

Gas and Renewables: Building a Cleaner Energy Bridge to a Sustainable Fuels Future

Concerns about climate change and energy security have converged to boost the development of alternative and renewable fuels that can be produced domestically. Efforts are underway to commercialize next-generation biofuels derived from agricultural residues and energy crops, but these remain several years away. Cleaner energy is needed now to bridge the gap.

The energy bridge to the future must have lower emissions to address concerns about global warming and climate change. As a result of advances in gas production technology, natural gas has emerged as the most promising fuel to replace coal for power generation and perhaps even gasoline in vehicles. Gas is abundant, cleaner than other fossil fuels, and enormously price competitive. It could be a partner to biofuels in lowering emissions while next generation biofuels are being developed.

Recent advances in hydraulic fracturing techniques and technology have unlocked huge resources of unconventional gas around the world. Some observers have said the global potential of unconventional and conventional gas could change the international geo-political balance of energy politics. Others have criticized fracturing, claiming it has contaminated drinking water supplies and impacted air quality and have called upon government to implement new regulations governing its use.

This FIU conference will bring together international experts in natural gas and biofuels to discuss the strategic, technical, market, and environmental aspects of how these alternatives can work together to reduce greenhouse gas emissions and our dependence on foreign sources of energy, while contributing to the growth of an entirely new green economy around the world.

Gas and Renewables: Building a Cleaner Energy Bridge to a Sustainable Fuels Future

November 9, 2010

MARC International Pavilion at Florida International University

8:15 a.m. – 9:00 a.m. **Registration and breakfast**

9:00 a.m. – Noon **Morning Program**

Introductory Remarks by Conference Chair, Dr. Edward Glab, Co-Director FIU Global Energy Security Forum

Global Gas Outlook for Conventional and Unconventional Gas

Alan Stuckert, ExxonMobil Gas and Power Marketing Public and Government Affairs Manager

Unconventional Gas and the Environment

Don McClure, Vice President, Government and Stakeholder Relations, Encana

Geo-Political and Energy Policy Implications of the Global Gas Outlook

Alan Hegburg, Senior Fellow, CSIS Energy and National Security Program

Noon to 1:30 pm. **Luncheon program**

Building a Cleaner Energy Bridge to the Future

Dr. George Philippidis, Director of Energy, FIU's Applied Research Center

1:30 pm – 3:00 pm **Afternoon Program**

Regulatory, Policy and Transportation Challenges to Gas Delivery

Opoku Danquah, Director, Upstream Research, Hart Energy

A View from the Power Generation Sector

Sam Forrest, VP of Energy Marketing and Trading, Florida Power and Light (FP&L)

Information about Conference Participants

Dr. Edward Glab, Co-Director FIU Global Energy Security Forum. Dr. Glab is currently a Clinical Professor of Business and Faculty Advisor to the School for International and Public Affairs at FIU. In addition to FIU, he has taught at Northern Illinois University, University of Texas at Austin, the University of Chile and La Catolica in Santiago. He spent over 25 years in the private sector in the oil and gas business and for the past seven years has served as a consultant to a number of major oil and gas companies around the world. He appears frequently in the media talking about energy.

Alan Stuckert, ExxonMobil Gas and Power Marketing Public and Government Affairs Manager. ExxonMobil is the largest publicly traded international oil and gas company, uses technology and innovation to help meet the world's growing energy needs. ExxonMobil holds an industry-leading inventory of resources, is the largest refiner and marketer of petroleum products, and its chemical company is one of the largest in the world.

Don McClure, Vice President, Government and Stakeholder Relations, Encana. Encana is Canada's major producer of unconventional gas. It is one of only five Canadian energy companies to be named to Corporate Knights Magazine's Global 100 Most Sustainable Corporations in the World. The Global 100 Most Sustainable Corporations in the world is an annual project initiated by Corporate Knights recognizing the corporations which have been most proactive in managing environmental, social and governance issues.

Alan Hegburg, Senior Fellow, CSIS Energy and National Security Program. Alan is a senior fellow in the CSIS Energy and National Security Program. Prior to joining CSIS, he served for 17 years in the U.S. Departments of State and Energy, most recently as deputy assistant secretary for international energy policy in the Office of Policy and International Affairs at the Energy Department. In the private sector, he spent 17 years at Phillips Petroleum, Amoco, and BP as manager of international government relations and director of international and geopolitical analysis. He has participated in international exploration and production negotiations involving investment opportunities in Asia, Russia, the Caspian, the Middle East, and Latin America.

Dr. George Philippidis is an international energy expert with over 20 years of experience in biofuels (ethanol, butanol, biodiesel, algae, and hydrocarbons) and renewable power. He is Energy Director of the Applied Research Center and co-Director of the Global Energy Security Forum at Florida International University in Miami. He assists companies in the Americas to pursue bioenergy and biofuels business opportunities and advises governments on energy policy and regulatory issues. Before joining FIU, he was business director at a subsidiary of Thermo Electron Corporation (a Fortune 500 company) in Boston and directed biofuels technology development at the National Renewable Energy Laboratory (NREL) in Denver. He holds a Ph.D. in

Chemical Engineering and an MBA, has numerous publications, and holds 11 patents in cleantech.

Opoku Danquah is is Director of Upstream Research at Hart Energy. Prior to joining Hart, Danquah was a North American analyst for Wood Mackenzie, where he worked on multiple projects focusing on natural gas production, infrastructure and transportation. Before that, he specialized in modeling and market analysis within the Global Gas team at IHS CERA (Cambridge Energy Research Associates), and was instrumental in creating the group's supply models. His previous work experience also includes consulting for Bank of America's country risk group and conducting research at Institutional Investor. Danquah holds degrees from Middlebury College and The Fletcher School at Tufts University.

Hart Energy Consulting is a leading full-service information, analysis and communication resource for the worldwide energy industry. Headquartered in Houston, with representation in New York, London, Washington, Brussels, Bahrain, Singapore, and many other international cities, Hart Energy Consulting is a division of Hart Energy Publishing. Hart Energy Publishing's market-leading publications include Oil and Gas Investor, E&P, FUEL and PipeLine and Gas Technology. Hart also produces newsletters, custom publishing products, conferences, and unique multi- and single-client consulting services.

Sam Forrest, VP of Energy Marketing and Trading, Florida Power and Light (FP&L). Sam Forrest is responsible for energy marketing and trading activities for Florida Power & Light Company (FPL), the principal subsidiary of NextEra Energy, Inc., and one of the largest investor-owned electric utilities in the nation. He was appointed vice president in June 2007. Before joining FPL, Mr. Forrest was with Constellation Energy serving as vice president of origination for that company's commodities group. In addition, he has held a variety of energy marketing and trading management positions with Duke Energy, Entergy Koch and Entergy.

Florida Power & Light Company is the largest electric utility in Florida and one of the largest rate-regulated utilities in the United States. FPL serves approximately 4.5 million customer accounts in Florida and is a leading employer in the state with more than 10,000 employees. A clean energy leader, FPL has one of the lowest emissions profiles and one of the leading energy efficiency programs among utilities nationwide. FPL is a subsidiary of Juno Beach, Fla.-based NextEra Energy, Inc.