

**DRAFT TRANSMITTAL LETTER**

July 18, 2007

The Honorable Samuel W. Bodman  
Secretary of Energy  
Washington, D.C. 20585

Dear Mr. Secretary:

In response to the questions posed in your letter of October 5, 2005, the National Petroleum Council conducted a comprehensive study considering the future of oil and natural gas to 2030 in the context of the global energy system. The complexity of today's integrated energy markets and the urgency surrounding today's energy issues demanded a study that included:

- An integrated view of supply, demand, infrastructure, technology, and geopolitics
- A comprehensive review of public and aggregated proprietary energy outlooks
- In-depth analysis of technology trends and opportunities
- Policy options viewed through economic, security, and environmental lenses
- More than 350 participants from diverse backgrounds and organizations
- Dialogue with more than 1,000 persons and groups actively involved in energy.

The Council found that total global demand for energy is projected to grow by 50-60 percent by 2030, driven by increasing population and the pursuit of improving living standards. At the same time, there are accumulating risks to the supply of reliable, affordable energy to meet this growth, including political hurdles, infrastructure requirements, and availability of a trained work force. We will need all economic, environmentally responsible energy sources to assure adequate, reliable supply.

There is no single, easy solution to the global challenges ahead. Given the massive scale of the global energy system and the long lead-times necessary to make material changes, actions must be initiated now and sustained over the long term.

Over the next 25 years, the United States and the world face hard truths about the global energy future:

- Coal, oil, and natural gas will remain indispensable to meeting total projected energy demand growth.
- The world is not running out of energy resources, but there are accumulating risks to continuing expansion of oil and natural gas production from the conventional sources relied upon historically. These risks create significant challenges to meeting projected total energy demand.
- To mitigate these risks, expansion of all economic energy sources will be required, including coal, nuclear, biomass, other renewables, and unconventional oil and natural gas. Each of these sources faces significant challenges including safety, environmental, political, or economic hurdles, and imposes infrastructure requirements for development and delivery.
- "Energy Independence" should not be confused with strengthening energy security. The concept of energy independence is not realistic in the foreseeable future, whereas U.S. energy security can be enhanced by moderating demand, expanding and diversifying domestic energy supplies, and strengthening global energy trade and investment. There can be no U.S. energy security without global energy security.

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- A majority of the U.S. energy sector workforce, including skilled scientists and engineers, is eligible to retire within the next decade. The workforce must be replenished and trained.
- Policies aimed at curbing carbon dioxide emissions will alter the energy mix, increase energy-related costs, and require reductions in demand growth.

The Council proposes five core strategies to assist markets in meeting the energy challenges to 2030 and beyond. All five strategies are essential—there is no single, easy solution to the multiple challenges we face. However, we are confident that the prompt adoption of these strategies, along with a sustained commitment to implementation, will promote U.S. competitiveness by balancing economic, security, and environmental goals.

The United States must:

- Moderate the growing demand for energy by increasing efficiency of transportation, residential, commercial, and industrial uses.
- Expand and diversify production from clean coal, nuclear, biomass, other renewables, and unconventional oil and gas; moderate the decline of conventional domestic oil and gas production; and increase access for development of new resources.
- Integrate energy policy into trade, economic, environmental, security, and foreign policies; strengthen global energy trade and investment; and broaden dialog with both producing and consuming nations to improve global energy security.
- Enhance science and engineering capabilities and create long-term opportunities for research and development in all phases of the energy supply and demand system.
- Develop the legal and regulatory framework to enable carbon capture and sequestration. In addition, as policymakers consider options to reduce carbon dioxide emissions, provide an effective global framework for carbon management, including establishment of a transparent, predictable, economy-wide cost for carbon dioxide emissions.

The attached report, *Facing the Hard Truths about Energy*, details findings and recommendations based on comprehensive analyses developed by the study teams.

The Council looks forward to sharing this study and its results with you, your colleagues, and broader government and public audiences.

Respectfully submitted,

Lee R. Raymond  
Chair

Andrew Gould  
Vice Chair, Technology

John J. Hamre  
Vice Chair, Geopolitics  
& Policy

David J. O'Reilly  
Vice Chair, Supply

Daniel H. Yergin  
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Attachment