

Triple Threat: Petrochemicals and Plastics, Power Plants, and Exports Drive a New Fracking Boom

Fracking has unleashed more natural gas than the industry can use, cutting into profits and putting frackers out of business. To alleviate the gas glut and save the industry, gas producers are relying on a new wave of dirty infrastructure that would transform gas into petrochemicals and plastics, burn it for dirty energy or transport it to overseas markets. If built, these facilities will lock in both fracking and toxic facilities for decades.

Fracked gas production surged more than 15-fold from 2000 to the first half of 2018.¹ This additional gas has pushed real, inflation-adjusted natural gas prices to their lowest levels in decades, now 60 percent lower than in 2008.² Producers fear that without infrastructure to relieve the glut, drilling and fracking will slow dramatically.³ To become profitable again, fracking needs new markets (exports), new end users (petrochemical and power plants) and new products (plastics) to drive up gas demand.⁴

Petrochemicals and Plastics

In addition to methane, fracking has produced an oversupply of cheap ethane. Ethane is a fracking byproduct that has been a boon for the plastics industry, which relies on petrochemical manufacturing to turn ethane into plastics.⁵ More fracking means more ethane and more plastics and petrochemical plants that can eat up excess gas to justify more drilling.

Investors are lining up to build new factories that transform fracking byproducts into plastics.⁶ In 2018, the chemical industry was slated to spend over \$202 billion on 333 facilities to take advantage of shale gas.⁷ This investment is targeted primarily for Appalachia and the Gulf Coast, and could drive a 40 percent increase in global plastics production over the next decade.⁸

Unfortunately, plants that convert natural gas into petrochemicals emit massive amounts of air and climate pollutants, and pump out mountains of toxic plastics, the majority of which are immediately thrown away.⁹



Gas-Fired Power Plants

In addition to turning gas into plastics, a push is under way to burn gas at new gas-fired power plants. The U.S. Department of Energy (DOE) projects that 364 new gas-fired generators will be built between 2018 and 2022.¹⁰ In 2017 and 2018 alone, new gas plants would provide 8 percent more energy than in 2016.¹¹ This added electric generation could power 36.6 million homes, about one-fourth of U.S. households.¹²

The demand for electricity is not rising as fast as new gas plants are coming online, creating the potential for new gas

power plants to create a power supply glut.¹³ New gas plants drive additional gas drilling, cement the dominance of fossil fuels in our energy grid, lock in greenhouse gas emissions and displace investments in renewables.¹⁴

Export Terminals

The industry also hopes to tighten the domestic market for natural gas by exporting it. These exports would supercharge additional fracking, with 80 percent of the increased exports filled by gas from new wells.¹⁵ Some gas is exported by pipeline to Mexico and Canada, and the rest is shipped by tanker from export terminals to overseas markets.¹⁶

To be suitable for ocean transport, natural gas must be super-cooled and compressed at special terminals.¹⁷ Liquefaction facilities emit large amounts of air pollution, damage marine habitats, release dangerous toxins into the water and leak colossal amounts of methane.¹⁸ Tankers and facilities are also prone to catastrophic explosions.¹⁹

The first liquefied natural gas (LNG) shipment from the lower 48 states departed from Cove Point, Maryland in 2016.²⁰

Currently, the United States can liquefy and export 3.6 billion cubic feet of natural gas per day, about 5 percent of U.S. gas production.²¹ In 2018, there were only 3 active LNG export facilities in the country, but 22 more either were already being built or were approved for construction, and another 22 were pending federal review.²² By 2040, LNG exports could be as high as 30.7 billion cubic feet per day, more than a quarter of the DOE's projection for the U.S. gas supply.²³

Conclusion

The new petrochemical factories, power plants and LNG exports will cushion the fracking industry by sopping up the gas glut, tightening the supply and raising prices. Without the buildout of fracked gas infrastructure, the industry would likely face more severe economic headwinds and be unable to reinvest in more drilling and exploration.

Instead of doubling down on new fossil fuel facilities, we must invest in clean, renewable energy. Technology for a large-scale transition to renewables at low cost exists²⁴ — we just need strong government policies backed by political will to see them through.

Endnotes

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