

Transforming the Transportation Sector: Energy Security, Climate Change and Transportation

**Monday, June 8, 2009
9:00 am – 1:30 pm**

**CSIS B1B Conference Room
1800 K Street, NW
Washington, DC 20006**

The transportation sector sits at the intersection of energy security and climate change policy decisions. Since petroleum based fuels power approximately 95 percent of the U.S. transportation sector, concerns over oil supply security and price argue for a more diversified fuel base. However, given existing infrastructure and the size of the current automotive fleet, finding a scalable and cost effective replacement for oil is an expensive proposition that may raise new security as well as other concerns. On the climate side, the transportation sector accounts for 25 percent of greenhouse gas (GHG) emissions, but models suggest that the most cost-effective GHG reductions exist primarily in the electricity sector. Consequently, it is quite plausible that even economy-wide climate policy will leave the transportation sector largely carbon-intensive in the next several decades and largely dependent on oil absent adequate complementary policies such as vehicle and fuel performance standards as well as infrastructure and incentives aimed at moderating travel demand.

The current U.S. transportation system is the product of decades of significant private and public sector investment. The public and private sector will need to make major new investments to ensure reliable and affordable transportation services while transforming the sector. Transforming the transportation sector requires policymakers to examine the full spectrum of policy decisions that influence the current and future system. This includes fuel and vehicle options as well as infrastructure, planning, and behavioral changes. This session will examine the energy security and climate implications of our current transportation system, as well as some of the options for transforming the transportation sector to something more sustainable.

PROGRAM

- 9:00-9:45 Opening Address
Beth Osborne, Deputy Assistant Secretary for Policy, U.S. Department of Transportation
- 9:45-10:00 Overview: Future Trends and Challenges in Transportation
Frank Verrastro, Director and Senior Fellow, Energy and National Security Program, CSIS
- 10:00 – 11:30 Panel I: Alternative Transportation Options: Fuels and Vehicles
Moderator: **Doug Arent**, Director, Strategic Energy Analysis Center, National Renewable Energy Laboratory
- Speakers:*
Anup Bandivadekar, Passenger Vehicle Program Lead, International Council on Clean Transportation
- Jim Burkhard**, Managing Director, Global Oil Group, Cambridge Energy Research Associates
- Robbie Diamond**, Founder and President of Securing America's Future Energy
- 11:30- 12:00 Buffet Lunch
- 12:00 -1:30 Panel II: Transportation Infrastructure, Planning and Behavior
Moderator: **Sarah Ladislaw**, Fellow, Energy and National Security Program, CSIS
- Speakers:*
Robert Puentes, Senior Fellow, Metropolitan Policy Program, Brookings Institute
- The Honorable Slade Gorton**, Co-chair, National Transportation Policy Project Bipartisan Policy Center
- Deron Lovaas**, Federal Transportation Policy Director, Natural Resources Defense Council

Speaker Biographies

Doug Arent, Director, Strategic Energy Analysis Center, National Renewable Energy Laboratory

Doug Arent is director of the Strategic Energy Analysis Center (SEAC) with the National Renewable Energy Laboratory (NREL). He specializes in strategic planning and financial analysis competencies; clean energy technologies and energy and water issues; and international and governmental policies. In addition to his NREL responsibilities, Arent is a member of the U.S. Government Review Panel for the IPCC Reports on Climate Change and is a Senior Visiting Fellow at the Center for Strategic and International Studies. Arent is on the Advisory Board of E+Co, a public-purpose investment company that supports sustainable development across the globe. He serves on the Chancellor's Committee on Energy, Environment and Sustainability Carbon Neutrality Group, and on the Advisory Board of the Energy and Environmental Security Institute, University of Colorado. Arent was the chair of the Quantitative Work Group in support of the Clean and Diversified Energy Advisory Council of the Western Governors' Association. Prior to coming to NREL, he was a management consultant to clean energy companies, providing strategy, development and market counsel. Previous positions held include director of strategic marketing and business development at Network Photonics, director of Media Gateway Products and strategic planning manager at Lucent Technologies (now Avaya), and vice president of business development for Amonix Inc. Arent has a Ph.D. from Princeton University, an MBA from Regis University, and a bachelor's of science from Harvey Mudd College in California.

Anup Bandivadekar, Passenger Vehicle Program Lead, International Council on Clean Transportation

Anup Bandivadekar is currently the passenger vehicle program lead with the International Council on Clean Transportation (ICCT). His interests are focused around developing frameworks and methods to foster innovative solutions towards achieving a more sustainable energy and transportation system. At the ICCT, Dr. Bandivadekar's work is aimed at reducing air pollution and greenhouse gas emissions from passenger vehicles globally. Previously, Anup was a postdoctoral fellow in the Sloan Automotive Laboratory at the Massachusetts Institute of technology (MIT), where he evaluated vehicle and fuel technologies that can significantly reduce greenhouse gas emissions and petroleum consumption from the U.S. light-duty fleet over the next thirty years. He holds a Bachelor of Engineering degree from University of Mumbai and a Master of Science Degree from Michigan Technological University in the field of Mechanical Engineering as well as a Master of Science in Technology and Policy and a Ph.D. in Engineering Systems from MIT. James Burkhard, Managing Director of IHS CERA's Global Oil Group, leads the team of IHS CERA experts that analyze and assess upstream and downstream business conditions and strategies. His team also develops and maintains detailed short- and long-term outlooks for global crude oil and refined products markets. Mr. Burkhard's expertise covers geopolitics, world economic conditions and global oil demand and supply trends. He works closely with IHS CERA clients in assessing how market, economic, and political risks could change the competitive environment. He also works with companies to assess business opportunities in both the upstream and downstream sectors.

Jim Burkhard, Managing Director, Global Oil Group, Cambridge Energy Research Associates

Mr. Burkhard was the project director of Dawn of a New Age: Global Energy Scenarios for Strategic Decision Making—The Energy Future to 2030, the most comprehensive study that IHS CERA has ever undertaken, encompassing the oil, gas, and electricity sectors. He was also the director of the IHS CERA Multiclient Study Potential versus Reality: West African Oil & Gas to 2020. He is also the coauthor of CERA's respected World Oil Watch, which analyzes short- to medium-term developments in the oil market. In addition to leading CERA's oil research, Mr. Burkhard served on the US National Petroleum Council (NPC) committee that provided recommendations on US oil and gas policy to the US Secretary of Energy. He led the team that developed demand-oriented recommendations that were published in the 2007 NPC report *Facing the Hard Truths About Energy*. Before joining CERA, Mr. Burkhard was a member of the United States Peace Corp in Niger, West, Africa. He directed infrastructure projects to improve water availability and credit facilities. He was a field operator for Rod Electric. Mr. Burkhard holds a BA from Hamline University and an MS from the School of Foreign Service at Georgetown University.

Robbie Diamond, Founder and President of Securing America's Future Energy

Robbie Diamond is the Founder and President of Securing America's Future Energy (SAFE), a nonpartisan, not-for-profit organization committed to reducing America's dependence on oil and improving U.S. energy security in order to bolster national security and strengthen the economy. Since founding SAFE, Mr. Diamond has worked to find new ways to influence the energy security debate. In 2006, he came together with Frederick W. Smith, Chairman, President, and CEO of FedEx Corporation, and General P.X. Kelley, USMC (Ret.), 28th Commandant of the Marine Corps, to form SAFE's Energy Security Leadership Council, a group of prominent business leaders and retired senior military officers dedicated to addressing the economic and security aspects of oil dependence. In December 2006, the Council released a comprehensive report entitled Recommendations to the Nation on Reducing U.S. Oil Dependence; a year later, Congress passed and the President signed into law groundbreaking legislation that closely mirrors major elements of the Recommendations.

In 2008, the ESLC released A National Strategy for Energy Security, a new, comprehensive plan that offers the public and policymakers specific solutions to the very real threats posed by our nation's dependence on oil. The National Strategy lays out the pathway toward a long-term goal of an electrified transportation system that is no longer dependent on oil, along with the interim policies needed to reach that goal while keeping our economy and our nation strong and secure. Prior to founding SAFE, Mr. Diamond served as Deputy Director of Community Outreach on Senator Joe Lieberman's 2004 presidential campaign. Before that, Mr. Diamond was a Director at the Washington firm Fontheim International LLC, working in all practice areas of the firm. Prior to coming to Washington, he worked with senior executives at Seagram Spirits and Wine Group on special projects.

Mr. Diamond earned an Honours Bachelor of Arts from the University of Toronto in Peace and Conflict Studies and Political Science, as well as a Master of Arts in Law and Diplomacy from The Fletcher School. He lives in Washington, D.C., with his wife and three daughters.

The Honorable Slade Gorton, Co-chair, National Transportation Policy Project Bipartisan Policy Center

Slade's dedication to public service began in 1959 when he was elected to the Washington State House of Representatives where he served for ten years, including the last two as Majority Leader.

In 1969, Slade was sworn in as the state's Attorney General, a post he would hold for three terms. Gorton's illustrious career as Washington Attorney General saw him argue fourteen cases before the United States Supreme Court (1973-1980), prompting Chief Justice Warren Burger to comment: "[Slade Gorton] makes the best arguments before the Supreme Court of any Attorney General in America."

Slade's most popular achievement as Attorney General was a successful suit against the American League in 1979 to keep major league baseball in Seattle. To this day, Slade Gorton is remembered by fans across the state for 'Saving the Mariners.'

Slade served one term in United States Senate from 1980 until 1986. He was returned to the Senate in 1988 and served two more terms. His time in the Senate saw him appointed to powerful committee posts including Appropriations, Budget, Commerce, Science and Transportation, and Energy and National Resources. He served as the Chairman of the Interior Appropriation Subcommittee (1995-2001), the Commerce Subcommittee on Consumer Affairs (1995-99), and Aviation (1999-2000). He was a member of the Republican leadership as counsel to the Majority Leader (1996-2000).

Slade joined Preston Gates & Ellis LLP (now K&L Gates LLP) in 2001 as of counsel. He served on the National Commission on Federal Election Reform in 2001 and in 2002 was appointed to serve as a Commissioner on the National Commission on Terrorist Attacks Upon the United States. In November 2005, Slade was appointed to serve on BP Refineries Independent Safety Review Panel. In 2007, Slade was appointed to serve on the National War Powers Commission and the Bipartisan Policy Center's National Transportation Policy Project.

Sarah Ladislaw, Fellow, Energy and National Security Program, CSIS

Sarah Ladislaw is a fellow in the CSIS Energy and National Security Program, where she concentrates on the geopolitical implications of energy production and use, energy security, energy technology, sustainable development, and climate change. She has been involved with CSIS's work on the geopolitics portion of the National Petroleum Council study, focusing particularly on energy security and climate issues. She has also worked on the implications of global energy trends, prospects for greater energy integration, U.S. leadership on climate change, and carbon management strategies and technologies.

Ladislaw joined the Department of Energy (DOE) in 2003 as a presidential management fellow, and from 2003 to 2006 worked in the Office of the Americas in DOE's Office of Policy and International Affairs, where she covered a range of economic, political, and energy issues in North America, the Andean region and Brazil. While at the department, she also worked on comparative investment frameworks and trade issues, as well as biofuels development and use both in the Western Hemisphere and around the world. Ladislaw received her bachelor's degree in international affairs/East Asian studies and Japanese from the George Washington University in 2001 and her master's degree in international affairs/international security from the George Washington University in 2003 as part of the Presidential Administrative Fellows Program.

Deron Lovaas, Federal Transportation Policy Director, Natural Resources Defense Council

Deron Lovaas is the Federal Transportation Policy Director for NRDC. He has worked at the intersection of transportation, energy and environmental policy for fifteen years and recently served as the chief strategist for major bipartisan oil savings policy and the 2005 federal transportation bill. Deron has authored numerous analyses, reports and articles and has his own blog at <http://switchboard.nrdc.org/blogs/dlovaas>. Before his seven years at NRDC, Deron worked, among other places, for the National Wildlife Federation, the Sierra Club and Maryland's Department of Environment. Deron is a graduate of the University of Virginia who grew up in other countries including Honduras, Panama and Niger.

Robert Puentes, Senior Fellow, Metropolitan Policy Program, Brookings Institute

Robert Puentes is a senior fellow with the Brookings Institution Metropolitan Policy Program where he also directs the Program's Metropolitan Infrastructure Initiative. The Initiative was established to address the pressing transportation and infrastructure challenges facing cities and suburbs in the United States and abroad. Robert's work focuses on the broad array of policies and issues related to metropolitan growth and development. He is an expert on transportation and infrastructure, urban planning, growth management, suburban issues and housing. He is a frequent speaker to a variety of groups, a regular contributor in newspapers and other media, and has testified before Congressional committees.

Frank Verrastro, Director and Senior Fellow, Energy and National Security Program, CSIS

Frank Verrastro is director and senior fellow in the CSIS Energy and National Security Program. He has extensive energy experience, having spent 30 years in energy policy and project management positions in the U.S. government and the private sector. His government service includes staff positions in the White House (Energy Policy and Planning Staff) and the Departments of Interior (Oil and Gas Office) and Energy (Domestic Policy and International Affairs Office), including serving as director of the Office of Producing Nations and deputy assistant secretary for international energy resources. In the private sector, he has served as director of refinery policy and crude oil planning for TOSCO (formerly the nation's largest independent refiner) and more recently as senior vice president for Pennzoil. Responsibilities at Pennzoil included government affairs activity, both domestic and international, and corporate planning, risk assessment, and international negotiations. In addition, he served on the company's Executive Management and Operating Committees, as well as the Environmental, Safety, and Health Leadership Council. As part of Pennzoil's Caspian Team, he was instrumental in securing approval for the Baku-Supsa pipeline, the precursor to the Baku-Tblisi-Ceyhan project.

Mr. Verrastro holds a B.S. in biology/chemistry from Fairfield University, a master's degree from Harvard University, and he completed the executive management program at the Yale University Graduate School of Business and Management. He has been an adjunct professor at the Elliott School of International Affairs at George Washington University and at the University of Maryland. He served as chair for the Geopolitics and Policy Task Groups for the 2007 National Petroleum Council report, *Hard Truths: Facing the Hard Truths about Energy*, and as a Task Force member for the 2006 Council on Foreign Relations report, *National Security Consequences of U.S. Oil Dependency*. He has authored a variety of papers on energy and security topics and currently serves on the Advisory Board for the National Renewable Fuels Laboratory (NREL) in Golden, Colorado.