

West Virginia Natural Gas:
What a Difference 10 Years Makes
Where We've Been
Where We Are
Where We're Going

2013 Governor's Energy Summit
December 17, 2013

Independent Oil and Gas Association of West Virginia

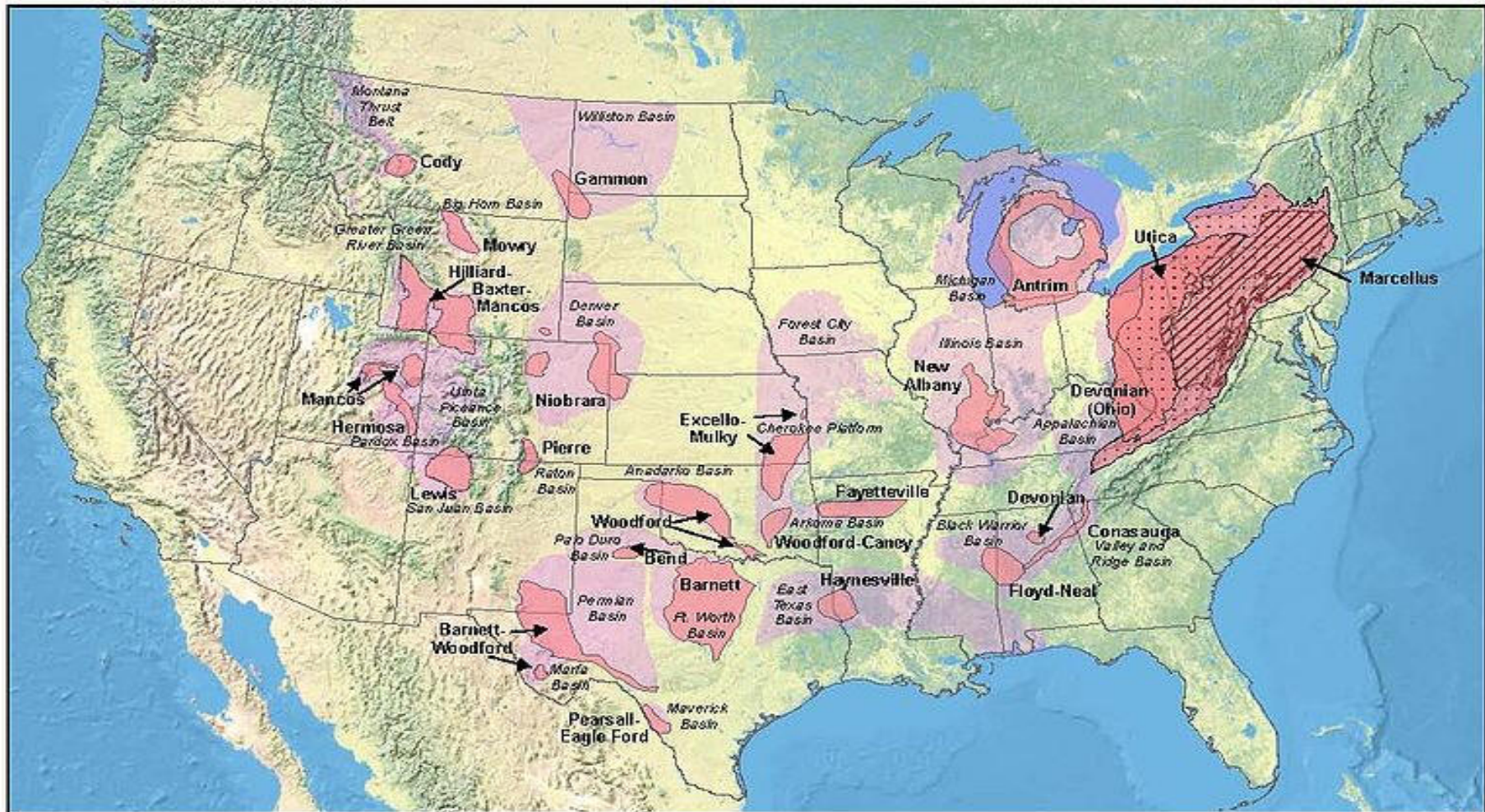
Established in 1959 as a non-profit trade association to promote and protect a strong, competitive and capable oil and natural gas industry in W.Va.

More than 700 company and Partner members



Dedicated to providing accurate information to members and to the general public

IOGAWV IS INVESTING IN WEST VIRGINIA'S FUTURE

- Extensive Energy Education Outreach
 - 3-time winner of the IOGCC Chairman's Stewardship Award in Energy Education
 - Opportunities for Life / High School Career Days
 - Teach the Teacher Events
 - Tom Dunn Energy and Leadership Academy
- Since 1997 IOGAWV has awarded \$118,000 in scholarships to deserving West Virginia HS Seniors



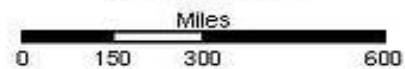
United States Shale Gas Plays

 Shale Gas Plays
 Basins

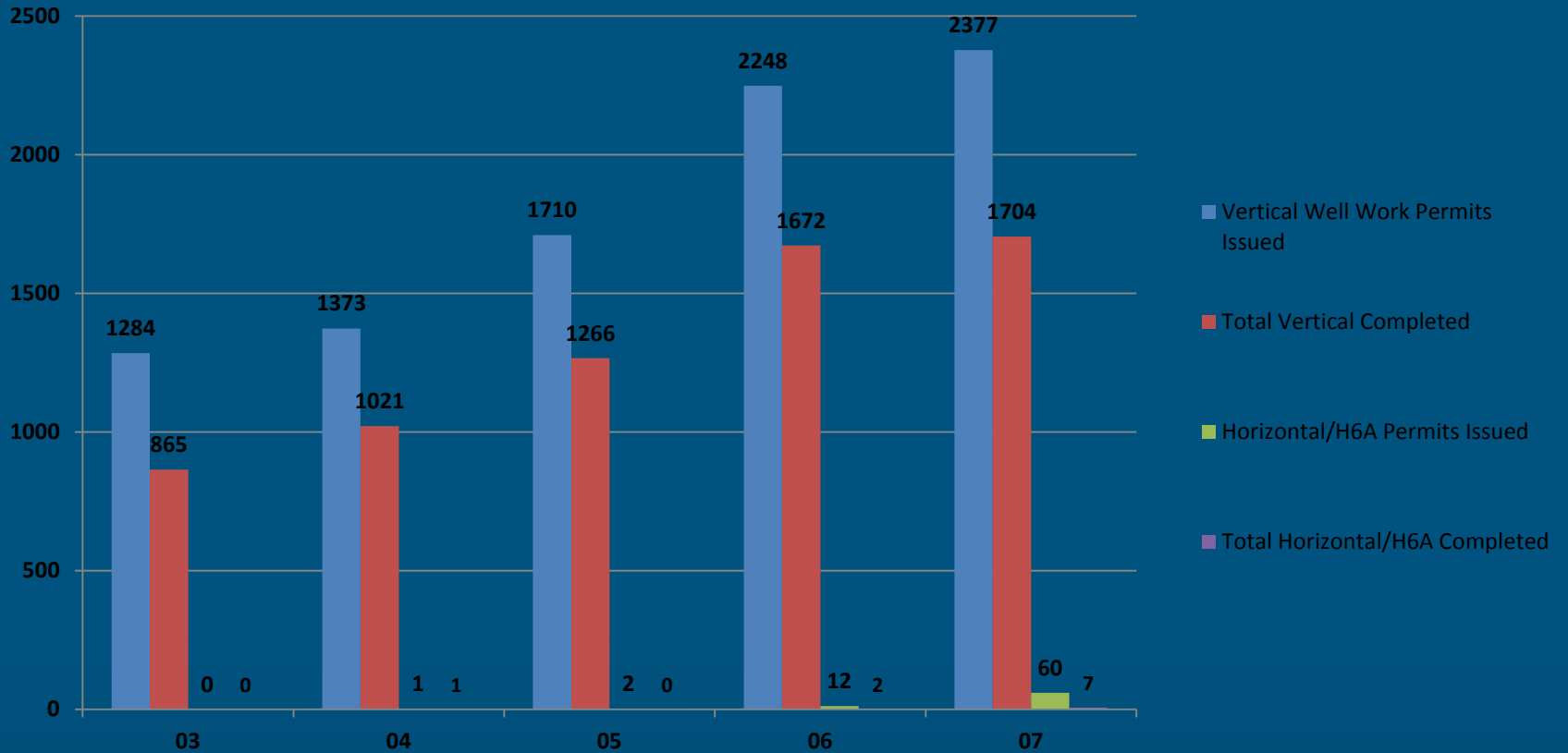
Stacked Appalachian Plays

 Marcellus
 Utica
 Devonian (OH shale)

November 2008

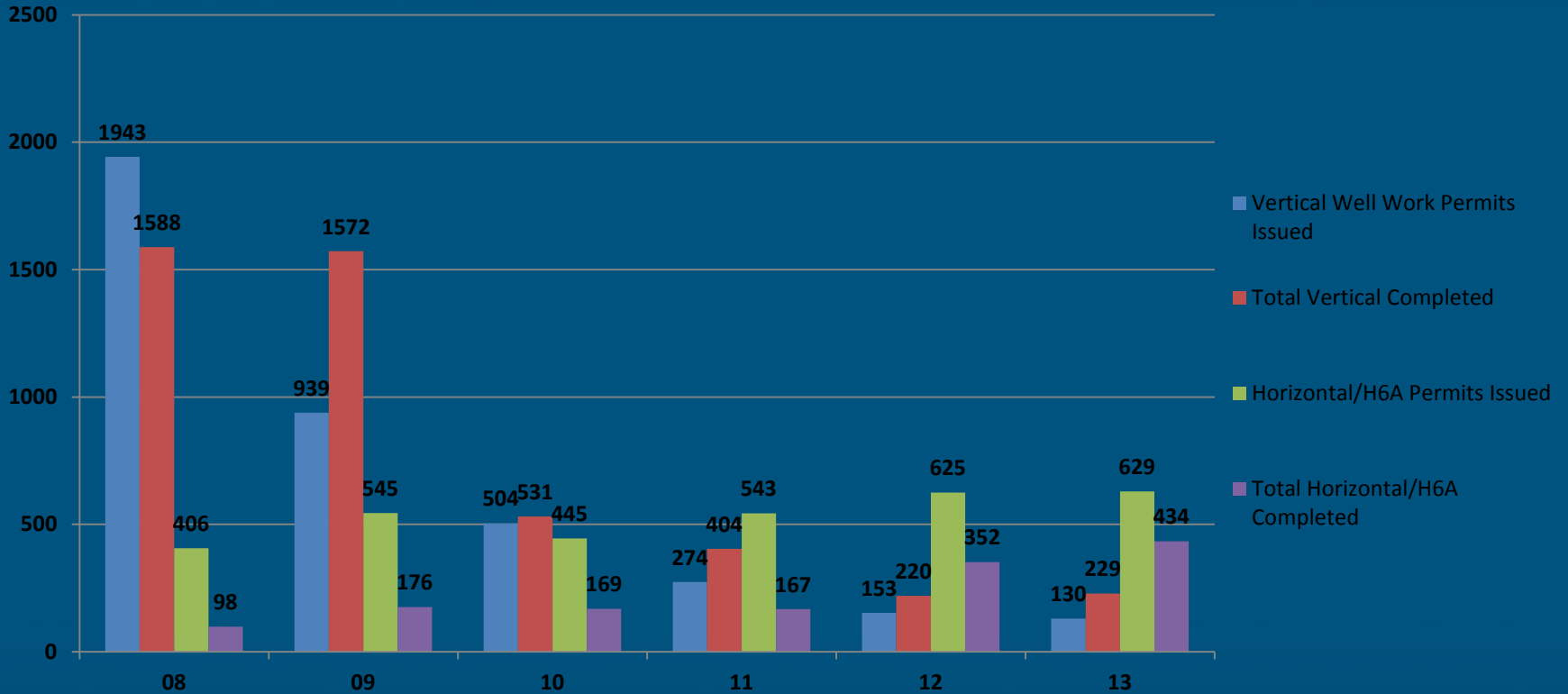


WELL PERMITS / COMPLETIONS



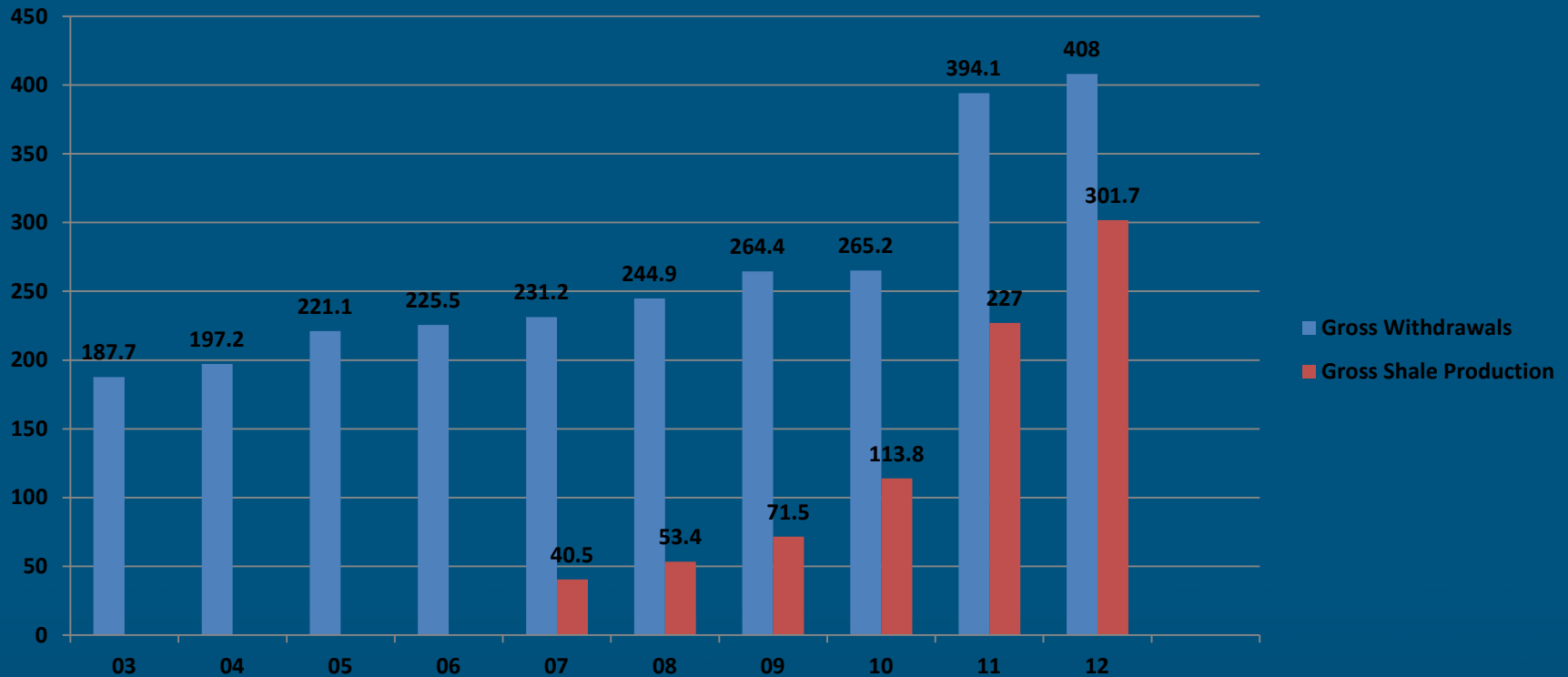
Source: WV Department of Environmental Protection Office of Oil & Gas

WELL PERMITS / COMPLETIONS



Source: WV Department of Environmental Protection Office of Oil & Gas

TOTAL PRODUCTION (BCF)



Source: U.S. Energy Information Administration and the WVGES

PRICING ECONOMICS

Pricing: Average Wellhead Pricing (Henry Hub)

Average Wellhead Pricing

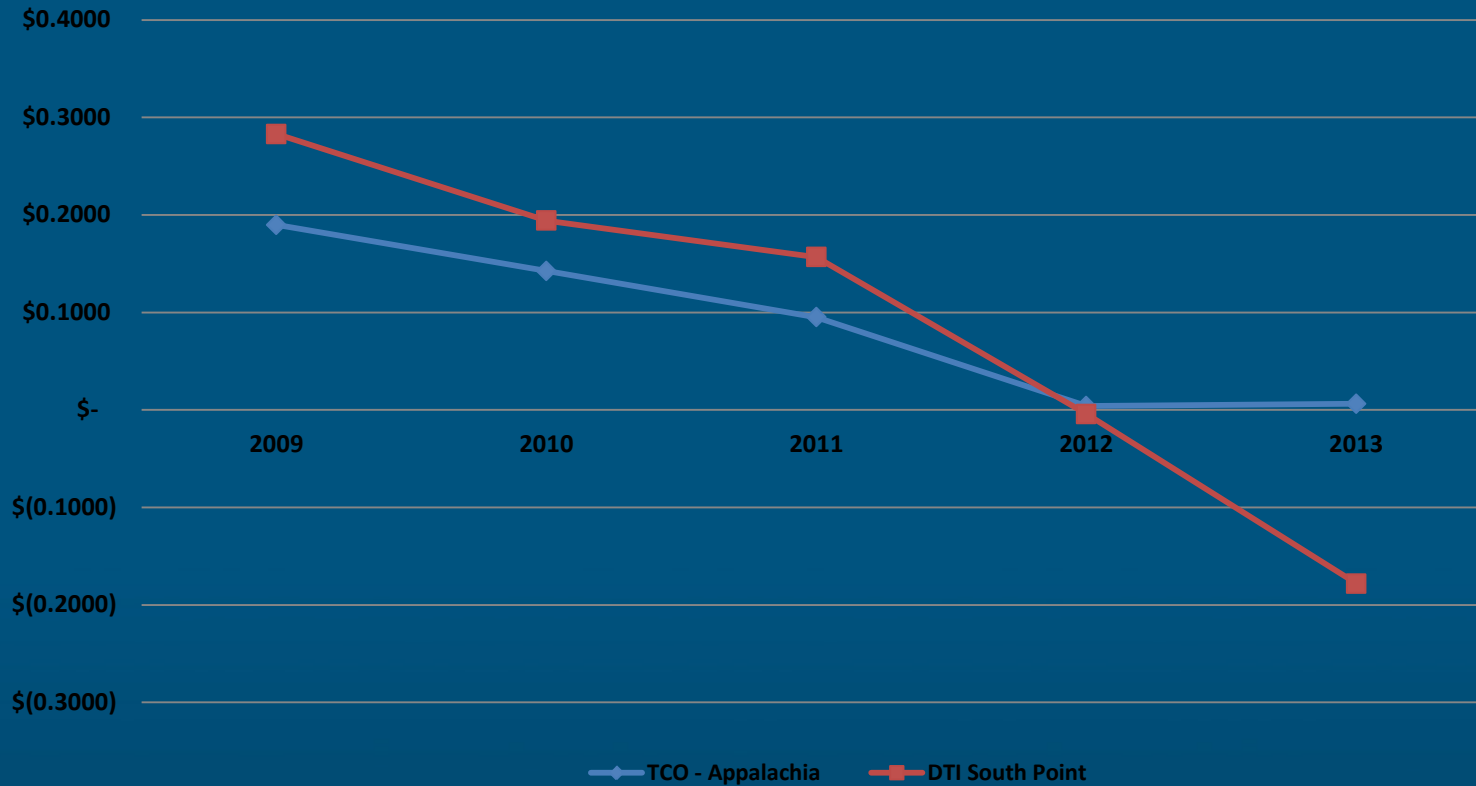


Source: U.S. Energy Information Administration

PRICING ECONOMICS

Pricing: Basis Differential

Basis Differential to Henry Hub



WV ECONOMICS

WV Severance Tax Contributions



Source: WV State Tax Department

WV ECONOMICS

WV Property Tax Contributions

Natural Gas Property Tax Contributions (Millions)



Source: WV State Tax Department

ECONOMICS

Future Pricing Projections

Projected Wellhead Price Increase



Source: EIU Economic & Commodity Forecast 2013-2018

RECENT INVESTMENTS IN WEST VIRGINIA'S ENERGY FUTURE

- **Blue Racer Midstream:**
 - \$1.5 billion joint venture between Caiman Energy II, LLC and Dominion
- **MarkWest Energy Partners**
 - **Majorsville V, (Marshall County):**
 - a 200 MMcf/d cryogenic processing facility that increases the total processing capacity in the Marcellus Shale to over 1.8 Bcf/d.
 - **Sherwood Processing (Doddridge County)**
 - With Antero Resources, will expand the complex by 200 MMcf/d, bringing total capacity of the complex to 1 Bcf/d by the third quarter of 2014.
- **Bluegrass Pipeline (a JV between Williams and Boardwalk Pipeline Partners, LP)**
 - Phase I designed to provide customers with 200,000 barrels per day of mixed NGLs take-away capacity in Ohio, West Virginia and Pennsylvania.

THE FACE OF WEST VIRGINIA ENERGY'S FUTURE LANDSCAPE

- **Electric Generation**

- EPA credits a 10% decline in GHG Emissions from 2010 to 2012 for switches to NG from coal in US power plants (Source: USEPA)
- Natural Gas may likely be the only source of new future fossil-based generation

- **Natural Gas Fueled Vehicles:**

- IGS opens natural gas fueling station in Bridgeport in September, Charleston November 19
- Natural gas is less than half the price of gasoline and diesel at the pump on an energy equivalent basis, according to the Clean Cities Alternative Fuel Price Report.

- **LNG Exports**

- April 2013 Dominion announced it is moving forward to liquefy NG for exportation at its Cove Point, MD import terminal. Once approved, construction on the \$3.4-\$3.8B project would begin in 2014, with an in-service date of 2017.

- **ASCENT (Appalachian Shale Cracker Enterprise):**

- Total investment in the \$2-3 Billion range
- Will use WV produced ethane
- Will create thousands of construction jobs and hundreds of permanent jobs