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May 29, 2026

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Ms. Karen Buckley
Executive Secretary
Public Service Commission of West Virginia
201 Brooks Street
Charleston, WV 25301

Via Electronic Filing

Re: CASE NO. 26-0108-E-CN
MONONGAHELA POWER COMPANY and
THE POTOMAC EDISON COMPANY
Application for Approval of Generation Resource Construction and
Related Relief

Dear Ms. Buckley:

Please find enclosed for filing in the above-styled matter the *Direct Testimony of Jason D. Bostic*, on behalf of the West Virginia Coal Association, Inc., in the above-referenced matter, service of which was made this date as indicated.

Thank you for your attention to this matter. Please feel free to contact me with any questions or concerns.

Yours very truly,



Jacob C. Altmeyer, Esq.

JCA/

Enclosure

cc: Chris R. Hamilton (via e-mail)
Jason D. Bostic (via e-mail)
Evan Midler (via e-mail)
Dennis Watson (via e-mail)

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**PUBLIC SERVICE COMMISSION OF WEST VIRGINIA
CHARLESTON**

CASE NO. 26-0108-E-CN

**MONONGAHELA POWER COMPANY and
THE POTOMAC EDISON COMPANY**

Application for Approval of Generation Resource Construction and
Related Relief

DIRECT TESTIMONY OF

JASON D. BOSTIC

ON BEHALF OF THE

WEST VIRGINIA COAL ASSOCIATION, INC.

MAY 29, 2026

DIRECT TESTIMONY OF
JASON D. BOSTIC
ON BEHALF OF THE WEST VIRGINIA COAL ASSOCIATION, INC.
BEFORE THE PUBLIC SERVICE COMMISSION OF WEST VIRGINIA
CASE NO. 26-0108-E-CN

1 **Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND POSITION.**

2 A. My name is Jason D. Bostic. I am the Executive Vice President for the West Virginia
3 Coal Association, Inc. (“WVCA”), with a business address of 200 Association Drive,
4 #160, Charleston, WV 25311.

5 **Q. FOR WHOM ARE YOU TESTIFYING IN THIS PROCEEDING?**

6 A. I am testifying on behalf of the West Virginia Coal Association, Inc.

7 **Q. HAVE YOU PREVIOUSLY PROVIDED TESTIMONY OR APPEARED BEFORE**
8 **THE PUBLIC SERVICE COMMISSION OF WEST VIRGINIA?**

9 A. I have not appeared or testified before the Public Service Commission of West Virginia
10 (“PSCWV”), but I did participate previously in the Coal Supply Task Force convened by
11 the PSCWV.

12 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

13 A. To provide the coal industry’s perspective regarding the application jointly filed by
14 Monongahela Power Company and The Potomac Edison Company (hereinafter,
15 collectively the “Companies”) for prior consent and approval and for a certificate of need
16 and necessity with the PSCWV, for construction of a 1,200 MW Combined Cycle Gas
17 Turbine plant (“NGCC”).

1 **Q. WHERE IS THE PROPOSED GAS PLANT PROJECT LOCATED?**

2 A. The location of the proposed NGCC is within the site of the Companies' Fort Martin
3 Power Station facility, a coal-fired power plant owned by the Companies and located in
4 Maidsville, Monongalia County, West Virginia.

5 **Q. PLEASE PROVIDE A SUMMARY OF YOUR OBSERVATIONS AND**
6 **CONCERNS.**

7 A. WVCA has significant concerns regarding this application, specifically as it relates to the
8 potential impact the construction of the proposed NGCC will have on the continued
9 operation and viability of the companies' two existing coal fired power plants.

10 **Q. ARE YOU SPONSORING ANY SCHEDULES OR EXHIBITS IN THIS**
11 **PROCEEDING?**

12 A. Yes, I am sponsoring the following Exhibits:

13 A. Attachment I - The Economic Impact of the Fort Martin Power Station on the
14 Monongalia County and West Virginia Economies published by the Bureau of
15 Business and Economic Research, John Chambers College of Business and
16 Economics, West Virginia University;

17 B. Attachment II - The Economic Impact of the Harrison Power Station on the
18 Harrison County and West Virginia Economies published by the Bureau of
19 Business and Economic Research, John Chambers College of Business and
20 Economics, West Virginia University; and

21 C. Attachment III The Economic Impact of Coal and Coal Fired Power Generation in
22 West Virginia published by the Bureau of Business and Economic Research, John
23 Chambers College of Business and Economics, West Virginia University;

1 **Q. PLEASE DESCRIBE THE COMPANIES' EXISTING COAL FLEET LOCATED**
2 **IN WEST VIRGINIA?**

3 A. The Companies currently operate two coal-fired power plants located in West Virginia:

4 Fort Martin Power Station: Fort Martin is a supercritical coal power plant located in
5 Maidsville, West Virginia, has a nameplate capacity of 1,152 MWs.

6 Harrison Power Station: Harrison is a supercritical coal power plant located in Haywood,
7 West Virginia, and has a nameplate capacity of 2,052 MWs.

8 In addition to the Fort Martin Power Station and the Harrison Power Station, the
9 Companies' parent (FirstEnergy Corp.) formerly owned the Pleasants Power Station, a
10 1,300 MW coal-fired power plant located near Belmont, West Virginia, in Pleasants
11 County, West Virginia. While no longer owned by the Companies or their parent
12 company, the Pleasants Power Station is still in operation, may be available for
13 acquisition or the negotiation of power purchase agreement, and is located within the
14 Companies' service territory, and was seemingly ignored by the Companies in their
15 Application as a viable and cost-effective option to address the Companies' allegedly
16 anticipated capacity shortfall.

17 **Q. PLEASE BRIEFLY DESCRIBE THE IMPACT THE CONTINUED OPERATION**
18 **OF THE TWO COAL-FIRED POWER PLANTS HAS ON THE MEMBERS OF**
19 **THE WVCA.**

20 A. The WVCA's members employ hundreds of miners, preparation plant workers, and mine
21 service employees whose jobs exist because the existing coal-fired power plants in this
22 state — including Fort Martin, Harrison,— purchase West Virginia coal. When those
23 plants operate, those employees continue to work and our members' mines continue

1 operating. If those plants retire or experience significant reductions in dispatch, our
2 members' mines idle or close and their employees lose their jobs. WVCA member
3 companies account for 100% of the thermal coal production in the Northern Appalachian
4 coal region of West Virginia. Coal production provides thousands of direct and indirect
5 jobs throughout the local West Virginia economy and provides billions of dollars in
6 wages and taxes.

7 The two coal facilities owned by the Companies collectively consumed 6.4 million tons
8 of coal in 2025. Of that amount, 83% was sourced from West Virginia coal mining
9 operations. Operating at higher capacity factors in previous years, the plants have
10 consumed as much as 7.9 million tons of coal. Notably, the Harrison Power Station
11 receives 100% of its coal supply from a single West Virginia coal mine, with deliveries to
12 Harrison accounting for approximately 78% of that mine's total coal production. Using
13 the 2025 consumption figures, the coal consumed at the Fort Martin and Harrison power
14 stations accounts for about 16% of the state's total production of Northern Appalachian
15 domestic thermal coal.

16 The coal consumption attributable to the Harrison and Fort Martin power stations
17 generates about \$9.4 million in coal severance taxes for the State of West Virginia. The
18 West Virginia Northern Appalachian coal mines that provide fuel to the Harrison and
19 Fort Martin power stations account for approximately 2,200 direct coal mining jobs.
20 Using accepted economic multipliers, these direct mining jobs sustain another 6,380
21 indirect and induced jobs. Collectively, these 8,580 jobs account for \$609 million in
22 annual wages.

1 **Q. WHAT CONCERNS DO YOU HAVE REGARDING THE ECONOMIC IMPACT**
2 **STUDY INCLUDED IN THE COMPANIES' APPLICATION?**

3 A. The Companies' application is supported by an economic impact analysis (Attachment
4 JD-1) prepared by the Bureau of Business and Economic Research at West Virginia
5 University

6 The study estimates that the proposed NGCC will support 892 total jobs. However, that
7 figure is reduced to only 25 direct jobs to operate the proposed NGCC after the initial
8 construction period.

9 What the study does not address is the potential employment consequence of the coal
10 plant retirements, or reduced dispatch, that may result from construction of the NGCC.

11 The Companies own the Fort Martin Power Station, located adjacent to the proposed
12 NGCC site, and the Harrison Power Station.

13 The Commission is being asked to evaluate a capacity addition that in actuality may
14 result in a *capacity replacement*. The addition side of the equation carries a headline
15 employment figure of 892, reduced to 25 after the initial construction period, and the
16 replacement side carries an employment consequence that has not been calculated,
17 disclosed, or made part of this record, but certainly warrants consideration by the
18 Commission.

19 **Q. DOES THE ECONOMIC IMPACT STUDY INCLUDED IN THE COMPANIES'**
20 **APPLICATION INCLUDE A STANDARD EMPLOYMENT MULTIPLIER?**

21 A. The Economic Impact Study reports 892 total jobs supported by a facility with 25 direct
22 permanent employees. That ratio of total jobs to direct jobs — commonly called the
23 employment multiplier — is 35.7. Industry-standard IMPLAN Type II analysis for

1 electric power generation produces employment multipliers between 2.90 and 3.25 at the
2 national average, a fraction of the multiplier used for the Companies' Economic Impact
3 Study.

4 **Q. DO YOU HAVE ANY ADDITIONAL CONCERNS REAGRDNIG THE**
5 **EMPLOYMENT FACTORS INCLUDED IN THE COMPANIES' ECONOMIC**
6 **IMPACT STUDY?**

7 A. Yes. The study's methodology section states that employment impacts include “all full-
8 or part-time permanent or temporary workers involved in economic activity.” This
9 language describes a broader scope than IMPLAN Type II impact analysis, which
10 measures workers causally dependent on the specific facility. A study that includes all
11 workers “involved in economic activity” across connected industries attributes supply
12 chain employment regardless of whether those workers' jobs depend on the proposed
13 NGCC — or whether they would keep their jobs if the proposed NGCC is never
14 approved and operational.

15 The Commission should also note a specific provision of the Economic Impact of Coal
16 and Coal-Fired Power Generation in West Virginia study filed herewith as Attachment
17 III. That study explicitly states that it was conducted “after the impact of its purchase of
18 West Virginia coal is excluded.” The coal supply chain employment — the mining jobs,
19 the preparation plant jobs, the transportation jobs — were removed from the coal plant's
20 economic impact calculation by the study's own design.

21 The coal supply chain is the largest single source of indirect employment advantage for a
22 coal-fired generating facility. When it is excluded from the coal plant analysis while the
23 gas supply chain is attributed to the proposed NGCC in the Companies' Economic

1 Impact Study, the comparison systematically understates the coal plants' community
2 economic contribution relative to the proposed NGCC's.

3 **Q. DO YOU HAVE ANY CONCERNS REAGRDIING THE POSITION THE**
4 **COMPANIES WILL BE PLACED IN REAGRDIING DISPATCH DECISIONS IF**
5 **THEIR APPLICATION IS APPROVED?**

6 A. Yes. The proposed NGCC will be owned and operated by the Companies. Fort Martin
7 and Harrison are owned by the Companies. The proposed NGCC will be built on land
8 adjacent to existing coal facilities. It will dispatch into the same PJM merit order as the
9 coal plants.

10 When a single company controls both the proposed capacity addition and existing assets
11 that could be displaced, the Commission's public interest analysis must account for both
12 sides of the transaction. Approving the proposed NGCC without assessing the potential
13 displacement of existing coal assets is approving only half a transaction and providing
14 only half of a public interest review.

15 The WVCA is not prejudging a retirement decision, or lower capacity usage, for Fort
16 Martin or Harrison. We are simply asking the Commission to recognize that if
17 construction of the proposed NGCC impacts the operation of the Companies' existing
18 coal-fired assets, those potential employment and ratepayer consequences are part of the
19 public interest consideration in this proceeding and weight heavily upon the public need
20 for the proposed NGCC.

21 **Q. IS THE COMMISSION REQUIRED BY LAW TO CONSIDER THE ECONOMIC**
22 **IMPACT OF ANY POTENTIAL CLOSURE OF COAL PLANTS AND ITS**

1 **IMPACT ON THE WEST VIRGINIA COAL INDUSTRY IN CONSIDERING**
2 **THIS APPLICATION?**

3 A. Yes. W. Va. Code Ann. § 24-1-1(a)(3) charges this Commission with the legislative
4 responsibility to encourage “the well-planned development of utility resources in a
5 manner consistent with state needs and in ways consistent with the productive use of the
6 state's energy resources, such as coal”. Further, W. Va. Code Ann. § 24-1-1(b) charges
7 this with “appraising and balancing the interests of current and future utility service
8 customers, the general interests of the state's economy and the interests of the utilities
9 subject to its jurisdiction in its deliberations and decisions”.

10 In addition, despite those clear mandates to the Commission, in its 2021 session the West
11 Virginia Legislature made abundantly clear that the Commission must consider the
12 impact of its decisions on the state’s coal mining industry. By passing Senate Bill 542,
13 which amended the foregoing Chapter 24, Article 1, of the West Virginia Code to add the
14 following:

15 **§24-1-1c. Additional Legislative findings related to the coal industry.**

16 The Legislature finds that:

- 17 (1) Over 600 coal-fired electric units nationally have been forced to close;
18 (2) Eighteen coal-fired electric units within West Virginia’s borders have
19 been forced to close;
20 (3) Markets for West Virginia coal have been severely diminished due to
21 the closure of regional coal plants to the point that West Virginia coal
22 shipments have been reduced from 162 coal plants a decade ago to only 43
23 plants today;

1 (4) West Virginia coal mines are forced to close, resulting in West
2 Virginia coal miners being out of work, compromising homeland security
3 and defense measures, and threatening grid stability and resiliency;

4 (5) It is imperative the State of West Virginia take immediate steps to
5 reverse these undesirable trends to ensure that no more coal-fired plants
6 close, no additional jobs are lost, and long-term state prosperity is
7 maintained;

8 (6) Throughout the past decade, no group has been hit harder by the
9 decline of coal than West Virginia's coal miners and their families. Many
10 coal miners are struggling to make ends meet and provide for their
11 families;

12 (7) In addition to working toward sustaining coal employment levels and
13 coal-based, electric generation, the State of West Virginia should take
14 immediate steps to provide education, training, and retraining
15 opportunities for displaced coal miners and their families;

16 (8) West Virginia coal-fired power plants should continue to provide base
17 load generation critical for maintaining slow, steady generation that
18 produces power on a continuous cycle, ensures grid stability, and protects
19 against overloads and power shortages;

20 (9) West Virginia coal and electricity generated in West Virginia are relied
21 upon throughout a multi-state region, thus playing a vital role in regional
22 homeland security;

23 (10) West Virginia's coal fleet, comprised of nine individual plants and 25

units, is fueled on average by a total of 25 million tons annually; accounts for over \$2 billion of economic activity; and sustains approximately 3,500 mining jobs, 2,000 plant worker jobs, thousands of downstream and indirect local and surrounding county jobs, and hundreds of millions of dollars of payroll and tax dollars;

(11) The role of West Virginia and West Virginia coal in regional homeland security is of paramount importance; thus, it is incumbent for our state to continue to provide leadership in this increasingly critical area in order to sustain and protect our regional electric supplies; and

(12) Public electric utilities in West Virginia should be encouraged to operate their coal-fired plants at maximum reasonable output and for the duration of the life of the plants.

Q. WHAT IS YOUR RECOMENDATION REGARDING THE COMPANIES' APPLICATION?

A. The WVCA respectfully recommends that the Commission require the following:

1. Require the Companies to submit a complete integrated economic impact analysis that presents the net employment effect of its full portfolio transition — proposed NGCC employment added versus coal plant employment at risk — using consistent IMPLAN Type II methodology applied to both facility types and both fuel supply chains.
2. Require the Companies to provide a methodological explanation for the 35.7× employment multiplier reported in Attachment JD-1, including the specific IMPLAN sector classifications, regional model boundaries, activity level inputs,

1 and multiplier type used to produce that figure, and how it compares to the
2 published IMPLAN Type II range for electric power generation.

- 3 3. Require the Companies to disclose the projected capacity factor impact on Fort
4 Martin and Harrison under the dispatch scenarios that follow the proposed
5 NGCC's commercial operation based upon actual load (removing undocumented,
6 hypothetical load devoid of firm, written commitments), and the projected
7 retirement timeline for each facility under those scenarios, as part of the public
8 interest record in this proceeding.
- 9 4. Require disclosure of the total stranded cost exposure to West Virginia ratepayers
10 from capital expenditures at Fort Martin and Harrison that were approved by this
11 Commission on the basis of long-term operation representations, and which will
12 be stranded if either or both plants retire following the NGCC's commercial
13 operation.

14 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

15 **A.** Yes. I reserve the right to update my testimony if new information becomes available.

FALL 2021

 West Virginia University
JOHN CHAMBERS COLLEGE OF
BUSINESS AND ECONOMICS
Bureau of Business and
Economics Research



ECONOMIC IMPACT OF THE **FORT MARTIN** POWER STATION ON **MONONGALIA COUNTY** AND **WEST VIRGINIA**

The Economic Impact of the Fort Martin Power Station on the Monongalia County and West Virginia Economies

is published by:

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WRITTEN BY

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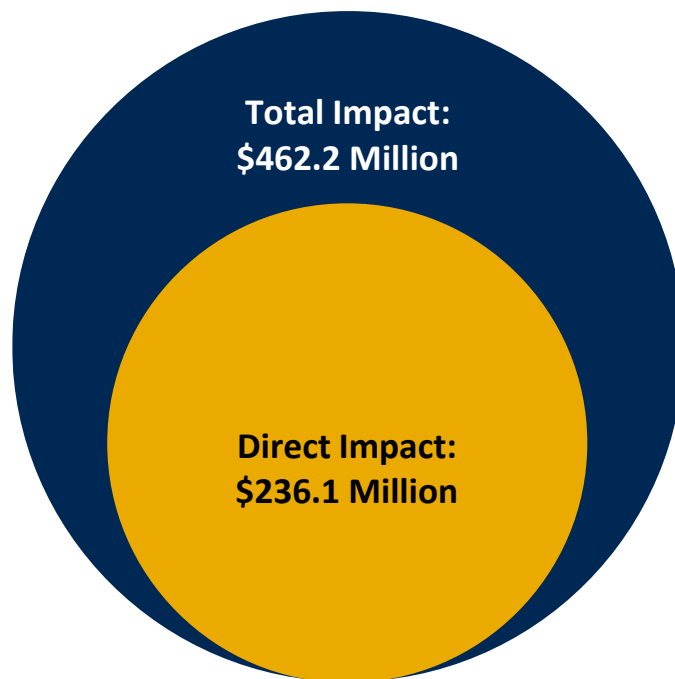


Executive Summary

Located in Monongalia County, the Fort Martin Power Station contains two coal-fired units that have the capacity to produce a total of 1,098 MW of electricity. The station came online between 1967 and 1968 and consumed nearly two million tons of coal in 2020. The Fort Martin Power Station is operated by FirstEnergy, one of two primary electric utility companies in the state. The company serves approximately 800 thousand customers in the state through its two subsidiaries: Mon Power in the northern and central parts of the state, and Potomac Edison in the state's Eastern Panhandle region.

Despite COVID-related declines in power generation and employment in 2020, the Fort Martin Power Station remains a significant source of economic activity in West Virginia and Monongalia County. As shown in Figure 1, the total economic impact of the power station is just under twice its own expenditures.

Figure 1: Economic Impact Multiplier



Additional findings are as follows:

- Fort Martin Power Station generates **nearly \$462 million in total economic activity** in the West Virginia economy.
- The Station's operations support **over 1,500 jobs in the state**.
- Employees of the power station and supported industries in the state **earn more than \$95 million in compensation**.
- The Fort Martin Power Station and secondary industries pay **approximately \$10 million in state and local taxes**.

1 Introduction

Located in Monongalia County, the Fort Martin Power Station contains two coal-fired units that have the capacity to produce a total of 1,098 MW of electricity. The station came online between 1967 and 1968 and consumed nearly two million tons of coal in 2020. The Fort Martin Power Station is operated by FirstEnergy, one of two primary electric utility companies in the state. The company serves approximately 800 thousand customers in the state through its two subsidiaries: Mon Power in the northern and central parts of the state, and Potomac Edison in the state's Eastern Panhandle region.

In this report, we estimate the economic impact of the Fort Martin Power Station on both the West Virginia economy and the Monongalia County economy. We begin with an overview of the effects of the COVID pandemic on Monongalia County's economy, followed by the economic impact of the power station.

2 Background on the Monongalia County Economy

The COVID pandemic had a significant impact on the West Virginia economy in 2020, and Monongalia County was no exception. As shown in Figure 2, the worst decline was experienced in the second quarter of 2020, when pandemic-related shutdowns caused Monongalia County employment to fall by nearly 7,500 jobs when compared with the end of 2019—a decline of more than 13 percent. In comparison, employment in West Virginia fell by just over 12 percent in the second quarter of 2020 compared with the end of 2019. However, Monongalia County has recovered more quickly than the state. As of first quarter 2021, total employment in Monongalia County has regained more than half of the jobs lost, and employment is down only about 5.5 percent from 2019 levels, while in the state, employment remains more than 7 percent below where it was at the end of 2019.

Employment in the Utilities sector—which includes power generation, natural gas distribution, and water and sewage utilities—has been more stable than the overall employment picture in Monongalia County. As shown in Figure 3, employment in Utilities was up by about 27 jobs between the end of 2019 and the first quarter of 2021, a gain of nearly 8 percent. However, this gain may be more due to seasonal variation than increased power demand during the pandemic. Utilities employment in West Virginia declined somewhat during this period, and employment remains down by about 2 percent in the first quarter of 2021 compared with the end of 2019.

Figure 2: Monongalia County and West Virginia Employment

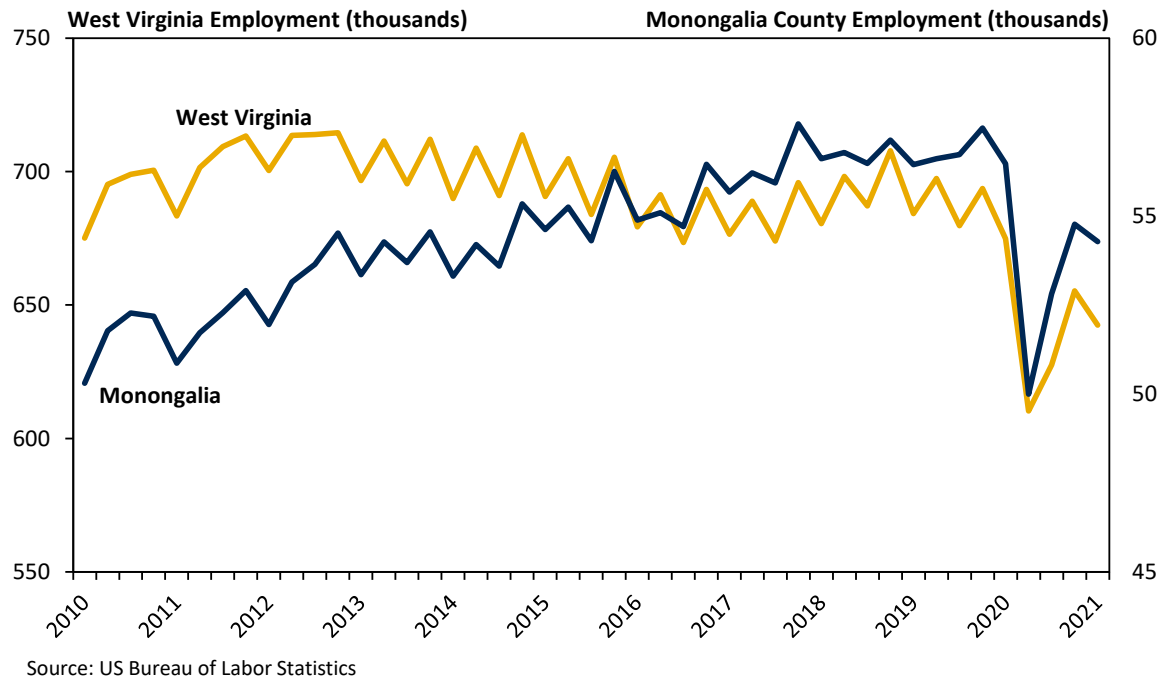
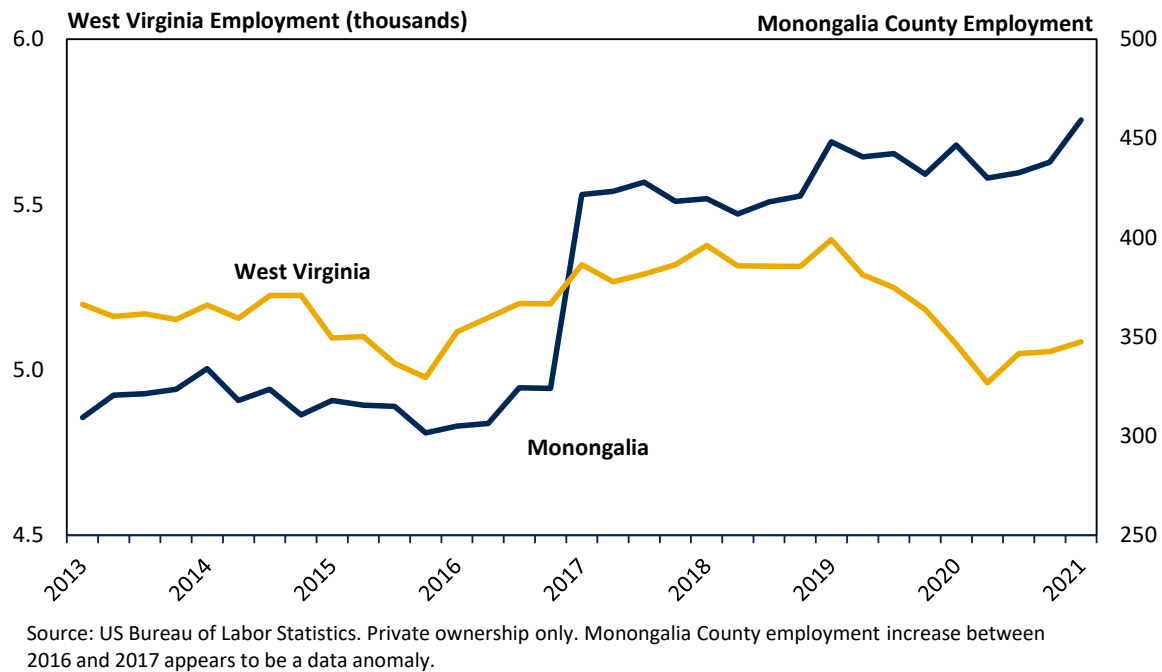
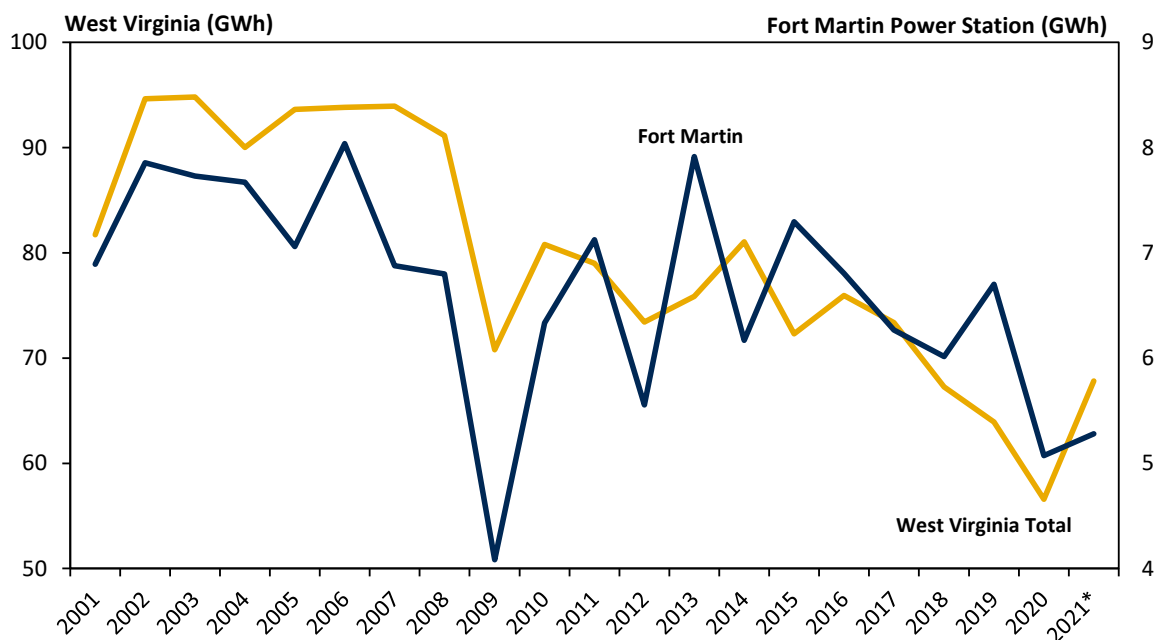


Figure 3: Utilities Employment



The COVID pandemic had a significant impact on West Virginia's electricity demand in 2020, as total electricity generation in the state fell from about 64 thousand gigawatt hours (GWh) to 53 GWh in 2020, a drop of approximately 11 percent (see Figure 4). Generation at the Fort Martin Power Station fell by a larger margin, declining by about 1.6 thousand GWh, or more than 24 percent. Generation from both the Fort Martin Power Station and other power plants in the state appear to be rebounding in 2021. Annualized data indicate the Fort Martin Power Station's output is expected to recover about 200 MWh of the lost generation by the end of 2021, while West Virginia generation as a whole is on pace to exceed 2019 levels.

Figure 4: Electricity Generation



* Annualized 2021 data based on generation in first two quarters. Source: US Energy Information Administration.

3 Economic Impact of the Fort Martin Power Station

In this section we estimate the economic impact of the Fort Martin Power Station. First, we discuss our methodological approach. Then we provide economic impact estimates for the state as a whole, followed by impact estimates for Monongalia County specifically.

To estimate the economic impacts of the Fort Martin Power Station, we use a detailed model of the West Virginia economy.¹ The expenditures for fuel, wages, benefits, and other spending are called the direct impact. However, the total impact is not limited to the direct impact, but also includes the secondary economic impact accrued as those expenditures are re-spent throughout the rest of the economy.

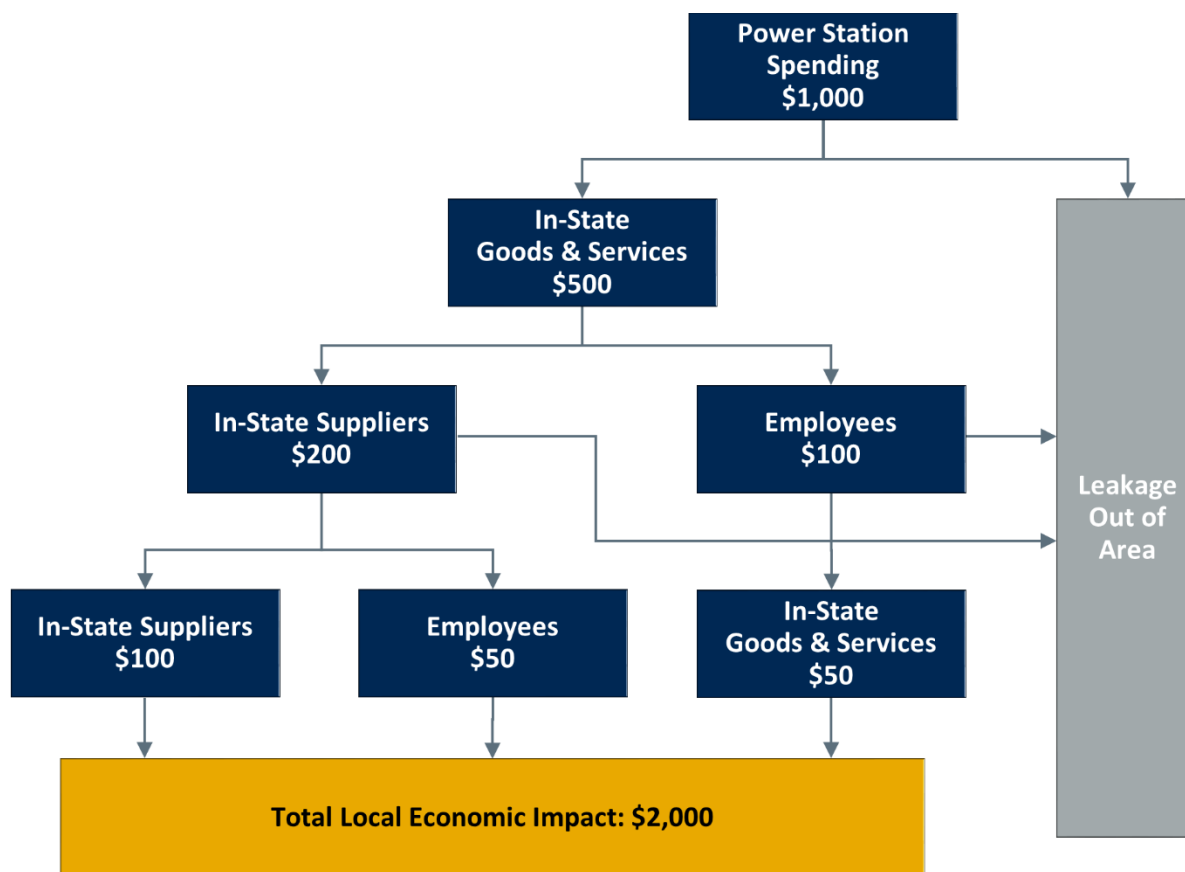
For example, as depicted in Figure 5, each year the Fort Martin Power Station purchases a variety of goods and services, such as coal, lime, insurance, and various other items. As the suppliers of these inputs increase production, their subsequent suppliers will increase production, and so on. Also, the Fort Martin Power Station directly employs thousands of workers, part of whose income will be spent in the West Virginia economy, which generates more output, income, and employment.

These secondary impacts together form what is known as the “multiplier effect.” The original stimulus to the economy from the Power Station’s expenditures is re-spent multiple times through the rest of the economy. At each stage, some of the expenditures “leak” out of West Virginia as they are spent at companies outside the state. The combined direct impact and secondary impacts together constitute the total economic impact of the Fort Martin Power Station’s operations.

¹ This study was conducted using the IMPLAN modeling software, an industry-standard input-output model of the economy. More information about IMPLAN can be found at <http://www.implan.com>.



Figure 5: Economic Impact Flow



To conduct this analysis, we make several assumptions. First, in order to estimate the economic impact of the power station, we assume a counterfactual scenario in which the power station is eliminated from the local economy. This type of analysis is called an economic contribution analysis and assumes the rest of the economy is unchanged by the elimination of the power station. Second, we assume that permanent employees of the power station live within the state boundaries and their expenditure patterns follow that of the typical West Virginia resident.

3.1 Statewide Impacts

The data used in this study were provided by FirstEnergy and were not independently audited by the authors. The company made available annual expenditure and employment data for 2019 and 2020, which were disaggregated into several categories, including employee compensation, fuel purchases, capital expenditures, and other expenses. Because of the pandemic downturn, we averaged the two years of data to calculate an average annual direct impact of the power stations in the local economy.

Based on FirstEnergy financial statements, average annual expenditures at the Fort Martin Power Station were \$236 million over the course of 2019 and 2020. Including contractors, the power station employed 189 workers, who earned a total compensation of about \$32 million.

We estimate that power plant a total of \$462 million in economic activity in the West Virginia economy (see Table 1). Of this approximately \$226 million came in secondary industries, primarily coal mining. We estimate that the power plant supported more than 1,300 jobs in the secondary economy, resulting in a total employment impact of 1,507 jobs with nearly \$76 million in compensation. The overall economic activity associated with this operation is estimated to generate almost \$10 million in selected state and local tax revenues.²

Table 1: Impact of Fort Martin Power Station on the West Virginia Economy

	Direct Impact	Indirect & Induced Impact	Total Economic Impact
Output (\$, millions)	236.1	226.1	462.2
Employment (jobs)	189	1,318	1,507
Employee Compensation (\$, millions)	31.6	64.1	95.7
Total Taxes (\$, millions)	3.0	7.1	10.0

Notes: Output, Employee Compensation, and Tax Revenue are measured in 2021 dollars. Tax Revenue impact includes sales, personal income, property, and corporation net income taxes.

3.2 Monongalia County Impacts

The economic impact of the Fort Martin Power Station is lower in Monongalia County than in the state as a whole. In general, the economic impact of the power station will be lower in a county's economy than in a state's, as the economic impact is distributed across a wider economic area, allowing the supply chains for the power plants to be more completely contained within the state. Fort Martin Power Station sources approximately two-thirds of its coal within the state of West Virginia and the other third from outside the state. However, none of the coal—which amounts to approximately 60 percent of total expenditures for the plant—is sourced within Monongalia County. This difference in sourcing for the plant's primary fuel accounts for the large majority of the difference in economic impact from the plant within Monongalia County.

As shown in Table 2, we estimate that the total economic impact of the Fort Martin Power Station in Monongalia County is approximately \$312 million, of which \$76 million comes in the secondary economy. The power station is estimated to support about 603 jobs in the county, with total compensation of just under \$54 million. The overall economic activity associated with this operation is estimated to generate about \$5.4 million in select state and local tax revenues.

² Tax revenues include sales, personal income, property, and corporation net income taxes.



Table 2: Impact of Fort Martin Power Station on the Monongalia County Economy

	Direct Impact	Indirect & Induced Impact	Total Economic Impact
Output (\$, millions)	236.1	75.7	311.8
Employment (jobs)	189	414	603
Employee Compensation (\$, millions)	31.6	22.2	53.8
Total Taxes (\$, millions)	3.0	2.4	5.4

Notes: Output, Employee Compensation, and Tax Revenue are measured in 2021 dollars. Tax Revenue impact includes sales, personal income, property, and corporation net income taxes.

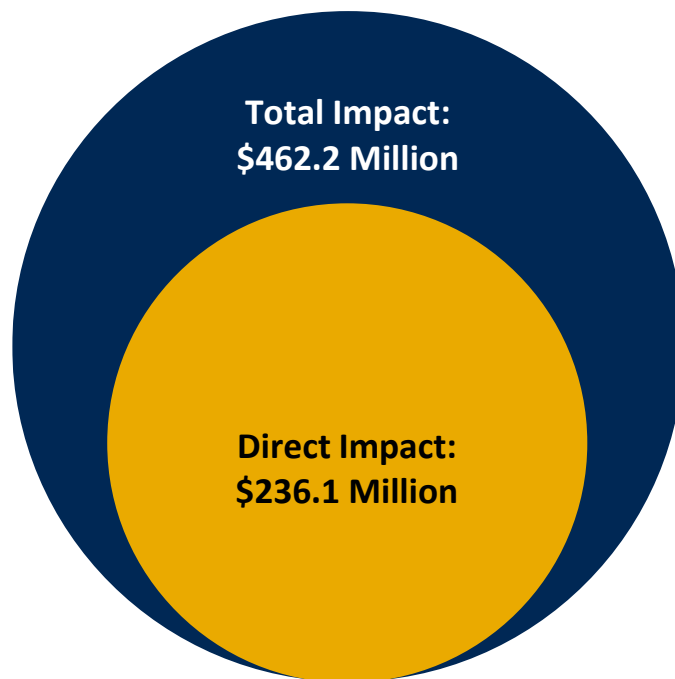


4 Conclusion

Despite COVID-related declines in power generation and employment in 2020, the Fort Martin Power Station remains a significant source of economic activity in West Virginia and Monongalia County. As shown in Figure 6, the total economic impact of the power station is just under twice its own annual expenditures. Through direct and secondary impacts, the power station supports more than 1,500 jobs in West Virginia. Total compensation for these workers is more than \$181 million, which is more than 4 percent of all county wages in 2020.

The large economic multiplier of the Fort Martin Power Station reflects the fact that the station is highly integrated with the coal mining industry in the state. Both of these industries are characterized by deep supply chains in the West Virginia region and have a highly paid workforce that contribute to the state economy.

Figure 6: Economic Impact Multiplier



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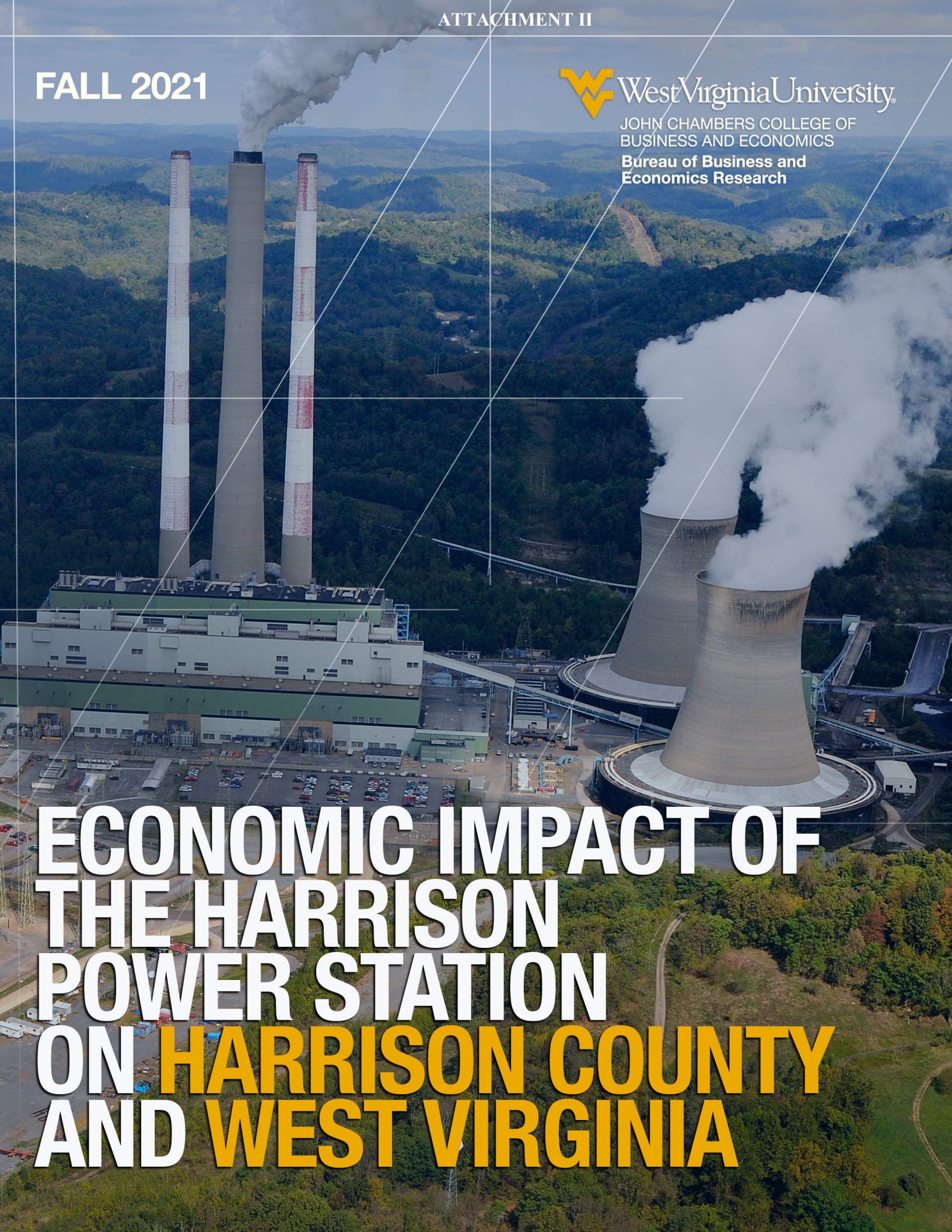
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Bureau of Business and
Economics Research



ECONOMIC IMPACT OF THE HARRISON POWER STATION ON **HARRISON COUNTY** AND **WEST VIRGINIA**

The Economic Impact of the Harrison Power Station on the Harrison County and West Virginia Economies

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Funding for this research was provided by FirstEnergy. The opinions herein are those of the authors and do not necessarily reflect those of the West Virginia Higher Education Policy Commission or the West Virginia University Board of Governors. The cover photo Harrison Power Station was provided by FirstEnergy.

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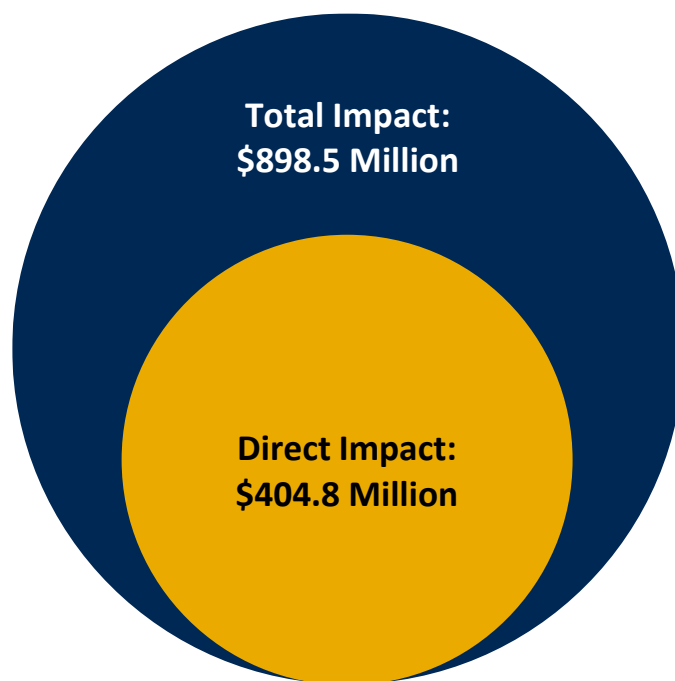


Executive Summary

The Harrison Power Station is one of the largest power plants in West Virginia. Located in Harrison County, the power station is the home of three coal-fired units that have the capacity to produce a total of 1,984 MW of electricity. The station came online between 1972 and 1974 and consumed approximately 4 million tons of coal in 2020, almost 6 percent of total coal production in West Virginia in that year.

Despite COVID-related declines in power generation and employment in 2020, the Harrison Power Station remains a significant source of economic activity in West Virginia and Harrison County. As shown in Figure 1, the total economic impact of the power station is more than twice its own expenditures.

Figure 1: Economic Impact Multiplier



Additional findings are as follows:

- Harrison Power Station generates **more than \$898 million in total economic activity** in the West Virginia economy.
- The Station's operations support **over 3,300 jobs in the state**.
- Employees of the power station and supported industries in the state **earn more than \$187 million in compensation**.
- The Harrison Power Station and secondary industries pay **approximately \$37 million in state and local taxes**.

1 Introduction

The Harrison Power Station is one of the largest power plants in West Virginia. Located in Harrison County, the power station is the home of three coal-fired units that have the capacity to produce a total of 1,984 MW of electricity.¹ The station came online between 1972 and 1974 and consumed approximately 4 million tons of coal in 2020, almost 6 percent of total coal production in West Virginia in that year.

The Harrison Power Station is operated by FirstEnergy, one of two primary electric utility companies in the state. The company serves approximately 800 thousand customers in the state through its two subsidiaries: Mon Power in the northern and central parts of the state, and Potomac Edison in the state's Eastern Panhandle region.

In this report, we estimate the economic impact of the Harrison Power Station on both the Harrison County economy and the West Virginia economy. We begin with an overview of the effects of the COVID pandemic on Harrison County's economy, followed by the economic impact of the power station.

2 Background on the Harrison County Economy

The COVID pandemic had a significant impact on the West Virginia economy in 2020, and Harrison County was no exception. As shown in Figure 2, the worst decline was experienced in the second quarter of 2020, when pandemic-related shutdowns caused Harrison County employment to fall by more than four thousand jobs when compared with the end of 2019—a decline of almost 11 percent. In comparison, employment in West Virginia fell by more than 12 percent in the second quarter of 2020 compared with the end of 2019. However, the state economy has recovered more quickly than Harrison County. As of first quarter 2021, total employment in the state is down about 7 percent from 2019 levels, while Harrison County's employment levels remain suppressed by more than 8.5 percent.

Employment in the Utilities sector—which includes power generation, natural gas distribution, and water and sewage utilities—has been more stable than the overall employment picture in Harrison County. As shown in Figure 3, employment in Utilities was up by about 30 jobs between the end of 2019 and the first quarter of 2021, a gain of nearly 8 percent. However, this gain may be more due to seasonal variation than increased power demand during the pandemic. Utilities employment in West Virginia declined somewhat during this period, and employment remains down by about 2 percent in the first quarter of 2021 compared with the end of 2019.

¹ See <https://www.firstenergycorp.com/content/dam/corporate/generationmap/files/FE-Harrison%20Fact%20Sheet.pdf> for more details.

Figure 2: Harrison County and West Virginia Employment

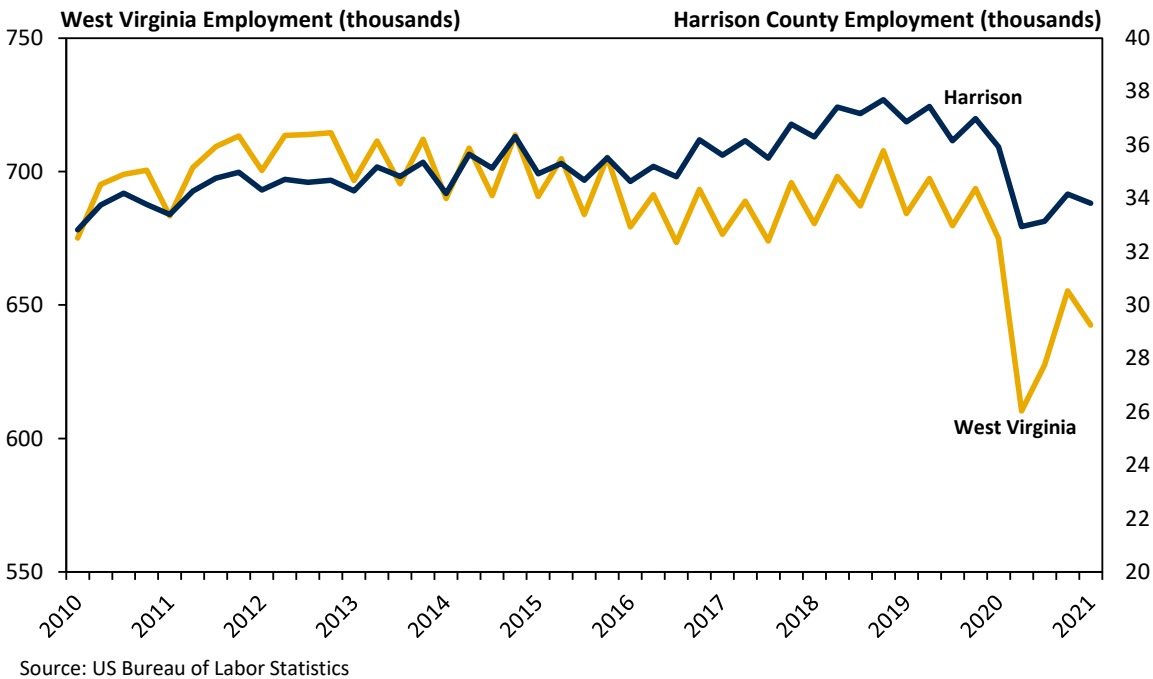
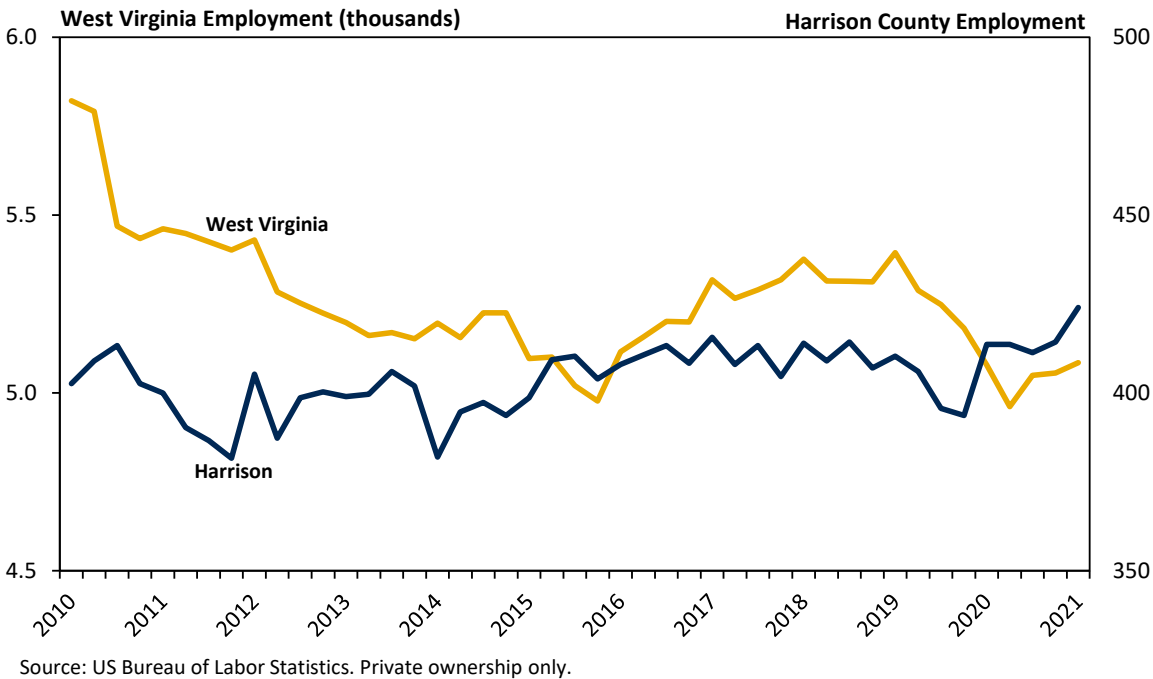
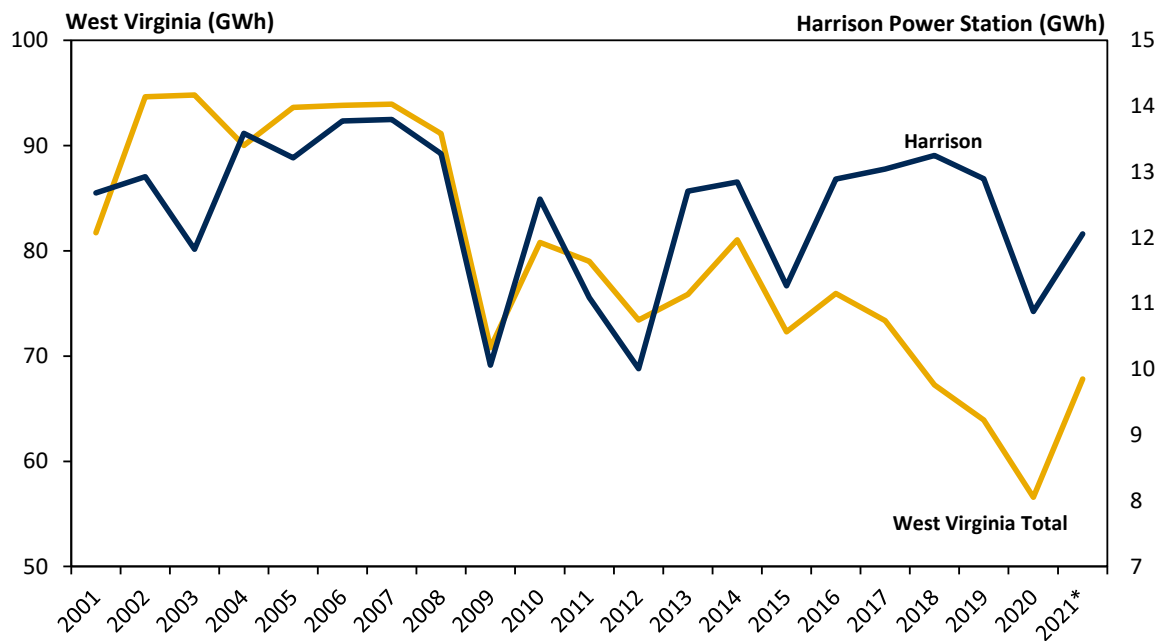


Figure 3: Utilities Employment



The COVID pandemic had a significant impact on West Virginia's electricity demand in 2020, as total electricity generation in the state fell from about 64 thousand gigawatt hours (GWh) to 53 GWh in 2020, a drop of approximately 11 percent (see Figure 4). Generation at the Harrison Power Station fell by a larger margin, declining by about two thousand GWh, or more than 15 percent. Generation from both the Harrison Power Station and other power plants in the state appear to be rebounding in 2021. Annualized data indicate the Harrison Power Station's output is expected to recover more than half of the lost generation by the end of 2021, while West Virginia generation as a whole is on pace to exceed 2019 levels.

Figure 4: Electricity Generation



* Annualized 2021 data based on generation in first two quarters. Source: US Energy Information Administration.

3 Economic Impact of the Harrison Power Station

In this section we estimate the economic impact of the Harrison Power Station. First, we discuss our methodological approach. Then we provide economic impact estimates for the state as a whole, followed by impact estimates for Harrison County specifically.

To estimate the economic impacts of the Harrison Power Station, we use a detailed model of the West Virginia economy.² The expenditures for fuel, wages, benefits, and other spending are called the direct impact. However, the total impact is not limited to the direct impact, but also includes the secondary economic impact accrued as those expenditures are re-spent throughout the rest of the economy.

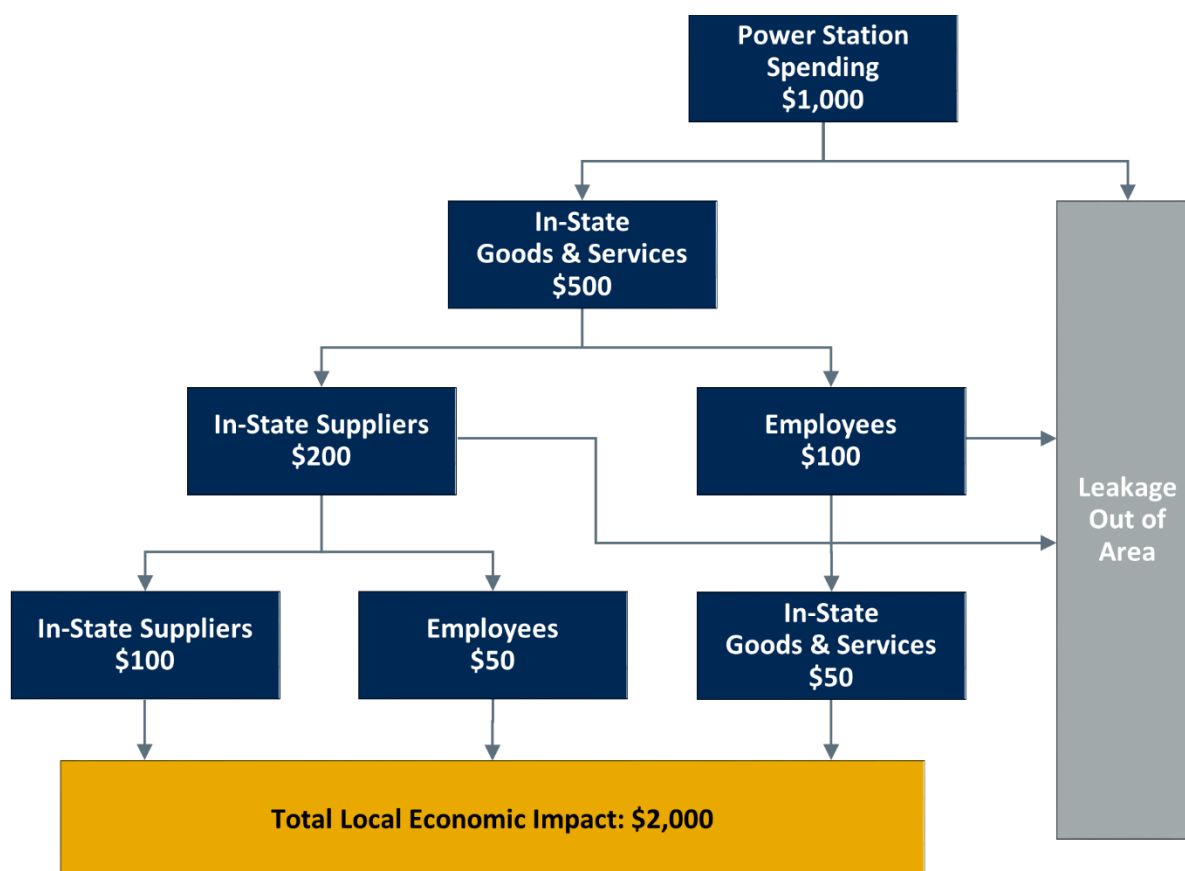
For example, as depicted in Figure 5, each year the Harrison Power Station purchases a variety of goods and services, such as coal, lime, insurance, and various other items. As the suppliers of these inputs increase production, their subsequent suppliers will increase production, and so on. Also, the Harrison Power Station directly employs thousands of workers, part of whose income will be spent in the West Virginia economy, which generates more output, income, and employment.

These secondary impacts together form what is known as the “multiplier effect.” The original stimulus to the economy from the Power Station’s expenditures is re-spent multiple times through the rest of the economy. At each stage, some of the expenditures “leak” out of West Virginia as they are spent at companies outside the state. The combined direct impact and secondary impacts together constitute the total economic impact of the Harrison Power Station’s operations.

² This study was conducted using the IMPLAN modeling software, an industry-standard input-output model of the economy. More information about IMPLAN can be found at <http://www.implan.com>.



Figure 5: Economic Impact Flow



To conduct this analysis, we make several assumptions. First, in order to estimate the economic impact of the power station, we assume a counterfactual scenario in which the power station is eliminated from the local economy. This type of analysis is called an economic contribution analysis and assumes the rest of the economy is unchanged by the elimination of the power station. Second, we assume that permanent employees of the power station live within the state boundaries and their expenditure patterns follow that of the typical West Virginia resident.

3.1 Statewide Impacts

The data used in this study were provided by FirstEnergy and were not independently audited by the authors. The company made available annual expenditure and employment data for 2019 and 2020, which were disaggregated into several categories, including employee compensation, fuel purchases, capital expenditures, and other expenses. Because of the pandemic downturn, we averaged the two years of data to calculate an average annual direct impact of the power stations in the local economy.

Based on FirstEnergy financial statements, average annual expenditures at the Harrison Power Station were \$404 million over the course of 2019 and 2020. Including contractors, the power station employed 231 workers, who earned a total compensation of more than \$52 million.

We estimate that power plant a total of \$899 million in economic activity in the West Virginia economy (see Table 1). Of this approximately \$494 million came in secondary industries, primarily coal mining. We estimate that the power plant supported more than 3,100 jobs in the secondary economy, resulting in a total employment impact of 3,342 jobs with approximately \$187 in compensation. The overall economic activity associated with this operation is estimated to generate almost \$37 million in selected state and local tax revenues.³

Table 1: Impact of Harrison Power Station on the West Virginia Economy

	Direct Impact	Indirect & Induced Impact	Total Economic Impact
Output (\$, millions)	404.8	493.7	898.5
Employment (jobs)	231	3,111	3,342
Employee Compensation (\$, millions)	52.4	134.6	187.1
Total Taxes (\$, millions)	22.4	14.8	37.2

Notes: Output, Employee Compensation, and Tax Revenue are measured in 2021 dollars. Tax Revenue impact includes sales, personal income, property, and corporation net income taxes.

3.2 Harrison County Impacts

In general, the economic impact of the power station will be lower in the county economy than in the state as a whole. In the state economy, the economic impact is distributed across a wider economic area, allowing the supply chains for the power plants to be more completely contained within the region under study. For example, coal for many power plants comes from multiple sources, some of which are located outside the county where the plants are located. If we expand the region to include these sources of coal, the secondary impacts are more fully accounted for.

However, the Harrison Power Station sources all of its coal in the neighboring Harrison County Mine. Also, the purchase of coal amounts to approximately half of the station's annual expenditures. Because nearly all of the economic impact is located in the same county as the plant, the county-level impacts are similar to those in the state as a whole.

As shown in Table 2, we estimate that the total economic impact of the Harrison Power Station in Harrison County is approximately \$875 million, of which \$470 million comes in the secondary economy. The power station is estimated to support about 3,169 jobs in the county, with total compensation of more than \$181 million. The overall economic activity associated with this operation is estimated to generate about \$36.5 million in select state and local tax revenues.

³ Tax revenues include sales, personal income, property, and corporation net income taxes.

Table 2: Impact of Harrison Power Station on the Harrison County Economy

	Direct Impact	Indirect & Induced Impact	Total Economic Impact
Output (\$, millions)	404.8	470.1	874.9
Employment (jobs)	231	2,938	3,169
Employee Compensation (\$, millions)	52.4	128.8	181.2
Total Taxes (\$, millions)	22.4	14.1	36.5

Notes: Output, Employee Compensation, and Tax Revenue are measured in 2021 dollars. Tax Revenue impact includes sales, personal income, property, and corporation net income taxes.



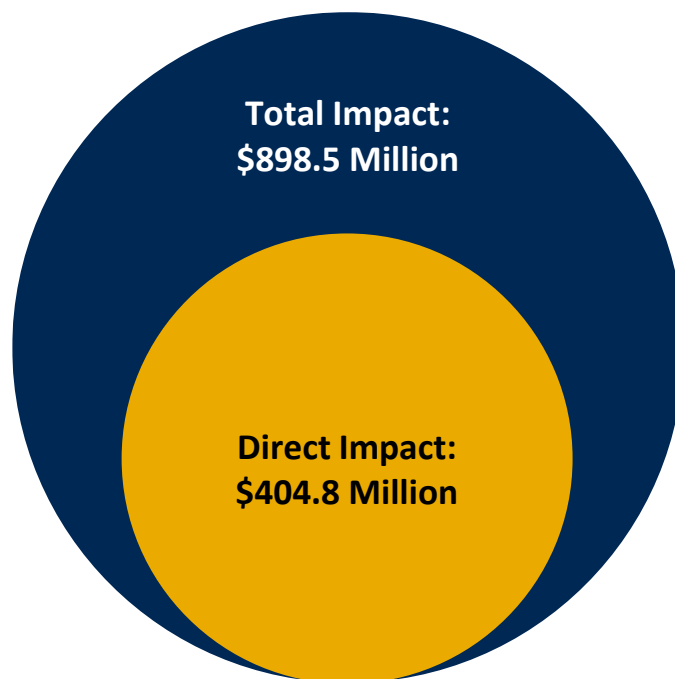
4 Conclusion

Despite COVID-related declines in power generation and employment in 2020, the Harrison Power Station remains a significant source of economic activity in West Virginia and Harrison County. As shown in Figure 6, the total economic impact of the power station is more than twice its own annual expenditures.

Through direct and secondary impacts, the power station produces nearly \$900 million in total economic impact statewide, supporting more than 3,300 jobs. The station supports more than 3,100 jobs in Harrison County, which represents more than 9 percent of total employment. Total compensation for these workers is more than \$181 million, which is more than 4 percent of all county wages in 2020.

The large economic multiplier of the Harrison Power Station reflects the fact that the station is highly integrated with the coal mining industry in the same county. Both of these industries are characterized by deep supply chains in the West Virginia region and have a highly paid workforce that contribute to the state economy.

Figure 6: Economic Impact Multiplier



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The Economic Impact of Coal and Coal-Fired Power Generation in West Virginia

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1 Introduction and Executive Summary

While coal production in West Virginia has declined over the past two decades or so, the sector remains a vital part of the state's economy. In this report, we consider the contribution of coal mining and coal-fired power generation to the state's employment base, economic output, and tax revenue.

We begin with a detailed examination of recent trends in coal production, employment, employee compensation, and coal distribution for West Virginia over the past several years. We also consider coal exports, which may provide a potential growth area as domestic demand for coal declines over the long term.

The core of this report is an estimate of the economic impact of coal production and coal-fired power generation on the West Virginia economy. Statistics indicate that coal mining directly employs around 13,000 workers in West Virginia who earn total compensation of around \$1.9 billion annually. Further, our estimates indicate that coal mines generate a direct output of over \$12 billion in the state's economy directly. However, the total economic impact of the industry does not end there. As coal mines operate, they purchase various inputs from local suppliers, thereby increasing demand for upstream businesses. Further, as coal mine employees spend their earnings in the local economy, further economic activity is created downstream. Finally, the primary downstream purchaser of coal—coal-fired electric power generation—injects billions of dollars into the state's economy, with around 2,000 very high-wage workers. Highlights of our economic impact analysis are as follows:

Coal Mining

- Coal mining supported an estimated \$16.4 billion in total economic activity in the state of West Virginia in 2024.
- Coal mining supported 30,600 jobs in West Virginia in 2024.
- Coal mining supported \$3.1 billion in total employee compensation in West Virginia in 2024.
- Coal mining generated around \$1.0 billion in state and local tax revenue for West Virginia and its local governments in 2024.

Coal-Fired Power Generation

- Coal-fired power generation supported nearly \$4.6 billion in total economic activity in the state of West Virginia in 2024. This impact is net of the impact associated with the purchase of West Virginia coal, which is already accounted for in the coal mining impact above.
- Coal-fired power generation supported 5,649 jobs in West Virginia in 2024.
- Coal-fired power generation provided \$615.2 million in employee compensation in West Virginia in 2024.
- Coal-fired power generation supported \$315.1 million state and local tax revenue for West Virginia and its local governments.

Coal Mining and Coal-Fired Power Generation

- Coal mining and coal-fired power generation combined generated approximately \$21.0 billion in total economic activity in the state of West Virginia in 2024.
- Coal mining and coal-fired power generation combined supported 36,249 jobs in West Virginia in 2024.
- Coal mining and coal-fired power generation combined supported \$3.7 billion in employee compensation in West Virginia in 2024.



- Coal mining and coal-fired power generation combined supported \$1.3 billion in select state and local tax revenue for West Virginia and its local governments.

Figure 1: Economic Impact of Coal Mining and Coal-Fired Power Generation in West Virginia

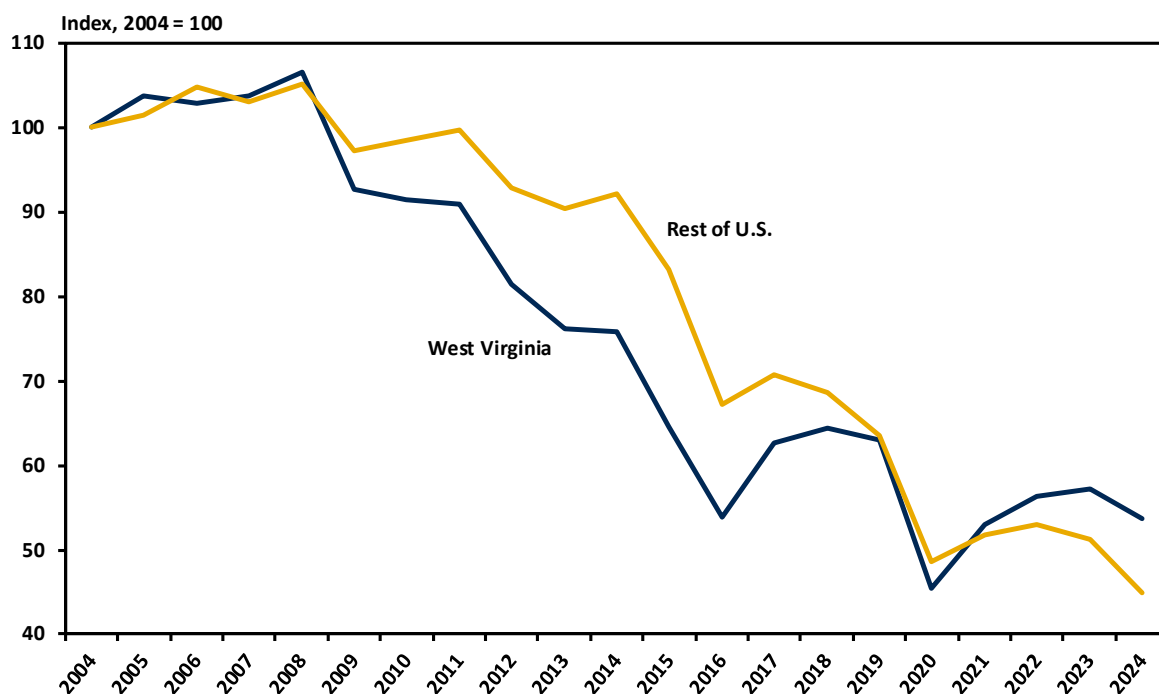
Type of Impact	Direct	Indirect and Induced	Total
Output (\$, billions)	15.5	5.5	21.0
Employment (jobs)	14,896	21,353	36,249
Employee Compensation (\$, billions)	2.2	1.5	3.7
State & Local Tax Revenue (\$, billions)	--	--	1.3
Notes: Output, Employee Compensation, and Taxes are measured in 2024 dollars. Tax impact includes severance, sales, personal income, property, and corporation net income taxes.			



2 Coal and the West Virginia Economy: Recent Trends

WEST VIRGINIA AND U.S. COAL PRODUCTION We begin with a consideration of overall production in terms of short tons in West Virginia and in the rest of the U.S., as reported in Figure 2. The coal industry in both West Virginia and the U.S. experienced substantial declines over the years 2009 through 2020. However, production in 2024 is higher compared with 2020 levels in West Virginia. Overall, the downturn has been slightly less severe in West Virginia compared to the rest of the U.S. Overall, production in terms of tonnage has fallen to 53.7 percent of its 2004 level in West Virginia; production has fallen to 44.9 percent of its 2004 level in the rest of the U.S. Expressed differently, production has fallen from nearly 148 million short tons in West Virginia in 2004 to just under 80 million short tons in 2024.

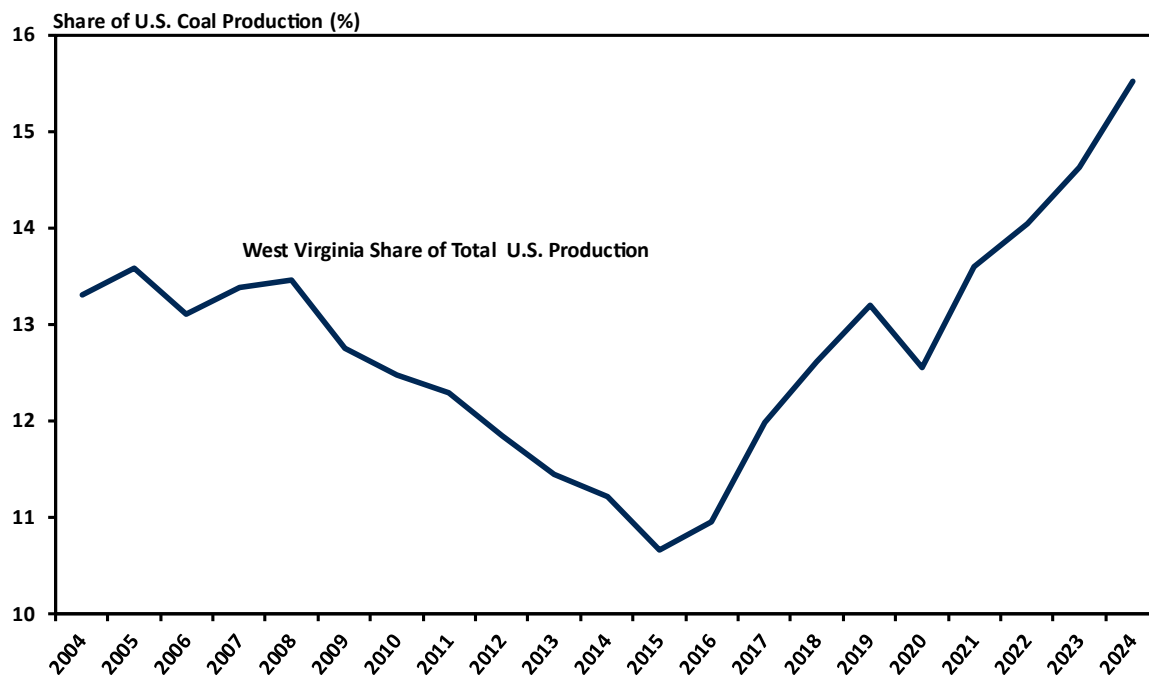
Figure 2: Annual Coal Production, West Virginia vs Other U.S. States



Source: U.S. Energy Information Administration

In Figure 3 we examine the same data that we considered in Figure 2, but here we report West Virginia's share of total U.S. production by tonnage. In 2004, West Virginia accounted for 13.3 percent of total U.S. coal production. After declining in the early 2010s, West Virginia's share of total U.S. production increased, rising to 15.5 percent of total U.S. production in 2024. West Virginia remains the second-largest coal producer in the U.S., behind only Wyoming, whose share of U.S. coal production was around 37 percent in 2024.

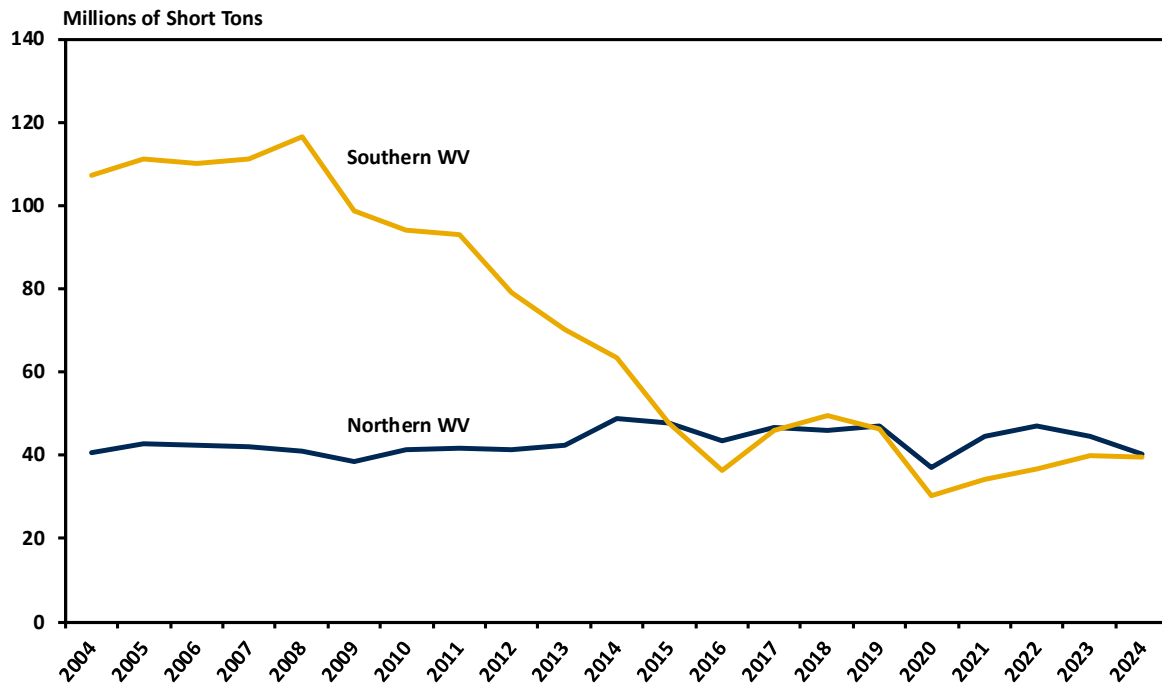
Figure 3: West Virginia Share of U.S. Annual Coal Production



Source: U.S. Energy Information Administration

REGIONAL COAL PRODUCTION: Virtually all of the decline in coal production in West Virginia occurred in the state’s southern coal fields – part of the Central Appalachian Coal Basin. Between 2009 and 2024, Southern West Virginia coal production dropped from nearly 117 million tons to just under 40 million tons, a decline of around 66 percent. In contrast, during the past two decades, Northern West Virginia coal production (part of the Northern Appalachian Coal Basin) changed by very little. Consequently, Southern West Virginia’s share of total state coal production dropped from nearly 74 percent in 2008 to just under 50 percent in 2024.

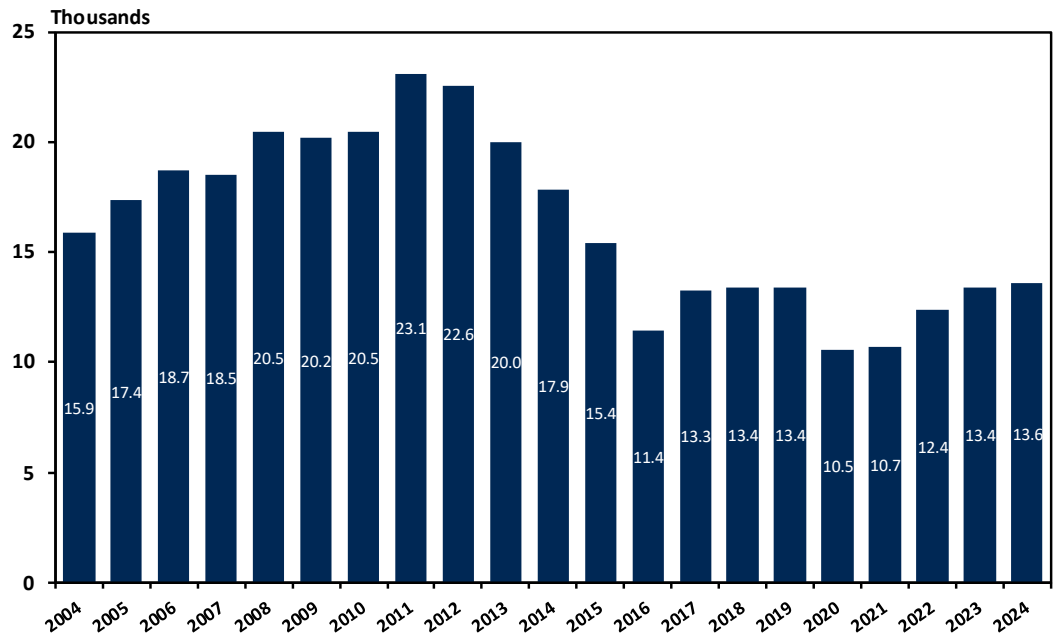
Figure 4: West Virginia Regional Coal Production



Source: U.S. Energy Information Administration

COAL MINING EMPLOYMENT: As shown in Figure 5, approximately 13,600 workers were employed in the coal mining industry in West Virginia in 2024.¹ Coal mining employment in West Virginia has been largely stable since around 2017 except for a fluctuation around the COVID-19 pandemic.

Figure 5: Coal Mining Employment in West Virginia



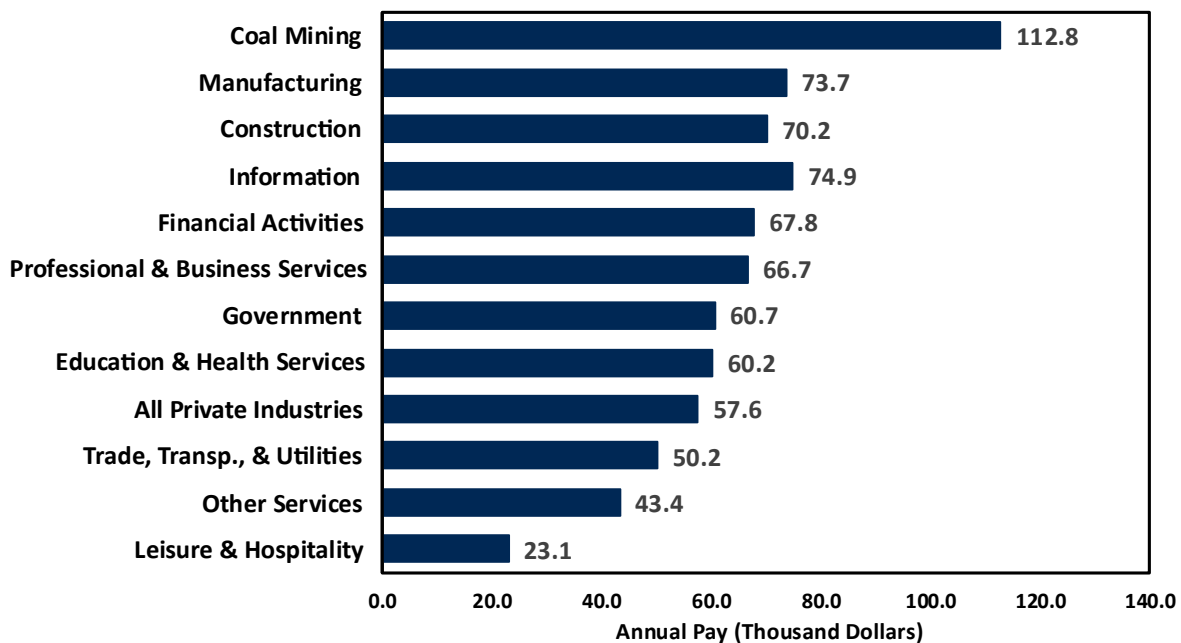
Source: U.S. Bureau of Labor Statistics

¹ This specifically represents jobs in the coal mining sector, classified as NAICS code 2121.



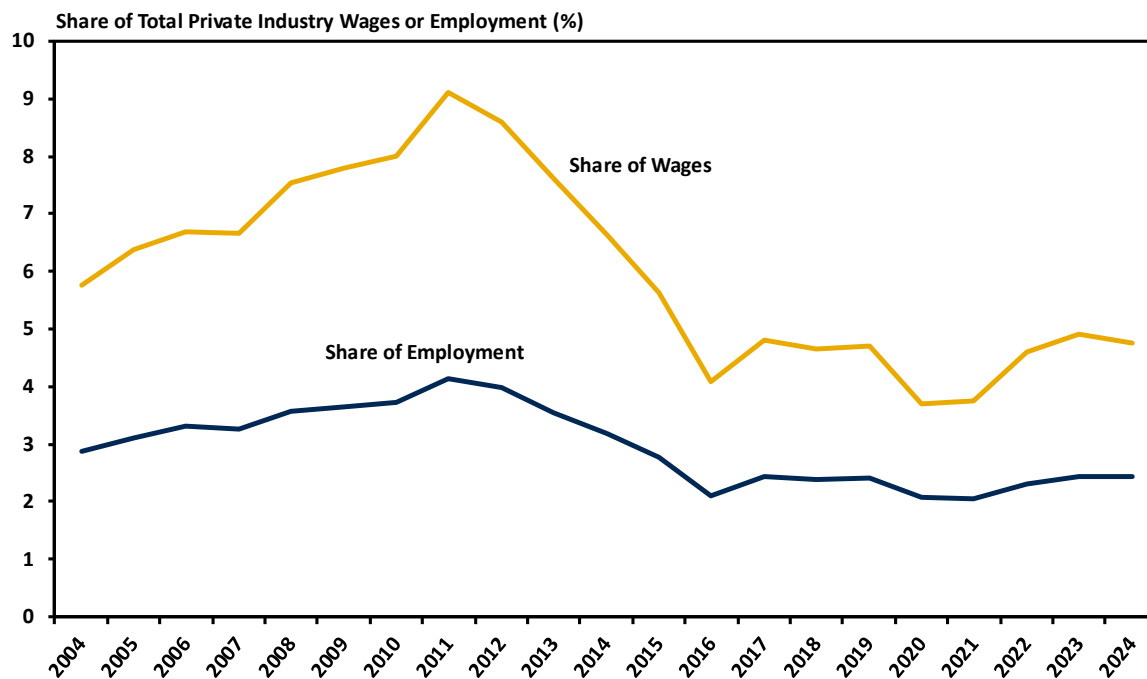
COAL MINING WAGES: The coal industry’s contribution to the West Virginia economy is more pronounced when we consider employee income. In 2024, the coal industry paid its workers an average of \$112.8 thousand annually. This wage is nearly double the average annual wages for all private industries in the state (Figure 6). While coal mining accounted for nearly 2.5 percent of all jobs in private industries in West Virginia in 2024, earnings from coal mining accounted for 4.8 percent of total earnings from private industries (see Figure 7).

Figure 6: Average Annual Income by Industry, West Virginia, 2024



Source: U.S. Bureau of Labor Statistics

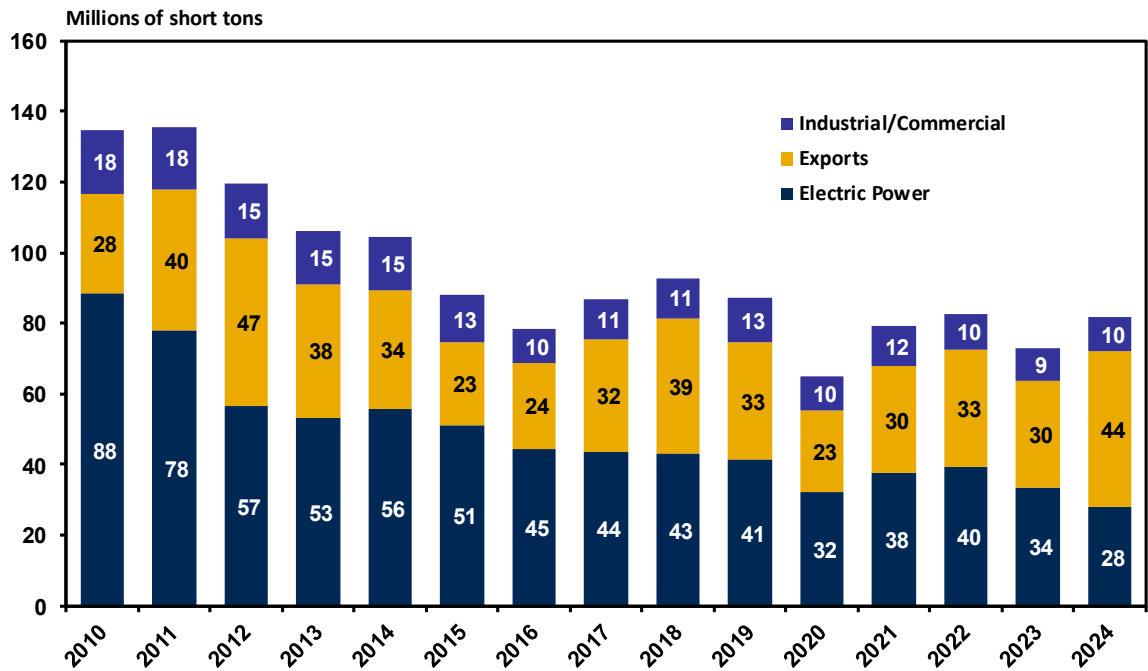
Figure 7: Coal Mining Share of Total Employment and Wages



Source: U.S. Bureau of Labor Statistics

COAL DISTRIBUTION AND DEMAND: Now we turn to how West Virginia coal is distributed among its users (Figure 8). In 2024 the majority of the West Virginia coal is used for export to foreign markets. This stands in sharp contrast to the past where exports were a relatively small share of the state’s total coal distribution, well behind electric power generation. Indeed, around 53 percent of West Virginia’s total coal production went to export markets in 2024. In contrast, coal that was distributed for electric power generation accounted for just over one-third of total distribution in 2024. Coal for industrial or commercial use domestically accounted for just over 12 percent of distribution in 2024. International coal exports are discussed in greater detail below in Section 3.

Figure 8: Distribution of West Virginia Coal by Consumer

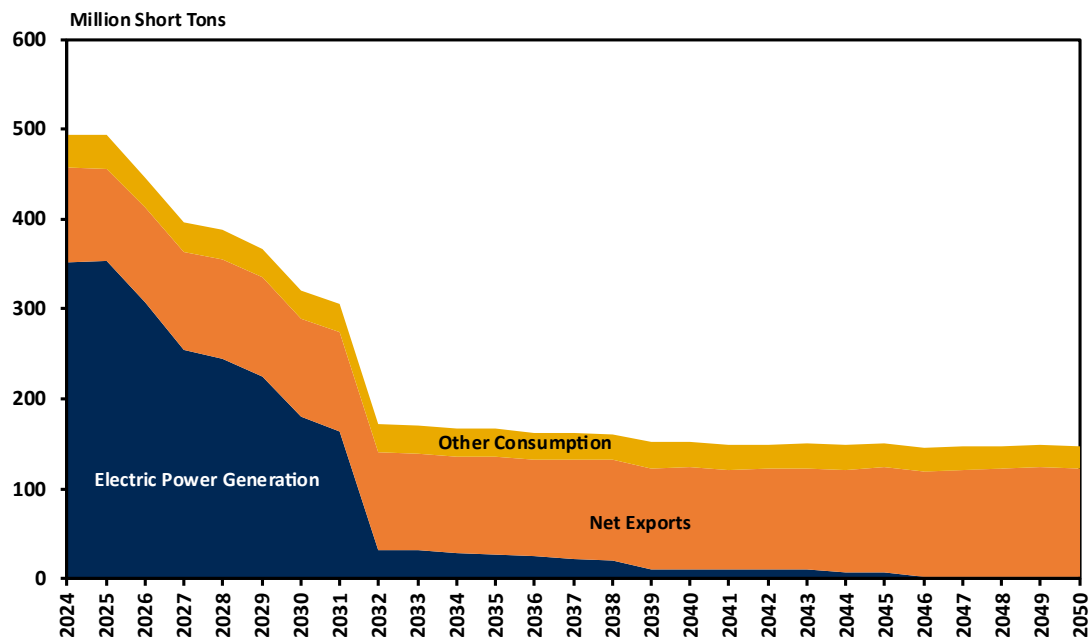


Source: U.S. Energy Information Administration



COAL PRODUCTION FORECAST: After considering recent trends in coal consumption, we now examine coal consumption projections for the long run. As reported in Figure 9, the U.S. Energy Information Administration (EIA) predicts continued significant losses in coal used for electric power generation through 2032. After that point, coal used for electric power generation is projected to decline slowly until it virtually disappears in the late-2040s. In contrast, coal produced for export and for industrial or commercial use is expected to remain largely stable, or even increase slightly, throughout the forecast period.

Figure 9: U.S. Coal Demand Forecast

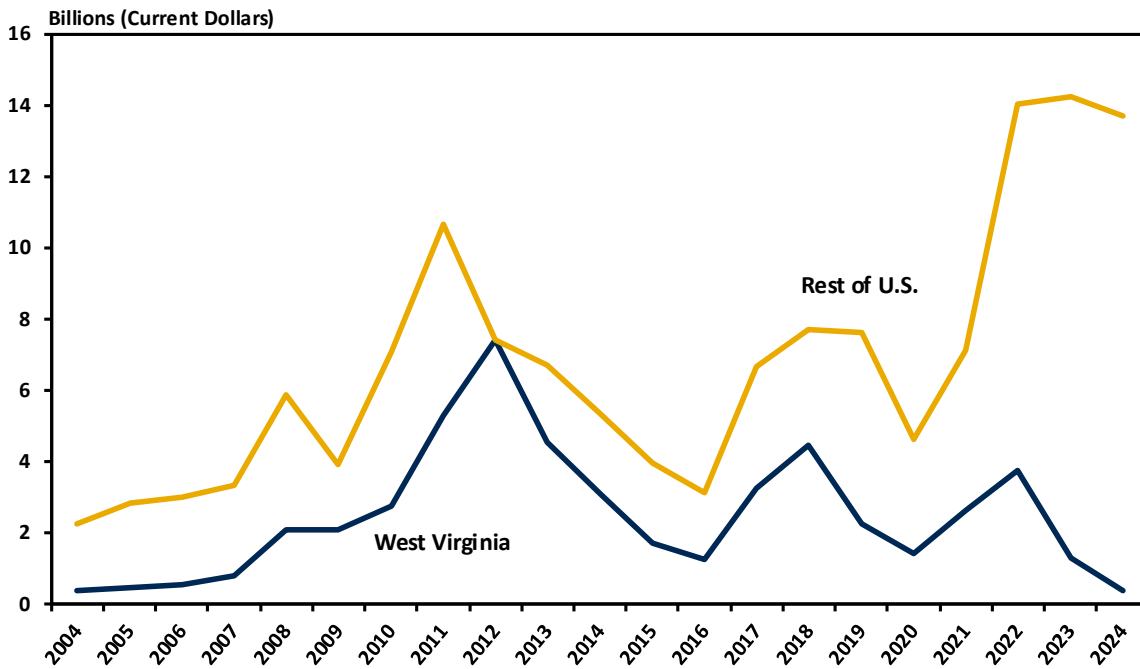


Source: U.S. Energy Information Administration

3 West Virginia Coal Exports

WEST VIRGINIA AND U.S. COAL EXPORTS: In Figure 10 we report the value of coal exports from West Virginia and from the rest of the U.S. over the past two decades or so. West Virginia coal exports experienced significant volatility over much of the period depicted. The total value of the state's coal exports ranged from a high of nearly \$7.5 billion in 2012 to a low of about \$400 million in 2024.

Figure 10: Coal Exports, West Virginia vs Other U.S. States

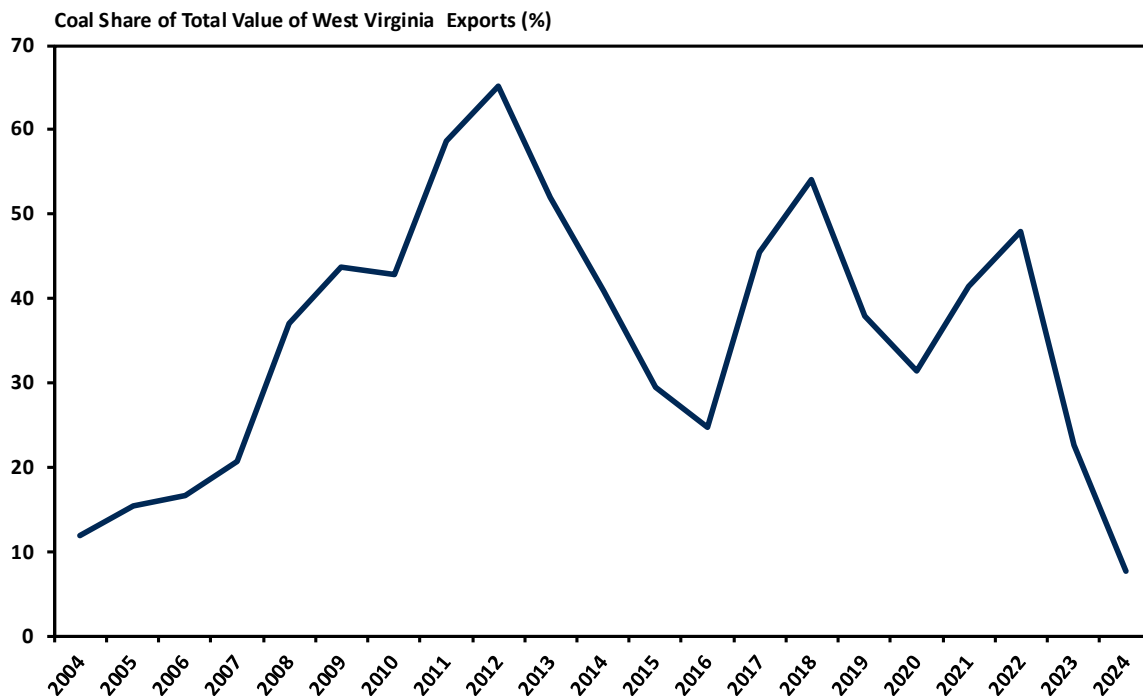


Source: USA Trade Online

WEST VIRGINIA COAL EXPORTS AS A SHARE OF TOTAL WEST VIRGINIA EXPORTS: In Figure 11 we compare West Virginia coal exports to the state's total exports. Coal exports accounted for an enormous share (i.e., more than one-half) of the state's total exports in several years over the past two decades or so. However, the figure fluctuates widely given the volatility of global coal markets.

More information about West Virginia's coal export destinations can be found in Appendix 1.

Figure 11: West Virginia Coal Exports as a Share of the State's Total Exports



Source: USA Trade Online

4 Economic Impact of Coal Production in West Virginia

In this section we examine the economic impact of coal production on the West Virginia economy in 2024. To estimate the economic impact, we use IMPLAN modeling software, an industry-standard input output software, which applies a detailed model of the West Virginia economy that outlines how industry-specific trade-flows interact with key economic indicators such as employment, income, output, and tax revenue. Our analysis consists of two aspects of the coal economy: First, in this section, we consider the economic impact of coal mining. In Section 5 we consider the impact of the coal-fired electric power generation, the primary user of coal in the state.

ECONOMIC IMPACT ANALYSIS BACKGROUND: Expenditures that take place directly to mine coal and compensate coal mine workers are referred to as the direct economic impact of coal mining.² However, the total economic impact of coal mining is not limited to the direct impact, but also includes the secondary economic impacts accrued as those initial direct expenditures are re-spent throughout the rest of the economy. For example, to support coal mining, contractors providing services such as site preparations, tunneling, coal stripping, truck transportation, etc., will increase their production in correspondence with an increase in coal mining. As these suppliers increase production, their subsequent suppliers will increase production, and so on. All of this additional economic activity that stems from coal mining is referred to as indirect impacts. In addition, the coal mine and these suppliers employ numerous workers, part of whose income will be spent in the West Virginia economy, generating additional output, income, and employment. This activity associated with employees spending their income in the state is referred to as induced impacts. These indirect and induced impacts together form what is known as the “multiplier effect.” The original stimulus to the economy from the operation’s total expenditures is re-spent multiple times through the rest of the economy. The combined direct impact and secondary impacts constitute the total economic impact of coal mining.

² Employment data are provided by the U.S. Bureau of Labor Statistics, Quarterly Censuses of Employment and Wages, NAICS code 2121, shown in Figure 5 above.



ECONOMIC IMPACT OF COAL MINING We estimate the direct output at coal mines in West Virginia based on the 2024 coal mining's total output from IMPLAN. In particular, we estimate that coal mines in West Virginia produced around \$12.2 billion in output in 2024. As reported in Figure 12, this direct output is estimated to generate \$4.2 billion in secondary output impacts, resulting in a total economic impact of \$16.4 billion in total output in the West Virginia economy.

Further, the 12,900 or so coal mining jobs in West Virginia in 2024 and all of the related expenditures are expected to generate 17,700 additional jobs in the state economy, resulting in a total employment impact of 30,600 jobs. The large multiplier is driven, in part, by the fact that coal miners earn unusually large incomes. Further, coal mining generates around \$3.1 billion in total employee compensation in the state. Finally, coal mining is estimated to generate \$1 billion in select state and local tax revenue with West Virginia.

Figure 12: Economic Impact of Coal Mining in West Virginia

Type of Impact	Direct	Indirect and Induced	Total
Output (\$, billions)	12.2	4.2	16.4
Employment (thousand jobs)	12.9	17.7	30.6
Employee Compensation (\$, billions)	1.9	1.2	3.1
State and Local Tax Revenue (\$, billions)	--	--	1.0
Notes: Output, Employee Compensation, and Taxes are measured in 2024 dollars. Tax impact includes severance, sales, personal income, property, and corporation net income taxes.			

5 Economic Impact of Coal-Fired Power Generation in West Virginia

In this section we consider the economic impact of the primary user of coal in West Virginia – coal-fired electric power generation. We estimate the economic impact of all West Virginia coal-power plants located in eight counties across the state (Figure 13). Two power stations are operating in Monongalia County - First Energy Fort Martin Power Station and Longview Power Plant. The two stations combined generated more than 8.5 million megawatt hours (MWh) of electricity in 2024. Another station owned by First Energy, Harrison Power Station, located in Harrison County, generated a total of 10.6 million MWh of electricity in the same year. Another large plant is John Amos, located in Putnam County, generated 9.6 million MWh of electricity. All coal-fired plants combined generated more than 43 million MWh of electricity in 2024.

In the next section we present the economic impact based on the county in which the power stations are located (we therefore combine Longview Power Plant and First Energy Fort Martin Power Station). We do not have direct data on each plant's direct output, employment, or employment compensation. As such, we estimate each station's direct impact based on its total electricity generation as shown in Figure 13 as a share of the state's total generation and the total output, employment, and employee compensation of the coal-fired power generation sector in West Virginia for the state of West Virginia as estimated by IMPLAN in 2024.

It is important to note that for the coal-fired power plants, coal mining serves as the main supporting sector. When estimating the economic impact of power plants, one would normally include the multiplier impact that goes through all power plants' supporting sectors, including coal mining. However, since the impact of coal mining is already accounted for above, we exclude coal purchases in this section of the analysis to avoid double counting these impacts.

Figure 13: West Virginia Coal Power Plants Included in the Analysis

County	Plant	Total Generation (MWh)
Grant	Mt. Storm	4,160,041
Harrison	First Energy Harrison Power Station	10,618,152
Marion	Grant Town Power Plant	614,833
Marshall	Mitchell (WV)	4,090,177
Mason	Mountaineer	4,725,200
Monongalia	First Energy Fort Martin Power Station	3,860,539
Monongalia	Longview Power Plant	4,696,189
Pleasants	First Energy Pleasants Power Station	955,020
Putnam	John E Amos	9,613,014
All Plants		43,333,165

Source: US Energy Information Administration



5.1 Grant County

Mt. Storm, owned by Virginia Electric and Power Company, is the only coal-fired power station located in Grant County. The plant generated 4.2 million MWh of electricity in 2024. We estimate that the plant generated a direct output of \$317.1 million in 2024. As this output circulated in the state economy, and after the impact of its purchase of West Virginia coal is excluded, we estimate that the plant generated \$155.6 million in secondary output impacts, resulting in a total economic impact of \$472.7 million in total output in the West Virginia economy.

In terms of employment, we estimate that the Mt. Storm power plant directly employed 192 workers. This spending is expected to generate 346 additional jobs in the state economy, resulting in a total employment impact of 538 jobs. All these workers earned \$58.2 million in employee compensation. The large employment multiplier is driven primarily by two reasons: the impact spreads from a highly capital-intensive sector to more labor-intensive sectors and power-plant workers also earn large incomes. For these same reasons, this large employment multiplier will continue to be present in all power plants analyzed below.

Finally, this coal-fired power plant is estimated to generate \$31.4 million in select state and local tax revenue (see Figure 14).

Figure 14: Economic Impact of Coal-Fired Power Plant in Grant County

Type of Impact	Direct	Indirect and Induced	Total
Output (\$, millions)	317.1	155.6	472.7
Employment (jobs)	192	346	538
Employee Compensation (\$, millions)	31.8	26.5	58.2
State & Local Tax Revenue (\$, millions)	--	--	31.4
Notes: Output, Employee Compensation, and Taxes are measured in 2024 dollars. Tax impact includes sales, personal income, property, and corporation net income taxes.			

5.2 Harrison County

There is only one coal-fired power station located in Harrison County, First Energy Harrison Power Station, which is owned by First Energy. This plant is one of the largest coal-fired power plants and is indeed the biggest user of West Virginia coal in the state. The plant generated 10.6 million MWh of electricity in 2024. We estimate that the plant's direct output in 2024 was \$809.4 million. As this output circulated in the state economy, and after the impact of its purchase of West Virginia coal is excluded, it is estimated that the plant generated \$411.6 million in secondary output impacts, resulting in a total economic impact of over \$1.2 billion output in the West Virginia economy.

In terms of employment, we estimate that the plant directly employed 489 workers. This spending is expected to generate 1,044 additional jobs in the state economy, resulting in a total employment impact of 1,533 jobs. These workers earned an estimated \$166.3 million in employee compensation.

Finally, this coal-fired power plant is estimated to generate \$93.0 million in select state and local tax revenue in the state (see Figure 15).

Figure 15: Economic Impact of Coal-Fired Power Plant in Harrison County

Type of Impact	Direct	Indirect and Induced	Total
Output (\$, millions)	809.4	411.6	1,221.0
Employment (jobs)	489	1,044	1,533
Employee Compensation (\$, millions)	81.1	55.1	166.3
State & Local Tax Revenue (\$, millions)	--	--	93.0
Notes: Output, Employee Compensation, and Taxes are measured in 2024 dollars. Tax impact includes sales, personal income, property, and corporation net income taxes.			

5.3 Marion County

Marion County also has one coal-fired power station, Grant Town Power Plant. The plant utilizes both waste coal and natural gas in its operation. The plant generated nearly 615 thousand MWh of electricity in 2024. We estimate that the plant's direct output in 2024 was \$46.9 million. As this output circulated in the state economy, and after the impact of its purchase of West Virginia coal is excluded, we estimate that the plant generated \$25.7 million in secondary output impact, resulting in a total economic impact of \$72.5 million output in the West Virginia economy.

In terms of employment, we estimate that the plant directly employed 28 workers and supported 67 additional jobs through secondary effects, resulting in a total employment impact of 95 jobs in the state economy. These workers earned an estimated \$9.8 million in employee compensation.

Finally, this coal-fired power plant is estimated to generate \$4.7 million in select state and local tax revenue (see Figure 16).

Figure 16: Economic Impact of Coal-Fired Power Plant in Marion County

Type of Impact	Direct	Indirect and Induced	Total
Output (\$, millions)	46.9	25.7	72.5
Employment (jobs)	28	67	95
Employee Compensation (\$, millions)	4.7	5.1	9.8
State & Local Tax Revenue (\$, millions)	--	--	4.7
Notes: Output, Employee Compensation, and Taxes are measured in 2024 dollars. Tax impact includes sales, personal income, property, and corporation net income taxes.			

5.4 Marshall County

Marshall County has one coal-fired power station, Mitchel (WV), owned by Kentucky Power Company. The plant utilizes primarily coal with a small amount of petroleum in its operation. The plant generated 4.1 million MWh of electricity in 2024. We estimate that the plant's direct output in 2024 was \$311.8 million. After excluding the impact of the plant's purchase of West Virginia coal, we estimate that the plant generated \$99.4 million in secondary output impact, resulting in a total economic impact of \$406.2 million in output in the West Virginia economy.

In terms of employment, we estimate that the plant directly employed 188 workers. An additional 239 jobs are supported through secondary impacts, resulting in a total employment impact of 428 jobs in the state economy. These workers earned \$49.5 million in employee compensation.

Finally, this coal-fired power plant is estimated to generate \$25.9 million in select state and local tax revenue (see Figure 17).

Figure 17: Economic Impact of Coal-Fired Power Plant in Marshall County

Type of Impact	Direct	Indirect and Induced	Total
Output (\$, millions)	311.8	99.4	406.2
Employment (jobs)	188	239	428
Employee Compensation (\$, millions)	31.3	18.3	49.5
State & Local Tax Revenue (\$, millions)	--	--	25.9
Notes: Output, Employee Compensation, and Taxes are measured in 2024 dollars. Tax impact includes sales, personal income, property, and corporation net income taxes.			

5.5 Mason County

The Mountaineer power plant, owned by Appalachian Power Company, is the only coal-fired power station located in Mason County. The plant utilizes primarily coal and a small amount of petroleum in its operation. It purchases coal primarily from both West Virginia and Kentucky. The plant generated around 4.7 million MWh of electricity in 2024. We estimate that the plant's direct output in 2024 was \$360.2 million. As this output circulated in the state economy, and after the impact of its purchase of West Virginia coal is excluded, it is estimated that the plant generated \$101.5 million in secondary output impacts, resulting in a total economic impact of \$461.7 million in output in the West Virginia economy.

In terms of employment, we estimate that the plant directly employed 218 workers. This spending is expected to generate 246 additional jobs in the state economy, resulting in a total employment impact of 463 jobs. These workers earned an estimated \$54.7 million in employee compensation.

Finally, this coal-fired power plant is estimated to generate \$31.0 million in select state and local tax revenue (see Figure 18).

Figure 18: Economic Impact of Coal-Fired Power Plant in Mason County

Type of Impact	Direct	Indirect and Induced	Total
Output (\$, millions)	360.2	101.5	461.7
Employment (jobs)	218	246	463
Employee Compensation (\$, millions)	36.1	18.6	54.7
State & Local Tax Revenue (\$, millions)	--	--	31.0
Notes: Output, Employee Compensation, and Taxes are measured in 2024 dollars. Tax impact includes sales, personal income, property, and corporation net income taxes.			

5.6 Monongalia County

Monongalia County had two power plants in 2024. They are First Energy Fort Martin Power Station and Longview Power Plant. The two power plants generated around 8.6 million MWh of electricity in 2024. We estimate that the plants' direct output in 2024 was \$652.3 million. As this output circulated in the state economy, and after the impact of its purchase of West Virginia coal is excluded, it is estimated that the plants together generated \$353.9 million in secondary output impacts, resulting in a total impact of over \$1.0 billion in output in the West Virginia economy.

In terms of employment, we estimate that the plants directly employed 394 workers. This spending is estimated to generate 926 additional jobs in the state economy, resulting in a total employment impact of 1,320 jobs. These workers earned a combined \$141.8 million in employee compensation.

Finally, these coal-fired power plants are estimated to generate around \$62.7 million in select state and local tax revenue (see Figure 19).

Figure 19: Economic Impact of Coal-Fired Power Plants in Monongalia County

Type of Impact	Direct	Indirect and Induced	Total
Output (\$, millions)	652.3	353.9	1,006.2
Employment (jobs)	394	926	1,320
Employee Compensation (\$, millions)	65.4	76.4	141.8
State & Local Tax Revenue (\$, millions)	--	--	62.7
Notes: Output, Employee Compensation, and Taxes are measured in 2024 dollars. Tax impact includes sales, personal income, property, and corporation net income taxes.			

5.7 Pleasants County

Pleasants Power Station, owned by Omnis Pleasants, LLC., is the only coal-fired power station located in Pleasants County. The plant utilizes primarily coal and a small amount of natural gas in its operation. The plant generated over 955 thousand MWh of electricity in 2024. We estimate that the plant generated a direct output of \$72.8 million in 2024. As this output circulated in the state economy, and after the impact of its purchase of the West Virginia coal is excluded, we estimate that the plant generated \$33.4 million in secondary impacts, resulting in a total economic impact of \$106.2 million in the West Virginia economy.

In terms of employment, we estimate that the Pleasants Power plant directly employed 44 workers. This spending is expected to generate 72 additional jobs in the state economy, resulting in a total employment impact of 116 jobs. These workers earned a combined of \$13.2 million in employee compensation.

Finally, this coal-fired power plant is estimated to generate \$6.8 million in select state and local tax revenue (see Figure 20).

Figure 20: Economic Impact of Coal-Fired Power Plant Pleasants County

Type of Impact	Direct	Indirect and Induced	Total
Output (\$, millions)	72.8	33.4	106.2
Employment (jobs)	44	72	116
Employee Compensation (\$, millions)	7.3	5.9	13.2
State & Local Tax Revenue (\$, millions)	--	--	6.8
Notes: Output, Employee Compensation, and Taxes are measured in 2024 dollars. Tax impact includes sales, personal income, property, and corporation net income taxes.			

5.8 Putnam County

The John E Amos plant, owned by Appalachian Power Company, is the only coal-fired power station located in Putnam County. This plant is also one of the largest coal-fired power plants and is one of the biggest users of West Virginia coal in the state. The plant generated 9.6 million MWh of electricity in 2024. We estimate that the plant's direct output in 2024 was \$732.8 million. As this output circulated in the state economy, and after the impact of its purchase of West Virginia coal is excluded, it is estimated that the plant generated \$116.5 million in secondary output impacts, resulting in a total economic impact of \$895.3 million in the West Virginia economy.

In terms of employment, we estimate that the plant directly employed 443 workers. This spending is expected to generate 713 additional jobs in the state economy, resulting in a total employment impact of 1,156 jobs. These employees earned a combined \$121.7 million in employee compensation.

Finally, this coal-fired power plant is estimated to generate \$59.6 million in select state and local tax revenue (see Figure 21).

Figure 21: Economic Impact of Coal-Fired Power Plant in Putnam County

Type of Impact	Direct	Indirect and Induced	Total
Output (\$, millions)	732.8	116.5	895.3
Employment (jobs)	443	713	1,156
Employee Compensation (\$, millions)	73.5	48.2	121.7
State & Local Tax Revenue (\$, millions)	--	--	59.6
Notes: Output, Employee Compensation, and Taxes are measured in 2024 dollars. Tax impact includes sales, personal income, property, and corporation net income taxes.			

5.9 Total Economic Impact of Coal-Fired Power Plants In West Virginia

In Figure 22 we recap the economic impact generated by all the coal-fired power plants in West Virginia. We estimate that the plants combined generated a direct output of \$3.3 billion in 2024. After excluding the purchase of West Virginia coal used in their operation, we estimate that this direct impact generates \$1.3 billion in secondary output impacts, resulting in a total economic impact of \$4.6 billion in output in the West Virginia economy.

We estimate that all the coal-fired power stations in the state employed directly 1,996 workers. This spending is expected to generate 3,653 additional jobs in the state economy, resulting in a total employment impact of 5,649 jobs. Further, coal-fired power plants generate an estimated \$615.2 million in total employee compensation in the state. Finally, coal-fired power plants are estimated to generate \$315.1 million in select state and local tax revenue.

Figure 22: Economic Impact of All Coal-Fired Power Generation in West Virginia

Type of Impact	Direct	Indirect and Induced	Total
Output (\$, millions)	3,303.3	1,297.6	4,596.8
Employment (jobs)	1,996	3,653	5,649
Employee Compensation (\$, millions)	331.2	254.1	615.2
State & Local Tax Revenue (\$, millions)	--	--	315.1
Notes: Output, Employee Compensation, and Taxes are measured in 2024 dollars. Tax impact includes sales, personal income, property, and corporation net income taxes.			



6 Economic Impact of Coal Mining and Coal-Fired Power Generation

Finally, we recap the economic impact of both coal mining and all coal-fired power generation in West Virginia. We estimate that coal mining and coal-fired power plants combined generated a direct output impact of \$15.5 billion in 2024. We further estimate that this direct impact generates \$5.5 billion in secondary output impacts, resulting in a total economic impact of \$21.0 billion in output in the West Virginia economy.

We estimate that both coal mining and all coal-fired power stations in the state employed directly 14,896 workers. This spending is expected to support 21,353 additional jobs in the state economy, resulting in a total employment impact of 36,249 jobs. Further, coal mining and coal-fired power plants generate \$3.7 billion in total employee compensation in the state. Finally, coal mining and coal-fired power plants are estimated to generate \$1.3 billion in select state and local tax revenue.

Figure 23: Economic Impact of Coal Mining and Coal-Fired Power Generation in West Virginia

Type of Impact	Direct	Indirect and Induced	Total
Output (\$, billions)	15.5	5.5	21.0
Employment (jobs)	14,896	21,353	36,249
Employee Compensation (\$, billions)	2.2	1.5	3.7
State & Local Tax Revenue (\$, billions)	--	--	1.3
Notes: Output, Employee Compensation, and Taxes are measured in 2024 dollars. Tax impact includes severance, sales, personal income, property, and corporation net income taxes.			



7 Appendix

WEST VIRGINIA COAL EXPORT DESTINATIONS: The international demand for West Virginia's coal comes from various countries. We report the top destination countries for West Virginia coal in Appendix Table 1. The list of the primary importing countries often changes significantly from year to year due to a wide variety of political and economic factors.

Appendix 1: West Virginia Coal Exports by Country of Destination, 2024

Country of Destination	Value of Exports (Millions, 2024\$)	Percent Share
1. India	55.2	18.0
2. China	53.5	14.5
3. Indonesia	44.7	12.1
4. Japan	41.5	11.3
5. South Korea	41.2	11.2
6. Malaysia	30.6	8.3
7. Thailand	25.0	6.8
8. Belgium	23.8	6.5
9. Finland	23.1	6.3
10. Germany	6.8	1.8
11. Italy	5.3	1.4
12. Netherlands	4.3	1.2
Rest of the World	2.2	0.6

Source: USA Trade Online



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CERTIFICATE OF SERVICE

I hereby certify that on May 29, 2026, a copy of the foregoing Direct Testimony of Jason

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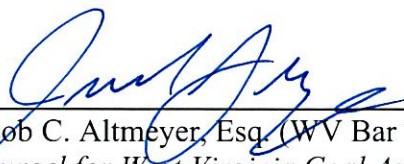
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