

WEST VIRGINIA

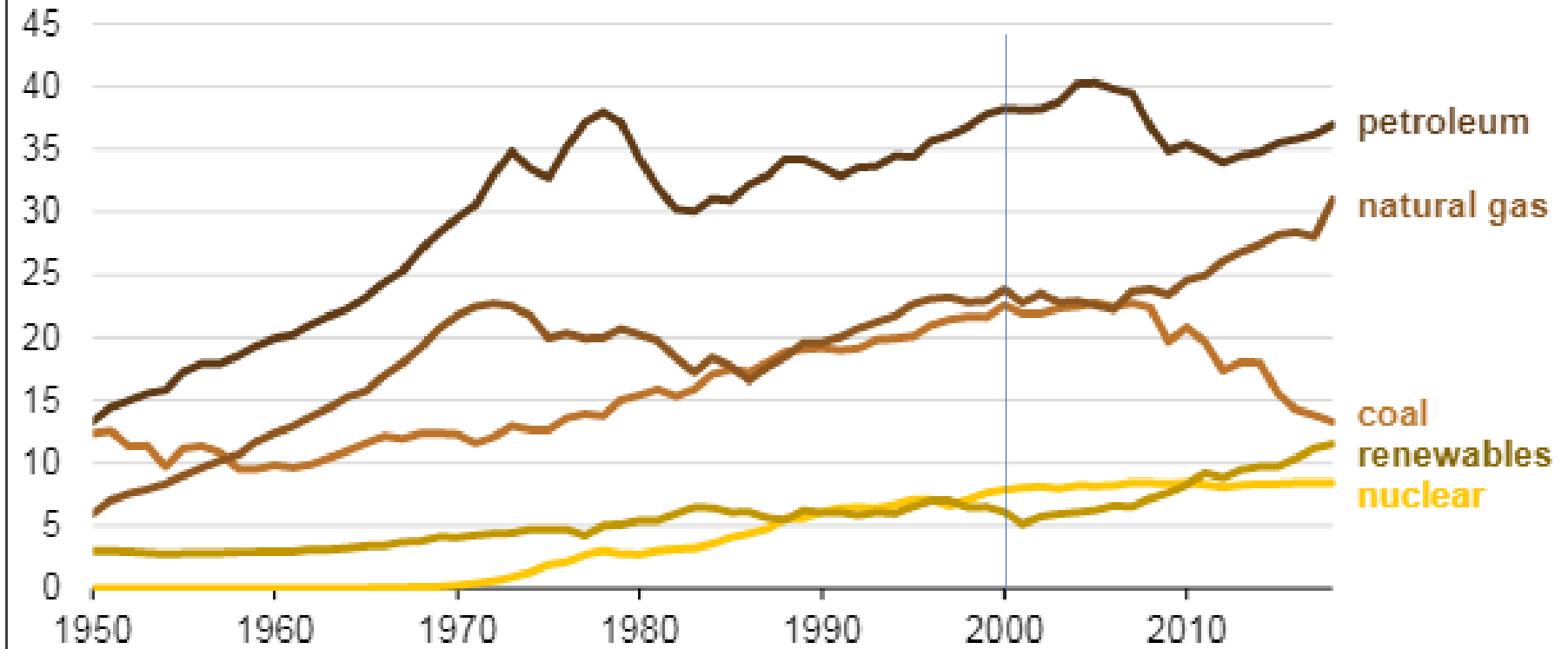
ENERGY IN TRANSITION

James Wood

Interim Director, Energy Institute
West Virginia University

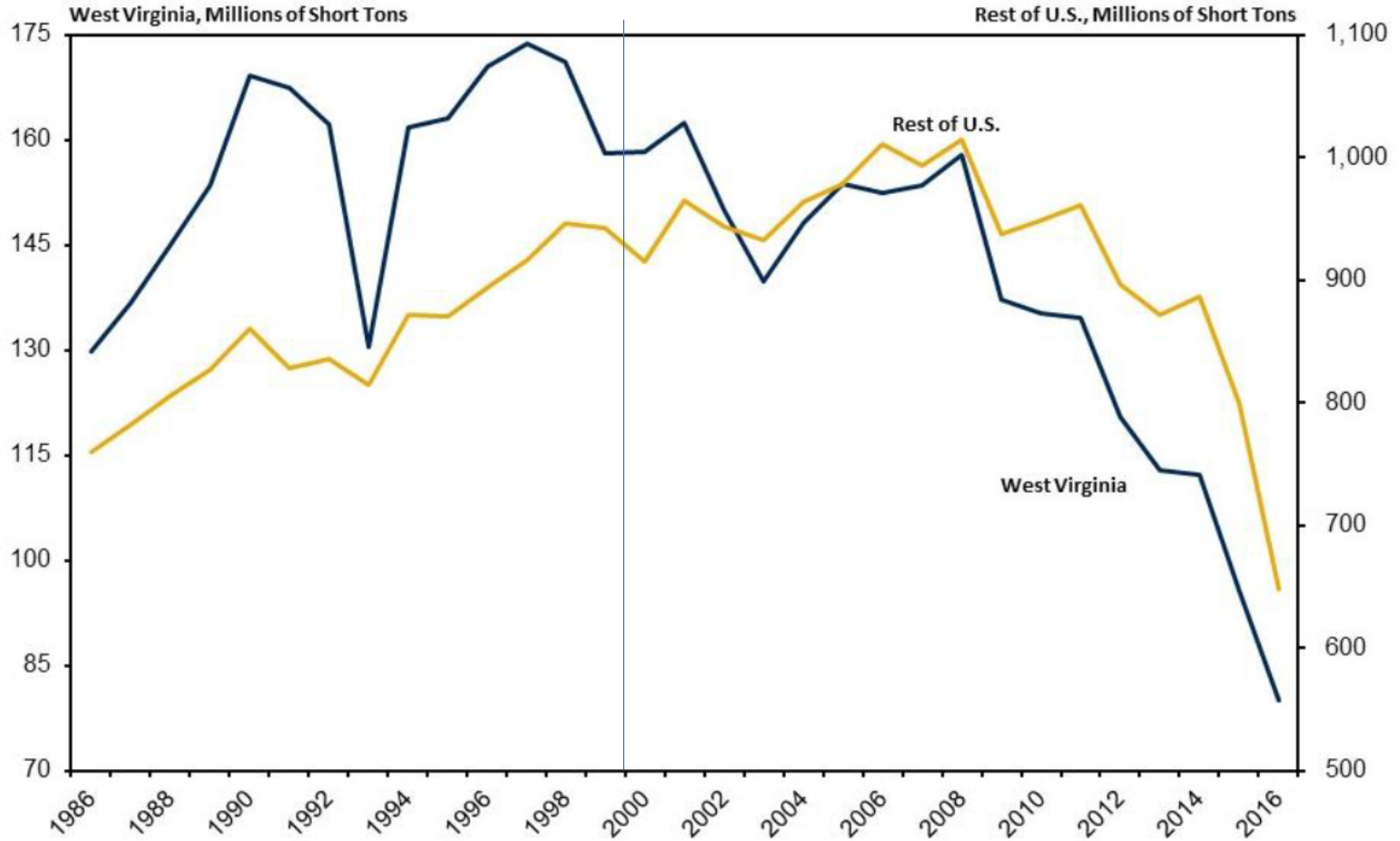
U.S. total energy consumption (1950-2018)

quadrillion British thermal units



Source: U.S. Energy Information Administration

Figure 1: Historical Coal Production Levels

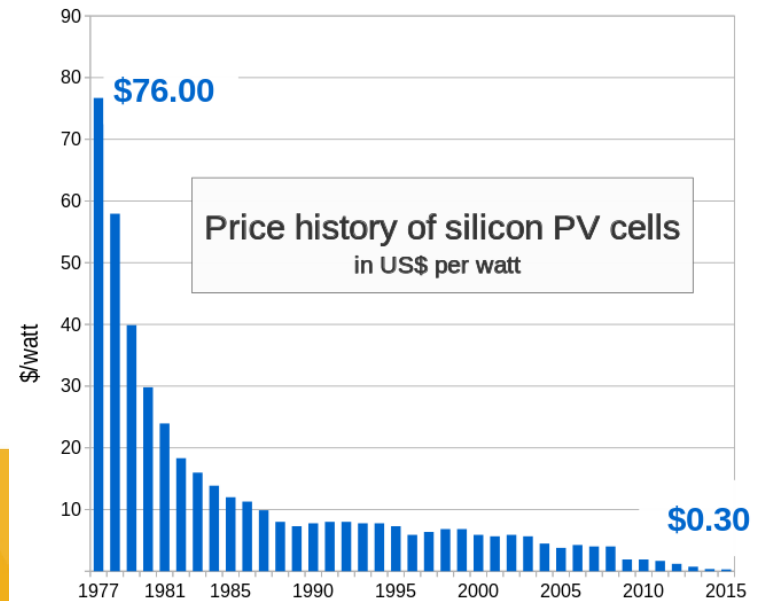
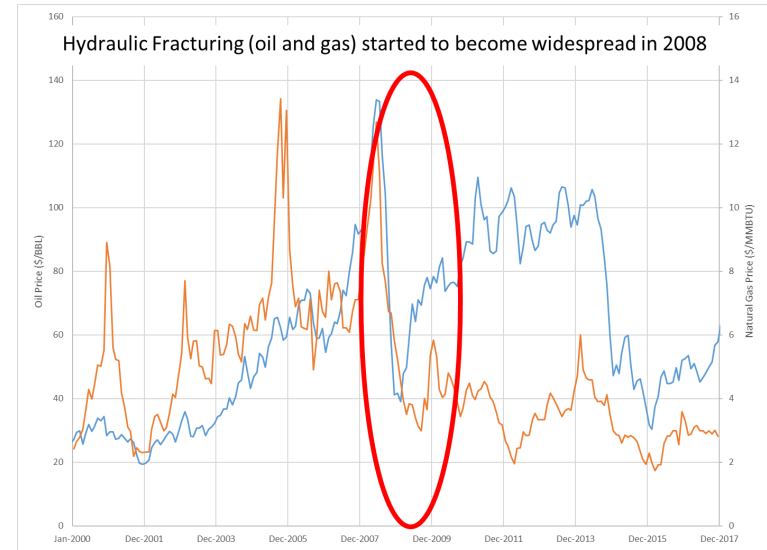


Source: Energy Information Administration

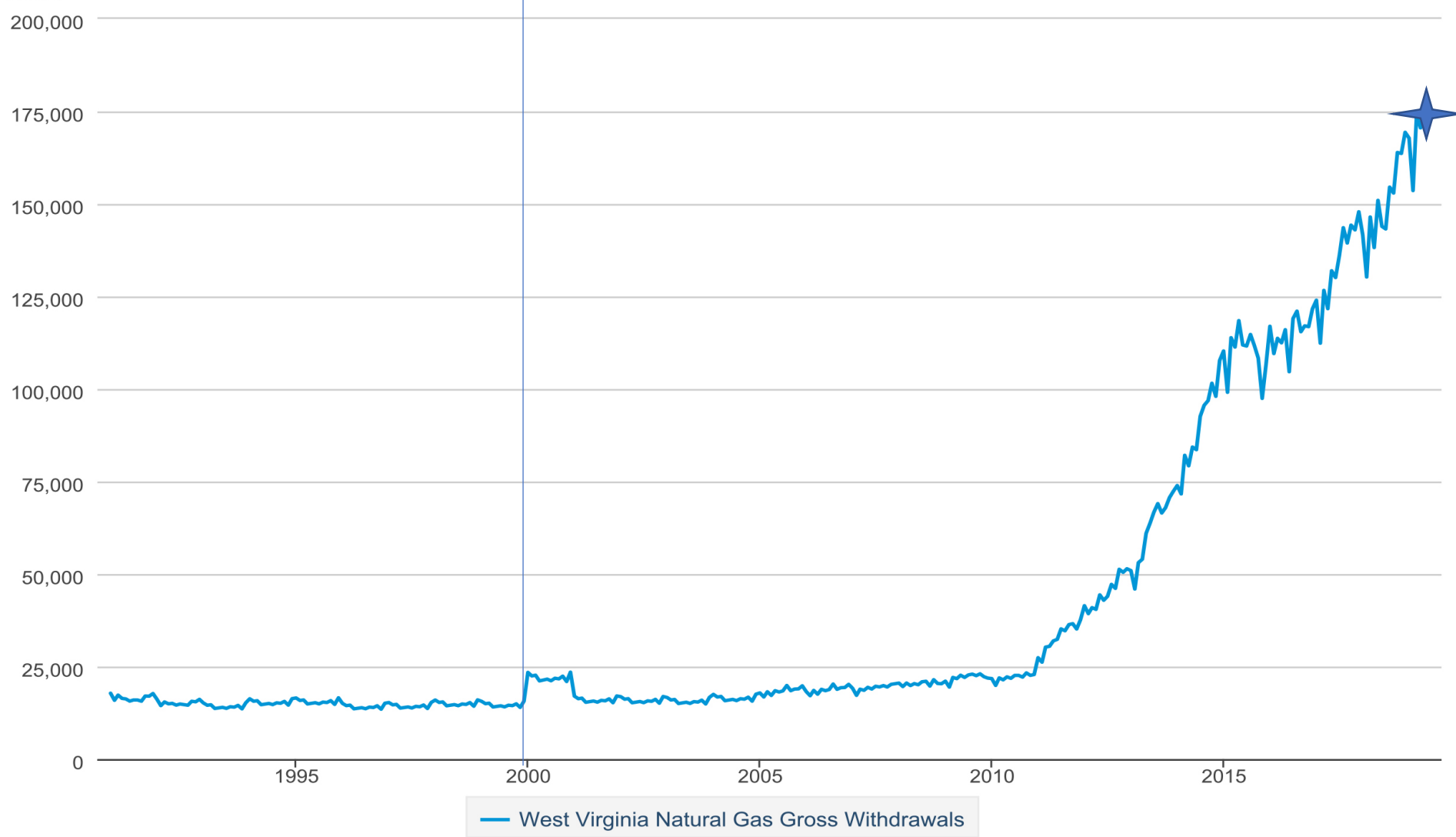
THE IMPACT OF TECHNOLOGICAL CHANGE

We are often slow to understand the impacts of transformational technological change.

In this decade, we are seeing changes in both fossil and renewable power that were unthinkable in the early 2000s.



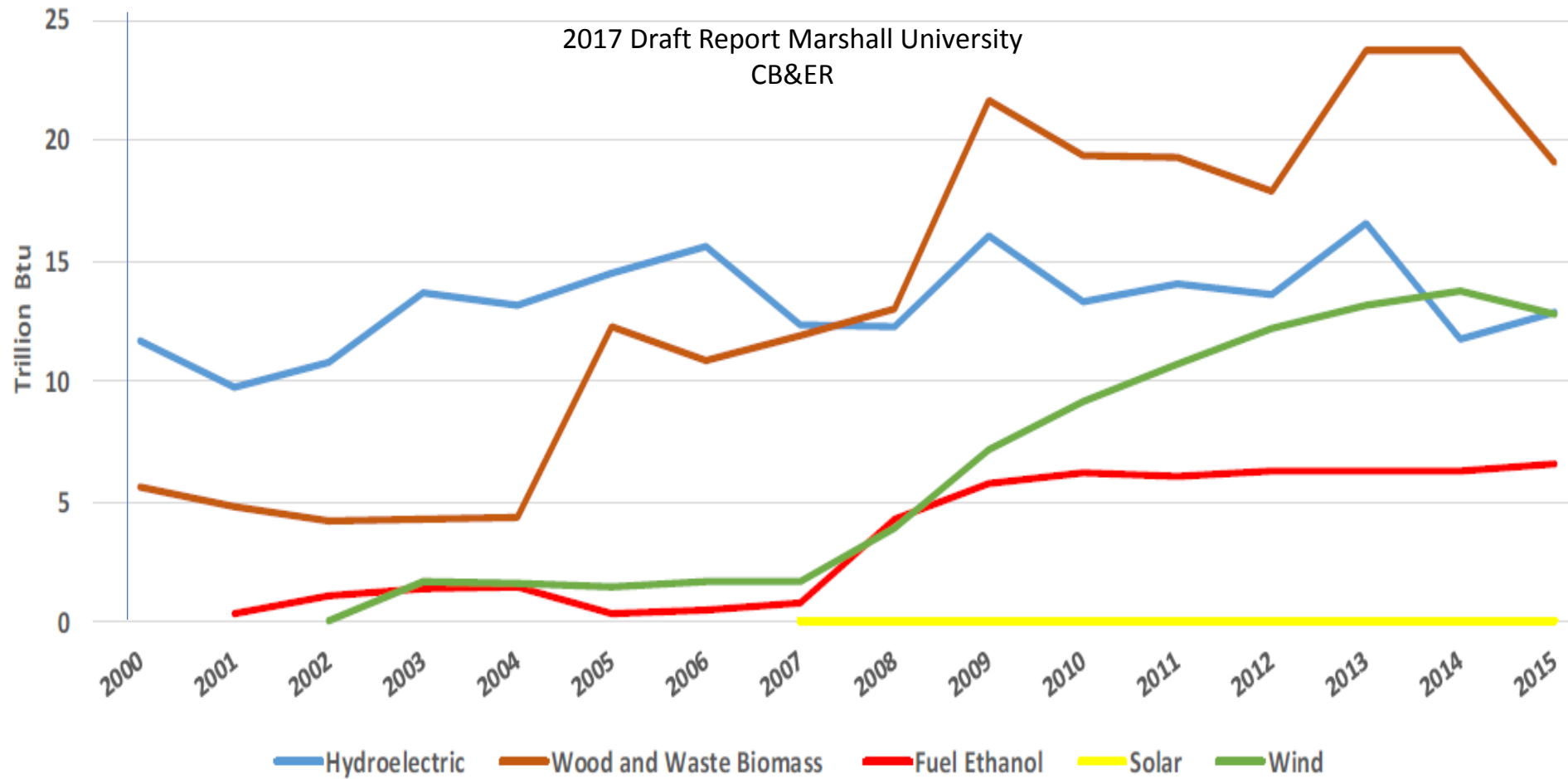
Source: Bloomberg New Energy Finance & pv.energytrend.com



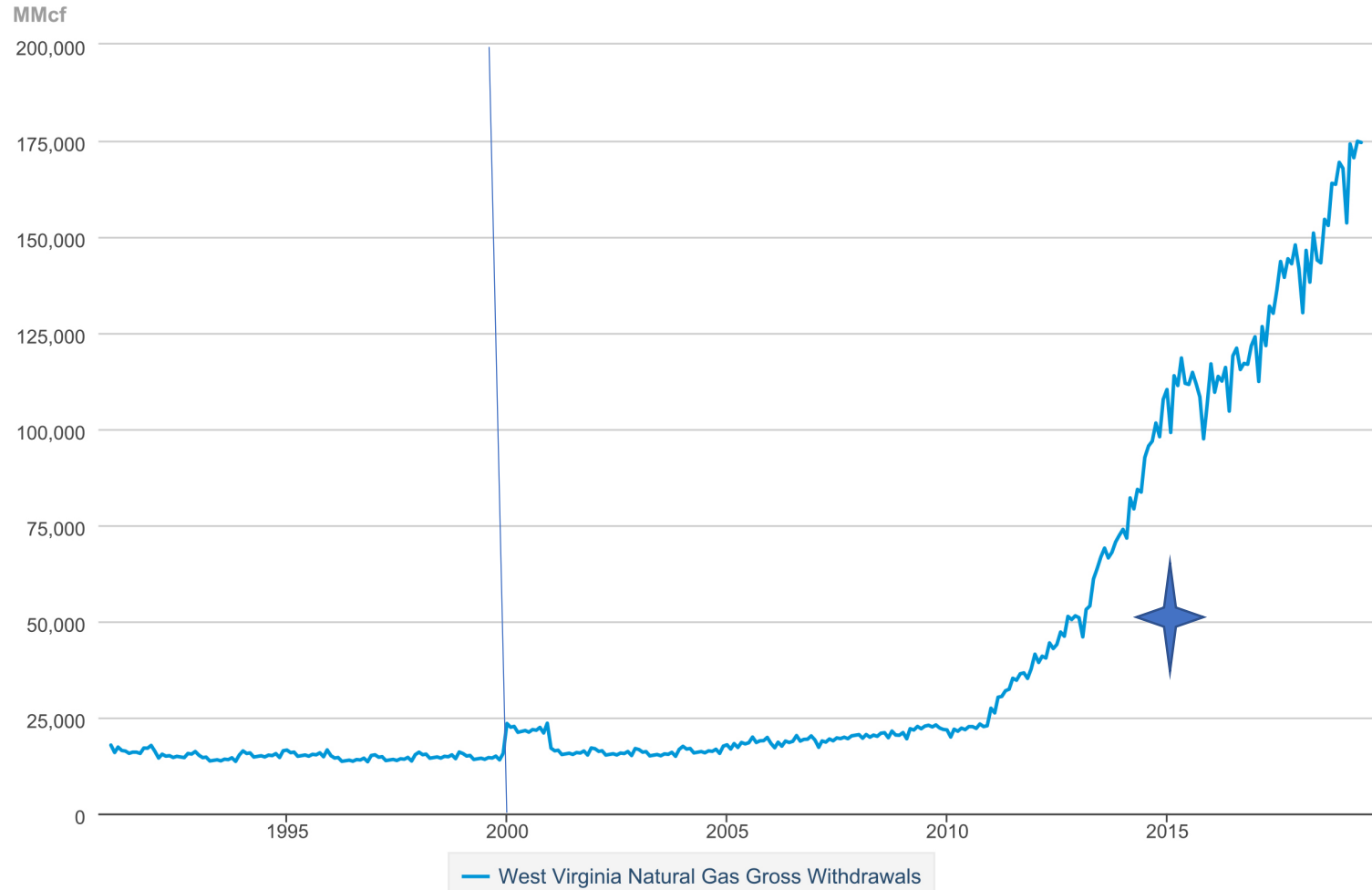
Source: U.S. Energy Information Administration

Utilization of Renewables in West Virginia

2017 Draft Report Marshall University
CB&ER



Natural Gas Gross Withdrawals and Production



Source: U.S. Energy Information Administration

WVU ENERGY INSTITUTE

- Understand the trends in energy and energy technology
- Play a relevant role in expanding WVU research in the energy sector with special focus on environmental remediation (overall WVU research goal \$60 MM by 2025)
- Promote economic development
- Play a role in expanding WV energy labor force

LEADERSHIP



James Wood
Interim Director



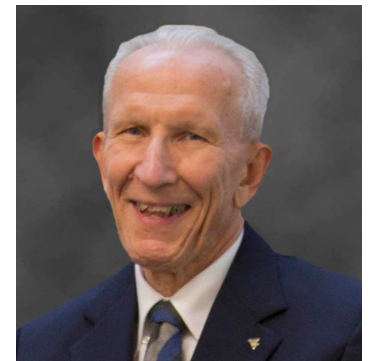
Paul Ziemkiewicz
Water



Trina Wafle
Program
Development and
Research Services



Samuel Taylor
Strategic
Partnerships and
Technology



Richard Bajura
International
Outreach

WATER

- Rare Earth Oxide from AMD
- Water Quality Monitoring
- Brownfields Redevelopment

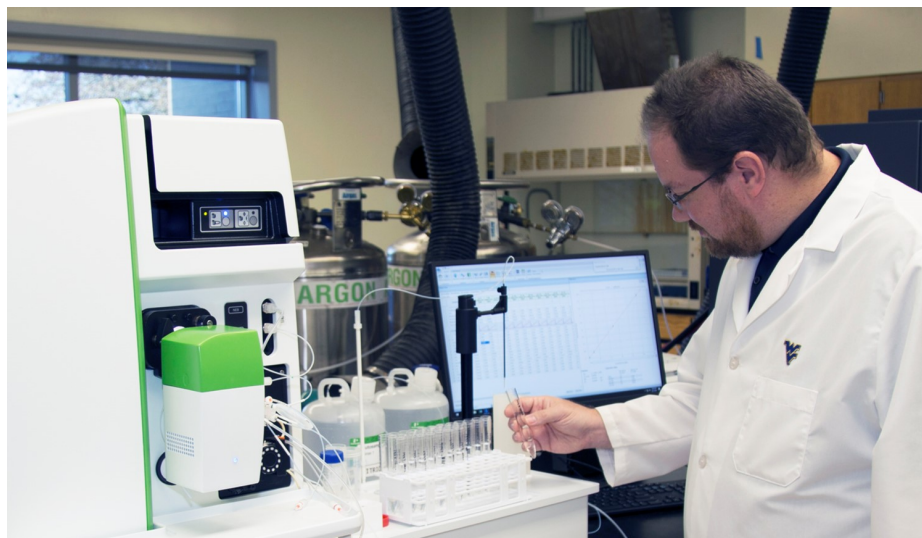
BROWNFIELDS REDEVELOPMENT



Programs supported by this program include Downtown Appalachia, BAD Buildings, Mon River Towns, and Technical Assistance

DEVELOPMENT & RESEARCH SERVICES

- Analytical Laboratory Services
- Program Development
- National Alternative Fuels Training Consortium





STRATEGIC PARTNERSHIPS & TECHNOLOGY

- Marcellus Shale Energy & Environmental Energy Laboratory (MSEEL)
- Energy Geosciences
- The Nature Conservancy



OUR NEWEST PARTNERSHIP

The Nature
Conservancy



INTERNATIONAL OUTREACH

- U.S. China Clean Energy Research Center-
Advanced Coal Technology Consortium
- U.S. China Energy Center
- International Collaboration:
Iceland; Colombia; China;
Israel, India, Paraguay;
Japan; Mexico



OUR PARTNERS

- Federal and state agencies
- West Virginia communities
- Industry
- Government labs
- Universities

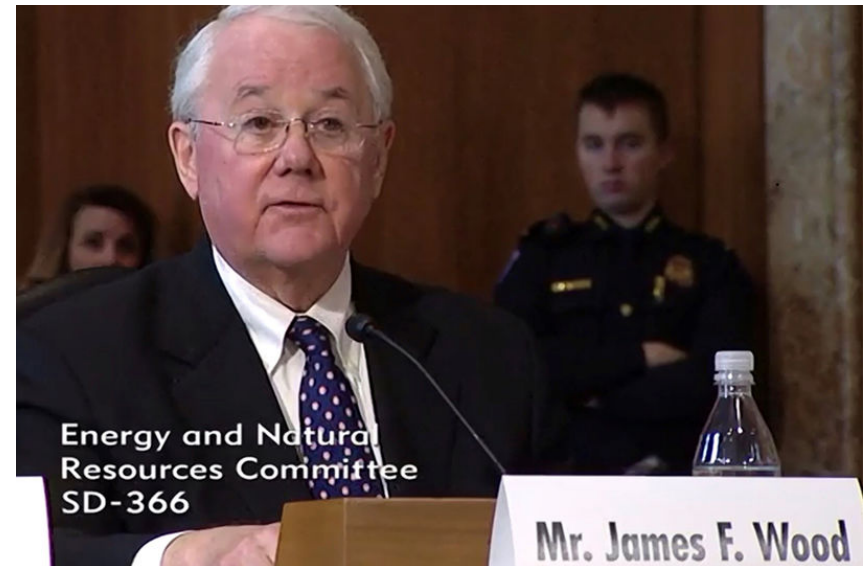
STATE EXAMPLES

- Governor's Downstream Jobs Task Force
- West Virginia Forward
- WV DEP – Special Reclamation Fund Advisory Council



NATIONAL EXAMPLES

- National Energy Technology Laboratory
- Research Partnership to Secure Energy for America
- National Coal Council
- Oak Ridge
Associated Universities
- Congressional
Testimony



THERE'S POWER IN PARTNERSHIP

Energy Institute | energy.wvu.edu