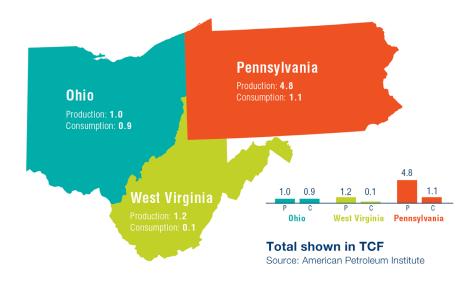


## Today's Takeaway: After Shale Insight 2018, one thing is perfectly clear – this is a once in a lifetime window of opportunity!

It's not that the issue wasn't covered at all at Shale Insight 2018, but it is the key to unlocking the full potential that the Marcellus Shale and Utica Shale formations have to offer. The issue, is regional collaboration. If we look at the current state of the market, it's clear that Pennsylvania is seeing the economic benefits of the shale boom – both from a personal and community perspective. According to a recent report from the Consumer Energy Alliance, Pennsylvanians saved more than \$30.5 billion on energy costs between 2006 and 2016 thanks to increased production and new technologies in the natural gas space. A PricewaterhouseCoopers report showed that in 2015 alone, more than 216,000 jobs in Pennsylvania were made possible as an indirect result of the oil and natural gas industry.

But the question remains – what needs to be done to ensure all three states in the Tri-State Shale Coalition – Pennsylvania, Ohio and West Virginia – can reap these same economic benefits to further downstream opportunities?

# Annual Natural Gas Production and Consumption Profiles of Pennsylvania, Ohio and West Virginia



#### What's the Point?

For the natural gas production industry, life is pretty sweet. In 2016, Appalachia was the <u>3rd largest</u> natural gas producer in the world, topping Iran, Saudi Arabia, Qatar and others. By 2040, domestic production of natural gas is expected to more than double, with most of the increase coming from the tri-state region of Pennsylvania, West Virginia and Ohio. Yet, production is still far <u>surpassing demand</u>.

Of those three states, Pennsylvania is the one harvesting the most downstream benefits. Beyond the jobs already created indirectly through natural gas, the in-progress, multi-billion-dollar Shell ethylene cracker plant in Beaver County, Pennsylvania, is poised to create more than 7,400 permanent jobs once completed in the early 2020s. And while experts say indirect job creation as a result of the plant's opening will be gradual, it's difficult for manufacturers to not get excited about the possibility of low-cost ethylene readily available right in Western Pennsylvania.

However, with all this natural gas supply coming from right beneath our feet in Appalachia, shouldn't there be more growth stories like Pennsylvania's Shell plant? Right now, the Appalachian region is taking advantage of only a fraction of the potential benefits that come from its vast supplies of natural gas. West Virginia accounted for fewer than 33,000 indirect jobs in 2015 – that's less than 1% of the total indirect jobs created via natural gas across the U.S. Ohio is a bit better with 172,800 jobs, but still, doesn't it seem like there's plenty of meat left on the bone for other end-use opportunities in these three states?

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### **Why Should I Care?**

Increasing downstream operations is not an endeavor that one business, one county, or even one state can do on its own. It will take a fully collaborative effort between Pennsylvania, West Virginia and Ohio in order for the Appalachian region to truly realize all the advantages of the Marcellus Shale region.

Certainly, the agreement between each of the three states' governors that was extended back in March is a good place to start. Since the coalition started in 2015, <u>Ohio has seen</u> its horizontal shale wells produce an average of 19.2 million bbl of oil and 1.36 tcf of gas, which are increases of 275.5% and 619.4%, respectively, compared to the 3-year average prior to the agreement. Yet, there is still plenty more work to be done in downstream operations specifically for this coalition to make long-term impact.

Pennsylvania's much talked about <u>playbook</u> detailing the decommissioning and redevelopment of the Mitchell Power Station is one good example. These playbooks are doing the hard work of identifying potential brownfield sites for manufacturers and other end-use operations, and making it easier for them to see the possibility that lies within these sites. By working together and sharing know-how, the three states can enable these playbooks to be churned out at a much quicker pace for potential properties across the region.

Moving forward, greater collaboration across state lines among legislators and businesses will be required to enable more downstream development. From pipeline production and brownfield development, to marketing and workforce development, the way to end-use prosperity begins with tri-state cooperation.