AMERICA'S STRATEGIC ENERGY ASSET

WHY THE OHIO, WEST VIRGINIA, PENNSYLVANIA REGION MUST BE PRIORITIZED FOR POWER, PROSPERITY, AND NATIONAL SECURITY

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Executive Summary

The Ohio, West Virginia, and Pennsylvania region, collectively known as Shale Crescent USA, represents one of the most strategic energy and industrial assets in the world. **It is the only place on the planet with vast, low-cost natural gas production co-located with a dense concentration of industrial consumers and world-class infrastructure.** It sits within a one-day drive of half the U.S. population. If the tri-state region were a country, it would rank as the **3rd-largest natural gas producer in the world,** behind only the rest of the U.S. and Russia. These three states produce roughly one-third of all U.S. natural gas, and natural gas in the Shale Crescent USA is the lowest priced hydrocarbon in the industrialized world.

The global race for AI and advanced computing will require the regions of the U.S. with the natural resources and infrastructure to deliver baseload power. The United States must treat power generation as a core strategic capability. The Ohio-West Virginia-Pennsylvania corridor is uniquely capable of providing a solution.

The Shale Crescent USA region is the ideal location and a **national solution to America's most pressing challenges: onshoring manufacturing, manufacturing resilience, energy security, grid reliability, and national security.** This paper highlights a globally rare concentration of strategic assets. It calls for strategic official recognition and targeted investment, **urging national leaders to prioritize this tri-state region as a strategic energy asset.** Areas of investment and development should be prioritized by greatest positive impact:

1. **Re-shore critical energy-intensive manufacturing** and create high-wage jobs in a region with deep industrial roots and supporting resources and infrastructure.
2. **Increase electric generation and grid resilience** by delivering baseload power generation to support artificial intelligence, industrial growth, and other increased electric demand.
3. **Utilize U.S. natural gas here first.** Maximize the value of American energy by utilizing feedstocks and producing power domestically before exporting surplus resources.

The assets of this region align with the country's most urgent priorities. By focusing national attention and investment here, we can enhance economic competitiveness, energy reliability, and long-term prosperity. **Energy security is national security.**

Next steps: Immediate Development of Energy Assets & Infrastructure

There are only two regions in the United States capable of powering a national-scale energy and industrial expansion: the Gulf Coast and the Shale Crescent USA. The three states in the Shale Crescent USA produce 36 billion cubic feet per day (Bcf/d) of gas. Within this region, is the even more compact Ohio River Valley. From Pittsburgh, PA by roughly 150 miles south and 75 miles east and west of the river, is one of the densest energy deposits in the world. It produces nearly a quarter of all the gas in the country at 25 billion cubic feet per day (Bcf/d). According to the U.S. Department of Energy, **natural gas production in Ohio, West Virginia, and Pennsylvania is expected to grow by 50% over the next 25 years, while production in the rest of the country declines.** The region benefits from legacy industrial development, with robust electric transmission, pipeline networks, gas processing facilities, and heavy infrastructure already in place. These assets make the energy corridor uniquely equipped to deliver scalable, affordable baseload power to meet rising domestic demand.

Rather than spending billions of dollars and decades building new infrastructure in distant locations**, the United States should leverage and expand the energy and industrial assets already established here.** The Ohio, West Virginia, Pennsylvania region is where America's energy future must be prioritized and further developed.

1. Introduction: A Strategic Location and Energy Solution

Over the past two decades, the United States has experienced major shifts in energy production, supply chains, and manufacturing priorities. Global instability, supply chain fragility, energy price volatility, and rising geopolitical tensions have revealed weaknesses in America's economic foundation and highlighted the need for secure, domestic sources of power and production.

The Ohio, West Virginia, Pennsylvania region, collectively known as the Shale Crescent USA, is uniquely equipped to be a solution for the energy and manufacturing industries. It is the **only place in the world at scale where both abundant low-cost energy and large consumer markets exist together.** All other locations require manufacturers or power producers to choose between importing energy/feedstock or exporting products. **The elimination of long-haul transportation makes the region a more secure and profitable investment than alternatives.**

The region's rare combination of resources, infrastructure, and proximity to market presents an unparalleled opportunity to address America's industrial, energy, and national security challenges. This paper lays out the case for recognizing the **Shale Crescent USA (SCUSA) region as America's Strategic Energy Corridor and prioritizing it for targeted investment and development.**

2. National Security: Reliable Energy & U.S. Manufacturing.

Manufacturing security is national security. Global dependence on hostile or unstable regimes can threaten critical supply chains. The United States cannot afford to be reliant on foreign energy or foreign manufacturing for its industrial future. 'Made in America' is critical.

The Shale Crescent USA region is globally superior in critical energy intensive manufacturing. Studies reveal the **region is more profitable than other industrialized regions** of the world due to proximity to abundant energy feedstocks and consumer markets. It is the ideal place to re-shore energy-intensive manufacturing and to co-locate power generation and production. Manufacturers in the Shale Crescent USA region experience the benefit and security of both supply of feedstock/energy and demand of customers in the same region. Whether building semiconductors, critical minerals processing, electric grid components, or defense technologies, these sectors must be powered by American energy on American soil.

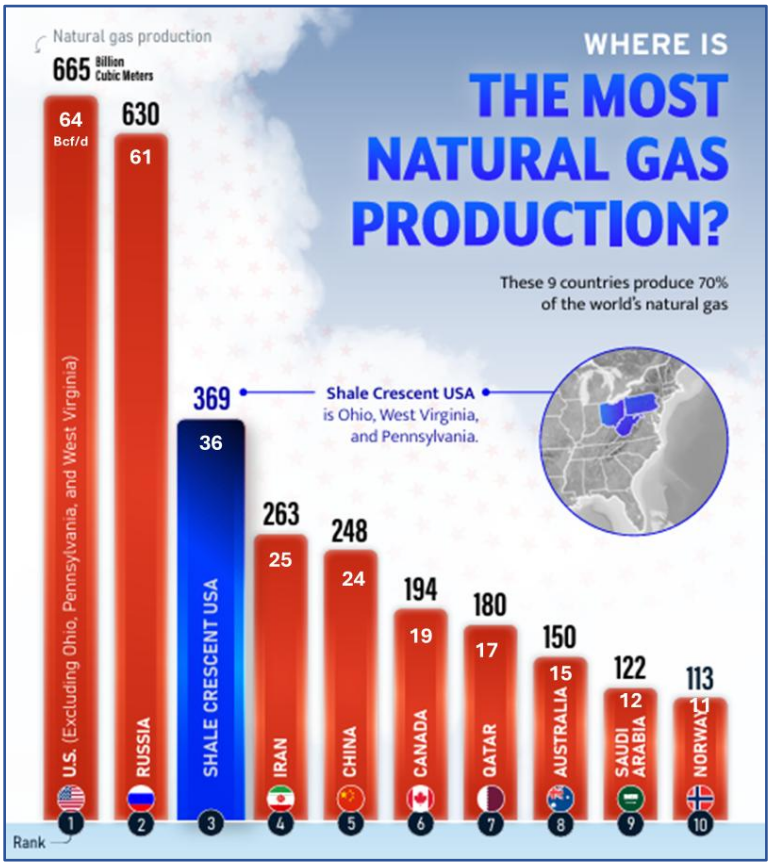
Power security is national security. The three states possess the resources to also produce substantial amounts of baseload power to support growing electric demands. **Other regions of the U.S. import power from Ohio, West Virginia, and Pennsylvania.** The U.S. must take bold steps to ensure its industrial resurgence is built on a solid energy foundation. That starts with leveraging the Shale Crescent USA region, one of the few places in America with the physical, geological, and infrastructural capacity to generate large-scale baseload electricity using hydrocarbons.

This region aligns well with bipartisan national priorities. Companies that locate here can meet 'Made in America' requirements while also meeting economic competitiveness goals.

3. The Global Energy Dominance of Ohio – West Virginia - Pennsylvania

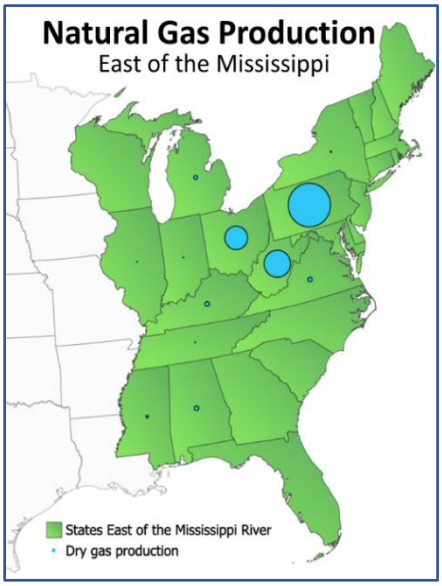
The states of Ohio, West Virginia, and Pennsylvania are global leaders in energy production. **Combined, these three states are the third most productive natural gas producing region in the world** at roughly 36 billion cubic feet per day (BCF/d). The only two regions that produce more natural gas are the rest of the United States and Russia.

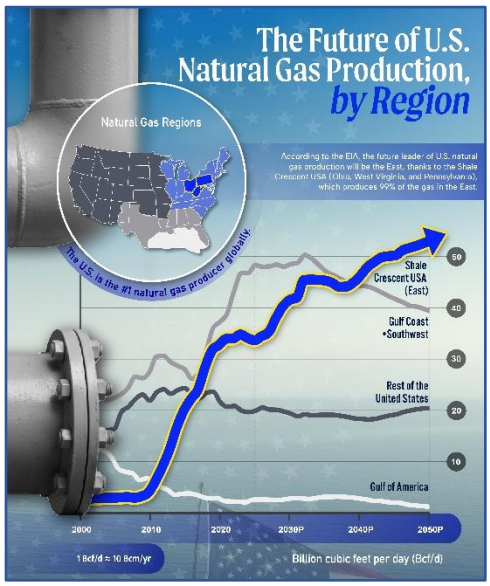
The three Shale Crescent USA states produce one & a half times (1.5x) as much natural gas as China, whose land mass is thirty times (30x) larger. China is a significant producer of industrial and petrochemical products and power, but **China has to acquire and import much of its feedstock from other regions such as the U.S. and the Middle East.**



Shale Crescent USA **currently produces one-third of U.S. natural gas.** The region is the greatest natural gas producing region in the country. To illustrate, Texas has twice (2x) the land mass of the three states combined but produces less. Since 2008, 62% of the growth in natural gas production has come from the Shale Crescent USA. The shale revolution has changed the way energy moves in the U.S. Energy used to flow South to North from Texas into the SCUSA region. Today, gas flows from North to South. The SCUSA region no longer imports natural gas and energy; it exports it to other parts of the country and the world.

At the intersection of Ohio, West Virginia, and Pennsylvania is the Ohio River Valley. **From Pittsburgh, PA by roughly 150 miles south and 75 miles east and west of the Ohio river, is one of the densest energy deposits in the world**. It produces nearly a quarter of all the natural gas in the entire country at the amount of **25 billion cubic feet per day (Bcf/D).** It is one of the most strategically vital energy-producing regions in the United States.





The three states are responsible for nearly all the gas produced East of the Mississippi. It is the most readily deployable resources in the Eastern U.S. **This supply of natural gas and feedstock has created the most reliable and lowest-cost natural gas environment for industrial users in the U.S. and world over the past decade.**

Growth in Natural Gas Production:

This region is projected to also be responsible for U.S. future growth in gas supply. According to the U.S. Department of Energy, **natural gas production in Ohio, West Virginia, and Pennsylvania is projected to grow by 50%** (roughly 7 trillion cubic feet per year or 19 billion cubic feet per day - Bcf/d) over the next 25 years. In contrast, production in regions near the **Gulf Coast is projected to decline** by 3.3 trillion cubic feet per year or 9 Bcf/d.

4. Price Advantage for Manufacturing and Power Generation

The cost of energy and feedstock is the primary factor impacting the economic vitality and profitability of manufacturing operations. Many manufactured products are commodities and face global competition that is based on the price and deliverability of the finished product. **Natural gas prices in the Shale Crescent USA region are consistently the lowest in the industrialized world making it one of the most attractive regions for investment and onshoring.**

U.S. Natural Gas: A price advantage over the rest of the world

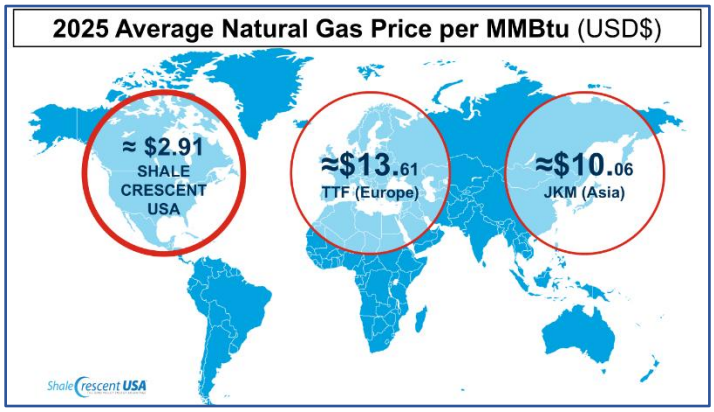
Natural gas and natural gas liquids have become the world's low-cost hydrocarbon opportunity. Since the shale revolution, the price of gas has dropped dramatically & no longer runs in close parallel with oil. In 2025, the price of American natural gas compared to global oil was roughly 1 to 20, far greater than the historical ratio of 1 to 8.

In the Shale Crescent USA region, there is an even greater price advantage compared to the rest of the world and the rest of the U.S. Energy supply and prices are not the same across the U.S. Some regions are in short supply, while others have it in plenty. **The most affordable natural gas within the populated and industrialized U.S. is in Ohio, West Virginia, and Pennsylvania.** Thus far in 2025, the average price of U.S. natural gas has been $3.67 per MMBtu, in the SCUSA the average price of natural gas has been $2.91 per MMBtu.

Since the start of the shale revolution, over 60 percent of the new natural gas supply has come from the SCUSA region. This new supply of natural gas has driven U.S. prices down by 65 percent.

2025 global natural gas price comparison:

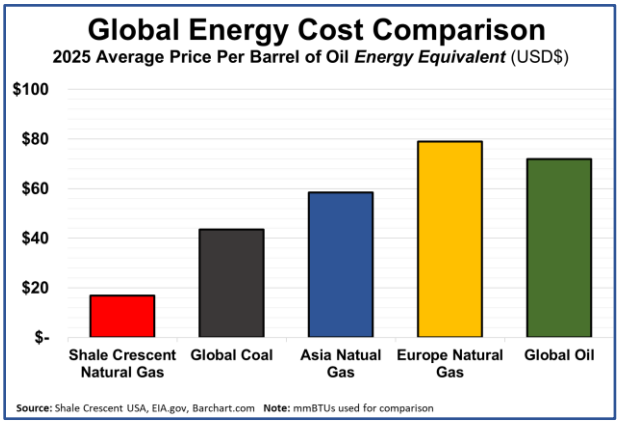
- Shale Crescent USA = **$2.91 per MMBtu**
- U.S. (Henry Hub) = **$3.67 per MMBtu**
- Europe TTF Market = **$13.61 per MMBtu**
- Asia JKM Market = **$10.06 per MMBtu**



For over a decade, gas consumers in the SCUSA region have experienced the benefit of prices well below those in the rest of the American market and the rest of the world. I**n 2025, on average, European customers paid over four times (4x) more than customers in the SCUSA region**. Based on abundant supply and the lack of need for long-haul transportation, **SCUSA is projected to continue to be the lowest-cost natural gas and natural gas liquids consumer region.**

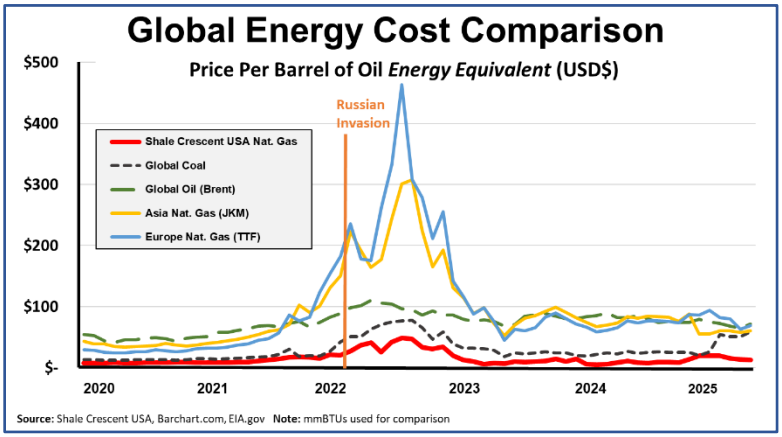
Shale Crescent USA: Lowest-cost hydrocarbons

Shale Crescent USA natural gas and NGLs are also the lowest cost hydrocarbons in the industrialized world. The prices have declined significantly over the past decade, and they are now lower than the energy equivalent prices of both coal and oil.



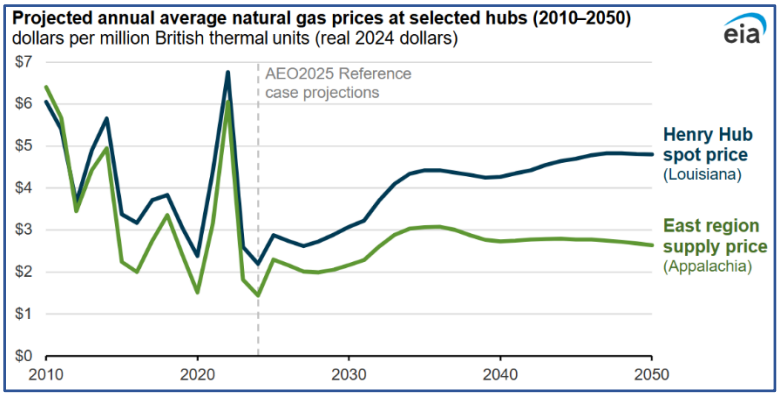
To compare hydrocarbon prices, differing energy forms must be set equal on an energy content, BTU basis. The standard rule of thumb to compare oil to natural gas is that one (1) MMBtu of natural gas multiplied by roughly six (6) is equivalent to one (1) barrel of oil on an energy content basis. **Thus far in 2025, the average price for a barrel of oil energy equivalent of natural gas has been $16.85 in the SCUSA region.**

Over the past four years, there has been a significant separation between U.S. natural gas prices and those in the rest of the world. The chart indicates that this trend was occurring even before the Russian invasion of Ukraine.



Energy consumers in the SCUSA region experience stable prices, reduced volatility, and lower risks compared to global competitors. This predictability allows for better forecasting of feedstock availability and pricing, resulting in smoother operations and improved production planning.

With natural gas prices in the region disconnected from volatile global oil markets, energy-intensive businesses such as chemical production, metals, glass, and plastics gain a durable edge. **The cost of the hydrocarbon molecule is the largest single input for many of these industries making this advantage strategic and lasting.**



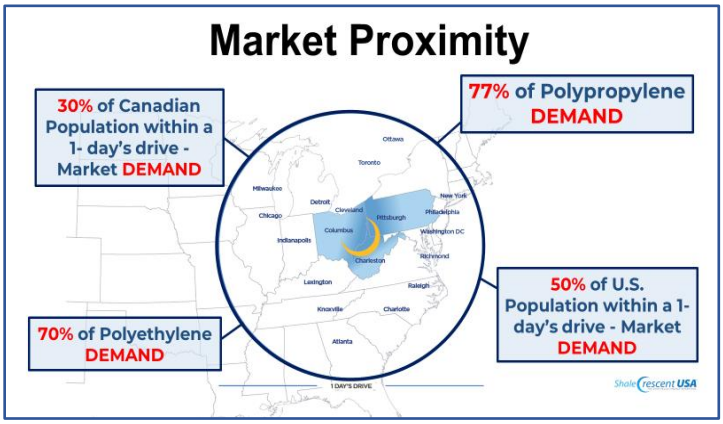
The EIA projects natural gas prices will continue to widen and eventually be two times (2x) higher on the Gulf Coast than in the eastern region (Ohio, West Virginia, Pennsylvania). **This price advantage is not a temporary anomaly. It is a direct result of abundant, local production and avoided transportation costs.**

5. Proximity + Power: A Global Anomaly

The Shale Crescent USA is the only region on the globe where world scale energy supply and world scale consumer demand are located together. Everywhere else users must decide between importing their energy and feedstock or exporting their finished product. In the Shale Crescent USA, long haul transportation is eliminated. This creates logistical and emissions benefits that cannot be replicated by overseas manufacturers. From "wellhead to Walmart," the entire value chain can occur in one region.

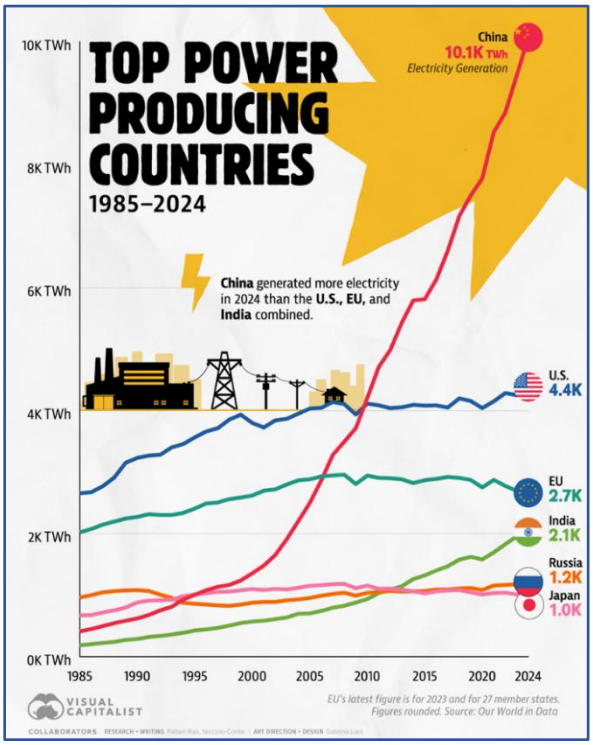
The region sits within a one day's drive of:

- 50% of the U.S. population (170 million people)
- 30% of the Canadian population (12 million people)
- 70% of U.S. polyethylene and 77% of polypropylene consumption



Because the region is a historic energy producer, it is also a historic manufacturing center. Today, plastics and petrochemical manufacturing operations are clustered within the region. There already exists substantial infrastructure and industrial activity throughout the entire value chain. **Manufacturing in the region is both more cost competitive and sustainable - largely driven by the elimination of transportation.**

6. The Electric Grid Challenge & Opportunity



For the first time in over 50 years, the United States is experiencing sustained growth in electricity demand. This is being driven by onshoring industry, artificial intelligence, electrification, and the digital infrastructure required to support a 21st-century economy. **Power security is National security and meeting the demand is critical.**

Artificial intelligence and high-performance computing require massive amounts of stable, continuous electricity. As geopolitical tensions rise, the ability to produce that power domestically and reliably will determine which nations lead in the AI race. At present, China produces significantly more electricity than the United States. **If the U.S. is to lead the world in AI and future technologies, we must also lead in power generation.**

This will require regions with natural resources and infrastructure to deliver baseload power. The Ohio, West Virginia, Pennsylvania energy corridor is one of the few places in America capable. It has natural resources and legacy infrastructure to produce scalable electricity at affordable prices. Unlike other areas of the country that rely on outside feedstock and power to maintain their grids and industry, **this region is internally capable of providing feedstock and power to meet national demands.**

To secure our future, the United States must treat power generation as a core strategic capability. That means **investing in modern natural gas facilities, advanced coal technologies, and distributed energy systems that can be built and scaled quickly. Natural Gas is the most readily deployable resource in the U.S.** Further development and prioritization in the Shale Crescent USA region **where the infrastructure already exists offers the best return on investment and the fastest deployment timeline.**

This energy corridor must be valued as a **Strategic Power/Energy Reserve** for the United States. In ways, similar to the critical Strategic Petroleum Reserve on the Gulf Coast. Ensuring the U.S. has the capacity to generate its own electricity, at scale and on demand, is not merely an economic priority. **It is national security.**

7. Maximizing the Value of the Resource - Economic Growth Priorities

America's energy resources are among the most valuable strategic assets we possess. They must be stewarded. How we use them will determine their long-term impact. **Not all uses of energy create equal value. The key is to keep the energy molecule in our domestic economy as long as possible.**

Simply extracting and exporting raw energy provides a limited return—essentially a value of one. But if the molecule is converted into a commodity, then a derivative product, and ultimately a finished good, the economic impact increases exponentially. **Each step down the value chain creates more jobs, more revenue, and greater national resilience.**

Manufacturing delivers one of the highest returns on energy investment. For every 1 manufacturing job created, 5 additional jobs are generated across the broader economy. This multiplier effect makes U.S. based manufacturing one of the most powerful tools for economic growth.

The Shale Crescent USA region provides a unique opportunity to translate abundant domestic energy into national-scale economic gains. **'Made in America' is viable and should be the number one priority as it maximizes the value of the energy molecules in the form of jobs and economic gain.** The Shale Crescent USA is uniquely positioned to support the coming wave of American manufacturing. The region can drive national-scale economic gains. Policymakers and private industry should align around three key priorities in order of impact:

1. **Onshore energy-intensive manufacturing.** This generates the highest number of direct and indirect jobs and delivers the greatest economic multiplier.
2. **Use local energy to generate electricity for growing demand.** Attract data centers, AI infrastructure, and distributed power systems that can build directly on top of energy assets.
3. **After meeting domestic demand, export value-added products and surplus energy.** Prioritize downstream manufacturing over raw resource exports.

Summary:

There are only two regions in the United States capable of powering a national-scale industrial and energy expansion: the Gulf Coast and the Shale Crescent USA. At 36 billion cubic feet per day of production, the Shale Crescent USA is one of the densest energy deposits in the world. If Ohio, West Virginia, and Pennsylvania were a country, it would be the third-largest natural gas producing country in the world. This region also benefits from legacy industrial development, with robust electric transmission, pipeline networks, gas processing facilities, and heavy infrastructure already in place. It is the only place on the planet with vast, affordable, and reliable natural gas production co-located with one of the largest concentrations of consumer markets and industrial activity.

Energy Security is National Security! The states of Ohio, West Virginia, and Pennsylvania are a national strategic asset and where Americas energy future should be prioritized and further developed. Strategic development of the region's energy resources will produce National economic benefits and security. Developing the region should be a national priority. **Rather than spending decades and billions of dollars building new infrastructure in distant locations, the United States should leverage and expand the energy and industrial assets already established.**