



GLASSWORKS

BUSINESS PARK





ECONOMIC IMPACT METHODOLOGY AND SUMMARY

Miles Brothers, LLC conducted an economic impact analysis for the proposed Glass Works Business Park project. The economic impact analysis was conducted based on the following general input:

- Estimated construction costs
- Specific industry and square footage for the proposed project

The economic impact analysis was conducted to project: 1) employment, compensation, and taxes supported during construction; 2) direct employment, compensation, and taxes generated annually at full build out; and 3) indirect and induced economic impacts from construction and on-going operations.

PROJECT OVERVIEW

The Glass Works Business Park Project (Project) is located in Clarion Borough, Clarion County, Pennsylvania less than 3 miles from Interstate 80 (I-80). The Project site encompasses several parcels covering an estimated 28.91 acres of the former Owens-Brockway Glass Container plant, which are generally encompassed by Sloan and South Sheridan Roads to the East, Grand Avenue to the West, and Veterans Drive to the North. The former Owens-Brockway Glass Container plant was a division of the Owens-Illinois glass manufacturer, which started operations in Clarion, Pennsylvania in 1905. The plant was functional until recently in 2010 when Owens-Illinois closed the plant as part of a consolidation effort. In 2012, several of the plant's buildings were demolished.



The proposed redevelopment effort for the property will modernize the site, supporting future warehouse and industrial uses. The site requires significant investment in: demolition and environmental remediation; earth moving; roadways; utilities; and related infrastructure. The current estimated cost for investing in the site redevelopment totals approximately \$4.9 million. (Funding Procured in 2018)

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As currently proposed, the future build-out will feature six lots with an average size of approximately 3.15 acres. Each lot will support between 22,950 to 46,850 square feet of new office warehouse or light industrial space.



FIGURE 1 – AERIAL VIEW OF PROJECT SITE

KEY ASSUMPTIONS

Project Name: Glass Works Business Park Project
 Owner: Miles Brothers, LLC
 Project Location: Clarion Borough, Clarion County, Pennsylvania
 Business Type: Office Warehouse and Industrial (proposed)

Proposed Improvements: Site work, including demolition and environmental remediation; earth moving; roadways; utilities; and related infrastructure improvements. Construction of approximately 194,870 square feet of warehouse/light industrial buildings.

Building(s) Size: 194,870 square feet
 Site Area: 18.91 acres
 Site Improvement Costs: \$4,930,750 (estimated)

Building Construction Costs: \$19,419,505 (estimated)

Current Employees: 0

ECONOMIC IMPACT ANALYSIS OVERVIEW

The economy is shaped by complex interactions among businesses, workers, and communities. This dynamic exchange between **producers** and **consumers** defines our economy. Economic impact analysis replicates this nonlinear relationship and captures the flow of spending from producer to consumer. Due to the dynamic nature of the economy, it is difficult to conceptualize these economic interdependencies. Computer impact modeling helps simplify these relationships – adding new jobs, improving industry output, or downsizing an industry sector – enabling the cumulative effects of these changes on industries and households to be measured.

IMPLAN is a modeling system that estimates the cumulative effects of economic change. Whether the change is positive or negative, industries and households will respond by altering their spending habits. IMPLAN seeks to replicate real-world interdependencies that exist between producers and consumers. IMPLAN differentiates between economic impacts that are temporary and those that are more permanent. Development projects typically have a **construction phase** and an **operational phase**.

IMPLAN captures basic economic variables, such as industry output, compensation, and employment. It can also be used to estimate fiscal impacts that reflect the change in local government revenue and costs associated with a development project. IMPLAN remains a nationally recognized and widely used modeling tool for its affordability and ease of use. The national Input-Output (I-O) account, which forms the foundation of any IMPLAN model, also provides a high level of detail about inter-industry relationships that would be too costly to outline using traditional research methods.

METHODOLOGY

With national I-O account linkages established, IMPLAN uses labor force and commuting pattern data to develop state- and county-level descriptive models that become the foundation for examining impacts.

The construction phase of a project results in a wide range of temporary benefits. The personnel hired to manage the job and work the construction site are often transplants from other communities. Contracted for a specific project, they spend a portion of their wages on local goods and services (e.g., lodging, food, clothes), but their resource contribution does not represent a sustained contribution. In contrast, the operational phase of a project results in permanent new jobs that attract people from the local labor market. As these new hires increase their earnings, their discretionary spending activity creates demand for goods and services. Changes in demand *drive* the IMPLAN model. Because the operational phase of a project results in sustained economic change, IMPLAN estimates these impacts separately from the construction phase. Both project phases have a

“ripple effect” on the economy. To capture these ripple effects, IMPLAN recognizes three types of impacts: direct, indirect, and induced.

TYPES OF IMPACTS:

The I-O accounting framework establishes interdependencies among the industry sectors. The **direct impact** – be it a new business opening, plant closure, or construction project – creates new opportunities for industries in the supply chain. As the impact trickles throughout the I-O framework, other industries are affected by the change – the **indirect impact**. As these supplier industries modify their behavior, their workforce follows suit, making different decisions about how to invest their money – the **induced impact**.

Direct Impacts represent the immediate change to the economy. The direct impacts reflect any spending associated with on-site construction activity and the operating expenses associated with the project at build-out. Direct impacts look at the combined value of the jobs, wages, and output associated with development.

Indirect Impacts examine how other industries respond to direct industry investment. As an example, if Company X maintains close ties with key suppliers, these business-to-business relationships often grow as Company X grows. Supplier industries may likewise expand, hiring new employees and increasing production. Both the construction phase and the operational phase will inject new money into the economy. The *direct* purchase of building materials, business services, and employees will stimulate other industries to do the same.

Induced Impacts are often referred to as “consumer impacts” because they measure how household spending responds to changes in industry production. When new jobs are created, individuals have greater spending power. A portion of their disposable income is recirculated through the economy when they purchase goods and services. These induced impacts are part of the “ripple effect” that is modeled by IMPLAN.

SUMMARY OF IMPLAN INPUT

For purposes of this analysis, projected employment at the site provided the input for the IMPLAN model to determine the projected compensation; industry output; indirect and induced employment, compensation, and output; and state and local taxes. Below is a summary of the input data provided for the IMPLAN model.

Development Structure as Designed for "Glass Works Business Park"	Developed Lot Size (Acres)	Building Size (Sq. Ft.)
Proposed Building	4.73	38,700
Proposed Building	3.36	46,850
Proposed Building	2.32	23,600
Proposed Building	2.52	22,950
Proposed Building	2.36	24,900
Proposed Building	3.62	37,870
Total	18.91	194,870

New direct employment project using industry allocation for employees light industrial uses. A summary of the buildings by size, space allocation, and resulting estimated employees follows:

Estimated Construction Costs	
Civil Site Improvement	\$4,930,750
Building Construction	\$19,419,505
Total Construction Cost	\$24,350,255

was estimated for the benchmarks for space for office warehouse and

Building Size	Sq. Ft. per Employee	Estimated Employees
38,700	800	48
46,850	1500	31
23,600	800	30
22,950	1500	15
24,900	800	31
37,870	800	47
194,870		202

CONSTRUCTION PHASE JOBS

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Construction phase impacts are based on total development costs for the project (\$24,350,255), and primarily include construction hard costs. IMPLAN's use of a project's construction phase is driven by the labor hours associated with construction-related activity. Property acquisition costs are not a factor of production and therefore, cannot be captured as part of the construction phase impacts. Construction phase impacts are a one-time injection into the economy. Based on the total project costs, the IMPLAN results are summarized below.

The estimated \$24.4 million construction spending from the project will support an estimated 181 direct jobs in the Pennsylvania economy. An additional 126 indirect and induced jobs will be supported by the project construction spending. A summary of the construction impacts follows:

Projected Construction Employees, Labor Income, and Value Added

Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	180.79	\$10,497,887	\$11,596,186	\$24,350,255
Indirect Effect	43.56	\$3,016,614	\$4,447,884	\$8,816,075
Induced Effect	82.07	\$4,043,997	\$6,787,716	\$11,555,817
Total Effect	306.42	\$17,558,498	\$22,831,786	\$44,722,147

Source: IMPLAN, 2016

CONSTRUCTION PHASE TAXES:

The construction spending will also generate a one-time injection of state and local taxes into Pennsylvania's economy. Of note, a projected \$97,260 will be generated in Sales Tax and \$227,954 in Personal Income Tax. Total state and local tax impact from direct construction activity is estimated at \$503,061. The state and local taxes and other fees generated by the project are summarized in the table below.

Construction Direct Tax Impact Results from IMPLAN Input-Output Model

Description	Employee Compensation	Proprietor Income	Tax on Production and Imports	Households	Corporations
Dividends					\$721
Social Ins Tax- Employee Contribution	\$5,129	\$0			
Social Ins Tax- Employer Contribution	\$10,017				
Tax on Production and Imports: Sales Tax			\$97,260		
Tax on Production and Imports: Property Tax			\$83,759		
Tax on Production and Imports: Vehicle Lic			\$1,648		
Tax on Production and Imports: Severance Tax			\$0		
Tax on Production and Imports: Other Taxes			\$16,950		
Tax on Production and Imports: S/L NonTaxes			\$446		
Corporate Profits Tax					\$11,425
Personal Tax: Income Tax				\$227,954	
Personal Tax: NonTaxes (Fines- Fees				\$29,253	

Personal Tax: Motor Vehicle License				\$8,772	
Personal Tax: Property Taxes				\$4,274	
Personal Tax: Other Tax (Fish/Hunt)				\$5,453	
Total State and Local Tax	\$15,146	\$0	\$200,063	\$275,706	\$12,146

Source: IMPLAN, 2016

OPERATIONAL PHASE JOBS – NEW EMPLOYEE IMPACT

Operational impacts were estimated based on the projected new employment at the Glass Works Business Park at full build out. The estimated 203 new permanent employees served as the input used in the IMPLAN modeling process to determine the economic and fiscal impacts from the project, including the employee compensation for the new permanent positions. Operational phase impacts are annual and represent an on-going injection into the economy. A summary of the projected new employees is shown here.

Projected New Employees, Value Added, and Output

Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	203	\$11,738,418	\$16,143,362	\$54,155,686
Indirect Effect	132.09	\$8,720,437	\$12,748,976	\$25,226,533
Induced Effect	124.32	\$6,126,346	\$10,283,385	\$17,506,938
Total Effect	459.41	\$26,585,201	\$39,175,723	\$96,889,157

Source: IMPLAN, 2016

Projected Employee Compensation – Direct, Indirect and Induced

Direct	Indirect	Induced	Total
\$10,590,234	\$7,198,467	\$5,299,908	\$23,088,609

Source: IMPLAN, 2016

TAX GENERATION IMPACT

Projected local and state taxes from annual operations were estimated using IMPLAN based on the projected number of employees at the full build out of the Glass Works Business Park. The majority of state tax revenue generated by operations is the Pennsylvania Personal Income Tax applied to employee wages and the Corporate Profits Tax. Another significant contributor to state tax revenues is the Sales Tax. A summary showing all of the IMPLAN tax output is shown below. Total state and local taxes and fees from new employees are estimated at \$630,149, which will be an annual on-going impact on the Pennsylvania economy.

State Tax Impact from Operations from Projected Net New Employees

Description	Employee Compensation	Proprietor Income	Tax on Production and Imports	Households	Corporations
Dividends					\$3,407
Social Ins Tax- Employee Contribution	\$6,104	\$0			
Social Ins Tax- Employer Contribution	\$11,922				
Tax on Production and Imports: Sales Tax			\$120,512		
Tax on Production and Imports: Property Tax			\$103,784		
Tax on Production and Imports: Vehicle Lic			\$2,042		
Tax on Production and Imports: Severance Tax			\$0		
Tax on Production and Imports: Other Taxes			\$21,002		
Tax on Production and Imports: S/L NonTaxes			\$552		
Corporate Profits Tax					\$54,002
Personal Tax: Income Tax				\$253,679	
Personal Tax: NonTaxes (Fines- Fees				\$32,555	
Personal Tax: Motor Vehicle License				\$9,762	
Personal Tax: Property Taxes				\$4,757	
Personal Tax: Other Tax (Fish/Hunt)				\$6,069	
Total State and Local Tax for Project Buildout	\$18,026	\$0	\$247,892	\$306,822	\$57,409

Source: IMPLAN, 2016

NEW PERMANENT FULL-TIME EMPLOYEE ANNUAL WAGE

The total compensation output from IMPLAN for the 203 new direct employees is \$10,590,234. When direct compensation is divided by direct employees, the average compensation is \$52,169 per employee.

CONCLUSION

The Glass Works Business Park project will result in significant one-time construction and annual on-going economic impacts in Clarion County, Pennsylvania. These impacts include supporting jobs during construction and creating new full-time employment. All of these activities will result in additional spin-off economic activity.