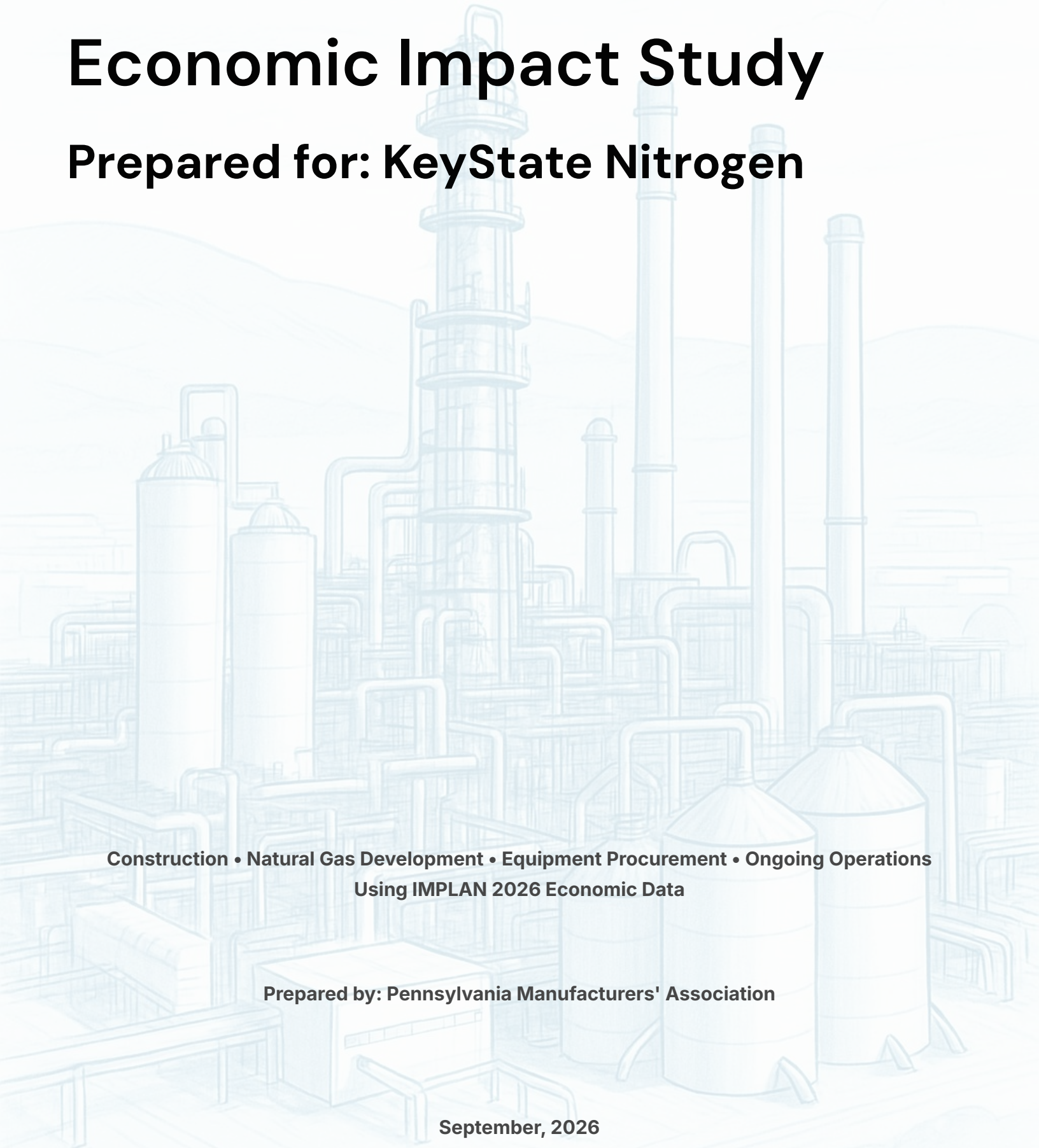
Economic Impact Study

Prepared for: KeyState Nitrogen



Construction • Natural Gas Development • Equipment Procurement • Ongoing Operations
Using IMPLAN 2026 Economic Data

Prepared by: Pennsylvania Manufacturers' Association

September, 2026

Project Overview

KeyState Nitrogen is a $3.5 billion capital project to provide more than 1,000,000 tons per year (tpy) of vital fertilizers and chemicals to Pennsylvania and a 15-state, Northeast/Mid-Atlantic region. Currently this region is without the production of essential hydrogen, ammonia, and urea products and is dependent upon international imports.

KeyState's proposed Clearfield County, PA facility will displace a majority of fertilizer imported into Eastern ports. Historically, this high cost, unpredictable supply has come from Russia and the Middle East.

KeyState has a sound business case, with competitive advantage in proximity to market and gas feedstock price with 60% of KeyState's production already committed under 10-year off take agreements.

The typical lifespan for US ammonia plants is more than 60 years. Historically, other chemical plants and related businesses relocate to be near major ammonia and fertilizer production facilities. Synergies with Pennsylvania's world-leading powdered metallurgy industry nearby are being explored. The implications for North-Central Pennsylvania are profound.

KeyState won acceptance into the Appalachia Regional Hydrogen Hub for pioneering work in reducing emissions in natural gas production, vertically integrating natural gas extraction with manufacturing, and using geological storage of CO_2, receiving a provisional award of $70,000,000. This $70,000,000 represents less than 4% of KeyState's total project cost but is an essential financing tool for attracting additional development-stage investment to rural Pennsylvania.

KeyState has secured more than 50% of funds needed to reach project final investment. More than $10,000,000 of private funds and seven years of local hard work have been invested in KeyState to date.

Much of the last four years has been spent navigating federal energy and emissions policy, all which has resulted in a larger, stronger, strategically significant mega-project.

Study Purpose

The basis of this study is to quantify the economic impact to the region and commonwealth through the construction and full-time operations of this proposed facility.

Project Details

Facility Overview

The facility in Clearfield County will be supplied with approximately 15 billion cubic feet (bcf) of natural gas per year from a site just nine miles away in Clinton County. This feedstock will be transmitted to the new manufacturing facility in Clearfield County where it will be transformed into the following products:

- **100,000tpy of ammonia for agricultural and industrial uses (17.5mm kg year of Qualified Clean H2)**
- **300,000tpy of dry urea fertilizer**
- **450,000tpy of urea ammonium nitrate (UAN) fertilizer**
- **360,000tpy of auto-grade urea for diesel exhaust fluid**
- **Industrial gases such as oxygen, nitrogen, argon**
- **On-site natural gas generation**



Construction Requirements

To construct the manufacturing facility in Clearfield County, it will require at least 1,000 construction workers over a period of three years. The pipeline to connect the natural gas extraction site in Clinton County will require at least 20 workers for 1 year.

Equipment and Operations

During the three year construction phase of the plant, industrial equipment worth approximately $750,000,0000 will be installed. Once operational, the new manufacturing facility will employ approximately 273 workers in the area of urea and nitrogenous fertilizer manufacturing.

Executive Summary

This study examines the Pennsylvania economic impact of Keystate Nitrogen, a proposed nitrogenous fertilizer manufacturing facility and the activity required to build, equip, supply, and operate it. The analysis uses IMPLAN 2024 data and input-output calculation processes, with all results reported in 2026 dollars. The model is structured as a Multi-Regional Input-Output (MRIO) analysis so that activity occurring outside the immediate project area but within Pennsylvania can be captured, while purchases sourced outside Pennsylvania are treated as leakage.

The project creates two distinct economic stories. The first is a large, time-limited development phase consisting of three years of construction, associated natural gas development, and equipment procurement. The second is the recurring annual operation of the manufacturing facility. Because manufacturing operations require an extensive network of transportation, warehousing, energy, professional services, wholesale distribution, financial services, and other suppliers, the annual operating footprint is substantially larger than the direct plant workforce alone.

The combined results show that the project's secondary employment effects are even larger than its direct employment effects. Approximately 3,295 direct jobs/job-years support another 3,521 indirect and induced jobs/job-years through Pennsylvania supply chains and household spending. **This is especially important in the operations phase, where 273 direct manufacturing jobs support approximately 1,426 total jobs statewide each year.**

Combining three years of construction, natural gas development, equipment procurement, and one representative year of full operations, the project supports approximately 6,816 jobs/job-years, $542.0 million in labor income, $1.08 billion in value added, $2.25 billion in Pennsylvania economic output, and $207.8 million in total tax revenue.

Impact	Employment	Labor Income	Value Added	Output
Direct	3,295	$262.54M	$616.26M	$1.396B
Indirect	1,787	$178.50M	$275.32M	$545.63M
Induced	1,735	$101.00M	$184.70M	$305.33M
Total	**6,816**	**$542.04M**	**$1.076B**	**$2.247B**

The four-year snapshot should not be interpreted as 6,816 permanent simultaneous jobs. Construction and development employment is tied to the build-out period. The operations results, by contrast, represent a recurring annual economic base expected to continue for the operating life of the facility at the modeled level.

Methodology and Study Scope

IMPLAN is a regional input-output modeling system that estimates how an initial economic activity moves through suppliers, workers, households, and other industries. Direct effects are the initial project activities entered into the model. Indirect effects are business-to-business supply-chain activity generated by those direct effects. Induced effects are generated when workers supported by the direct and indirect activity spend their earnings in the broader economy.

This study was run using an MRIO framework. The purpose is to preserve the geographic location of direct project activity while allowing the model to trace supplier and household-spending effects across Pennsylvania. Equipment procurement is particularly important in this structure: only the portion of equipment-related economic activity retained within Pennsylvania contributes to the Commonwealth's impact. Purchases supplied from outside Pennsylvania are treated as imports to the region and do not receive Pennsylvania multiplier effects.

> Conservative Treatment of Equipment: The equipment model reports approximately $720.8 million in imports to the region. Those purchases are treated as leakage from Pennsylvania. The statewide results therefore reflect only the equipment production, distribution, wholesale, transportation, and related supply-chain activity that IMPLAN estimates is retained within Pennsylvania.

How to Read Employment Results

IMPLAN employment represents an annual average mix of full-time, part-time, and seasonal jobs and is not the same as full-time-equivalent employment. Construction results are therefore best understood as jobs or job-years supported during the applicable development period. Operations employment is a recurring annual measure.

Measures Reported

Measure	Interpretation
Employment	Jobs supported by direct, supplier, and household-spending activity.
Labor Income	Employee compensation and proprietor income associated with supported activity.
Value Added	Contribution to gross economic product; the closest IMPLAN measure to GDP.
Output	Total value of production or sales supported by the modeled activity.
Tax Revenue	Model-estimated taxes associated with the supported economic activity.

The study measures gross economic impact. It is not a benefit-cost analysis, net-benefits analysis, environmental review, ratepayer analysis, land-use review, or fiscal return-on-investment calculation.

Construction Economic Impact

The construction phase represents three years of major facility development. The model includes 3,000 direct construction jobs and captures the Pennsylvania suppliers and household-serving businesses supported by that activity. The input was 1,000 constructions jobs per year.

Impact	Employment	Labor Income	Value Added	Output
Direct	3,000	$214.75M	$304.94M	$705.22M
Indirect	1,034	$92.51M	$146.64M	$297.83M
Induced	1,209	$69.96M	$128.04M	$211.86M
Total	**5,243**	**$377.22M**	**$579.62M**	**$1.2149B**

Construction supports approximately 5,243 jobs/job-years across Pennsylvania, including 2,243 indirect and induced jobs/job-years beyond the 3,000 direct construction positions. The phase generates approximately $377.2 million in labor income, $579.6 million in value added, and $1.21 billion in total output.

The construction results show a broad supplier footprint. Machinery wholesalers, trucking, durable-goods wholesalers, ready-mix concrete, engineering, staffing, real estate, accounting, couriers, and warehousing all participate in the build-out. Household spending then extends the impact into hospitals, restaurants, physician offices, retail, nursing care, and other community-serving industries.



Construction Supply Chain

Rank	Industry	Indirect	Induced	Total
1	Wholesale - Machinery, equipment, and supplies	84	1	85
2	Truck transportation	75	9	84
3	Wholesale - Other durable goods merchant wholesalers	58	3	62
4	Ready-mix concrete manufacturing	54	0	54
5	Employment services	51	16	67
6	Architectural, engineering, and related services	50	3	53
7	Other real estate	47	32	78
8	Management of companies and enterprises	40	16	56
9	Accounting, bookkeeping, and payroll services	39	9	48
10	Couriers and messengers	32	10	42

Construction Tax Impact

Level	Tax Revenue
Local/County	$12.88M
State (PA)	$27.53M
Federal	$85.83M
Total	**$125.82M**

Natural Gas Development

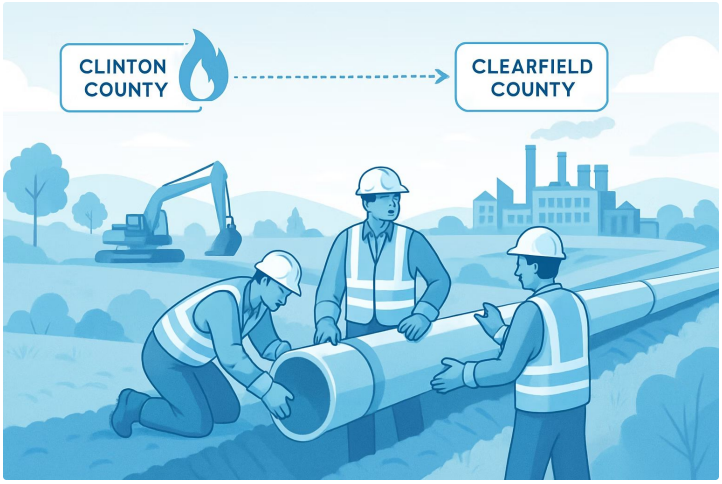
Natural gas development is modeled separately to capture the upstream energy activity associated with supplying the manufacturing facility. This component is smaller than construction or plant operations but creates additional employment, income, output, and tax effects through extraction, pipeline transportation, management, technology, wholesale, logistics, and household spending.

Impact	Employment	Labor Income	Value Added	Output
Direct	22	$1.90M	$4.56M	$8.40M
Indirect	10	$1.36M	$1.61M	$2.91M
Induced	12	$0.64M	$1.23M	$2.05M
Total	**44**	**$3.90M**	**$7.40M**	**$13.36M**

The modeled natural gas activity supports approximately 44 jobs, $3.9 million in labor income, $7.4 million in value added, and $13.4 million in Pennsylvania economic output. Oil and gas extraction accounts for direct activity, while management services, computer programming, pipeline transportation, trucking, engineering, machinery wholesale, warehousing, and other services appear through the supply chain.

Natural Gas Development Tax Impact

Level	Tax Revenue
Local/County	$0.31M
State (PA)	$0.51M
Federal	$0.93M
Total	**$1.76M**



Equipment Procurement

Major equipment procurement was modeled across Pennsylvania using the MRIO framework. This approach is important because large capital purchases can originate both inside and outside the Commonwealth. The model applies regional purchasing relationships so that Pennsylvania receives economic impact only for the portion of the equipment supply chain that is retained in-state. While approximately $720.8 million of equipment demand is reported as imports to the region, that activity is not assumed to be Pennsylvania economic output. The $34.25 million statewide equipment impact therefore reflects the economic activity that the model estimates remains in Pennsylvania based on IMPLAN's social accounting matrices (SAM).

Impact	Employment	Labor Income	Value Added	Output
Direct	0	$0.001M	$0.001M	$0.004M
Indirect	70	$7.53M	$10.66M	$27.68M
Induced	33	$2.28M	$4.06M	$6.56M
Total	**103**	**$9.81M**	**$14.72M**	**$34.25M**

Equipment Supply Chain

Industry	Impact Output
Power boiler and heat exchanger manufacturing	$11.43M
Turbine and turbine generator set units manufacturing	$7.59M
Metal tank (heavy gauge) manufacturing	$0.10M
Wholesale - Machinery, equipment, and supplies	$0.80M

Equipment Tax Impact

Level	Tax Revenue
Local / County	$0.43M
State (PA)	$0.60M
Federal	$2.25M
Total	**$3.28M**

Manufacturing Operations

The long-term operating phase is the most important recurring component of the project. Unlike construction, the employment, payroll, supplier activity, household spending, output, and tax revenue associated with operations are expected to recur each year for the operating life of the facility, assuming operations continue at the modeled level.

Impact	Employment	Labor Income	Value Added	Output
Direct	273	$45.89M	$306.77M	$681.93M
Indirect	673	$77.10M	$116.41M	$217.20M
Induced	481	$28.12M	$51.37M	$84.87M
Total	**1,426**	**$151.11M**	**$474.55M**	**$983.99M**

Manufacturing Multiplier: The 273 direct operating jobs support approximately 1,426 total jobs statewide. That is an employment multiplier of about 5.22: each direct manufacturing job is associated with roughly 4.22 additional indirect and induced jobs regionally and throughout Pennsylvania.

The output multiplier is also substantial. Approximately $681.9 million in direct manufacturing output supports approximately $984.0 million in total Pennsylvania output, an output multiplier of about 1.44. The operating facility contributes approximately $474.5 million in annual value added, a measure comparable to contribution to gross domestic product.



Manufacturing Employment Multplier

Rank	Industry	Indirect	Induced	Total
1	Truck transportation	74	4	77
2	Warehousing and storage	64	3	67
3	Management of companies and enterprises	59	6	66
4	Employment services	53	6	60
5	Insurance agencies, brokerages, and related activities	37	3	40
6	Natural gas distribution	25	0	25
7	Rail transportation	25	0	25
8	Wholesale - Other nondurable goods merchant wholesalers	20	1	22
9	Monetary authorities and depository credit intermediation	18	8	26
10	Other real estate	17	13	29

This operating profile illustrates why manufacturing has a broad economic reach. The plant's recurring demand supports transportation and logistics, warehousing, management, staffing, insurance, natural gas distribution, rail, wholesale trade, finance, real estate, power transmission and distribution, machinery repair, accounting, and other business services.

Household-Spending Effects

Worker earnings also support recurring employment in hospitals, religious organizations, limited- and full-service restaurants, physician offices, nursing and community care facilities, family services, retail stores, automotive services, and other household-serving industries. These induced effects account for approximately 481 jobs annually.

Annual Tax Impact

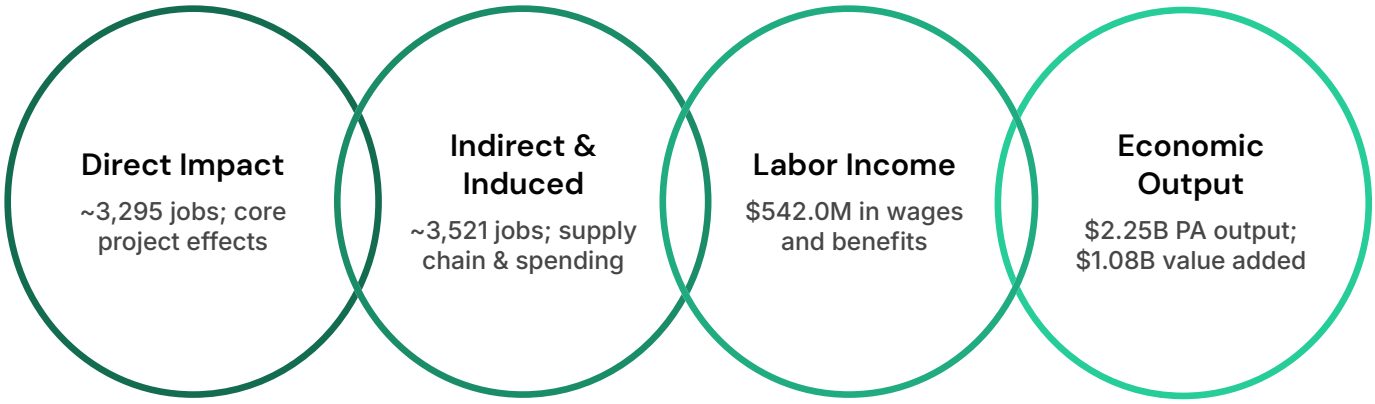
Level	Tax Revenue
Local / County	$10.17M
State (PA)	$22.16M
Federal	$43.63M
Total	**$76.96M**

Four-Year Project Snapshot

The four-year snapshot combines three years of construction, natural gas development, equipment procurement, and one representative year of full manufacturing operations. It provides a consolidated view of the project's development and transition into operations while preserving an important distinction: construction and development impacts are time-limited, while the operating impact recurs annually.

Impact	Employment	Labor Income	Value Added	Output
Direct	3,295	$262.54M	$616.26M	$1.396B
Indirect	1,787	$178.50M	$275.32M	$545.63M
Induced	1,735	$101.00M	$184.70M	$305.33M
Total	**6,816**	**$542.04M**	**$1.076B**	**$2.247B**

Across the combined snapshot, the project supports approximately 6,816 jobs/job-years, $542.0 million in labor income, nearly $1.08 billion in value added, and approximately $2.25 billion in Pennsylvania economic output. Indirect and induced employment totals approximately 3,521 jobs/job-years, exceeding the direct employment represented in the four-year snapshot.



Leading Statewide Employment Effects

Rank	Industry	Total Employment
1	Construction of new manufacturing structures	3,000
2	Nitrogenous fertilizer manufacturing	271
3	Truck transportation	164
4	Employment services	129
5	Management of companies and enterprises	125
6	Other real estate	110
7	Hospitals	103
8	Religious organizations	102
9	Warehousing and storage	101
10	Full-service restaurants	97

The combined employment profile makes the statewide ripple effect visible. Construction and manufacturing form the direct economic base, while transportation, warehousing, machinery distribution, staffing, management, real estate, health care, restaurants, finance, engineering, and other industries are supported through supplier purchases and household spending.

Four-Year Tax Impact

Tax Category	Revenue
Sub-County General	$4.46M
Sub-County Special Districts	$15.52M
County	$3.40M
State (PA)	$51.80M
Federal	$132.65M
Total	**$207.82M**

State and local taxes total approximately $75.2 million across the four-year snapshot, while federal taxes total approximately $132.6 million. Combined tax revenue across all levels of government is approximately $207.8 million.

Multiplier Effects and Statewide Reach

The multiplier effect describes how direct project activity supports additional activity elsewhere in the economy. The results are particularly strong in the recurring operations phase because a manufacturing facility purchases inputs and services from a broad network of Pennsylvania businesses year after year.

Measure	Four-Year Snapshot	Annual Operations
Employment multiplier	2.07	5.22
Labor income multiplier	2.06	3.29
Value added multiplier	1.75	1.55
Output multiplier	1.61	1.44

Across the four-year snapshot, each direct job/job-year corresponds to approximately 2.07 total jobs/job-years statewide. During annual operations, the relationship is much stronger: 273 direct manufacturing jobs support approximately 1,426 total jobs, or about 5.22 total jobs for every direct operating job.

The operating employment multiplier should not be interpreted to mean that every individual plant employee personally creates 4.22 identifiable jobs. It is an input-output relationship showing the scale of supplier and household-spending employment associated with the modeled manufacturing activity across Pennsylvania.

A Statewide Manufacturing Footprint: The facility is physically concentrated at the project site, but its economic footprint is not. Trucking, rail, warehousing, natural gas distribution, machinery and equipment suppliers, insurance, financial services, engineering, accounting, employment services, real estate, health care, restaurants, retail, and other industries participate in the recurring economic activity supported by the plant.



Clearfield County Economic Impact

Clearfield County is the geographic center of the project and captures the bulk of the modeled development and operating activity. A county-specific view shows how strongly the facility is concentrated locally, while the statewide MRIO analysis presented elsewhere in this study captures additional supplier and household-spending effects throughout Pennsylvania.

Four-Year Clearfield County Snapshot

The Clearfield County four-year snapshot combines three years of construction, associated natural gas activity, equipment-related activity retained in the county, and one representative year of manufacturing operations. It supports approximately 5,727 jobs/job-years in Clearfield County, generates $446.7 million in labor income, $918.3 million in value added, and $1.94 billion in economic output.

Impact	Employment	Labor Income	Value Added	Output
Direct	3,278	$260.92M	$611.36M	$1.387B
Indirect	1,268	$122.88M	$190.05M	$359.61M
Induced	1,181	$62.92M	$116.90M	$195.69M
Total	**5,727**	**$446.72M**	**$918.32M**	**$1.941B**

The county-level results show that approximately 2,449 indirect and induced jobs/job-years are supported beyond the direct project activity. Construction, fertilizer manufacturing, ready-mix concrete, stone and sand production, machinery distribution, natural gas distribution, pipeline transportation, rail, trucking, employment services, accounting, and more.

Four-Year Clearfield County Tax Impact

Tax Category	Revenue
Sub-County General	$2.75M
Sub-County Special Districts	$11.84M
County	$2.57M
Pennsylvania State	$43.56M
Federal	$110.44M
Total	**$171.16M**

The four-year Clearfield County activity generates approximately $17.16 million in modeled sub-county and county taxes, $43.56 million in Pennsylvania state taxes, and $110.44 million in federal taxes, for approximately $171.16 million in total tax revenue.

Annual Operations in Clearfield County

The county-level operating results reinforce the importance of the facility ***after construction is complete.*** The 271 direct manufacturing jobs support approximately 1,128 total jobs in Clearfield County each year, including approximately 538 indirect jobs through the local supply chain and 319 induced jobs through household spending. This represents about 4.16 total county jobs for every direct manufacturing job.

Impact	Employment	Labor Income	Value Added	Output
Direct	271	$45.67M	$305.85M	$680.23M
Indirect	538	$61.03M	$90.16M	$166.60M
Induced	319	$17.03M	$31.64M	$52.96M
Total	**1,128**	**$123.74M**	**$427.65M**	**$899.79M**

Annual operations therefore generate approximately $123.7 million in labor income, $427.6 million in value added, and $899.8 million in Clearfield County economic output. The local supplier footprint includes natural gas distribution, pipeline and rail transportation, trucking, electric power transmission and generation, wholesale trade, insurance, machinery services, employment services, and other support industries. These are recurring annual effects expected to continue for the operating life of the facility at the modeled level.

Annual Clearfield County Tax Impact

Tax Category	Revenue
Sub-County General	$1.18M
Sub-County Special Districts	$5.58M
County	$1.25M
Pennsylvania State	$20.40M
Federal	$37.25M
Total	**$65.66M**

Recurring operations generate approximately $8.01 million annually in modeled sub-county and county taxes, $20.40 million in Pennsylvania state taxes, and $37.25 million in federal taxes, for approximately $65.66 million in total annual tax revenue associated with Clearfield County activity.

Clearfield County accounts for most of the project activity captured in the four-year snapshot, while the statewide MRIO results show the additional economic reach created through Pennsylvania suppliers and household spending beyond the county. The distinction is especially useful for operations: the plant is a major local manufacturing employer, but its purchasing relationships extend the economic impact well beyond the facility gates.

Conclusion

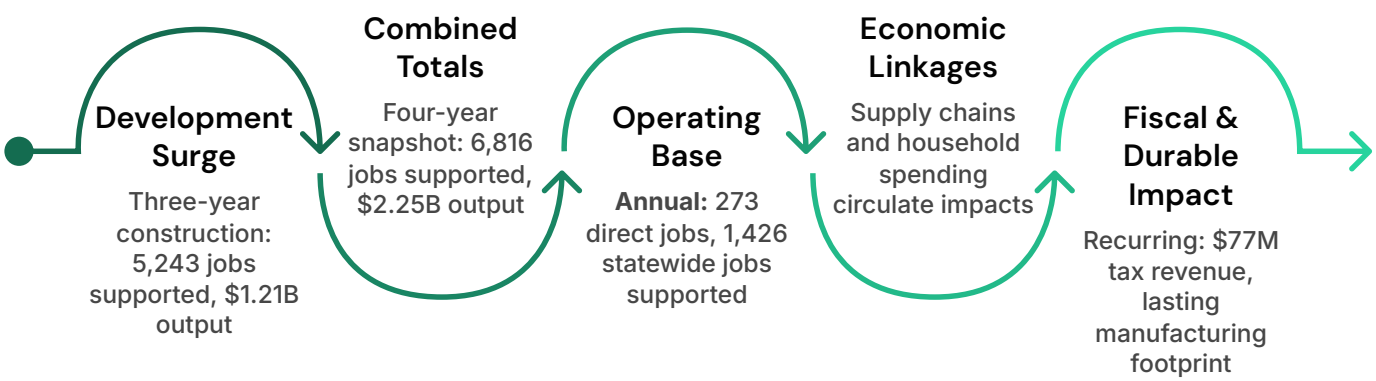
The IMPLAN MRIO results show a project with a substantial development-period impact and an unusually broad recurring manufacturing footprint. During the three-year construction period, the project supports approximately 5,243 jobs/job-years and more than $1.21 billion in Pennsylvania output. Natural gas development and equipment procurement add further supplier activity, while the equipment model conservatively excludes approximately $720.8 million in purchases treated as imports to Pennsylvania.

The four-year snapshot, including one representative year of operations, supports approximately 6,816 jobs/job-years, $542.0 million in labor income, $1.08 billion in value added, $2.25 billion in economic output, and $207.8 million in total tax revenue. Those figures describe the scale of the project's transition from development into operation, not a permanent simultaneous workforce.

The long-term economic story is the manufacturing operation itself. The completed facility supports 273 direct operating jobs and approximately 1,426 total jobs statewide each year. Annual operations generate approximately $151.1 million in labor income, $474.5 million in value added, nearly $984.0 million in Pennsylvania output, and approximately $77.0 million in total tax revenue. These impacts are expected to recur year over year for the life of the facility at the modeled operating level.

The results demonstrate the interconnected nature of modern manufacturing. A major production facility does not operate in isolation. Its demand for transportation, warehousing, natural gas, rail, equipment, professional services, finance, insurance, staffing, maintenance, and other inputs supports employment throughout the Commonwealth. The wages generated by those activities then circulate through health care, restaurants, retail, housing, and other community-serving industries.

Accordingly, the project's economic significance is best understood in two parts: a large but temporary construction and development surge, followed by a durable annual manufacturing base whose supplier and household-spending effects extend across Pennsylvania.



Appendix: Summary of Modeled Results

Component	Employment	Labor Income	Value Added	Output	Taxes
Construction	5,243	$377.22M	$579.62M	$1.215B	$125.82M
Natural Gas Development	44	$3.90M	$7.40M	$13.36M	$1.76M
Equipment Procurement	103	$9.81M	$14.72M	$34.25M	$3.28M
Annual Operations	1,426	$151.11M	$474.55M	$983.99M	$76.96M
Four-Year Snapshot	**6,816**	**$542.04M**	**$1.076B**	**$2.247B**	**$207.82M**

Note: The four-year snapshot is the combined IMPLAN run and should be used as the authoritative consolidated total. Component totals may not sum exactly to the combined result because MRIO interactions, event structure, rounding, and model treatment of overlapping economic relationships can affect consolidated results.