Ohio River Valley Institute

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Poor Economics for Virgin Plastics:

Petrochemicals Will Not Provide Sustainable Business Opportunities

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The Appalachian petrochemical buildout is on shaky ground. Despite speculation that supply chain constraints, COVID-induced shortages of key products, and volatile energy prices could "re-shore" virgin plastics production in the Ohio Valley, a concurrence of factors casts a dark shadow over the financial outlook of regional petrochemical development. A new report from the Ohio River Valley Institute outlines the market forces likely to impede new petrochemical capacity in Appalachia:

1. **Environmental concerns are curtailing demand for petrochemical products.** Consumers' and investors' increased focus on the plastics pollution crisis is changing assumptions about demand growth for polyethylene (PE), the primary product of prospective Appalachian petrochemical plants.

2. **Under pressure, major petrochemical producers have pledged to reduce carbon emissions, shifting cost assumptions and siting decisions.** Technological innovations, such as carbon capture, use, and sequestration (CCUS) and advances in 'green' and 'blue' hydrogen, are an as yet unproven and still cost-prohibitive means of decarbonization for chemical facilities in the US.

3. **The Appalachian feedstock pool is limited.** A tighter US ethane market and producers' ability to access export markets via expanded capacity at Marcus Hook will likely push regional ethane prices too high to allow new ethane cracker facilities to be competitive.

4. **Market shifts in China and across Asia will undercut U.S. cost margins.** Once the primary importer of U.S. ethylene, China is now leveraging tariffs and racing toward supply self-sufficiency. Accelerating overseas capacity additions and lower-than-expected Asian import demand could create a significant overhang of U.S. capacity.

Prospective investors have hesitated to fund major new projects because building out more ethylene production in Appalachia may result in stranded assets. And, even if such projects go forward, they are not likely to produce the economic benefits once predicted by industry supporters and hoped for by local communities. For these reasons, the region's business leaders and policymakers would be wise to shift their focus from virgin plastics production to other strategies for economic development.

View and download the full report at www.ohiorivervalleyinstitute.org/poor-economics-for-virgin-plastics/