

Poor Economics for Virgin Plastics

Petrochemicals Will Not Provide
Sustainable Business Opportunities in Appalachia

Summary Slide Deck



Ohio River
Valley Institute



The Appalachian petrochemical buildout is on shaky ground.

- New petrochemical development in Appalachia is unlikely to move forward due to a series of market forces, a new report from the Ohio River Valley Institute finds.
 - Shifting ethylene and plastics markets are likely to undercut the cost margins of new petrochemical facilities, threatening their profitability in the short- and long-term.
- Four factors, outlined on the following slides, cast a dark shadow over new petrochemical capacity additions in the region.



1. Environmental concerns are curtailing demand for petrochemical products.

- Consumers and investors are increasingly aware of the impacts of the climate and plastics pollution crises.
 - Conscious consumers are purchasing fewer single-use plastic products. A growing number of investors are similarly wary of funneling funds toward polluting projects and industries.
- Growing consciousness of plastic pollution has reduced demand for polyethylene, the primary product of prospective Appalachian petrochemical plants.



2. Under pressure, major petrochemical producers have pledged to reduce carbon emissions, shifting cost assumptions.

- As public concern about plastic pollution grows, petrochemical producers are ‘feeling the heat’ to reduce their climate impact.
- Reducing carbon emissions from large petrochemical facilities is a costly endeavor, changing capital cost assumptions and siting decisions.
 - Without more certainty about carbon pricing, technological innovations like carbon capture, use, and storage (CCUS) and advances in ‘green’ and ‘blue’ hydrogen are an as yet unproven and cost-prohibitive means of decarbonization.



3. The Appalachian feedstock pool is limited.

- The U.S. ethane market is tightening, and producers are increasingly able to access export markets with expanded capacity at Marcus Hook.
 - These developments 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. margins.

- Until 2018, China was the primary importer of U.S. ethylene.
- Now, China is leveraging tariffs and increasing its own ethylene capacity in a bid to become self-sufficient.
 - Accelerating ethylene development overseas and lower-than-expected import demand across Asia could create a significant overhang of U.S. capacity.



The poor financial outlook for petrochemicals should encourage alternative development in Appalachia.

- Prospective petrochemical investors have hesitated to fund major new projects for fear of losing money in stranded Appalachian assets.
- Even if petrochemical projects move forward, they are not likely to produce the economic benefits once predicted by industry proponents and hoped for by local communities.
- Appalachian business leaders and policymakers would be wise to consider alternative strategies for economic development.



Learn more:

- View and download the full report, as well as a one-page summary document, at the link below:

<https://ohiorivervalleyinstitute.org/poor-economics-for-virgin-plastics/>