



# MANUFACTURING SUMMIT 2018: Growing the Petrochemical Industry in Western PA

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# ABOUT THE TRI-STATE SHALE COALITION (TSSC)

In 2015, governors Wolf, Kasich, and Justice of PA, OH, and WV agreed to collaborate on development of natural gas and downstream development in the tri-state region — an agreement they renewed in 2018.



# WORKING TOGETHER



**Pennsylvania Governor Tom Wolf**

“I’m proud to continue our successful collaboration with Ohio and West Virginia to ensure that we are doing everything we can to support additional development – and the jobs and economic growth that go with it – in a region with an unprecedented natural resource.”



**Ohio Governor John Kasich**

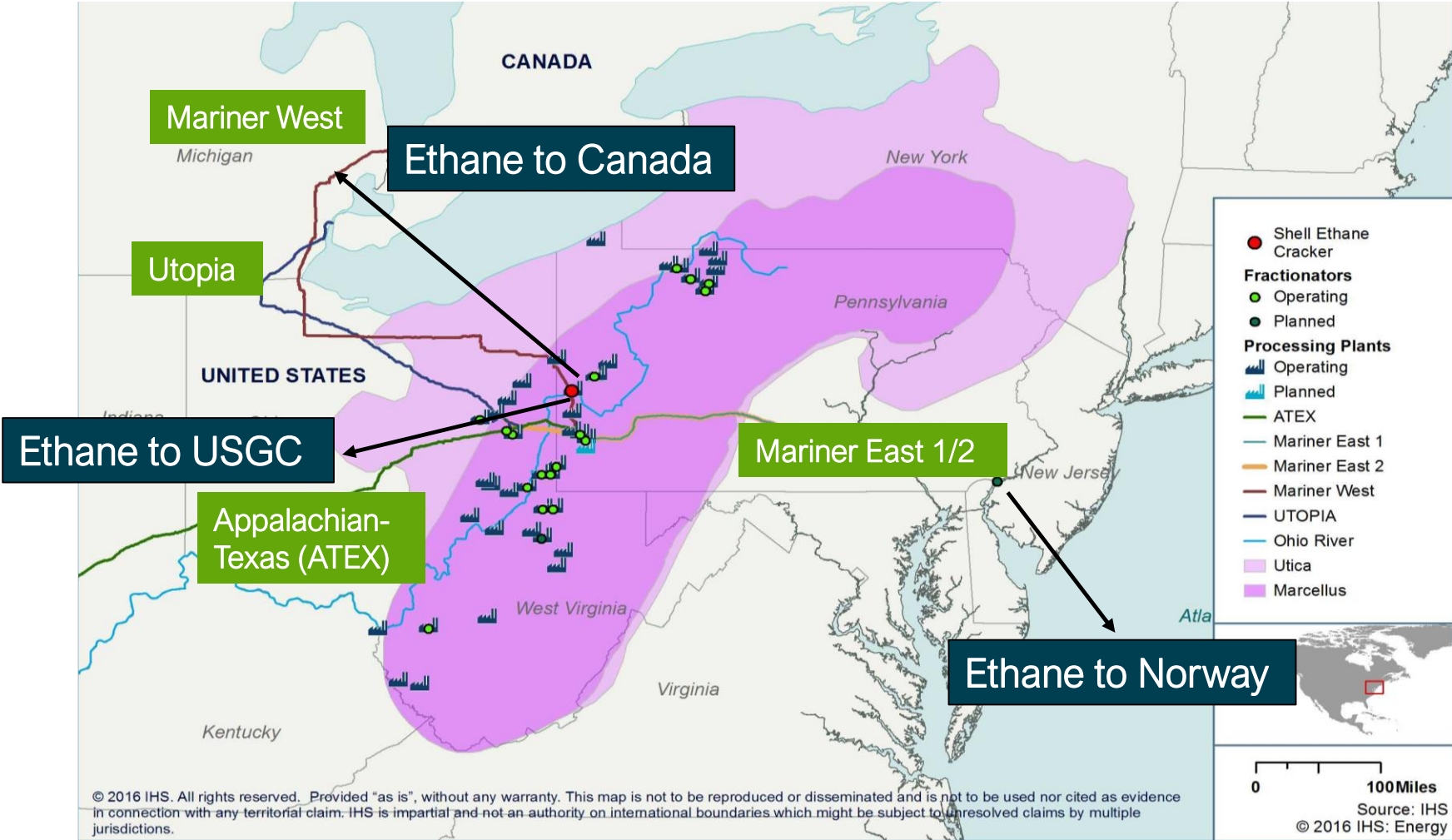
“[We] will continue to discuss ways to cooperate in marketing efforts to attract new businesses, strengthen workforce development programs, spur investments in expanding infrastructure and delivery of natural gas and liquids, and encourage its academic institutions to expand and collaborate on research.”



**West Virginia Governor James Justice**

“Instead of competing, our three states are working together to promote the region as a center for shale-related manufacturing...We are encouraging chemicals and plastics manufacturers to come here, stay here and grow here with us in the Appalachian region.”

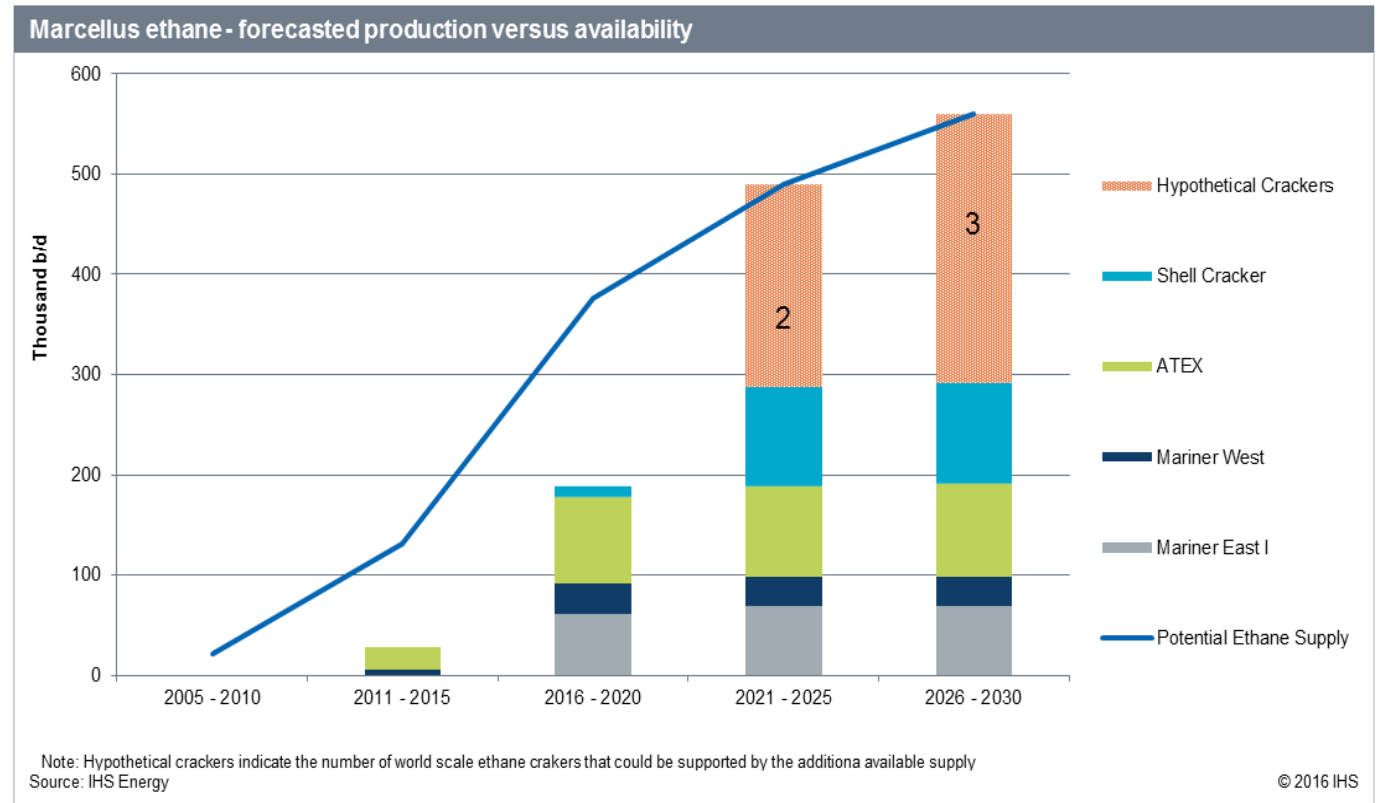
# MARCELLUS & UTICA NGL INFRASTRUCTURE



# IHS MARKET REPORT

PA's IHS Market Report estimates enough ethane remaining in the Marcellus to support **three** additional world-scale ethane crackers.

There is enough ethane in the Utica to support **one** additional ethane cracker.

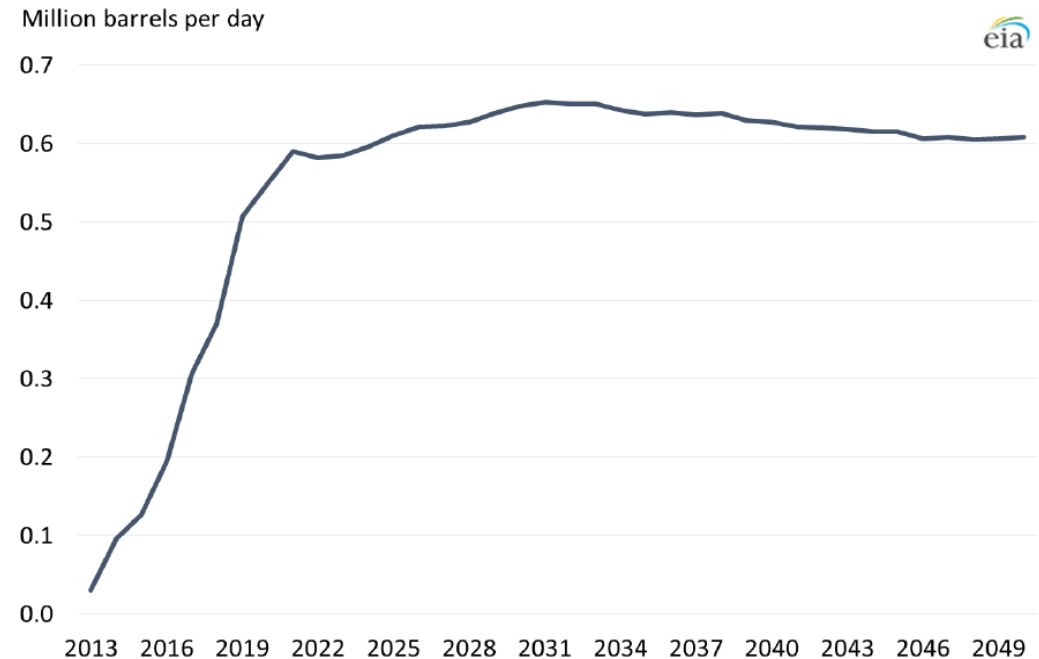


# COULD THE APPALACHIAN BASIN BE THE NEXT SILICON VALLEY OF AMERICAN ENERGY INFRASTRUCTURE?

–Energy in Depth, September 2017

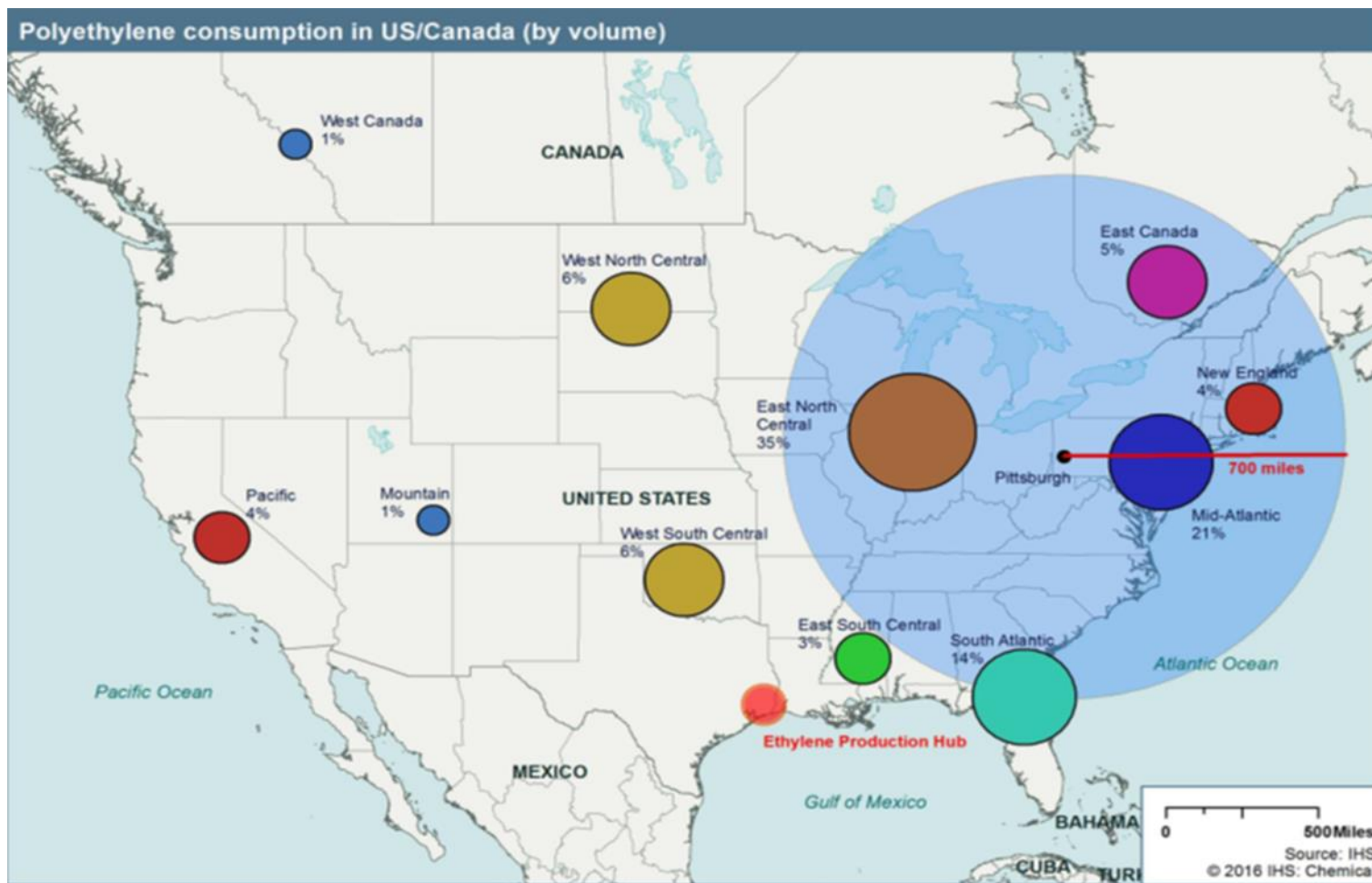
- Staggering Appalachia NGL production growth expected in the years to come
- Appalachia NGL infrastructure is keeping pace, but storage is needed to maximize local use.
- ACC has found that by addressing NGL storage the region could see up to 100,000 permanent jobs.
- Storage will also help keep ethane and propane in the United States and, more specifically, **in the Appalachian region.**
- Region needs 30 million barrels of NGL storage at full development

Figure 8. Appalachia Ethane Production<sup>15</sup>





# US & CANADIAN POLYETHYLENE CONSUMPTION

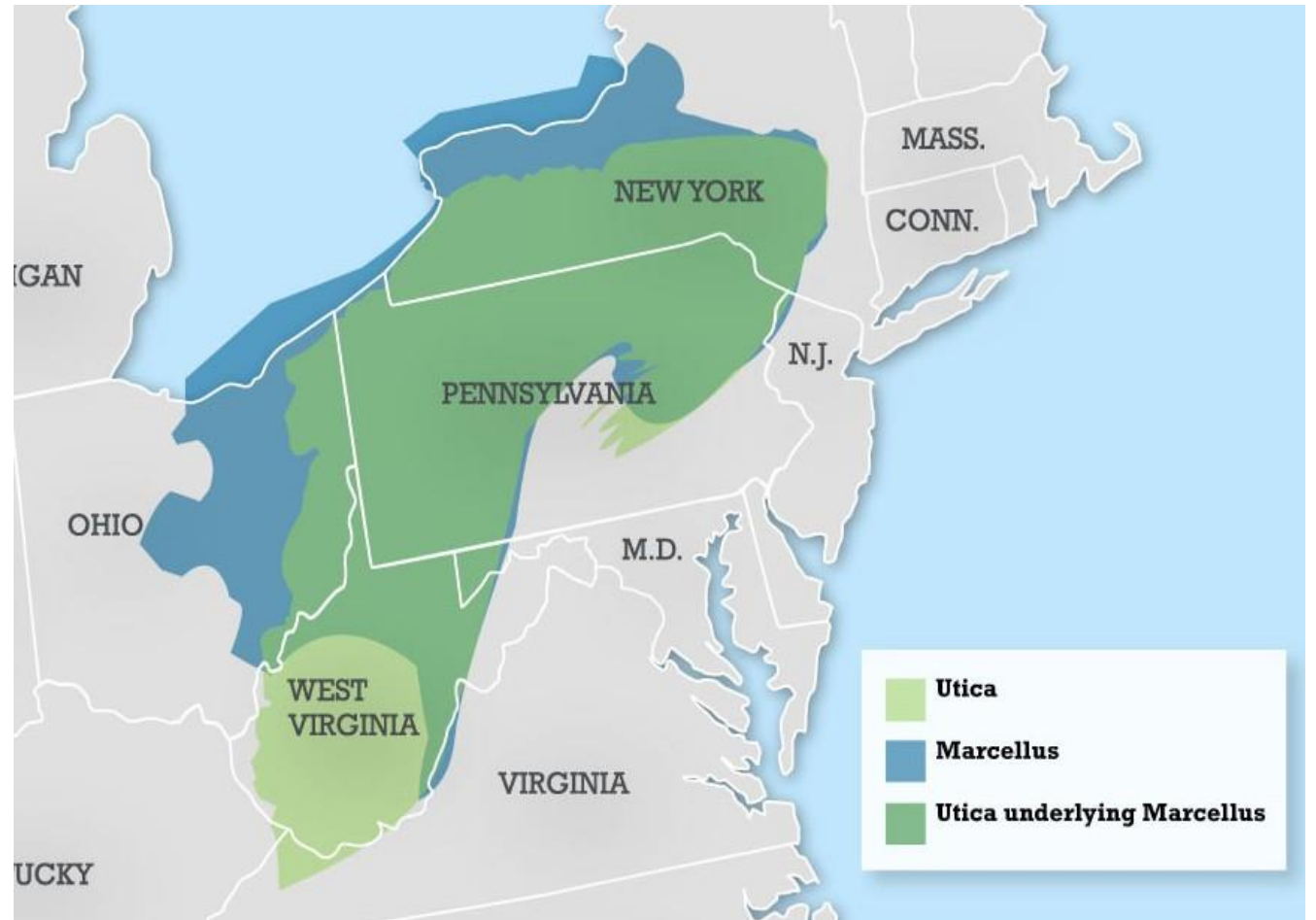


# COLLABORATION



PA, OH & WV will work collaboratively on issues regarding:

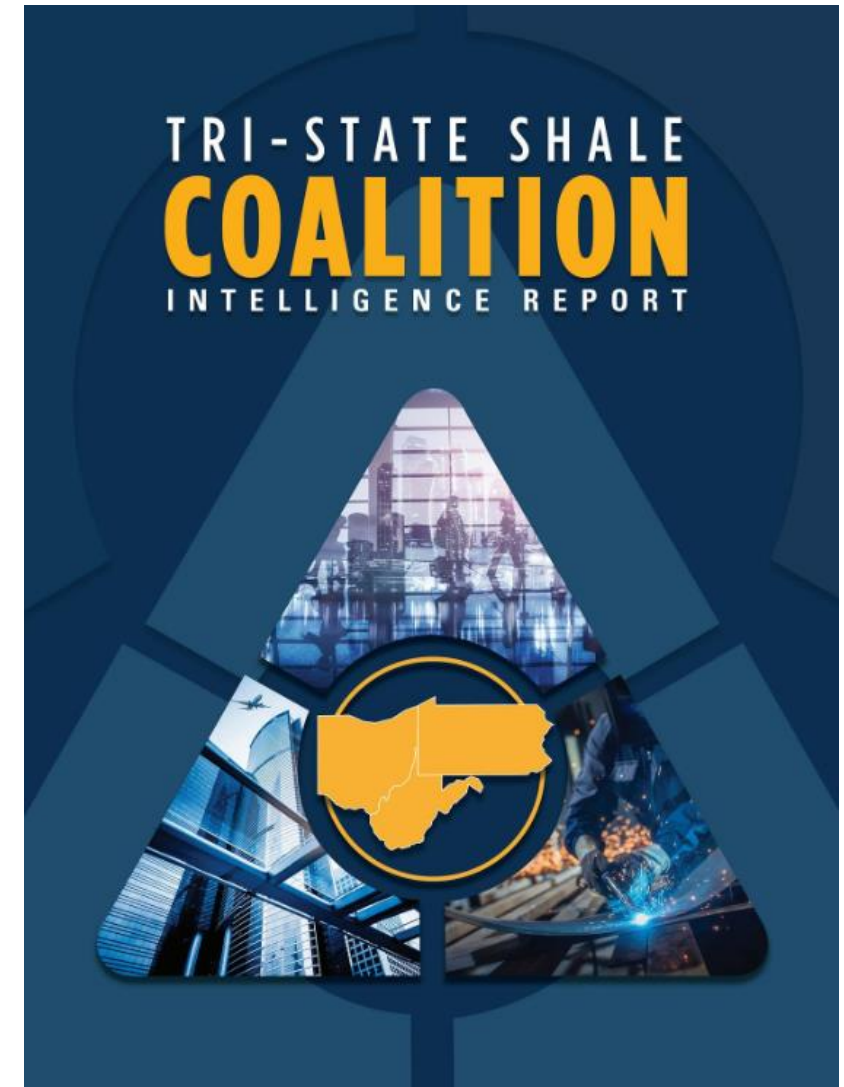
- Marketing the Region
- Transportation & Infrastructure
- Workforce
- Research, Innovation, Commercialization





# MARKETING THE REGION

- Presentations
- Outreach
- Official Brand
- Energy & Downstream Intelligence Report in Site Selection Magazine (January 2018)
- National Media Familiarization Tour (April 2018)



# DEVELOPING A BRAND

- Conducted research and material audit
- Conducted customer/stakeholder interviews
- Narrowed down to four positioning areas:
  - Economics
  - Proximity
  - Convergence
  - Next/Future/Forward



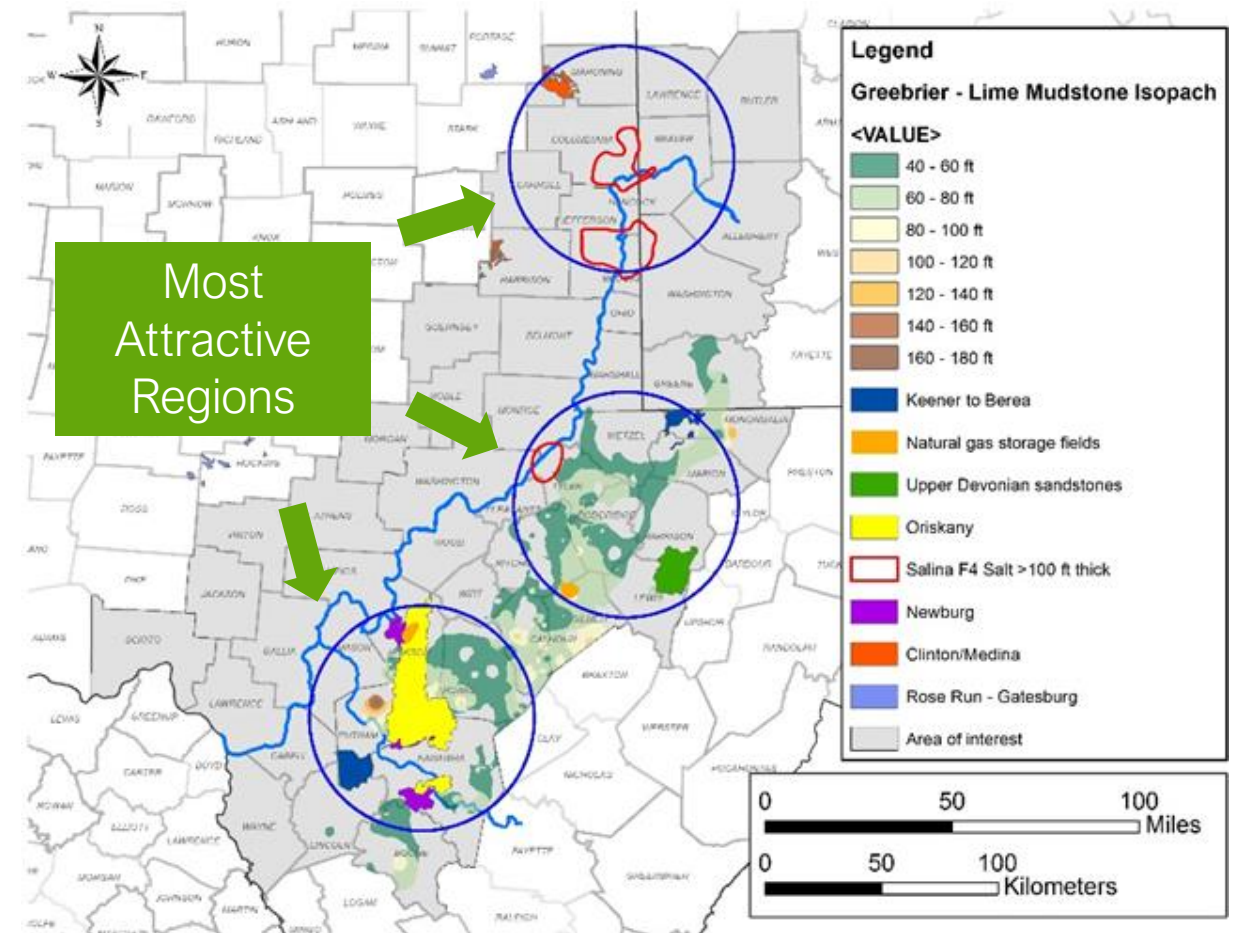
# DEVELOPING A BRAND

- Several options have been developed
- Currently discussing final options with stakeholders and developing taglines that will encompass the new brand
- **New brand will be implemented within the next few weeks**



# TRANSPORTATION & INFRASTRUCTURE

- TSSC sponsored joint study with OH, PA, & WV Geological Surveys to identify potential storage hub locations
- Exploring engagement strategies with industry and government groups on understanding key transportation and infrastructure issues



# TRANSPORTATION & INFRASTRUCTURE

- Developing natural gas liquids storage hub by securing \$2.5 billion federal loan guarantee through Department of Energy
- Storage will be developed in a phased build out, starting with 8 to 10 million barrels
- Pipeline build out is expected to be 400 miles



# WORKFORCE

Working closely with TEAM\* Consortium to develop new and seamless systems for companies and workers to:



*\*Tri-State Energy & Advanced Manufacturing Consortium*

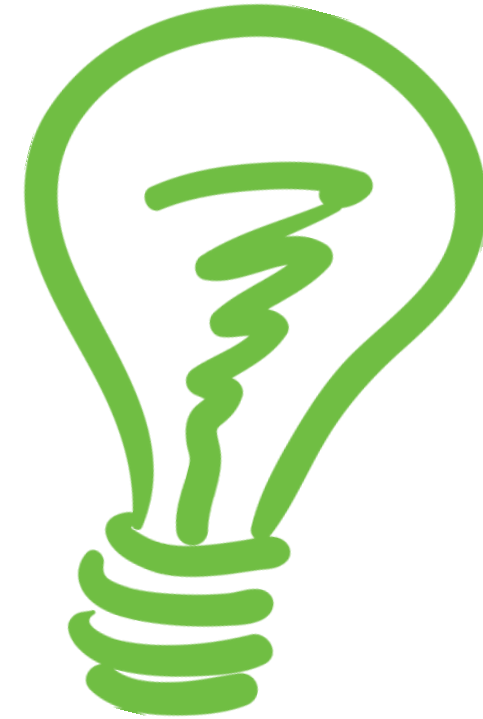
- Recognize what knowledge and skills employers will need for in-demand occupations
- Share information with education and training partners
- Share the development and delivery of relevant curricula across state and institutional boundaries (32 COUNTIES)
- Raise awareness and understanding of types of available jobs
- Connect students and trainees with internships, apprenticeships, and jobs



# RESEARCH, INNOVATION, & COMMERCIALIZATION

In addition to developing an MOU CMU and CWRU, encouraging academic institutions to expand collaborative research efforts that identify broader and environmentally-appropriate end uses of natural gas and NGLs, including:

- Electricity generation
- Liquid fuel
- Feedstocks for petrochemicals
- Alternative transportation fuels
- Heating applications



THANK YOU