

# Compete: Energy

Regional Energy Summit Series

## **Southern Energy Summit** **The Path to Energy Diversification:** Addressing Public Policy, Business and Technological Challenges to Sustainable Energy Supplies

February 13, 2009



**Compete.**

Council on  
Competitiveness

Energy Security, Innovation & Sustainability Initiative

In 2007, the Council on Competitiveness launched the Energy Security, Innovation & Sustainability (ESIS) Initiative to explore the linkages between the United States' need for greater energy security, the global imperative for environmental sustainability and U.S. economic competitiveness at the enterprise and national levels. Through extensive dialogues, the ESIS Initiative brought together high-level experts from industry, labor, academe and the policy community to form conclusions and ideas on how to create the enabling conditions that will stimulate and accelerate private sector innovation and investment in sustainable energy solutions. Leveraging the insights generated at the dialogues and the wisdom of the ESIS Initiative Steering Committee, the Council crafted *Prioritize: A 100-Day Energy Action Plan for the 44th President of the United States*. *Prioritize* was released at the National Press Club on September 9, 2008, and has since had a significant impact in shaping U.S. energy policy and priorities.

In an effort to broaden understanding of the drivers for innovation and investment in sustainable energy solutions in specific areas, the Council is holding a series of four regionally-based energy summits around the United States during the first half of 2009. The Southern Energy Summit was the first in this series.

The following are the highlights and key points captured at the Summit, which was held on February 13, 2009, in Houston, Texas, in conjunction with Cambridge Energy Research Associates (CERA) and CERAWeek 2009.

The Council would like to express its gratitude to: Clarence Cazalot Jr., president and CEO of Marathon Oil Corporation and a member of the ESIS Initiative Steering Committee, for sponsoring and kicking off the first regional summit; Shirley Ann Jackson, president of Rensselaer Polytechnic Institute, vice chairman of the Council and co-chair of the Council's ESIS Initiative, for her leadership and vision in conceptualizing the regional summit series; Robert Estill, vice president for strategic planning and portfolio management at Marathon and an advisor to the ESIS Initiative; the Marathon team for their strong support in planning and executing this event; CERA and its chairman Daniel Yergin for collaborating with the Council; Roger Goodman, senior consultant for CERA, for moderating our discussions; and, with sincere appreciation, each of the expert participants for their insights and contributions.

**Compete: Energy  
Regional Energy Summit Series**

Table of Contents

The Road to the National Energy Summit & International Dialogue	4
Southern Energy Summit Participants List	6
Executive Summary	7
Summit Highlights	
The Energy Innovation Imperative	8
Energy Price Volatility: A Risk to Energy Innovation	10
Energy System Transformation Will Occur in Stages	10
Public-Private Collaboration is Needed	12
The American Recovery and Reinvestment Act: An Important Step Forward on Energy Investment	13
Sowing the Seeds of Sustainability	14
Energy Innovation Snapshot: Sandia National Laboratories	15
Recognizing Shared Roles and Responsibilities	16
About the Council on Competitiveness	19

## Energy Security, Innovation & Sustainability Initiative Regional Energy Summit Series



**February 13, 2009**  
**Houston, TX**

Clarence P. Cazalot Jr., president and CEO of Marathon Oil Corporation, hosted a regional summit on the path to achieving sustainable energy supplies and the impact of the economic stimulus package on U.S. energy security. This meeting was held in concert with *CERAWeek 2009*, the annual conference that brings executives from around the world together to discuss global energy issues.



**April 15, 2009**  
**New Brunswick, NJ**

Ralph Izzo, chairman, president and CEO of Public Service Enterprise Group; and Richard L. McCormick, president of Rutgers, The State University of New Jersey, co-hosted a regional summit on ways to promote energy efficiency in the utility industry and lessons for the nation that can be learned from the rollout of the Regional Greenhouse Gas Initiative (RGGI).



**May 13–14, 2009**  
**Chicago, IL**

James Owens, chairman and CEO of Caterpillar Inc.; Robert Zimmer, president of The University of Chicago; and Eric Isaacs, director of Argonne National Laboratory, co-hosted a regional summit focused on using the Midwest's unique energy resources and infrastructure to reduce greenhouse gas emissions and improve our nation's energy security.

# Compete: Energy

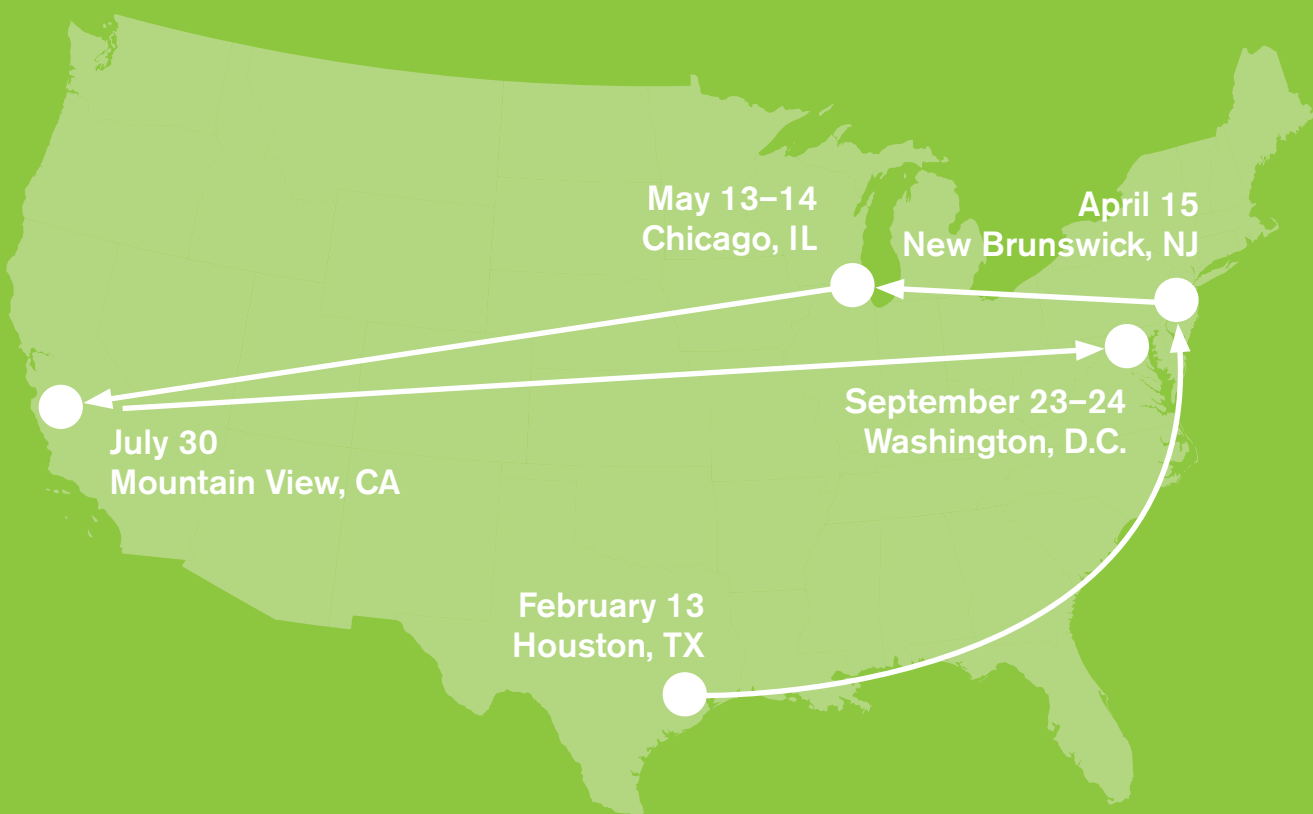
## The National Energy Summit & International Dialogue

**July 30, 2009**  
**Mountain View, CA**

S. Pete Worden, director of NASA Ames Research Center; Mark Yudof, president of the University of California; George Miller, director of Lawrence Livermore National Laboratory; Paul Alivisatos, interim director of Lawrence Berkeley National Laboratory; and Thomas Baruch, founder and managing director of CMEA Capital; co-hosted a regional summit on lessons that can be learned from the successes of California and other western states as front-runners in the development and deployment of sustainable energy technologies.

**September 23–24, 2009**  
**Washington, D.C.**

The Council will convene its top experts in the energy field and representatives from countries around the world to address the interconnected challenges of energy security, innovation and sustainability. The Council's agenda for change will be rooted in a new relationship between the public and private sectors to deal with a defining challenge of the millennium.



# Southern Energy Summit Participants List

## CO-HOSTS

**Clarence P. Cazalot Jr.**  
President and CEO  
Marathon Oil Corporation

**Deborah L. Wince-Smith**  
President  
Council on Competitiveness

## PARTICIPANTS

**Mitchell T. Baer**  
Director  
Office of Oil and Gas Analysis  
U.S. Department of Energy

**Roger J. Goodman**  
Senior Consultant  
Cambridge Energy Research Associates

**John D. Hofmeister**  
Founder and CEO  
Citizens for Affordable Energy

**Thomas O. Hunter**  
Director  
Sandia National Laboratories

**Shirley Ann Jackson**  
President  
Rensselaer Polytechnic Institute

**James Kinnear**  
President and CEO  
Pengrowth Management Limited

**Ziad Labban**  
President and CEO  
Saudi Refining, Inc.

**Joan MacNaughton**  
Senior Vice President, Power and Environmental Policies  
Alstom Power Systems

**Mary Mujica**  
Senior Vice President, LNG Americas  
Shell Gas & Power Americas

**Kenan Sahin**  
Founder and President  
TIAX LLC

**Vic Svec**  
Senior Vice President, Investor Relations and  
Corporate Communications  
Peabody Energy

**William S. Rees, Jr.**  
Former Deputy Under Secretary of Defense  
for Laboratories and Basic Sciences  
U.S. Department of Defense

**Daniel Yergin**  
Executive Vice President and Strategic Advisor  
IHS Inc.

# Executive Summary

**The path to true energy sustainability will not be fast or easy and will require unprecedented cooperation between government, the private sector and the American public.**

More than a dozen energy experts convened in Houston, Texas, on February 13, 2009, for the first in a series of four regionally-based energy summits being held by the Council on Competitiveness. The Southern Energy Summit was hosted by Marathon Oil Corporation, and participants explored the public policy, business and technological challenges to increasing the diversity and sustainability of U.S. energy supplies.

There was strong consensus that no single form of energy can satisfy the projected doubling, if not tripling, of demand by the year 2050 while also meeting pressing environmental challenges, including climate change. Innovative technology such as carbon capture and storage, new mitigation techniques and alternative forms of energy must all be brought to bear.

However, unlike breakthroughs in information technology, advancing broad-based energy innovation requires an enormous scale that must be factored into any equation that represents an energy solution.

Further, the time frame for developing alternative forms of energy is much longer than many believe and is not understood by the general public, whose support for sustainability is critical. Some panelists estimated that it will take more than 50 years to achieve the vision of an energy system that is locally tailored and has tremendous diversity in generation. A long-term commitment to energy sustainability

may also require some game-changing strategies that calm volatile energy markets and avoid political cycles. Taking a page from U.S. economic history, one panelist suggested the creation of an independent Federal Energy Reserve Board not unlike the Federal Reserve. The board would be independent and influence national decisions on energy supply, technology, infrastructure and the nation's carbon footprint to better calm the volatile energy market.

Public-private efforts are critical. Energy sustainability will require partnerships with the federal government, such as the U.S. Department of Energy's National Laboratories, that can provide real-world improvements in both the short- and long-term. Indeed, the roles of government and the private sector in energy sustainability were brought into sharper focus by the pending American Recovery and Reinvestment Act of 2009, also known as the economic stimulus bill. There was cautious optimism that the bill was moving the nation in the right direction by way of focusing on greater energy efficiency, alternative forms of energy and improved infrastructure. Nevertheless, there was concern over Congress picking energy winners and losers. Instead, Congress should challenge industry to produce solutions that will create a clear path forward to energy sustainability that the American people can support.

# Southern Energy Summit Highlights

## The Energy Innovation Imperative

Council on Competitiveness President Deborah L. Wince-Smith opened the morning's session by identifying three building blocks of competitiveness: innovation capacity, enterprise resiliency and sustainability.

Noting the nexus between energy, resiliency and the climate change imperative, she said that this is "one of the most important issues of our time that will not just drive our prosperity, but the future security and capabilities of the world, from the developing to the developed world."

A fundamental question is whether both energy security and energy sustainability can be achieved, or if there is an either/or proposition. The panel members pointed to obvious "tensions" between the two. For example, coal is the most "secure" fuel in the United States. It produces more than 48 percent of the electricity in the United States and unlike oil, provides a healthy five to ten billion dollar trade surplus. As Vic Svec, senior vice president for investor relations and corporate communications at Peabody Energy, noted, coal is an extremely important part of the nation's "asset base." Yet, coal is relatively carbon intensive which raises strong environmental questions about sustainability.

Innovation will provide some real-world solutions. Efforts are underway today to improve carbon capture and storage (CSS), which will move the nation from "clean coal" to so-called "green coal"—a major leap that goes beyond cutting particulate matter and sulfur to making major reductions in CO<sub>2</sub> emissions.



"In September 2008, the Council released a 100-day action agenda for the new president and the new Congress, and embedded in that action agenda were six key recommendations. Among them were recommendations that the federal government begin to draw the market to higher efficiency standards through its procurement of goods and services, retrofits for buildings and so forth; that there be a level playing field for the development of all energy sources; that there be a clean energy bank created for long-term debt financing for private investment in sustainable energy solutions; that investment in energy R&D and commercialization be ramped-up dramatically; that we clear the way for the creation of a national transmission superhighway; and that there be a focus on developing the green workforce.

If one looks at the emerging stimulus package, we are actually quite pleased that a number of the Council's recommendations essentially are reflected in that legislation, including a focus on the electrical grid."

**Shirley Ann Jackson**

Rensselaer Polytechnic Institute



*Vic Svec, Peabody Energy*

"It won't be easy. It won't be inexpensive, but it will be done in a way that satisfies society, and it needs to be done," concluded moderator Roger J. Goodman, a senior consultant at Cambridge Energy Research Associates.

Government, private industry and the academic community should all play a role in developing this new technology. The Obama administration has been discussing the need for five large demonstration projects to commercialize CSS. Similar projects are already taking shape in other parts of the world, such as China and Australia.

However, Kenan Sahin, founder and president of TIAX LLC, argued that with so much focus on CSS, not enough attention is being paid to financing



*Kenan Sahin, TIAX LLC*

related projects. "There are many ideas to reduce the effects of carbon dioxide in the atmosphere, yet there is very little funding for them," he said.

Sahin also observed that most people confuse energy innovation with IT innovation. The difference is scale. Five people can come together and write a piece of software that can revolutionize information technology, but the same cannot be said about energy storage or an energy production facility. Scale is an enormous concern that must be factored into any equation that represents an energy solution.

In Sahin's view, a "free for all" approach to innovation could diffuse efforts. Energy innovation calls for what he characterized as "more directed" innovation in which research efforts are focused to achieve specific outcomes.

### Energy Price Volatility: A Risk to Energy Innovation

The panelists expressed concern that the recent sharp drop in oil prices could harm innovation in alternative energy as some investors walk away from forward-thinking technologies, believing there will not be a good return on investment.

“There is nothing worse for innovation than complacency. Low oil, natural gas and coal prices can take the edge off of financing the development of new technology,” warned Goodman. The same may be true for individual attitudes. Four-dollars-a-gallon gas prices drove many people away from their SUVs to more fuel efficient cars or mass transportation. Goodman questioned whether today’s lower gas prices will bring them back, reversing a very environmentally-positive trend.

### Energy System Transformation Will Occur in Stages

Alternative forms of energy have long development timelines—far longer than most people currently anticipate.

For example, if one looks at the history of energy development and use in the United States—all the way up the hydrocarbon chain, from wood to coal to oil and natural gas—one will see that it took years for a real shift in energy supply to occur. From the inception of oil consumption, it took 50 years for oil to provide 10 percent of overall energy requirements and another 25 years to supply a quarter of U.S. energy use. The same holds true with natural gas.

William S. Rees, Jr., former deputy under secretary for laboratories and basic sciences at the U.S. Department of Defense, puts energy sustainability into three buckets: short-term, mid-term and long-

“We are really missing the boat on energy efficiency. There is so much more we could do near-term without large investment, without really needing new technologies. Technologies are out there on the shelf and simply need to be encouraged and perhaps incentivized a bit so that a great deal can be done.



I want to use the example of what’s been done here in the City of Houston, because we have a mayor who is very aggressive in terms of energy efficiency and sustainability. He gave some statistics the other night that Houston, the fourth largest U.S. city, has grown at a faster rate—in both percent and absolute terms—than virtually every other city in the United States, and something like 16 states.

And yet, in that time frame, electricity consumption has actually gone down, and the city has diversified the purchases of electricity to the point where 40 percent of Houston’s electricity today comes from wind power.

My point is: this is one city led by one mayor who’s doing far more than is being done in most other places, and yet it’s all available to us. So, there’s a lot more can be done with a short-term impact that could be achieved.”

**Clarence Cazalot Jr.**  
Marathon Oil Corporation



*Roger J. Goodman, Cambridge Energy Research Associates*

term. In the short-term—three to five years—there will probably be very little difference in the mix of how energy is generated. However, there could be some marginal improvements by mitigating impacts. In the mid-term—the 10-50 year window—he sees growth in nuclear power generation, especially if forecasts of increased world populations and per capita consumption in developing nations hold true. Fifty years plus, the energy system would bear little resemblance to today's system. It would have tremendous diversity in generation and would be locally tailored. One size would not fit all.

In the short-term, some experts foresee some real problems with the pace of energy efficiency efforts. During the past 20 to 30 years, there have been some incredible gains in energy efficiency in the U.S. residential sector. However, demand is outstripping these gains. Heating and air conditioning systems are more efficient, but as Goodman noted, "We're growing our electricity uses" through things such as plasma TVs and outdoor lighting.



*John D. Hofmeister, Citizens for Affordable Energy*

Affordable Energy noted that establishing non-volatile energy security will not work on a two- or four-year election cycle. Taking a page from U.S. economic history, he argued that the nation maintains financial stability, even in challenging economic times, through independent bodies with long-term interests.

Indeed, the need to ease financial and fiscal volatility drove the creation of the Federal Reserve system 95 years ago. The Fed has set monetary guidelines and has helped the U.S. maintain economic stability. Just as the Federal Reserve can calm volatility by controlling interest rates, maintaining an open market window and creating money, a Federal Energy Reserve Board could calm a volatile energy market by controlling supply, focusing resources on technology and infrastructure and setting goals for reducing the nation's carbon footprint. Hofmeister sees such a board as an independent body with presidential appointees coming from various sectors and appointed for seven-year terms.

### Public-Private Collaboration is Needed

Mary Mujica, senior vice president of LNG Americas for Shell Gas & Power Americas, saw three hard truths about meeting the energy challenge in an economically, socially and environmentally responsible way.

The first is that the world will require every type of energy supply to meet a projected doubling if not trebling of energy needs by 2050. Second, supply will be difficult to keep up with demand, and moving into renewables will take time. Third, all this demand will place a strain on the environment.

Her solution: “The public and private sectors must work together and demonstrate ways where we can be innovative.” This will require government participation at all levels, enacting appropriate legislation to move us down that desired path to achieving sustainable energy security.

Wrapping around to the original question of how to achieve sustainable energy security, Ziad Labban, president and CEO of Saudi Refining, Inc., took a broader view. He argued that the only time you get everybody working together to change is when you have a crisis, such as the dramatic and steep rise of oil prices in 2008. That crisis also begat opportunities. People started to work together to become more efficient in their energy utilization and looked for other opportunities and solutions. “I think the challenge in trying to reach sustainability is to start talking to each other,” he concluded.

Clearly, policy-driven solutions that drive both security and sustainability require collaboration between private and public stakeholders. While there are



*Joan MacNaughton, Alstom Power Systems*

many energy sources, investments are needed to get the energy to consumers in a usable form, which requires infrastructure. The pathway to security and low-carbon energy is to focus the private sector on doing what it does best, with a market that provides incentives for innovation.

As Joan MacNaughton, senior vice president for power and environmental policies at Alstom Power Systems, noted, “We’re not going to manage this through the market alone. Energy security has public benefits which individual companies are not equipped to deliver, but are absolutely essential to everybody.”



Mary Mujica, Shell Gas & Power Americas

### **The American Recovery and Reinvestment Act: An Important Step Forward on Energy Investment**

There is growing concern today that the momentum toward energy security and sustainability may slow due to the current global economic crisis. However, for the short-term, there was cautious optimism that the economic recovery legislation could produce some positive outcomes and keep the United States moving steadily forward on the bridge to the future.<sup>1</sup>

“We’re very fortunate that a number of the elements that are coming out of the stimulus bill are absolutely moving us in the right direction in terms of energy efficiency, biofuels and infrastructure around the smart grid,” said Clarence Cazalot Jr., president and CEO of Marathon Oil Corporation. These actions are also in concert with the 100-day energy action plan that the Council put forth in September 2008.

There was general concern that Congress will get in the game of picking winners and losers, such as solar versus nuclear, or folding the energy crisis into the economic crisis. Goodman advocated a multi-pronged approach. “There is no silver bullet,” he said. In addition to carbon capture and storage, the nation also has to look at the full range of zero-carbon fuels, such as nuclear, hydroelectric and renewable power.

Hope was expressed that eventually there would be a fact-based, comprehensive, five- to ten-year energy plan that identifies where the nation wants to be and how to work together to get there. Mujica thought the stimulus bill is heading in the right direction but that more needs to be done, which is why Shell continues to invest billions in capital expenditures in search of energy.

Thomas Hunter, director of Sandia National Laboratories, thought the stimulus bill will do two things. First, it will provide the market with more confidence and stability. Second, it will allow for investment in infrastructure. The nation needs confidence that its infrastructure systems—much of which are ancient and fragile—will continue to support the economy. For example, in 2003 a tree limb fell on power lines in Ohio, and for 36 hours there was no power in the Northeastern United States and Eastern Canada, costing the region billions of dollars.

1. The American Recovery and Reinvestment Act of 2009 was passed by Congress and signed into law on February 17, 2009.



*Thomas O. Hunter, Sandia National Laboratories; Shirley Ann Jackson, Rensselaer Polytechnic Institute; Deborah L. Wince-Smith, Council on Competitiveness; Clarence P. Cazalot Jr., Marathon Oil Corporation; Roger J. Goodman, Cambridge Energy Research Associates; Kenan Sahin, TIAX LLC; and James Kinnear, Pengrowth Management Limited.*

### **Sowing the Seeds of Sustainability**

Real energy sustainability and climate change solutions could take 50 years to fully accomplish. According to Goodman, the United States has been sowing a lot of seeds for the past five years. However, “we’ve got to get those seeds. They have to be fertilized.” But what about the long-term?

Although there is a clear tie between the stimulus bill and innovation, Goodman asked if all the activity around solar, wind and renewables will turn out to be a short-term bubble. There is a concern that while it is critical to get things moving quickly, long-term energy goals must not be forgotten.

On a positive note, the federal government is taking action beyond the stimulus bill. The U.S. Department of Energy’s (DOE) Mitchell Bayer stated that energy efficiency and emerging technologies already have a home at DOE and within the structure of the national laboratories.

## Energy Innovation Snapshot

# Sandia National Laboratories

Among America's assets are DOE's National Laboratories, which perform research and development "that is not well suited to university or private sector research facilities because of its scope, infrastructure requirements or multidisciplinary nature, but for which there is a strong public and national purpose." Hunter told the summit that the nation's 17 national laboratories represent a combination of values and capabilities.

"The laboratories' capabilities are largely scientific, with the ability to produce fundamental breakthroughs," he observed. Hunter said that Sandia is focusing on "small smart things" such as the integration of microelectronics and micromachines—"things that you can't see that do things you can't believe." They are also engaged in the new wave of engineering and science—high fidelity predictive simulation on supercomputers. These simulation techniques are being heralded as the third leg of science, beyond theory and experimentation.

Such efforts produce real-world applications beyond the laboratories' core mission of nuclear deterrence. For example, Sandia worked closely with The Goodyear Tire & Rubber Company. Together, using Sandia high performance simulation software adapted for tire applications, the company transformed from



*Thomas O. Hunter, Sandia National Laboratories*

a test-based to a computation-based design culture. This capability enables Goodyear to take novel tire designs from concept to market in less than a year.

"The values that we have at the laboratories start with national service. It's a place where people come and say 'I'm a scientist, I'm an engineer' and in some cases, 'I'm a manager, administrator. I want to commit myself to national service and look at a wide variety of applications, not for my own interest, but for the interest of something bigger and stronger around the country,' " he observed. "They represent excellence in science and technology."



*William S. Rees, Jr., formerly with the U.S. Department of Defense*

There are also programs in DOE's offices of Energy Efficiency and Renewable Energy and Fossil Energy addressing CCS and other new technologies. U.S. Secretary of Energy Steven Chu has indicated that climate change and emerging technologies will be a focus while he is leading the Department.

### **Recognizing Shared Roles and Responsibilities**

Rees asked what should the Department of Defense (DOD) do in this area. Why should innovation be in it? And why should the Council on Competitiveness be involved?

First, he believes that it is impossible to "decouple" national security and energy security. Second, DOD, through the Defense Advanced Research Projects



*Deborah L. Wince-Smith, Council on Competitiveness*

Agency (DARPA), has a rich history of innovation. Third, the Council offers the right venue for this discussion. It brings stakeholders from across the globe and the entire spectrum of interests.

Looping back to the problem of government picking winners, participating experts expressed the strong sentiment that the government should not pick "paths." Rather, the government should set high-level, national goals with dates to reach them. This will pose challenges to stimulate the economy to produce solutions. If correctly framed, regulation does not have to be anathema to industry.

In the case of delivering ultra-low sulfur diesel, regulation stimulated innovation. "The industry doubled-down and developed new technologies in a cost-effective fashion," observed Sahin. Enhanced

Corporate Average Fuel Economy (CAFE) standards and the Partnership for a New Generation of Vehicles (PNGV) also improved efficiency and fostered new ideas and concepts.

Hunter added that the regulatory atmosphere should not be adversarial. “We’re in this together. Let’s do it right, and let’s not be punitive. Let’s find a path forward,” he said.

Of great concern is the general public’s lack of knowledge about climate change and sustainability. Grassroots movements have been crucial to solving some of the nation’s biggest problems—from civil rights to the environment.

Hofmeister believes that “grassroot efforts with respect to energy and the future of our environment will come from our citizens, but only if we take the time to communicate and to educate on a sustained basis.”

Lastly, there was consensus on the need to make the development of the nation’s “intellectual capital” part of the sustainability agenda. It is critical for more students to enter science and engineering programs.

Wince-Smith concluded the session by summarizing the discussion: all energy sources must be part of the national energy “portfolio,” and fossil fuels will be part of that portfolio for many years, but in a more sustainable form. It is critical to reduce energy market volatility. The nation must deal with the different time frameworks from the short to the long term and the scale and scope of the investments. And collaboration must occur between the public and private sector.



*The Southern Energy Summit was held in conjunction with CERAWeek 2009. The Council was delighted that Daniel Yergin, chairman of CERA, was able to spend a few moments with participants at the conclusion of the Summit program. Yergin shared some off-the-record comments on highlights from CERA’s events.*



Robert Estill, Marathon Oil Corporation (left).



Ziad Labban, Saudi Refining, Inc.



Mitchell T. Baer, U.S. Department of Energy.



Experts from industry, academia, government and labor had several opportunities to pose questions to Summit participants.

## About the Council on Competitiveness

### WHO WE ARE

The Council's mission is to set an action agenda to drive U.S. competitiveness, productivity and leadership in world markets to raise the standard of living of all Americans.

The Council on Competitiveness is the only group of corporate CEOs, university presidents and labor leaders committed to ensuring the future prosperity of all Americans and enhanced U.S. competitiveness in the global economy through the creation of high-value economic activity in the United States.

### Council on Competitiveness

1500 K Street, NW  
Suite 850  
Washington, DC 20005  
T 202-682-4292  
Compete.org

### HOW WE OPERATE

The key to U.S. prosperity in a global economy is to develop the most innovative workforce, educational system and businesses that will maintain the United States' position as the global economic leader.

The Council achieves its mission by:

- Identifying and understanding emerging challenges to competitiveness
- Generating new policy ideas and concepts to shape the competitiveness debate
- Forging public and private partnerships to drive consensus
- Galvanizing stakeholders to translate policy into action and change

### FOR MORE INFORMATION

Susan Rochford  
Vice President, Energy and Sustainability Initiatives  
T 202 969 3384  
SRochford@compete.org  
[www.compete.org/about-us/initiatives/esis](http://www.compete.org/about-us/initiatives/esis)

The Council on Competitiveness launched the Energy Security, Innovation & Sustainability (ESIS) Initiative in July 2007 with the firm belief that the crucial role of the private sector demand in driving the way America produces and uses energy has gone largely unrecognized in prior policy initiatives. The ESIS Initiative, which was called for in the Council's 2004 seminal report *Innovate America*, is led by a CEO-level steering committee comprised of approximately 40 chief executives from U.S. industry, academia, government laboratories and organized labor. The distinguished steering committee is led by James W. Owens, chairman and CEO of Caterpillar Inc.; Shirley Ann Jackson, president of Rensselaer Polytechnic Institute; and D. Michael Langford, national president of the Utility Workers Union of America, AFL-CIO. The goal of the Initiative is to enhance U.S. competitiveness and energy security by developing a public-private action agenda to drive private sector demand for sustainable energy solutions and create new markets, industries and jobs. It is underwritten by the U.S. Department of Energy and has benefited from the guidance of more than 200 executive-level energy experts.

Council on Competitiveness  
1500 K Street, NW, Suite 850, Washington, D.C. 20005 T 202 682 4292  
Compete.org



**Compete.**

**Council on  
Competitiveness**