

ENERGY: OLD CHALLENGES, NEW OPPORTUNITIES



T H E A S P E N I N S T I T U T E
E N E R G Y A N D E N V I R O N M E N T P R O G R A M

2007 ENERGY POLICY FORUM

Walter M. Higgins and William W. Hogan, Co-chairs
Laura Hermann, Rapporteur


THE ASPEN INSTITUTE

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2007 Energy Policy Forum

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LAURA HERMANN, RAPPORTEUR

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Foreword

The current challenges of energy policy have a familiar ring to those who have followed these topics for years. Rising oil and gas imports and instability in the Middle East have renewed public concern about energy security. Recent developments in electricity markets, including price increases, lead to differing opinions about the move toward greater competition – and even to differing interpretations of what is actually happening in electricity markets. Arguments about how much and how fast to reduce emissions are still inextricably linked with energy decisions, although the growing consensus about climate change has brought the need to reduce carbon dioxide emissions to the forefront of this discussion.

Although the challenges remain much the same, and the need for greater public understanding and political will is unchanged, there are some new opportunities for solutions. Some are technological, some are regulatory, and some involve changes in market structures. These old challenges and new opportunities were explored at the 31st annual Energy Policy Forum, held in Aspen in July 2007.

A consistent strength of the Forum is the interaction among people with diverse views trained in different disciplines. Although the participants are knowledgeable in their own businesses or disciplines, in wrestling with multidimensional challenges they are challenged to

avoid easy responses that draw on a single area of expertise. The exchanges are enhanced by an informal atmosphere and a not-for-attribution rule that encourage creative thinking and candid speaking.

Walter M. Higgins, Chairman and CEO of Sierra Pacific Resources, and William W. Hogan, Professor of Global Energy Policy at Harvard's Kennedy School of Government, co-chaired this year's Forum. Their broad experience and insight helped guide the varied and timely contributions of the varied participants, bringing focus and perspective to a broad topic. A highly qualified group of session chairs and speakers provided a wealth of information and contributed substantially to the richness of the dialogue. Their names are listed in the Forum Agenda.

The Institute's Energy and Environment Program acknowledges and thanks our sponsors for their very important financial support. Without their generosity and commitment to our work, the Forum and other projects of the Program could not continue. Contributions were received during the past year from the following:

AEP Corporation	Lighthouse Consulting
Alstom Power	Group
American Petroleum Institute	National Rural Electric Cooperative Association
The Boyd Foundation	PEPCO
Center for International Energy & Environmental Policy, University of Texas at Austin	R.W. Beck
Duke Energy	Sempra Energy
Edison Electric Institute	Sierra Pacific Resources
Gas Technology Institute	Sullivan & Worcester
	Thelen Reid Brown Raysman & Steiner
	Van Ness Feldman
	Victus Capital

Laura Hermann of Potomac Communications Group served as rapporteur for the Forum, skillfully extracting the major themes and illustrative points from a wealth of excellent presentations and complicated discussions and summarizing them in a readable text.

Administrative preparations and arrangements in Aspen were admirably handled by Timothy Olson. His hard work and attention to detail were responsible for a pleasant and smoothly run meeting. Along with the participants, I am grateful for his conscientious effort.

This report is issued under the auspices of the Aspen Institute, and neither the Forum speakers, participants, nor sponsors are responsible for its contents. Although it is an attempt to represent views expressed during the Forum, all views expressed were not unanimous. The conclusions in the first chapter and at the beginning of succeeding chapters were overwhelmingly but not always unanimously endorsed by those attending the final session of the Forum. Not everyone was able to attend that session and participants were not asked to agree to the exact wording of the conclusions.

John A. Riggs
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NEW OPPORTUNITIES**

Laura Hermann
Rapporteur

Overarching Conclusions

- **Current energy systems cannot be sustained.**

There are disagreements about the timing of “peak oil” and the speed at which a transition to new fuels will have to occur. Regardless, the world faces a massive challenge in responsibly addressing the “liquid fuels problem,” particularly in light of the need to stabilize greenhouse gas emissions. The transition to new liquid fuels is inevitable, and the sooner the energy industry makes this transition, the less disruptive it will be.

The climate change problem is real. The United States must develop mandatory limits and incentives for the reduction of carbon emissions. A deliberate process to develop such a system can prevent unintended consequences and avoid more drastic or expensive action later. Reducing carbon emissions will involve many complex tradeoffs, and action must be both urgent and thoughtful.

- **Technology is important, but R&D is not enough.**

There is no “silver bullet,” but promising technologies can make important cumulative contributions to reducing carbon emissions and enhancing energy security.

To benefit from emerging technologies, decision makers should:

- Increase support for basic and applied energy research and development,
- Explore new models to enhance innovation,
- Undertake needed technology demonstration, and
- Provide policy support for technology deployment.

• Energy productivity offers the best point to begin to enhance energy security and to address carbon concerns.

The United States lags behind the rest of the industrialized world in the amount of economic benefit derived from each unit of energy it uses. Whether it is called conservation, energy efficiency or something else, improving energy productivity is generally the least disruptive and least expensive way to have an impact. It is therefore the place to begin developing sustainable energy systems.

The regulatory, behavioral and institutional impediments to greater energy productivity and efficiency must be addressed.

• Political leadership is required.

Americans deserve more from their political leadership than bromides about “energy independence.” Unachievable in any realistic time frame, a goal of energy independence does not present solutions to today’s energy challenges. It fails to address the challenge of climate change, and it ignores globalization and its interdependencies.

- **Greater public understanding is required to change the nation's approach to energy.**

To confront the intricate relationship between energy and climate, government at all levels, as well as private and public entities in society at large, must make energy education a priority.

- **Society should depend on markets to efficiently carry out policy choices.**

Energy prices will continue to rise and efforts to reduce carbon emissions will add costs. Policymakers and consumers should understand and anticipate these realities. To address these issues, stable, supportive regulatory and incentive structures are essential to attract the needed investment to transform our energy systems.

Regulation should help markets work well, allowing costs to be reflected in prices. Regulation that suppresses prices delays and complicates the unavoidable transition to future energy systems.

APPENDICES

Agenda

Energy: Old Challenges, New Opportunities

Co-Chairs:

Walter M. Higgins, CEO, Sierra Pacific Resources

William W. Hogan, Professor, JFK School, Harvard University

Thursday, July 12

2:30–5:30

SESSION I: Seminars — Timeless Values, Timely Action

SEMINAR A:

“Environment:
How to Choose?”

Moderators: **Elliot Gerson**, Executive VP
for Seminars & Public Programs, Aspen
Institute; and **Jack Riggs**, Senior Fellow,
Program on Energy & Environment,
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SEMINAR B:

“Globalization:
Who Benefits?”

Moderator: **David Monsma**, Executive
Director, Program on Energy & Environment,
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Friday, July 13

8:30–noon

SESSION II: Import Dependence

- Chair: **Phil Sharp**, President, Resources for the Future
- Speakers: **Philip K. Verleger**, PK Verleger LLC Oil dependence
Robert L. Hirsch, SAIC Peak oil
Red Cavaney, CEO, API Interdependence
David G. Victor, Stanford & CFR Natural gas security

1:30–5:00

SESSION III: Electricity Markets – Where Are We

- Chair: **Jon Wellinghoff**, Commissioner, Federal Energy Regulatory Commission
- Speakers: **Phil Harris**, CEO, PJM Interconnection
Elizabeth A. Moler, EVP, Exelon
Susan Kelly, VP and General Counsel, APPA
Larry Kellerman, President, Cogentrix

Saturday, July 14

8:30 – noon

SESSION IV: Electricity Markets – Where Are We Going?

- Chair: **Susan Tomasky**, EVP, AEP Corp.
- Speakers: **James E. Rogers**, CEO, Duke Energy
William W. Hogan, Professor, JFK School, Harvard
Sandra Hochstetter, Chairman, Arkansas PSC
Tim Kingston, Managing Director, Global Power and M&A,
Goldman Sachs
Audrey Zibelman, CEO, Nodal Exchange

Sunday, July 15

8:30 – noon

SESSION V: Possible Solutions?

- Chair: **Hank Courtright**, Senior VP, EPRI
- Speakers: **Dale Klein**, Chair, NRC Nuclear
Brandon Owens, Director, Renewables
 Global Power Group, CERA
Scott Nyquist, McKinsey & Company Demand reduction
James L. Sweeney, Stanford Auto fuel efficiency
Nancy Mohn, Alstom Power Carbon capture and
 storage

Monday, July 16

8:00 – 11:30

SESSION VI — Conclusions

- Chair: **David Garman**, Decker, Garman, Sullivan and Associates

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