

Preface

The *Annual Energy Outlook 2007 (AEO2007)*, prepared by the Energy Information Administration (EIA), presents long-term projections of energy supply, demand, and prices through 2030. The projections are based on results from EIA's National Energy Modeling System (NEMS).

The report begins with an "Overview" summarizing the *AEO2007* reference case. The next section, "Legislation and Regulations," discusses evolving legislation and regulatory issues, including recently enacted legislation and regulation, such as the new Corporate Average Fuel Economy (CAFE) standards for light-duty trucks finalized by the National Highway Traffic Safety Administration (NHTSA) in March 2006. It also provides an update on the handling of key provisions in the Energy Policy Act of 2005 (EPACT2005) that could not be incorporated in the *Annual Energy Outlook 2006 (AEO2006)* because of the absence of implementing regulations or funding appropriations. Finally, it provides a summary of how sunset provisions in selected Federal fuel taxes and tax credits are handled in *AEO2007*.

The "Issues in Focus" section includes discussions of the potential for biofuels in U.S. transportation markets and the impact of rising construction costs on energy markets. It also discusses possible construction of an Alaska natural gas pipeline; renewed interest in nuclear generating capacity; and the demand response to higher energy prices in end-use sectors.

The "Market Trends" section summarizes the *AEO2007* projections for energy markets. The projections for 2006 and 2007 incorporate the short-term projections from EIA's September 2006 *Short-Term Energy Outlook*, where the data are comparable. The analysis

in *AEO2007* focuses primarily on a reference case, lower and higher economic growth cases, and lower and higher energy price cases. Results from a number of other alternative cases are also presented, illustrating uncertainties associated with the reference case projections for energy demand, supply, and prices. Readers are encouraged to review the full range of cases, which address many of the uncertainties inherent in long-term projections. Complete tables for the five primary cases are provided in Appendixes A through C. Major results from many of the alternative cases are provided in Appendix D. Appendix E briefly describes NEMS and the alternative cases.

AEO2007 projections generally are based on Federal, State, and local laws and regulations in effect on or before October 31, 2006. The potential impacts of pending or proposed legislation, regulations, and standards (and sections of existing legislation that require implementing regulations or funds that have not been appropriated) are not reflected in the projections.

In general, historical data used in the *AEO2006* projections are based on EIA's *Annual Energy Review 2005*, published in August 2006; however, only partial or preliminary 2005 data were available in some cases. Other historical data, taken from multiple sources, are presented in this report for comparative purposes; documents referenced in the source notes should be consulted for official data values.

AEO2007 is published in accordance with Section 205c of the Department of Energy Organization Act of 1977 (Public Law 95-91), which requires the EIA Administrator to prepare annual reports on trends and projections for energy use and supply.

The projections in the *Annual Energy Outlook 2007* are not statements of what will happen but of what might happen, given the assumptions and methodologies used. The projections are business-as-usual trend estimates, given known technology and technological and demographic trends. *AEO2007* generally assumes that current laws and regulations are maintained throughout the projections. Thus, the projections provide a policy-neutral reference case that can be used to analyze policy initiatives. EIA does not propose, advocate, or speculate on future legislative and regulatory changes. Most laws are assumed to remain as currently enacted; however, the impacts of emerging regulatory changes, when defined, are reflected.

Because energy markets are complex, models are simplified representations of energy production and consumption, regulations, and producer and consumer behavior. Projections are highly dependent on the data,

methodologies, model structures, and assumptions used in their development. Behavioral characteristics are indicative of real-world tendencies rather than representations of specific outcomes.

Energy market projections are subject to much uncertainty. Many of the events that shape energy markets are random and cannot be anticipated, including severe weather, political disruptions, strikes, and technological breakthroughs. In addition, future developments in technologies, demographics, and resources cannot be foreseen with certainty. Many key uncertainties in the *AEO2007* projections are addressed through alternative cases.

EIA has endeavored to make these projections as objective, reliable, and useful as possible; however, they should serve as an adjunct to, not a substitute for, a complete and focused analysis of public policy initiatives.