

THE SHELL ETHANE CRACKER

What You Need to Know



1. The ethylene cracker plant under construction in Potter Township, Beaver County, Pa. is owned by Shell Chemical Appalachia LLC, a subsidiary of Royal Dutch Shell, the fifth largest company in the world. (WSJ)
2. Petrochemical plants “crack” ethane into polyethylene pellets called “nurdles” that will be used to manufacture plastic and chemical products. ([Shell Polymers](#))
3. The Shell plant in Beaver County would be the second highest hazardous air polluter in the state and the 20th most polluting plant in the country. ([2015 EPA Toxic Release Inventory](#))
4. Cancer risk in Beaver County exceeds 30 in a million, which is elevated over the national average of cancer risk. Adding hazardous air pollutants to this existing situation will only make matters worse from a cancer perspective ([NATA 2104, EPA EJ Screen 2019](#)).
5. The Shell plant would be the largest source of volatile organic compounds (VOCs) in southwestern Pennsylvania. VOCs contain acrolein, ammonia, naphthalene, benzene, ethylene glycol, formaldehyde, methylene chloride, tetrachloroethylene, toluene and xylene. The VOC emissions would be six to seven times higher than Horsehead reported in 2011, 522 tons compared with 77 tons. (PA DEP 2016 Conditional Use Permit)
6. VOCs cause eye, nose and throat irritation, frequent headaches and nausea. They can also damage the liver, kidney and central nervous system, exacerbate symptoms of asthma and cause cancer. ([PRETA Study](#))
7. It is estimated that the Potter Township plant will emit 2.2 million tons annually of carbon dioxide – equivalent to putting another 433,000 passenger cars on the road each year. (EPA’s Greenhouse Gas Calculator)
8. Global petro expansion will make the Paris Agreement impossible to meet. The planet must not warm beyond 2 degrees Celsius which will require both methane and CO2 reductions according to the United Nations Intergovernmental Panel on Climate Change ([Oct. 2018 UN IPCC Report](#)).

9. Ohio, Pennsylvania and West Virginia are ground zero for a multi-billion-dollar petrochemical build-out that would tap into the region's abundant store of "wet" gas.
10. A single petro plant would require industry to open more than 1000 new gas wells every 3 to 5 years to supply feedstock for plastics manufacturing (Dr. John Stoltz). Studies have shown that gas wells located in close proximity to communities result in health risks to children and sensitive populations. ([Environmental Health Project](#))
11. Dozens of children and young adults have been diagnosed with Ewing sarcoma and other forms of cancer in a four-county area outside Pittsburgh. ([Pittsburgh Post-Gazette](#))
12. Fracked methane gas will be transported by "gathering" pipelines from gas well pad/ fracking sites throughout the Ohio River Valley to cryogenic plants where ethane and other heavy natural gas liquids will be extracted. The "volatile liquid ethane" is then transported by the Falcon pipeline to the Shell plant where it will be processed into plastic. (PA DEP)
13. The Falcon pipeline would pass through densely populated neighborhoods, 25 landslide-prone areas, the watershed of the Ambridge Reservoir, habitats of several endangered and threatened species, within 1/4 mile of 240 private water wells. It will intersect 31 streams and 174 wetlands including the Independence Marsh. ([PA DEP](#))
14. For every three jobs created by the shale gas industry, someone's life in the region was cut short by a year. The industry is already responsible for thousands of premature deaths. ([CMU Study, Dec. 2019](#))
15. Since 2007, the gas industry has given \$11.3 million to political candidates, committees and parties in Pennsylvania. ([Marcellus Money](#))
16. The Shell ethane cracker has the capacity to produce over 1 million metric tons of plastic a year. The Marcellus and Utica shale plays are some of the largest in the world and this region will supply 37% of the nation's natural gas production by 2040. The plastic commodity will be used in U.S. and shipped overseas. ([Shale Crescent USA](#))
17. The DEP permitted Shell to use a "grandfathered-in" water permit as an "existing facility" because it is located on the old Horsehead Zinc Smelter site rather than requiring a new water permit. This permissive act means Shell is exempt from 2010 water discharge standards for dissolved solids. (PA DEP)
18. The PTTG plant is a second petrochemical ethane cracker in the permitting phase in Belmont Ohio, across the river from Wheeling, WV and upwind from the Pittsburgh and southwestern Pennsylvania. It has not yet received final approvals. (Sierra Club Ohio)
19. Industry experts believe there is enough ethane in Appalachian shales to supply more than four more petrochemical plants in the tristate region like the Shell plant. Exxon Mobil has begun scouting for sites in Washington and Beaver counties. ([Team Pennsylvania](#))
20. Pennsylvania taxpayers will contribute \$1.6 billion in taxpayer dollars toward the construction of the Shell plant which provide 400-600 permanent full-time jobs. This equates to a subsidy of \$2.7 million per job. Contrast this with New York State's commitment of \$1.5 billion for 40,000 renewable energy jobs in the state, or a subsidy of \$37,500 per job. ([U.S. News and World Report](#))