

largest domestic market for coal is the electric utility industry, which accounts for 88% of U.S. annual coal production.

ABOUT THE AUTHOR: Mr. Puglio has a B.S. in Geology, University of Dayton (1975), an M.S. in Geology, University of Pittsburgh (1977), and an MBA, University of Pittsburgh (1990). He has been employed by Consol Energy for 24 years, where he has been involved in Consol's coal-based operations as well as purchase of non-Marcellus oil and gas wells in western Pennsylvania and northern West Virginia.

GEORGE WESTINGHOUSE REENACTMENT

Ed Reis, Senator John Heinz History Center, Pittsburgh PA

ABSTRACT: Dressed as George Westinghouse, Ed Reis talks about his life, his family, his service during the Civil War and his many accomplishments including air brakes for trains, electricity, natural gas and the shipping industry. This Heinz History Center Outreach Program has been very well received, and Ed had done this first person portrayal of George Westinghouse over 200 times.

ABOUT THE AUTHOR: A native Pittsburgher, Ed Reis attended Duquesne University where he obtained a BS Degree in Business Administration and a MS Degree in Business Information Systems. He worked in Pittsburgh for three different companies before retiring from the Westinghouse Electric Corporation. While working for Westinghouse he became interested in the history of the company and its founder George Westinghouse. Twenty years ago he became a member of the Board of Directors of the George Westinghouse Museum Foundation, and in 1998 he became the Executive Director of the George Westinghouse Museum. The Museum merged with the Senator John Heinz History Center in late 2007, at which time Ed became the part-time Westinghouse Historian at the Heinz Center. Ed Reis is well known for his "History Alive" first-person impersonations of George Westinghouse – "The Forgotten Genius."

TECHNOLOGY OF ENERGY PRODUCTION IN PENNSYLVANIA NATURAL GAS, GAS LIQUIDS, AND PETROLEUM FROM MARCELLUS AND UTICA SHALES

Bill Zagorski, Vice President, Geology
Marcellus Shale Division, Range Resources Corporation

ABSTRACT: The Middle Devonian Marcellus Shale has evolved into North America's major gas play in terms of total gas resource, production rates, and economic potential. This

play encompasses over 28 million acres, including large portions of Pennsylvania, Northern West Virginia, and portions of southern New York and eastern Ohio. Development of the Marcellus Shale has expanded rapidly since 2008. Gas production now exceeds 3 billion cubic feet per day (Bcf/d), and has the potential to reach 20 Bcf/d by 2020. This presentation will describe the geology and productivity factors associated with this rich natural resource. The potential of neighboring fields such as the Utica Shales will also be discussed. Environmental concerns will be addressed as well.

ABOUT THE AUTHOR: Mr. Zagorski has over 30 years experience in various unconventional gas plays. He joined Range Resources in 1993. In 2004 he and members of his group identified the potential of Marcellus Shale. The Pittsburgh Association of Petroleum Geologists awarded Bill the title of "Father of Marcellus Shale" in 2008. Bill holds B.S. and M.S. degrees in geology from the University of Pittsburgh.

ENERGY SYMPOSIUM

Monday, August 27, 2012

Titusville, PA

Sponsored by

Pittsburgh Section, American Chemical Society

Pittsburgh Chapter, American Institute of Chemical Engineers

Drake Well Museum

Petroleum History Institute