

Independent Statistics & Analysis U.S. Energy Information Administration June 17-18, 2013 JW Marriott Washington, DC

Welcome to the 2013 EIA Energy Conference.

This year's conference highlights one of the more dynamic times in energy that I can remember: skyrocketing growth in U.S. oil and natural gas production, principally from shales, which leads to challenges and opportunities here and around the world for suppliers, consumers, policymakers, and, of course, EIA. Your participation in discussions over the next two days is crucial as we begin a dialogue about the forces that are remaking the energy world at an accelerating pace.

We have again this year invited colleagues from both within and outside EIA to present their views on a host of topical energy issues. We look forward to hearing from a distinguished group of speakers who will address topics such as the global natural gas outlook; world hydrocarbon resources; international and domestic outlooks for coal and nuclear power; energy in the Americas; the implications of growth in U.S. oil and natural gas production; alternatives to oil in transportation; integrating renewables, energy storage, and the electricity grid; energy consumption and efficiency of buildings; and issues related to the coverage and quality of international energy statistics.

I hope the discussions we start here can lead to a more informed national and international conversation on energy.

Adam Sieminski, Administrator U.S. Energy Information Administration

Monday, June 17			
7:30 a.m.	Registration, Badging, and Continental Breakfast		
8:45 a.m. Plenary Session - Capitol Ballroom Welcome: Adam Sieminski, Administrator, EIA			
	<i>Keynote Addresses:</i> Dr. Ernest Moniz, United Sta	ites Secretary of Energy	
	Thomas Fanning, Chairman,	, President and CEO, Southern Company	
10:30 a.m.	Coffee Break		
		kers Listed in Alphabetical Order 2. Renewable, Storage, and Grid Integration	
Moderator: Angelina LaRose, EIA		Location: Capitol Ballroom	
Speakers: Jason Bordoff, Columbia University Center on Global Energy Policy Ira Joseph, PIRA Energy Group Wolfgang Moehler, IHS		Moderator: Bill Booth, EIA	
		Speakers: Mark Bolinger, Lawrence Berkeley National Laboratory	
		Craig Glazer, PJM Interconnection, LLC	
		Chris Namovicz, EIA	
12:30 p.m.	Break	·	
12:45 p.m.	Lunch - Grand Ballroom <i>Keynote Address:</i> Hans Rosling, Professor, Kar Gapminder Foundation	olinska Institute and Chairman,	
Location: Moderato Speakers Phani Gad Don Gauti John Staul	drocarbon Resources Grand Ballroom or: Sarah O. Ladislaw, CSIS : de, Wood Mackenzie er, U.S. Geological Survey b, EIA and Vello Advanced Resources	 kers Listed in Alphabetical Order 4. Energy Consumption & Building Efficiency Location: Capitol Ballroom Moderator: Eileen O'Brien, EIA Speakers: Patrick Hughes, National Electrical Manufacturers Association Sukanya Paciorek, Vornado Realty Trust Roland Risser, Energy Efficiency and Renewable Energy, U.S. DOE 	
3·30 n m	Coffee Break		

AGENDA

4:00 p.m. Concurrent Sessions - Speaker 5. Energy in the Americas Location: Grand Ballroom		s Listed in Alphabetical Order 6. Alternatives to Oil in Transportation Location: Capitol Ballroom
Moderator: Shirley Neff, EIA		Moderator: John Maples, EIA
Speakers: John Foran, Natural Resources Canada		Speakers: Dominic DiCicco, Ford Motor Company
Neelesh Nerurkar, U.S. Department of State		Michael Gallagher, Westport Innovations
Ivan Sandrea, Ernst and Young		Ron Gecan, Congressional Budget Office
5:30 p.m. Reception, Networking and EIA Product Demonstrations <i>Tuesday, June 18</i>		
8:00 a.m.	Registration and Continenta	al Breakfast
8:45 a.m. Plenary Session - Capitol Ballroom		
	Keynote Addresses: Aldo Flores-Quiroga, Secret Forum	ary General, International Energy
	Lisa Murkowski, U.S. Senat Senate Energy and Natural	or (Alaska) and ranking member of Resources Committee
9:45 a.m.	Coffee Break	
10:00 a.m.		akers Listed in Alphabetical Order
7. U.S. Natural Gas Production Growth and its Implications		8. Coal and Nuclear: World and Domestic Outlook
Location: Grand Ballroom		Location: Capitol Ballroom
Moderator: Melanie Kenderdine, DOE		
Speakers: Peter Evans, General Electric		Speakers: Jim Diefenderfer, EIA
Katherine Spector, CIBC World Markets		Jamie Heller, Hellerworx
Jim Tramuto, Southwestern Energy Company		Michael Latsko, Westinghouse
11:30 a.m.	Coffee Break	
11:45 a.m. Concurrent Sessions - Speakers Listed in Alphabetical Order 9. U.S. Oil Production Growth and 10. International Energy		
its Implications Location: Grand Ballroom		Statistics: Coverage and Quality Location: Capitol Ballroom
Moderator: Margot Anderson, Bipartisan Policy Center		Moderator: Frank Verrastro, CSIS
Speakers:		Speakers: Antoine Halff, IEA
John Powell, EIA Andrew Slaughter, IHS		Trevor Houser, Rhodium Group
Jan Stuart, Credit Suisse		Andy Kohut, Statistics Canada
1:15 p.m.	Adjourn	

Adam Sieminski *Administrator, EIA*

Plenary Session June 17, 2013 — 8:45 a.m.-10:30 a.m. Location: Capitol Ballroom

Adam Sieminski was sworn in on June 4, 2012, as the eighth administrator of the U.S. Energy Information Administration (EIA). From 2005 until 2012, he was

the chief energy economist for Deutsche Bank, working with DB's global research and trading units. Drawing on extensive industry, government, and academic sources, Mr. Sieminski forecasted energy market trends and wrote on a variety of topics involving energy economics, climate change, geopolitics, and commodity prices. From 1998 to 2005, he served as the energy strategist for Deutsche Bank's global oil and gas equity team.

Prior to that, from 1988 to 1997, Mr. Sieminski was the senior energy analyst for NatWest Securities in the United States, covering the major U.S. international integrated oil companies. From 1971 to 1988, he served in various energy-related roles at the National Journal, the Ford Foundation, and as founder and co-owner of Washington Analysis Corp. In early 2012, while awaiting his Senate confirmation as administrator of EIA, Mr. Sieminski served on the staff of the National Security Council as senior director for energy.

He also was a senior adviser to the Energy and National Security Program at the Center for Strategic and International Studies (CSIS), a nonpartisan policy think tank in Washington, DC. He is a senior fellow and former president of the U.S. Association for Energy Economics, and served as president of the National Association of Petroleum Investment Analysts.

In 2006, U.S. Secretary of Energy Samuel Bodman appointed Mr. Sieminski to the National Petroleum Council (NPC), an advisory group to the secretary of energy, where he helped author the 2007 NPC study, "Facing the Hard Truths about Energy: A Comprehensive View to 2030 of Global Oil and Natural Gas."

In addition to his affiliation with CSIS, he was also an advisory board member of the Global Energy and Environment Initiative at Johns Hopkins University/SAIS. He chaired the Supply-Demand Committee of the Independent Petroleum Association of America, and was an advisory member of the Strategic Energy Task Force of the Council on Foreign Relations. He is a member of the Washington, DC, investment professional society, and holds the Chartered Financial Analyst (CFA) designation. He received an undergraduate degree in civil engineering and a master's degree in public administration from Cornell University.

Dr. Ernest J. Moniz Secretary of Energy

Plenary Session Keynote Speaker June 17, 2013 — 8:45 a.m.-10:30 a.m. Location: Capitol Ballroom



As U.S. Secretary of Energy, Dr. Ernest Moniz is tasked with implementing critical Department of Energy (DOE) missions in support of President Obama's

goals of growing the economy, enhancing security and protecting the environment. This encompasses advancing the President's all-of-theabove energy strategy, maintaining the nuclear deterrent and reducing the nuclear danger, promoting American leadership in science and clean energy technology innovation, cleaning up the legacy of the cold war, and strengthening management and performance.

Prior to his appointment, Dr. Moniz was the Cecil and Ida Green Professor of Physics and Engineering Systems at the Massachusetts Institute of Technology (MIT), where he was a faculty member since 1973. At MIT, he headed the Department of Physics and the Bates Linear Accelerator Center. Most recently, Dr. Moniz served as the founding Director of the MIT Energy Initiative and of the MIT Laboratory for Energy and the Environment and was a leader of multidisciplinary technology and policy studies on the future of nuclear power, coal, nuclear fuel cycles, natural gas, and solar energy in a lowcarbon world.

From 1997 until January 2001, Dr. Moniz served as DOE's Under Secretary. He was responsible for overseeing DOE's science and energy programs, leading a comprehensive review of nuclear weapons stockpile stewardship, and serving as the Secretary's special negotiator for the disposition of Russian nuclear materials. From 1995 to 1997, he served as Associate Director for Science in the Office of Science and Technology Policy in the Executive Office of the President.

In addition to his work at MIT, the White House, and DOE, Dr. Moniz has served on a number of boards of directors and commissions involving science, energy and security. These include President Obama's Council of Advisors on Science and Technology, the Department of Defense Threat Reduction Advisory Committee, and the Blue Ribbon Commission on America's Nuclear Future.

A member of the Council on Foreign Relations, Dr. Moniz is a Fellow of the American Association for the Advancement of Science, the Humboldt Foundation, and the American Physical Society. Dr. Moniz received a Bachelor of Science degree summa cum laude in Physics from Boston College, a Doctorate in Theoretical Physics from Stanford University, and honorary degrees from the University of Athens, the University of Erlangen-Nurenberg, and Michigan State University.

Thomas Fanning Chairman, President and CEO, Southern Company

Plenary Session Keynote Speaker June 17, 2013 — 8:45 a.m.-10:30 a.m. Location: Capitol Ballroom



Thomas Fanning is chairman, president and chief executive officer of Southern Company, one of

America's largest producers of electricity. Fanning became president of Southern Company in August 2010 and assumed the additional responsibilities of CEO and chairman in December 2010.

Fanning has worked for Southern Company for more than 30 years and has held 15 different positions in eight different business units. Most recently, he served as chief operating officer, where he was responsible for Southern Company's generation and transmission, engineering and construction services, research and environmental affairs, system planning and the company's competitive generation business units. He led Southern Company's efforts on business strategy and served as a director of Southern Nuclear, Southern Company's nuclear plant operating company.

He previously was the company's chief financial officer, where he was responsible for accounting, finance, tax, investor relations, treasury and risk management functions. In this role, he served as the chief risk officer and had responsibility for corporate strategy. Prior to assuming the role of chief financial officer, he was president and CEO of Gulf Power.

While at Gulf Power, Fanning worked closely with Florida Governor Jeb Bush to develop state government policy, served on the Governor's Transition Policy Team and was appointed by Governor Bush to cochair the Base Realignment and Closure Advisory Committee.

He serves on the board of directors of the Federal Reserve Bank of Atlanta, the Georgia Tech College of Management advisory board, the board of trustees for the Georgia Tech Foundation, the Institute of Nuclear Power Operations board of directors, and the World Association of Nuclear Operators - Atlanta Centre governing board. He also is a member of the Business Roundtable.

Fanning earned bachelor's and master's degrees in industrial management, and was also awarded an honorary doctor of philosophy degree from Georgia Tech. His executive education includes programs at the International Institute for Management Development in Lausanne, Switzerland, the Harvard University School of Business and the University of Virginia's Darden School of Business.

Hans Rosling Professor, Karolinska Institute and Chairman, Gapminder Foundation

Lunch Keynote Speaker June 17, 2013 —12:45 p.m.-2:00 p.m. Location: Grand Ballroom



Hans Rosling is professor of International Health at Karolinska Institute, the medical university in

Stockholm, Sweden. When working as a young doctor in Mozambique he discovered a previously unrecognized paralytic disease that his research team named Konzo. His 20 years of research on global health concerned the character of the links between economy and health in Africa, Asia, and Latin America.

He has been adviser to WHO and UNICEF, co-founded Médecines sans Frontiers in Sweden and started new courses and published a textbook on Global Health. He is a member of the International Group of the Swedish Academy of Science and of the Global Agenda Network of the World Economic Forum in Switzerland.

He co-founded Gapminder Foundation (www.gapminder.org) with his son and daughter in-law. Gapminder promotes a fact-based world view by converting the international statistics into moving, interactive, understandable and enjoyable graphics. This was first done by developing the Trendalyzer software that Google acquired in 2007. Using animations of global trends, Hans Rosling lectures about past and contemporary economic, social and environmental changes in the world and he produces thematic videos using the same technique. His award-winning lectures on global trends have been labeled "humorous, yet deadly serious" and many in the audience realize their own world view is lagging many decades.

Aldo Flores-Quiroga Secretary General, International Energy Forum

Plenary Session Speaker June 18, 2013 — 8:45 a.m.-9:15 a.m. Location: Capitol Ballroom



Aldo Flores-Quiroga took up post as IEF Secretary General in January 2012.

Before joining the IEF he served in the Mexican government as Assistant Secretary for International Affairs at the Ministry of Energy (2007-2011), and as Assistant Secretary for Bilateral Economic Relations at the Ministry of Foreign Affairs (2001-2005).

His accomplishments in the international energy field include: Mexico's incorporation into the International Partnership on Energy Efficiency Cooperation, the Global Carbon Capture and Storage Institute, the Global Gas Flaring Reduction Partnership, and its accession to IRENA, where it is now a Board Member; concluding bilateral agreements and MOUs on technical and scientific cooperation with the United States, Canada, Australia, Brazil, Denmark, Iceland, India, the Netherlands, New Zealand, South Korea, and Spain; facilitating various financial cooperation agreements with the World Bank, and the IDB to fund components of Mexico's national energy efficiency programs; organizing high-profile international events, such as the 12th IEF Ministerial and 4th International Energy Business Forum (2010), the meeting of the United Nations Advisory Group on Energy and Climate Change (2010), the Global Renewable Energy Forum (in cooperation with UNIDO, 2009), and the Africa-Latin America Ministerial Energy Conference (2008); chairing the Executive Board of the IEF (2008-2010) and the Steering Committee of OLADE (2010); and heading the delegation of Mexico's energy sector at the COP-16 negotiations in Cancun, and at the High-Level Steering Group in charge of drafting the new Executive Charter of the IEF, both of them concluding with unprecedented agreements.

Before joining the Mexican government he was Assistant Professor at the School of Politics and Economics of the Claremont Graduate University in California. He was also visiting professor at the Autonomous Technological Institute and Affiliate Professor at the Center for Economic Research and Education, both in Mexico City.

Dr. Flores-Quiroga studied Economics at the Autonomous University of Nuevo León, in Mexico and earned his Ph.D. in Political Science-International Political Economy, with majors in economic theory and international political economy, at the University of California, Los Angeles (1997).

Lisa Murkowski U.S. Senator (Alaska) and Ranking Member of Senate Energy and Natural Resources Committee

Plenary Session Speaker June 18, 2013 — 9:15 a.m.-9:45 a.m. Location: Capitol Ballroom



Senator Lisa Murkowski is the first Alaskan-born Senator and only the sixth United States Senator to serve the state. The state's senior senator, Lisa Murkowski is a third-generation Alaskan, born in Ketchikan and raised in towns across the state: Wrangell, Juneau, Fairbanks and Anchorage. Since joining the Senate in 2002, Senator Murkowski has been a strong advocate for Alaska on the important issues facing the state, including energy, health care, education, military/veterans' affairs, and infrastructure development.

Only the 33rd female to serve in the United States Senate since its founding in 1789, Senator Murkowski has assumed leadership roles quickly. She is the senior Republican member of the Senate Energy and Natural Resources Committee and also serves on the Senate Appropriations Committee, where she is the ranking Republican of the Interior and Environment Subcommittee. Senator Murkowski is a member of the Senate Health, Education, Labor and Pensions Committee – the first Alaskan to serve on that panel – and also is a senior member of the Senate Indian Affairs Committee.

She earned a B.A. in economics from Georgetown University in 1980 and a law degree from Willamette University in 1985. Prior to her appointment to the United States Senate, Senator Murkowski practiced commercial law in Anchorage and served three terms in the Alaska State House of Representatives. She was elected to a full six-year U.S. Senate term in 2004, and was re-elected in 2010 in a historic write-in campaign, the first successful write-in effort to the Senate since 1954.

Senator Murkowski is married to Verne Martell and they have two sons. She enjoys spending time with her family in the Alaskan outdoors.

Margot Anderson Bipartisan Policy Center

U.S. Oil Production Growth and its Implications June 18, 2013 — 11:45 a.m.-1:15 p.m. Location: Grand Ballroom

Margot Anderson is the executive director of the Energy Project at the Bipartisan Policy Center (BPC). Prior to joining BPC, she was a senior advisor to the

deputy secretary of energy. From 2004 to 2009, Anderson was an office director at the U.S. Energy Information Administration (EIA) where she was responsible for EIA's short-term energy forecasts, U.S. energy consumption surveys, and the international statistics program. From 2000 to 2004, Anderson was deputy assistant secretary for Policy Analysis, Department of Energy, where she worked on a wide range of energy and environmental policy issues. From 1998-2000, Anderson directed USDA's Global Change Program focusing on the economics of climate change on agriculture and forestry and on international climate negotiations. Prior to 1998, Anderson held various staff and management positions at the Economic Research Service, USDA. She has received two Presidential Rank Awards for her federal career achievements. Anderson holds a B.A. in economics (University of Cincinnati) and an M.S. and Ph.D. in agricultural economics (University of Illinois).

Mark Bolinger Lawrence Berkeley National Laboratory

Renewable, Storage, and Grid Integration June 17, 2013 — 11:00 a.m.-12:30 p.m. Location: Capitol Ballroom

Mark Bolinger is a Research Scientist at Lawrence Berkeley National Laboratory, where his work focuses on analyzing the cost, performance, and value of

renewable generation within electricity markets; understanding how renewable power projects are financed; and the design and evaluation of renewable energy policies. Mark has published more than 150 reports on these topics over the past decade. Mark holds a master's degree in Energy and Resources from the University of California at Berkeley, and a bachelor's degree from Dartmouth College.





William Booth

U.S. Energy Information Administration Renewable, Storage, and Grid Integration June 17, 2013 — 11:00 a.m.-12:30 p.m. Location: Capitol Ballroom

William Booth is a senior electricity advisor in EIA's Office of Energy Statistics. He has held various

supervisory, technical, and policy positions with the Federal Energy Regulatory Commission, Nuclear Regulatory Commission, Congress's Office of Technology Assessment, and the U.S. Department of Energy before joining EIA in 2010. He holds Engineering and Public Policy degrees from Swarthmore College, Massachusetts Institute of Technology, and Harvard University.

Jason Bordoff *Columbia University Center on Global Energy Policy*

Global Natural Gas Outlook June 17, 2013 — 11:00 a.m.-12:30 p.m. Location: Grand Ballroom



Jason Bordoff joined the Columbia faculty after serving

until January 2013 as Special Assistant to the President and Senior Director for Energy and Climate Change on the staff of the National Security Council, and, prior to that, holding senior policy positions on the White House's National Economic Council and Council on Environmental Quality. One of the nation's top energy policy experts, he joined the Administration in April 2009. At Columbia's School of International and Public Affairs (SIPA), Bordoff is a professor of professional practice and serves as Director of SIPA's Center on Global Energy Policy. Bordoff's research and policy interests lie at the intersection of economics, energy, environment, and national security. Prior to joining the White House, Bordoff was the Policy Director of the Hamilton Project, an economic policy initiative housed at the Brookings Institution. He is also a member of the Council on Foreign Relations, a consultant to the National Intelligence Council, and serves on the board of the Association of Marshall Scholars. During President Bill Clinton's Administration, Bordoff served as an advisor



to the Deputy Secretary of the U.S. Treasury Department. He was also a consultant with McKinsey & Company, one of the leading global strategy consultancies. Bordoff graduated with honors from Harvard Law School, where he was treasurer and an editor of the Harvard Law Review, and clerked on the U.S. Court of Appeals for the D.C. Circuit. He also holds an MLitt degree from Oxford University, where he studied as a Marshall Scholar, and a B.A. magna cum laude and Phi Beta Kappa from Brown University.

Dominic DiCicco Ford Motor Company

Alternatives to Oil in Transportation June 17, 2013 — 4:00 p.m.-5:30 p.m. Location: Capitol Ballroom

Mr. DiCicco was recently appointed to the position of Manager, Environmental Policy and Fuel quality in



the Sustainability and Vehicle Environmental Matters division at Ford Motor Company. His new role involves supporting the execution of Ford Motor Company's strategic product plans as well as topics of mutual interest on improving fuel quality and regulations, requiring interaction with the U.S. Environmental Protection Agency, California Air Resources Board and other government entities around the world. Mr. DiCicco is Chair of the Real World Vehicle Emissions Committee of the Coordinating Research Council (CRC) and serves as a member on both the CRC Emissions Committee and CRC AVFL Committee. He is a Ford representative on the Fuels Working Group of United States Council for Automotive Research, the Alliance of Automobiles and other industry related efforts. Recent and past major projects included key roles in working towards the successful reduction in sulfur content in fuels, elimination of manganese across the Canadian marketplace and more recently in the evaluation of mid-level ethanol blends (such as E15 and E20). His career with Ford Motor Company is nearly 20 years young, more than half this time supporting fuels after starting at the Ford Research Laboratory in the Chemical Engineering Department researching exhaust emission catalytic systems. Mr. DiCicco holds a M.S. and B.S. in Chemical Engineering and a B.A in Chemistry, all from Wavne State University.

Jim Diefenderfer

U.S. Energy Information Administration Coal and Nuclear: World and Domestic Outlook June 18, 2013 — 10:00 a.m.-11:30 a.m. Location: Capitol Ballroom

Jim Diefenderfer has worked in the electric power industry for over 30 years. He is currently the Electricity Analysis Team Leader in EIA's Office of



SPEAKER

Electricity Analysis learn Leader in EIA's Office of Electricity, Coal, Nuclear, and Renewables Analysis and is responsible for the Electricity Market Module of EIA's National Energy Modeling System. Between 2004 and EIA's reorganization in 2010, Mr. Diefenderfer held a variety of leadership positions in EIA's Office of Coal, Nuclear, Electric, and Alternate Fuels where he was responsible for EIA's monthly and annual electric power industry surveys and publications.

Prior to joining EIA in 2004, he worked on a number of assignments as an independent consultant. In this capacity he helped develop and implement a statewide market development program for the renewable energy industry and also developed multi-jurisdictional electric pricing models in support of wholesale and retail electricity market activities.

Mr. Diefenderfer spent the first 18 years of his career with Delmarva Power (and later Conectiv), working initially as an engineer in a cogeneration power plant. He also worked in the Corporate Planning Department where he was responsible for the Company's integrated resource planning activities and later as the Manager of Power Resource Arrangements where he was responsible for managing the Company's capacity purchase contracts and transmission agreements.

Mr. Diefenderfer has a Bachelor's Degree in Mechanical Engineering and a Master's in Business Administration, both from the University of Delaware.

Peter Evans General Electric

U.S. Natural Gas Production Growth and its Implications June 18, 2013 — 10:00 a.m.-11:30 a.m. Location: Grand Ballroom



Peter C. Evans leads the Global Strategy and Analytics for General Electric, which is responsible for tracking and analyzing megatrends, shocks and constraints that shape the global strategic business environment. Before moving to the GE's Corporate strategy team, Dr. Evans led GE Energy's Global Strategy and Planning team for five years, where he oversaw the Fuels, Policy, Carbon and Strategic Workforce Planning Centers of Excellence. He is a member of GE's Corporate Growth Council.

Prior to joining GE, he was Director, Global Oil, and Research Director of the Global Energy Forum at Cambridge Energy Research Associates (CERA). He also worked as an independent consultant for a variety of corporate and government clients, including the U.S. Trade Promotion Coordinating Committee, U.S. Department of Energy, the Organization for Economic Cooperation and Development, and the World Bank. Dr. Evans has extensive international energy experience, including two years as a Visiting Scholar at the Central Research Institute for the Electric Power Industry in Tokyo, Japan. His many articles and policy monographs include: The Industrial Internet: Pushing the Boundaries of Minds and Machines (General Electric, 2012) Japan: Bracing for an Uncertain Energy Future (Brookings Institution, 2006), Liberalizing Global Trade in Energy Services (AEI Press, 2002), and International Conflict and Cooperation in Government Export Financing (Institute for International Economics, 2001). He is a lifetime member of the Council on Foreign Relations and a Board Member of the National Association for Business Economics. Evans holds a B.A. from Hampshire College and a master's degree and PhD from the Massachusetts Institute of Technoloav.

John Foran *Natural Resources Canada*

Energy In the Americas June 17, 2013 — 4:00 p.m.-5:30 p.m. Location: Grand Ballroom

Mr. Foran has B.S. in Geology and a Masters in Business Administration. He worked as a petroleum geologist/geophysicist in Calgary, Alberta until 1987,

then became Manager of Gas Supply Studies for what is now Enbridge Gas Distribution of Toronto, Canada's largest natural gas distribution company. He is now Director of the Oil & Gas Policy & Regulatory Affairs Division of Natural Resources Canada, the federal department responsible for energy. His role is to provide information and policy advice to the Minister and department on crude oil, natural gas, and petroleum product market, pipeline, or regulatory matters.

Phani Gadde *Wood Mackenzie*

World Hydrocarbon Resources June 17, 2013 — 2:00 p.m.-3:30 p.m. Location: Grand Ballroom

Phani Gaddie is a Senior Analyst in the Upstream Lower 48 team at Wood Mackenzie. He has over 14 years of experience in the energy industry. Phani leads North America supply data analysis and develops production forecasts for tight oil plays. He keenly tracks the impact of technological and operational efficiency gains in unconventional plays on supply.

Prior to his current role, he worked as a Senior Supply Analyst in the North American Gas Service at Wood Mackenzie. Before joining Wood Mackenzie, Phani worked as a research engineer at The University of Texas at Austin for six years where he led research and consulting related to produced water reinjection and slick-water fracturing in tight gas sands. Phani holds a B.S. from the Indian School of Mines and an M.S. from the University of Texas at Austin, both in Petroleum Engineering.





SPEAKER

Michael Gallagher Westport Innovations

Alternatives to Oil in Transportation June 17, 2013 — 4:00 p.m.-5:30 p.m. Location: Capitol Ballroom

Dr. J. Michael Gallagher is Senior Adviser, and Former President and Chief Operating Officer of Westport Innovations, where he is working to encourage the

global adoption of natural gas in clean transportation systems. Dr. Gallagher was, until recently, Chairman of the 60-organization Natural Gas Group of the two-year U.S. national energy study, the National Petroleum Council Study of Future Transportation Fuels. He also serves as Chairman of the Boards of Agility Fuel Systems, a leading natural gas fuel systems company, and the Southern California Air Quality Management District's Natural Gas Vehicle Partnership, and is Former Chairman of the Board of Cummins Westport Inc. He is also a member of the Board of Trustees of the Vancouver Opera Foundation, and The Nature Conservancy of Canada-British Columbia.

Donald Gautier United States Geological Survey

World Hydrocarbon Resources June 17, 2013 — 2:00 p.m.-3:30 p.m. Location: Grand Ballroom

Donald L. Gautier is a geologist with the Energy Resources Program of the United States Geological Survey. Born in Los Angeles, he holds a Ph.D. in

geology from the University of Colorado and worked for Mobil Oil Corporation before joining the USGS in 1977. He is the author of more than 200 publications, many of which concern evaluation of undiscovered oil and gas resources. Gautier leads the USGS World Energy Project and was the principal investigator for the USGS San Joaquin Basin Assessment and the Circum-Arctic Resource Appraisal. His most recent work is focused on resource/cost relationships and unconventional resources.





Ron Gecan Congressional Budget Office

Alternatives to Oil in Transportation June 17, 2013 — 4:00 p.m.-5:30 p.m. Location: Capitol Ballroom

Ron Gecan serves as Principal Analyst of the Microeconomic Studies Division of the Congressional Budget Office in Washington, DC with a primary

focus on policy issues related to the economics of energy and natural resources. Dr. Gecan holds a B.A. in economics and history from the University of Iowa and M.A. and Ph.D. degrees in economics from the University of Minnesota. Ron's background is a mix of academic, government, and consulting experience: assistant professor of macroeconomics at the Catholic University of America (Washington, DC), staff economist for the electricity sector at the Federal Energy Regulatory Commission, adjunct professor of money and banking in the Economics Department of Georgetown University, and electricity sector consultant with Charles River Associates (Washington, DC).

Craig Glazer PJM Interconnection, L.L.C.

Renewable, Storage, and Grid Integration June 17, 2013 — 11:00 a.m.-12:30 p.m. Location: Capitol Ballroom

Craig Glazer serves as the Vice President—Federal Government Policy for PJM Interconnection. In this capacity, Mr. Glazer coordinates all of P1M's regulator

capacity, Mr. Glazer coordinates all of PJM's regulatory and legislative policies before Congress, the Federal Energy Regulatory Commissions, the United States Department of Energy and other federal agencies. PJM operates the largest competitive wholesale electricity market in the world and serves over 9% of the United States population. Mr. Glazer heads PJM's Washington, D.C. office.

Prior to coming to PJM, Mr. Glazer served as Commissioner and Chairman of the Public Utilities Commission of Ohio. As one of the longest-serving Chairs of the Ohio Commission in its history, Mr. Glazer oversaw Ohio's move toward deregulation of its telephone, natural gas, transportation and electric industries. Mr. Glazer served as CEO of the agency which operated with over 300 employees and a budget of \$25 million. He also chaired the state's Siting Board and served as a member of the Governor's Cabinet.





Mr. Glazer remains extremely active on national electricity issues. He frequently testified before Congress and the Federal Energy Regulatory Commission on development of Regional Transmission Organizations and the needs of the marketplace. Mr. Glazer served as a member of the Board of Directors of the National Association of Regulatory Utility Commissioners, Chairman of its International Relations Committee and a member of its Electricity and Energy Resources Committees. He also chaired the National Council on Competition in the Electric Industry, an interagency collaborative which brought together FERC, the state PUCs, the U.S. Department of Energy, the U.S. EPA and the National Council of State Legislatures. He has served as Chairman of the Board of Directors of the Northeast-Midwest Institute, a bipartisan research arm of the Northeast and Midwest region's Congressional delegations and is on the Board of Directors of the Gridwise Alliance.

Mr. Glazer is a graduate of the University of Pennsylvania and the Vanderbilt University School of Law.

Antoine Halff International Energy Agency

International Energy Statistics: Coverage and Quality June 18, 2013 — 11:45 a.m.-1:15 p.m. Location: Capitol Ballroom



Antoine Halff joined the IEA in July 2012 as head of its oil market unit and editor of its flagship monthly publication, the Oil Market Report. Earlier, he was a lead economist at the U.S. Energy Information Administration, after several years as director of commodities research at brokerage Newedge in New York and its predecessor company Fimat. In 2005, he launched the energy practice of political-risk consultancy Eurasia Group, also in New York. Earlier in his career, he worked as New York Bureau Chief for the Energy Intelligence Group and in other positions. From 2006 to 2012, he was an adjunct Professor of International and Public Affairs at Columbia University in New York. He is a member of the board of directors of the New York Energy Forum, of the editorial committee of Geopolitics of Energy and of the Beijing Energy Club. He was born and educated in Paris and has lived and worked in Paris, Seoul, Washington, DC, and New York.

Jamie Heller *Hellerworx*

Coal and Nuclear: World and Domestic Outlook June 18, 2013 — 10:00 a.m.-11:30 a.m. Location: Capitol Ballroom

Jamie Heller is President of Hellerworx, Inc. which he founded in 2001. For most of the last 35 years Jamie has been a consultant in energy, environmental and

transportation matters. He founded Fieldston Company, Fieldston Publications, and co-founded Fieldston Transportation Services. In 1998, he sold all of the businesses, worked for three years as a Senior Partner with PA Consulting, and then moved back home where he consults with assistance from his former colleagues. He is an investor in White Oak Resources, a new Illinois Basin coal mine developer. He has an MBA from Harvard Business School and an electrical engineering degree from Northwestern University.

Trevor Houser Rhodium Group

International Energy Statistics: Coverage and Quality June 18, 2013 — 11:45 a.m.-1:15 p.m. Location: Capitol Ballroom

Trevor Houser is a partner at Rhodium Group (RHG) and leads the firm's energy and natural resources work. He is also a visiting fellow at the Peterson

Institute for International Economics in Washington, DC, where he writes on energy, commodity and environmental market and policy issues. Trevor is an adjunct lecturer at the City College of New York, and a visiting fellow at the school's Colin Powell Center for Policy Studies. He is a member of the Council on Foreign Relations and the National Committee on U.S.-China Relations and serves on the Advisory Board of Asia Society's Center on U.S.-China Relations. He speaks regularly on international energy market and policy trends and has testified before the House Energy and Commerce Committee, the House Select Committee on Energy Independence and Global Warming, the U.S. Helsinki Commission and the U.S.-China Economic and Security Review Commissions.

During 2009, Trevor left RHG temporarily to serve as senior advisor to the U.S. State Department, where he worked on a broad range of international energy, natural resource and environmental policy issues. While in government, Trevor negotiated seven bilateral U.S.-China





energy agreements, including the U.S.-China Shale Gas Initiative and the establishment of the U.S.-China Clean Energy Research Center. Trevor also served as a U.S. climate change negotiator through the Copenhagen conference in 2009.

Patrick Hughes National Electrical Manufacturers Association

Energy Consumption and Building Efficiency June 17, 2013 — 2:00 p.m.-3:30 p.m. Location: Capitol Ballroom

Patrick Hughes is the Policy Director for High



Performance Buildings and Industrial Energy Efficiency at the National Electrical Manufacturers Association (NEMA) where he directs the NEMA High Performance Building Council and the Industrial Energy Efficiency Coalition. His work is focused on promoting federal, state, and local policies that encourage energy efficiency, sustainability, and safety in commercial, public, and industrial facilities.

Before joining NEMA, Patrick was a Senior Associate at the Energy Future Coalition, an initiative of the United Nations Foundation, where he focused on developing new methods to increase the energy efficiency of the commercial building stock in the United States, as well as advocating for policies that encourage the build-out of the electric grid to interconnect remote renewable energy resources. Prior to that, he worked in the office of Congresswoman Grace F. Napolitano. Patrick is a M.S. candidate in Energy Policy and Climate Science at Johns Hopkins University and received his undergraduate degree from the University of Rochester.

Ira Joseph PIRA Energy Group

Global Natural Gas Outlook June 17, 2013 — 11:00 a.m.-12:30 p.m. Location: Grand Ballroom

Ira B. Joseph is the Executive Director of International Gas at PIRA Energy Group in New York. He manages PIRA's European Energy Services, which includes distinct services on European natural gas and European electricity, as well as PIRA's Global LNG Service and Consumer Gas Price



Service. These services provide a short- and long-term fundamental underpinning of supply/demand balances that assist clients in understanding the direction of gas and power prices. Mr. Joseph has authored multiple gas market studies including PIRA's new 2013 Liquefied Henry Hub study as well as previous studies on Unconventional LNG in 2011 and the Globalization of Gas markets in 2007.

Mr. Joseph joined PIRA in 1999 after working at Energy Intelligence Group for over a decade as Editor-in-Chief of World Gas Intelligence and Senior Editor of Petroleum Intelligence Weekly. With 24 years in the energy business, he has authored several books on natural gas and crude oil marketing, including EIG's International Crude Oil Market Handbook and World Gas Handbook, as well as several articles on natural gas swaps and gas marketing strategy. Mr. Joseph makes frequent presentations to Boards of Directors and trading groups at companies ranging from exploration and production firms to larger industrial end users and utilities. He also does advisory work related to investments in gas infrastructure and hedging strategies for both sellers and buyers of natural gas.

Stan Kaplan *U.S. Energy Information Administration Coal and Nuclear: World and Domestic Outlook June 18, 2013 — 10:00 a.m.-11:30 a.m.*

Location: Capitol Ballroom

Stan Kaplan has worked in the energy and environmental areas, focusing on power generation and fuels, since 1978. Prior to rejoining EIA as Director

of the Office of Electricity, Renewables, and Uranium Statistics he was a Specialist in Energy and Environmental Policy with the Congressional Research Service. Immediately before joining CRS, Stan was a team leader managing electric power survey data collection and analysis at the EIA. He has otherwise worked for energy consulting firms, including Fieldston Company and PHB Hagler Bailly; for regulatory agencies, including the Texas Public Utility Commission; and served as manager of fuel supply for Austin Energy, the municipal utility serving Austin, Texas. Stan has a master's degree in public policy from the LBJ School at the University of Texas and a B.A. in history from Rutgers University.



Melanie A. Kenderdine U.S. Department of Energy

U.S. Natural Gas Production Growth and its Implications June 18, 2013 — 10:00 a.m.-11:30 a.m. Location: Grand Ballroom



Melanie A. Kenderdine is a senior advisor to the Secretary of Energy. She served at the Department of Energy in several key posts from 1993 to 2001, including as director of the Office of Policy and senior advisor to the secretary. Just prior to joining DOE she was the executive director of the MIT Energy Initiative.

Andy Kohut Statistics Canada

International Energy Statistics: Coverage and Quality June 18, 2013 — 11:45 a.m.-1:15 p.m. Location: Capitol Ballroom

Andy Kohut is the Director of the Manufacturing and Energy Division at Statistics Canada, responsible for the energy statistics program. The program gathers

and disseminates data on energy production, distribution, transformation and consumption in Canada, and provides information to meet Canada's international reporting requirements. He has worked at Statistics Canada for almost 33 years. This year, Andy has also been named as the new Chair of the United Nations Oslo Group on Energy Statistics – an international body of experts working to improve the quality and comparability of energy statistics on a global basis.



Vello Kuuskraa Advanced Resources International, Inc.

World Hydrocarbon Resources June 17, 2013 — 2:00 p.m.-3:30 p.m. Location: Grand Ballroom

Vello A. Kuuskraa, President of Advanced Resources International, Inc. (ARI), has over 40 years of experience assessing unconventional oil and gas

resources. Mr. Kuuskraa headed the team that prepared the 1978, three volume report entitled Enhanced Recovery of Unconventional Gas for the U.S. Department of Energy that helped guide unconventional gas R&D and technology development efforts during the formative period 1978-2000. He is a member of the Potential Gas Committee and has authored over 100 technical papers on energy resources. Mr. Kuuskraa is a 2001 recipient of the Ellis Island Medal of Honor that recognizes individuals for exceptional professional contributions by America's diverse cultural ancestry. He currently serves on the Board of Directors of Southwestern Energy Company, on the Board of Directors for Research Partnership to Secure Energy for America and on the National Petroleum Council. Mr. Kuuskraa holds a M.B.A., Highest Distinction from The Wharton Graduate School and a B.S., Applied Mathematics/ Economics from North Carolina State University.

Sarah O. Ladislaw *Center for Strategic and International Studies*

World Hydrocarbon Resources June 17, 2013 — 2:00 p.m.-3:30 p.m. Location: Grand Ballroom

Sarah Ladislaw is co-director and senior fellow in the CSIS Energy and National Security Program, where

she concentrates on the geopolitics of energy, energy security, energy technology, and climate change. She has been involved with CSIS's work on the geopolitics portion of the 2007 National Petroleum Council study and the CSIS Smart Power Commission, focusing particularly on energy security and climate issues. She has published papers on U.S. energy policy, global and regional climate policy, clean energy technology, as well as European and Chinese energy issues. Ladislaw teaches a graduate level course on energy security at the George Washington University.





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 also spent a short period of time working at Statoil as their Senior Director for International Affairs in the Washington office. 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.

Angelina LaRose U.S. Energy Information Administration Global Natural Gas Outlook June 17, 2013 — 11:00 a.m.-12:30 p.m. Location: Grand Ballroom



Angelina LaRose leads the Natural Gas Markets Analysis Team within EIA's Office of Energy Analysis.

Her team is responsible for both long-term domestic and international natural gas projections, as published in EIA's Annual Energy Outlook and International Energy Outlook respectively, as well as short-term forecasts of natural gas markets, as published in EIA's Short-Term Energy Outlook. Ms. LaRose has worked in natural gas analysis for EIA for over ten years and was the product manager of EIA's Today in Energy when that publication was launched. Prior to her work at EIA, she worked as a senior energy analyst at a private consulting firm. Ms. LaRose has a B.A. in Government and Politics and an M.B.A. in Finance from the University of Maryland, College Park.

Michael Latsko Westinghouse

Coal and Nuclear: World and Domestic Outlook June 18, 2013 — 10:00 a.m.-11:30 a.m. Location: Capitol Ballroom

As Vice President of Product Strategy in the Nuclear Power Plant (NPP) Business & Project Development organization, Michael Latsko is responsible for



assessing the strategic needs of Westinghouse's new power plant business and developing and implementing its global product strategies. He was appointed to this position in April 2012, when the NPP Business & Project Development organization was established. The organization was created to focus on new approaches to develop Westinghouse AP1000® plant and small modular reactor (SMR) projects on a worldwide basis.

Prior to his current role, Mr. Latsko held various positions of increasing responsibility in Westinghouse's Finance and Strategy organizations; in those roles, he helped to implement a number of strategic initiatives which led to significant growth and new activity across the business. Mr. Latsko has been with Westinghouse for more than 20 years. He received a bachelor's degree in Finance from the Pennsylvania State University and is a certified Westinghouse Customer 1st Green Belt. He is an active member of the Corporate Strategy Board and the Institute for the Study of Business Markets. In addition, he serves on the boards of Celtic Charities and the Seneca Valley Foundation, local Pittsburgh, Pennsylvania (USA), area charities dedicated to serving the needs of western Pennsylvania communities.

Mr. Latsko and his wife, Donna, live in Cranberry Township, Pennsylvania, with their three children.

John Maples U.S. Energy Information Administration Alternatives to Oil in Transportation

Alternatives to Oil in Transportation June 17, 2013 — 4:00 p.m.-5:30 p.m. Location: Capitol Ballroom

John D. Maples serves as the transportation team lead in the Office of Energy Consumption and Efficiency Analysis for EIA's Office of Energy Analysis. Mr.

Maples is responsible for the research and analysis of issues related to transportation energy demand, emissions, and forecasting. His



SPEAKERS

team is responsible for the development of transportation models within the National Energy Model System, as well as those used for short-term and international projections. Prior to joining EIA in 2001, Mr. Maples was employed as the senior transportation analyst at Trancon, Inc. and as a Senior Research Analyst at the University of Tennessee's Transportation Research Center, where he served on the U.S. Department of Energy Office of Transportation Technologies' Laboratory Analytic Team. He has more than 20 years of experience analyzing energy, security, economic, technological, and environmental issues related to the transportation sector. Mr. Maples received a B.S. in Transportation and Logistics from the University of Tennessee. He has served on alternative fuel and energy committees for the Transportation Research Board and has served as an officer on the Governing Board of the Society of Automotive Engineers' Washington, DC Chapter.

Wolfgang Moehler IHS

Global Natural Gas Outlook June 17, 2013 — 11:00 a.m.-12:30 p.m. Location: Grand Ballroom

Wolfgang Moehler, IHS CERA Director, Global LNG, focuses on global liquefied natural gas (LNG). Mr. Moehler monitors emerging strategic trends, analyzes



markets, and is responsible for modeling LNG cost fundamentals. His expertise includes economic analyses and modeling with focus on supply-side fundamentals. He contributed to the IHS multiclient study The Next Prize: Strategic Positioning for a Global Gas Price, The New Map of Global Gas and studies exploring the global shale gas potential. Mr. Moehler holds an M.A. from Technische Universität, Muenchen, Germany, and an M.A. from Vanderbilt University, where he was a University Graduate Fellow.

Chris Namovicz

U.S. Energy Information Administration Renewable, Storage, and Grid Integration June 17, 2013 — 11:00 a.m.-12:30 p.m. Location: Capitol Ballroom

Chris Namovicz is a Senior Renewable Energy Analyst for the U.S. Energy Information Administration's Office of Energy Analysis. Mr. Namovicz maintains and

updates the renewable fuels module of the National Energy Modeling Systems (NEMS), which is the primary model used to develop EIA's Annual Energy Outlook. Mr. Namovicz is responsible for analysis and forecasting of renewable resources and generation, including occasional reports to Congress analyzing the impact of policies with significant potential to affect renewable energy markets such as a national renewable portfolio standard, energy tax policy, and carbon regulation.

Mr. Namovicz has presented on renewable energy markets and policy at major national energy conferences, to the National Research Council, and to state energy authorities. In addition to numerous EIA reports, he has also been published in the Electricity Journal and the CRC Handbook of Energy Conservation and Renewable Energy. Prior to joining EIA in 2001, Mr. Namovicz worked as an Energy Policy Analyst with SENTECH, Inc. and Senior Analyst with Technology & Management Services, Inc. He holds an M.S. in Environmental Science from Johns Hopkins University and B.S. in Engineering and Public Policy from Washington University in St. Louis.

Shirley Neff U.S. Energy Information Administration

Energy in the Americas June 17, 2013 — 4:00 p.m.-5:30 p.m. Location: Grand Ballroom

Shirley Neff is a Senior Advisor to the Administrator of the U.S. Energy Information Administration. Prior to

joining EIA, she served as a senior advisor to the National Commission on the BP Deepwater Horizon Oil and Spill and Future of Offshore Drilling. Ms. Neff has extensive private and public energy sector experience. She served as the Democratic economist for the Senate Energy and Natural Resources Committee for seven years and on the





staff of the Kansas Corporation Commission. She worked for Shell Oil Company and the natural gas and liquid pipeline industries.

She is a Senior Fellow and past President of the United States Association for Energy Economics (USAEE) and a former member of the National Petroleum Council (NPC) and the Biomass R&D Technical Advisory Committee. She also served on the advisory board of the Center for Energy Economics at the Bureau of Economic Geology, University of Texas at Austin and as a Senior Associate with the Energy and National Security Program at the Center for Strategic and International Studies. She taught a graduate class in energy policy at the School of International and Public Affairs (SIPA) at Columbia University.

Neelesh Nerurkar U.S. Department of State

Energy in the Americas June 17, 2013 — 4:00 p.m.-5:30 p.m. Location: Grand Ballroom

Neelesh Nerurkar provides economic insight to guide energy-related U.S. foreign policy at the U.S. Department of State. He leads the Bureau of Energy



Resources' Analysis Team, which focuses on the relationship between international energy markets, policy, and the economy. Prior to joining the Department of State in July 2012, he served as an energy policy specialist at the Congressional Research Service, advising members of Congress and their staff on international energy issues and energy markets through public testimony, private consultations, and nonpartisan reports. Before this, Neelesh analyzed global energy markets as an economist for BP, advising corporate strategy and planning decisions. He contributed to the annual BP Statistical Review of World Energy, a leading source of insight on global energy markets used by media, academia, policy makers, and industry around the world. Neelesh has also served as an economist at the U.S. Energy Information Administration. He is a council member and former president of the U.S. Association for Energy Economics' National Capital Area Chapter (NCAC). Neelesh has a B.A. in Economics from the University of Oklahoma and an M.A. from the Johns Hopkins University School for Advanced International Studies.

Eileen O'Brien

U.S. Energy Information Administration Energy Consumption and Building Efficiency June 17, 2013 — 2:00 p.m.-3:30 p.m. Location: Capitol Ballroom

Eileen O'Brien leads the Buildings Survey Statistics Team within EIA's Office of Energy Consumption and Efficiency Statistics. This team develops and manages

complex national sample surveys of energy consumers and suppliers to the residential and commercial building populations (RECS and CBECS)—key inputs to EIA's NEMS projections and EPA's Energy Star ratings. During her tenure, the surveys have grown in scale, their topical and geographic coverage, and their range of energy issues. Prior to joining EIA, Eileen worked as the Senior Survey Methodologist in the Statistical Research Division of the Census Bureau (1998-2005) on housing surveys and censuses, decennial evaluations, and behavioral research. From 1987-1998 while at the National Agricultural Statistics Service, USDA, she developed new surveys on chemical use and production practices' impact on the environment and farm economy. Ms. O'Brien has a B.A. in Economics from Michigan State University and a M.S. from the Joint Program in Survey Methodology, University of Maryland at College Park. She has served on federal interagency statistical working groups and on councils and committees of the American Statistical Association and the American Association for Public Opinion Research.

Sukanya Paciorek *Vornado Realty Trust (Energy Star Partner of the Year 2013)*

Energy Consumption and Building Efficiency June 17, 2013 — 2:00 p.m.-3:30 p.m. Location: Capitol Ballroom

Sukanya Paciorek is Vornado Realty Trust's Vice-President of Corporate Sustainability. In this role, she oversees

Vornado's energy efficiency and sustainability initiatives, including Vornado's project evaluation, energy management and outreach efforts. She also manages the energy and utilities portfolio for Vornado's New York division.

Sukanya was instrumental in establishing Vornado's energy efficiency capital allocation in 2011. Since 2009, she also led Vornado's efforts





to LEED certify over 12 million of Vornado's 30 million square feet of certified space nationwide. Previously, Suki worked in the natural gas industry, and for the U.S. Department of State. She holds a Master's degree from SIPA with a concentration in International Energy Management and Policy.

John Powell U.S. Energy Information Administration U.S. Oil Production Growth and its Implications

June 18, 2013 — 11:45 a.m.-1:15 p.m. Location: Grand Ballroom



John M. Powell is a Senior Petroleum Markets Analyst with the U.S. Energy Information Administration (EIA). Powell is responsible for the Liquid Fuels Model Module

of the National Energy Modeling System. This module replaced the Petroleum Market Module used in earlier EIA Annual Energy Outlooks to provide a more granular and integrated modeling of petroleum refineries and all other types of current and potential future liquid fuels production technologies.

Prior to joining EIA, Powell was part of the U.S. Department of Energy's Strategic Petroleum Reserve (SPR) office in Washington, D.C. involved in crude oil purchases for the SPR and drawdown of the Reserve in 2011 in response the oil crisis in Libya.

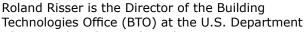
Before joining the federal government, Powell worked with Ammonite Resources Company where he developed a fully risked financial model to analyze potential exploration plays for mezzanine financing. He was a Member of the American Stock Exchange where he worked on the exchange floor as an options market maker.

Earlier in his career, Powell spent 6 years with Texaco Oil Trading and Supply as Manager of Analysis and Manager of Product Trading and 20 years with the Mobil Oil Corporation where held various management, engineering, supply and trading positions.

Powell earned a Bachelor of Science in Chemical Engineering and Master of Science in Chemical Engineering from the University of Michigan in Ann Arbor, a Master of Business Administration from Baruch College, City University of New York, and holds a Professional Engineering license in Connecticut.

Roland Risser U.S. DOE Energy Efficiency & Renewable Energy

Energy Consumption and Building Efficiency June 17, 2013 — 2:00 p.m.-3:30 p.m. Location: Capitol Ballroom



of Energy (DOE). BTO's goal is to optimize U.S. energy savings opportunities and help create a self-sustaining market for building energy efficiency by pioneering advanced technologies, accelerating the energy efficiency, speed and scale of codes and standards, and promoting highly efficient buildings and homes. BTO is responsible for managing a portfolio with a total annual budget of approximately \$220 million. Program results produced to date are expected to save U.S. consumers \$91 billion and 32 quads of energy by 2030.

Ivan Sandrea Ernst and Young

Energy In the Americas June 17, 2013 — 4:00 p.m.-5:30 p.m. Location: Grand Ballroom

Ivan Sandrea is a partner and sector leader at Ernst and Young in London, with responsibility for global oil and gas emerging markets.

Ivan recently worked as a senior advisor to the president of Brazil's leading unconventional gas company and served as president at Energy Intelligence (EI) in London. Past positions include President of Energy Intelligence in London, VP Global Strategy and Business Development and VP of Strategy International Exploration & Production (E&P) at Statoil, head of oil supply at the Organization of the Petroleum Exporting Countries (Vienna), associate vice president of oil and gas equity research at Merrill Lynch (London) and exploration and operational geologist at BP (Venezuela, Norway, and Egypt). Mr. Sandrea is currently active as a Senior Research Advisor at the Oxford Institute for Energy Studies and as member of the Oxford Energy Policy Club; co-founder, Board Member, and lecturer of strategy at the Executive Energy MBA program at Vienna's Wirtschaftsuniversität (WU) in Austria; member of the UNECE Expert Group on Resource Classification (Geneva). He was recently appointed as a trustee to the Energy



Policy Research Foundation, Inc. (Washington, D.C.). EPRINC, a nonprofit think tank established in 1944, provides research and analysis of contemporary petroleum issues. Ivan holds a B.Sc. in geology from Baylor University, a MSc. and MBA from Edinburgh University and attended the Berkeley Executive Leadership Program.

Andrew Slaughter IHS

U.S. Oil Production Growth and its Implications June 18, 2013 — 11:45 a.m.-1:15 p.m. Location: Grand Ballroom



Andrew Slaughter currently holds the position of Vice President Energy Research for IHS. In this role he leads the company's research teams in the areas of upstream oil and gas with a particular focus on operational and environmental issues. He is based in Houston, Texas.

Prior to joining IHS in mid-2012, Andrew Slaughter was Business Environment Manager for Shell's Upstream Americas E&P business. He had responsibilities for strategic counseling and analysis relative to North American crude oil and natural gas markets, covering shortand long-term supply, demand, price and other regional market issues in support of investment planning and business strategy. He was also involved with policy analysis, stakeholder engagement and external communications activities as they relate to market issues. Andrew worked closely with the Shell global scenario team in developing and communicating Shell's long-term energy scenarios and global geopolitical and societal scenarios.

Andrew Slaughter has been an active participant in a leadership role for recent National Petroleum Council (NPC) studies, undertaken for the U.S. government, including the 2007 NPC study "Facing the Hard Truths About Energy," and the 2011 study on Prudent Development of North American oil and gas resources, for which he served as Chair of the Resources and Supply Task Group; is a member of the Oil and Gas Journal Editorial Advisory Board; a technical reviewer for the Journal of the Society of Petroleum Engineers; and is a regular contributor to industry forums.

Earlier in his career, he worked in energy industry consulting with DRI/McGraw-Hill (now known as IHS Global Insight), based in Paris, France. Previously he was with management consultants Arthur D. Little, also based in Paris. In both these roles he gained extensive experience in international oil and gas markets.

Andrew Slaughter began his career with Chevron Oil, in a planning and economic analysis role for Chevron's downstream oil business.

Andrew is a UK citizen, married with three children.

Katherine Spector CIBC World Markets Corp.

U.S. Natural Gas Production Growth and its Implications June 18, 2013 — 10:00 a.m.-11:30 a.m. Location: Grand Ballroom



Katherine Spector joined CIBC World Markets in 2010 to initiate Commodities Strategy for the bank's

sales and trading desk based in New York. She is responsible for the bank's energy price forecasts and market views, and her analysis includes global energy supply/demand fundamentals, money flows, and geopolitics. In addition, she serves on the board of the New York Energy Forum, an educational organization dedicated to increasing public knowledge about energy issues.

Prior to joining CIBC, Ms. Spector headed the Global Energy Strategy group as part of JPMorgan's Global Commodities Sales & Trading team. Previously, she was an Energy Strategist on the Deutsche Bank Commodity Sales & Trading desk, and worked as the editor of Oil Market Intelligence at the Energy Intelligence Group, which also publishes leading trade publications such as Petroleum Intelligence Weekly. She also worked as a consultant with Industrial Economics, Inc., in Cambridge, Mass. Her work there included litigation support for the deregulation of natural gas utilities.

Ms. Spector holds a degree in Political Science from Yale University, where her research focused on patterns of rent distribution in petrostates, and implications for democratization.

John Staub

U.S. Energy Information Administration World Hydrocarbon Resources June 17, 2013 — 2:00 p.m.-3:30 p.m. Location: Grand Ballroom

John Staub is the Team Lead for Exploration and Production in the Office of Petroleum, Natural Gas and Biofuels Analysis at the U.S. Energy Information

Administration. John leads analysis and modeling of domestic and international petroleum and natural gas resources and production for both short and long-term outlooks. John began his career as a Presidential Management Fellow in the U.S. Department of Energy's Office of Policy and International Affairs and has served detail assignments at the White House Council of Economic Advisers and the International Energy Agency (IEA). He received an undergraduate degree in physics from Concordia College, Moorhead, Minn., and a master's degree in public policy from the University of Chicago.

Jan Stuart *Credit Suiss*e

U.S. Oil Production Growth and its Implications June 18, 2013 — 11:45 a.m.-1:15 p.m. Location: Grand Ballroom

Jan Stuart is a Managing Director at Credit Suisse in the Investment Banking division, based in New York. He is the Head of Global Energy Research, specifically covering markets for oil and natural gas.

Mr. Stuart joined Credit Suisse in September 2011 after a combined six years as the Global Oil Economist at UBS and later Macquarie, where he worked on equity sell-side research. Previously, Mr. Stuart was a desk analyst on a leading oil and natural gas futures brokerage desk at ABN Amro and Societe Generale for five years.

Mr. Stuart received a B.S. in International Affairs and Art History from the American University in Paris, an M.A. in International Relations & Strategic Studies from Boston University, and an M.S. from Columbia University's School of Journalism.





Jim Tramuto Southwestern Energy Company

U.S. Natural Gas Production Growth and its Implications June 18, 2013 — 10:00 a.m.-11:30 a.m. Location: Grand Ballroom



James A. Tramuto is vice president of governmental and regulatory strategies for Southwestern Energy

Company. Tramuto joined Southwestern Energy Company in 2009 and has more than 35 years of experience in energy and governmental relations. Previously he served as vice president of federal government relations for PG&E Corporation in Washington, D.C., and as vice president of external affairs for PG&E's National Energy Group.

Prior to joining PG&E, Tramuto was president of TECO Gas Marketing and president and CEO of Polaris Pipeline. He also held a number of executive, legal and governmental affairs positions at United Gas Pipeline Company. Tramuto has extensive experience serving on a number of energy committees in Washington, Texas and Arizona, including several appointments by former Texas Governor George W. Bush and Texas Governor Rick Perry. Tramuto has served as a member of Texas A&M University Business School Finance Advisory Board, is a board member of The Energy Council, the IOGCC and a past president and member of the Texas Utility Lawyers.

Currently, Tramuto is involved with America's Natural Gas Alliance (ANGA) serving as chairman of the State Affairs Committee and with the Natural Gas Supply Association (NGSA) serving on a number of committees. He also serves on the board of directors of Texas Alliance of Energy Producers.

Tramuto earned a juris doctorate from South Texas College of Law and a bachelor's degree in management from Texas A&M University. He has also attended the Executive Development Program at the Harvard Business School.

Frank A. Verrastro *Center for Strategic and International Studies*

International Energy Statistics: Coverage and Quality June 18, 2013 — 11:45 a.m.-1:15 p.m. Location: Capitol Ballroom



Frank Verrastro is senior vice president and the James R. Schlesinger Chair for Energy & Geopolitics. From

2003- 2012, he served as Director of the Energy and National Security Program at CSIS. He has extensive energy experience, having spent over 30 years in energy policy and project management positions in the U.S. government and the private sector. His government service included staff positions in the White House and the Departments of Interior and Energy, including serving as 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, 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.

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 The George Washington University and has lectured at Harvard's Kennedy School. He served as a member of the Coordinating Committee for the 2012 National Petroleum Council (NPC) study on the Prudent Development of North American Energy Resources, as chair for the Geopolitics and Policy Task Groups for the 2007 NPC report Facing the Hard Truths about Energy: A Comprehensive View to 2030 of Global Oil and Natural Gas, and as a Task Force member for the Council on Foreign Relations report National Security Consequences of U.S. Oil Dependency, and on the 2011 NPC report Prudent Development - Realizing the Potential of North America's Abundant Natural Gas and Oil Resources. He has authored a variety of papers on energy and security topics and currently serves on the Advisory Board for the National Renewable Energy Laboratory (NREL) in Golden, Colorado and as a member of the Council on Foreign Relations.

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