

# 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.
2. Petrochemical plants “crack” ethane into polyethylene pellets called “nurdles” that will be used to manufacture plastic and chemical products.
3. The Shell plant in Beaver County would be the second highest hazardous air polluter in the state and the 20<sup>th</sup> most polluting plant in the country. (PA DEP)
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 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. (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.
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 goals impossible to meet. The planet must not warm beyond 2 degrees Celsius which will require both methane and CO<sub>2</sub> reductions according to the United Nations Intergovernmental Panel on Climate Change (IPPC).

9. Ohio, Pennsylvania and West Virginia are ground zero for a multi-billion-dollar petrochemical build-out thanks to 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 plastic 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 sent via "gathering" pipelines from fracking sites 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.
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. (DEP)
14. The Shell Falcon pipeline is classified by the federal government as a "volatile liquid ethane" pipeline. It is NOT a "natural gas pipeline". Natural gas refers to methane, which is used to heat homes and used for cooking. Ethane pipelines are prone to explosion.
15. Since 2007, the gas industry has given \$11.3 million to political candidates, committees and parties in Pennsylvania. (Marcellus Money)
16. The ethane cracker has the capacity to produce over 1 million metric tons of plastic a year. Most of the plastic produced will be shipped overseas as a commodity.
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.
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.
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.
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.