Transportation Data Programs:

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

Project ID# VAN009

Principal Investigator:
Stacy C. Davis

June 18, 2014

2014 U.S. DOE Hydrogen Program and Vehicle Technologies Program Annual Merit Review and Peer Evaluation Meeting

June 16-20, 2014

Center for Transportation Analysis

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

OAK RIDGE NATIONAL LABORATORY
MANAGED BY UT-BATTELLE FOR THE DEPARTMENT OF ENERGY

Overview

Timeline

- Project start date: October 2013
- Project end date: September 2014
- 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

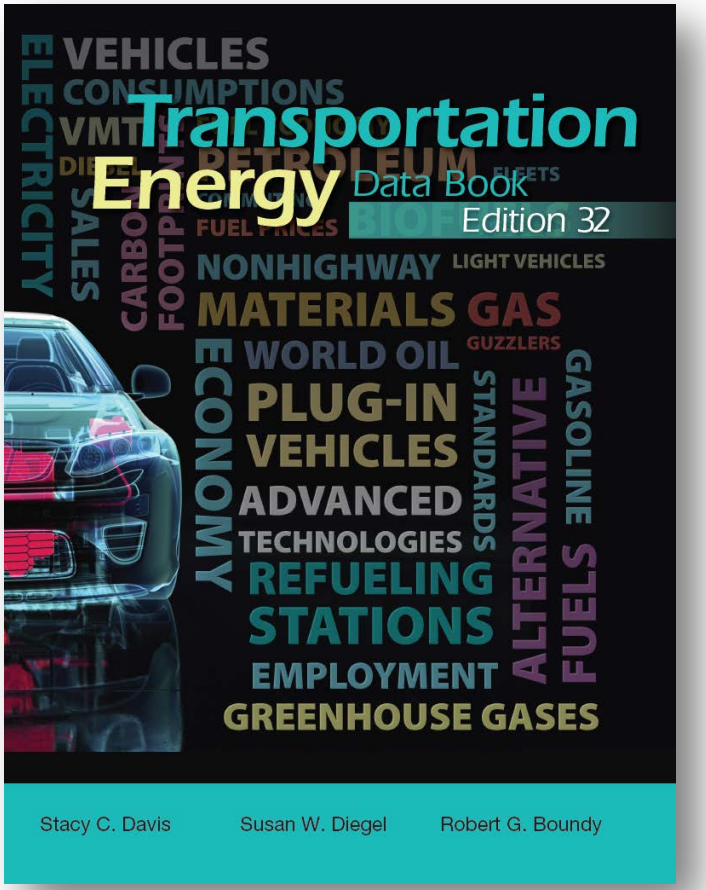
- Total project funding
  - $575K / year
- Funding received in FY13: $575K
- Funding for FY14: $575K

Partners

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

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 33**.
- 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 five 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 supports VTO public outreach and drives traffic to the VTO website.

Website address:
http://www1.eere.energy.gov/vehiclesandfuels/facts/2014_index.html

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 32 published July 2013

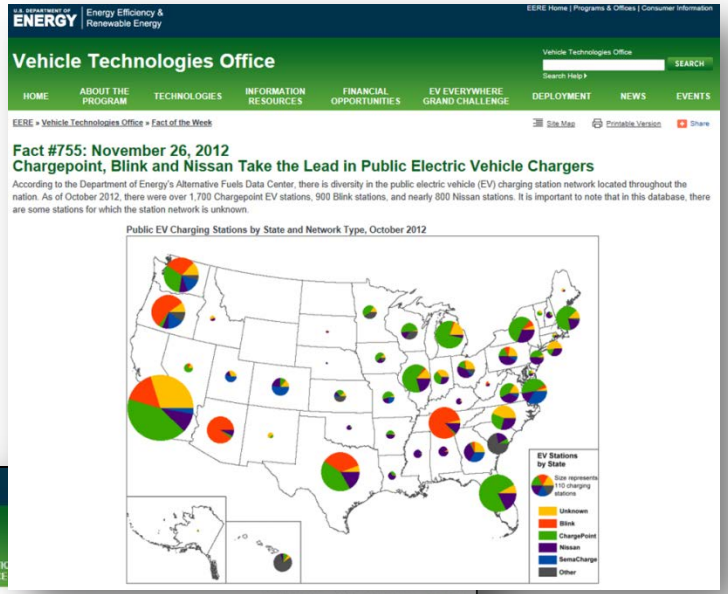
Edition 33 will be published in July 2014

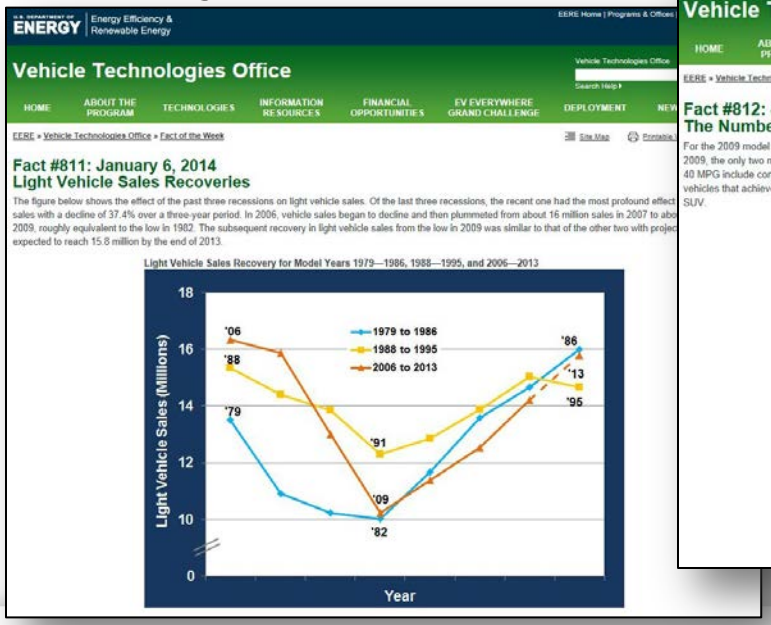
Vehicle Technologies Market Report Milestones

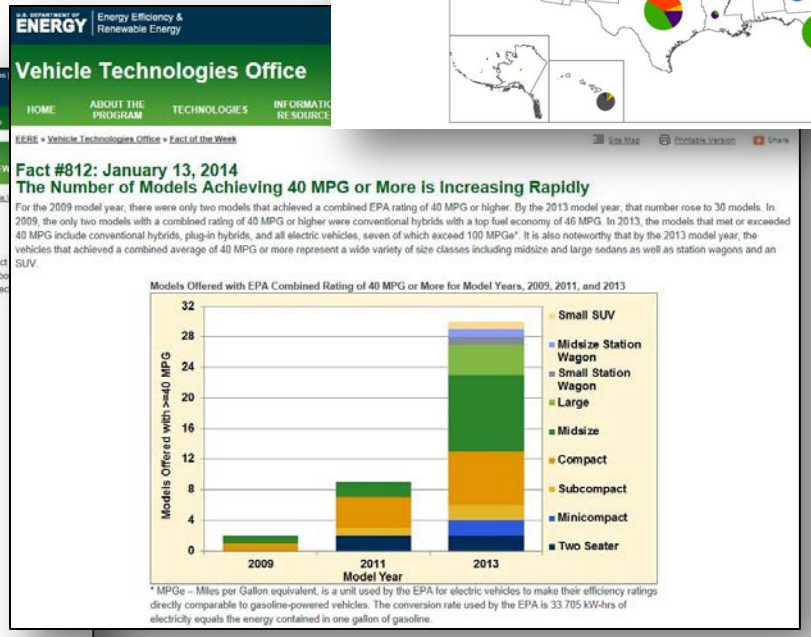
- Published the *2011 Vehicle Technologies Market Report* – February 2012
- Published the *2012 Vehicle Technologies Market Report* – February 2013
- Published the *2013 Vehicle Technologies Market Report* – March 2014

VTO Fact of the Week Milestones

- Developed a new Fact each week of FY 2013 to be posted on the Vehicle Technologies Home Page
- Developed and will continue to develop a new Fact each week of FY 2014 to be posted on the Vehicle Technologies Home Page







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

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
- Answer questions from the public

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

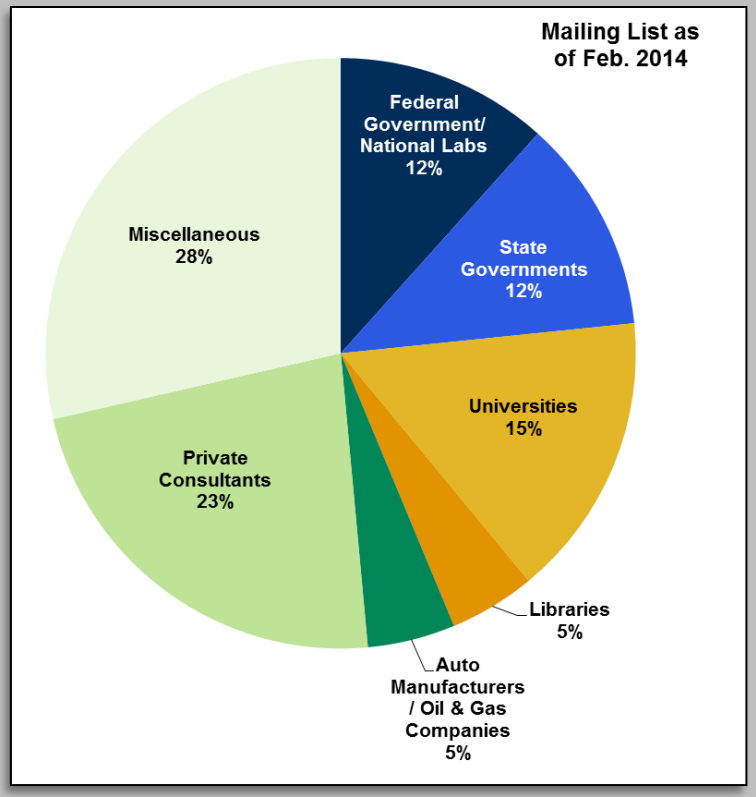
Outreach

- 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



1,600 books printed in FY13

It costs less than $25K to print and mail hardcopies – black & white pages with color cover – using the Government Printing Office and Media Mail postage rate.

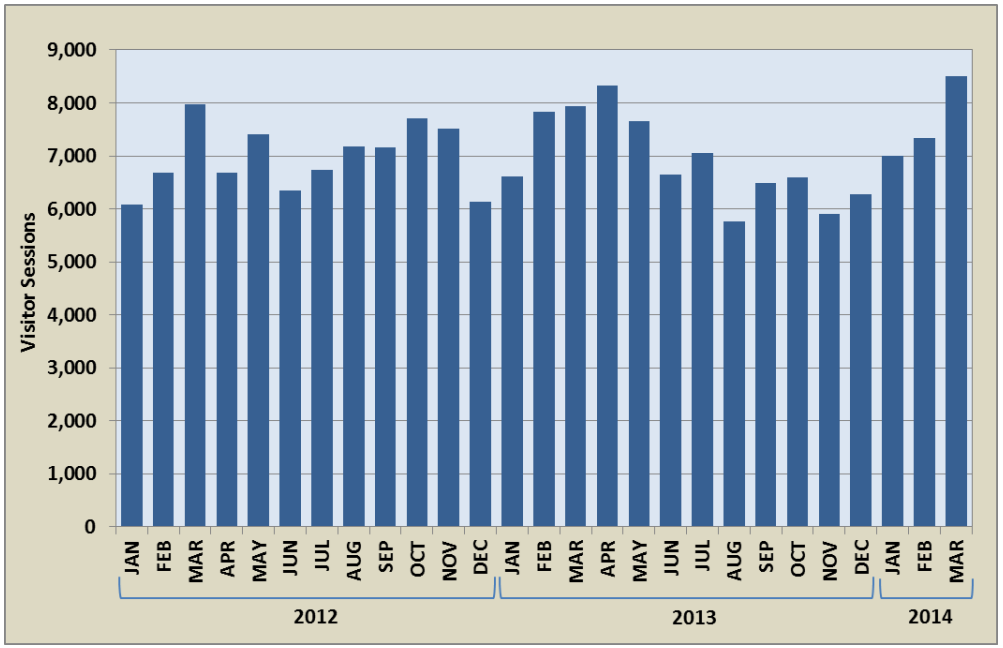
If any hardcopies are left once the new edition is printed, they are sent to schools and universities for use as reference books for students.

The University of Michigan and Georgia Tech University have used the Data Book as a course textbook.

Transportation Energy Data Book
Technical Accomplishments and Progress

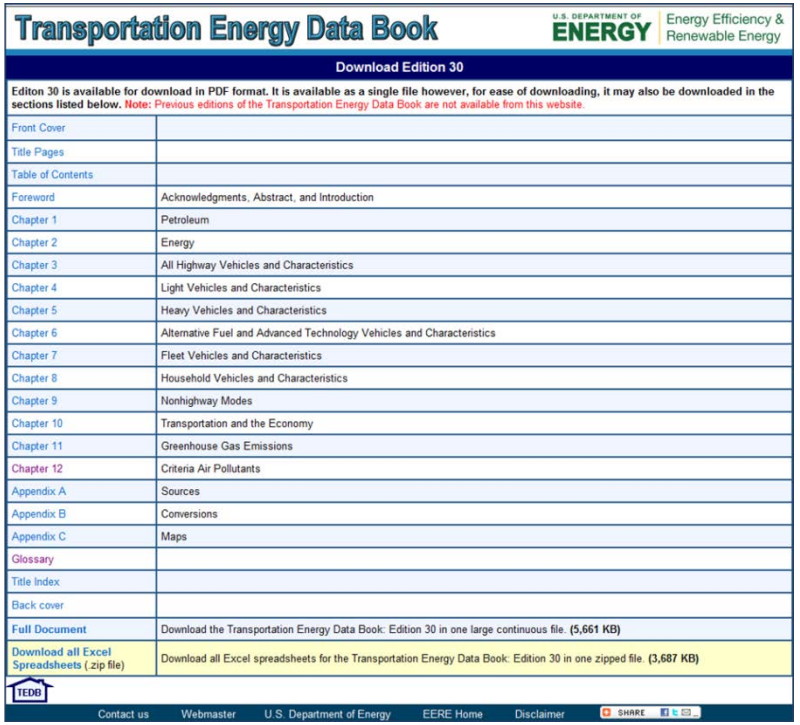
Successful Outreach: Website content easily available and accessed by many

6-8,000 visitor sessions per month



Responsive to user comments

Researchers said they wanted to be able to "pack" all Excel spreadsheets from the Data Book onto their laptops for use when they had no Internet connection



Transportation Energy Data Book — U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

Download Edition 30

Editon 30 is available for download in PDF format. It is available as a single file however, for ease of downloading, it may also be downloaded in the sections listed below. Note: Previous editions of the Transportation Energy Data Book are not available from this website.

Front Cover	
Title Pages	
Table of Contents	
Foreword	Acknowledgments, Abstract, and Introduction
Chapter 1	Petroleum
Chapter 2	Energy
Chapter 3	All Highway Vehicles and Characteristics
Chapter 4	Light Vehicles and Characteristics
Chapter 5	Heavy Vehicles and Characteristics
Chapter 6	Alternative Fuel and Advanced Technology Vehicles and Characteristics
Chapter 7	Fleet Vehicles and Characteristics
Chapter 8	Household Vehicles and Characteristics
Chapter 9	Nonhighway Modes
Chapter 10	Transportation and the Economy
Chapter 11	Greenhouse Gas Emissions
Chapter 12	Criteria Air Pollutants
Appendix A	Sources
Appendix B	Conversions
Appendix C	Maps
Glossary	
Title Index	
Back cover	
Full Document	Download the Transportation Energy Data Book: Edition 30 in one large continuous file. (5,661 KB)
Download all Excel Spreadsheets (.zip file)	Download all Excel spreadsheets for the Transportation Energy Data Book: Edition 30 in one zipped file. (3,687 KB)

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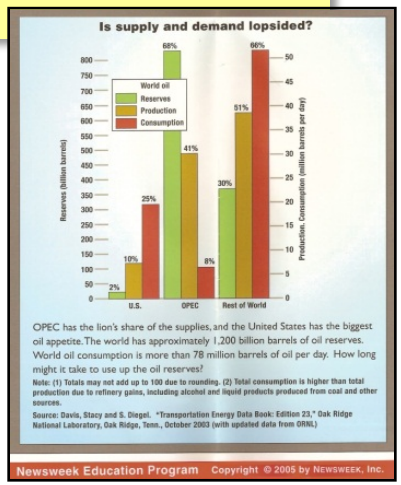
Transportation Energy Data Book
Technical Accomplishments and Progress

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*.

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).



Searching Google Scholar shows more than 1,100 citations for the Data Book in scholarly reports.

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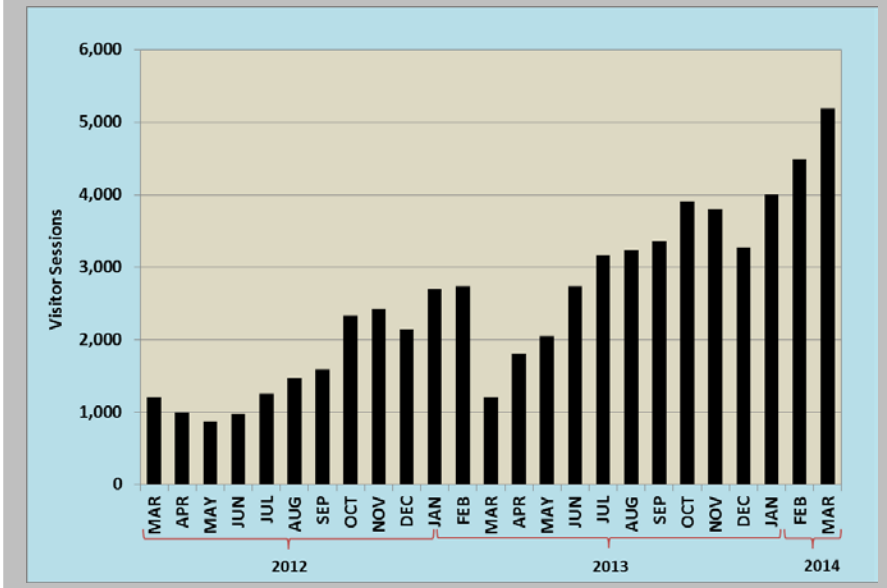
Vehicle Technologies Market Report
Technical Accomplishments and Progress

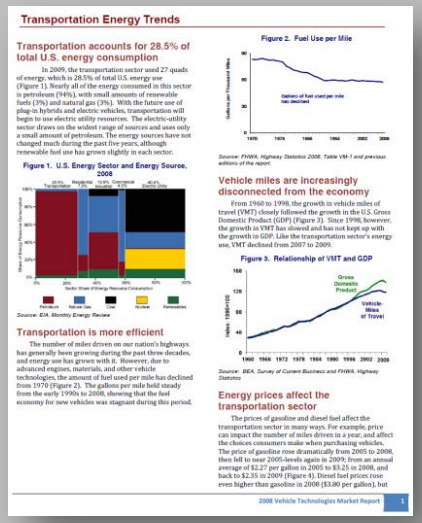
Website Traffic

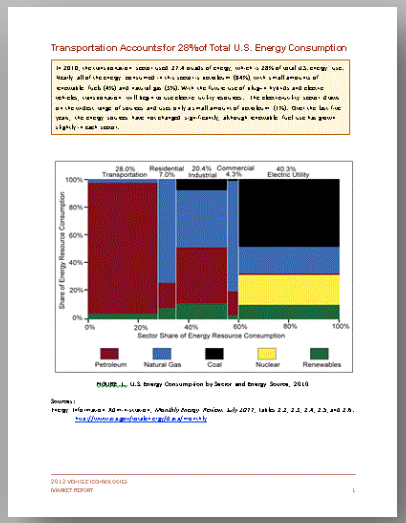
Number of visitor sessions is growing – even before this year's report was posted on-line at the end of March. Over 5,000 visitor sessions in March 2014.



Major Improvement

Changed from a two-column, small graph format to a format with a graph on each page and more room for highlights, sources and notes.

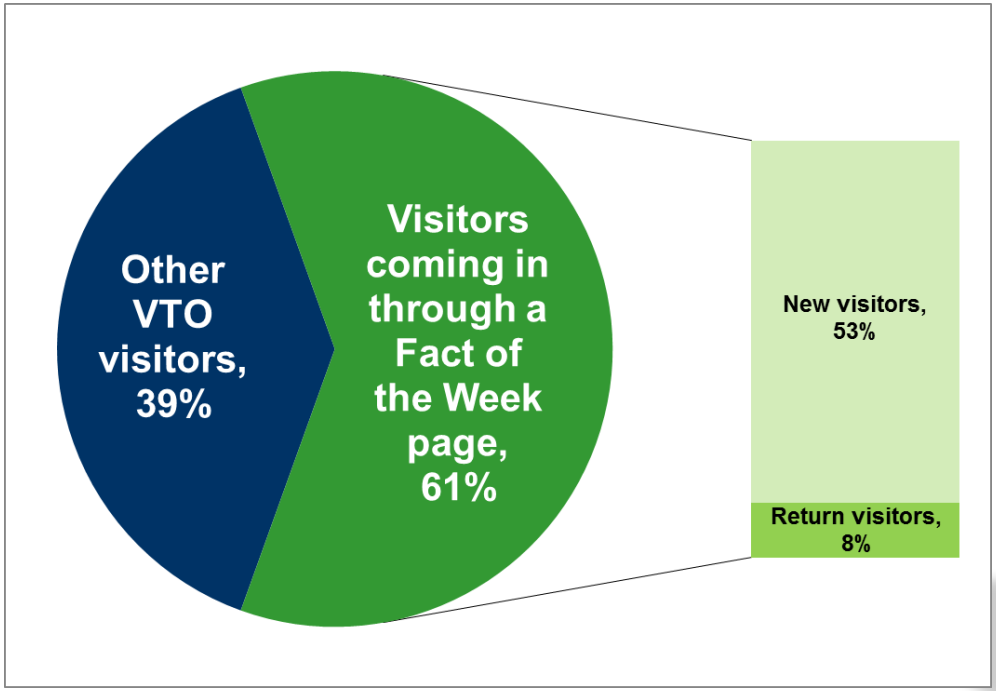




2010 version **vs.** 2011 version

VTO Fact of the Week
Technical Accomplishments and Progress

More than 60% of the visitors to the VTO website come through the Fact of the Week web page and most of those are new visitors.



FY2014 through February.

Of the 18 Facts posted in this fiscal year (Oct–mid Feb), only one was from data that were included in the Data Book or Market Report

Amy Foster, an energy blogger, wrote in 2010:

"I have a secret. When I need a little pick-me-up at work, I often surf over to the EERE Vehicle Technologies Program website and read their latest Fact of the Week. Updated like clockwork every week, the Fact of the Week site provides dozens (if not hundreds) of factoids of a broad variety of vehicle-related topics."

"Call me crazy, but these little weekly statistical gems are always fascinating to me.…These archives are a treasure trove of interesting information."

Responses to Previous Year Reviewers' Comments

This is the project's first AMR evaluation, thus there are no comments to be addressed.

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 continually 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 Renewal Energy Laboratory
- Ward's Automotive Info Bank

Other sources, as necessary

Proposed Future Work

FY 2014

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 2015

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

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

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

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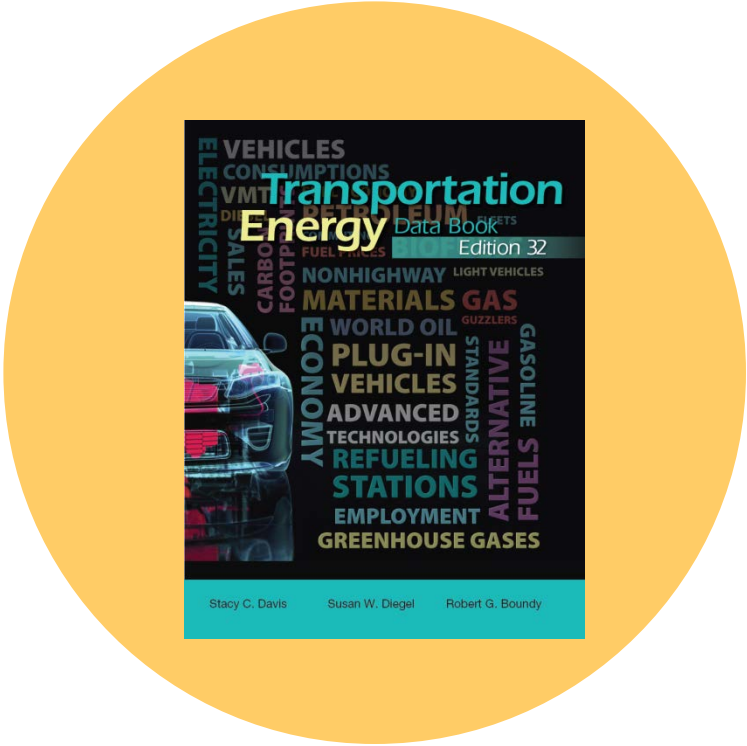
Transportation Energy Data Book Summary

- The *Transportation Energy Data Book* is a black & white publication with 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 associated website serves data in Excel format and pdf format to 6-8,000 monthly visitor sessions.
- Data from the book feeds into many other VTO products – from reports to models – as well as other Federal Agency projects.



Vehicle Technologies Market Report Summary

- The *Vehicle Technologies Market Report* is a colorful graphic-based report with figures that display data on an individual company level. The emphasis of the report is the vehicle market and new technologies coming into the market, which is useful to VTO staff and others.
- The associated website serves data in both Excel and pdf format. In the month of March 2014 there were nearly 5,200 visitors sessions.

VT Fact of the Week Summary

- The VT Fact of the Week is presented graphically with summary text and posted “like clockwork” every Monday morning on the DOE VTO website home page, attracting visitors to the website.
- Transportation stakeholders and the general public benefit from VTO’s data expertise through these readily accessible Facts.

Summary

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
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US Department of Energy

Philip Patterson, retired
Formerly of the Office of Vehicle Technologies
US Department of Energy

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