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

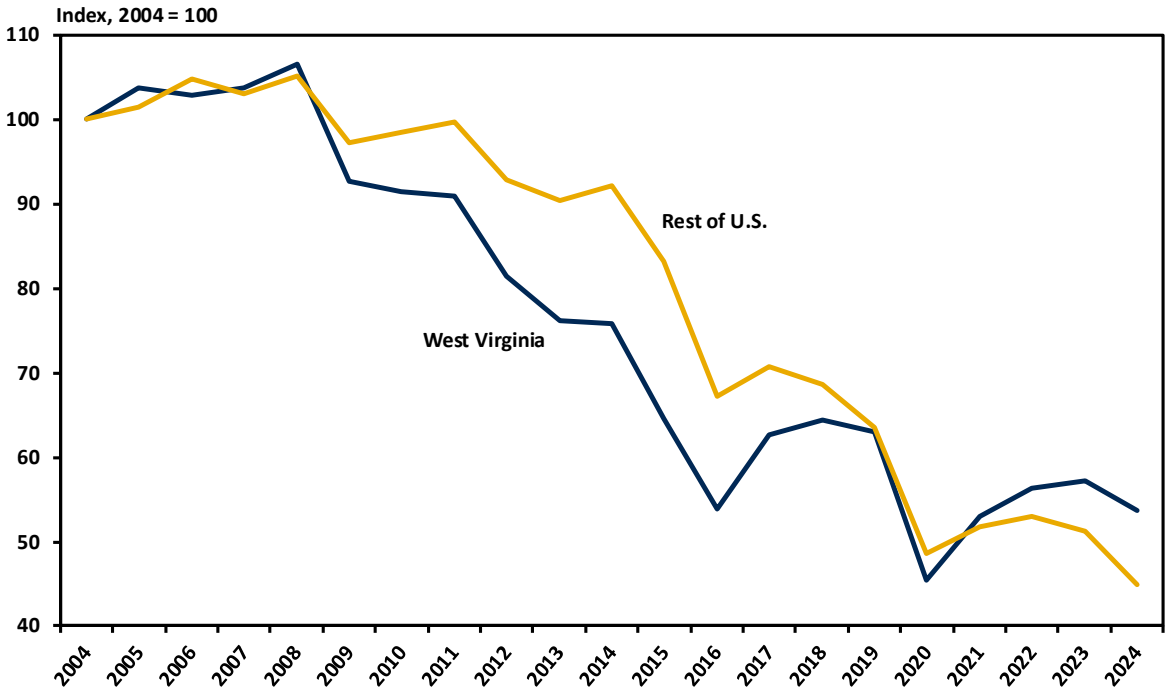
Type of Impact	Direct	Indirect and Induced	Total
Output ($, billions)	15.5	5.5	21.0
Employment (jobs)	14,896	21,353	36,249
Employee Compensation ($, billions)	2.2	1.5	3.7
State & Local Tax Revenue ($, billions)	--	--	1.3

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.

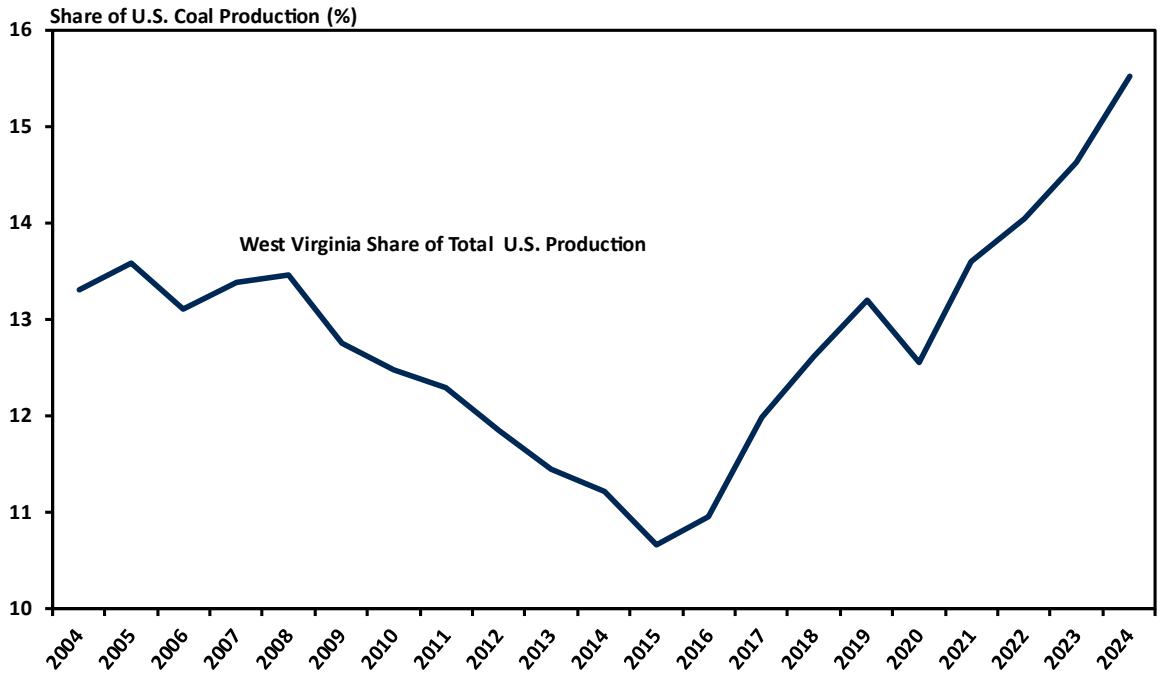
Figure 2: Annual Coal Production, West Virginia vs Other U.S. States



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.

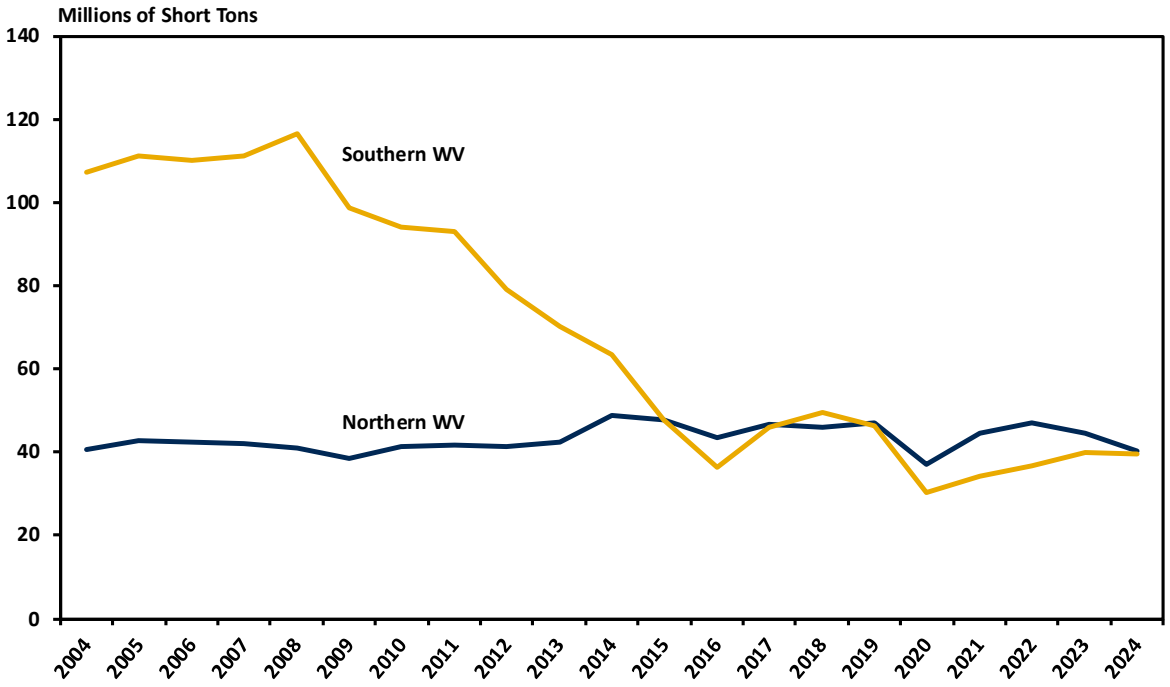
Figure 3: West Virginia Share of U.S. Annual Coal Production



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.

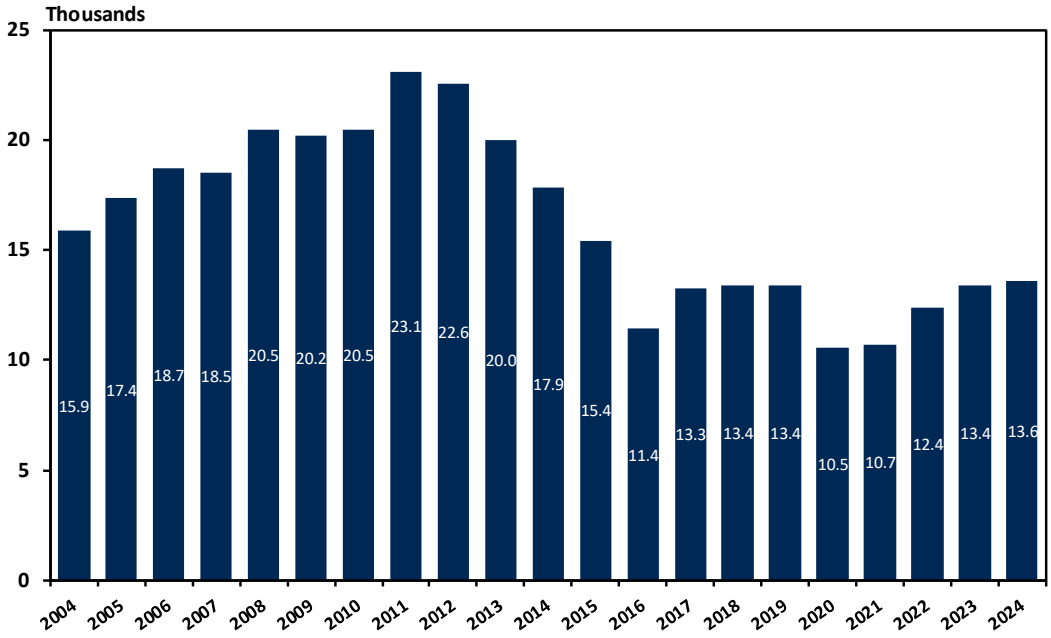
Figure 4: West Virginia Regional Coal Production



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

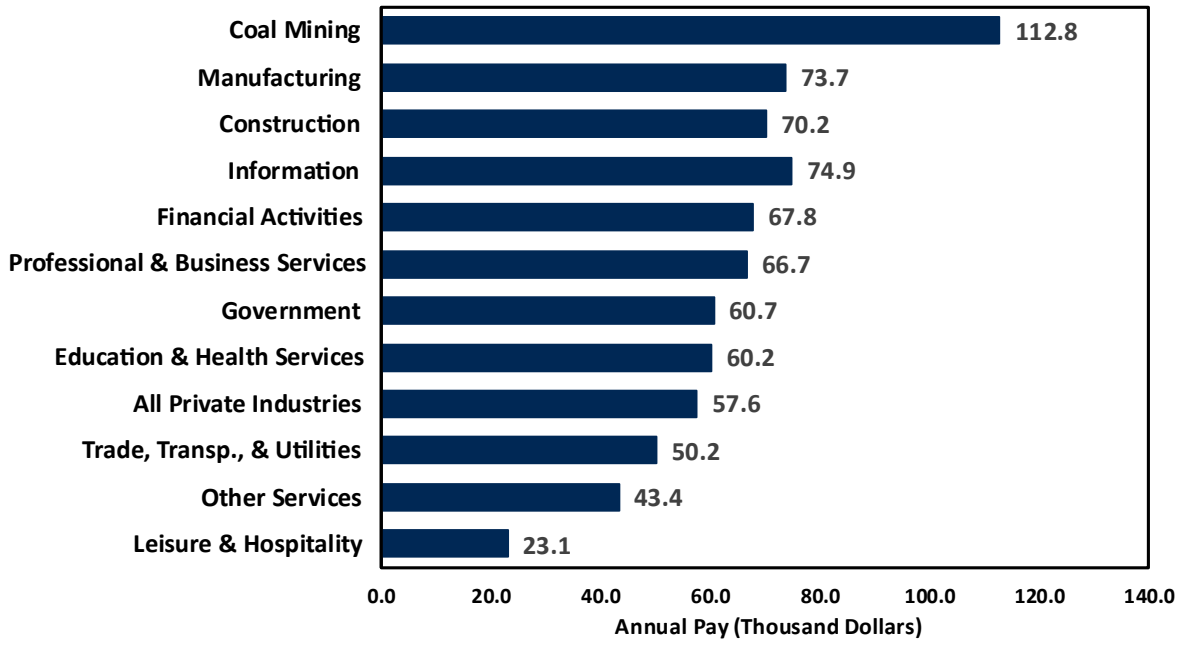


Source: U.S. Bureau of Labor Statistics

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

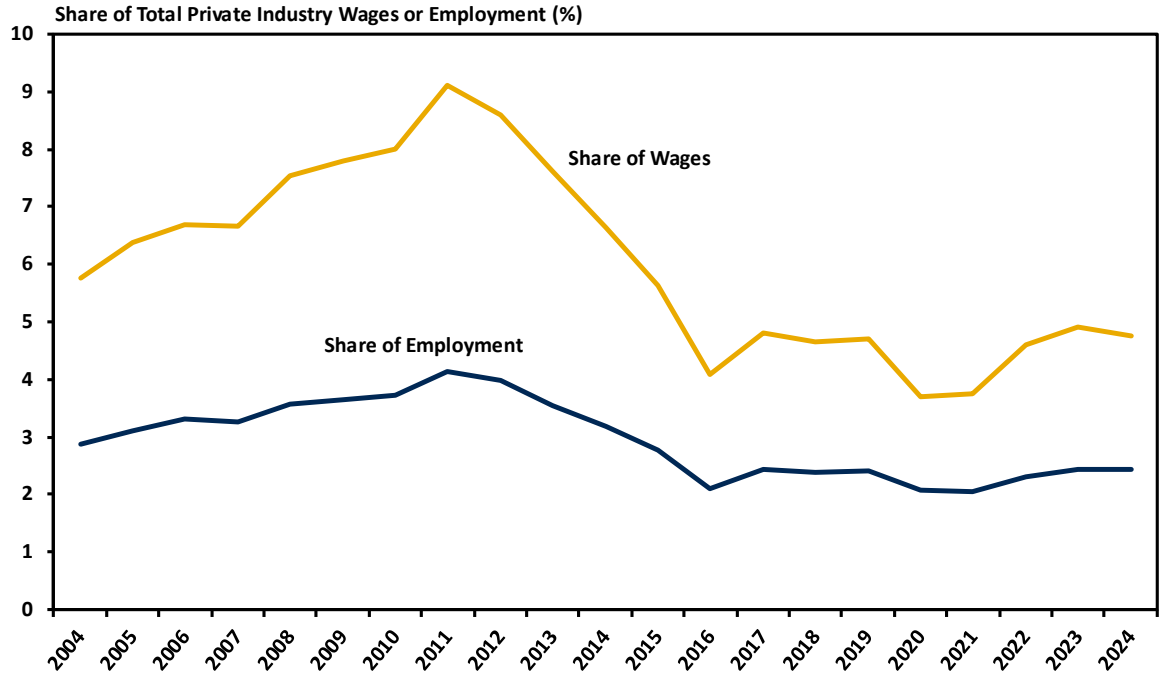
COAL MINING WAGES: The coal industry's contribution to the West Virginia economy is more pronounced when we consider employee income. In 2024, the coal industry paid its workers an average of $112.8 thousand annually. This wage is nearly double the average annual wages for all private industries in the 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

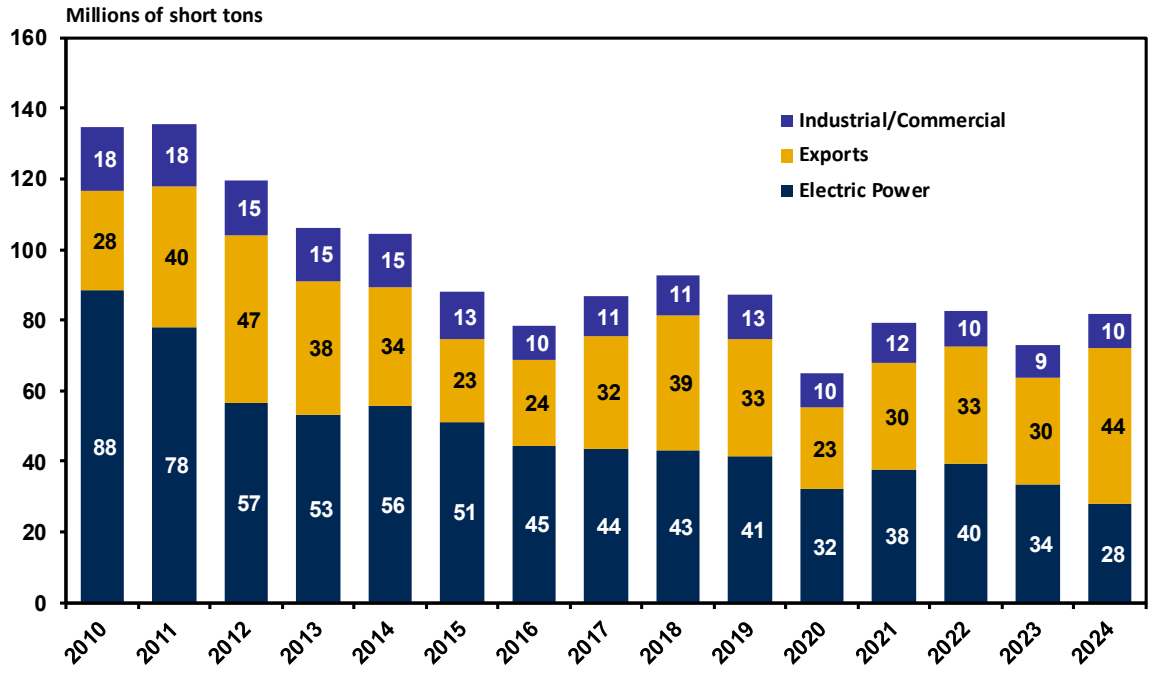
Figure 7: Coal Mining Share of Total Employment and Wages



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 Virgina'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.

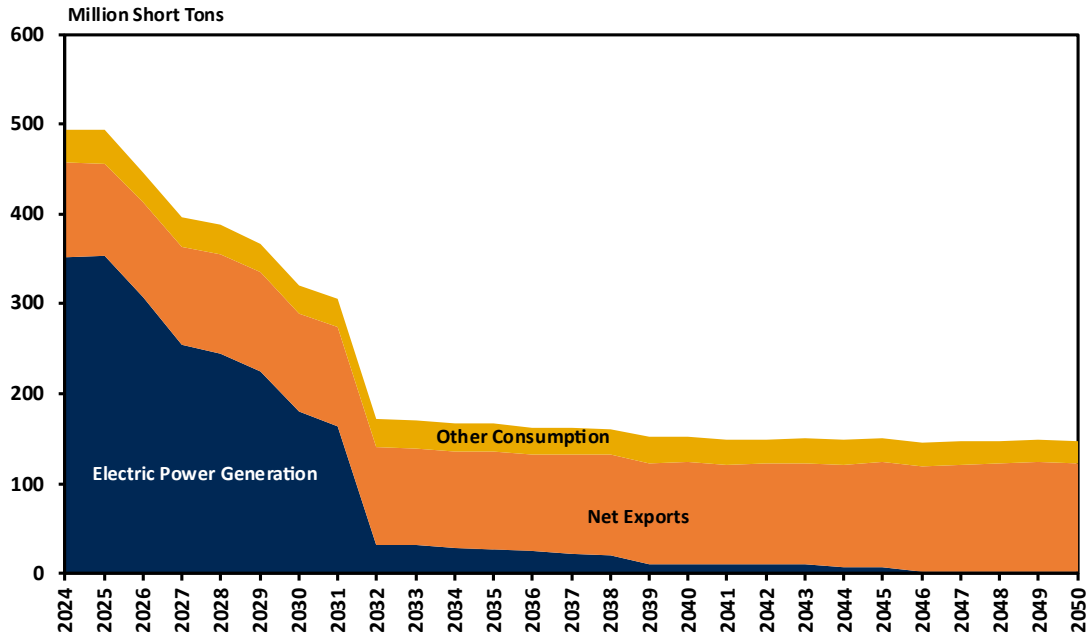
Figure 8: Distribution of West Virginia Coal by Consumer



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

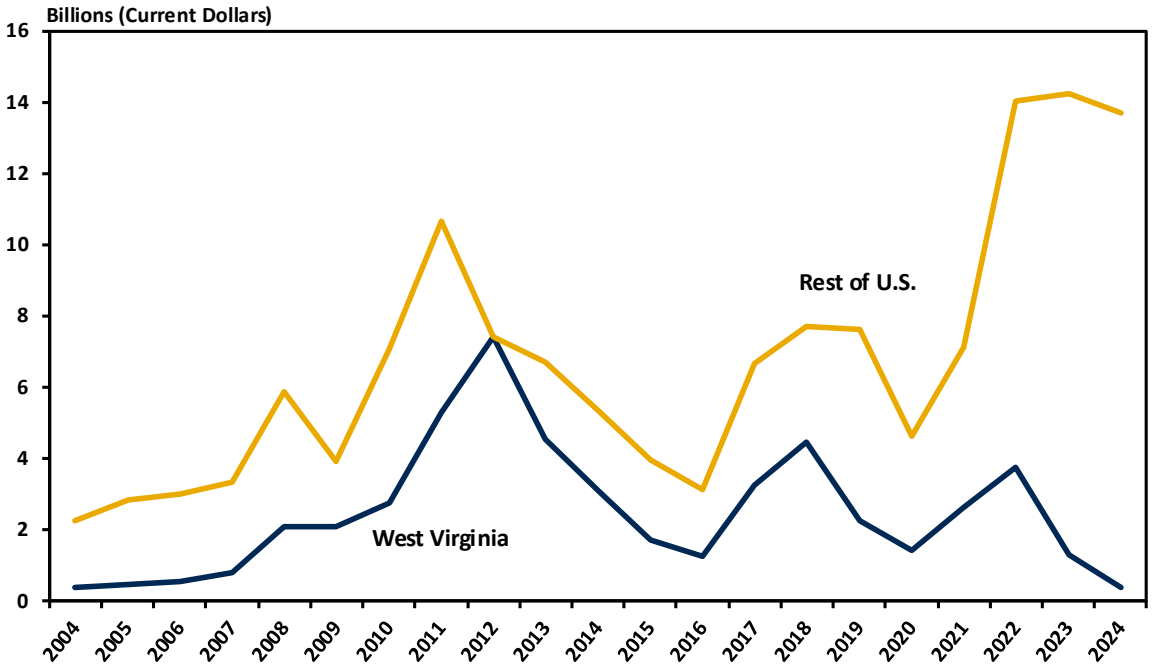


Source: U.S. Energy Information Administration

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

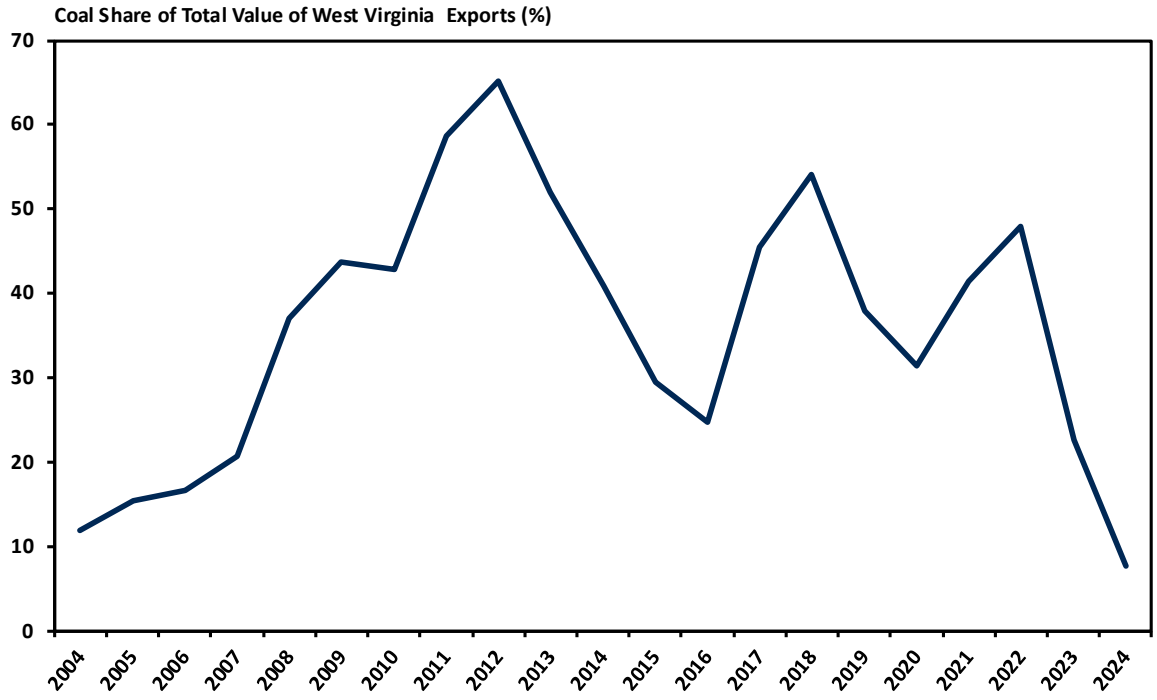


Source: USA Trade Online

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 Censes 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 ouptut 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 in 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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