

Plugging into Natural Gas

Presenters' Background

Northwest Gas System December 2009 Experience

Clay Riding, Puget Sound Energy

Clay Riding is Director of Natural Gas Resources for Puget Sound Energy in Bellevue, Washington. Mr. Riding is responsible for the acquisition of long-term natural gas supplies, transportation and storage for Puget's core gas and gas-fired generation portfolios. He leads natural gas resource project development and acquisition efforts to achieve a diversified pool of gas resources and oversees the Company's interests in the Jackson Prairie Storage Project.

Mr. Riding has 31 years of experience in the energy industry covering a broad-range of areas including risk management, utility operations management, trading, business development and marketing. He has an extensive background in the acquisition and management of energy supply resources, utility and interstate pipeline operations, and Federal Energy Regulator Commission regulations. Over the past twenty years he has been involved in the development of natural gas markets in the west, including gas-fired generation projects. Prior to joining PSE for his second tour of duty in July 2007, Clay spent six years with The Energy Authority, four years with Puget Sound Energy and sixteen years with The Williams Companies in various trading, marketing & business development, and finance roles.

Texas-New Mexico February 2011Event

Heather Polzin, FERC Office of Enforcement

Heather Polzin is currently an Attorney-Advisor with the Federal Energy Regulatory Commission's Office of Enforcement, Division of Investigations. At the Commission, she was the electric side lead for the Southwest Inquiry Task Force, which issued a report in August, 2011 on causes and recommendations relating to the February 2011 gas and electric outages in Texas, Arizona and New Mexico. Before joining the Commission, she was General Counsel to the Maryland Public Service Commission and spent many years in private practice as a trial lawyer. She is a graduate of James Madison University and the University of Virginia, School of Law.

Earl Shockley, NERC Director of Investigations

Earl Shockley is the Director of the Reliability Risk Management Group at NERC. Earl is responsible for directing all NERC activities with respect to Bulk Power System Awareness and crisis response, Event Analysis, Human Performance and Compliance Investigations across North America. Earl joined NERC in August of 2007 and has served in roles of increasing responsibility including: Director of Event Analysis and Investigations, Manager of Compliance Violation Investigations, Lead Compliance Investigator and Regional Compliance Coordinator.

Earl began his career in the United States Navy and has served 34 years in the power industry. Before he came to NERC, Earl was employed by the Tennessee Valley Authority, Seattle City Light and San Diego Gas & Electric. During this period he served in various roles of increasing responsibility including: Project Manager of Compliance and Standards, Technical Instructor, Operations Shift Supervisor, Senior Power Dispatcher, Balancing Authority, Transmission System Operator and Senior Outage Coordinator.

Earl led or participated on many accident/event investigations during his career, including the NERC lead investigator on the 2008 Florida Blackout, executive sponsor on the Feb 2011 Southwest Cold Snap Event, and currently leading several teams on the Sep 2011 Southwest Blackout Event. Earl is a former lead instructor for cause analysis methods/event investigations, electrical safety and human performance fundamentals.

Earl holds a B. S. degree in Business Administration & Organizational Management and is currently working on his Masters degree in Engineering Management. Earl also has completed numerous advanced technical power system apprenticeships and certification courses while in the US Navy and the electric industry.

Federal Regulatory Perspective

Phil Moeller, FERC Commissioner

Commissioner Philip D. Moeller is serving his second term on the Commission, having been nominated by President Obama and sworn in on July 16, 2010, by Congresswoman Cathy McMorris Rodgers (R-Wash.), for a term expiring June 30, 2015. He was first nominated to FERC by President George W. Bush in 2006 and sworn into office on July 24, 2006, by Chief Justice of the United States John Roberts. From 1997 through 2000, Mr. Moeller served as an energy policy advisor to U.S. Senator Slade Gorton (R-Washington) where he worked on electricity policy, electric system reliability, hydropower, energy efficiency, nuclear waste, energy and water appropriations and other energy legislation.

Prior to joining Senator Gorton's staff, he served as the Staff Coordinator for the Washington State Senate Committee on Energy, Utilities and Telecommunications, where he was responsible for a wide range of policy areas including energy, telecommunications, conservation, water, and nuclear waste.

Before becoming a Commissioner, Mr. Moeller headed the Washington, D.C., office of Alliant Energy Corp. Prior to Alliant Energy, Mr. Moeller worked in the Washington office of Calpine Corporation.

Mr. Moeller was born in Chicago, and grew up on a ranch near Spokane, Washington. He received a B.A. in Political Science from Stanford University.

Implications of Natural Gas and Electricity Convergence

Catherine Elder, Aspen Environmental

Catherine Elder joined Aspen Environmental Group in October 2009 as a Senior Associate in the Integrated Electricity and Resource Analysis Division. From her start in graduate school at Bay State Gas outside Boston to joining Pacific Gas and Electric Company to work on natural gas unbundling, she now helps clients evaluate and address energy policy and resource planning issues, including application of carbon regulation and incorporation of reasonable natural gas and other strategic assumptions into electricity modeling. She has served as R. W. Beck's Chief Gas Price Forecaster, has reviewed fuel plans and advised lenders for more than 40 different gas-fired power projects across the U.S. and Canada, and provides support to the natural gas staff at the California Energy Commission.

Ms. Elder is the primary author of "Implications of Greater Reliance on Natural Gas for Electricity Generation," released in July 2010 by the American Public Power Association. A native Hoosier, she earned an undergraduate degree with honors in Political Economy from the University of California, Berkeley and holds a Master in Public Policy from Harvard University's Kennedy School of Government.

Integrating Renewables Using Natural Gas

Leonard Crook, ICF International

Mr. Crook is a Vice President in ICF International's Natural Gas Practice, with over 30 years' experience in the natural gas industry. Prior to joining ICF, Mr. Crook served at FERC for 10 years. Since joining ICF, Mr. Crook has focused on the economics of gas supply and transportation and gas markets. He has advised LDCs, independent power producers, and electric utilities on gas supply and acquisition strategies. He has served as lenders' fuel and gas markets expert on over \$4 billion in project financed power and natural gas facilities. He currently is advising electric generation clients on gas transportation and supply contracting. He worked with ICF team on the assessment of gas infrastructure implications of higher levels gas fired generation in specific markets. Mr. Crook has participated in engagements involving gas market design in Australia and Ontario. He recently led a major study for the Government of India on a conceptual design for a national gas grid. Mr. Crook has participated in the development of gas market models and has used market models extensively in his consulting practice to develop forecasts of market conditions, evaluate investment projects (pipeline, storage, power plants), and in the context of regulatory proceedings.

Mr. Crook began his career at FERC in hydroelectric licensing and then moved into natural gas regulation, evaluating the economic and environmental impacts of interstate natural gas pipelines and FERC gas rulemakings. He was part of the FERC team that prepared the President's Decision on the Alaska Natural Gas Transportation System. Mr. Crook has an MA in History and a BA in Economics and History from the University of Memphis.

Regional Developers' Views

Malcolm McLellan, Van Ness Feldman

Malcolm McLellan practices in the areas of administrative and commercial law representing users of natural resources. His practice focuses on the regulation of electricity, transmission, and Alaskan fisheries. Malcolm has an intricate knowledge of the technical, legal and business considerations facing electric utilities, as well as a depth of practical experience gained from working with the operators of interconnected electric systems and marketers in the Western Interconnection. He has significant experience counseling on rulemakings, compliance, project development, and complex, international, multi-party agreements. Malcolm was singled out for his work in Energy Law by the 2012 edition of Best Lawyers in America.

CEO Perspectives for Moving Forward

Steve Wright, Bonneville Power Administration

Stephen J. Wright began his career in 1981 at the Bonneville Power Administration in the agency's conservation office as an entry-level GS-9. He became Acting Administrator on the eve of the West Coast energy crisis of 2000-2001 and was named Administrator and Chief Executive Officer by the Secretary of Energy in January 2002. His tenure has spanned some of the region's greatest energy challenges, such as developing power contracts that preserve the value of the federal hydropower system, consecutive years of low water and Endangered Species Act litigation. He also has overseen the agency during a time of change, including the emergence of wind energy as a significant resource, construction of major new transmission lines to maintain reliability and deliver renewable resources, technical innovations associated with development of a Smart Grid, renewed focus on energy efficiency and progress in restoring Columbia Basin fish runs.

Allison Bridges, Williams Northwest Pipeline

As Vice President & General Manager, Ms. Bridges is responsible for all commercial, operations and technical services functions for Williams Northwest Pipeline. She has 30 years of experience in the natural gas pipeline industry. Prior to her current role, Allison served as Vice President, Commercial Operations, Northwest Pipeline, and Vice President, Service Delivery, Gas Management and Control for Williams Gas Pipeline. Since joining the company in 1981, she has held various management positions including Vice President, Strategic Marketing for Williams Gas Pipeline and Director, Business Development for Transcontinental Gas Pipeline. Allison graduated from the University of Virginia with a B.S. degree in Commerce. She currently serves on the Board for the Northwest Gas Association.

Gregg Kantor, NW Natural

Mr. Kantor became President and Chief Executive Officer of NW Natural on January 1, 2009. Previously, Mr. Kantor served as President and Chief Operating Officer of NW Natural from May 2007 to December 2008, and as Executive Vice President from December 2006 to April 2007. He also served as Senior Vice President of Public and Regulatory Affairs from 2003 to 2006, as Vice President of Public Affairs and Communications from 1998 to 2003, and as Director of Public Affairs and Communications from 1996 to 1998. Mr. Kantor is a board member of the Portland Business Alliance, the Oregon Business Council and Greenlight of Greater Portland. He was also a board member of the Leaders Roundtable until December 2010 and the Oregon Global Warming Commission until January 2011. Mr. Kantor earned a Bachelor of Arts in Geography and Environmental Studies from the University of California at Santa Barbara and a Masters of Urban Planning from the University of Oregon.

Scott Morris, Avista Utilities

Scott Morris is Chairman of the Board, President and Chief Executive Officer of Avista Corp. He was elected president in 2006 and named chairman and chief executive officer in 2008. Morris also serves as chairman of the board of Advantage IQ, a subsidiary of Avista Corp.

Morris is an experienced utility executive who has served in a variety of leadership positions since joining the company in 1981. He began his career in the company's utility marketing division and has served in leadership positions throughout the company, including in customer service, construction and as general manager for Avista's Oregon and California utility business. He held that position until being named president of Avista Utilities in 2000.

Morris is a graduate of Gonzaga University and received his master's degree from Gonzaga in organizational leadership. He also attended the Stanford Business School Financial Management Program and the Kidder Peabody School of Financial Management.

Jim Piro, Portland General Electric

Jim Piro has 36 years of experience in the utility business. Prior to becoming PGE's President and CEO in 2009, he served as Executive Vice President of Finance, Chief Financial Officer and Treasurer for 8 years.

Since joining PGE as a civil engineer in Generation Engineering in 1980, Piro has been integrally involved in a number of strategic company initiatives. He served as a revenue requirement analyst in Economic Regulation and a financial analyst in Forecasting & Business Development. He also managed the departments of Economic Analysis and Strategic Planning Support.

A 1974 graduate of Oregon State University, Piro earned a bachelor's degree in civil engineering with an emphasis in structural engineering. He is also a registered professional engineer in California, and before working at PGE, he was a civil engineer at Pacific Gas & Electric based in San Francisco, Calif.