FOREWORD

Welcome to this 34th edition of the *Transportation Energy Data Book*. Twenty-six editions of this Data Book have been produced by Stacy Davis; DOE is grateful for the dedication, consistency, and skill she has brought to this effort.

I would like to bring to your attention some of the data that are new in this edition:

- **Figure 1.3 and Table 1.5** have been expanded to show not only the most current year data, but also data from 1980 and 1993 (**Figures 1.1 and 1.2**).
- **Table 2.3** is a new table containing the distribution of transportation energy consumption by source from 1950 to 2014.
- **Figure 2.4 and Table 2.4** were formerly in Chapter 1 and have also been expanded to show not only the most current year data, but also data from 1980 and 1993 (**Figures 2.2 and 2.3**).
- **Figure 2.5** was formerly in Chapter 6 Alternative Fuel and Advanced Technology Vehicles and Characteristics.
- **Figure 2.6** is a new graphic which summarizes domestic transportation fuel use by mode. The width of the bars shows the relationship of fuel use by mode and the colors represent the different fuel types.
- **Figures 3.1 and 3.2** are new figures depicting the World production of cars and trucks from 1983 to 2013, providing historical data similar to what is provided on **Table 3.1**.
- On **page 5-5** information is available on the planning of a new Vehicle Inventory and Use Survey. If you are interested in knowing more about this study, email VIUS@dot.gov.
- **Table 11.1**, which formerly contained World carbon dioxide data from the latest year compared to 1990 data, has an intervening year of data –2005.
- **Figure 11.1** is a new historical representation of World carbon dioxide emissions from 1990 to 2012.
- **Tables 11.3 and 11.5** on greenhouse gas emissions/carbon emissions have been expanded to include additional years of data.
- **Table 11.6** is a new table comparing the transportation sector carbon dioxide emissions data from two sources.
- **Tables 11.7 and 11.8** were reworked from previous years to include additional historical data.
- **Tables 11.9, 11.10, and 11.11** are now in metric tons of carbon dioxide instead of short tons of carbon dioxide. Please be sure to note this difference.

I hope you find value in this data book. Stacy and I welcome suggestions on how to improve it.

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This book would not be possible without the leadership, guidance, and vision of Phil Patterson, who began this book in the 1970's. We hope to continue this report into the future with the same level of excellence. The authors and the transportation research community will be forever grateful for his efforts.

ABSTRACT

The *Transportation Energy Data Book: Edition 34* is a statistical compendium prepared and published by Oak Ridge National Laboratory (ORNL) under contract with the U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Vehicle Technologies Office. Designed for use as a desk-top reference, the Data Book represents an assembly and display of statistics and information that characterize transportation activity, and presents data on other factors that influence transportation energy use. The purpose of this document is to present relevant statistical data in the form of tables and graphs. The latest edition of the Data Book is available to a larger audience via the Internet (cta.ornl.gov/data).

This edition of the Data Book has 12 chapters which focus on various aspects of the transportation industry. Chapter 1 focuses on petroleum; Chapter 2 – energy; Chapter 3 – highway vehicles; Chapter 4 – light vehicles; Chapter 5 – heavy vehicles; Chapter 6 – alternative fuel vehicles; Chapter 7 – fleet vehicles; Chapter 8 – household vehicles; Chapter 9 – nonhighway modes; Chapter 10 – transportation and the economy; Chapter 11 – greenhouse gas emissions; and Chapter 12 – criteria pollutant emissions. The sources used represent the latest available data. There are also three appendices which include detailed source information for some tables, measures of conversion, and the definition of Census divisions and regions. A glossary of terms and a title index are also included for the reader's convenience.

INTRODUCTION

In January 1976, the Transportation Energy Conservation (TEC) Division of the Energy Research and Development Administration contracted with Oak Ridge National Laboratory (ORNL) to prepare a Transportation Energy Conservation Data Book to be used by TEC staff in their evaluation of current and proposed conservation strategies. The major purposes of the Data Book were to draw together, under one cover, transportation data from diverse sources, to resolve data conflicts and inconsistencies, and to produce a comprehensive document. The first edition of the TEC Data Book was published in October 1976. With the passage of the Department of Energy (DOE) Organization Act, the work being conducted by the former Transportation Energy Conservation Division fell under the purview of the DOE's Office of Transportation Programs. This work continues today in the Vehicle Technologies Office.

Policymakers and analysts need to be well-informed about activity in the transportation sector. The organization and scope of the data book reflect the need for different kinds of information. For this reason, Edition 34 updates much of the same type of data that is found in previous editions.

In any attempt to compile a comprehensive set of statistics on transportation activity, numerous instances of inadequacies and inaccuracies in the basic data are encountered. Where such problems occur, estimates are developed by ORNL. To minimize the misuse of these statistics, an appendix (Appendix A) is included to document the estimation procedures. The attempt is to provide sufficient information for the conscientious user to evaluate the estimates and to form their own opinions as to their utility. Clearly, the accuracy of the estimates cannot exceed the accuracy of the primary data, an accuracy which in most instances is unknown. In cases where data accuracy is known or substantial errors are strongly suspected in the data, the reader is alerted. In all cases it should be recognized that the estimates are not precise.

The majority of the statistics contained in the data book are taken directly from published sources, although these data may be reformatted for presentation by ORNL. Consequently, neither ORNL nor DOE endorses the validity of these data.