

# SAVE THE APPALACIAN REGION

Petrochemical Industries Planning an Appalachian Petrochemical Hub in OH, WV, KY, & PA.



## Appalachian Petrochemical Hub

The Appalachian Petrochemical Hub is a collection of proposed and existing petrochemical processing facilities in the Ohio River Valley that produce plastics, typically single use plastic products.

The future sites of the proposed ethane cracker's include 6 locations within the region of Ohio, West Virginia, Kentucky, and Pennsylvania.

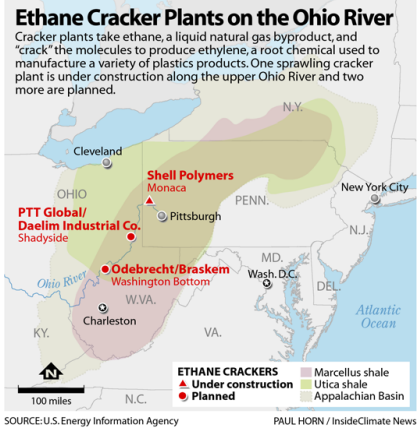
### Current Projects Include:

- ⇒ Thailand based PTT Global Chemical Ethane Cracker in Belmont County, Ohio.
- ⇒ Shell Corp. Ethane Cracker in Beaver County, Pennsylvania.
- ⇒ An Underground Ethane Storage location, Mountaineer Storage Facility in Clarington, Ohio.

## Petrochemical Facilities Are Coming to Appalachia

Petrochemical facilities are moving into the old Rust Belt of Appalachia at an alarming rate, and right into some of the same properties that the coal and steel industries left behind. The petrochemical industry is a broad sweeping “industry branch” that creates goods and products “such as refinery products, natural gas, plastic, rubber, [and] fiber raw materials.” The purpose of the petrochemical industry is to work on a “global product market,” creating materials and goods to be shipped out around the world to various industries and fabricators. In Appalachia, the incursion of the petrochemical industry poses significant long term risks to the people and communities that live in this lush and historical region of Appalachia.

On the location of the old R.E. Burger coal-fired power plant located just south of the city of Shadyside in Belmont County, Ohio, another industrial facility is now being constructed to house an Ethane Cracker Plant. The R.E. Burger plant was operational from 1944 to 2011 and demolished in 2016 as many other fossil fuel power plants around the nation were shut down between 2010 to 2018 to be “replaced by natural gas power plants;” now the region is seeing the increased interest of industries coming back into the area with the planning of some “twenty-nine new gas-fired plants” to power the electricity of the region. Just as with the old coal and steel plants, the petrochemical industry brings significant risks to the environment and people who live there and utilize the abundant lands of Appalachia in the form of industrial waste and pollution from emission and facility practices.



**BUCKEYE ENVIRONMENTAL NETWORK**

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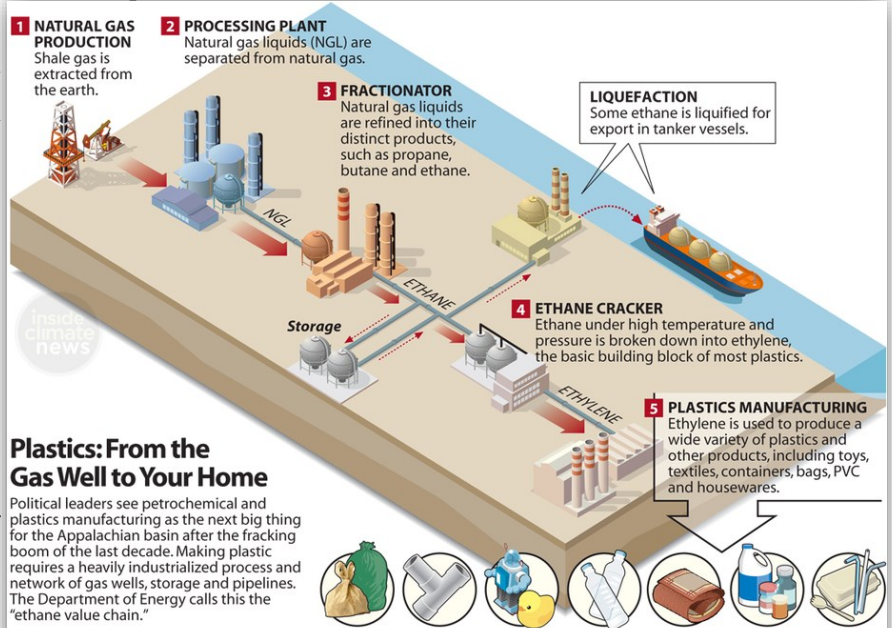
## New Investments : Risks and Oversight

The prospect of these “new investments” in Appalachia comes at a critical period for the oil and gas industry that has had its share of failures and success, otherwise known as “booms and busts.” The Wall Street Journal “reported” hesitancy and caution in a time where many drillers are approaching the time they will need to pay off escalating debts. The drillers (a.k.a. Frackers) have an estimated balance of “\$9 billion in debt, and that number will rise to \$137 billion between 2020 and 2022.” The issue of debt is a significant matter that communities considering the inclusion of these industries into their region should deeply weigh and investigate before approving such expansion. The issue of debt on the side of the “investors” creates a critical “risk” factor for these communities, that are typically seeking a monetary payout with a long-term rise in job prospects for their citizens that could ultimately be in jeopardy if as in the past, these “investors” default and the company is no longer able to uphold promises made during negotiations with communities and local governments.

Outside of Ohio, other plants are being constructed like the one in Beaver County, Pennsylvania. The Beaver County Ethane Cracker facility is “expected to produce 1.6 million metric tons of polyethylene each year.” Market analysts offered a market forecast just two years ago that proposed the placement of up to an additional five cracker facilities to be constructed in the Appalachian region. The regions where Ethane cracker plants are planned would be in Ohio, West Virginia, Pennsylvania, and Kentucky, all in the heart of Appalachia. These forecasts for the Appalachia region comes during a significant period of countless market upheavals and “other challenges” that the old Rust Belt communities should not risk.

## The Process of Obtaining Ethane

In the process of extracting natural gas by drilling (aka fracking), the drillers also pull up other byproduct materials from underground, including copious amounts of Ethane gas. Ethane is a “different kind of raw material” that is a byproduct of fracking for natural gas, and the oil and gas industry uses this byproduct to sell to cracker facilities, like the proposed plant in Belmont County, to produce plastic products. A plant like the proposed Ethane Cracker facility in Belmont County, Ohio, then purchases the Ethane from Frackers and proceeds to “break apart [the] ethane molecules to produce Ethylene,” which can then be used to make plastic products at other facilities around the world. The cracker facility itself will likely be the “size of a Walmart,” including all “the land and outbuildings.” All the infrastructure is in place to construct the facility, but the company itself is showing hesitation and waiting for the final “go ahead” to begin construction. Recent events with the Global Pandemic have put a lot of pressure on investors worldwide. Meanwhile, at the community level, this hesitation has left the people in limbo without resolution and the fulfillment of negotiated promises from the company.



SOURCES: U.S. Dept. of Energy; InsideClimate News research

NOTE: Graphic is diagramatic and not to scale

PAUL HORN / InsideClimate News

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## Our Communities, Our Region, Our Choice

Allowing petrochemical industries to invade the Appalachian region in higher numbers will permanently “tie” the region to the “economic fate of the natural gas industry,” a risky investment commitment for the region given the unsteadiness of the industry in recent years and the rise of green energy throughout the world. Nevertheless, the projects are moving forward. In Belmont County, Ohio, two companies, PTT Global Chemical America of Thailand and Daelim Chemical USA of South Korea, have “announced” the completion of the “first phase of site preparation for the potential Ethane Cracker facility. These foreign investors and corporations have made significant investments into these cracker facilities to produce plastic products, the companies have “purchased” a great deal of acreage, in Belmont County, at a sum of 500 acres of Ohio land including the FirstEnergy former site of the R.E. Burger coal-fired power plant just south of Shadyside, Ohio.

Considering all this information, one has to question if these interested parties as foreign corporations can have the communities safety in mind, how the local communities and governments responding to the new investments in their community will pan out in the long run, and the probable issues that might arise, including environmental pollution, resources, and community impact over the life of the facility. As of now, it is apparent that most government officials are enthusiastic about the induction of these facilities into their communities.

Local governments are supporting the construction of the Ethane Cracker plant in Belmont County, Ohio, including the Belmont County Board of Commissioner, Mead Township trustees, and the Shadyside Board of Education that “all approved” a “tax agreement” with investors of this plant. After all, political negotiations have been ongoing with these corporations for “about six years,” with a deal being struck with local government with a complete financial package that they feel will significantly help the local region and its people. The deal struck with the investing companies allots a tax exemption from property tax for a span of 15 years, with a provision that instead, the company will also pay a sum of “\$38 million to the local school district” of Shadyside during that period. The mead Township of Trustees would receive a sum of “\$9.5 million” over the same period, while Belmont County is estimated revenue of between \$20-\$24 million in sales tax revenue from the construction process and goods in this process of building the facility.

The agreement between the companies and the local government in Belmont County is purely a financial endeavor that was made at a high cost to the company, but what are the possible environmental effects on the region from the Ethylene Plant and to the global environment upon the production of more single-use plastics. Local representatives remain optimistic, lamenting that the company is funneling millions of dollars into the region, and yet they have “not earned a penny.” The fact that millions of dollars are being invested before any revenue, what then is the expectation of this facility throughout the plants' life, and within that period, what will the community and the environment ultimately reap while the company recoups their money?



**12/8/2019 Shale Gas Buildout in the Appalachian Basin (Courtesy of the Concerned Ohio River Residents, Facebook Page).**

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## Impact of Ethane Cracker Facilities

The negative impacts of an ethane cracker facility must also be measured before allowing such industries into our communities of Appalachia. We know from past industrial plants that the emissions from industrial plants have been found to “make people ill,” causing a myriad of problems, including: “headaches, shortness of breath, impaired thinking, and changes in blood pressure.” We know the effects of industrial pollution on communities from various scientific studies. Nevertheless, the proposed plant in Beaver, Pennsylvania, is going to be located just “one mile directly downwind” from the community, shopping centers, and newly developed housing developments. We can take solace in the lessons learned from the past, how these types of industrial facilities have impacted communities to protect the welfare of current and future generations.

The type of Ethane Cracker facilities we are discussing are known to pose high risks to the surrounding communities and environment. The Fractracker Alliance explains that “large petrochemical facilities of this type are known to produce sizable unplanned releases of carcinogenic (benzene and other toxic pollutants during “plant upsets,” a term that refers to a “shut down because of a mechanical problem, power outage or some other unplanned event.” Other threats posed by Ethane Cracker facilities include similar dangers as other industrial sites, including “fires, explosions, evacuations, injuries, and death.” These events have happened in recent years, and the Fractacker Alliance gives a horrifying example:

*“A ruptured boiler at the Williams Company ethane cracker plant in Geismar, Louisiana, led to an explosion and fire in 2013. The event resulted in the unplanned and unpermitted release of at least 30,000 lbs. of flammable hydrocarbons into the air, including ethylene, propylene, benzene, 1-3 butadiene, and other volatile organic chemicals, as well as the release of pollutants through the discharge of untreated fire waters, according to the Louisiana Department of Environmental Quality. According to the Times-Picayune, “workers scrambl(ed) over gates to get out of the plant.” The event required the evacuation of 300 workers, injured 167, and resulted in two deaths. The community’s emergency response involved [the] deployment of hundreds of personnel and extensive resources, including 20 ambulances, four rescue helicopters, and buses to move the injured to multiple area hospitals. The U.S. Chemical Safety and Hazard Investigation Board chalked up the incident to poor “process safety culture” at the plant and “gaps in a key industry standard by the American Petroleum Institute (API).” The accident shut the plant down for a year and a half.”*

[Leiter, Leann. “A Formula for Disaster: Calculating Risk at the Ethane Cracker.” Fractracker Alliance. February 8, 2017. <https://www.fractracker.org/2017/02/formula-disaster-ethane-cracker/>. (accessed 4/16/2020).]

All things considered, the magnitude of the potential loss of life and damage to community infrastructure and lands makes the incorporation of an Ethane Cracker Facility highly hazardous and consequential.

Beyond the environmental issues, there are other factors to consider. According to the Energy Economics and Financial Analyst (IEEFA), a non-profit think tank, they state that these corporations that are anticipating the building of the Belmont County, Ohio Ethane Cracker plant are already pursuing other infrastructure construction before the facilities are even close to being completed before the communities have entirely accepted the inclusion of these businesses into their cities. The Energy Economics and Financial Analyst af-

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## Get Involved!

Call Ohio Governor Mike DeWine, Today (614) 644-4357

Tell the Governor: “The Ohio River should be protected from Plastic pollution. It is the drinking water source of 5 million people. I don’t want the PTT Global Chemical plastic factory polluting my drinking water. Ohio Environmental Protection Agency Director Stevenson should pull the permits for PTT Global Chemical.”

**Get Informed:** Suggested reading list:

- ⇒ DESMOG Blog: “A Field Guide to the Petrochemical and Plastics Industry.” (<https://www.desmogblog.com/2018/10/28/field-guide-petrochemical-plastics-industry> )
- ⇒ Environmental Health News: “Ever Heard of a Nurdle?” (<https://www.ehn.org/plastic-pollution-ohio-river-2641559748.html> )
- ⇒ Center for International Environmental Law: “Plastic & Health: The Hidden Costs of a Plastic Planet [Feb 2019].” (<https://www.ciel.org/reports/plastic-health-the-hidden-costs-of-a-plastic-planet-february-2019/> )

## More Ways to Get Involved:

- Join the Fight, send us an email to stay informed and get involved.
- Schedule a presentation for your local community group.
- Write a letter to your local newspaper’s editor (Op-ed).
- Host a house party with a short film and a member of the Ohio River Guardian.
- Join local government committee’s and help steer your communities away from the Petrochemical industries.
- Speak Loud, inform others, & Speak Out!

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**“Be the Change you wish to see in the World.”**

**~Mahatma Gandhi**

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