide quick responses to outside queries.



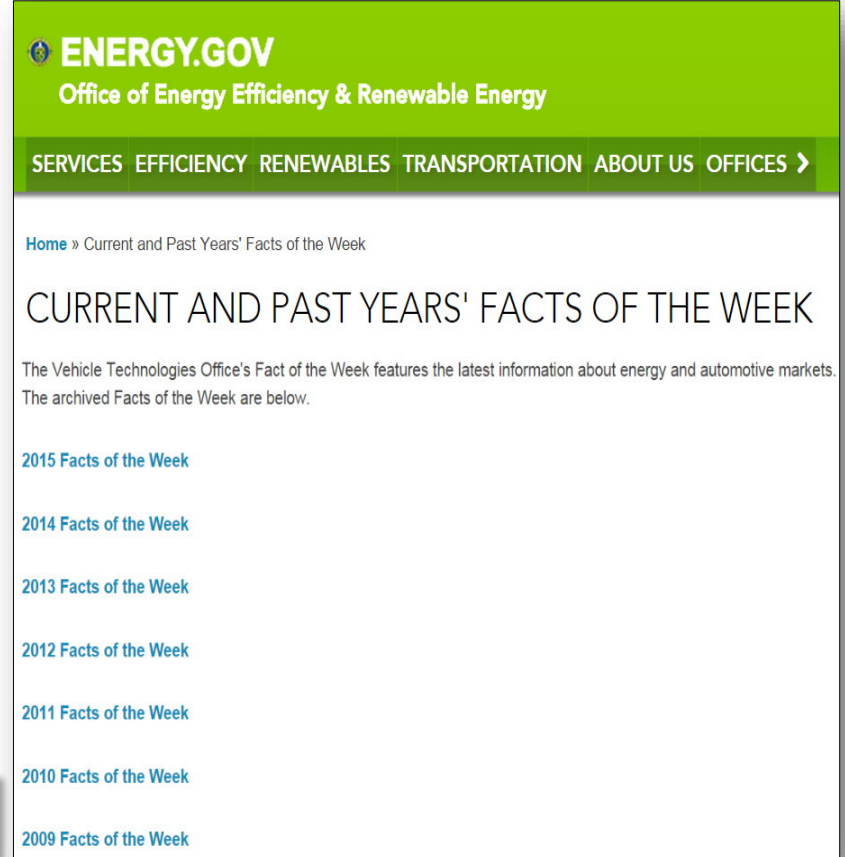
**Website address:**  
<http://cta.ornl.gov/vtmarketreport/>

# VTO Fact of the Week Relevance

- ORNL began developing the weekly VTO Fact of the Week in April 2001.
- The Fact topics align to VTO's mission, mainly concentrating on the energy uses and energy efficiencies of the highway mode.
- The Fact of the Week supports VTO public outreach and drives traffic to the VTO website.

Website address:

[http://www1.eere.energy.gov/vehiclesandfuels/facts/2015\\_index.html](http://www1.eere.energy.gov/vehiclesandfuels/facts/2015_index.html)



The screenshot shows the ENERGY.GOV website header with the text 'Office of Energy Efficiency & Renewable Energy'. Below the header is a navigation menu with links for SERVICES, EFFICIENCY, RENEWABLES, TRANSPORTATION, ABOUT US, and OFFICES. The main content area features a breadcrumb trail 'Home » Current and Past Years' Facts of the Week' and the title 'CURRENT AND PAST YEARS' FACTS OF THE WEEK'. A descriptive paragraph states: 'The Vehicle Technologies Office's Fact of the Week features the latest information about energy and automotive markets. The archived Facts of the Week are below.' A list of links follows, ranging from '2015 Facts of the Week' at the top to '2009 Facts of the Week' at the bottom.

**The Mission of the Vehicle Technologies Office (VTO) is to develop and assist in the deployment of more energy-efficient and environmentally friendly technologies for highway transportation passenger and commercial vehicles that will meet or exceed performance expectations and environmental requirements, enabling the U.S. to use significantly less petroleum and reduce greenhouse gas emissions. - Multi-Year Program Plan 2011 – 2015**

# Transportation Energy Data Book Milestones

Transportation Energy Data Book: Edition 33 published July 2014

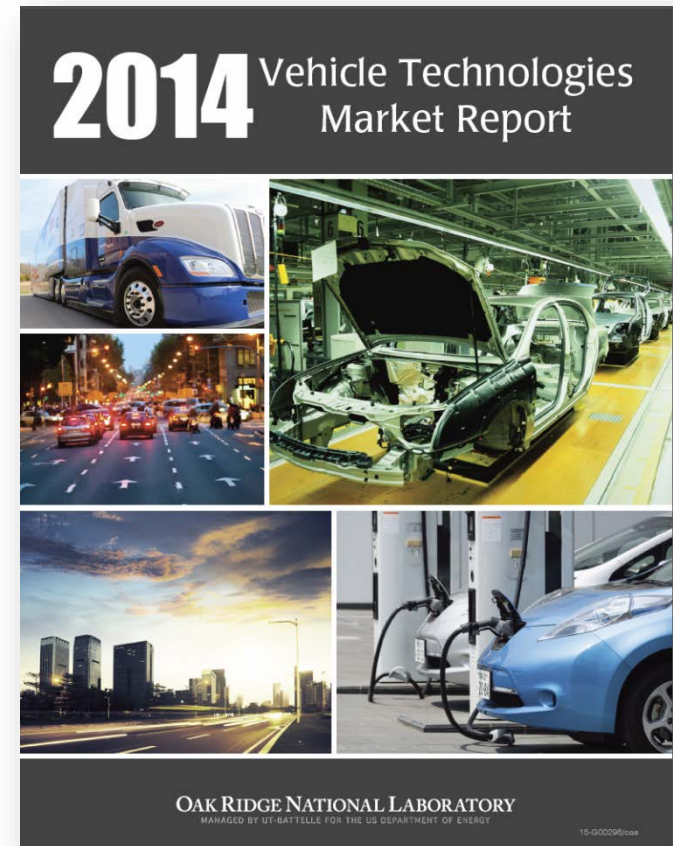
	Transportation Energy Data Book	33
	Transportation Energy Data Book	32
	Transportation Energy Data Book	31
	Transportation Energy Data Book	30
ORNL-6959	TRANSPORTATION ENERGY BOOK	29
ORNL-6964	Transportation Energy Data Book	28
ORNL-6981	Transportation Energy Data Book	27
ORNL-6979	Transportation Energy Data Book	26
ORNL-6974	Transportation Energy Data Book	25
	TRANSPORTATION ENERGY DATA BOOK	24
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	TRANSPORTATION ENERGY DATA BOOK	22
ORNL-6966	Transportation Energy Data Book	21
ORNL-6959	Transportation Energy Data Book	20
ORNL-6958	Transportation Energy Data Book	19
ORNL-6941	Transportation Energy Data Book	18
ORNL-6919	Transportation Energy Data Book	17
ORNL-6998	Transportation Energy Data Book	16
ORNL-6956	Transportation Energy Data Book	15
ORNL-6798	Transportation Energy Data Book	14
ORNL-6743	TRANSPORTATION ENERGY DATA BOOK: 13	13
ORNL-6710	TRANSPORTATION ENERGY DATA BOOK: Edition 12	12
ORNL-6649	TRANSPORTATION ENERGY DATA BOOK: Edition 11	11
ORNL-6565	TRANSPORTATION ENERGY DATA BOOK: EDITION 10	10
ORNL-6525	TRANSPORTATION ENERGY DATA BOOK: EDITION 9	9
ORNL-6503	TRANSPORTATION ENERGY DATA BOOK: EDITION 8	8
ORNL-6000 (Edition 7 of ORNL-6195)	TRANSPORTATION ENERGY DATA BOOK: EDITION 7	7
	TRANSPORTATION ENERGY DATA BOOK: SIXTH EDITION KUIP HOLCOMB	6
ORNL-6705	Transportation Energy Conservation Data Book	5
ORNL-6664	Transportation Energy Conservation Data Book	4
ORNL-5493 Special	Transportation Energy Conservation Data Book	
ORNL-5320	TRANSPORTATION ENERGY CONSERVATION DATA BOOK: EDITION 2	
ORNL-5198 Special	TRANSPORTATION ENERGY CONSERVATION DATA BOOK	

Edition 34 will be published in July 2015



# Vehicle Technologies Market Report Milestones

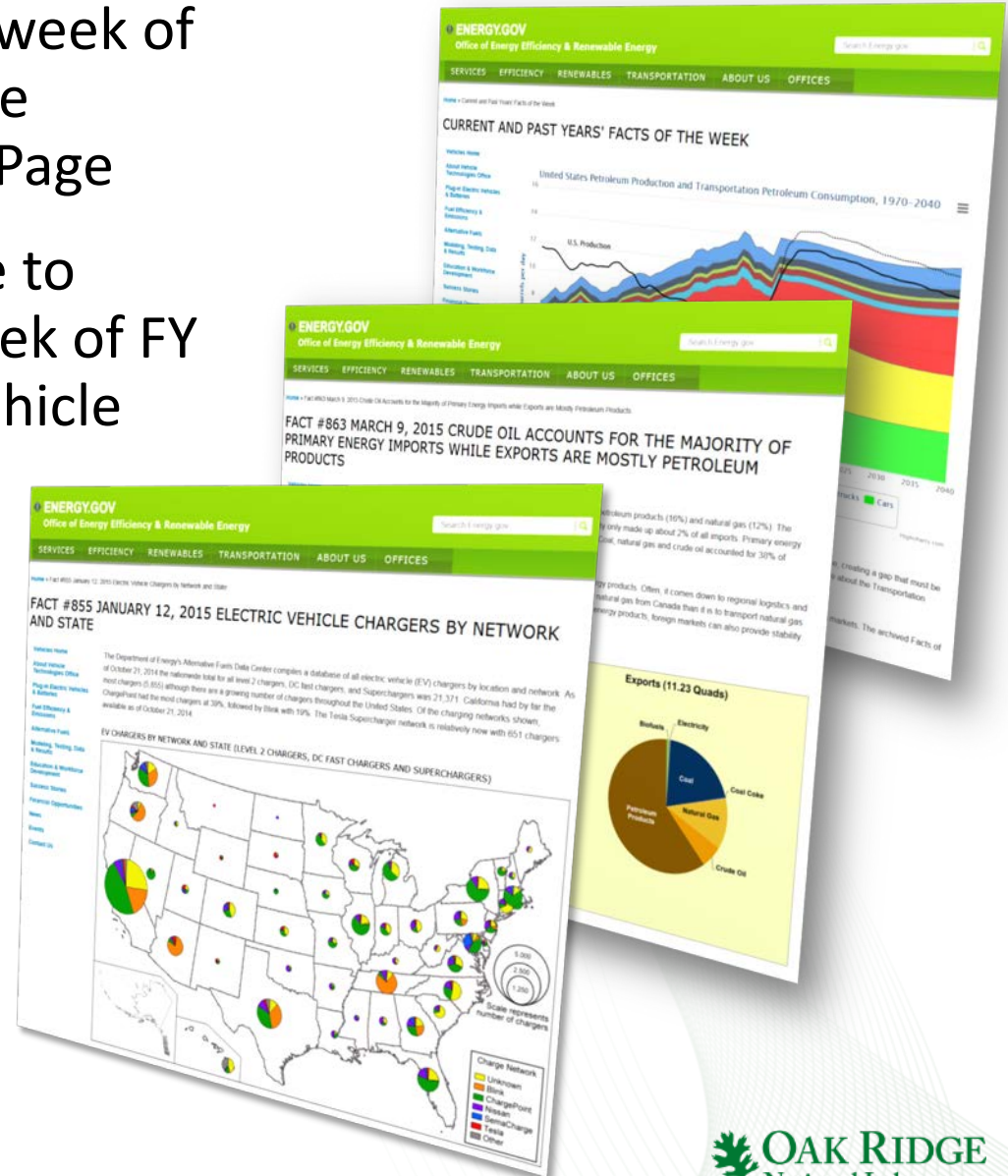
- Published the *2013 Vehicle Technologies Market Report* – March 2014
- Published the *2014 Vehicle Technologies Market Report* – March 2015



# VTO Fact of the Week Milestones

- Developed a new Fact each week of FY 2014\* to be posted on the Vehicle Technologies Home Page
- Developed and will continue to develop a new Fact each week of FY 2015 to be posted on the Vehicle Technologies Home Page

\*The Vehicle Technologies Office (VTO) website was reprogrammed during 2014. From February 24 to April 14, VTO could not post new content, including Facts, due to the reprogramming. ORNL provides content to website programmers but has no control over the DOE VTO website.





# Transportation Energy Data Book Approach/Strategy

## Discovery

- Content review
  - Petroleum
  - Energy
  - Highway Vehicles
  - Light Vehicles
  - Heavy Vehicles
  - Alternative Fuel Vehicles
  - Fleet Vehicles
  - Household Vehicles
  - Nonhighway Modes
  - Transportation & the Economy
  - Greenhouse Gas Emissions
  - Criteria Pollutants
  - Unit Conversions
- Source identification
- Data collection
  - From Excel, pdf & hardcopy

## Due Diligence

- Convert units
- Perform calculations
- Confirm all series revisions
- Analyze disparate data
- Study definitions
- Assemble notes
- Create tabulations and graphics

## Outreach

- Update Website
  - Serve data in Excel and pdf
- Publish hardcopy
  - Distribute to mailing list of nearly 1,300 people
- Answer questions from the public
- Request user feedback

# Vehicle Technologies Market Report Approach/Strategy

## Discovery

- Content review
  - Energy & Economics
  - Light Vehicle Market
  - Heavy Truck Market
  - Advanced Technologies
  - Policy
- Source identification
- Data collection
  - From Excel, pdf & hardcopy

## Due Diligence

- Convert units
- Perform calculations
- Confirm all series revisions
- Analyze disparate data
- Study definitions
- Assemble notes
- Create graphics and tabulations

## Outreach

- Update Website
  - Serve data in Excel and pdf
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- Request user feedback

# VTO Fact of the Week Approach/Strategy

## Discovery

- Probe for new report releases on:
  - Fuels
  - Vehicle efficiency
  - Policy
  - Advanced technology
  - Consumer trends
- Search for data on timely news topics
- Data collection
  - From Excel, pdf, html & hardcopy

## Due Diligence

- Convert units
- Perform calculations
- Study definitions
- Assemble notes
- Create graphics and tabulations

## Outreach

- Provide a new Fact of the Week for posting on the VTO website on a weekly basis

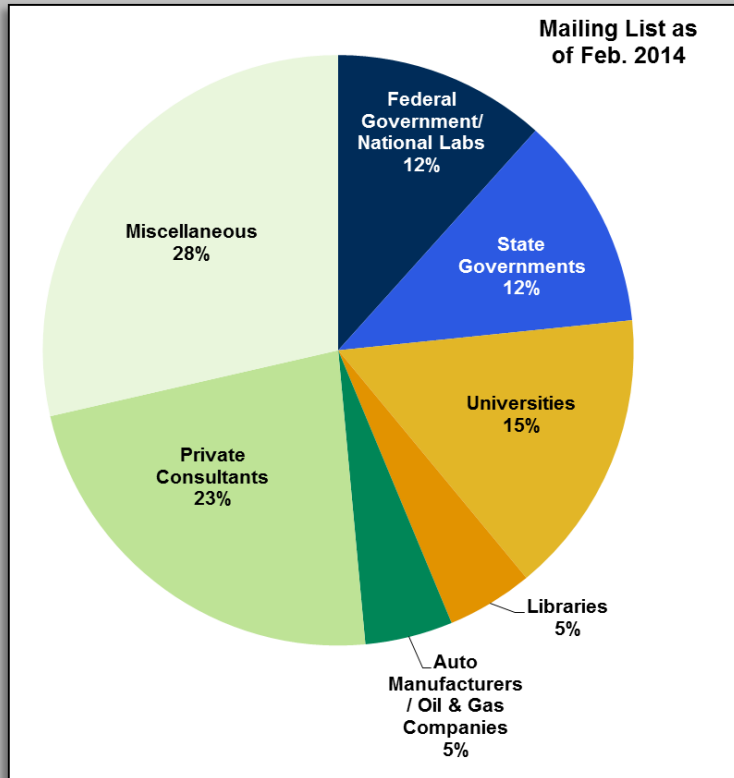


# Transportation Energy Data Book

## Technical Accomplishments and Progress

**Successful Outreach: Hardcopies of the Data Book are preferred by many**

**Hardcopy mailing list of about 1,300 individuals**



**1,400 books printed in FY14**

In FY2014 mailing, Data Book users asked to reply to continue receiving hardcopies and provide comments on the report.

**375 Replies**

322 - had no comments

40 - "thank you" or "excellent"

13 - suggestions for improvement

- If any hardcopies are left once the new edition is printed, they are sent to schools and universities for use as reference books for students.
- The University of Michigan and Georgia Tech University have used the Data Book as a course textbook.

**Website: Average of 6,600 visitor sessions per month in FY2014**

# Transportation Energy Data Book

## Technical Accomplishments and Progress

### Successful Outreach: Hardcopy mailing list purged and comments solicited

*"Leave well alone. An excellent publication."*

*"I love getting the print edition for quick access to many tables I need to scan. Online access is good for putting numbers into my work!"*

*"Even in the digital age, sometimes you want that physical book to refer to. Thanks for keeping this book going!"*

*"With VIUS a fading memory, more state level data – sales, fuel economy, technology penetration, and incentives would be helpful."*

*"Please include more maritime shipping data."*

*"Include as much on rail as possible."*

**RETURN THIS FORM**  
**TO CONTINUE RECEIVING YOUR FREE COPY OF THE**  
**Transportation Energy Data Book**

We are updating our mailing list for the *Transportation Energy Data Book*. We want to ensure that those of you who want a hard copy continue to receive one.

If you would like for us to continue to mail you a free printed copy of the Data Book, please fill in the information below and return this card to the address on the back (postage is paid). If you prefer, you may email your information to [DavisSC@ornl.gov](mailto:DavisSC@ornl.gov).

Name (required): \_\_\_\_\_

Update address below or check here  if address has not changed.

Company: \_\_\_\_\_

Mailing Address 1: \_\_\_\_\_

Mailing Address 2: \_\_\_\_\_

City, State/Zip: \_\_\_\_\_

Email Address: \_\_\_\_\_

Comments or suggestions for improvement:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Thank you for your continued interest in the *Transportation Energy Data Book*.

*"Improves every year by including more statistical data. An outstanding publication that I use all the time."*

*"It's great – useful – no change needed!"*

*"This is my go-to book for academic and press writing. Thanks Ms. Davis and Uncle Sam!"*

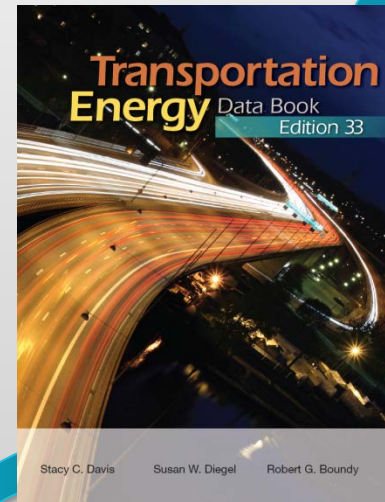
*"Nice data book that I use in energy and transportation technology courses."*

# Transportation Energy Data Book Technical Accomplishments and Progress

Outreach via hardcopy and the web has led to widespread use of the data and public education on transportation



Besides being cited twice in the Vehicle Technologies *Multi-Year Program Plan*, data from the *Transportation Energy Data Book* has been used in a variety of other documents, such as *The Economic Report of the President*, *Popular Science Magazine*, and *Newsweek Education*.



Searching Google Scholar shows more than 1,500 citations for the Data Book in scholarly reports.

Many models developed for VTO use input data from the book, as well as other agencies' models, such as EIA's National Energy Modeling System (NEMS) and EPA's Motor Vehicle Emission Simulator (MOVES).

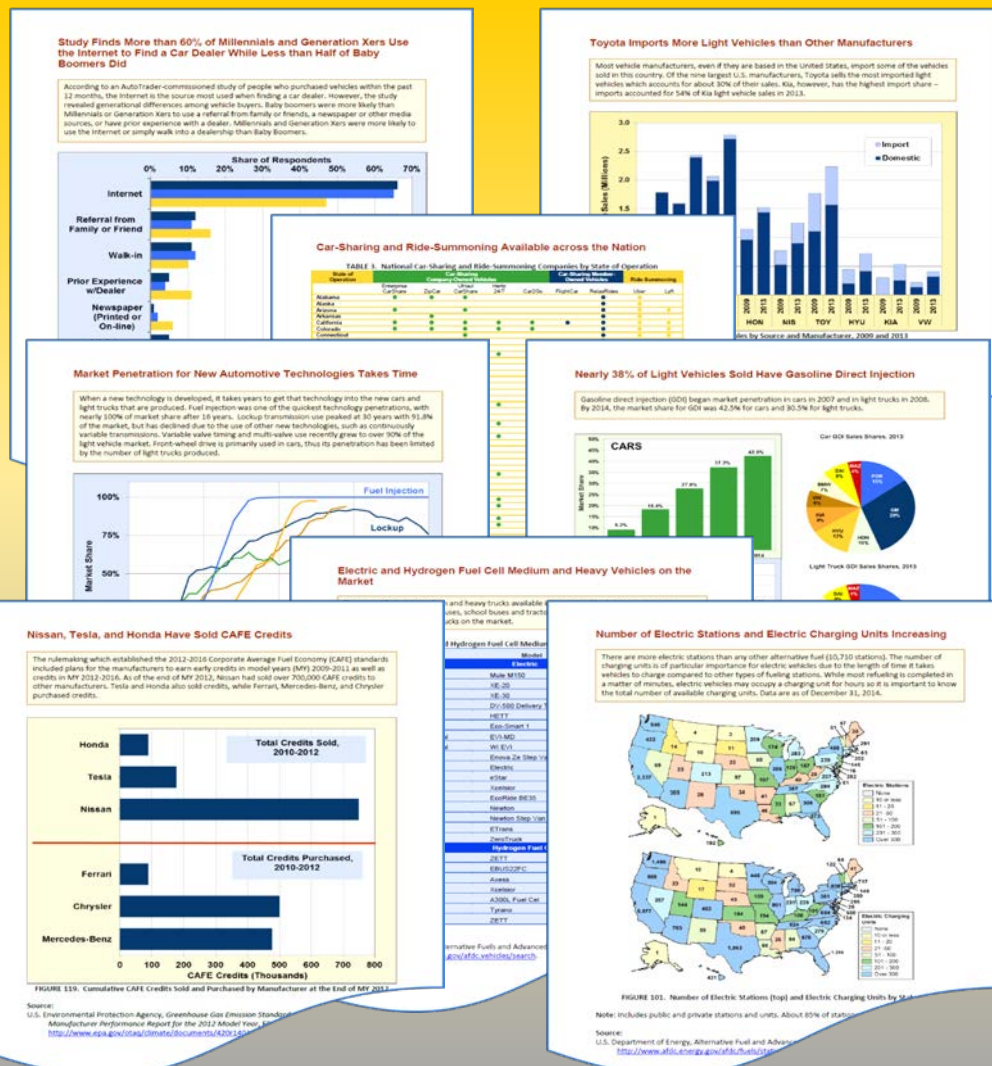


# Vehicle Technologies Market Report

## Technical Accomplishments and Progress

At least 20 pages of additional content in the 2014 Market Report:

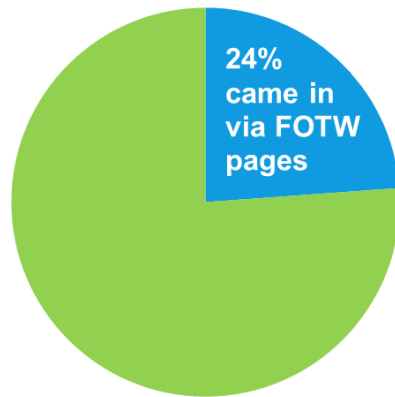
- Vehicle sales by price
- Car-sharing
- Import vs. domestic sales
- New technology penetration
- Hydrogen fuel cell vehicles
- Idle fuel consumption
- Corporate Average Fuel Economy credit trades and balances
- California Zero-Emission Vehicle credit trades and balances



Website: Average of 3,750 visitors per month in FY2014

# VTO Fact of the Week Technical Accomplishments and Progress

New visitors to VTO website  
101,000



About one-quarter of the new visitors to the VTO website come through the Fact of the Week web page.

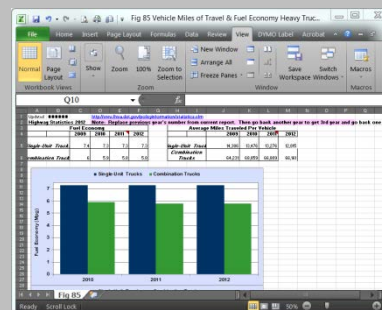
May 1, 2014 through February 28, 2015.

On May 26, 2014 the figure size was increased for better readability.

Can you Read this?

vs.

You can Read this!



On July 21, 2014 the Fact of the Week began including a link to an Excel spreadsheet that contained the raw data for the figures shown.

Of the 24 Facts posted in this fiscal year (October to mid-March), only five were from the Data Book or Market Report.

24 FOTWS posted  
- 5 Report related  
19 Original Facts

# Responses to Previous Year Reviewers' Comments

## • ***What mechanisms are used to collect user feedback?***

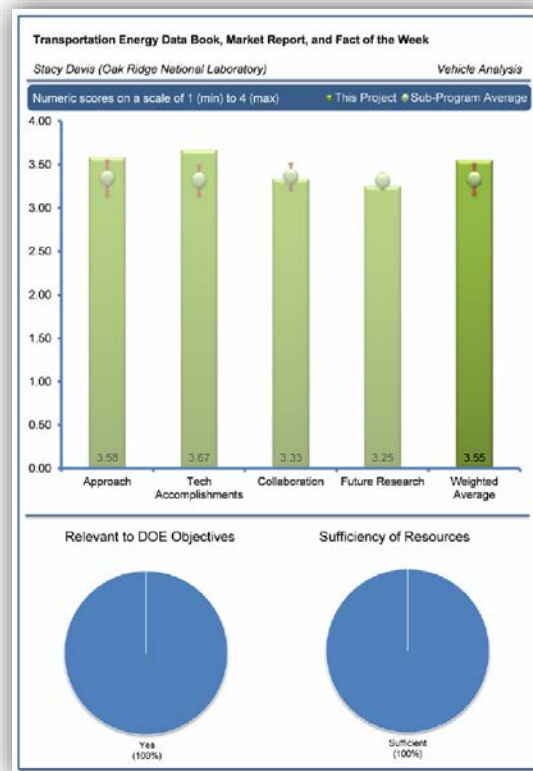
- Dating back to Edition 5 in 1981, Data Book users are encouraged to give feedback to the project sponsor and/or lead author, with contact information provided after the title page in each Edition.
- The same information is found via a “Contact Us” link at the bottom of every page on the Data Book and Market Report websites.
- In addition, this year the Market Report website has a new user feedback icon. This same icon will be on the Data Book website when it is updated to Edition 34.
- A postage-paid mail-back card which asked for comments or suggestions for improvement was sent with every Edition 33 Data Book mailed out in 2014.

## • ***Is there an opportunity to print fewer copies of the Data Book?***

- Yes, the mailing list was purged and postage-paid mail-back cards were sent with the Edition 33 hardcopy mailing. Only those who returned the cards or emailed responses will be kept on the hardcopy mailing list, reducing the list from 1,300 to about 400.

## • ***“Splitting the Data Book or the web-based report into sections that are updated periodically would have greater value to users.”***

- In verbal contact, emails, and feedback cards, Data Book users have made it clear that they do not want changes to the chapters or sections of the report. Users are able to quickly find the content needed when chapters do not vary greatly from one year to the next. However, when changes in the transportation sector warrant a new chapter or changes to the current chapters, the authors will make changes.





# Collaboration and Coordination with Other Institutions

In order to effectively communicate the data coming from an organization, one must know some of the details, definitions, and processes behind the data. ORNL regularly communicates with the following organizations in order to gain better understanding of the data coming from those organizations.



Energy Information Administration



U.S. Environmental Protection Agency



U.S. Department of Transportation



U.S. Census Bureau



Argonne National Laboratory



National Renewable Energy Laboratory



Ward's Automotive Info Bank



Crain Communications



Bobit Publishing

*Other sources, as necessary*

# Proposed Future Work

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## FY 2015

The final *Transportation Energy Data Book* will be sent to the printers and posted on the website in July.

A Fact of the Week will be developed and posted on the Vehicle Technologies Home Page weekly.

## FY 2016

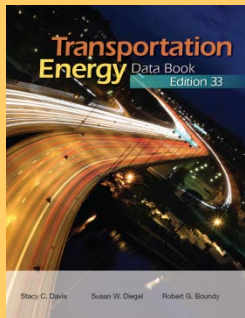
An updated annual *Transportation Energy Data Book* will be published and website updated.

An updated annual *Vehicle Technologies Market Report* will be published and website updated.

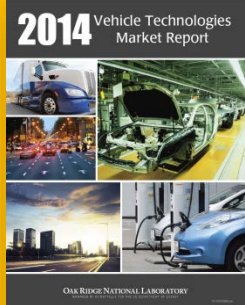
The Fact of the Week will be developed and posted to the Vehicle Technologies home page on a weekly basis.

...

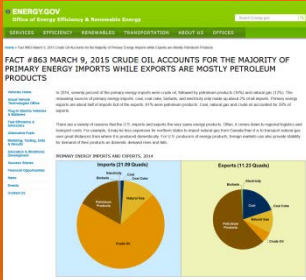
# Summary



- The Transportation Energy Data Book includes historical data tables that provide the foundation for the analysis performed by VTO staff and other transportation analysts in pursuit of energy efficient and environmentally-friendly technologies.

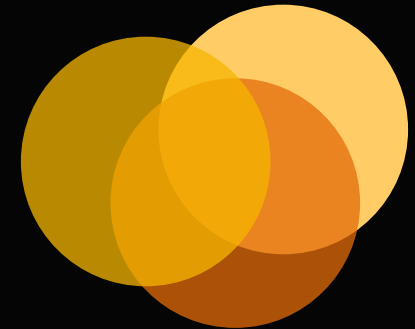


- The Vehicle Technologies Market Report is a colorful graphic-based report with an emphasis on the new vehicle market and new technologies coming into the market.



- The VT Fact of the Week is posted every Monday morning on the DOE VTO website home page, attracting visitors to the VTO website and benefitting transportation stakeholders and the general public.

Though each of these three data products has its own focus, the synergy among the products adds to the efficiency of the project.





# ACKNOWLEDGEMENTS

**Jacob Ward**

*Office of Vehicle Technologies  
US Department of Energy*

**Philip Patterson, retired**

*Formerly of the Office of Vehicle Technologies  
US Department of Energy*

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