



Projected Economic Impact of \$1 Billion Investment by Nippon Steel Corporation into U. S. Steel's Southwestern Pennsylvania Operations

October 1, 2024





United States Steel

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Disclaimer: This economic analysis report is an independent analysis of Parker Strategy Group and is based upon certain information provided by United States Steel Corporation and is subject to certain assumptions. The conclusions presented in the report are the result of Parker Strategy Group's independent analysis and have not been verified by United States Steel Corporation, Nippon Steel Corporation or their affiliates. Actual outcomes may differ.



Executive Summary

In August 2024, Nippon Steel Corporation announced a post-closing capital spend commitment of no less than \$1 billion to further invest in U. S. Steel's operations in the Monongahela Valley of Southwest Pennsylvania known as the Mon Valley Works as a part of its proposed partnership with U. S. Steel. Nippon Steel committed to spend no less than \$1 billion to replace and/or upgrade the hot strip mill at the Pittsburgh-area Irvin Plant, along with other facilities in the Mon Valley Works.¹ The proposed investment in Mon Valley Works will have a significant economic impact on the Southwest Pennsylvania region in Pennsylvania and improve operations in the Mon Valley. The economic analysis presented in this report projects the potential investment in multiple geographies using a range of scenarios. The analysis is based on a \$600 million spend on construction. For each scenario, a Baseline Scenario assuming 100% spend within the geography was calculated however, the final impact will be in the range of 40% to 80% of total direct spending. The key findings of the economic analysis show a range of impacts on Pennsylvania:

The proposed \$600 million construction project over two years are estimated to:

- Generate between \$476.4 million using Scenario A to \$952.9 million using Scenario C in economic impact.
- Create between 2,432 jobs using Scenario A and 4,864 jobs using Scenario C in employment impact.
- Create \$19.1 million for Scenario A and \$38.3 million for Scenario C in local and state taxes.

PROJECTED ECONOMIC IMPACT IN PENNSYLVANIA

Baseline Scenario – 100%	Scenario A – 40%	Scenario B – 60%	Scenario C – 80%
\$1.2B Economic Impact	\$476.4M Economic Impact	\$714.7B Economic Impact	\$952.9M Economic Impact
\$606.7M Value Added	\$242.7M Value Added	\$364M Value Added	\$485.3M Value Added
6,080 Jobs	2,432 Jobs	3,648 Jobs	4,864 Jobs
\$47.9M Local and State Taxes	\$19.1M Local and State Taxes	\$28.7M Local and State Taxes	\$38.3M Local and State Taxes

¹ <https://apnews.com/article/us-steel-nippon-union-85e4ab45aa1aa82231981022520d89b5#>

Introduction

In September 2024, U. S. Steel engaged Parker Strategy Group to measure the potential economic impact of a \$1 billion investment by Nippon Steel in the Mon Valley Works. The goal of this analysis is to provide a range of impacts associated with the investment into the Mon Valley Works. The impact presented in this analysis is broken down into three categories: direct impact, indirect impact and induced impact. The indirect and induced impacts are commonly referred to as the “multiplier effect.” The graphic below provides an overview of the types of impact detailed in this report.



DIRECT

Impacts generated because of proposed spending on Mon Valley Works— construction spending only by Nippon Steel.



INDIRECT

The increase in demand for goods and services in industry sectors that will supply or support the proposed investment in the Mon Valley Works. Impacts will be felt in the supply chain of the project.



INDUCED

The third wave of impact created because of household spending by construction employees, employees of suppliers, Induced impacts estimate the effect of increased household income, including housing, household goods, entertainment, food, clothing, transportation and other categories of personal spending.

The methodology in this study uses the input-output model and dataset developed by IMPLAN Group, LLC. Primary financial data and assumptions used in this study were obtained from the United States Steel Corporation (U. S. Steel). Additional information on the methodology and assumptions used to complete this study can be found in Appendix B.

Data Sources:

U. S. Steel

Study Type:

Economic Impact

Geography: Commonwealth of Pennsylvania

Study Year: FY 2026

Methodology: IMPLAN

Key Assumptions About Predictive Models

The findings presented in this report show the potential impact of a \$1 billion investment by Nippon Steel into the Mon Valley Works located in the Monongahela Valley of Southwest Pennsylvania. The findings presented in this report are based on a core set of assumptions derived from previous U. S. Steel construction projects. The goal of these predictive models is to show a range of impact based upon the impact of dollars spent in Pennsylvania.

- Assumption 1:** The \$1 billion investment is expected to include approximately \$400,000,000 of equipment spend and \$600,000,000 on construction costs. All models built exclude equipment purchases since they likely will not be made in Pennsylvania since the necessary equipment is not made in the state. Therefore, the baseline of all economic impact begins at \$600 million not \$1 billion.
- Assumption 2:** All models are presented in 2026 dollars which is the anticipated start of the construction or refurbishment of the Mon Valley Works.
- Assumption 3:** At the time of analysis, there is the potential for a new equipment or replacement of existing equipment. To avoid overestimating or underestimating the potential impact for each scenario, 50% of the total investment is allocated to new construction and 50% of the total investment is allocated to refurbishing existing facilities.
- Assumption 4:** All findings presented in this report are over a two-year time period.

All analysis presented in this report was completed in IMPLAN with custom models developed for the Commonwealth of Pennsylvania.

Scenario Overview

The findings presented in this report show a range of impact based upon the amount of spend over a two-year period beginning in 2026. Analysis was completed in IMPLAN using the core set of assumptions described above.

- Baseline Scenario: 100% construction spend in geography
- Scenario A: 40% construction spend within geography
- Scenario B: 60% construction spend within geography
- Scenario C: 80% construction spend within geography

Projected Pennsylvania Impact

PROJECTED ECONOMIC IMPACT IN PENNSYLVANIA

Baseline Scenario – 100%	Scenario A – 40%	Scenario B – 60%	Scenario C – 80%
\$1.2B Economic Impact	\$476.4M Economic Impact	\$714.7B Economic Impact	\$952.9M Economic Impact
\$606.7M Value Added	\$242.7M Value Added	\$364M Value Added	\$485.3M Value Added
6,080 Jobs	2,432 Jobs	3,648 Jobs	4,864 Jobs
\$47.9M Local and State Taxes	\$19.1M Local and State Taxes	\$28.7M Local and State Taxes	\$38.3M Local and State Taxes

The estimated spend with local suppliers and on labor will likely fall into a range of 40% to 80% spent within the state.

- The projected economic impact of the proposed \$600 million construction project over two years is estimated to be in the range of \$476.4 million using Scenario A to \$952.9 million using Scenario C.
- The projected employment impact of the \$600 million construction project over two years is estimated to be between 2,432 jobs using Scenario A and 4,864 jobs using Scenario C.
- The projected local and state tax impact of the \$600 million construction project is estimated to be in the range of \$19.1 million for Scenario A and \$38.3 million for Scenario C.

Baseline Scenario: Pennsylvania 100%

Using the **Baseline Scenario**, assuming the entire \$600 million is spent in Pennsylvania, the construction project would create a \$1.2 billion impact in Pennsylvania, create 6,080 jobs over two years, and generate a \$47.9 million local and state tax impact over two years.

BASELINE SCENARIO: 100% OF CONSTRUCTION AND LABOR EXPENDITURES IN PENNSYLVANIA

Impact	Employment (jobs)	Labor Income	Value Added	Economic Impact
Direct	3,335	\$235,478,753	\$278,651,168	\$600,000,000
Indirect	1,107	\$85,777,681	\$150,826,478	\$291,187,786
Induced	1,639	\$103,615,756	\$177,180,952	\$299,924,084
Total	6,080	\$424,872,190	\$ 606,658,598	\$1,191,111,870

Source: Parker Strategy Group using data from U. S. Steel in IMPLAN

BASELINE SCENARIO: 100% OF CONSTRUCTION AND LABOR EXPENDITURES IN PENNSYLVANIA

Impact	Sub County, General (city taxes)	Sub County, Special Districts (fire, EMS and school districts)	Country	State	Total
Direct	\$1,900,412	\$1,882,242	\$271,320	\$8,007,309	\$12,061,283
Indirect	\$2,017,289	\$4,701,011	\$965,642	\$10,491,925	\$18,175,867
Induced	\$2,014,380	\$4,353,452	\$881,707	\$10,366,653	\$17,616,192
Total	\$5,932,081	\$10,936,705	\$2,118,669	\$28,865,887	\$47,853,342

Source: Parker Strategy Group using data from U. S. Steel in IMPLAN

Scenario A: Pennsylvania 40%

Using **Scenario A**, the projected economic impact of the proposed \$600 million construction project over two years is estimated to be \$476.4 million, 2,432 jobs created, and \$19.1 million generated in local and state tax revenue.

SCENARIO A: 40% OF CONSTRUCTION AND LABOR EXPENDITURES IN PENNSYLVANIA

Impact	Employment (jobs)	Labor Income	Value Added	Economic Impact
Direct	1,334	\$94,191,501	\$111,460,467	\$240,000,000
Indirect	443	\$34,311,072	\$60,330,591	\$116,475,114
Induced	655	\$41,446,302	\$70,872,381	\$119,969,634
Total	2,432	\$169,948,876	\$242,663,439	\$476,444,748

Source: Parker Strategy Group using data from U. S. Steel in IMPLAN

SCENARIO A: 40% OF CONSTRUCTION AND LABOR EXPENDITURES IN PENNSYLVANIA

Impact	Sub County, General (city taxes)	Sub County, Special Districts (fire, EMS and school districts)	Country	State	Total
Direct	\$760,165	\$752,897	\$108,528	\$3,202,924	\$4,824,514
Indirect	\$806,916	\$1,880,404	\$386,257	\$4,196,770	\$7,270,347
Induced	\$805,752	\$1,741,381	\$352,683	\$4,146,661	\$7,046,477
Total	\$2,372,833	\$4,374,682	\$847,468	\$11,546,355	\$19,141,338

Source: Parker Strategy Group using data from U. S. Steel in IMPLAN

Scenario B: Pennsylvania 60%

Using **Scenario B**, the projected economic impact of the proposed \$600 million construction project over two years is estimated to be \$714.7 million, 3,648 jobs created, and \$28.7 million generated in local and state tax revenue.

SCENARIO B: 60% OF CONSTRUCTION AND LABOR EXPENDITURES IN PENNSYLVANIA

Impact	Employment (jobs)	Labor Income	Value Added	Economic Impact
Direct	2,001	\$141,287,252	\$167,190,701	\$360,000,000
Indirect	664	\$51,466,609	\$90,495,887	\$174,712,672
Induced	983	\$62,169,453	\$106,308,571	\$179,954,451
Total	3,648	\$254,923,314	\$363,995,159	\$714,667,122

Source: Parker Strategy Group using data from U. S. Steel in IMPLAN

SCENARIO B: 60% OF CONSTRUCTION AND LABOR EXPENDITURES IN PENNSYLVANIA

Impact	Sub County, General (city taxes)	Sub County, Special Districts (fire, EMS and school districts)	Country	State	Total
Direct	\$1,140,247	\$1,129,345	\$162,792	\$4,804,385	\$7,236,769
Indirect	\$1,210,373	\$2,820,607	\$579,385	\$6,295,155	\$10,905,520
Induced	\$1,208,628	\$2,612,071	\$529,024	\$6,219,992	\$10,569,715
Total	\$3,559,248	\$6,562,023	\$1,271,201	\$17,319,532	\$28,712,004

Source: Parker Strategy Group using data from U. S. Steel in IMPLAN

Scenario C: Pennsylvania 80%

Using **Scenario C**, the projected economic impact of the proposed \$600 million construction project over two years is estimated to be \$952.9 million, 4,864 jobs created, and \$38.3 million generated in local and state tax revenue.

SCENARIO C: 80% OF CONSTRUCTION AND LABOR EXPENDITURES IN PENNSYLVANIA

Impact	Employment (jobs)	Labor Income	Value Added	Economic Impact
Direct	2,668	\$188,383,002	\$222,920,934	\$480,000,000
Indirect	885	\$68,622,145	\$120,661,182	\$232,950,229
Induced	1,311	\$82,892,605	\$141,744,762	\$239,939,267
Total	4,864	\$339,897,752	\$485,326,879	\$952,889,496

Source: Parker Strategy Group using data from U. S. Steel in IMPLAN

SCENARIO C: 80% OF CONSTRUCTION AND LABOR EXPENDITURES IN PENNSYLVANIA

Impact	Sub County, General (city taxes)	Sub County, Special Districts (fire, EMS and school districts)	Country	State	Total
Direct	\$1,520,330	\$1,505,794	\$217,056	\$6,405,847	\$9,649,027
Indirect	\$1,613,831	\$3,760,809	\$772,513	\$8,393,540	\$14,540,693
Induced	\$1,611,504	\$3,482,762	\$705,366	\$8,293,323	\$14,092,954
Total	\$4,745,665	\$8,749,364	\$1,694,935	\$23,092,710	\$38,282,674

Source: Parker Strategy Group using data from U. S. Steel in IMPLAN

Appendix A: Terms and Definitions

Direct Economic Impact: All direct expenditures made by a corporation due to its expenditures in a specific geographic area. These include operating expenditures, capital expenditures, and pay and benefits expenditures.

Direct Employment: Total number of employees, both full-time and part-time, at the corporation based on total jobs, not FTEs.

Dollar Year: Presented in 2026 dollars.

Government Revenue/State and Local Tax Impact: Government revenue or tax revenue that is collected by governmental units at the state and local levels in addition to those paid directly by a corporation. This impact includes taxes paid directly by the corporation itself, employees of the corporation, and vendors who sell products to the corporation and at the household level.

Indirect Economic Impact: The indirect impact includes the impact of local industries buying goods and services from other local industries. The cycle of spending works its way backward through the supply chain until all money is spent outside of the local economy, either through imports or by payments to value added (multiplier effect).

Indirect Employment: Additional jobs created as a result of a corporation's economic impact. Local companies or vendors that provide goods and services to a corporation increase their number of employees as purchasing increases, thus creating an employment multiplier.

Induced Economic Impact: The response by an economy to an initial change (direct effect) that occurs through re-spending of income received by a component of value added. IMPLAN's default multiplier recognizes that labor income (employee compensation and proprietor income components of value added) is not lost to the regional economy. This money is recirculated through household spending patterns causing further local economic activity (multiplier effect).

Induced Employment: Additional jobs created as a result of household spending by employees of a corporation and the employees of vendors. This is another wave of the employment multiplier.

Labor Income: The total value of all forms of employment-based income paid to Households by a given Industry or throughout a defined economy during a specified period of time.

Multiplier Effect: The multiplier effect is the additional economic impact created as a result of the corporation's direct spending. Local companies that provide goods and services to a corporation increase their purchasing by creating a multiplier (indirect/supply-chain impacts). Household spending generated by employees of the corporation and the corporation's suppliers create a third wave of multiplier impact (induced/household-spending impacts). The multipliers in this study are derived by IMPLAN.

Study Year: 2026

Total Economic Impact: Includes spending on operations, capital expenditures, labor income expenditures, and value added to the economy as a result of expenditures made by a corporation. It is the combined impact of direct, indirect, and induced impacts.

Value Added: Value Added is the total market value of all final goods and services produced within a region in a given period of time (usually a quarter or year). It is the sum of the intermediate stages of production.

Appendix B: Data and Methods

Data used to complete the economic analysis was provided by U. S. Steel. All analysis includes projected construction expenditures. The study approach and economic-impact findings are an estimate of impact and are based on projected spending of the \$1 billion investment into the Mon Valley Works by Nippon Steel. The study is a snapshot of the projected economic impact if \$600,000,000 is spent to improve operations at Mon Valley Works. To ensure that the models did not over or undercount, each scenario was built with 50% in IMPLAN Code 51 – Construction of new manufacturing structures and 50% in IMPLAN Code 60 – Maintenance and repair construction of nonresidential structures.

Overview and the IMPLAN Model

The most common and widely accepted methodology for measuring the economic impacts of economic sectors is input-output (I-O) analysis. At its core, an I-O analysis is a table that records the flow of resources to and from companies/corporations and individuals within a region at a given time. For a specified region such as a state of the nation, the input-output table accounts for all dollar flows among different sectors of the economy in a given period. With this information, a model can then follow how a dollar added into one sector is spent and re-spent in other sectors of the economy, generating outgoing ripples of subsequent economic activity. This chain of economic activity generated by one event is called the “economic multiplier” effect.

The primary tool used in the performance of this study is the I-O model and dataset developed and maintained by IMPLAN Group LLC (formerly Minnesota IMPLAN Group Inc.). IMPLAN is a widely accepted and used software model first developed by the U.S. Forest Service in 1972. Data used in the baseline IMPLAN model and data set come largely from federal-government databases. The input-output tables themselves come from the Bureau of Economic Analysis. Much of the annual data on labor, wages, final demand, and other market data comes from the Bureau of Labor Statistics, the U.S. Census Bureau, and other government sources.

Government agencies, companies, and researchers use IMPLAN to estimate the economic activities associated with spending in a particular industry or on a particular project. The IMPLAN model extends conventional I-O modeling to include the economic relationships among government, industry, and household sectors, allowing IMPLAN to model transfer payments such as taxes. Producers of goods and services must secure labor, raw materials, and other services to produce their product.

The resources transferred to the owners of that labor or those raw materials and services are then spent to secure additional goods and services or inputs to the products they sell. For example, a corporation may start a manufacturing plant that produces tractors with a value of \$1 million. However, to produce that product, they may be required to spend \$500,000 in wages and benefits, \$200,000 to suppliers of tractor parts, \$100,000 for electricity, \$50,000 for transportation of goods and raw materials to and from the plant, and \$50,000 in various professional services associated with operating a business (e.g., attorneys and accountants). The suppliers will, in turn, spend those resources on labor and raw materials necessary to produce tractors. Workers and the owners of the company will buy goods and services from other firms in the area (e.g., restaurants and gas stations) and pay taxes. The suppliers, employees, and owners of this second tier will, in turn, spend those resources on other goods and services whether within the study region or elsewhere. The cycle continues until all of the money leaves the region.

IMPLAN Methodology

The model uses national production functions for over 546 industries to determine how an industry spends its operating receipts to produce its commodities. Sectors utilized in this study include 215 – iron and steel mills and ferroalloy manufacturing. These production functions are derived from U.S. Census Bureau data. IMPLAN couples the national production functions with a variety of county-level economic data to determine the impacts at a state and congressional-district level. IMPLAN collects data from a variety of economic data sources to generate average output, employment, and productivity for each industry in a given county. IMPLAN combines this data to generate a series of economic multipliers for the study area. The multiplier measures the amount of total economic activity generated by a specific industry's spending an additional dollar in the study area. Based on these multipliers, IMPLAN generates a series of tables to show the economic event's direct, indirect, and induced impacts to gross receipts, or output, within each of the model's more than 546 industries.

The model calculates three types of effects: direct, indirect, and induced.

Considerations concerning IMPLAN

There are three important points about the use of IMPLAN (or any other input-output model):

1. It is a fixed-price model. The model assumes that changes in consumption are not limited by capacity and do not affect prices. This assumption does not cause a problem for the analysis presented here because we are taking a snapshot of Pennsylvania in a specific year.
2. As in many studies using this type of model, the direct impacts are not calculated by the model; they are a reflection of actual and projected spending levels and patterns created by U. S. Steel and their proposed projects. Changing the level of direct spending allows us to calculate the magnitude of the indirect and induced effects associated with the initial level of spending.
3. Because the model continues to calculate additional spending until all of the money leaves the region (i.e., “leakage”), the larger and more economically diverse the region, the longer it will take for spending to leave the region and the larger the impact is likely to be. For example, employees of U. S. Steel may spend some amount of their income on buying a car. Since there are no car manufacturers in Pennsylvania, this spending will leave the region, and the multiplier effect will stop. At the national level, some portion of that same spending by that same individual may go to a national auto producer. That spending would lead to more spending at the national level than would be captured by a more regional or statewide model.

Appendix C: Cautionary Note

Regarding Forward-Looking Statements

This document contains information regarding United States Steel Corporation (the “Company”) that may constitute “forward-looking statements,” as that term is defined under the Private Securities Litigation Reform Act of 1995 and other securities laws, that are subject to risks and uncertainties. We intend the forward-looking statements to be covered by the safe harbor provisions for forward-looking statements in those sections. Generally, such forward-looking statements are identified by using the words “believe,” “expect,” “intend,” “estimate,” “anticipate,” “project,” “target,” “forecast,” “aim,” “should,” “plan,” “goal,” “future,” “will,” “may” and similar expressions or by using future dates in connection with any discussion of, among other things, statements regarding the proposed transaction between the Company and Nippon Steel Corporation and the potential impact of investments that Nippon Steel may make in certain of the Company’s facilities. However, the absence of these words or similar expressions does not mean that a statement is not forward-looking. Forward-looking statements include all statements that are not historical facts. Many of these statements depend on matters which, by their nature, are inherently uncertain and outside of the Company’s control. Caution should be taken not to place undue reliance on any such forward-looking statements because such statements speak only as of the date when made. In addition, forward-looking statements are subject to certain risks and uncertainties that could cause actual results to differ materially from present expectations or projections. Risks and uncertainties include without limitation: the ability of the parties to consummate the proposed transaction between the Company and Nippon Steel Corporation, on a timely basis or at all; the timing, receipt and terms and conditions of any required governmental and regulatory approvals of the proposed transaction; the occurrence of any event, change or other circumstances that could give rise to the termination of the definitive agreement and plan of merger relating to the proposed transaction (the “Merger Agreement”); and the risk that the parties to the Merger Agreement may not be able to satisfy the conditions to the proposed transaction in a timely manner or at all. The Company directs readers to its Form 10-K for the year ended December 31, 2023 and Quarterly Report on Form 10-Q for the quarter ended June 30, 2024, and the other documents it files with the SEC for other risks associated with the Company’s future performance. These documents contain and identify important factors that could cause actual results to differ materially from those contained in the forward-looking statements. All information in this document is as of October 1, 2024. The Company does not undertake any duty to update any forward-looking statement to conform the statement to actual results or changes in the Company’s expectations whether as a result of new information, future events or otherwise, except as required by law.

Appendix D: About Parker Strategy Group

With over 50 years of combined experience, Parker Strategy Group is a national consulting firm specializing in economic impact with extensive experience across the government, corporate, and non-profit sectors. We are committed to delivering statistically valid, industry-respected results that give organizations the confidence that their analysis is both defensible and actionable for internal and external audiences.

Led by Nichole Parker, a national economic impact expert with over 30 years of experience and more than 600 economic impact studies, Parker Strategy Group excels in producing economic analysis that is both defensible and easily understood. Nichole's deep expertise as an economic analyst enables clients to confidently explain their impact to key audiences. Past and current clients include FGS Global, University of Washington, Penn State University, and the Association of Independent Colleges of Pennsylvania.

Visit parkerstrategygroup.com to learn more.





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